Full wwPDB EM Validation Report ⓘ

Mar 6, 2026 – 11:08 PM UTC

PDB ID	:	2YKR / pdb_00002ykr
EMDB ID	:	EMD-1884
Title	:	30S ribosomal subunit with RsgA bound in the presence of GMPPNP
Authors	:	Guo, Q.; Yuan, Y.; Xu, Y.; Feng, B.; Liu, L.; Chen, K.; Lei, J.; Gao, N.
Deposited on	:	2011-05-30
Resolution	:	9.80 Å(reported)
Based on initial models	:	3OFA, 2RCN

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

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

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

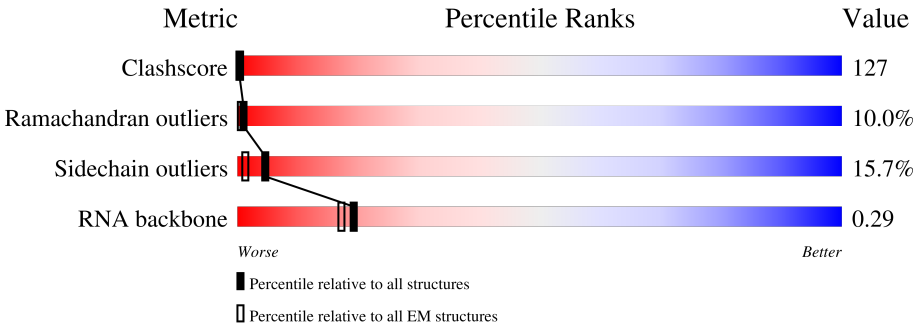
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

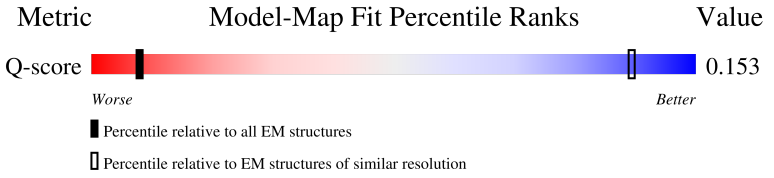
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 9.80 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)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	157 (9.30 - 10.30)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1533	15% 84%
2	B	218	17% 34% 37% 12%
3	C	206	18% 28% 43% 11%

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Mol	Chain	Length	Quality of chain
4	D	205	17% 38% 33% 12%
5	E	150	13% 33% 43% 11%
6	F	100	19% 32% 39% 10%
7	G	151	9% 36% 36% 19% 9%
8	H	129	16% 29% 40% 16%
9	I	127	18% 33% 34% 15%
10	J	98	10% 40% 33% 17%
11	K	117	15% 31% 44% 9%
12	L	123	21% 40% 24% 15%
13	M	114	14% 29% 32% 25%
14	N	100	17% 40% 28% 12%
15	O	88	14% 39% 32% 16%
16	P	82	20% 33% 37% 11%
17	Q	80	9% 24% 45% 22%
18	R	55	15% 42% 33% 11%
19	S	79	24% 37% 23% 16%
20	T	85	12% 42% 33% 13%
21	U	51	37% 43% 31% 24%
22	W	350	27% 30% 20% 19%

2 Entry composition (i)

There are 22 unique types of molecules in this entry. The entry contains 53633 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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					AltConf	Trace
			Total	C	N	O	P		
1	A	1533	32892	14671	6036	10653	1532	0	0

- Molecule 2 is a protein called 30S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	218	1705	1081	305	312	7	0	0

- Molecule 3 is a protein called 30S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	206	1625	1028	305	289	3	0	0

- Molecule 4 is a protein called 30S RIBOSOMAL PROTEIN S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	205	1643	1026	315	298	4	0	0

- Molecule 5 is a protein called 30S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	E	150	1106	687	211	202	6	0	0

- Molecule 6 is a protein called 30S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	100	818	515	148	149	6	0	0

- Molecule 7 is a protein called 30S RIBOSOMAL PROTEIN S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	151	Total	C	N	O	S	0	0
			1182	735	227	216	4		

- Molecule 8 is a protein called 30S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 9 is a protein called 30S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 10 is a protein called 30S RIBOSOMAL PROTEIN S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	98	Total	C	N	O	S	0	0
			787	493	150	143	1		

- Molecule 11 is a protein called 30S RIBOSOMAL PROTEIN S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	117	Total	C	N	O	S	0	0
			877	540	174	160	3		

- Molecule 12 is a protein called 30S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 13 is a protein called 30S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	M	114	Total	C	N	O	S	0	0
			884	546	178	157	3		

- Molecule 14 is a protein called 30S RIBOSOMAL PROTEIN S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	N	97	Total	C	N	O	S	0	1
			775	483	161	128	3		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
N	39	ASP	GLU	conflict	UNP B7M1M1

- Molecule 15 is a protein called 30S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

- Molecule 16 is a protein called 30S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	P	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

- Molecule 17 is a protein called 30S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	Q	80	Total	C	N	O	S	0	0
			649	411	121	114	3		

- Molecule 18 is a protein called 30S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	R	55	Total	C	N	O	0	0
			456	288	86	82		

- Molecule 19 is a protein called 30S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	S	79	Total	C	N	O	S	0	0
			638	408	120	108	2		

- Molecule 20 is a protein called 30S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	T	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

- Molecule 21 is a protein called 30S RIBOSOMAL PROTEIN S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	U	51	Total	C	N	O	S	0	0
			426	265	86	74	1		

- Molecule 22 is a protein called PUTATIVE RIBOSOME BIOGENESIS GTPASE RSGA.

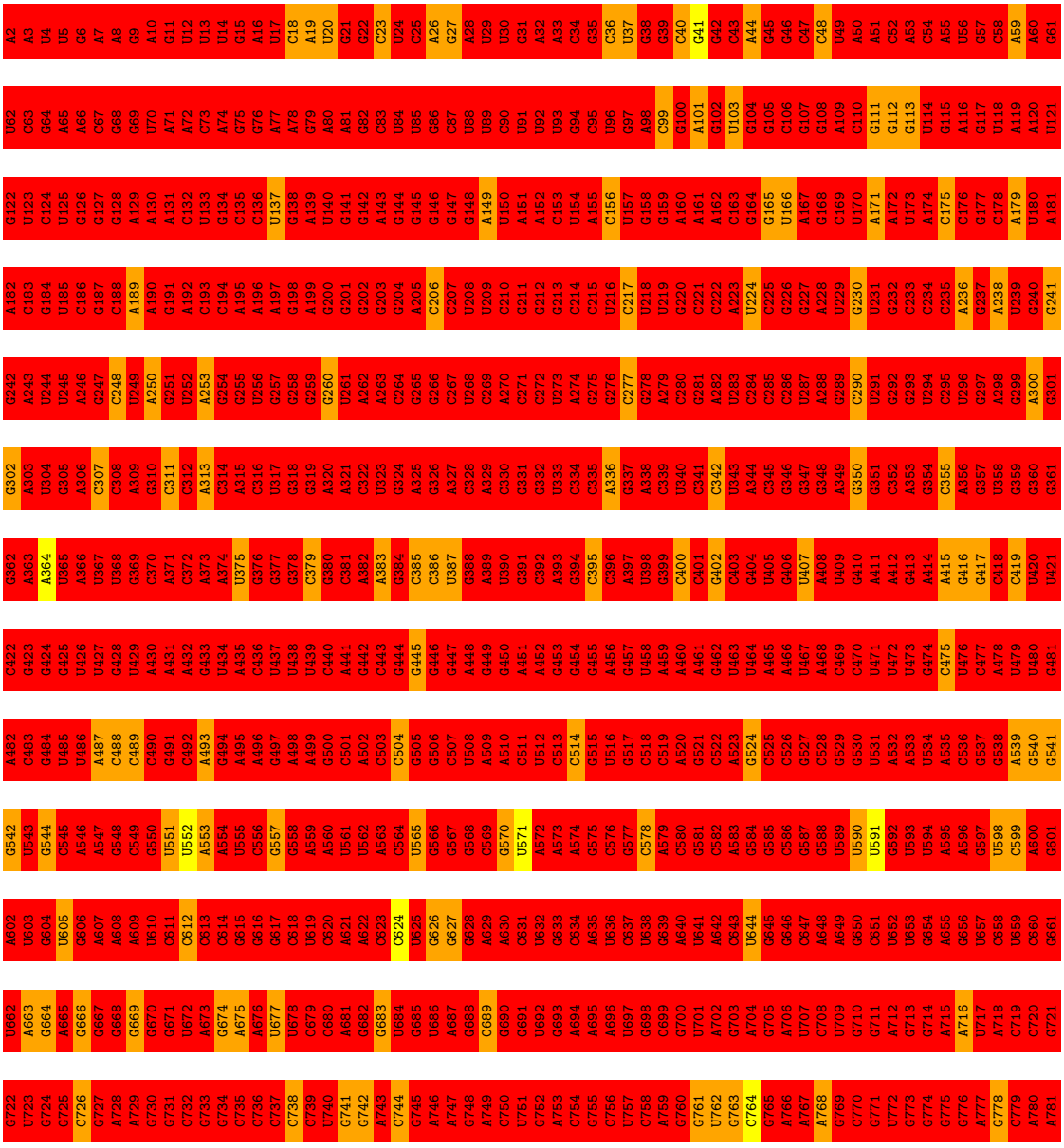
Mol	Chain	Residues	Atoms					AltConf	Trace
22	W	282	Total	C	N	O	S	0	4
			2186	1378	388	410	10		

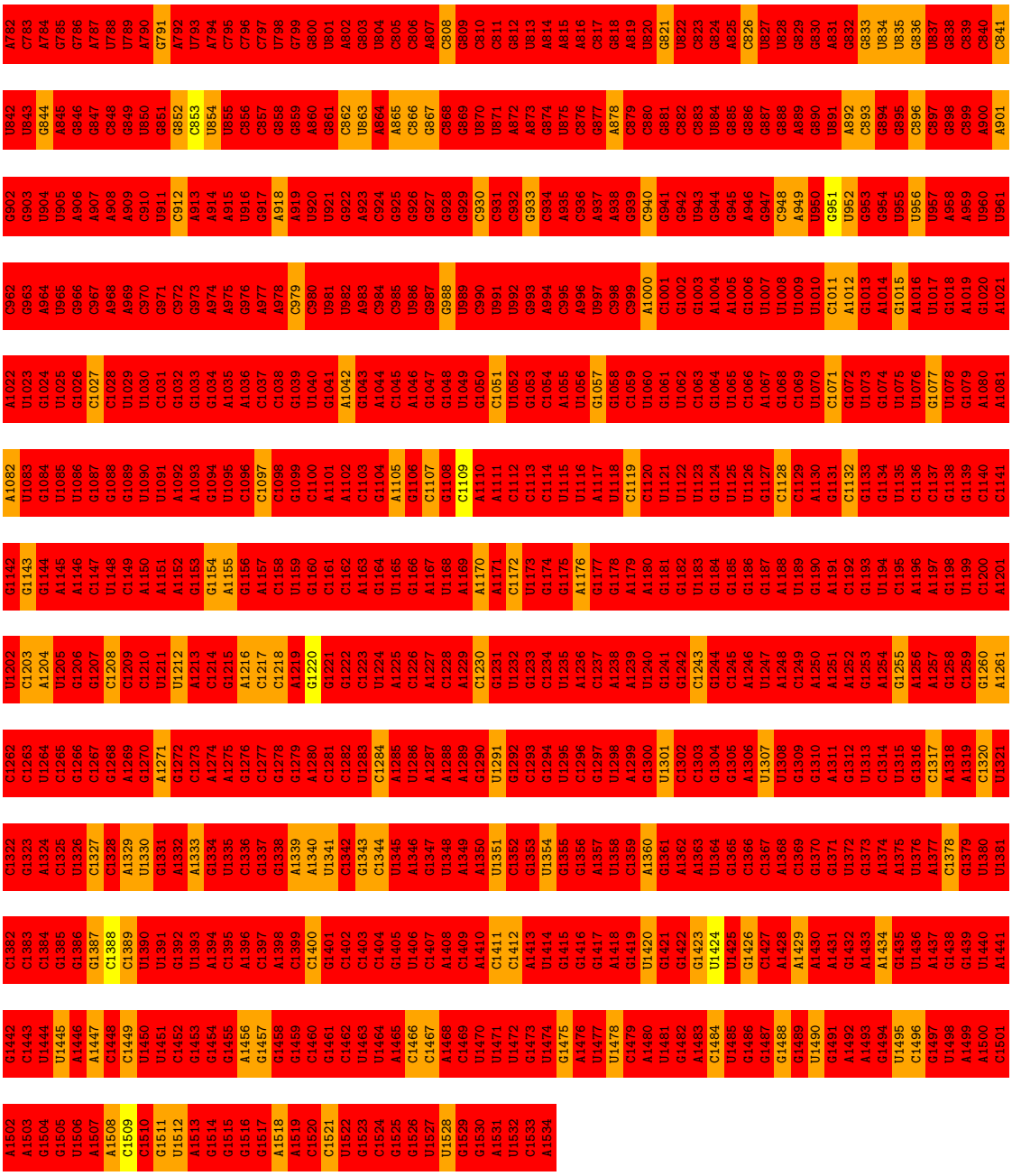
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 16S RRNA

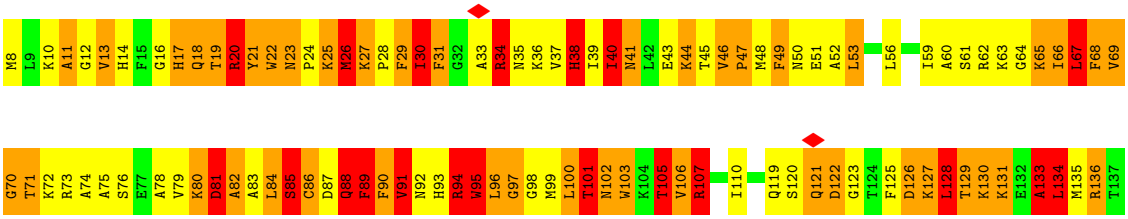
Chain A:

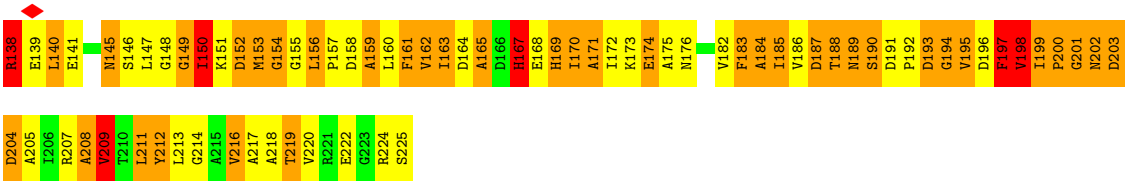




• Molecule 2: 30S RIBOSOMAL PROTEIN S2

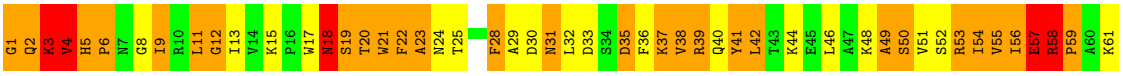
Chain B:

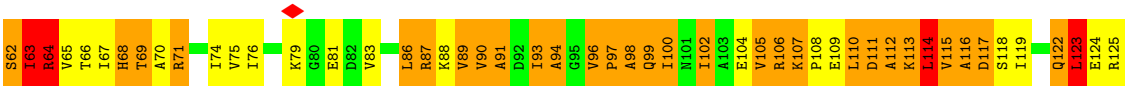


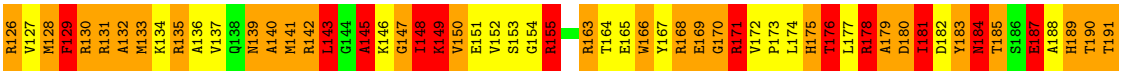


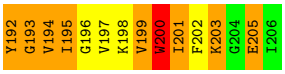
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain C:



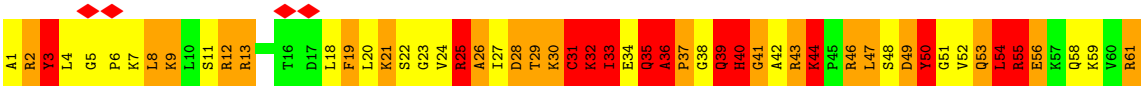


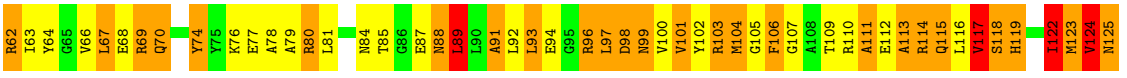


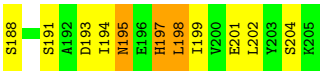


• Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain D:

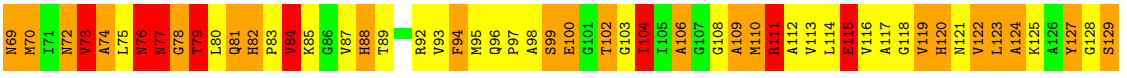




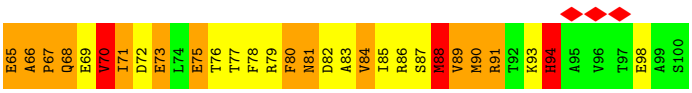


• Molecule 5: 30S RIBOSOMAL PROTEIN S5

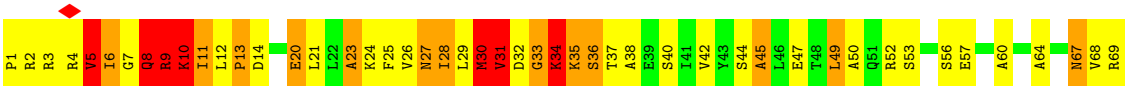
Chain E:

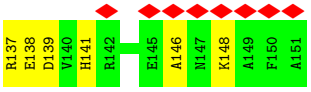


• Molecule 6: 30S RIBOSOMAL PROTEIN S6

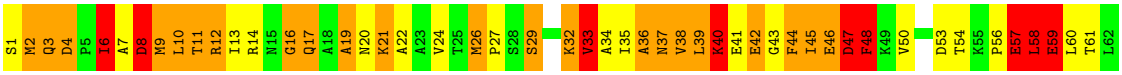


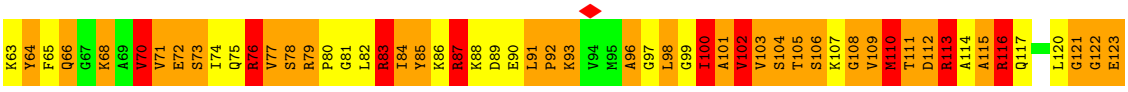
• Molecule 7: 30S RIBOSOMAL PROTEIN S7

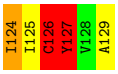




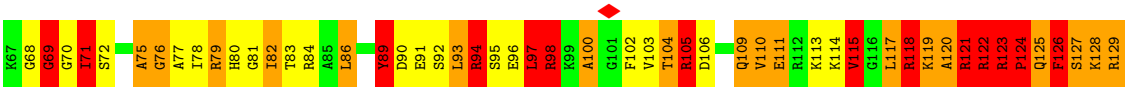
• Molecule 8: 30S RIBOSOMAL PROTEIN S8





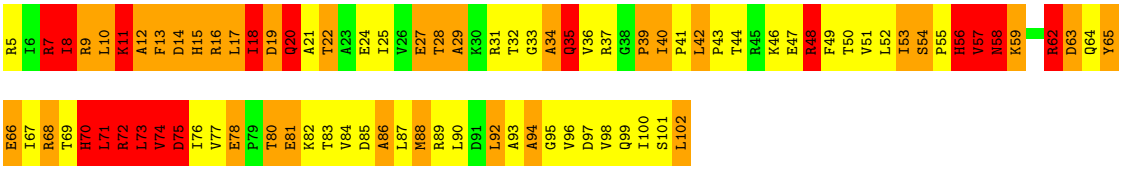


• Molecule 9: 30S RIBOSOMAL PROTEIN S9



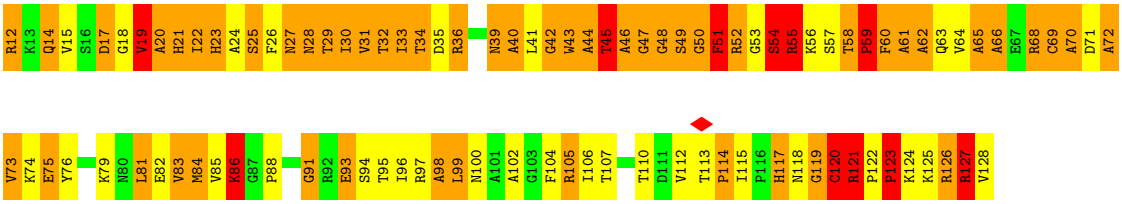
• Molecule 10: 30S RIBOSOMAL PROTEIN S10

Chain J:



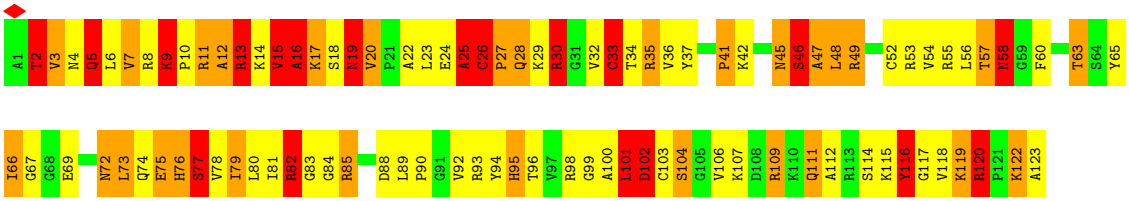
• Molecule 11: 30S RIBOSOMAL PROTEIN S11

Chain K:



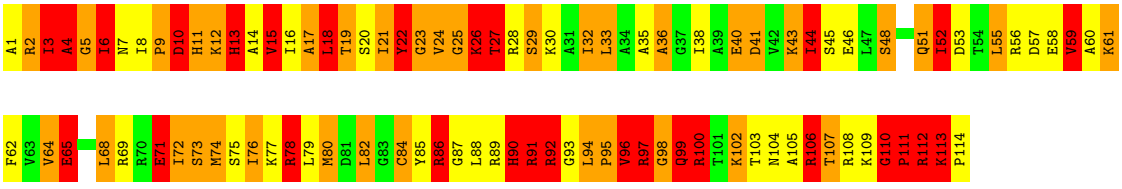
• Molecule 12: 30S RIBOSOMAL PROTEIN S12

Chain L:



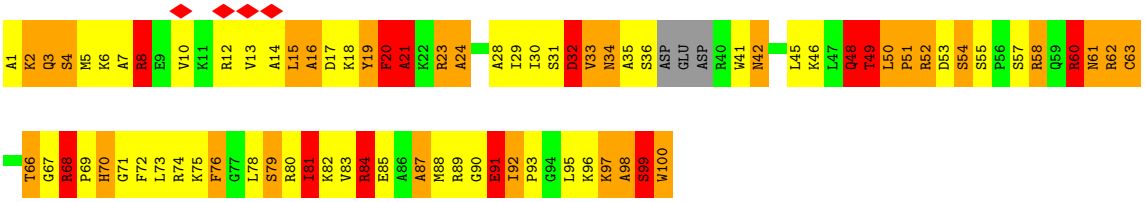
• Molecule 13: 30S RIBOSOMAL PROTEIN S13

Chain M:



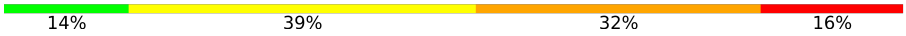
• Molecule 14: 30S RIBOSOMAL PROTEIN S14

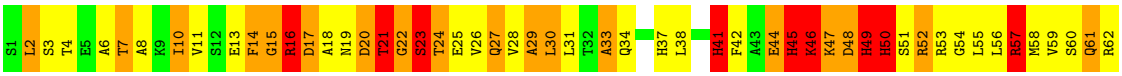
Chain N:



• Molecule 15: 30S RIBOSOMAL PROTEIN S15

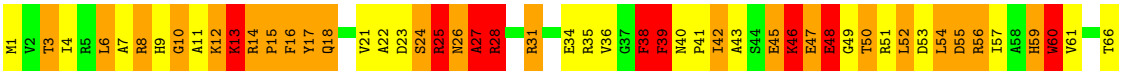
Chain O:

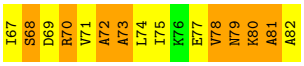




• Molecule 16: 30S RIBOSOMAL PROTEIN S16

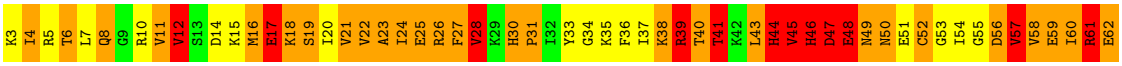
Chain P:

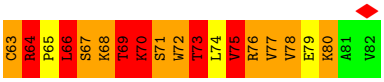




• Molecule 17: 30S RIBOSOMAL PROTEIN S17

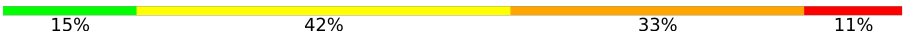
Chain Q:

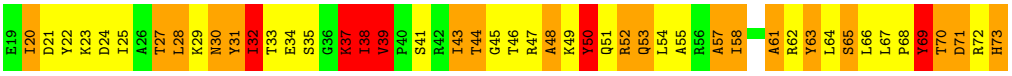




• Molecule 18: 30S RIBOSOMAL PROTEIN S18

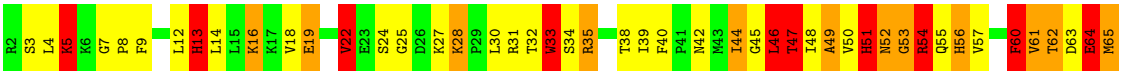
Chain R:





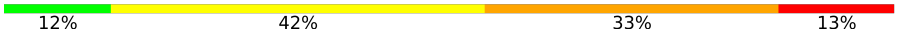
• Molecule 19: 30S RIBOSOMAL PROTEIN S19

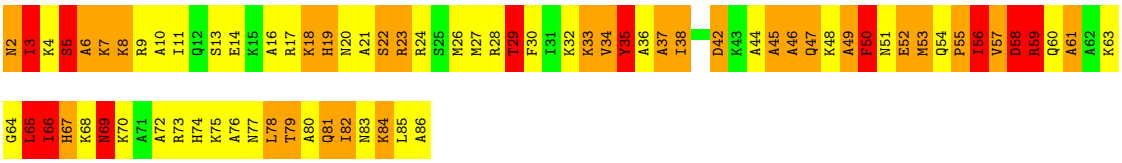
Chain S:



• Molecule 20: 30S RIBOSOMAL PROTEIN S20

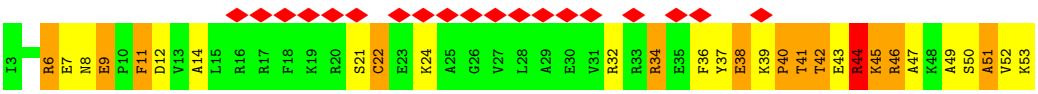
Chain T:





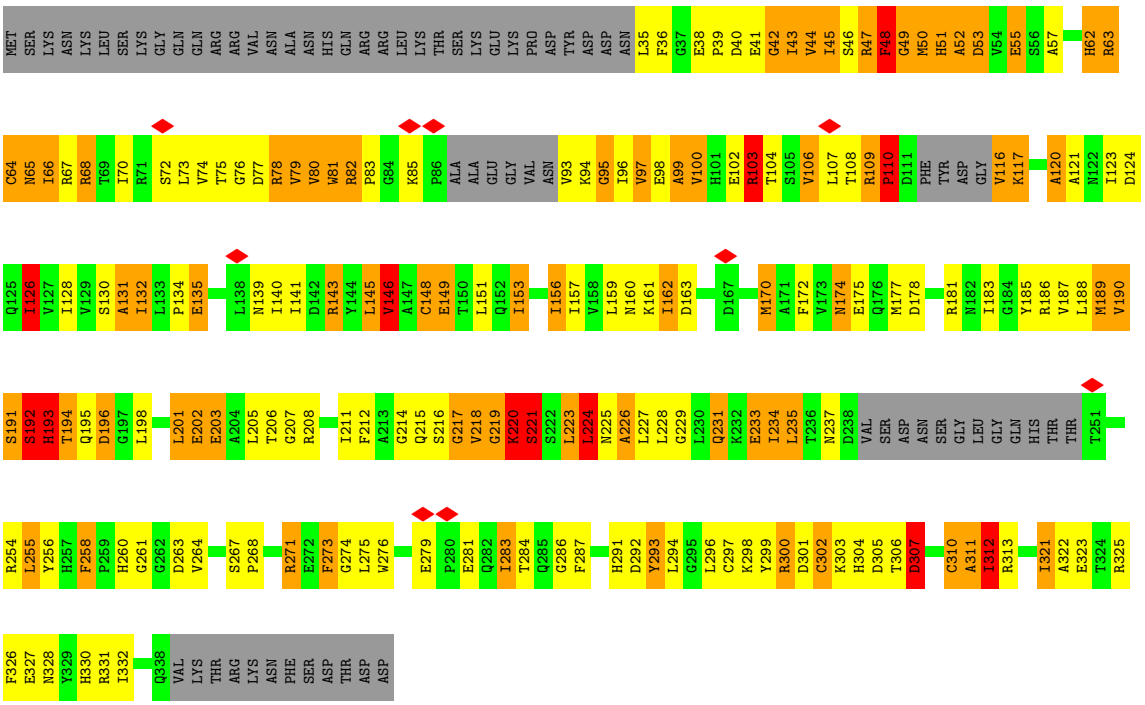
• Molecule 21: 30S RIBOSOMAL PROTEIN S21

Chain U:



• Molecule 22: PUTATIVE RIBOSOME BIOGENESIS GTPASE RSGA

Chain W:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	77483	Depositor
Resolution determination method	Not provided	
CTF correction method	MAPS FROM EACH DEFOCUS GROUP	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	20	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	3850	Depositor
Magnification	59000	Depositor
Image detector	FEI EAGLE (4k x 4k)	Depositor
Maximum map value	19.771	Depositor
Minimum map value	-6.451	Depositor
Average map value	0.106	Depositor
Map value standard deviation	1.371	Depositor
Recommended contour level	3.16	Depositor
Map size (Å)	362.5, 362.5, 362.5	wwPDB
Map dimensions	125, 125, 125	wwPDB
Map angles (°)	90, 90, 90	wwPDB
Pixel spacing (Å)	2.9, 2.9, 2.9	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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	A	2.49	2421/36831 (6.6%)	2.77	4596/57458 (8.0%)
2	B	2.06	55/1736 (3.2%)	2.57	158/2338 (6.8%)
3	C	2.30	85/1652 (5.1%)	2.46	134/2225 (6.0%)
4	D	2.14	66/1665 (4.0%)	2.48	118/2227 (5.3%)
5	E	2.44	67/1119 (6.0%)	2.56	98/1504 (6.5%)
6	F	2.13	31/836 (3.7%)	2.45	61/1128 (5.4%)
7	G	1.85	22/1196 (1.8%)	2.29	86/1602 (5.4%)
8	H	2.19	44/989 (4.4%)	2.55	84/1326 (6.3%)
9	I	2.12	36/1034 (3.5%)	2.55	95/1375 (6.9%)
10	J	2.19	30/797 (3.8%)	2.67	82/1077 (7.6%)
11	K	2.37	48/893 (5.4%)	2.51	71/1205 (5.9%)
12	L	2.10	32/969 (3.3%)	2.50	76/1300 (5.8%)
13	M	2.37	42/893 (4.7%)	2.79	95/1193 (8.0%)
14	N	1.90	17/786 (2.2%)	2.56	68/1045 (6.5%)
15	O	2.27	25/722 (3.5%)	2.81	82/964 (8.5%)
16	P	2.10	19/659 (2.9%)	2.61	64/884 (7.2%)
17	Q	2.70	50/658 (7.6%)	3.06	84/881 (9.5%)
18	R	1.99	14/463 (3.0%)	2.50	40/621 (6.4%)
19	S	1.79	9/653 (1.4%)	2.32	47/877 (5.4%)
20	T	2.13	26/671 (3.9%)	2.86	76/888 (8.6%)
21	U	1.66	4/431 (0.9%)	2.30	22/570 (3.9%)
22	W	1.96	65/2223 (2.9%)	2.21	124/3008 (4.1%)
All	All	2.37	3208/57876 (5.5%)	2.69	6361/85696 (7.4%)

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	A	0	1238
2	B	0	14
3	C	0	16

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Mol	Chain	#Chirality outliers	#Planarity outliers
4	D	0	15
5	E	0	6
6	F	0	7
7	G	0	4
8	H	0	12
9	I	0	15
10	J	0	6
11	K	0	10
12	L	0	7
13	M	0	13
14	N	0	9
15	O	0	9
16	P	0	5
17	Q	0	7
18	R	0	4
19	S	0	8
20	T	0	5
21	U	0	2
22	W	0	7
All	All	0	1419

All (3208) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	O	22	GLY	CA-C	-15.77	1.41	1.52
1	A	1171	A	P-O5'	-14.75	1.37	1.59
1	A	70	U	O3'-P	-14.17	1.40	1.61
1	A	76	G	P-O5'	-13.99	1.38	1.59
1	A	737	C	P-O5'	-13.52	1.39	1.59
1	A	201	G	C1'-N9	-13.36	1.27	1.48
1	A	276	G	P-O5'	-13.07	1.40	1.59
13	M	25	GLY	CA-C	-13.01	1.33	1.51
1	A	1239	A	C1'-N9	-12.86	1.27	1.47
1	A	217	C	C2'-C1'	-12.78	1.34	1.53
1	A	1181	G	C1'-N9	-12.67	1.27	1.47
1	A	63	C	O3'-P	-12.20	1.42	1.61
1	A	1440	U	C2'-C1'	-12.11	1.35	1.53
1	A	180	U	O3'-P	-12.01	1.43	1.61
1	A	1170	A	C1'-N9	-11.99	1.29	1.48
1	A	288	A	P-O5'	-11.98	1.41	1.59
1	A	772	U	P-O5'	-11.85	1.42	1.59
1	A	1303	C	C2'-C1'	-11.83	1.35	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	925	G	C1'-N9	-11.76	1.30	1.48
1	A	265	G	P-O5'	-11.68	1.42	1.59
1	A	1171	A	C1'-N9	-11.62	1.30	1.48
1	A	193	C	P-O5'	-11.56	1.42	1.59
1	A	1392	G	C1'-N9	-11.55	1.30	1.48
1	A	1502	A	C1'-N9	-11.46	1.29	1.47
1	A	781	A	C1'-N9	-11.42	1.30	1.48
1	A	578	C	P-O5'	-11.41	1.42	1.59
1	A	1239	A	C3'-C2'	-11.39	1.35	1.52
1	A	450	G	P-O5'	-11.34	1.42	1.59
1	A	464	U	O3'-P	-11.24	1.44	1.61
1	A	1399	C	O3'-P	-11.22	1.44	1.61
1	A	187	G	P-O5'	-11.21	1.43	1.59
4	D	46	ARG	CA-C	-11.21	1.42	1.53
1	A	904	U	P-O5'	-11.17	1.43	1.59
1	A	880	C	P-O5'	-11.12	1.43	1.59
1	A	1004	A	C4'-C3'	-11.12	1.35	1.52
1	A	76	G	O5'-C5'	-11.12	1.25	1.42
1	A	264	C	P-O5'	-11.03	1.43	1.59
8	H	112	ASP	CA-C	-10.99	1.38	1.52
1	A	1094	G	O3'-P	-10.99	1.44	1.61
1	A	1303	C	C1'-N1	-10.96	1.32	1.48
1	A	123	U	P-O5'	-10.95	1.43	1.59
1	A	263	A	C1'-N9	-10.94	1.31	1.48
1	A	1282	C	C2'-C1'	-10.87	1.37	1.53
1	A	1506	U	C1'-N1	10.85	1.63	1.47
1	A	1171	A	O5'-C5'	-10.78	1.26	1.42
1	A	557	G	P-O5'	-10.74	1.43	1.59
1	A	1206	G	C1'-N9	-10.68	1.31	1.48
20	T	34	VAL	CA-C	-10.67	1.40	1.52
13	M	64	VAL	CA-C	-10.66	1.43	1.52
1	A	94	G	P-O5'	-10.61	1.43	1.59
17	Q	59	GLU	CA-C	-10.58	1.39	1.52
1	A	301	G	C4'-C3'	-10.58	1.36	1.52
1	A	918	A	C2'-C1'	-10.56	1.37	1.53
1	A	37	U	C1'-N1	-10.55	1.32	1.48
1	A	279	A	C4'-O4'	-10.48	1.30	1.45
1	A	70	U	C3'-O3'	-10.48	1.26	1.42
5	E	48	GLY	CA-C	-10.47	1.42	1.52
1	A	94	G	C4'-O4'	-10.45	1.29	1.45
1	A	117	G	P-O5'	-10.45	1.44	1.59
1	A	202	G	O4'-C1'	-10.45	1.25	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	Q	72	TRP	CA-C	-10.43	1.40	1.52
1	A	418	C	P-O5'	-10.39	1.44	1.59
1	A	451	A	C2'-C1'	-10.39	1.37	1.53
1	A	669	G	P-O5'	-10.39	1.44	1.59
1	A	617	G	O3'-P	-10.34	1.45	1.61
1	A	1269	A	C2'-C1'	-10.29	1.38	1.53
1	A	782	A	P-O5'	-10.24	1.44	1.59
1	A	1053	G	C2'-C1'	-10.24	1.38	1.53
1	A	1046	A	C1'-N9	-10.22	1.32	1.48
1	A	1250	A	C2'-C1'	-10.21	1.38	1.53
5	E	38	VAL	N-CA	-10.18	1.34	1.46
1	A	1408	A	P-O5'	-10.17	1.44	1.59
1	A	582	C	P-O5'	-10.14	1.44	1.59
1	A	1263	C	P-O5'	-10.12	1.44	1.59
1	A	687	A	C1'-N9	-10.11	1.31	1.47
1	A	1371	G	C1'-N9	-10.10	1.32	1.48
3	C	190	THR	CA-C	-10.04	1.41	1.52
10	J	11	LYS	CA-C	-10.04	1.40	1.52
1	A	265	G	O4'-C1'	-10.02	1.26	1.41
1	A	1256	A	C2'-C1'	-10.02	1.38	1.53
1	A	1326	U	C2'-C1'	-10.01	1.38	1.53
1	A	617	G	P-O5'	-10.00	1.44	1.59
1	A	674	G	C2'-C1'	-9.99	1.38	1.53
1	A	1192	C	P-O5'	-9.98	1.44	1.59
1	A	1417	G	C2'-C1'	-9.94	1.38	1.53
1	A	94	G	O4'-C1'	-9.94	1.26	1.41
1	A	202	G	C1'-N9	-9.93	1.33	1.48
1	A	1095	U	C2'-C1'	-9.92	1.38	1.53
1	A	1157	A	C1'-N9	-9.90	1.32	1.47
1	A	947	G	P-O5'	-9.88	1.45	1.59
1	A	647	C	P-O5'	-9.87	1.45	1.59
1	A	186	C	P-O5'	-9.86	1.45	1.59
1	A	138	G	C2'-C1'	-9.84	1.38	1.53
1	A	761	G	P-O5'	-9.83	1.45	1.59
1	A	1269	A	C1'-N9	-9.82	1.33	1.48
1	A	1170	A	O3'-P	-9.81	1.46	1.61
1	A	644	U	P-O5'	-9.81	1.45	1.59
6	F	65	GLU	CA-C	-9.80	1.40	1.53
1	A	1092	A	C2'-C1'	-9.78	1.38	1.53
17	Q	72	TRP	N-CA	-9.78	1.34	1.46
1	A	194	C	C1'-N1	-9.77	1.33	1.48
1	A	1482	G	C2'-C1'	-9.76	1.38	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	686	U	C2'-C1'	-9.75	1.38	1.53
1	A	1126	U	C2'-C1'	-9.75	1.38	1.53
1	A	1237	C	O3'-P	-9.73	1.46	1.61
1	A	429	U	C1'-N1	-9.73	1.32	1.47
1	A	263	A	O3'-P	-9.73	1.46	1.61
1	A	193	C	C1'-N1	-9.71	1.33	1.48
1	A	1371	G	O3'-P	-9.70	1.46	1.61
1	A	46	G	C2'-C1'	-9.68	1.38	1.53
1	A	1434	A	C1'-N9	-9.65	1.33	1.48
1	A	413	G	C2'-C1'	-9.65	1.38	1.53
1	A	46	G	O3'-P	-9.64	1.46	1.61
1	A	254	G	P-O5'	-9.64	1.45	1.59
1	A	1308	U	P-O5'	-9.62	1.45	1.59
1	A	559	A	C1'-N9	-9.62	1.32	1.47
20	T	55	PRO	CA-C	-9.61	1.38	1.52
1	A	1502	A	C4'-O4'	-9.60	1.31	1.45
1	A	938	A	C1'-N9	-9.56	1.33	1.48
1	A	1304	G	C1'-N9	-9.56	1.33	1.48
2	B	91	VAL	CA-C	-9.56	1.40	1.52
1	A	1258	G	C2'-C1'	-9.55	1.39	1.53
1	A	1334	G	C1'-N9	-9.54	1.33	1.48
1	A	537	G	P-O5'	-9.53	1.45	1.59
1	A	1268	G	C2'-C1'	-9.53	1.39	1.53
3	C	58	ARG	N-CA	-9.53	1.37	1.46
3	C	59	PRO	CA-C	-9.52	1.42	1.52
1	A	426	U	P-O5'	-9.49	1.45	1.59
1	A	543	U	C1'-N1	-9.49	1.34	1.48
15	O	15	GLY	CA-C	-9.48	1.43	1.52
1	A	81	A	O3'-P	-9.47	1.47	1.61
8	H	37	ASN	CA-C	-9.45	1.40	1.52
5	E	14	LEU	CA-C	-9.44	1.41	1.52
1	A	959	A	C1'-N9	-9.43	1.33	1.48
1	A	181	A	C3'-C2'	-9.43	1.38	1.52
5	E	66	ALA	CA-C	-9.43	1.40	1.52
1	A	865	A	C2'-C1'	-9.42	1.39	1.53
1	A	543	U	C2'-C1'	-9.41	1.39	1.53
7	G	4	ARG	CA-CB	9.41	1.62	1.53
4	D	140	ASP	CA-C	-9.40	1.41	1.52
1	A	37	U	P-O5'	-9.39	1.45	1.59
17	Q	60	ILE	N-CA	-9.38	1.35	1.46
1	A	614	C	C1'-N1	-9.37	1.34	1.48
1	A	69	G	O4'-C1'	-9.36	1.27	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	194	C	P-O5'	-9.34	1.45	1.59
1	A	1355	G	C3'-C2'	-9.34	1.38	1.52
1	A	453	G	C1'-N9	-9.33	1.33	1.48
1	A	1067	A	C2'-C1'	-9.33	1.39	1.53
1	A	1277	C	C2'-C1'	-9.32	1.39	1.53
1	A	603	U	P-O5'	-9.31	1.45	1.59
1	A	194	C	O3'-P	-9.30	1.47	1.61
1	A	410	G	O3'-P	-9.30	1.47	1.61
1	A	373	A	C2'-C1'	-9.30	1.39	1.53
1	A	1005	A	P-O5'	-9.29	1.45	1.59
1	A	1181	G	P-O5'	-9.28	1.45	1.59
1	A	184	G	P-O5'	-9.25	1.45	1.59
1	A	602	A	P-O5'	-9.25	1.45	1.59
1	A	1304	G	C2'-C1'	-9.24	1.39	1.53
1	A	254	G	C2'-C1'	-9.24	1.39	1.53
1	A	1055	A	P-O5'	-9.24	1.45	1.59
1	A	751	U	C1'-N1	-9.24	1.34	1.48
3	C	62	SER	CA-C	-9.23	1.42	1.53
1	A	1216	A	C1'-N9	-9.22	1.34	1.48
1	A	319	G	C1'-N9	-9.22	1.34	1.48
1	A	1432	G	O3'-P	-9.20	1.47	1.61
1	A	857	C	P-O5'	-9.20	1.46	1.59
1	A	935	A	C2'-C1'	-9.19	1.39	1.53
1	A	1502	A	O4'-C1'	-9.19	1.28	1.42
1	A	823	C	P-O5'	-9.17	1.46	1.59
5	E	46	GLY	CA-C	-9.17	1.42	1.51
1	A	180	U	P-O5'	-9.13	1.46	1.59
1	A	714	G	C2'-C1'	-9.13	1.39	1.53
1	A	496	A	C1'-N9	-9.13	1.34	1.48
1	A	781	A	P-O5'	-9.10	1.46	1.59
1	A	145	G	C1'-N9	-9.09	1.34	1.48
1	A	299	G	C2'-C1'	-9.09	1.39	1.53
1	A	1399	C	C1'-N1	-9.09	1.33	1.47
1	A	452	A	C2'-C1'	-9.08	1.39	1.53
1	A	47	C	P-O5'	-9.08	1.46	1.59
1	A	535	A	O3'-P	-9.08	1.47	1.61
1	A	704	A	P-O5'	-9.06	1.46	1.59
1	A	1406	U	C2'-C1'	-9.05	1.39	1.53
1	A	1356	G	C2'-C1'	-9.05	1.39	1.53
4	D	171	GLU	CA-C	-9.05	1.41	1.52
1	A	1266	G	C3'-C2'	-9.04	1.39	1.52
1	A	580	C	P-O5'	-9.04	1.46	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	616	G	C1'-N9	-9.03	1.34	1.48
1	A	1127	G	C1'-N9	-9.02	1.34	1.48
1	A	90	C	C2'-C1'	-9.00	1.39	1.53
1	A	1075	U	P-O5'	-8.99	1.46	1.59
17	Q	61	ARG	CA-C	-8.99	1.41	1.52
17	Q	78	VAL	CA-C	-8.99	1.41	1.52
1	A	1270	G	P-O5'	-8.98	1.46	1.59
1	A	1084	G	O3'-P	-8.97	1.47	1.61
1	A	1344	C	C2'-C1'	-8.97	1.39	1.53
3	C	64	ARG	CA-C	-8.96	1.43	1.53
1	A	72	A	P-O5'	-8.96	1.46	1.59
16	P	26	ASN	CA-C	-8.95	1.41	1.52
15	O	78	THR	CA-C	-8.95	1.41	1.52
1	A	251	G	C1'-N9	-8.94	1.33	1.47
1	A	96	U	C2'-C1'	-8.93	1.39	1.53
1	A	1303	C	C4'-C3'	-8.93	1.39	1.52
1	A	1181	G	C2'-C1'	-8.92	1.39	1.53
4	D	181	PHE	CA-C	-8.91	1.40	1.52
1	A	1004	A	O3'-P	-8.91	1.47	1.61
1	A	1237	C	P-O5'	-8.91	1.46	1.59
1	A	152	A	C3'-C2'	-8.90	1.39	1.52
1	A	1270	G	C4'-C3'	-8.90	1.39	1.52
1	A	1097	C	C2'-C1'	-8.89	1.40	1.53
2	B	184	ALA	CA-C	-8.88	1.41	1.52
1	A	191	G	O4'-C1'	-8.88	1.28	1.41
5	E	39	GLY	CA-C	-8.88	1.39	1.51
1	A	480	U	C1'-N1	-8.87	1.35	1.48
3	C	133	MET	CA-C	-8.87	1.41	1.52
1	A	289	G	P-O5'	-8.84	1.46	1.59
1	A	780	A	C2'-C1'	-8.84	1.40	1.53
1	A	925	G	C3'-C2'	-8.84	1.39	1.52
17	Q	56	ASP	CA-C	-8.83	1.41	1.52
6	F	4	TYR	CA-C	-8.82	1.42	1.52
10	J	70	HIS	CA-C	-8.82	1.41	1.52
1	A	1171	A	C2'-C1'	-8.82	1.40	1.53
1	A	1102	A	C2'-C1'	-8.81	1.40	1.53
1	A	256	U	P-O5'	-8.81	1.46	1.59
6	F	35	LYS	CA-C	-8.81	1.41	1.52
1	A	1172	C	C2'-C1'	-8.80	1.40	1.53
1	A	846	G	C1'-N9	-8.80	1.34	1.48
3	C	39	ARG	CA-C	-8.76	1.41	1.52
1	A	601	G	C1'-N9	-8.76	1.34	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	729	A	C2'-C1'	-8.76	1.40	1.53
1	A	648	A	P-O5'	-8.74	1.46	1.59
20	T	42	ASP	CA-C	-8.72	1.41	1.52
1	A	617	G	C1'-N9	-8.71	1.34	1.48
1	A	584	G	P-O5'	-8.70	1.46	1.59
15	O	28	VAL	CA-C	-8.69	1.42	1.52
1	A	602	A	C1'-N9	-8.69	1.34	1.48
4	D	170	LEU	CA-C	-8.68	1.42	1.52
1	A	348	G	C4'-C3'	-8.68	1.39	1.52
1	A	1522	U	C3'-C2'	-8.68	1.39	1.52
1	A	781	A	C4'-C3'	-8.67	1.39	1.52
1	A	1306	A	C2'-C1'	-8.67	1.40	1.53
1	A	1307	U	P-O5'	-8.66	1.46	1.59
1	A	1342	C	C2'-C1'	-8.64	1.40	1.53
17	Q	63	CYS	CA-C	-8.64	1.42	1.52
1	A	613	C	C1'-N1	-8.64	1.35	1.48
1	A	1482	G	P-O5'	-8.64	1.46	1.59
16	P	25	ARG	CA-C	-8.63	1.41	1.52
1	A	287	U	P-O5'	-8.63	1.46	1.59
8	H	59	GLU	CA-C	-8.62	1.42	1.52
1	A	1091	U	O3'-P	-8.62	1.48	1.61
1	A	500	G	P-O5'	-8.61	1.46	1.59
1	A	1447	A	C3'-C2'	-8.61	1.39	1.52
1	A	1053	G	C4'-O4'	-8.61	1.32	1.45
1	A	1298	U	O3'-P	-8.61	1.48	1.61
1	A	1251	A	O3'-P	-8.61	1.48	1.61
2	B	199	ILE	CA-C	-8.61	1.46	1.52
1	A	344	A	O3'-P	-8.60	1.48	1.61
1	A	1501	C	C4'-C3'	-8.60	1.39	1.52
1	A	1083	U	O3'-P	-8.59	1.48	1.61
1	A	1170	A	C2'-C1'	-8.58	1.40	1.53
11	K	60	PHE	CA-C	-8.58	1.41	1.52
1	A	733	G	C1'-N9	-8.58	1.35	1.48
1	A	469	C	C2'-C1'	-8.57	1.40	1.53
1	A	1091	U	C4'-C3'	-8.57	1.39	1.52
1	A	1380	U	O3'-P	-8.56	1.48	1.61
17	Q	68	LYS	CA-C	-8.56	1.41	1.52
1	A	178	C	P-O5'	-8.56	1.47	1.59
1	A	121	U	O3'-P	-8.56	1.48	1.61
1	A	365	U	C3'-C2'	-8.56	1.40	1.52
5	E	37	VAL	CA-C	-8.55	1.42	1.52
1	A	878	A	C2'-C1'	-8.55	1.40	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	320	A	C1'-N9	-8.54	1.34	1.47
1	A	1500	A	P-O5'	-8.54	1.47	1.59
1	A	1060	U	P-O5'	-8.54	1.47	1.59
1	A	279	A	C1'-N9	-8.54	1.34	1.47
1	A	864	A	C2'-C1'	-8.54	1.40	1.53
1	A	860	A	P-O5'	-8.53	1.47	1.59
1	A	90	C	P-O5'	-8.52	1.47	1.59
1	A	1337	G	C2'-C1'	-8.52	1.40	1.53
1	A	451	A	P-O5'	-8.50	1.47	1.59
9	I	18	VAL	CA-C	-8.49	1.42	1.52
1	A	788	U	C2'-C1'	-8.48	1.40	1.53
2	B	88	GLN	CA-C	-8.48	1.44	1.53
1	A	1313	U	P-O5'	-8.47	1.47	1.59
19	S	54	ARG	CA-C	-8.47	1.44	1.52
1	A	79	G	P-O5'	-8.47	1.47	1.59
1	A	182	A	P-O5'	-8.47	1.47	1.59
17	Q	60	ILE	CA-C	-8.47	1.42	1.52
1	A	415	A	P-O5'	-8.47	1.47	1.59
1	A	429	U	C2'-C1'	-8.47	1.40	1.53
1	A	657	U	P-O5'	-8.46	1.47	1.59
8	H	112	ASP	N-CA	-8.46	1.36	1.46
1	A	203	G	O3'-P	-8.46	1.48	1.61
1	A	417	G	P-O5'	-8.46	1.47	1.59
8	H	47	ASP	CA-C	-8.46	1.42	1.52
1	A	161	A	C2'-C1'	-8.45	1.40	1.53
1	A	1228	C	C2'-C1'	-8.44	1.40	1.53
1	A	622	A	C1'-N9	-8.44	1.35	1.48
1	A	1304	G	P-O5'	-8.43	1.47	1.59
1	A	1092	A	O3'-P	-8.42	1.48	1.61
1	A	1477	U	P-O5'	-8.41	1.47	1.59
1	A	585	G	P-O5'	-8.41	1.47	1.59
1	A	1084	G	C4'-O4'	-8.41	1.32	1.45
1	A	246	A	P-O5'	-8.41	1.47	1.59
1	A	38	G	C1'-N9	-8.40	1.35	1.48
1	A	45	G	C1'-N9	-8.40	1.35	1.48
13	M	24	VAL	CA-C	-8.40	1.42	1.52
4	D	97	LEU	CA-C	-8.39	1.42	1.52
1	A	22	G	O3'-P	-8.39	1.48	1.61
1	A	1435	G	C2'-C1'	-8.39	1.40	1.53
5	E	12	GLU	CA-C	-8.39	1.42	1.52
1	A	484	G	C1'-N9	-8.38	1.34	1.47
13	M	21	ILE	CA-C	-8.38	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	731	G	C2'-C1'	-8.38	1.40	1.53
1	A	1139	G	O3'-P	-8.38	1.48	1.61
1	A	1237	C	C2'-C1'	-8.37	1.40	1.53
1	A	1279	G	C2'-C1'	-8.37	1.40	1.53
17	Q	64	ARG	CA-C	-8.36	1.44	1.53
1	A	1348	U	C2'-C1'	-8.36	1.40	1.53
1	A	61	G	C2'-C1'	-8.36	1.40	1.53
1	A	816	A	P-O5'	-8.35	1.47	1.59
15	O	77	TYR	CA-C	-8.35	1.42	1.52
1	A	264	C	C1'-N1	-8.34	1.35	1.48
1	A	1519	A	C2'-C1'	-8.34	1.40	1.53
1	A	641	U	P-O5'	-8.33	1.47	1.59
1	A	776	G	P-O5'	-8.33	1.47	1.59
13	M	22	TYR	CA-C	-8.33	1.41	1.52
1	A	380	G	P-O5'	-8.32	1.47	1.59
22	W	64	CYS	CA-C	-8.32	1.42	1.52
1	A	165	G	P-O5'	-8.32	1.47	1.59
1	A	301	G	C2'-C1'	-8.32	1.40	1.53
1	A	513	C	P-O5'	-8.32	1.47	1.59
1	A	1260	G	P-O5'	-8.31	1.47	1.59
9	I	17	ARG	CA-C	-8.31	1.42	1.52
1	A	985	C	C2'-C1'	-8.30	1.40	1.53
1	A	1130	A	C2'-C1'	-8.30	1.40	1.53
17	Q	67	SER	CA-C	-8.30	1.42	1.52
1	A	1241	G	C5'-C4'	8.30	1.63	1.51
1	A	130	A	C1'-N9	-8.29	1.34	1.47
1	A	866	C	P-O5'	-8.29	1.47	1.59
1	A	1256	A	C1'-N9	-8.29	1.34	1.47
22	W	82	ARG	CA-C	-8.28	1.44	1.52
1	A	62	U	P-O5'	-8.27	1.47	1.59
1	A	1067	A	C1'-N9	-8.27	1.34	1.47
1	A	1129	C	C1'-N1	-8.27	1.36	1.48
9	I	19	PHE	N-CA	-8.27	1.36	1.46
1	A	203	G	C1'-N9	-8.26	1.35	1.48
1	A	81	A	O4'-C1'	-8.26	1.29	1.42
1	A	276	G	O5'-C5'	-8.26	1.30	1.42
1	A	798	U	C1'-N1	-8.25	1.36	1.48
1	A	368	U	O3'-P	-8.24	1.48	1.61
1	A	875	U	C2'-C1'	-8.23	1.41	1.53
1	A	1042	A	P-O5'	-8.23	1.47	1.59
1	A	1115	U	P-O5'	-8.23	1.47	1.59
1	A	1251	A	C2'-C1'	-8.23	1.40	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1468	A	C2'-C1'	-8.22	1.41	1.53
4	D	180	THR	CA-C	-8.22	1.42	1.53
1	A	1053	G	P-O5'	-8.22	1.47	1.59
1	A	850	U	C2'-C1'	-8.20	1.41	1.53
1	A	274	A	P-O5'	-8.20	1.47	1.59
1	A	1521	C	C2'-C1'	-8.20	1.41	1.53
3	C	134	LYS	CA-C	-8.20	1.42	1.52
1	A	1094	G	P-O5'	-8.19	1.47	1.59
1	A	1215	G	C1'-N9	-8.19	1.35	1.48
1	A	861	G	P-O5'	-8.19	1.47	1.59
1	A	1085	U	P-O5'	-8.19	1.47	1.59
1	A	94	G	C1'-N9	-8.19	1.35	1.48
17	Q	7	LEU	CA-C	-8.19	1.42	1.52
1	A	925	G	P-O5'	-8.18	1.47	1.59
6	F	64	VAL	CA-C	-8.18	1.42	1.52
1	A	46	G	C3'-O3'	-8.18	1.29	1.42
1	A	1124	G	C2'-C1'	-8.18	1.41	1.53
1	A	162	A	C1'-N9	-8.17	1.35	1.48
1	A	655	A	C2'-C1'	-8.17	1.41	1.53
1	A	1230	C	P-O5'	-8.17	1.47	1.59
1	A	72	A	C5'-C4'	-8.16	1.39	1.51
5	E	79	THR	CA-C	-8.16	1.42	1.52
5	E	60	GLN	CA-C	-8.16	1.42	1.52
1	A	1172	C	C4'-C3'	-8.16	1.40	1.52
22	W	311	ALA	CA-C	-8.15	1.42	1.52
1	A	1184	G	C4'-O4'	-8.15	1.33	1.45
1	A	1399	C	C2'-C1'	-8.15	1.40	1.53
1	A	233	C	C3'-C2'	-8.15	1.40	1.52
1	A	1157	A	C4'-O4'	-8.15	1.33	1.45
10	J	14	ASP	CA-C	-8.15	1.43	1.52
1	A	179	A	P-O5'	-8.14	1.47	1.59
1	A	404	G	C3'-C2'	-8.14	1.40	1.52
1	A	1239	A	O4'-C1'	-8.13	1.29	1.42
1	A	142	G	C3'-C2'	-8.13	1.40	1.52
1	A	1457	G	P-O5'	-8.13	1.47	1.59
3	C	31	ASN	CA-C	-8.13	1.42	1.52
1	A	1032	G	O3'-P	-8.12	1.49	1.61
1	A	1264	U	P-O5'	-8.12	1.47	1.59
22	W	48	PHE	CA-C	-8.12	1.44	1.53
1	A	1206	G	P-O5'	-8.11	1.47	1.59
1	A	1184	G	P-O5'	-8.11	1.47	1.59
1	A	1213	A	C2'-C1'	-8.10	1.41	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1241	G	C1'-N9	-8.10	1.35	1.48
1	A	271	C	P-O5'	-8.10	1.47	1.59
1	A	1373	G	C1'-N9	-8.10	1.35	1.48
3	C	3	LYS	CA-C	-8.09	1.42	1.53
1	A	1093	A	C2'-C1'	-8.09	1.41	1.53
2	B	89	PHE	CA-C	-8.09	1.41	1.53
1	A	182	A	O5'-C5'	-8.08	1.30	1.42
1	A	182	A	C2'-C1'	-8.08	1.41	1.53
1	A	1531	A	P-O5'	-8.07	1.47	1.59
1	A	1518	A	C2'-C1'	-8.06	1.41	1.53
1	A	614	C	C2'-C1'	-8.06	1.41	1.53
5	E	50	GLY	N-CA	-8.06	1.36	1.44
1	A	1370	G	C1'-N9	-8.05	1.35	1.48
1	A	960	U	C2'-C1'	-8.04	1.41	1.53
1	A	1447	A	C2'-C1'	-8.03	1.41	1.53
1	A	986	U	P-O5'	-8.03	1.47	1.59
1	A	1213	A	C1'-N9	-8.03	1.35	1.48
1	A	300	A	C2'-C1'	-8.02	1.41	1.53
9	I	105	ARG	N-CA	-8.02	1.39	1.46
1	A	471	U	C3'-C2'	-8.02	1.40	1.52
1	A	664	G	O3'-P	-8.01	1.49	1.61
1	A	1523	G	P-O5'	-8.00	1.47	1.59
1	A	1236	A	C1'-N9	-8.00	1.35	1.48
1	A	468	A	C2'-C1'	-7.99	1.41	1.53
1	A	560	A	C1'-N9	-7.99	1.34	1.47
1	A	1371	G	C3'-C2'	-7.99	1.40	1.52
1	A	391	G	O4'-C1'	-7.99	1.29	1.41
1	A	483	C	C3'-C2'	-7.99	1.40	1.52
1	A	272	C	C2'-C1'	-7.98	1.41	1.53
1	A	1197	A	O3'-P	-7.98	1.49	1.61
1	A	900	A	C2'-C1'	-7.98	1.41	1.53
1	A	813	U	C2'-C1'	-7.97	1.41	1.53
1	A	1144	G	O3'-P	-7.97	1.49	1.61
1	A	815	A	O3'-P	-7.97	1.49	1.61
18	R	69	TYR	CA-C	-7.97	1.43	1.53
1	A	559	A	O3'-P	-7.97	1.49	1.61
1	A	145	G	P-O5'	-7.97	1.47	1.59
7	G	94	ARG	CA-C	-7.97	1.43	1.53
5	E	54	GLU	CA-C	-7.97	1.42	1.52
4	D	178	GLU	CA-C	-7.96	1.43	1.52
15	O	16	ARG	N-CA	-7.96	1.40	1.47
1	A	452	A	C1'-N9	-7.96	1.36	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	266	G	C4'-O4'	-7.96	1.33	1.45
1	A	1160	G	C1'-N9	-7.95	1.36	1.48
1	A	189	A	C2'-C1'	-7.94	1.41	1.53
1	A	613	C	C2'-C1'	-7.94	1.41	1.53
1	A	1025	U	C2'-C1'	-7.94	1.41	1.53
1	A	1313	U	C3'-C2'	-7.94	1.40	1.52
22	W	77	ASP	CA-C	-7.94	1.42	1.52
8	H	40	LYS	CA-C	-7.94	1.43	1.52
1	A	887	G	C1'-N9	-7.94	1.36	1.48
1	A	894	G	P-O5'	-7.93	1.47	1.59
1	A	391	G	O3'-P	-7.93	1.49	1.61
1	A	788	U	C1'-N1	-7.93	1.36	1.48
1	A	1278	G	O3'-P	-7.93	1.49	1.61
1	A	1305	G	C3'-C2'	-7.92	1.40	1.52
1	A	218	U	O3'-P	-7.92	1.49	1.61
1	A	144	G	P-O5'	-7.91	1.47	1.59
1	A	668	G	C2'-C1'	-7.91	1.41	1.53
1	A	368	U	C2'-C1'	-7.90	1.41	1.53
1	A	599	C	P-O5'	-7.90	1.47	1.59
1	A	1399	C	C3'-O3'	-7.90	1.31	1.43
1	A	224	U	C2'-C1'	-7.89	1.41	1.53
1	A	1222	G	C1'-N9	-7.89	1.36	1.48
1	A	1307	U	O3'-P	-7.89	1.49	1.61
1	A	655	A	C1'-N9	-7.89	1.36	1.48
1	A	1090	U	C2'-C1'	-7.89	1.41	1.53
8	H	87	ARG	CA-C	-7.89	1.42	1.53
3	C	37	LYS	CA-C	-7.88	1.40	1.52
1	A	207	C	C4'-O4'	-7.88	1.33	1.45
10	J	10	LEU	CA-C	-7.88	1.43	1.52
17	Q	11	VAL	CA-C	-7.87	1.42	1.52
1	A	288	A	C3'-C2'	-7.87	1.41	1.52
1	A	1181	G	O4'-C1'	-7.87	1.30	1.42
1	A	599	C	C3'-C2'	-7.86	1.41	1.52
1	A	1157	A	C2'-C1'	-7.86	1.41	1.53
1	A	120	A	C1'-N9	-7.86	1.36	1.48
1	A	1162	C	C2'-C1'	-7.86	1.41	1.53
1	A	1228	C	O3'-P	-7.86	1.49	1.61
1	A	411	A	C1'-N9	-7.86	1.36	1.48
1	A	638	U	O3'-P	-7.86	1.49	1.61
1	A	1125	U	C2'-C1'	-7.86	1.41	1.53
3	C	98	ALA	CA-C	-7.86	1.42	1.52
17	Q	62	GLU	CA-C	-7.85	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	374	A	C2'-C1'	-7.85	1.41	1.53
1	A	1253	G	C3'-C2'	-7.85	1.41	1.52
3	C	97	PRO	CA-C	-7.84	1.43	1.52
1	A	1015	G	C2'-C1'	-7.84	1.41	1.53
1	A	1447	A	O3'-P	-7.84	1.49	1.61
1	A	39	G	C2'-C1'	-7.83	1.41	1.53
1	A	329	A	C1'-N9	7.83	1.58	1.47
1	A	861	G	C2'-C1'	-7.83	1.41	1.53
1	A	1004	A	C2'-C1'	-7.83	1.41	1.53
1	A	1348	U	C1'-N1	-7.83	1.36	1.48
1	A	413	G	C1'-N9	-7.83	1.35	1.47
1	A	904	U	C2'-C1'	-7.82	1.41	1.53
5	E	20	VAL	N-CA	-7.81	1.36	1.46
1	A	495	A	C1'-N9	-7.81	1.35	1.47
1	A	1296	C	C2'-C1'	-7.81	1.41	1.53
1	A	1440	U	C4'-O4'	7.80	1.57	1.45
2	B	209	VAL	CA-C	-7.80	1.42	1.52
1	A	470	C	C1'-N1	-7.80	1.36	1.48
1	A	193	C	O3'-P	-7.80	1.49	1.61
1	A	869	G	P-O5'	-7.80	1.48	1.59
1	A	1237	C	C4'-C3'	-7.80	1.40	1.52
1	A	688	G	O4'-C1'	-7.79	1.29	1.41
1	A	64	G	C1'-N9	-7.79	1.36	1.48
1	A	1279	G	O3'-P	-7.79	1.49	1.61
1	A	59	A	C1'-N9	-7.78	1.36	1.48
1	A	262	A	O3'-P	-7.78	1.49	1.61
1	A	218	U	C4'-C3'	-7.77	1.40	1.52
1	A	410	G	C3'-C2'	-7.77	1.41	1.52
1	A	895	G	P-O5'	-7.76	1.48	1.59
1	A	343	U	P-O5'	-7.76	1.48	1.59
1	A	120	A	C4'-C3'	7.76	1.64	1.52
1	A	866	C	O3'-P	-7.76	1.49	1.61
1	A	878	A	P-O5'	-7.76	1.48	1.59
1	A	1277	C	P-O5'	-7.75	1.48	1.59
1	A	37	U	O3'-P	-7.75	1.49	1.61
1	A	266	G	C4'-C3'	-7.74	1.41	1.53
1	A	986	U	C3'-C2'	-7.74	1.41	1.52
12	L	6	LEU	CA-C	-7.74	1.42	1.52
1	A	31	G	C2'-C1'	-7.74	1.41	1.53
1	A	453	G	O4'-C1'	-7.74	1.30	1.41
10	J	48	ARG	C-N	7.74	1.43	1.33
1	A	1171	A	C4'-C3'	-7.73	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	675	A	C3'-C2'	-7.73	1.41	1.52
5	E	13	LYS	CA-C	-7.73	1.43	1.52
10	J	74	VAL	CA-C	-7.73	1.43	1.52
1	A	1344	C	O3'-P	-7.73	1.49	1.61
1	A	181	A	O4'-C1'	-7.73	1.30	1.41
1	A	371	A	C3'-C2'	-7.73	1.41	1.52
1	A	777	A	C2'-C1'	-7.73	1.41	1.53
5	E	34	ALA	CA-C	-7.73	1.43	1.52
1	A	770	C	C2'-C1'	-7.72	1.41	1.53
5	E	134	ASN	CA-C	-7.72	1.44	1.52
13	M	27	THR	CA-C	-7.72	1.43	1.52
13	M	89	ARG	CA-C	-7.72	1.42	1.52
1	A	1102	A	O3'-P	-7.72	1.49	1.61
1	A	245	U	O3'-P	-7.72	1.49	1.61
1	A	635	A	P-O5'	-7.72	1.48	1.59
8	H	110	MET	CA-C	-7.72	1.43	1.52
5	E	19	ARG	CA-C	-7.71	1.43	1.52
1	A	544	G	C1'-N9	-7.71	1.36	1.48
1	A	877	G	C1'-N9	-7.71	1.36	1.48
1	A	339	C	P-O5'	-7.71	1.48	1.59
1	A	1470	U	C2'-C1'	-7.70	1.41	1.53
1	A	419	C	C2'-C1'	-7.70	1.41	1.53
1	A	562	U	O3'-P	-7.70	1.49	1.61
7	G	47	GLU	CA-C	-7.70	1.43	1.52
11	K	120	CYS	CA-C	-7.70	1.42	1.52
1	A	1274	A	C2'-C1'	-7.69	1.41	1.53
1	A	634	C	O3'-P	-7.69	1.49	1.61
1	A	1141	C	C2'-C1'	-7.68	1.41	1.53
5	E	18	ASN	CA-C	-7.68	1.43	1.52
1	A	579	A	C2'-C1'	-7.68	1.41	1.53
1	A	1499	A	C2'-C1'	-7.68	1.41	1.53
1	A	380	G	C5'-C4'	-7.67	1.39	1.51
1	A	1256	A	O3'-P	-7.67	1.49	1.61
1	A	753	A	O3'-P	-7.66	1.49	1.61
2	B	197	PHE	CA-C	-7.66	1.43	1.52
1	A	701	U	C4'-C3'	-7.66	1.41	1.52
1	A	163	C	C2'-C1'	-7.66	1.41	1.53
1	A	1067	A	O3'-P	-7.66	1.49	1.61
10	J	12	ALA	CA-C	-7.65	1.43	1.52
1	A	181	A	C1'-N9	-7.65	1.36	1.48
1	A	247	G	C1'-N9	-7.65	1.36	1.48
1	A	253	A	C1'-N9	-7.65	1.36	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	246	A	C1'-N9	-7.64	1.35	1.47
1	A	1434	A	P-O5'	-7.64	1.48	1.59
1	A	1099	G	C2'-C1'	-7.64	1.41	1.53
6	F	81	ASN	CA-C	-7.64	1.43	1.52
5	E	38	VAL	CA-C	-7.64	1.43	1.52
1	A	456	A	C3'-C2'	-7.63	1.41	1.52
1	A	830	G	P-O5'	-7.63	1.48	1.59
1	A	1288	A	C2'-C1'	-7.63	1.42	1.53
11	K	99	LEU	CA-C	-7.63	1.44	1.52
1	A	700	G	C2'-C1'	-7.63	1.42	1.53
14	N	63	CYS	CA-C	-7.63	1.43	1.52
1	A	69	G	C4'-O4'	-7.62	1.34	1.45
1	A	245	U	C3'-O3'	-7.62	1.30	1.42
1	A	1102	A	C4'-C3'	-7.62	1.41	1.52
13	M	106	ARG	N-CA	-7.62	1.36	1.46
1	A	939	G	C3'-C2'	-7.61	1.41	1.52
1	A	471	U	P-O5'	-7.61	1.48	1.59
8	H	38	VAL	CA-CB	-7.61	1.45	1.54
1	A	1191	A	P-O5'	-7.60	1.48	1.59
1	A	1323	G	C2'-C1'	-7.60	1.42	1.53
1	A	1507	A	C2'-C1'	-7.60	1.42	1.53
11	K	22	ILE	CA-C	-7.60	1.42	1.52
13	M	53	ASP	CA-C	-7.60	1.42	1.52
1	A	700	G	C3'-C2'	-7.60	1.41	1.52
1	A	894	G	C1'-N9	-7.60	1.36	1.48
1	A	616	G	C2'-C1'	-7.60	1.42	1.53
1	A	1523	G	C3'-C2'	-7.60	1.41	1.52
1	A	137	U	C3'-C2'	-7.60	1.41	1.52
1	A	529	G	C2'-C1'	-7.60	1.42	1.53
1	A	1252	A	C2'-C1'	-7.60	1.42	1.53
1	A	1380	U	C2'-C1'	-7.59	1.42	1.53
3	C	114	LEU	CA-C	-7.59	1.43	1.52
9	I	69	GLY	CA-C	-7.59	1.41	1.51
1	A	146	G	P-O5'	-7.59	1.48	1.59
1	A	1053	G	O4'-C1'	-7.58	1.30	1.41
1	A	16	A	C1'-N9	-7.58	1.36	1.48
1	A	103	U	C3'-C2'	-7.58	1.41	1.52
1	A	746	A	C2'-C1'	-7.58	1.42	1.53
1	A	1522	U	C2'-C1'	-7.57	1.42	1.53
1	A	701	U	C4'-O4'	-7.57	1.34	1.45
1	A	1313	U	C2'-C1'	-7.57	1.42	1.53
1	A	821	G	C2'-C1'	-7.57	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1148	U	P-O5'	-7.57	1.48	1.59
4	D	114	ARG	CA-C	-7.56	1.43	1.52
9	I	18	VAL	CA-CB	-7.56	1.45	1.54
2	B	130	LYS	CA-C	-7.56	1.42	1.52
1	A	1072	G	P-O5'	-7.56	1.48	1.59
1	A	985	C	C3'-C2'	-7.55	1.41	1.52
1	A	1057	G	C2'-C1'	-7.55	1.42	1.53
1	A	1242	G	C2'-C1'	-7.55	1.42	1.53
1	A	57	G	P-O5'	-7.55	1.48	1.59
1	A	1478	U	C2'-C1'	-7.55	1.42	1.53
1	A	483	C	O3'-P	-7.54	1.49	1.61
1	A	1523	G	C1'-N9	-7.54	1.36	1.48
1	A	52	C	C2'-C1'	-7.54	1.42	1.53
1	A	69	G	C4'-C3'	-7.54	1.41	1.52
1	A	665	A	C2'-C1'	-7.54	1.42	1.53
1	A	868	C	P-O5'	-7.53	1.48	1.59
1	A	303	A	C2'-C1'	-7.53	1.42	1.53
1	A	1096	C	C3'-C2'	-7.53	1.41	1.52
1	A	1402	C	P-O5'	-7.53	1.48	1.59
1	A	689	C	P-O5'	-7.52	1.48	1.59
1	A	241	G	P-O5'	-7.52	1.48	1.59
1	A	428	G	O4'-C1'	-7.52	1.30	1.42
1	A	679	C	C2'-C1'	-7.52	1.42	1.53
2	B	85	SER	CA-C	-7.51	1.43	1.52
1	A	243	A	C2'-C1'	-7.50	1.42	1.53
11	K	42	GLY	CA-C	-7.50	1.43	1.51
1	A	577	G	C1'-N9	-7.49	1.36	1.48
1	A	1283	U	C2'-C1'	-7.49	1.42	1.53
1	A	1434	A	C2'-C1'	-7.49	1.42	1.53
1	A	449	G	O3'-P	-7.49	1.50	1.61
1	A	1237	C	C4'-O4'	-7.49	1.34	1.45
1	A	1504	G	C1'-N9	-7.49	1.35	1.47
1	A	739	C	P-O5'	-7.48	1.48	1.59
12	L	80	LEU	CA-C	-7.48	1.43	1.52
13	M	23	GLY	CA-C	-7.48	1.41	1.51
1	A	1343	G	C2'-C1'	-7.48	1.42	1.53
1	A	1514	G	C2'-C1'	-7.47	1.42	1.53
1	A	1354	U	P-O5'	-7.47	1.48	1.59
1	A	1215	G	C2'-C1'	-7.47	1.42	1.53
2	B	90	PHE	N-CA	-7.47	1.36	1.45
17	Q	37	ILE	CA-C	-7.47	1.46	1.52
1	A	547	A	C4'-O4'	-7.46	1.34	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	O	82	GLU	CA-C	-7.46	1.42	1.52
1	A	64	G	P-O5'	-7.46	1.48	1.59
1	A	1253	G	P-O5'	-7.46	1.48	1.59
1	A	130	A	P-O5'	-7.45	1.48	1.59
1	A	1504	G	O3'-P	-7.45	1.50	1.61
1	A	262	A	C2'-C1'	-7.45	1.42	1.53
7	G	4	ARG	CD-NE	7.45	1.56	1.46
1	A	690	G	P-O5'	-7.44	1.48	1.59
1	A	1145	A	C2'-C1'	-7.44	1.42	1.53
1	A	263	A	C4'-C3'	-7.44	1.41	1.52
1	A	393	A	C2'-C1'	-7.44	1.42	1.53
1	A	888	G	P-O5'	-7.44	1.48	1.59
1	A	678	U	C3'-C2'	-7.44	1.41	1.52
1	A	1116	U	C2'-C1'	-7.44	1.42	1.53
1	A	411	A	C2'-C1'	-7.43	1.42	1.53
1	A	508	U	O3'-P	-7.43	1.50	1.61
1	A	1048	G	C1'-N9	-7.43	1.36	1.48
1	A	616	G	P-O5'	-7.43	1.48	1.59
1	A	1435	G	C3'-C2'	-7.43	1.41	1.52
1	A	1518	A	C3'-C2'	-7.43	1.41	1.52
16	P	39	PHE	CA-C	-7.43	1.44	1.52
1	A	1026	G	P-O5'	-7.43	1.48	1.59
1	A	76	G	O3'-P	-7.43	1.50	1.61
1	A	869	G	C2'-C1'	-7.42	1.42	1.53
1	A	1231	G	C4'-C3'	-7.42	1.41	1.52
1	A	1057	G	C4'-C3'	-7.41	1.41	1.52
1	A	410	G	C2'-C1'	-7.41	1.42	1.53
1	A	642	A	C2'-C1'	-7.41	1.42	1.53
1	A	82	G	C2'-C1'	-7.40	1.42	1.53
1	A	1468	A	C1'-N9	-7.40	1.36	1.48
3	C	113	LYS	CA-C	-7.39	1.42	1.52
1	A	21	G	C3'-C2'	-7.39	1.41	1.52
1	A	510	A	C1'-N9	-7.39	1.36	1.48
1	A	700	G	P-O5'	-7.38	1.48	1.59
4	D	31	CYS	N-CA	-7.38	1.36	1.46
15	O	30	LEU	CA-C	-7.38	1.43	1.52
1	A	1510	C	C3'-C2'	-7.38	1.41	1.52
15	O	23	SER	CA-C	-7.38	1.42	1.52
1	A	656	G	P-O5'	-7.38	1.48	1.59
1	A	1277	C	C3'-C2'	-7.38	1.41	1.52
1	A	147	G	C3'-C2'	-7.37	1.41	1.52
1	A	1153	G	P-O5'	-7.37	1.48	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	295	C	P-O5'	-7.37	1.48	1.59
1	A	337	G	C2'-C1'	-7.37	1.42	1.53
12	L	79	ILE	CA-C	-7.37	1.43	1.52
1	A	917	G	C2'-C1'	-7.36	1.42	1.53
1	A	1300	G	P-O5'	-7.36	1.48	1.59
1	A	1058	G	P-O5'	-7.36	1.48	1.59
1	A	483	C	C2'-C1'	-7.36	1.42	1.53
1	A	946	A	C1'-N9	-7.36	1.36	1.48
1	A	1358	U	P-O5'	-7.36	1.48	1.59
1	A	1375	A	C4'-C3'	-7.35	1.41	1.52
1	A	46	G	C1'-N9	-7.35	1.36	1.48
1	A	673	A	C2'-C1'	-7.35	1.42	1.53
1	A	1181	G	C4'-O4'	-7.35	1.34	1.45
1	A	1087	G	P-O5'	-7.35	1.48	1.59
1	A	852	G	P-O5'	-7.34	1.48	1.59
1	A	1244	G	P-O5'	-7.34	1.48	1.59
1	A	81	A	C2'-C1'	-7.33	1.42	1.53
6	F	63	ASN	CA-C	-7.33	1.44	1.52
1	A	483	C	P-O5'	-7.32	1.48	1.59
1	A	255	G	C1'-N9	-7.32	1.36	1.48
1	A	749	A	C2'-C1'	-7.32	1.42	1.53
1	A	864	A	C1'-N9	-7.32	1.36	1.48
1	A	1223	C	O4'-C1'	-7.32	1.30	1.42
1	A	1461	G	C2'-C1'	-7.32	1.42	1.53
1	A	1115	U	C2'-C1'	-7.32	1.42	1.53
1	A	97	G	C1'-N9	-7.31	1.36	1.48
1	A	916	U	C3'-C2'	-7.31	1.41	1.52
1	A	120	A	O4'-C1'	-7.31	1.30	1.41
11	K	117	HIS	CA-C	-7.31	1.44	1.52
1	A	610	U	C2'-C1'	-7.31	1.42	1.53
1	A	1374	A	C2'-C1'	-7.31	1.42	1.53
1	A	890	G	O3'-P	-7.30	1.50	1.61
1	A	1097	C	C3'-C2'	-7.30	1.41	1.52
1	A	854	U	C2'-C1'	-7.30	1.42	1.53
1	A	911	U	P-O5'	-7.30	1.48	1.59
1	A	1111	A	P-O5'	-7.30	1.48	1.59
4	D	179	GLY	CA-C	-7.30	1.41	1.51
1	A	223	A	C2'-C1'	-7.30	1.42	1.53
1	A	348	G	O3'-P	-7.30	1.50	1.61
4	D	129	VAL	CA-C	-7.29	1.44	1.52
1	A	314	C	P-O5'	-7.29	1.48	1.59
1	A	22	G	C3'-C2'	-7.29	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	L	26	CYS	CA-C	-7.29	1.43	1.52
17	Q	16	MET	N-CA	-7.28	1.36	1.46
2	B	29	PHE	N-CA	-7.28	1.37	1.46
4	D	54	LEU	CA-C	-7.28	1.43	1.52
12	L	10	PRO	C-N	7.28	1.43	1.33
1	A	96	U	O3'-P	-7.28	1.50	1.61
1	A	464	U	C2'-C1'	-7.27	1.42	1.53
1	A	371	A	P-O5'	-7.27	1.48	1.59
1	A	851	G	P-O5'	-7.27	1.48	1.59
1	A	45	G	C3'-C2'	-7.27	1.41	1.52
1	A	205	A	C4'-C3'	-7.27	1.41	1.52
5	E	59	ILE	CA-C	-7.26	1.43	1.52
1	A	617	G	C3'-C2'	-7.26	1.41	1.52
1	A	337	G	P-O5'	-7.26	1.48	1.59
1	A	566	G	C2'-C1'	-7.26	1.42	1.53
1	A	1303	C	C4'-O4'	-7.26	1.34	1.45
1	A	391	G	C1'-N9	-7.25	1.37	1.48
1	A	1184	G	C1'-N9	-7.25	1.37	1.48
1	A	384	G	P-O5'	-7.25	1.48	1.59
1	A	925	G	C2'-C1'	-7.25	1.42	1.53
16	P	81	ALA	N-CA	-7.25	1.37	1.46
1	A	610	U	O3'-P	-7.25	1.50	1.61
17	Q	39	ARG	CA-C	-7.25	1.43	1.52
1	A	1296	C	C3'-C2'	-7.24	1.41	1.52
1	A	1520	C	C2'-C1'	-7.24	1.42	1.53
1	A	1418	A	C3'-C2'	-7.24	1.41	1.52
1	A	1370	G	O4'-C1'	-7.24	1.30	1.41
1	A	928	G	C2'-C1'	-7.24	1.42	1.53
1	A	1095	U	P-O5'	-7.24	1.48	1.59
20	T	38	ILE	CA-C	-7.23	1.44	1.52
1	A	116	A	C2'-C1'	-7.23	1.42	1.53
1	A	969	A	C2'-C1'	-7.23	1.42	1.53
1	A	1242	G	P-O5'	-7.23	1.49	1.59
1	A	466	A	C2'-C1'	-7.23	1.42	1.53
1	A	1080	A	C4'-O4'	-7.23	1.34	1.45
1	A	862	C	P-O5'	-7.22	1.49	1.59
20	T	46	ALA	CA-C	-7.22	1.43	1.52
1	A	1036	A	C2'-C1'	-7.21	1.42	1.53
1	A	1383	C	P-O5'	-7.21	1.49	1.59
1	A	1270	G	O3'-P	-7.21	1.50	1.61
1	A	1486	G	P-O5'	-7.21	1.49	1.59
1	A	201	G	P-O5'	-7.20	1.49	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1473	G	C1'-N9	-7.20	1.37	1.48
1	A	24	U	C2'-C1'	-7.19	1.42	1.53
1	A	386	C	P-O5'	-7.19	1.49	1.59
1	A	301	G	C3'-C2'	-7.18	1.42	1.52
1	A	655	A	P-O5'	-7.18	1.49	1.59
1	A	1202	U	C2'-C1'	-7.18	1.42	1.53
1	A	789	U	C2'-C1'	-7.18	1.42	1.53
1	A	958	A	P-O5'	-7.18	1.49	1.59
1	A	1140	C	C4'-O4'	7.18	1.56	1.45
1	A	668	G	C1'-N9	-7.18	1.37	1.48
17	Q	73	THR	CA-C	-7.17	1.43	1.52
1	A	118	U	P-O5'	-7.17	1.49	1.59
1	A	848	C	C2'-C1'	-7.17	1.42	1.53
1	A	207	C	O4'-C1'	-7.17	1.30	1.41
1	A	1484	C	C2'-C1'	-7.17	1.42	1.53
1	A	1350	A	C2'-C1'	-7.17	1.42	1.53
1	A	1440	U	C3'-C2'	-7.17	1.42	1.52
2	B	84	LEU	CA-C	-7.17	1.43	1.52
3	C	35	ASP	CA-C	-7.17	1.43	1.52
1	A	619	U	O3'-P	-7.16	1.50	1.61
9	I	13	SER	CA-C	-7.16	1.44	1.53
1	A	1527	U	C4'-C3'	-7.16	1.41	1.52
1	A	1098	C	P-O5'	-7.16	1.49	1.59
1	A	703	G	C2'-O2'	-7.16	1.30	1.41
1	A	1074	G	C1'-N9	-7.16	1.37	1.48
1	A	1523	G	O3'-P	-7.16	1.50	1.61
1	A	1041	G	P-O5'	-7.15	1.49	1.59
1	A	1232	U	P-O5'	-7.15	1.49	1.59
1	A	947	G	C1'-N9	-7.15	1.37	1.48
1	A	970	C	O3'-P	-7.15	1.50	1.61
1	A	1121	U	C2'-C1'	-7.14	1.42	1.53
1	A	683	G	P-O5'	-7.14	1.49	1.59
1	A	1367	C	C2'-C1'	-7.14	1.42	1.53
1	A	343	U	C3'-C2'	-7.13	1.42	1.52
1	A	614	C	C4'-C3'	-7.13	1.41	1.52
1	A	198	G	C2'-C1'	-7.13	1.42	1.53
1	A	300	A	C3'-C2'	-7.13	1.42	1.52
1	A	1345	U	C2'-C1'	-7.13	1.42	1.53
1	A	1377	A	C1'-N9	-7.13	1.37	1.48
1	A	226	G	C2'-C1'	-7.13	1.42	1.53
1	A	1357	A	P-O5'	-7.13	1.49	1.59
3	C	111	ASP	CA-C	-7.12	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1406	U	C1'-N1	-7.12	1.37	1.48
1	A	49	U	C2'-C1'	-7.12	1.42	1.53
1	A	23	C	C3'-C2'	-7.11	1.42	1.52
1	A	686	U	C1'-N1	-7.11	1.36	1.47
7	G	27	ASN	N-CA	-7.11	1.37	1.46
4	D	124	VAL	CA-C	-7.11	1.46	1.52
1	A	1160	G	P-O5'	-7.11	1.49	1.59
1	A	1330	U	C2'-C1'	-7.11	1.42	1.53
1	A	1305	G	O4'-C1'	-7.10	1.30	1.41
1	A	187	G	C2'-C1'	-7.10	1.42	1.53
1	A	842	U	P-O5'	-7.10	1.49	1.59
1	A	1102	A	C1'-N9	-7.10	1.37	1.48
1	A	262	A	P-O5'	-7.09	1.49	1.59
7	G	112	ASP	CA-C	-7.09	1.43	1.52
1	A	640	A	P-O5'	-7.09	1.49	1.59
4	D	141	VAL	CA-C	-7.09	1.46	1.53
1	A	1300	G	O3'-P	-7.09	1.50	1.61
1	A	815	A	C1'-N9	-7.08	1.37	1.48
3	C	1	GLY	CA-C	-7.08	1.39	1.52
3	C	130	ARG	CA-C	-7.08	1.44	1.52
5	E	21	SER	CA-C	-7.08	1.43	1.52
1	A	752	G	P-O5'	-7.08	1.49	1.59
1	A	750	C	C2'-C1'	-7.07	1.42	1.53
1	A	81	A	C1'-N9	-7.07	1.36	1.47
5	E	62	ALA	CA-C	-7.07	1.44	1.53
1	A	263	A	C2'-C1'	-7.07	1.42	1.53
1	A	1309	G	C1'-N9	-7.07	1.37	1.48
1	A	630	A	O3'-P	-7.07	1.50	1.61
1	A	127	G	C5'-C4'	7.06	1.61	1.51
3	C	194	VAL	CA-CB	-7.06	1.45	1.54
1	A	255	G	P-O5'	-7.06	1.49	1.59
1	A	438	U	O3'-P	-7.06	1.50	1.61
1	A	216	U	P-O5'	-7.06	1.49	1.59
1	A	462	G	C3'-C2'	-7.06	1.42	1.52
1	A	1251	A	C4'-C3'	-7.06	1.42	1.53
1	A	1319	A	C1'-N9	-7.06	1.37	1.48
1	A	1333	A	C3'-C2'	-7.06	1.42	1.52
1	A	238	A	C2'-C1'	-7.05	1.42	1.53
1	A	769	G	C4'-C3'	-7.05	1.42	1.52
1	A	914	A	C2'-C1'	-7.05	1.42	1.53
1	A	1044	A	C1'-N9	-7.05	1.37	1.48
1	A	1166	G	C3'-C2'	-7.05	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	199	VAL	CA-C	-7.05	1.44	1.52
1	A	91	U	C2'-C1'	-7.05	1.42	1.53
1	A	501	C	P-O5'	-7.05	1.49	1.59
1	A	504	C	P-O5'	-7.05	1.49	1.59
10	J	16	ARG	CA-C	-7.05	1.42	1.52
1	A	1523	G	C4'-C3'	-7.04	1.42	1.52
1	A	606	G	C2'-C1'	-7.04	1.42	1.53
1	A	529	G	C1'-N9	-7.04	1.37	1.48
1	A	500	G	O3'-P	-7.04	1.50	1.61
1	A	700	G	C2'-O2'	-7.04	1.31	1.42
1	A	249	U	C2'-C1'	-7.03	1.42	1.53
1	A	469	C	C4'-O4'	-7.03	1.35	1.45
1	A	1129	C	C2'-C1'	-7.03	1.42	1.53
1	A	90	C	O3'-P	-7.03	1.50	1.61
1	A	787	A	C4'-C3'	-7.03	1.42	1.52
1	A	1157	A	O3'-P	-7.03	1.50	1.61
1	A	1243	C	P-O5'	-7.03	1.49	1.59
1	A	603	U	C2'-C1'	-7.03	1.42	1.53
1	A	677	U	C2'-C1'	-7.03	1.42	1.53
1	A	794	A	C2'-C1'	-7.03	1.42	1.53
1	A	1145	A	O4'-C1'	-7.03	1.31	1.41
1	A	1502	A	C5'-C4'	-7.03	1.40	1.51
1	A	281	G	O3'-P	-7.02	1.50	1.61
1	A	1390	U	C2'-C1'	-7.02	1.42	1.53
1	A	1157	A	O4'-C1'	-7.02	1.31	1.42
1	A	385	C	P-O5'	-7.01	1.49	1.59
1	A	1502	A	C3'-C2'	-7.01	1.42	1.52
1	A	98	A	P-O5'	-7.01	1.49	1.59
1	A	279	A	O4'-C1'	-7.01	1.31	1.42
1	A	361	G	C4'-O4'	-7.01	1.35	1.45
1	A	440	C	O3'-P	-7.01	1.50	1.61
1	A	1313	U	C1'-N1	-7.01	1.38	1.48
1	A	1326	U	C3'-C2'	-7.01	1.42	1.52
1	A	1467	C	C2'-C1'	-7.01	1.42	1.53
1	A	182	A	O3'-P	-7.01	1.50	1.61
17	Q	58	VAL	CA-C	-7.00	1.44	1.52
1	A	861	G	C3'-C2'	-7.00	1.42	1.52
1	A	1304	G	C3'-C2'	-7.00	1.42	1.52
1	A	405	U	P-O5'	-7.00	1.49	1.59
1	A	301	G	O4'-C1'	-7.00	1.31	1.41
1	A	30	U	O3'-P	-7.00	1.50	1.61
1	A	1238	A	C4'-C3'	-7.00	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1241	G	C2'-C1'	-7.00	1.42	1.53
1	A	626	G	C2'-C1'	-6.99	1.42	1.53
1	A	759	A	P-O5'	-6.99	1.49	1.59
1	A	937	A	C3'-C2'	-6.99	1.42	1.52
1	A	1190	G	C5'-C4'	6.99	1.61	1.51
1	A	1346	A	P-O5'	-6.99	1.49	1.59
1	A	432	A	P-O5'	-6.98	1.49	1.59
1	A	1392	G	O4'-C1'	-6.98	1.31	1.41
1	A	909	A	P-O5'	-6.98	1.49	1.59
1	A	217	C	C3'-C2'	-6.98	1.42	1.52
1	A	253	A	C5'-C4'	-6.98	1.40	1.51
8	H	116	ARG	CA-C	-6.98	1.44	1.52
1	A	1337	G	C1'-N9	-6.97	1.37	1.48
1	A	1512	U	C2'-C1'	-6.97	1.42	1.53
3	C	55	VAL	CA-C	-6.97	1.44	1.52
1	A	301	G	P-O5'	-6.97	1.49	1.59
1	A	566	G	O3'-P	-6.97	1.50	1.61
1	A	246	A	C4'-O4'	-6.97	1.35	1.45
1	A	678	U	C2'-C1'	-6.97	1.42	1.53
1	A	1301	U	C4'-O4'	-6.97	1.35	1.45
2	B	90	PHE	CA-C	-6.97	1.44	1.52
1	A	753	A	C2'-C1'	-6.97	1.42	1.53
1	A	986	U	C2'-C1'	-6.97	1.42	1.53
1	A	380	G	O3'-P	-6.96	1.50	1.61
1	A	1268	G	C3'-C2'	-6.96	1.42	1.52
1	A	948	C	P-O5'	-6.96	1.49	1.59
2	B	22	TRP	CA-C	-6.96	1.45	1.53
1	A	177	G	C2'-C1'	-6.96	1.43	1.53
1	A	1158	C	C4'-C3'	-6.96	1.42	1.52
1	A	1495	U	P-O5'	-6.96	1.49	1.59
3	C	68	HIS	CA-C	-6.96	1.44	1.52
9	I	52	GLU	CA-C	-6.96	1.45	1.53
3	C	64	ARG	N-CA	-6.95	1.37	1.46
1	A	433	G	P-O5'	-6.95	1.49	1.59
1	A	918	A	O3'-P	-6.95	1.50	1.61
14	N	98	ALA	CA-C	-6.95	1.45	1.52
1	A	1303	C	O3'-P	-6.95	1.50	1.61
1	A	902	G	O4'-C1'	-6.95	1.31	1.41
1	A	1248	A	C2'-C1'	-6.95	1.43	1.53
1	A	814	A	C1'-N9	-6.93	1.37	1.48
1	A	180	U	C1'-N1	-6.93	1.38	1.48
1	A	1228	C	C1'-N1	-6.93	1.38	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1186	G	O4'-C1'	-6.93	1.31	1.41
20	T	49	ALA	N-CA	-6.93	1.37	1.46
1	A	670	G	C2'-C1'	-6.93	1.43	1.53
5	E	120	HIS	CA-C	-6.93	1.46	1.52
1	A	1040	U	O3'-P	-6.93	1.50	1.61
1	A	1103	C	C2'-C1'	-6.93	1.43	1.53
1	A	753	A	C1'-N9	-6.92	1.36	1.47
7	G	34	LYS	CA-C	-6.92	1.43	1.52
1	A	1184	G	C4'-C3'	-6.92	1.42	1.52
7	G	28	ILE	CA-C	-6.92	1.44	1.52
1	A	478	A	C3'-C2'	-6.92	1.42	1.52
1	A	1046	A	C2'-C1'	-6.92	1.43	1.53
1	A	1118	U	P-O5'	-6.92	1.49	1.59
1	A	1402	C	C4'-C3'	-6.91	1.42	1.52
1	A	688	G	C2'-C1'	-6.91	1.43	1.53
1	A	253	A	P-O5'	-6.91	1.49	1.59
17	Q	45	VAL	CA-C	-6.91	1.44	1.52
1	A	749	A	P-O5'	-6.91	1.49	1.59
1	A	752	G	C2'-C1'	-6.91	1.43	1.53
1	A	1327	C	C2'-C1'	-6.91	1.43	1.53
1	A	789	U	P-O5'	-6.91	1.49	1.59
1	A	1140	C	C1'-N1	6.91	1.58	1.48
1	A	765	G	C3'-C2'	-6.90	1.42	1.52
1	A	867	G	P-O5'	-6.90	1.49	1.59
1	A	129	A	P-O5'	-6.90	1.49	1.59
3	C	2	GLN	N-CA	-6.90	1.37	1.46
1	A	996	A	P-O5'	-6.89	1.49	1.59
4	D	169	TRP	N-CA	-6.89	1.36	1.46
1	A	1519	A	P-O5'	-6.89	1.49	1.59
11	K	40	ALA	CA-C	-6.89	1.44	1.52
1	A	250	A	P-O5'	-6.89	1.49	1.59
11	K	66	ALA	CA-C	-6.89	1.43	1.52
1	A	1091	U	C2'-C1'	-6.89	1.43	1.53
7	G	33	GLY	CA-C	-6.89	1.44	1.51
1	A	771	G	P-O5'	-6.88	1.49	1.59
11	K	65	ALA	CA-C	-6.88	1.44	1.52
12	L	27	PRO	CA-C	-6.88	1.41	1.52
21	U	42	THR	CA-C	-6.88	1.44	1.52
3	C	33	ASP	CA-C	-6.88	1.44	1.52
1	A	1315	U	C2'-C1'	-6.88	1.43	1.53
11	K	20	ALA	CA-C	-6.88	1.44	1.53
3	C	19	SER	CA-C	-6.88	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1410	A	P-O5'	-6.88	1.49	1.59
1	A	807	A	C2'-C1'	-6.87	1.43	1.53
1	A	1004	A	P-O5'	-6.87	1.49	1.59
1	A	379	C	C2'-C1'	-6.87	1.43	1.53
1	A	1306	A	N7-C5	-6.87	1.25	1.39
1	A	314	C	C2'-C1'	-6.87	1.43	1.53
1	A	905	U	P-O5'	-6.87	1.49	1.59
1	A	258	G	P-O5'	-6.86	1.49	1.59
1	A	154	U	C2'-C1'	-6.86	1.43	1.53
1	A	466	A	N7-C5	-6.86	1.25	1.39
1	A	1158	C	P-O5'	-6.86	1.49	1.59
1	A	1405	G	C2'-C1'	-6.86	1.43	1.53
1	A	422	C	O3'-P	-6.86	1.50	1.61
1	A	652	U	C2'-C1'	-6.86	1.43	1.53
14	N	78	LEU	CA-C	-6.86	1.43	1.52
1	A	385	C	C3'-C2'	-6.85	1.42	1.52
1	A	1238	A	O3'-P	-6.85	1.50	1.61
2	B	195	VAL	CA-C	-6.85	1.45	1.52
1	A	1316	G	O3'-P	-6.85	1.50	1.61
1	A	1518	A	P-O5'	-6.85	1.49	1.59
1	A	1363	A	C3'-C2'	-6.84	1.42	1.52
9	I	38	PHE	N-CA	-6.84	1.40	1.46
1	A	952	U	C2'-C1'	-6.83	1.43	1.53
1	A	993	G	O3'-P	-6.83	1.50	1.61
1	A	1382	C	C4-N4	-6.83	1.20	1.33
5	E	45	VAL	CA-C	-6.83	1.44	1.52
8	H	105	THR	CA-C	-6.83	1.44	1.53
1	A	873	A	C2'-C1'	-6.83	1.42	1.53
1	A	10	A	C2'-C1'	-6.83	1.43	1.53
1	A	241	G	C1'-N9	-6.83	1.37	1.48
1	A	707	U	C2'-C1'	-6.83	1.43	1.53
5	E	70	MET	CA-C	-6.83	1.44	1.52
1	A	1379	G	C1'-N9	-6.83	1.37	1.48
1	A	627	G	N7-C5	-6.82	1.25	1.39
2	B	131	LYS	N-CA	-6.82	1.38	1.46
1	A	172	A	O3'-P	-6.82	1.50	1.61
11	K	85	VAL	CA-C	-6.82	1.44	1.52
22	W	46	SER	CA-C	-6.81	1.44	1.52
1	A	261	U	P-O5'	-6.81	1.49	1.59
1	A	413	G	C4'-O4'	-6.81	1.35	1.45
1	A	736	C	C2'-C1'	-6.80	1.43	1.53
1	A	1303	C	O4'-C1'	-6.80	1.31	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	465	A	O3'-P	-6.80	1.50	1.61
1	A	728	A	C2'-C1'	-6.80	1.43	1.53
10	J	9	ARG	CA-C	-6.80	1.44	1.52
1	A	162	A	C4'-C3'	-6.80	1.42	1.52
1	A	5	U	C5'-C4'	6.80	1.61	1.51
1	A	197	A	C5'-C4'	6.80	1.61	1.51
1	A	279	A	O3'-P	-6.79	1.50	1.61
17	Q	70	LYS	N-CA	-6.79	1.37	1.46
1	A	905	U	C3'-C2'	-6.79	1.42	1.52
1	A	1363	A	C1'-N9	-6.79	1.36	1.47
18	R	38	ILE	CA-C	-6.79	1.44	1.52
1	A	131	A	C3'-C2'	-6.79	1.42	1.52
1	A	194	C	C4'-C3'	-6.78	1.42	1.52
1	A	201	G	O3'-P	-6.78	1.50	1.61
1	A	910	C	P-O5'	-6.78	1.49	1.59
1	A	536	C	O3'-P	-6.78	1.50	1.61
1	A	1203	C	P-O5'	-6.78	1.49	1.59
1	A	732	C	C2'-C1'	-6.78	1.43	1.53
1	A	592	G	P-O5'	-6.78	1.49	1.59
1	A	1089	G	C3'-C2'	-6.78	1.42	1.52
1	A	988	G	C3'-C2'	-6.77	1.42	1.52
1	A	1181	G	C2'-O2'	-6.77	1.31	1.41
1	A	980	C	P-O5'	-6.77	1.49	1.59
15	O	73	ASP	CA-C	-6.77	1.44	1.52
1	A	263	A	C3'-O3'	-6.77	1.31	1.42
1	A	1504	G	C3'-C2'	-6.77	1.42	1.52
1	A	1068	G	C1'-N9	-6.76	1.37	1.48
1	A	1117	A	C1'-N9	-6.76	1.37	1.48
1	A	1330	U	P-O5'	-6.76	1.49	1.59
1	A	786	G	C2'-C1'	-6.76	1.43	1.53
9	I	18	VAL	N-CA	-6.76	1.38	1.46
1	A	348	G	C2'-C1'	-6.75	1.43	1.53
1	A	127	G	C4'-C3'	6.75	1.62	1.52
1	A	1263	C	C2'-C1'	-6.75	1.43	1.53
3	C	112	ALA	CA-C	-6.75	1.44	1.52
1	A	577	G	C2'-C1'	-6.75	1.43	1.53
1	A	1250	A	C4'-C3'	-6.75	1.42	1.52
20	T	70	LYS	N-CA	-6.75	1.38	1.46
1	A	687	A	C2'-C1'	-6.75	1.43	1.53
2	B	164	ASP	CA-C	-6.75	1.45	1.52
1	A	215	C	C2'-C1'	-6.75	1.43	1.53
5	E	19	ARG	N-CA	-6.74	1.37	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	404	G	C2'-C1'	-6.74	1.43	1.53
1	A	480	U	O3'-P	-6.74	1.51	1.61
1	A	656	G	C2'-C1'	-6.74	1.43	1.53
1	A	129	A	O3'-P	-6.74	1.51	1.61
1	A	234	C	P-O5'	-6.74	1.49	1.59
1	A	269	C	P-O5'	-6.74	1.49	1.59
1	A	410	G	P-O5'	-6.74	1.49	1.59
1	A	780	A	C5'-C4'	6.74	1.61	1.51
1	A	1333	A	C2'-C1'	-6.74	1.43	1.53
1	A	357	G	P-O5'	-6.73	1.49	1.59
2	B	12	GLY	CA-C	-6.73	1.44	1.51
1	A	543	U	C2'-O2'	-6.72	1.32	1.42
1	A	1090	U	C3'-C2'	-6.72	1.42	1.52
1	A	1402	C	C3'-C2'	-6.72	1.42	1.52
1	A	729	A	P-O5'	-6.72	1.49	1.59
1	A	1287	A	P-O5'	-6.72	1.49	1.59
1	A	257	G	P-O5'	-6.72	1.49	1.59
1	A	61	G	C4'-C3'	-6.71	1.42	1.52
1	A	222	C	P-O5'	-6.71	1.49	1.59
1	A	410	G	C1'-N9	-6.71	1.37	1.48
1	A	1225	A	P-O5'	-6.71	1.49	1.59
1	A	867	G	O4'-C1'	-6.70	1.31	1.41
16	P	16	PHE	CA-C	-6.70	1.43	1.53
1	A	899	C	C2'-C1'	-6.70	1.43	1.53
1	A	1114	C	P-O5'	-6.70	1.49	1.59
1	A	608	A	P-O5'	-6.70	1.49	1.59
1	A	733	G	O4'-C1'	-6.70	1.31	1.41
1	A	1226	C	O4'-C1'	-6.70	1.31	1.42
3	C	2	GLN	CA-C	-6.70	1.43	1.52
1	A	357	G	C1'-N9	-6.69	1.38	1.48
1	A	36	C	C3'-C2'	-6.69	1.42	1.52
1	A	733	G	C4'-O4'	-6.69	1.35	1.45
1	A	557	G	C1'-N9	-6.69	1.38	1.48
1	A	1231	G	P-O5'	-6.69	1.49	1.59
1	A	426	U	O3'-P	-6.69	1.51	1.61
1	A	881	G	C1'-N9	-6.69	1.38	1.48
1	A	1064	G	P-O5'	-6.69	1.49	1.59
1	A	1332	A	C2'-C1'	-6.69	1.43	1.53
1	A	373	A	N9-C4	-6.68	1.24	1.37
1	A	752	G	C1'-N9	-6.68	1.38	1.48
1	A	936	C	C2'-C1'	-6.68	1.43	1.53
1	A	1270	G	O4'-C1'	-6.68	1.31	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	23	ALA	CA-C	-6.68	1.44	1.53
1	A	771	G	C2'-C1'	-6.68	1.43	1.53
1	A	25	C	C2'-C1'	-6.67	1.43	1.53
1	A	1238	A	C1'-N9	-6.67	1.38	1.48
1	A	1312	G	O3'-P	-6.67	1.51	1.61
1	A	1222	G	C2'-C1'	-6.67	1.43	1.53
1	A	239	U	C3'-C2'	-6.67	1.42	1.52
1	A	289	G	O3'-P	-6.67	1.51	1.61
1	A	359	G	P-O5'	-6.67	1.49	1.59
1	A	1259	C	P-O5'	-6.67	1.49	1.59
1	A	199	A	C2'-C1'	-6.67	1.43	1.53
1	A	824	G	P-O5'	-6.67	1.49	1.59
1	A	1369	C	C3'-C2'	-6.67	1.42	1.52
1	A	1009	U	C3'-C2'	-6.67	1.42	1.52
1	A	1525	G	C3'-C2'	-6.66	1.42	1.52
1	A	618	C	P-O5'	-6.66	1.49	1.59
1	A	685	G	C2'-C1'	-6.66	1.43	1.53
1	A	522	C	P-O5'	-6.66	1.49	1.59
2	B	70	GLY	CA-C	-6.66	1.42	1.51
1	A	78	A	N9-C4	6.66	1.51	1.37
1	A	1435	G	P-O5'	-6.66	1.49	1.59
8	H	113	ARG	CA-C	-6.66	1.43	1.52
1	A	235	C	O3'-P	-6.65	1.51	1.61
1	A	550	G	C1'-N9	-6.65	1.38	1.48
1	A	428	G	O3'-P	-6.65	1.51	1.61
1	A	1057	G	O3'-P	-6.65	1.51	1.61
1	A	324	G	C3'-C2'	-6.65	1.42	1.52
1	A	1098	C	C3'-C2'	-6.65	1.42	1.52
1	A	270	A	P-O5'	-6.64	1.49	1.59
1	A	1099	G	P-O5'	-6.64	1.49	1.59
1	A	985	C	O3'-P	-6.64	1.51	1.61
1	A	1354	U	C3'-C2'	-6.64	1.42	1.52
1	A	450	G	O3'-P	-6.64	1.51	1.61
1	A	536	C	C2'-C1'	-6.64	1.43	1.53
1	A	1114	C	C3'-C2'	-6.64	1.42	1.52
1	A	1184	G	C2'-C1'	-6.64	1.43	1.53
17	Q	69	THR	N-CA	-6.64	1.37	1.46
1	A	600	A	C2'-C1'	-6.63	1.43	1.53
1	A	1404	C	P-O5'	-6.63	1.49	1.59
1	A	263	A	C3'-C2'	-6.63	1.42	1.52
3	C	194	VAL	N-CA	-6.63	1.38	1.46
16	P	39	PHE	N-CA	-6.63	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1054	C	O3'-P	-6.63	1.51	1.61
17	Q	62	GLU	N-CA	-6.62	1.38	1.46
1	A	997	U	P-O5'	-6.62	1.49	1.59
1	A	1329	A	C3'-C2'	-6.62	1.42	1.52
1	A	251	G	P-O5'	-6.62	1.49	1.59
1	A	1346	A	O3'-P	-6.62	1.51	1.61
2	B	60	ALA	N-CA	-6.62	1.37	1.46
11	K	48	GLY	CA-C	-6.62	1.42	1.51
1	A	235	C	P-O5'	-6.62	1.49	1.59
5	E	50	GLY	CA-C	-6.62	1.41	1.52
5	E	99	SER	CA-C	-6.62	1.44	1.52
1	A	1420	U	P-O5'	-6.61	1.49	1.59
2	B	65	LYS	CA-C	-6.61	1.44	1.53
1	A	16	A	C2'-C1'	-6.61	1.43	1.53
1	A	33	A	O3'-P	-6.61	1.51	1.61
1	A	45	G	C2'-C1'	-6.61	1.43	1.53
1	A	858	G	C3'-C2'	-6.61	1.42	1.52
1	A	926	G	O3'-P	-6.61	1.51	1.61
1	A	628	G	C1'-N9	-6.60	1.38	1.48
1	A	1068	G	C2'-C1'	-6.60	1.43	1.53
22	W	82	ARG	N-CA	-6.60	1.39	1.45
1	A	563	A	P-O5'	-6.60	1.49	1.59
1	A	615	G	C3'-C2'	-6.60	1.42	1.52
1	A	578	C	C2'-C1'	-6.60	1.43	1.53
1	A	685	G	P-O5'	-6.60	1.49	1.59
1	A	1442	G	O3'-P	-6.60	1.51	1.61
1	A	152	A	O3'-P	-6.59	1.51	1.61
1	A	954	G	P-O5'	-6.59	1.49	1.59
1	A	142	G	O4'-C1'	-6.59	1.31	1.41
1	A	319	G	O3'-P	-6.59	1.51	1.61
1	A	1199	U	P-O5'	-6.59	1.49	1.59
1	A	1001	C	P-O5'	-6.59	1.49	1.59
1	A	434	U	P-O5'	-6.58	1.49	1.59
1	A	577	G	O4'-C1'	-6.58	1.31	1.41
11	K	45	THR	CA-C	-6.58	1.44	1.52
13	M	74	MET	N-CA	-6.58	1.38	1.46
1	A	680	C	P-O5'	-6.58	1.49	1.59
17	Q	46	HIS	N-CA	-6.57	1.38	1.46
1	A	160	A	C4'-C3'	-6.57	1.42	1.52
1	A	1501	C	C1'-N1	-6.57	1.38	1.48
1	A	944	G	P-O5'	-6.57	1.49	1.59
3	C	118	SER	CA-C	-6.57	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	E	25	LYS	CA-CB	6.57	1.60	1.52
1	A	104	G	C1'-N9	-6.57	1.38	1.48
1	A	134	G	P-O5'	-6.57	1.50	1.59
1	A	252	U	C5'-C4'	-6.57	1.41	1.51
1	A	535	A	C3'-O3'	-6.57	1.32	1.42
22	W	188	LEU	CA-C	-6.57	1.44	1.52
1	A	1295	U	P-O5'	-6.56	1.50	1.59
1	A	78	A	P-O5'	-6.56	1.50	1.59
1	A	1409	C	P-O5'	-6.56	1.50	1.59
1	A	695	A	C2'-C1'	-6.56	1.43	1.53
1	A	918	A	P-O5'	-6.56	1.50	1.59
1	A	1346	A	C1'-N9	-6.56	1.37	1.47
1	A	1526	G	P-O5'	-6.56	1.50	1.59
1	A	515	G	P-O5'	-6.56	1.50	1.59
1	A	529	G	C3'-C2'	-6.56	1.43	1.52
1	A	1118	U	O4'-C1'	-6.56	1.31	1.41
1	A	1141	C	P-O5'	-6.55	1.50	1.59
1	A	335	C	C2'-C1'	-6.55	1.43	1.53
1	A	1269	A	O3'-P	-6.55	1.51	1.61
12	L	24	GLU	CA-C	-6.55	1.46	1.53
1	A	429	U	C3'-C2'	-6.55	1.43	1.52
9	I	60	LEU	CA-C	-6.55	1.44	1.52
1	A	220	G	C3'-C2'	-6.54	1.43	1.52
1	A	1239	A	P-O5'	-6.54	1.50	1.59
1	A	465	A	C1'-N9	-6.53	1.38	1.48
1	A	979	C	P-O5'	-6.53	1.50	1.59
1	A	387	U	P-O5'	-6.53	1.50	1.59
2	B	185	ILE	N-CA	-6.53	1.38	1.46
1	A	807	A	C1'-N9	-6.53	1.38	1.48
1	A	1513	A	C2'-C1'	-6.53	1.43	1.53
1	A	1461	G	P-O5'	-6.53	1.50	1.59
1	A	1252	A	C1'-N9	-6.53	1.38	1.48
1	A	1027	C	P-O5'	-6.52	1.50	1.59
13	M	24	VAL	N-CA	-6.52	1.38	1.46
1	A	726	C	C2'-C1'	-6.52	1.43	1.53
1	A	903	G	O3'-P	-6.52	1.51	1.61
1	A	904	U	O5'-C5'	-6.51	1.32	1.42
1	A	1183	U	C2'-C1'	-6.51	1.43	1.53
1	A	1472	U	P-O5'	-6.51	1.50	1.59
4	D	172	VAL	N-CA	-6.51	1.38	1.46
6	F	57	ALA	CA-C	-6.51	1.44	1.52
1	A	493	A	P-O5'	-6.51	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	751	U	C2'-C1'	-6.51	1.43	1.53
1	A	872	A	C1'-N9	-6.51	1.37	1.47
14	N	42	ASN	CA-C	-6.51	1.45	1.52
1	A	382	A	C2'-C1'	-6.50	1.43	1.53
4	D	59	LYS	CA-C	-6.50	1.44	1.52
1	A	225	C	C2'-C1'	-6.50	1.43	1.53
1	A	466	A	P-O5'	-6.50	1.50	1.59
1	A	502	A	C1'-N9	-6.50	1.38	1.48
1	A	874	G	P-O5'	-6.50	1.50	1.59
1	A	1084	G	O4'-C1'	-6.50	1.31	1.41
1	A	1278	G	C2'-C1'	-6.50	1.43	1.53
9	I	51	LEU	CA-C	-6.50	1.46	1.53
1	A	1371	G	P-O5'	-6.50	1.50	1.59
1	A	780	A	N7-C5	-6.49	1.26	1.39
1	A	984	C	C2'-C1'	-6.49	1.43	1.53
20	T	37	ALA	N-CA	-6.49	1.38	1.46
1	A	259	G	P-O5'	-6.49	1.50	1.59
1	A	103	U	P-O5'	-6.48	1.50	1.59
1	A	509	A	C1'-N9	-6.48	1.38	1.48
12	L	10	PRO	CA-C	6.48	1.60	1.52
1	A	324	G	P-O5'	-6.48	1.50	1.59
5	E	46	GLY	N-CA	-6.48	1.38	1.45
1	A	140	U	P-O5'	-6.47	1.50	1.59
1	A	290	C	P-O5'	-6.47	1.50	1.59
1	A	1187	G	O4'-C1'	-6.47	1.31	1.41
1	A	82	G	P-O5'	-6.47	1.50	1.59
1	A	500	G	C2'-C1'	-6.47	1.43	1.53
8	H	38	VAL	CA-C	-6.47	1.44	1.52
1	A	543	U	C3'-C2'	-6.47	1.43	1.52
1	A	1518	A	O3'-P	-6.47	1.51	1.61
1	A	242	G	C1'-N9	-6.46	1.38	1.48
1	A	797	C	C3'-C2'	-6.46	1.43	1.52
1	A	862	C	C2'-C1'	-6.46	1.43	1.53
1	A	1216	A	C4'-C3'	-6.46	1.42	1.52
1	A	1533	C	O3'-P	-6.46	1.51	1.61
1	A	70	U	C1'-N1	-6.46	1.38	1.48
1	A	1143	G	C3'-C2'	-6.46	1.43	1.52
1	A	361	G	P-O5'	-6.46	1.50	1.59
1	A	788	U	C4'-O4'	-6.46	1.35	1.45
1	A	968	A	O3'-P	-6.46	1.51	1.61
1	A	302	G	P-O5'	-6.46	1.50	1.59
1	A	1515	G	C2'-C1'	-6.46	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1273	C	C1'-N1	-6.45	1.38	1.48
1	A	1334	G	P-O5'	-6.45	1.50	1.59
1	A	228	A	C2'-C1'	-6.45	1.43	1.53
1	A	1120	C	C2'-C1'	-6.45	1.43	1.53
1	A	157	U	C3'-C2'	-6.45	1.43	1.52
1	A	120	A	C3'-O3'	6.45	1.51	1.42
1	A	235	C	C2'-C1'	-6.44	1.43	1.53
11	K	63	GLN	CA-C	-6.44	1.44	1.52
1	A	361	G	O3'-P	-6.43	1.51	1.61
1	A	647	C	C3'-C2'	-6.43	1.43	1.52
1	A	738	C	P-O5'	-6.43	1.50	1.59
1	A	1207	G	P-O5'	-6.43	1.50	1.59
1	A	267	C	P-O5'	-6.43	1.50	1.59
1	A	641	U	C3'-C2'	-6.43	1.43	1.52
1	A	1163	A	P-O5'	-6.43	1.50	1.59
17	Q	77	VAL	N-CA	-6.42	1.38	1.46
2	B	85	SER	N-CA	-6.42	1.38	1.46
1	A	380	G	O4'-C1'	-6.42	1.32	1.41
2	B	185	ILE	CA-C	-6.42	1.45	1.52
1	A	425	G	P-O5'	-6.42	1.50	1.59
1	A	1061	G	P-O5'	-6.42	1.50	1.59
2	B	170	ILE	CA-C	-6.42	1.44	1.52
22	W	331	ARG	CD-NE	6.42	1.55	1.46
1	A	957	U	P-O5'	-6.42	1.50	1.59
1	A	1358	U	C3'-C2'	-6.42	1.43	1.52
1	A	1316	G	C3'-C2'	-6.41	1.43	1.52
22	W	100	VAL	CA-C	-6.41	1.47	1.52
1	A	1084	G	C4'-C3'	-6.41	1.43	1.52
1	A	1166	G	O3'-P	-6.41	1.51	1.61
13	M	71	GLU	CA-C	-6.41	1.44	1.52
1	A	101	A	P-O5'	-6.41	1.50	1.59
1	A	1129	C	C3'-C2'	-6.41	1.43	1.52
1	A	1409	C	C2'-C1'	-6.41	1.43	1.53
1	A	1485	U	P-O5'	-6.41	1.50	1.59
19	S	53	GLY	CA-C	-6.41	1.42	1.51
1	A	973	G	P-O5'	-6.41	1.50	1.59
1	A	1231	G	O4'-C1'	-6.41	1.32	1.41
1	A	1502	A	P-O5'	-6.41	1.50	1.59
4	D	159	GLU	CA-C	-6.41	1.44	1.52
1	A	461	A	C2'-C1'	-6.40	1.43	1.53
1	A	752	G	O3'-P	-6.40	1.51	1.61
1	A	1321	U	C1'-N1	-6.40	1.38	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	216	U	O4'-C1'	-6.40	1.32	1.41
1	A	686	U	O3'-P	-6.40	1.51	1.61
3	C	140	ALA	CA-C	-6.40	1.44	1.52
1	A	1170	A	C8-N7	-6.40	1.18	1.31
1	A	160	A	O3'-P	-6.40	1.51	1.61
1	A	168	G	P-O5'	-6.40	1.50	1.59
2	B	48	MET	CA-C	-6.40	1.44	1.52
2	B	25	LYS	CA-C	-6.39	1.44	1.52
1	A	198	G	C1'-N9	-6.39	1.38	1.48
1	A	1239	A	O3'-P	-6.39	1.51	1.61
1	A	613	C	C3'-C2'	-6.39	1.43	1.52
1	A	927	G	O4'-C1'	-6.39	1.32	1.41
1	A	70	U	C2'-C1'	-6.38	1.43	1.53
1	A	108	G	C4'-C3'	-6.38	1.43	1.52
1	A	299	G	P-O5'	-6.38	1.50	1.59
1	A	1364	U	C5'-C4'	6.38	1.60	1.51
1	A	472	U	C3'-C2'	-6.38	1.43	1.52
1	A	462	G	O3'-P	-6.38	1.51	1.61
1	A	985	C	C1'-N1	-6.38	1.38	1.48
1	A	1262	C	C2'-C1'	-6.38	1.43	1.53
1	A	1373	G	C2'-C1'	-6.38	1.43	1.53
5	E	41	GLY	CA-C	-6.38	1.42	1.51
1	A	70	U	C4'-C3'	-6.38	1.43	1.52
2	B	47	PRO	CA-C	-6.38	1.42	1.52
1	A	305	G	P-O5'	-6.38	1.50	1.59
1	A	1276	G	N7-C5	-6.38	1.26	1.39
1	A	1144	G	C2'-C1'	-6.38	1.43	1.53
1	A	425	G	C2'-C1'	-6.38	1.43	1.53
8	H	13	ILE	CA-C	-6.38	1.45	1.52
1	A	921	U	P-O5'	-6.37	1.50	1.59
11	K	49	SER	CA-C	-6.37	1.46	1.53
1	A	362	G	O3'-P	-6.37	1.51	1.61
1	A	380	G	C3'-C2'	-6.36	1.43	1.52
1	A	549	C	C2'-C1'	-6.36	1.43	1.53
1	A	1226	C	C4'-O4'	-6.36	1.36	1.45
6	F	18	VAL	CA-C	-6.36	1.46	1.52
4	D	30	LYS	CA-C	-6.36	1.44	1.53
1	A	21	G	P-O5'	-6.36	1.50	1.59
1	A	535	A	P-O5'	-6.36	1.50	1.59
1	A	1175	G	P-O5'	-6.36	1.50	1.59
1	A	1464	U	C3'-C2'	-6.36	1.43	1.52
4	D	151	GLN	CA-C	-6.36	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	193	C	C3'-C2'	-6.36	1.43	1.52
1	A	91	U	C4'-O4'	6.35	1.55	1.45
1	A	253	A	C2'-C1'	-6.35	1.43	1.53
1	A	1321	U	C2'-C1'	-6.35	1.43	1.53
1	A	128	G	C2'-C1'	-6.35	1.43	1.53
1	A	551	U	C2'-C1'	-6.34	1.43	1.53
1	A	986	U	C2'-O2'	-6.34	1.32	1.42
1	A	776	G	O3'-P	-6.34	1.51	1.61
1	A	1073	U	C2'-C1'	-6.34	1.43	1.53
22	W	42	GLY	CA-C	-6.34	1.44	1.51
1	A	119	A	O4'-C1'	-6.34	1.32	1.41
1	A	275	G	P-O5'	-6.34	1.50	1.59
1	A	430	A	C1'-N9	-6.34	1.38	1.48
1	A	823	C	C1'-N1	-6.34	1.39	1.48
1	A	928	G	C1'-N9	-6.34	1.38	1.48
1	A	1309	G	C3'-C2'	-6.34	1.43	1.52
1	A	1143	G	C2'-C1'	-6.33	1.43	1.53
1	A	643	C	P-O5'	-6.33	1.50	1.59
9	I	63	TYR	CA-C	-6.33	1.45	1.52
1	A	216	U	O5'-C5'	-6.33	1.32	1.42
1	A	314	C	C3'-C2'	-6.33	1.43	1.52
1	A	169	C	P-O5'	-6.33	1.50	1.59
1	A	865	A	O3'-P	-6.33	1.51	1.61
1	A	1331	G	C2'-C1'	-6.33	1.43	1.53
1	A	3	A	O4'-C1'	-6.33	1.32	1.41
1	A	378	G	C2'-C1'	-6.33	1.43	1.53
1	A	1022	A	C3'-C2'	-6.33	1.43	1.52
1	A	237	G	C2'-C1'	-6.33	1.43	1.53
1	A	615	G	C2'-C1'	-6.33	1.43	1.53
1	A	275	G	C2'-C1'	-6.32	1.43	1.53
1	A	1111	A	O5'-C5'	-6.32	1.32	1.42
1	A	1128	C	C3'-C2'	-6.32	1.43	1.52
3	C	42	LEU	CA-C	-6.32	1.44	1.52
1	A	304	U	C2'-C1'	-6.31	1.43	1.53
1	A	205	A	O4'-C1'	-6.31	1.32	1.41
1	A	1169	A	C2'-C1'	-6.31	1.43	1.53
13	M	20	SER	N-CA	-6.31	1.37	1.46
1	A	1197	A	C1'-N9	-6.31	1.38	1.48
1	A	1324	A	C2'-C1'	-6.31	1.43	1.53
1	A	1170	A	C3'-C2'	-6.30	1.43	1.52
1	A	1321	U	P-O5'	-6.30	1.50	1.59
5	E	62	ALA	N-CA	-6.30	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	F	4	TYR	N-CA	-6.30	1.38	1.46
1	A	430	A	C2'-C1'	-6.30	1.43	1.53
9	I	127	SER	CA-C	-6.30	1.44	1.52
1	A	31	G	O3'-P	-6.30	1.51	1.61
22	W	221	SER	N-CA	-6.30	1.38	1.46
1	A	1391	U	C4'-O4'	-6.29	1.36	1.45
1	A	428	G	P-O5'	-6.29	1.50	1.59
1	A	1398	A	O3'-P	-6.29	1.51	1.61
22	W	191	SER	CA-C	-6.29	1.45	1.52
1	A	988	G	C2'-C1'	-6.29	1.44	1.53
1	A	1091	U	O4'-C1'	-6.29	1.32	1.41
1	A	1128	C	P-O5'	-6.29	1.50	1.59
17	Q	22	VAL	CA-C	-6.29	1.44	1.52
1	A	140	U	O3'-P	-6.29	1.51	1.61
1	A	1123	U	C1'-N1	6.29	1.57	1.48
1	A	1139	G	C4'-O4'	-6.29	1.36	1.45
1	A	84	U	C4'-O4'	-6.28	1.36	1.45
1	A	113	G	C2'-C1'	-6.28	1.44	1.53
1	A	1032	G	C3'-C2'	-6.28	1.43	1.52
1	A	1190	G	O3'-P	-6.28	1.51	1.61
1	A	721	G	C1'-N9	-6.28	1.37	1.47
10	J	7	ARG	CA-C	-6.28	1.45	1.52
10	J	82	LYS	CA-C	-6.28	1.45	1.52
1	A	864	A	P-O5'	-6.27	1.50	1.59
5	E	40	ASP	N-CA	-6.27	1.38	1.46
1	A	1279	G	C4'-C3'	-6.27	1.43	1.53
1	A	1258	G	P-O5'	-6.27	1.50	1.59
22	W	146	VAL	CA-C	-6.27	1.44	1.52
1	A	1231	G	N9-C4	-6.27	1.25	1.38
11	K	84	MET	CA-C	-6.27	1.45	1.53
1	A	166	U	P-O5'	-6.26	1.50	1.59
1	A	509	A	C3'-C2'	-6.26	1.43	1.52
1	A	649	A	C1'-N9	-6.26	1.38	1.48
1	A	1295	U	C3'-C2'	-6.26	1.43	1.52
1	A	1309	G	O3'-P	-6.26	1.51	1.61
1	A	208	U	P-O5'	-6.26	1.50	1.59
22	W	43	ILE	CA-C	-6.26	1.45	1.52
1	A	35	G	C2'-C1'	-6.26	1.44	1.53
1	A	395	C	P-O5'	-6.26	1.50	1.59
1	A	577	G	O3'-P	-6.25	1.51	1.61
1	A	708	C	C2'-C1'	-6.25	1.44	1.53
5	E	20	VAL	CA-CB	-6.25	1.45	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	694	A	P-O5'	-6.25	1.50	1.59
1	A	1502	A	C2'-C1'	-6.25	1.43	1.53
5	E	58	ALA	CA-C	-6.25	1.45	1.52
12	L	47	ALA	CA-C	-6.25	1.46	1.53
9	I	66	VAL	CA-C	-6.25	1.45	1.52
1	A	176	C	C2'-C1'	-6.25	1.44	1.53
1	A	672	U	P-O5'	-6.25	1.50	1.59
1	A	372	C	O4'-C1'	-6.24	1.32	1.41
1	A	1358	U	C2'-C1'	-6.24	1.44	1.53
1	A	549	C	C1'-N1	-6.24	1.39	1.48
1	A	1016	A	C2'-C1'	-6.24	1.44	1.53
5	E	63	MET	CA-C	-6.24	1.44	1.52
22	W	208	ARG	CA-C	-6.24	1.44	1.52
1	A	252	U	C4'-C3'	-6.24	1.43	1.52
10	J	19	ASP	CA-C	-6.24	1.44	1.52
1	A	1057	G	C1'-N9	-6.24	1.38	1.48
1	A	991	U	P-O5'	-6.24	1.50	1.59
1	A	1369	C	P-O5'	-6.24	1.50	1.59
1	A	231	U	P-O5'	-6.23	1.50	1.59
1	A	1125	U	O3'-P	-6.23	1.51	1.61
1	A	28	A	P-O5'	-6.23	1.50	1.59
1	A	629	A	C2'-C1'	-6.23	1.44	1.53
1	A	755	G	C2'-C1'	-6.23	1.44	1.53
1	A	1234	C	P-O5'	-6.23	1.50	1.59
5	E	58	ALA	N-CA	-6.23	1.39	1.46
7	G	3	ARG	CD-NE	6.23	1.54	1.46
1	A	410	G	C3'-O3'	-6.23	1.32	1.42
1	A	1443	C	P-O5'	-6.23	1.50	1.59
1	A	303	A	P-O5'	-6.23	1.50	1.59
1	A	1014	A	C2'-C1'	-6.23	1.44	1.53
1	A	465	A	P-O5'	-6.23	1.50	1.59
1	A	581	G	C2'-C1'	-6.22	1.44	1.53
8	H	17	GLN	CA-C	-6.22	1.44	1.52
20	T	36	ALA	CA-C	-6.22	1.44	1.52
1	A	696	A	C1'-N9	-6.22	1.38	1.48
12	L	3	VAL	CA-C	-6.22	1.45	1.52
1	A	227	G	C2'-C1'	-6.22	1.44	1.53
1	A	1343	G	C4'-C3'	-6.22	1.43	1.52
1	A	193	C	C2'-C1'	-6.22	1.44	1.53
1	A	703	G	C2'-C1'	-6.22	1.43	1.53
1	A	1032	G	P-O5'	-6.22	1.50	1.59
1	A	198	G	C5'-C4'	6.21	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1462	C	P-O5'	-6.21	1.50	1.59
4	D	140	ASP	N-CA	-6.21	1.38	1.46
1	A	1319	A	C2'-C1'	-6.21	1.44	1.53
13	M	22	TYR	N-CA	-6.21	1.38	1.46
1	A	94	G	O5'-C5'	-6.21	1.33	1.42
13	M	26	LYS	N-CA	-6.21	1.38	1.46
1	A	912	C	O3'-P	-6.21	1.51	1.61
1	A	1270	G	C2'-C1'	-6.21	1.44	1.53
1	A	1490	U	C5'-C4'	6.21	1.60	1.51
1	A	940	C	C2'-C1'	-6.21	1.44	1.53
1	A	481	G	O3'-P	-6.21	1.51	1.61
5	E	44	ARG	CA-C	-6.21	1.46	1.52
1	A	1262	C	P-O5'	-6.21	1.50	1.59
1	A	1074	G	C4'-C3'	-6.20	1.43	1.52
9	I	16	ALA	CA-C	-6.20	1.45	1.52
12	L	11	ARG	N-CA	6.20	1.53	1.46
1	A	265	G	C4'-O4'	-6.20	1.36	1.45
1	A	766	A	C2'-C1'	-6.20	1.44	1.53
1	A	1161	C	C2'-C1'	-6.20	1.44	1.53
2	B	218	ALA	CA-C	-6.20	1.46	1.53
1	A	22	G	C2'-C1'	-6.20	1.44	1.53
1	A	147	G	P-O5'	-6.20	1.50	1.59
1	A	181	A	C4'-O4'	-6.20	1.36	1.45
3	C	38	VAL	N-CA	-6.20	1.38	1.46
11	K	43	TRP	CA-C	-6.20	1.44	1.52
1	A	814	A	C2'-C1'	-6.19	1.44	1.53
1	A	687	A	C4'-O4'	-6.19	1.36	1.45
1	A	398	U	C3'-C2'	-6.19	1.43	1.52
1	A	687	A	O3'-P	-6.19	1.51	1.61
1	A	6	G	P-O5'	-6.19	1.50	1.59
1	A	635	A	C4'-C3'	-6.19	1.43	1.52
1	A	695	A	P-O5'	-6.19	1.50	1.59
1	A	160	A	C3'-C2'	-6.18	1.43	1.52
1	A	927	G	C2'-C1'	-6.18	1.44	1.53
3	C	22	PHE	N-CA	-6.18	1.38	1.46
1	A	605	U	O4'-C1'	-6.18	1.32	1.41
1	A	700	G	O3'-P	-6.18	1.51	1.61
13	M	43	LYS	CA-C	-6.18	1.44	1.52
1	A	370	C	C2'-C1'	-6.18	1.44	1.53
1	A	724	G	O3'-P	-6.18	1.51	1.61
22	W	227	LEU	CA-C	-6.18	1.45	1.52
1	A	1375	A	O3'-P	-6.18	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1007	U	C3'-C2'	-6.17	1.43	1.52
1	A	1241	G	N7-C5	-6.17	1.26	1.39
1	A	1299	A	P-O5'	-6.17	1.50	1.59
4	D	53	GLN	N-CA	-6.17	1.38	1.46
5	E	67	ARG	CA-C	-6.17	1.44	1.52
15	O	80	LEU	CA-C	-6.17	1.45	1.53
1	A	139	A	C2'-C1'	-6.17	1.44	1.53
1	A	1386	G	C2'-C1'	-6.17	1.44	1.53
1	A	187	G	C1'-N9	-6.17	1.38	1.48
11	K	112	VAL	C-N	6.17	1.41	1.33
1	A	129	A	C2'-C1'	-6.17	1.43	1.53
1	A	847	G	C2'-C1'	-6.17	1.44	1.53
8	H	44	PHE	CA-C	-6.17	1.45	1.52
1	A	181	A	P-O5'	-6.17	1.50	1.59
1	A	1074	G	O3'-P	-6.16	1.51	1.61
1	A	1260	G	O4'-C1'	-6.16	1.32	1.41
4	D	101	VAL	CA-C	-6.16	1.46	1.52
11	K	97	ARG	CA-C	-6.16	1.44	1.52
1	A	225	C	C3'-C2'	-6.16	1.43	1.52
1	A	363	A	C1'-N9	-6.16	1.38	1.48
1	A	401	C	C2'-C1'	-6.16	1.44	1.53
1	A	654	G	C2'-C1'	-6.16	1.44	1.53
19	S	51	HIS	CA-C	-6.16	1.44	1.52
1	A	20	U	P-O5'	-6.16	1.50	1.59
1	A	858	G	N7-C5	-6.16	1.26	1.39
1	A	1174	G	C1'-N9	-6.16	1.38	1.48
1	A	1325	C	C3'-C2'	-6.16	1.43	1.52
1	A	196	A	N7-C5	-6.15	1.26	1.39
1	A	288	A	O3'-P	-6.15	1.51	1.61
1	A	401	C	C1'-N1	-6.15	1.39	1.48
13	M	9	PRO	CA-C	-6.15	1.46	1.52
17	Q	59	GLU	N-CA	-6.15	1.38	1.45
1	A	64	G	O3'-P	-6.15	1.51	1.61
1	A	218	U	C1'-N1	-6.15	1.39	1.48
1	A	1532	U	C4'-O4'	-6.15	1.36	1.45
20	T	29	THR	CA-CB	-6.15	1.43	1.53
22	W	202	GLU	CA-C	-6.15	1.44	1.52
1	A	1301	U	P-O5'	-6.14	1.50	1.59
1	A	1513	A	C4'-C3'	-6.14	1.43	1.52
1	A	1376	U	C2'-C1'	-6.14	1.44	1.53
17	Q	78	VAL	N-CA	-6.14	1.39	1.46
1	A	1352	C	C2'-C1'	-6.14	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	143	A	C3'-C2'	-6.14	1.43	1.52
1	A	1234	C	C2'-C1'	-6.14	1.44	1.53
1	A	565	U	P-O5'	-6.13	1.50	1.59
1	A	776	G	C4'-O4'	-6.13	1.36	1.45
1	A	338	A	P-O5'	-6.13	1.50	1.59
1	A	1482	G	C3'-O3'	-6.13	1.32	1.42
6	F	3	HIS	CA-C	-6.13	1.44	1.52
1	A	550	G	C2'-C1'	-6.13	1.44	1.53
1	A	690	G	C2'-C1'	-6.12	1.44	1.53
1	A	1496	C	P-O5'	-6.12	1.50	1.59
1	A	212	G	O3'-P	-6.12	1.51	1.61
1	A	1278	G	C1'-N9	-6.12	1.37	1.47
5	E	49	TYR	CA-C	-6.12	1.45	1.52
1	A	738	C	C2'-C1'	-6.12	1.44	1.53
1	A	78	A	N7-C5	-6.12	1.27	1.39
1	A	202	G	C4'-C3'	-6.12	1.43	1.52
1	A	812	G	O3'-P	-6.12	1.51	1.61
1	A	1292	G	C2'-C1'	-6.12	1.44	1.53
2	B	22	TRP	N-CA	-6.12	1.39	1.46
17	Q	64	ARG	C-N	-6.12	1.26	1.33
19	S	5	LYS	CA-C	-6.12	1.45	1.52
8	H	39	LEU	CA-C	-6.12	1.44	1.52
1	A	253	A	C3'-C2'	-6.12	1.43	1.52
1	A	848	C	C3'-C2'	-6.12	1.43	1.52
12	L	76	HIS	CA-C	-6.12	1.45	1.53
1	A	795	C	P-O5'	-6.11	1.50	1.59
1	A	846	G	C2'-C1'	-6.11	1.44	1.53
1	A	95	C	O3'-P	-6.11	1.51	1.61
1	A	354	G	O3'-P	-6.11	1.51	1.61
4	D	58	GLN	CA-C	-6.11	1.44	1.52
1	A	758	C	C2'-C1'	-6.11	1.44	1.53
1	A	131	A	P-O5'	-6.11	1.50	1.59
10	J	20	GLN	CA-C	-6.11	1.45	1.52
1	A	625	U	C2'-C1'	-6.11	1.44	1.53
1	A	846	G	C2'-O2'	-6.11	1.33	1.42
1	A	303	A	C3'-C2'	-6.10	1.43	1.52
1	A	707	U	P-O5'	-6.10	1.50	1.59
5	E	79	THR	N-CA	-6.10	1.37	1.45
1	A	888	G	C1'-N9	-6.10	1.38	1.48
1	A	488	C	P-O5'	-6.10	1.50	1.59
1	A	883	C	P-O5'	-6.10	1.50	1.59
1	A	1279	G	P-O5'	-6.10	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	162	A	C4'-O4'	-6.10	1.36	1.45
1	A	1453	G	C1'-N9	-6.10	1.38	1.48
1	A	1468	A	C4'-C3'	-6.10	1.43	1.52
22	W	145	LEU	CA-C	-6.10	1.44	1.52
1	A	238	A	C3'-C2'	-6.10	1.43	1.52
1	A	1230	C	C2'-C1'	-6.10	1.44	1.53
11	K	44	ALA	CA-CB	-6.10	1.43	1.53
1	A	1140	C	C2'-O2'	-6.09	1.33	1.42
1	A	1396	A	C2'-C1'	-6.09	1.44	1.53
1	A	1272	G	C1'-N9	-6.09	1.38	1.48
22	W	160	ASN	CA-C	-6.09	1.45	1.52
1	A	8	A	O3'-P	-6.09	1.52	1.61
1	A	1302	C	P-O5'	-6.09	1.50	1.59
4	D	98	ASP	CA-C	-6.09	1.44	1.52
9	I	82	ILE	CA-C	-6.09	1.45	1.52
11	K	119	GLY	N-CA	-6.09	1.36	1.45
1	A	1271	A	P-O5'	-6.08	1.50	1.59
1	A	580	C	C4'-C3'	-6.08	1.43	1.52
1	A	1474	U	P-O5'	-6.08	1.50	1.59
1	A	903	G	N7-C5	-6.08	1.27	1.39
1	A	117	G	C2'-C1'	-6.08	1.44	1.53
1	A	641	U	C2'-C1'	-6.08	1.44	1.53
1	A	992	U	O3'-P	-6.08	1.52	1.61
1	A	775	G	P-O5'	-6.08	1.50	1.59
1	A	262	A	C1'-N9	-6.08	1.38	1.48
1	A	769	G	C2'-C1'	-6.08	1.44	1.53
2	B	185	ILE	CA-CB	-6.08	1.47	1.53
1	A	347	G	P-O5'	-6.07	1.50	1.59
1	A	1334	G	C3'-C2'	-6.07	1.43	1.52
1	A	23	C	C2'-C1'	-6.07	1.44	1.53
1	A	715	A	C2'-C1'	-6.07	1.44	1.53
1	A	1527	U	C3'-C2'	-6.07	1.43	1.52
15	O	28	VAL	CA-CB	-6.07	1.47	1.54
1	A	627	G	P-O5'	-6.07	1.50	1.59
1	A	938	A	C3'-C2'	-6.07	1.43	1.52
1	A	1152	A	C4'-C3'	-6.07	1.43	1.52
1	A	1211	U	P-O5'	-6.07	1.50	1.59
17	Q	48	GLU	CA-C	-6.06	1.44	1.52
1	A	1255	G	O3'-P	-6.06	1.52	1.61
10	J	75	ASP	CA-C	-6.06	1.44	1.52
2	B	67	LEU	CA-C	-6.06	1.44	1.52
1	A	831	A	C1'-N9	-6.06	1.38	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1134	G	P-O5'	-6.06	1.50	1.59
10	J	12	ALA	N-CA	-6.06	1.39	1.46
1	A	176	C	P-O5'	-6.06	1.50	1.59
1	A	1527	U	O3'-P	-6.06	1.52	1.61
22	W	47	ARG	CA-C	-6.06	1.45	1.52
1	A	600	A	C1'-N9	-6.05	1.38	1.48
11	K	126	ARG	CD-NE	6.05	1.54	1.46
1	A	373	A	C1'-N9	-6.05	1.38	1.48
1	A	594	U	C4'-O4'	-6.05	1.36	1.45
13	M	5	GLY	CA-C	-6.05	1.43	1.51
17	Q	61	ARG	N-CA	-6.05	1.38	1.46
1	A	1305	G	C2'-C1'	-6.05	1.44	1.53
22	W	65	ASN	CA-C	-6.05	1.44	1.53
1	A	812	G	C4'-C3'	-6.05	1.44	1.53
4	D	143	SER	CA-C	-6.05	1.45	1.52
1	A	569	C	O3'-P	-6.04	1.52	1.61
1	A	813	U	P-O5'	-6.04	1.50	1.59
1	A	1367	C	C3'-C2'	-6.04	1.43	1.52
1	A	266	G	O3'-P	-6.04	1.52	1.61
22	W	235	LEU	CA-C	-6.04	1.44	1.52
1	A	477	C	P-O5'	-6.04	1.50	1.59
1	A	509	A	C4'-O4'	-6.04	1.36	1.45
1	A	1328	C	O3'-P	-6.04	1.52	1.61
17	Q	69	THR	CA-C	-6.04	1.44	1.52
1	A	320	A	O4'-C1'	-6.04	1.32	1.42
1	A	396	C	C3'-C2'	-6.03	1.43	1.52
1	A	559	A	C4'-O4'	-6.03	1.36	1.45
1	A	960	U	C4'-C3'	-6.03	1.44	1.53
1	A	1402	C	C2'-C1'	-6.03	1.44	1.53
1	A	950	U	P-O5'	-6.03	1.50	1.59
1	A	1344	C	C1'-N1	-6.03	1.39	1.48
1	A	1410	A	C2'-C1'	-6.03	1.44	1.53
1	A	560	A	C2'-C1'	-6.03	1.44	1.53
1	A	63	C	P-O5'	-6.03	1.50	1.59
1	A	485	U	O3'-P	-6.03	1.52	1.61
17	Q	71	SER	CA-C	-6.03	1.45	1.53
1	A	27	G	C5'-C4'	6.03	1.60	1.51
1	A	305	G	C2'-C1'	-6.03	1.44	1.53
1	A	878	A	O3'-P	-6.03	1.52	1.61
22	W	310	CYS	CA-C	-6.03	1.45	1.52
1	A	313	A	P-O5'	-6.02	1.50	1.59
1	A	443	C	P-O5'	-6.02	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1171	A	C3'-C2'	-6.02	1.43	1.52
1	A	1432	G	C3'-O3'	-6.02	1.34	1.43
3	C	21	TRP	CA-C	-6.02	1.45	1.52
1	A	698	G	P-O5'	-6.02	1.50	1.59
1	A	284	C	P-O5'	-6.02	1.50	1.59
1	A	940	C	P-O5'	-6.02	1.50	1.59
1	A	1418	A	P-O5'	-6.02	1.50	1.59
6	F	59	TYR	CA-C	-6.02	1.45	1.52
1	A	1176	A	P-O5'	-6.02	1.50	1.59
19	S	72	GLU	CA-C	-6.02	1.45	1.52
1	A	1306	A	C8-N7	-6.02	1.19	1.31
3	C	56	ILE	N-CA	-6.02	1.39	1.46
1	A	224	U	C3'-C2'	-6.01	1.43	1.52
1	A	614	C	O4'-C1'	-6.01	1.32	1.41
1	A	981	U	C2'-C1'	-6.01	1.44	1.53
1	A	718	A	O3'-P	-6.01	1.52	1.61
1	A	792	A	C2'-C1'	-6.01	1.44	1.53
1	A	1098	C	O3'-P	-6.01	1.52	1.61
5	E	36	THR	CA-C	-6.01	1.45	1.52
1	A	732	C	C3'-C2'	-6.01	1.43	1.52
22	W	44	VAL	CA-C	-6.01	1.46	1.52
1	A	29	U	P-O5'	-6.01	1.50	1.59
1	A	1165	U	P-O5'	-6.01	1.50	1.59
1	A	1511	G	C1'-N9	-6.01	1.39	1.48
20	T	47	GLN	CA-C	-6.01	1.45	1.52
1	A	33	A	C2'-C1'	-6.00	1.44	1.53
1	A	1268	G	P-O5'	-6.00	1.50	1.59
1	A	63	C	O4'-C1'	-6.00	1.32	1.41
1	A	340	U	C3'-C2'	-6.00	1.43	1.52
1	A	1088	G	C2'-C1'	-6.00	1.44	1.53
17	Q	75	VAL	N-CA	-6.00	1.38	1.46
6	F	90	MET	CA-C	-6.00	1.45	1.52
1	A	318	G	C3'-C2'	-6.00	1.43	1.52
1	A	1127	G	P-O5'	-6.00	1.50	1.59
1	A	170	U	P-O5'	-6.00	1.50	1.59
1	A	1053	G	O5'-C5'	-6.00	1.33	1.42
4	D	41	GLY	CA-C	-6.00	1.41	1.51
1	A	589	U	C3'-C2'	-5.99	1.43	1.52
1	A	701	U	O3'-P	-5.99	1.52	1.61
1	A	883	C	C3'-C2'	-5.99	1.43	1.52
1	A	885	G	C2'-C1'	-5.99	1.44	1.53
1	A	1067	A	P-O5'	-5.99	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	221	C	P-O5'	-5.99	1.50	1.59
3	C	141	MET	CA-C	-5.99	1.44	1.52
8	H	2	MET	CA-C	-5.99	1.44	1.52
1	A	451	A	O3'-P	-5.99	1.52	1.61
1	A	958	A	C3'-C2'	-5.99	1.43	1.52
1	A	667	G	C2'-C1'	-5.99	1.44	1.53
22	W	109	ARG	CD-NE	5.99	1.54	1.46
1	A	36	C	C2'-C1'	-5.98	1.44	1.53
1	A	992	U	C2'-C1'	-5.98	1.44	1.53
1	A	1010	U	C2'-C1'	-5.98	1.44	1.53
1	A	1314	C	C2'-C1'	-5.98	1.44	1.53
1	A	288	A	C3'-O3'	-5.98	1.33	1.42
1	A	1256	A	C4'-C3'	-5.98	1.44	1.53
13	M	65	GLU	CA-C	-5.98	1.44	1.52
1	A	340	U	P-O5'	-5.98	1.50	1.59
1	A	428	G	C1'-N9	-5.98	1.38	1.47
1	A	447	G	C3'-C2'	-5.98	1.43	1.52
1	A	874	G	C2'-C1'	-5.98	1.44	1.53
1	A	1353	G	C1'-N9	-5.98	1.39	1.48
1	A	194	C	C2'-C1'	-5.98	1.44	1.53
1	A	516	U	C2'-C1'	-5.97	1.44	1.53
1	A	1033	G	P-O5'	-5.97	1.50	1.59
1	A	1375	A	C2'-C1'	-5.97	1.44	1.53
4	D	25	ARG	CA-C	-5.96	1.45	1.52
4	D	80	ARG	CD-NE	5.96	1.54	1.46
1	A	19	A	C2'-C1'	-5.96	1.44	1.53
1	A	278	G	C2'-C1'	-5.96	1.44	1.53
1	A	1067	A	C4'-O4'	-5.96	1.36	1.45
1	A	869	G	N9-C4	-5.96	1.26	1.38
1	A	267	C	O4'-C1'	-5.96	1.32	1.41
1	A	236	A	C2'-C1'	-5.96	1.44	1.53
1	A	996	A	C3'-C2'	-5.96	1.43	1.52
1	A	614	C	C2'-O2'	-5.95	1.33	1.42
1	A	664	G	C3'-C2'	-5.95	1.43	1.52
1	A	81	A	C4'-O4'	-5.95	1.36	1.45
1	A	201	G	C3'-C2'	-5.95	1.43	1.52
1	A	937	A	P-O5'	-5.95	1.50	1.59
1	A	1108	G	C2'-C1'	-5.95	1.44	1.53
12	L	33	CYS	CA-C	-5.95	1.45	1.52
16	P	17	TYR	CA-C	-5.95	1.45	1.53
1	A	153	C	C2'-C1'	-5.95	1.44	1.53
1	A	1144	G	C3'-C2'	-5.95	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	W	126	ILE	CA-C	-5.95	1.45	1.52
1	A	152	A	C2'-C1'	-5.95	1.44	1.53
1	A	141	G	C1'-N9	-5.94	1.39	1.48
1	A	243	A	O3'-P	-5.94	1.52	1.61
1	A	896	C	P-O5'	-5.94	1.50	1.59
11	K	64	VAL	N-CA	-5.94	1.39	1.46
1	A	37	U	C4'-C3'	-5.94	1.43	1.52
1	A	1055	A	C1'-N9	-5.93	1.39	1.48
5	E	40	ASP	CA-C	-5.93	1.44	1.52
5	E	64	GLU	CA-C	-5.93	1.45	1.52
1	A	1162	C	P-O5'	-5.93	1.50	1.59
3	C	99	GLN	N-CA	-5.93	1.38	1.45
1	A	894	G	C2'-C1'	-5.93	1.44	1.53
1	A	1385	G	P-O5'	-5.93	1.50	1.59
1	A	45	G	P-O5'	-5.92	1.50	1.59
1	A	1171	A	O4'-C1'	-5.92	1.32	1.41
1	A	354	G	C4'-C3'	-5.92	1.43	1.52
1	A	558	G	P-O5'	-5.92	1.50	1.59
1	A	896	C	C2'-C1'	-5.92	1.44	1.53
1	A	160	A	C2'-C1'	-5.92	1.44	1.53
10	J	32	THR	CA-C	-5.92	1.44	1.52
1	A	1512	U	C1'-N1	-5.92	1.39	1.48
1	A	98	A	N7-C5	-5.91	1.27	1.39
1	A	924	C	C2'-C1'	-5.91	1.44	1.53
1	A	925	G	N9-C4	-5.91	1.26	1.38
1	A	1337	G	O3'-P	-5.91	1.52	1.61
10	J	18	ILE	CA-C	-5.91	1.45	1.52
1	A	509	A	O3'-P	-5.91	1.52	1.61
1	A	90	C	O5'-C5'	-5.91	1.33	1.42
1	A	1211	U	O3'-P	-5.91	1.52	1.61
1	A	254	G	O3'-P	-5.91	1.52	1.61
1	A	654	G	P-O5'	-5.91	1.50	1.59
1	A	1417	G	C3'-O3'	-5.91	1.33	1.42
1	A	1159	U	C2'-C1'	-5.91	1.44	1.53
1	A	1513	A	C1'-N9	-5.91	1.39	1.48
11	K	55	ARG	N-CA	-5.91	1.39	1.46
1	A	903	G	C3'-C2'	-5.91	1.43	1.52
4	D	33	ILE	N-CA	-5.91	1.39	1.46
7	G	4	ARG	NE-CZ	5.91	1.39	1.33
1	A	1218	C	C2'-C1'	-5.90	1.44	1.53
1	A	1391	U	C2'-C1'	-5.90	1.44	1.53
1	A	1067	A	O4'-C1'	-5.90	1.33	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1205	U	P-O5'	-5.90	1.50	1.59
1	A	1423	G	C2'-C1'	-5.90	1.44	1.53
1	A	1484	C	C4'-C3'	-5.90	1.43	1.52
1	A	617	G	C2'-C1'	-5.90	1.44	1.53
10	J	66	GLU	C-N	5.90	1.40	1.33
1	A	960	U	C4'-O4'	-5.89	1.37	1.45
6	F	64	VAL	N-CA	-5.89	1.39	1.46
1	A	564	C	C2'-C1'	-5.89	1.44	1.53
2	B	203	ASP	CA-C	-5.89	1.44	1.52
1	A	1140	C	O3'-P	-5.89	1.52	1.61
1	A	24	U	P-O5'	-5.89	1.50	1.59
1	A	453	G	C2'-C1'	-5.89	1.44	1.53
1	A	888	G	O3'-P	-5.89	1.52	1.61
1	A	93	U	C2'-C1'	-5.89	1.44	1.53
1	A	686	U	C4'-O4'	-5.89	1.37	1.45
1	A	833	G	C2'-C1'	-5.89	1.44	1.53
11	K	94	SER	CA-C	-5.89	1.45	1.52
1	A	95	C	C2'-C1'	-5.88	1.44	1.53
1	A	126	G	O4'-C1'	-5.88	1.32	1.41
1	A	1275	A	N7-C5	-5.88	1.27	1.39
1	A	616	G	C3'-C2'	-5.88	1.44	1.52
1	A	190	A	P-O5'	-5.88	1.50	1.59
1	A	481	G	O4'-C1'	-5.88	1.33	1.42
1	A	960	U	O4'-C1'	-5.88	1.33	1.42
1	A	1063	C	P-O5'	-5.88	1.50	1.59
1	A	1186	G	C4'-C3'	5.88	1.61	1.52
1	A	193	C	C4'-O4'	-5.88	1.36	1.45
1	A	1159	U	O3'-P	-5.88	1.52	1.61
1	A	1335	U	C4'-C3'	-5.88	1.43	1.52
1	A	786	G	P-O5'	-5.88	1.50	1.59
1	A	133	U	O3'-P	-5.88	1.52	1.61
1	A	782	A	C4'-O4'	-5.88	1.36	1.45
6	F	55	HIS	CA-C	-5.88	1.45	1.52
1	A	953	G	P-O5'	-5.87	1.50	1.59
1	A	1410	A	O3'-P	-5.87	1.52	1.61
1	A	1474	U	O3'-P	-5.87	1.52	1.61
6	F	49	TYR	CA-C	-5.87	1.45	1.52
17	Q	75	VAL	CA-C	-5.87	1.45	1.52
1	A	373	A	O3'-P	-5.87	1.52	1.61
1	A	779	C	C2'-C1'	-5.87	1.44	1.53
1	A	865	A	N7-C5	-5.87	1.27	1.39
1	A	319	G	C2'-C1'	-5.87	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	427	U	P-O5'	-5.87	1.50	1.59
1	A	1002	G	C1'-N9	-5.87	1.39	1.48
3	C	104	GLU	CA-C	-5.87	1.45	1.52
1	A	1098	C	C2'-C1'	-5.87	1.44	1.53
13	M	27	THR	N-CA	-5.87	1.39	1.46
1	A	578	C	O5'-C5'	-5.86	1.33	1.42
1	A	1335	U	O3'-P	-5.86	1.52	1.61
1	A	118	U	C3'-C2'	-5.86	1.44	1.52
3	C	183	TYR	CA-C	-5.86	1.45	1.52
1	A	1300	G	C4'-O4'	-5.86	1.37	1.45
1	A	1510	C	C2'-C1'	-5.85	1.44	1.53
1	A	692	U	O3'-P	-5.85	1.52	1.61
1	A	750	C	O3'-P	-5.85	1.52	1.61
1	A	1206	G	C2'-C1'	-5.85	1.44	1.53
1	A	1301	U	O4'-C1'	-5.85	1.33	1.42
1	A	1441	A	N7-C5	-5.85	1.27	1.39
1	A	613	C	P-O5'	-5.85	1.50	1.59
1	A	1139	G	O4'-C1'	-5.85	1.33	1.42
5	E	119	VAL	CA-C	-5.85	1.47	1.53
22	W	79	VAL	CA-C	-5.85	1.45	1.52
1	A	546	A	C2'-C1'	-5.85	1.44	1.53
1	A	1140	C	C5'-C4'	5.85	1.60	1.51
1	A	1502	A	N7-C5	-5.85	1.27	1.39
1	A	1528	U	P-O5'	-5.85	1.50	1.59
22	W	305	ASP	CA-C	-5.85	1.45	1.52
1	A	337	G	O3'-P	-5.85	1.52	1.61
1	A	356	A	P-O5'	-5.84	1.50	1.59
1	A	22	G	C3'-O3'	-5.84	1.33	1.42
1	A	987	G	C2'-C1'	-5.84	1.44	1.53
1	A	996	A	C2'-C1'	-5.84	1.44	1.53
1	A	287	U	C2'-C1'	-5.84	1.44	1.53
1	A	1118	U	C2'-C1'	-5.84	1.44	1.53
16	P	80	LYS	CA-C	-5.84	1.45	1.52
1	A	703	G	C3'-C2'	-5.84	1.44	1.52
5	E	51	LYS	N-CA	-5.84	1.39	1.46
17	Q	44	HIS	CA-C	-5.84	1.45	1.52
1	A	428	G	C4'-O4'	-5.83	1.37	1.45
1	A	1156	G	C2'-C1'	-5.83	1.44	1.53
1	A	672	U	C2'-C1'	-5.83	1.44	1.53
1	A	780	A	C1'-N9	-5.83	1.39	1.48
18	R	57	ALA	CA-C	-5.83	1.44	1.52
15	O	20	ASP	CA-C	-5.83	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	234	C	C2'-C1'	-5.83	1.44	1.53
1	A	296	U	C2'-C1'	-5.83	1.44	1.53
3	C	22	PHE	CA-C	-5.83	1.45	1.52
1	A	262	A	C4'-O4'	-5.83	1.36	1.45
1	A	586	C	P-O5'	-5.83	1.51	1.59
6	F	8	PHE	N-CA	-5.83	1.39	1.46
1	A	214	C	C2'-C1'	-5.82	1.44	1.53
6	F	79	ARG	CA-C	-5.82	1.46	1.53
1	A	24	U	C3'-C2'	-5.82	1.44	1.52
3	C	149	LYS	CA-C	-5.82	1.45	1.52
1	A	242	G	P-O5'	-5.82	1.51	1.59
1	A	442	G	P-O5'	-5.82	1.51	1.59
1	A	1506	U	C3'-C2'	5.82	1.61	1.52
7	G	5	VAL	C-N	5.82	1.41	1.33
1	A	70	U	C3'-C2'	-5.82	1.44	1.52
1	A	729	A	C3'-C2'	-5.82	1.44	1.52
10	J	22	THR	CA-C	-5.82	1.45	1.52
1	A	320	A	C4'-O4'	-5.82	1.37	1.45
1	A	1221	G	C2'-C1'	-5.82	1.44	1.53
1	A	55	A	P-O5'	-5.82	1.51	1.59
1	A	673	A	O3'-P	-5.82	1.52	1.61
1	A	1423	G	C1'-N9	-5.81	1.39	1.48
1	A	579	A	C1'-N9	-5.81	1.39	1.48
1	A	1297	G	O4'-C1'	-5.81	1.33	1.42
20	T	83	ASN	CA-C	-5.81	1.45	1.52
1	A	918	A	C3'-C2'	-5.81	1.44	1.52
14	N	33	VAL	N-CA	-5.81	1.39	1.46
1	A	372	C	P-O5'	-5.81	1.51	1.59
1	A	533	A	O3'-P	-5.81	1.52	1.61
1	A	655	A	N7-C5	-5.80	1.27	1.39
1	A	1069	C	C1'-N1	-5.80	1.39	1.48
14	N	50	LEU	N-CA	-5.80	1.41	1.45
15	O	21	THR	CA-C	-5.80	1.45	1.52
18	R	32	ILE	N-CA	-5.80	1.39	1.46
1	A	288	A	C2'-C1'	-5.80	1.44	1.53
1	A	879	C	P-O5'	-5.80	1.51	1.59
8	H	20	ASN	CA-C	-5.80	1.45	1.53
1	A	62	U	C3'-C2'	-5.80	1.44	1.52
1	A	63	C	C1'-N1	-5.80	1.39	1.48
1	A	343	U	O4'-C1'	-5.80	1.32	1.41
10	J	40	ILE	CA-C	-5.80	1.46	1.52
1	A	1288	A	C1'-N9	-5.79	1.39	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1343	G	P-O5'	-5.79	1.51	1.59
11	K	55	ARG	CA-C	-5.79	1.45	1.52
1	A	529	G	O3'-P	-5.79	1.52	1.61
1	A	688	G	P-O5'	-5.79	1.51	1.59
1	A	790	A	C2'-C1'	-5.79	1.44	1.53
1	A	1165	U	C2'-C1'	-5.79	1.44	1.53
1	A	1237	C	O4'-C1'	-5.79	1.32	1.41
1	A	1334	G	O3'-P	-5.79	1.52	1.61
1	A	115	G	O3'-P	-5.79	1.52	1.61
1	A	345	C	C1'-N1	-5.79	1.39	1.48
1	A	489	C	P-O5'	-5.79	1.51	1.59
1	A	536	C	O4'-C1'	-5.79	1.32	1.41
1	A	476	U	P-O5'	-5.79	1.51	1.59
1	A	559	A	P-O5'	-5.79	1.51	1.59
1	A	308	C	C4'-C3'	5.79	1.61	1.52
1	A	262	A	C3'-C2'	-5.78	1.44	1.52
1	A	773	G	C2'-C1'	-5.78	1.44	1.53
1	A	1444	U	P-O5'	-5.78	1.51	1.59
10	J	15	HIS	CB-CG	-5.78	1.42	1.50
1	A	412	A	O3'-P	-5.78	1.52	1.61
1	A	483	C	C4'-C3'	-5.78	1.43	1.52
1	A	903	G	N9-C4	5.78	1.49	1.38
1	A	59	A	C4'-O4'	-5.78	1.36	1.45
1	A	187	G	C3'-C2'	-5.78	1.44	1.52
1	A	876	C	C1'-N1	-5.78	1.39	1.48
1	A	522	C	C2'-C1'	-5.78	1.44	1.53
15	O	21	THR	N-CA	-5.78	1.38	1.46
1	A	419	C	C4'-C3'	-5.77	1.43	1.52
1	A	589	U	P-O5'	-5.77	1.51	1.59
1	A	1033	G	C4'-C3'	-5.77	1.43	1.52
8	H	36	ALA	CA-C	-5.77	1.45	1.52
1	A	1053	G	O3'-P	-5.77	1.52	1.61
1	A	1405	G	P-O5'	-5.77	1.51	1.59
11	K	43	TRP	N-CA	-5.77	1.39	1.46
1	A	171	A	C2'-C1'	-5.77	1.44	1.53
1	A	334	C	C3'-C2'	-5.77	1.44	1.52
1	A	868	C	C3'-C2'	-5.77	1.44	1.52
1	A	580	C	C2'-C1'	-5.77	1.44	1.53
22	W	217	GLY	CA-C	-5.77	1.43	1.51
1	A	777	A	N7-C5	-5.76	1.27	1.39
1	A	719	C	C2'-C1'	-5.76	1.44	1.53
1	A	202	G	O3'-P	-5.76	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1357	A	O3'-P	-5.76	1.52	1.61
4	D	9	LYS	CA-C	-5.76	1.45	1.52
4	D	115	GLN	CA-C	-5.76	1.45	1.52
1	A	1128	C	C2'-O2'	-5.76	1.33	1.42
1	A	1278	G	C4'-C3'	-5.76	1.44	1.53
1	A	1449	C	C2'-C1'	-5.76	1.44	1.53
9	I	61	ASP	N-CA	-5.76	1.39	1.45
18	R	32	ILE	CA-C	-5.76	1.45	1.52
6	F	83	ALA	N-CA	-5.76	1.38	1.46
3	C	128	MET	CA-C	-5.76	1.45	1.53
13	M	94	LEU	N-CA	-5.76	1.37	1.45
1	A	296	U	P-O5'	-5.75	1.51	1.59
1	A	423	G	P-O5'	-5.75	1.51	1.59
1	A	539	A	C1'-N9	-5.75	1.39	1.48
1	A	1198	G	P-O5'	-5.75	1.51	1.59
1	A	360	G	C2'-C1'	-5.75	1.44	1.53
1	A	1407	C	P-O5'	-5.75	1.51	1.59
1	A	964	A	C2'-C1'	-5.75	1.44	1.53
1	A	713	G	O3'-P	-5.75	1.52	1.61
1	A	947	G	C3'-C2'	-5.75	1.44	1.52
9	I	71	ILE	CA-CB	-5.75	1.46	1.54
1	A	232	G	O4'-C1'	-5.75	1.33	1.41
2	B	38	HIS	CA-C	-5.74	1.45	1.52
1	A	179	A	C2'-C1'	-5.74	1.44	1.53
1	A	783	C	P-O5'	-5.74	1.51	1.59
15	O	78	THR	N-CA	-5.74	1.39	1.46
1	A	536	C	C4'-O4'	-5.74	1.36	1.45
1	A	1188	A	C2'-C1'	-5.74	1.44	1.53
1	A	761	G	C3'-C2'	-5.74	1.44	1.52
1	A	889	A	C1'-N9	-5.74	1.38	1.47
1	A	927	G	C5'-C4'	-5.74	1.42	1.51
1	A	1066	C	P-O5'	-5.74	1.51	1.59
20	T	48	LYS	CA-C	-5.74	1.45	1.52
1	A	666	G	C2'-C1'	-5.74	1.44	1.53
2	B	162	VAL	N-CA	-5.74	1.39	1.46
12	L	88	ASP	C-N	5.74	1.39	1.33
1	A	995	C	C2'-C1'	-5.73	1.44	1.53
1	A	732	C	C1'-N1	-5.73	1.39	1.48
1	A	1309	G	C4'-C3'	-5.73	1.44	1.52
2	B	50	ASN	CA-C	-5.73	1.45	1.52
1	A	1090	U	P-O5'	-5.73	1.51	1.59
1	A	1223	C	C4'-C3'	-5.73	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	956	U	P-O5'	-5.73	1.51	1.59
1	A	129	A	C4'-O4'	-5.72	1.37	1.45
1	A	222	C	C2'-C1'	-5.72	1.44	1.53
1	A	614	C	C4'-O4'	-5.72	1.36	1.45
1	A	1091	U	C3'-C2'	-5.72	1.44	1.52
1	A	1434	A	N7-C5	-5.72	1.27	1.39
8	H	33	VAL	CA-CB	-5.72	1.48	1.54
9	I	64	ILE	CA-C	-5.72	1.45	1.52
15	O	28	VAL	N-CA	-5.72	1.40	1.46
1	A	1208	C	P-O5'	-5.72	1.51	1.59
1	A	1246	A	C3'-C2'	-5.72	1.44	1.52
8	H	112	ASP	CA-CB	-5.72	1.44	1.53
20	T	46	ALA	N-CA	-5.71	1.39	1.46
1	A	297	G	C2'-C1'	-5.71	1.44	1.53
1	A	182	A	C3'-O3'	-5.71	1.34	1.43
1	A	434	U	C3'-C2'	-5.71	1.44	1.52
5	E	67	ARG	N-CA	-5.71	1.39	1.46
1	A	193	C	C2-N3	-5.71	1.24	1.35
1	A	377	G	P-O5'	-5.71	1.51	1.59
1	A	1097	C	C1'-N1	-5.71	1.39	1.48
22	W	49	GLY	CA-C	-5.71	1.43	1.51
1	A	925	G	C5-C6	-5.71	1.30	1.42
1	A	254	G	C1'-N9	-5.71	1.39	1.48
2	B	199	ILE	N-CA	-5.71	1.41	1.46
20	T	65	LEU	N-CA	-5.71	1.40	1.46
9	I	117	LEU	CA-C	-5.70	1.46	1.53
1	A	595	A	N7-C5	-5.70	1.27	1.39
1	A	598	U	C3'-C2'	-5.70	1.44	1.52
1	A	1181	G	C4'-C3'	-5.70	1.44	1.53
1	A	1306	A	P-O5'	-5.70	1.51	1.59
1	A	668	G	C3'-C2'	-5.70	1.44	1.52
14	N	60	ARG	CA-C	-5.70	1.45	1.52
15	O	23	SER	N-CA	-5.70	1.38	1.46
1	A	38	G	C4'-C3'	-5.69	1.44	1.52
1	A	400	C	C3'-C2'	-5.69	1.44	1.52
1	A	1215	G	P-O5'	-5.69	1.51	1.59
1	A	1236	A	C2'-O2'	-5.69	1.33	1.42
19	S	79	TYR	CA-C	-5.69	1.45	1.52
1	A	1501	C	O4'-C1'	-5.69	1.33	1.41
1	A	511	C	O3'-P	-5.69	1.52	1.61
1	A	429	U	C4'-O4'	-5.69	1.37	1.45
1	A	1117	A	C4'-C3'	-5.69	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1231	G	O3'-P	-5.69	1.52	1.61
10	J	13	PHE	CA-C	-5.69	1.44	1.52
14	N	99	SER	CA-C	-5.69	1.45	1.52
1	A	504	C	C2'-C1'	-5.69	1.44	1.53
1	A	1481	U	P-O5'	-5.69	1.51	1.59
8	H	8	ASP	CA-C	-5.69	1.45	1.52
4	D	84	ASN	N-CA	-5.68	1.39	1.46
1	A	204	G	C4'-C3'	-5.68	1.44	1.52
1	A	781	A	C2'-C1'	-5.68	1.44	1.53
1	A	851	G	O5'-C5'	-5.68	1.33	1.42
16	P	73	ALA	CA-C	-5.68	1.45	1.52
1	A	907	A	C2'-C1'	-5.68	1.44	1.53
1	A	37	U	C2'-C1'	-5.68	1.44	1.53
1	A	348	G	O4'-C1'	-5.68	1.33	1.41
1	A	745	G	C1'-N9	-5.68	1.39	1.48
8	H	68	LYS	CA-C	-5.68	1.45	1.52
1	A	527	G	C2'-C1'	-5.68	1.44	1.53
1	A	297	G	C4'-C3'	-5.68	1.44	1.52
1	A	936	C	C4'-C3'	-5.68	1.44	1.52
8	H	37	ASN	N-CA	-5.68	1.39	1.46
1	A	167	A	P-O5'	-5.67	1.51	1.59
1	A	850	U	P-O5'	-5.67	1.51	1.59
15	O	29	ALA	CA-C	-5.67	1.45	1.52
1	A	1127	G	O4'-C1'	-5.67	1.33	1.41
4	D	26	ALA	CA-C	-5.67	1.45	1.52
1	A	757	U	P-O5'	-5.67	1.51	1.59
1	A	1000	A	P-O5'	-5.67	1.51	1.59
1	A	394	G	C2'-C1'	-5.67	1.44	1.53
1	A	1179	A	C2'-C1'	-5.67	1.44	1.53
22	W	63	ARG	CA-C	-5.67	1.45	1.52
1	A	685	G	C1'-N9	-5.66	1.39	1.48
1	A	820	U	P-O5'	-5.66	1.51	1.59
1	A	1093	A	N7-C5	-5.66	1.27	1.39
22	W	51	HIS	CB-CG	-5.66	1.42	1.50
1	A	362	G	C1'-N9	-5.66	1.39	1.48
1	A	405	U	C4'-C3'	-5.66	1.44	1.52
3	C	145	ALA	N-CA	-5.66	1.38	1.46
1	A	1006	G	C1'-N9	-5.66	1.39	1.48
1	A	1043	G	P-O5'	-5.66	1.51	1.59
11	K	81	LEU	CA-C	-5.66	1.45	1.52
1	A	59	A	C2'-C1'	-5.65	1.44	1.53
1	A	1355	G	C2'-C1'	-5.65	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	687	A	N9-C4	-5.65	1.26	1.37
1	A	726	C	O3'-P	-5.65	1.52	1.61
1	A	1029	U	C2'-C1'	-5.65	1.44	1.53
3	C	23	ALA	N-CA	-5.65	1.39	1.45
5	E	15	ILE	N-CA	-5.65	1.39	1.46
8	H	38	VAL	N-CA	-5.65	1.39	1.46
1	A	1290	G	C2'-C1'	-5.65	1.44	1.53
4	D	112	GLU	CA-C	-5.65	1.45	1.52
1	A	1059	C	O3'-P	-5.65	1.52	1.61
1	A	1403	C	C2'-C1'	-5.64	1.44	1.53
8	H	111	THR	CA-C	-5.64	1.45	1.52
9	I	125	GLN	N-CA	-5.64	1.39	1.46
1	A	114	U	P-O5'	-5.64	1.51	1.59
1	A	1337	G	C3'-O3'	-5.64	1.33	1.42
1	A	1408	A	C2'-C1'	-5.64	1.44	1.53
1	A	1527	U	C2'-C1'	-5.64	1.44	1.53
1	A	1219	A	C3'-C2'	-5.64	1.44	1.52
1	A	1223	C	O3'-P	-5.64	1.52	1.61
16	P	35	ARG	CD-NE	5.64	1.54	1.46
1	A	73	C	C2'-C1'	-5.64	1.44	1.53
1	A	218	U	O4'-C1'	-5.64	1.33	1.41
1	A	815	A	P-O5'	-5.64	1.51	1.59
1	A	725	G	C1'-N9	-5.64	1.39	1.48
1	A	801	U	O3'-P	-5.64	1.52	1.61
1	A	1223	C	C4'-O4'	-5.63	1.37	1.45
21	U	6	ARG	CA-C	-5.63	1.46	1.53
1	A	3	A	C2'-C1'	-5.63	1.45	1.53
1	A	62	U	C4'-O4'	-5.63	1.37	1.45
1	A	593	U	C3'-C2'	-5.63	1.44	1.52
1	A	1196	A	O3'-P	-5.63	1.52	1.61
1	A	354	G	P-O5'	-5.63	1.51	1.59
1	A	617	G	C5'-C4'	-5.63	1.42	1.51
5	E	45	VAL	N-CA	-5.63	1.39	1.46
8	H	116	ARG	N-CA	-5.63	1.39	1.46
1	A	424	G	P-O5'	-5.63	1.51	1.59
1	A	1096	C	C2'-C1'	-5.63	1.45	1.53
20	T	56	ILE	CA-C	-5.63	1.45	1.52
1	A	703	G	P-O5'	-5.63	1.51	1.59
11	K	84	MET	N-CA	-5.63	1.40	1.46
17	Q	63	CYS	N-CA	-5.63	1.37	1.46
1	A	756	C	C2'-C1'	-5.62	1.45	1.53
2	B	208	ALA	CA-C	-5.62	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
13	M	26	LYS	CA-C	-5.62	1.45	1.52
1	A	1295	U	O3'-P	-5.62	1.52	1.61
1	A	1373	G	O3'-P	-5.62	1.52	1.61
1	A	986	U	C1'-N1	-5.62	1.40	1.48
1	A	79	G	O3'-P	-5.62	1.52	1.61
1	A	89	U	O3'-P	-5.62	1.52	1.61
1	A	215	C	C3'-C2'	-5.62	1.44	1.52
1	A	640	A	C3'-C2'	-5.62	1.44	1.52
1	A	760	G	P-O5'	-5.62	1.51	1.59
16	P	28	ARG	N-CA	-5.62	1.40	1.47
1	A	77	A	N7-C5	-5.61	1.28	1.39
1	A	782	A	C1'-N9	-5.61	1.39	1.48
1	A	588	G	C2'-C1'	-5.61	1.45	1.53
8	H	72	GLU	N-CA	-5.61	1.39	1.46
13	M	24	VAL	CA-CB	-5.61	1.47	1.54
1	A	141	G	O4'-C1'	-5.61	1.33	1.41
1	A	300	A	C1'-N9	-5.61	1.39	1.48
1	A	943	U	C3'-C2'	-5.61	1.44	1.52
1	A	1371	G	C2'-C1'	-5.61	1.45	1.53
1	A	701	U	O4'-C1'	-5.61	1.33	1.41
1	A	1376	U	C3'-C2'	-5.61	1.44	1.52
8	H	71	VAL	N-CA	-5.61	1.40	1.46
18	R	38	ILE	CA-CB	-5.61	1.46	1.54
1	A	190	A	N7-C5	-5.60	1.28	1.39
1	A	337	G	C4'-C3'	-5.60	1.44	1.52
1	A	1181	G	C3'-C2'	-5.60	1.44	1.52
19	S	65	MET	CA-C	-5.60	1.46	1.52
1	A	512	U	C2'-C1'	-5.60	1.45	1.53
1	A	660	C	C2'-C1'	-5.60	1.45	1.53
1	A	1304	G	N7-C5	-5.60	1.28	1.39
1	A	232	G	C3'-C2'	-5.60	1.44	1.52
1	A	132	C	O4'-C1'	-5.60	1.33	1.41
1	A	1164	G	P-O5'	-5.60	1.51	1.59
1	A	1273	C	C2'-C1'	-5.60	1.45	1.53
1	A	797	C	P-O5'	-5.60	1.51	1.59
1	A	1094	G	C2'-C1'	-5.60	1.45	1.53
9	I	14	SER	CA-C	-5.60	1.45	1.52
1	A	194	C	O4'-C1'	-5.59	1.33	1.41
1	A	409	U	C3'-C2'	-5.59	1.44	1.52
18	R	31	TYR	CA-C	-5.59	1.45	1.52
22	W	48	PHE	N-CA	-5.59	1.39	1.46
22	W	172	PHE	CA-C	-5.59	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1045	C	C3'-C2'	-5.59	1.44	1.52
1	A	1226	C	O3'-P	-5.59	1.52	1.61
7	G	45	ALA	N-CA	-5.59	1.39	1.46
1	A	304	U	O3'-P	-5.59	1.52	1.61
1	A	859	G	P-O5'	-5.59	1.51	1.59
1	A	919	A	C2'-C1'	-5.59	1.45	1.53
8	H	86	LYS	CA-C	-5.59	1.46	1.52
9	I	48	ARG	CA-C	-5.59	1.45	1.52
12	L	46	SER	CA-C	-5.59	1.45	1.52
22	W	223	LEU	CA-C	-5.59	1.45	1.52
1	A	827	U	C3'-C2'	-5.59	1.44	1.52
1	A	1375	A	C3'-C2'	-5.59	1.44	1.52
3	C	87	ARG	CA-C	-5.59	1.45	1.52
9	I	4	GLN	CA-C	-5.59	1.45	1.52
1	A	92	U	O4'-C1'	-5.59	1.33	1.41
9	I	51	LEU	N-CA	-5.59	1.39	1.46
1	A	170	U	C2'-C1'	-5.58	1.45	1.53
1	A	1270	G	O5'-C5'	-5.58	1.34	1.42
1	A	7	A	C5'-C4'	5.58	1.59	1.51
1	A	98	A	C2'-C1'	-5.58	1.45	1.53
1	A	339	C	C3'-C2'	-5.58	1.44	1.52
1	A	751	U	C4'-C3'	-5.58	1.44	1.52
1	A	1021	A	C1'-N9	-5.58	1.39	1.48
1	A	1060	U	C2'-C1'	-5.58	1.45	1.53
1	A	1399	C	O4'-C1'	-5.58	1.33	1.42
17	Q	77	VAL	CA-C	-5.58	1.45	1.52
1	A	696	A	P-O5'	-5.58	1.51	1.59
1	A	1131	G	C2'-C1'	-5.58	1.45	1.53
1	A	1396	A	C1'-N9	-5.58	1.38	1.47
14	N	35	ALA	C-N	-5.58	1.25	1.33
1	A	846	G	C5'-C4'	5.58	1.59	1.51
1	A	63	C	C3'-O3'	-5.58	1.33	1.42
1	A	1238	A	O4'-C1'	-5.58	1.33	1.41
1	A	987	G	C1'-N9	-5.58	1.39	1.48
1	A	1048	G	C3'-C2'	-5.58	1.44	1.52
1	A	1460	C	P-O5'	-5.58	1.51	1.59
1	A	1484	C	P-O5'	-5.58	1.51	1.59
3	C	100	ILE	CA-C	-5.58	1.46	1.52
1	A	1024	G	C3'-C2'	-5.57	1.44	1.52
1	A	529	G	P-O5'	-5.57	1.51	1.59
1	A	635	A	O5'-C5'	-5.57	1.34	1.42
1	A	132	C	C4'-O4'	-5.57	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	72	A	O4'-C1'	-5.57	1.33	1.41
1	A	740	U	C2'-C1'	-5.57	1.45	1.53
1	A	1150	A	C1'-N9	-5.57	1.39	1.48
1	A	279	A	P-O5'	-5.57	1.51	1.59
1	A	569	C	C2'-C1'	-5.57	1.45	1.53
1	A	1126	U	C3'-C2'	-5.57	1.44	1.52
1	A	1328	C	C3'-C2'	-5.57	1.44	1.52
8	H	121	GLY	CA-C	-5.57	1.44	1.51
12	L	7	VAL	N-CA	-5.57	1.39	1.46
1	A	130	A	O3'-P	-5.56	1.52	1.61
1	A	724	G	C2'-C1'	-5.56	1.45	1.53
1	A	770	C	C5'-C4'	-5.56	1.43	1.51
1	A	860	A	N7-C5	-5.56	1.28	1.39
7	G	4	ARG	CA-C	5.56	1.59	1.53
12	L	25	ALA	N-CA	-5.56	1.39	1.46
20	T	82	ILE	CA-CB	-5.56	1.46	1.54
1	A	439	U	C2'-C1'	-5.56	1.45	1.53
1	A	518	C	O3'-P	-5.56	1.52	1.61
1	A	1278	G	C5'-C4'	-5.56	1.43	1.51
1	A	1278	G	P-O5'	-5.56	1.51	1.59
1	A	600	A	C3'-C2'	-5.56	1.44	1.52
1	A	144	G	C1'-N9	-5.56	1.39	1.48
1	A	1090	U	C1'-N1	-5.55	1.40	1.48
1	A	1352	C	C3'-C2'	-5.55	1.44	1.52
2	B	129	THR	N-CA	-5.55	1.41	1.46
1	A	194	C	C5'-C4'	-5.55	1.43	1.51
1	A	1215	G	O4'-C1'	-5.55	1.33	1.41
3	C	56	ILE	CA-C	-5.55	1.45	1.52
14	N	79	SER	N-CA	-5.55	1.39	1.46
1	A	612	C	P-O5'	-5.55	1.51	1.59
1	A	560	A	O3'-P	-5.55	1.52	1.61
2	B	183	PHE	CA-C	-5.55	1.45	1.52
15	O	74	VAL	CA-C	-5.55	1.46	1.52
1	A	646	G	C1'-N9	-5.54	1.39	1.48
1	A	1272	G	C2'-C1'	-5.54	1.45	1.53
1	A	212	G	C2'-C1'	-5.54	1.45	1.53
1	A	371	A	C2'-C1'	-5.54	1.45	1.53
1	A	509	A	P-O5'	-5.54	1.51	1.59
1	A	740	U	C4'-C3'	-5.54	1.44	1.52
1	A	1201	A	O4'-C1'	-5.54	1.33	1.42
1	A	1216	A	C5'-C4'	-5.54	1.43	1.51
1	A	1280	A	O3'-P	-5.54	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	Q	73	THR	N-CA	-5.54	1.38	1.45
9	I	75	ALA	CA-C	-5.54	1.45	1.52
1	A	202	G	C4'-O4'	-5.54	1.37	1.45
1	A	451	A	O5'-C5'	-5.54	1.34	1.42
11	K	70	ALA	CA-C	-5.54	1.45	1.52
1	A	361	G	O4'-C1'	-5.53	1.33	1.41
1	A	484	G	C3'-C2'	-5.53	1.44	1.52
1	A	888	G	C2'-C1'	-5.53	1.45	1.53
4	D	13	ARG	CD-NE	5.53	1.53	1.46
4	D	177	MET	CA-C	-5.53	1.46	1.53
16	P	28	ARG	CA-C	-5.53	1.47	1.52
1	A	1486	G	C3'-C2'	-5.53	1.44	1.52
1	A	712	A	C2'-C1'	-5.53	1.45	1.53
1	A	1082	A	P-O5'	-5.53	1.51	1.59
1	A	1173	U	C3'-C2'	-5.53	1.44	1.52
1	A	1464	U	C2'-C1'	-5.53	1.45	1.53
20	T	57	VAL	CA-CB	-5.53	1.48	1.54
1	A	265	G	C1'-N9	-5.53	1.39	1.48
1	A	617	G	O4'-C1'	-5.53	1.33	1.41
1	A	1116	U	P-O5'	-5.53	1.51	1.59
4	D	174	ALA	CA-C	-5.53	1.45	1.52
20	T	82	ILE	N-CA	-5.53	1.39	1.46
1	A	687	A	O4'-C1'	-5.53	1.33	1.42
1	A	453	G	O3'-P	-5.53	1.52	1.61
1	A	705	G	C1'-N9	-5.52	1.39	1.48
5	E	106	ALA	N-CA	-5.52	1.39	1.46
1	A	498	A	O3'-P	-5.52	1.52	1.61
1	A	832	G	N9-C4	-5.52	1.26	1.38
1	A	1483	A	P-O5'	-5.52	1.51	1.59
1	A	1506	U	C2'-C1'	5.52	1.61	1.53
1	A	1378	C	O3'-P	-5.52	1.52	1.61
1	A	1179	A	P-O5'	-5.52	1.51	1.59
1	A	1359	C	O3'-P	-5.52	1.52	1.61
13	M	68	LEU	CA-C	-5.52	1.45	1.52
1	A	559	A	C2'-C1'	-5.51	1.44	1.53
11	K	113	THR	CA-C	5.51	1.59	1.52
22	W	170	MET	CA-C	-5.51	1.45	1.52
1	A	779	C	C3'-C2'	-5.51	1.44	1.52
1	A	1140	C	C2'-C1'	-5.51	1.45	1.53
13	M	65	GLU	N-CA	-5.51	1.39	1.46
1	A	1359	C	O4'-C1'	-5.51	1.33	1.41
6	F	87	SER	CA-C	-5.51	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	O	44	GLU	CA-C	-5.51	1.45	1.52
1	A	207	C	C4'-C3'	-5.51	1.44	1.52
1	A	589	U	C2'-C1'	-5.51	1.45	1.53
1	A	697	U	C2'-C1'	-5.51	1.45	1.53
1	A	1256	A	C3'-C2'	-5.51	1.44	1.52
1	A	266	G	C1'-N9	-5.51	1.38	1.47
1	A	938	A	C4'-O4'	-5.51	1.37	1.45
1	A	1463	U	O3'-P	-5.51	1.52	1.61
1	A	19	A	C1'-N9	-5.50	1.39	1.48
1	A	300	A	O3'-P	-5.50	1.52	1.61
1	A	955	U	P-O5'	-5.50	1.51	1.59
1	A	652	U	P-O5'	-5.50	1.51	1.59
5	E	66	ALA	N-CA	-5.50	1.39	1.46
17	Q	50	ASN	CA-C	-5.50	1.47	1.53
22	W	234	ILE	CA-C	-5.50	1.46	1.52
1	A	137	U	C2'-C1'	-5.50	1.45	1.53
1	A	1533	C	P-O5'	-5.50	1.51	1.59
1	A	633	G	C2'-C1'	-5.50	1.45	1.53
1	A	377	G	C3'-C2'	-5.50	1.44	1.52
4	D	96	ARG	CA-C	-5.50	1.45	1.53
22	W	66	ILE	N-CA	-5.50	1.39	1.46
1	A	70	U	C4'-O4'	-5.50	1.37	1.45
1	A	211	G	C5'-C4'	5.50	1.59	1.51
1	A	484	G	O3'-P	-5.50	1.52	1.61
1	A	782	A	O4'-C1'	-5.50	1.33	1.41
1	A	356	A	C2'-O2'	-5.50	1.34	1.42
1	A	1147	C	P-O5'	-5.50	1.51	1.59
1	A	658	C	C2'-C1'	-5.49	1.45	1.53
1	A	1531	A	O3'-P	-5.49	1.52	1.61
13	M	52	ILE	N-CA	-5.49	1.40	1.46
1	A	46	G	C4'-C3'	-5.49	1.44	1.52
1	A	451	A	C1'-N9	-5.49	1.38	1.47
1	A	640	A	C1'-N9	-5.49	1.39	1.48
1	A	1239	A	C2'-C1'	-5.49	1.44	1.53
1	A	189	A	O3'-P	-5.49	1.52	1.61
1	A	460	A	C3'-C2'	-5.49	1.44	1.52
1	A	67	C	P-O5'	-5.49	1.51	1.59
1	A	558	G	N7-C5	-5.49	1.28	1.39
16	P	3	THR	CA-C	-5.48	1.46	1.52
1	A	13	U	C5'-C4'	5.48	1.59	1.51
1	A	373	A	P-O5'	-5.48	1.51	1.59
1	A	563	A	C2'-C1'	-5.48	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	W	190	VAL	CA-C	-5.48	1.47	1.52
1	A	178	C	C2'-C1'	-5.48	1.45	1.53
1	A	1348	U	O3'-P	-5.48	1.52	1.61
1	A	1501	C	C4'-O4'	-5.48	1.37	1.45
8	H	122	GLY	CA-C	-5.48	1.46	1.51
12	L	73	LEU	CA-C	-5.48	1.45	1.52
1	A	28	A	C3'-C2'	-5.48	1.44	1.52
1	A	401	C	P-O5'	-5.48	1.51	1.59
1	A	1377	A	P-O5'	-5.48	1.51	1.59
3	C	181	ILE	CA-C	-5.48	1.46	1.52
1	A	833	G	C1'-N9	-5.48	1.39	1.48
1	A	1152	A	C2'-C1'	-5.48	1.45	1.53
4	D	130	ASN	N-CA	-5.48	1.39	1.46
13	M	107	THR	CA-CB	-5.48	1.44	1.53
16	P	38	PHE	CA-C	-5.48	1.45	1.52
1	A	751	U	C4'-O4'	-5.48	1.37	1.45
1	A	164	G	C2'-C1'	-5.47	1.45	1.53
1	A	181	A	C2'-C1'	-5.47	1.45	1.53
1	A	358	U	P-O5'	-5.47	1.51	1.59
1	A	641	U	C3'-O3'	-5.47	1.33	1.42
1	A	768	A	C2'-C1'	-5.47	1.45	1.53
1	A	1088	G	P-O5'	-5.47	1.51	1.59
1	A	1324	A	C3'-C2'	-5.47	1.44	1.52
1	A	346	G	C2-N2	-5.47	1.23	1.34
1	A	617	G	C4'-O4'	-5.47	1.37	1.45
1	A	497	G	C1'-N9	-5.47	1.39	1.48
3	C	143	LEU	CA-C	-5.47	1.45	1.52
1	A	657	U	O4'-C1'	-5.47	1.33	1.41
1	A	33	A	C1'-N9	-5.47	1.39	1.48
1	A	189	A	C1'-N9	-5.47	1.39	1.48
1	A	737	C	O5'-C5'	-5.47	1.34	1.42
1	A	224	U	P-O5'	-5.46	1.51	1.59
1	A	696	A	C2'-C1'	-5.46	1.45	1.53
1	A	1263	C	C3'-C2'	-5.46	1.44	1.52
1	A	64	G	O4'-C1'	-5.46	1.33	1.41
1	A	289	G	C4'-O4'	-5.46	1.37	1.45
1	A	297	G	O3'-P	-5.46	1.52	1.61
1	A	929	G	C2'-C1'	-5.46	1.45	1.53
1	A	982	U	P-O5'	-5.46	1.51	1.59
1	A	1023	U	C2'-C1'	-5.46	1.45	1.53
3	C	117	ASP	CA-C	-5.46	1.45	1.52
18	R	48	ALA	CA-C	-5.46	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	106	C	O3'-P	-5.46	1.52	1.61
1	A	119	A	P-O5'	-5.46	1.51	1.59
1	A	594	U	O3'-P	-5.45	1.52	1.61
1	A	928	G	C2'-O2'	-5.45	1.34	1.42
1	A	1436	U	C3'-C2'	-5.45	1.44	1.52
22	W	43	ILE	N-CA	-5.45	1.39	1.46
14	N	70	HIS	N-CA	-5.45	1.38	1.45
1	A	546	A	C2'-O2'	-5.45	1.34	1.42
6	F	51	ILE	CA-CB	-5.45	1.47	1.54
11	K	54	SER	CA-C	-5.45	1.45	1.52
22	W	235	LEU	N-CA	-5.45	1.39	1.46
1	A	181	A	C5'-C4'	-5.45	1.43	1.51
1	A	981	U	O3'-P	-5.45	1.52	1.61
1	A	1414	U	C3'-C2'	-5.45	1.44	1.52
6	F	42	TRP	CA-C	-5.45	1.46	1.53
1	A	272	C	P-O5'	-5.45	1.51	1.59
18	R	39	VAL	CA-C	-5.45	1.47	1.52
22	W	159	LEU	CA-C	-5.45	1.46	1.52
1	A	430	A	P-O5'	-5.45	1.51	1.59
1	A	1465	A	C4'-C3'	5.45	1.60	1.52
7	G	115	MET	CA-C	-5.45	1.45	1.52
1	A	3	A	C1'-N9	-5.44	1.39	1.48
1	A	825	A	C1'-N9	-5.44	1.39	1.48
1	A	731	G	C3'-C2'	-5.44	1.44	1.52
16	P	25	ARG	N-CA	-5.44	1.39	1.46
1	A	348	G	C5'-C4'	-5.44	1.43	1.51
1	A	525	C	P-O5'	-5.44	1.51	1.59
5	E	65	LYS	N-CA	-5.44	1.39	1.46
22	W	76	GLY	CA-C	-5.44	1.44	1.51
1	A	1468	A	P-O5'	-5.44	1.51	1.59
22	W	96	ILE	N-CA	-5.44	1.40	1.46
1	A	215	C	P-O5'	-5.44	1.51	1.59
1	A	470	C	P-O5'	-5.44	1.51	1.59
3	C	98	ALA	N-CA	-5.44	1.39	1.46
13	M	29	SER	CA-CB	-5.44	1.43	1.53
7	G	10	LYS	CA-C	-5.43	1.45	1.52
1	A	866	C	C1'-N1	-5.43	1.40	1.48
1	A	1308	U	O3'-P	-5.43	1.53	1.61
17	Q	33	TYR	CA-CB	5.43	1.60	1.53
1	A	175	C	C3'-C2'	-5.43	1.44	1.52
5	E	61	LYS	CA-C	-5.43	1.44	1.52
7	G	27	ASN	CA-C	-5.43	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
13	M	7	ASN	CA-C	-5.43	1.46	1.52
1	A	737	C	C3'-C2'	-5.43	1.44	1.52
12	L	19	ASN	C-N	5.43	1.38	1.33
1	A	652	U	O3'-P	-5.43	1.53	1.61
1	A	810	C	P-O5'	-5.43	1.51	1.59
3	C	86	LEU	CA-C	-5.43	1.45	1.52
1	A	476	U	C3'-C2'	-5.42	1.44	1.52
1	A	536	C	C1'-N1	-5.42	1.40	1.48
1	A	544	G	P-O5'	-5.42	1.51	1.59
1	A	353	A	O3'-P	-5.42	1.53	1.61
1	A	685	G	O3'-P	-5.42	1.53	1.61
1	A	1016	A	C1'-N9	-5.42	1.39	1.48
1	A	1230	C	C2'-O2'	-5.42	1.34	1.42
1	A	1246	A	P-O5'	-5.42	1.51	1.59
1	A	1311	A	C1'-N9	-5.42	1.39	1.48
22	W	178	ASP	CA-C	-5.42	1.45	1.52
1	A	858	G	P-O5'	-5.42	1.51	1.59
1	A	1288	A	N7-C5	-5.42	1.28	1.39
1	A	126	G	C2'-O2'	-5.42	1.34	1.42
1	A	250	A	C2'-C1'	-5.42	1.45	1.53
1	A	908	A	C2'-C1'	-5.42	1.45	1.53
13	M	95	PRO	N-CA	-5.42	1.40	1.47
1	A	520	A	P-O5'	-5.42	1.51	1.59
10	J	42	LEU	CA-C	-5.42	1.46	1.52
1	A	252	U	O4'-C1'	-5.42	1.33	1.41
6	F	7	VAL	CA-C	-5.42	1.45	1.52
1	A	366	A	N7-C5	-5.41	1.28	1.39
1	A	714	G	C1'-N9	-5.41	1.39	1.48
1	A	1121	U	P-O5'	-5.41	1.51	1.59
8	H	64	TYR	CA-C	-5.41	1.46	1.52
12	L	118	VAL	CA-C	-5.41	1.46	1.52
1	A	240	G	C2'-C1'	-5.41	1.45	1.53
1	A	450	G	O5'-C5'	-5.41	1.34	1.42
1	A	691	G	O4'-C1'	-5.41	1.33	1.41
1	A	1108	G	C3'-C2'	-5.41	1.44	1.52
1	A	628	G	N9-C4	-5.41	1.27	1.38
3	C	91	ALA	CA-C	-5.41	1.45	1.52
1	A	56	U	P-O5'	-5.41	1.51	1.59
1	A	502	A	P-O5'	-5.41	1.51	1.59
1	A	548	G	C1'-N9	-5.41	1.39	1.48
1	A	1293	C	C2'-C1'	-5.41	1.45	1.53
1	A	936	C	C3'-C2'	-5.41	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	F	60	VAL	CA-C	-5.41	1.46	1.52
1	A	1380	U	C3'-C2'	-5.40	1.44	1.52
1	A	860	A	O3'-P	-5.40	1.53	1.61
10	J	49	PHE	CA-C	5.40	1.59	1.52
17	Q	70	LYS	CA-C	-5.40	1.45	1.52
14	N	97	LYS	CA-C	-5.40	1.45	1.52
1	A	482	A	C1'-N9	-5.39	1.39	1.48
1	A	1346	A	C4'-O4'	-5.39	1.37	1.45
11	K	93	GLU	CA-C	-5.39	1.45	1.52
9	I	15	ALA	CA-C	-5.39	1.47	1.53
1	A	278	G	C1'-N9	-5.39	1.39	1.48
1	A	1494	G	C1'-N9	-5.39	1.39	1.48
1	A	46	G	P-O5'	-5.39	1.51	1.59
1	A	444	G	C1'-N9	-5.39	1.39	1.48
1	A	648	A	C5'-C4'	-5.39	1.43	1.51
1	A	792	A	O3'-P	-5.39	1.53	1.61
17	Q	15	LYS	CA-C	-5.39	1.45	1.53
1	A	37	U	C3'-C2'	-5.39	1.44	1.52
1	A	332	G	C2'-C1'	-5.39	1.45	1.53
1	A	578	C	C3'-C2'	-5.39	1.44	1.52
1	A	604	G	N9-C4	-5.39	1.27	1.38
1	A	1225	A	O3'-P	-5.39	1.53	1.61
1	A	1335	U	P-O5'	-5.39	1.51	1.59
1	A	1478	U	C3'-C2'	-5.39	1.44	1.52
4	D	26	ALA	N-CA	-5.39	1.39	1.46
1	A	203	G	C2'-C1'	-5.38	1.45	1.53
1	A	304	U	P-O5'	-5.38	1.51	1.59
1	A	318	G	C1'-N9	-5.38	1.39	1.48
1	A	1251	A	C1'-N9	-5.38	1.38	1.47
4	D	169	TRP	CA-C	-5.38	1.45	1.52
8	H	42	GLU	N-CA	-5.38	1.40	1.46
1	A	1280	A	P-O5'	-5.38	1.51	1.59
1	A	837	U	C2'-C1'	-5.38	1.45	1.53
1	A	872	A	O3'-P	-5.38	1.53	1.61
1	A	1242	G	C3'-C2'	-5.38	1.44	1.52
2	B	165	ALA	CA-C	-5.38	1.45	1.52
1	A	178	C	C3'-C2'	-5.37	1.44	1.52
1	A	761	G	C2'-C1'	-5.37	1.45	1.53
1	A	796	C	O4'-C1'	-5.37	1.33	1.41
1	A	798	U	C2'-C1'	-5.37	1.45	1.53
4	D	155	LYS	N-CA	-5.37	1.40	1.46
12	L	13	ARG	CA-C	-5.37	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	509	A	C2'-C1'	-5.37	1.45	1.53
1	A	583	A	P-O5'	-5.37	1.51	1.59
1	A	1153	G	C2'-C1'	-5.37	1.45	1.53
1	A	1370	G	C4'-O4'	-5.37	1.37	1.45
13	M	45	SER	CA-C	-5.37	1.46	1.53
1	A	1182	G	C1'-N9	-5.37	1.38	1.47
1	A	1216	A	C2'-C1'	-5.37	1.45	1.53
3	C	115	VAL	N-CA	-5.37	1.40	1.46
22	W	237	ASN	C-N	-5.37	1.25	1.33
1	A	2	A	C1'-N9	-5.37	1.39	1.48
1	A	62	U	C5'-C4'	-5.37	1.43	1.51
1	A	1135	U	C2'-C1'	-5.37	1.45	1.53
1	A	1501	C	C5'-C4'	-5.37	1.43	1.51
1	A	538	G	C2'-C1'	-5.37	1.45	1.53
1	A	693	G	O3'-P	-5.37	1.53	1.61
11	K	62	ALA	CA-C	-5.37	1.45	1.52
1	A	453	G	C4'-C3'	-5.36	1.44	1.52
1	A	1343	G	C3'-C2'	-5.36	1.44	1.52
1	A	1345	U	P-O5'	-5.36	1.51	1.59
1	A	1270	G	C1'-N9	-5.36	1.40	1.48
1	A	1396	A	O4'-C1'	-5.36	1.33	1.42
2	B	87	ASP	N-CA	-5.36	1.40	1.46
3	C	20	THR	CA-C	-5.36	1.45	1.52
1	A	750	C	C4'-C3'	-5.36	1.44	1.52
1	A	1289	A	C1'-N9	-5.36	1.40	1.48
3	C	135	ARG	CA-C	-5.36	1.45	1.52
1	A	928	G	C3'-C2'	-5.35	1.44	1.52
6	F	42	TRP	N-CA	-5.35	1.41	1.46
11	K	44	ALA	N-CA	-5.35	1.39	1.46
11	K	48	GLY	N-CA	-5.35	1.37	1.45
11	K	98	ALA	N-CA	-5.35	1.38	1.46
20	T	56	ILE	N-CA	-5.35	1.40	1.46
1	A	90	C	C4'-C3'	-5.35	1.45	1.53
1	A	947	G	O3'-P	-5.35	1.53	1.61
1	A	888	G	C3'-C2'	-5.35	1.44	1.52
1	A	72	A	C4'-C3'	-5.35	1.44	1.52
1	A	187	G	O4'-C1'	-5.35	1.33	1.41
1	A	190	A	C2'-C1'	-5.35	1.45	1.53
1	A	498	A	C2'-C1'	-5.35	1.45	1.53
1	A	912	C	P-O5'	-5.35	1.51	1.59
4	D	113	ALA	CA-C	-5.35	1.45	1.52
17	Q	21	VAL	CA-C	-5.35	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	65	A	C3'-C2'	5.35	1.60	1.52
1	A	318	G	P-O5'	-5.35	1.51	1.59
1	A	1523	G	O4'-C1'	-5.35	1.33	1.41
22	W	234	ILE	N-CA	-5.35	1.40	1.46
1	A	405	U	C1'-N1	-5.35	1.40	1.48
3	C	148	ILE	CA-C	-5.35	1.46	1.52
5	E	62	ALA	CA-CB	-5.35	1.46	1.53
11	K	27	ASN	C-O	-5.35	1.17	1.24
2	B	129	THR	CA-C	-5.34	1.46	1.53
1	A	943	U	P-O5'	-5.34	1.51	1.59
1	A	1357	A	C2'-C1'	-5.34	1.45	1.53
2	B	86	CYS	CA-C	-5.34	1.45	1.52
8	H	45	ILE	N-CA	-5.34	1.39	1.46
13	M	59	VAL	CA-CB	-5.34	1.48	1.54
1	A	694	A	C1'-N9	-5.34	1.40	1.48
1	A	871	U	C1'-N1	5.34	1.56	1.48
1	A	1222	G	O4'-C1'	-5.34	1.33	1.41
1	A	911	U	O3'-P	-5.34	1.53	1.61
1	A	1421	G	C2'-C1'	-5.34	1.45	1.53
4	D	89	LEU	CA-C	-5.34	1.46	1.52
1	A	635	A	C1'-N9	-5.33	1.40	1.48
1	A	142	G	O3'-P	-5.33	1.53	1.61
8	H	127	TYR	C-N	5.33	1.40	1.33
1	A	668	G	P-O5'	-5.33	1.51	1.59
1	A	1341	U	C2'-C1'	-5.33	1.45	1.53
1	A	536	C	P-O5'	-5.33	1.51	1.59
1	A	1058	G	N7-C5	-5.33	1.28	1.39
1	A	1380	U	C4'-C3'	-5.33	1.44	1.52
3	C	171	ARG	CA-C	-5.33	1.46	1.52
4	D	195	ASN	CA-C	-5.33	1.46	1.52
1	A	367	U	C2'-C1'	-5.33	1.45	1.53
1	A	1354	U	C2'-C1'	-5.33	1.45	1.53
2	B	195	VAL	N-CA	-5.33	1.40	1.46
1	A	300	A	P-O5'	-5.33	1.51	1.59
1	A	454	G	C1'-N9	-5.33	1.40	1.48
1	A	1366	C	C2'-C1'	-5.33	1.45	1.53
1	A	1377	A	O3'-P	-5.33	1.53	1.61
1	A	47	C	C4'-O4'	-5.32	1.37	1.45
1	A	500	G	C2'-O2'	-5.32	1.34	1.42
1	A	662	U	P-O5'	-5.32	1.51	1.59
1	A	925	G	O3'-P	-5.32	1.53	1.61
1	A	1524	C	C2'-C1'	-5.32	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	161	PHE	CA-C	-5.32	1.46	1.52
6	F	89	VAL	CA-CB	-5.32	1.47	1.54
17	Q	6	THR	CA-C	-5.32	1.46	1.52
19	S	56	HIS	CA-C	-5.32	1.46	1.53
1	A	405	U	C2'-C1'	-5.32	1.45	1.53
12	L	25	ALA	CA-C	-5.32	1.45	1.52
1	A	547	A	C4'-C3'	-5.32	1.45	1.53
1	A	1355	G	O4'-C1'	-5.32	1.33	1.41
1	A	1518	A	C3'-O3'	-5.32	1.34	1.42
17	Q	80	LYS	CA-C	-5.32	1.46	1.52
1	A	500	G	C1'-N9	-5.32	1.40	1.48
1	A	381	C	C2'-C1'	-5.32	1.45	1.53
1	A	1249	C	C2'-C1'	-5.32	1.45	1.53
1	A	1391	U	C1'-N1	5.32	1.56	1.48
4	D	181	PHE	N-CA	-5.32	1.39	1.46
5	E	32	PHE	CA-C	-5.31	1.46	1.52
1	A	1421	G	C3'-C2'	-5.31	1.44	1.52
1	A	1083	U	C2'-C1'	-5.31	1.45	1.53
1	A	18	C	C2'-C1'	-5.31	1.45	1.53
1	A	91	U	C5'-C4'	5.31	1.59	1.51
1	A	565	U	C2'-C1'	-5.31	1.45	1.53
1	A	1307	U	C3'-C2'	-5.31	1.44	1.52
1	A	856	C	C2'-C1'	-5.30	1.45	1.53
16	P	46	LYS	CA-C	-5.30	1.45	1.52
1	A	673	A	C3'-C2'	-5.30	1.44	1.52
1	A	1266	G	P-O5'	-5.30	1.51	1.59
3	C	46	LEU	CA-C	-5.30	1.46	1.53
22	W	81	TRP	CA-C	-5.30	1.46	1.52
22	W	102	GLU	CA-C	-5.30	1.46	1.52
1	A	99	C	C2'-C1'	-5.30	1.45	1.53
1	A	138	G	C3'-C2'	-5.30	1.44	1.52
1	A	1083	U	C3'-C2'	-5.30	1.44	1.52
11	K	34	THR	CA-C	-5.30	1.46	1.52
1	A	158	G	C2'-C1'	-5.30	1.45	1.53
5	E	77	ASN	CA-C	-5.30	1.45	1.52
1	A	78	A	C1'-N9	5.29	1.55	1.48
1	A	974	A	O3'-P	-5.29	1.53	1.61
1	A	1198	G	C2'-C1'	-5.29	1.45	1.53
1	A	74	A	O3'-P	-5.29	1.53	1.61
1	A	721	G	C2'-C1'	-5.29	1.45	1.53
1	A	1074	G	C2'-C1'	-5.29	1.45	1.53
3	C	170	GLY	CA-C	-5.29	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1528	U	O3'-P	-5.29	1.53	1.61
5	E	103	GLY	N-CA	-5.29	1.40	1.45
1	A	68	G	N7-C5	-5.29	1.28	1.39
1	A	420	U	O3'-P	-5.29	1.53	1.61
21	U	12	ASP	CA-C	-5.29	1.45	1.52
1	A	343	U	C4'-O4'	-5.29	1.37	1.45
1	A	347	G	N7-C5	-5.29	1.28	1.39
9	I	76	GLY	CA-C	-5.29	1.44	1.51
1	A	312	C	O3'-P	-5.29	1.53	1.61
1	A	540	G	C1'-N9	-5.29	1.40	1.48
1	A	1342	C	P-O5'	-5.29	1.51	1.59
1	A	1344	C	C4'-C3'	-5.29	1.44	1.52
16	P	71	VAL	CA-C	-5.29	1.46	1.52
1	A	560	A	C3'-C2'	-5.28	1.45	1.52
1	A	977	A	C1'-N9	-5.28	1.40	1.48
1	A	1394	A	C2'-C1'	-5.28	1.45	1.53
1	A	548	G	C2'-C1'	-5.28	1.45	1.53
1	A	1186	G	C2-N2	-5.28	1.24	1.34
3	C	129	PHE	CA-C	-5.28	1.46	1.52
14	N	83	VAL	CA-CB	-5.28	1.48	1.54
1	A	786	G	C3'-C2'	-5.28	1.44	1.52
1	A	1159	U	C4'-O4'	-5.28	1.38	1.45
1	A	35	G	P-O5'	-5.28	1.51	1.59
1	A	148	G	C2'-C1'	-5.28	1.45	1.53
1	A	1124	G	C1'-N9	-5.28	1.40	1.48
1	A	9	G	C2'-C1'	-5.28	1.45	1.53
1	A	679	C	C3'-C2'	-5.28	1.44	1.52
3	C	169	GLU	CA-C	-5.28	1.45	1.52
1	A	1280	A	C4'-O4'	-5.27	1.37	1.45
1	A	1447	A	C2'-O2'	-5.27	1.34	1.42
16	P	23	ASP	CA-C	-5.27	1.46	1.52
1	A	699	C	P-O5'	-5.27	1.51	1.59
15	O	30	LEU	N-CA	-5.27	1.40	1.46
1	A	1084	G	C3'-C2'	-5.27	1.44	1.52
1	A	1395	C	O3'-P	-5.27	1.53	1.61
1	A	1074	G	P-O5'	-5.27	1.51	1.59
1	A	1083	U	P-O5'	-5.27	1.51	1.59
1	A	1279	G	N7-C5	-5.27	1.28	1.39
12	L	35	ARG	N-CA	-5.27	1.39	1.46
1	A	163	C	C4'-C3'	-5.27	1.44	1.52
1	A	668	G	O4'-C1'	-5.27	1.33	1.41
8	H	113	ARG	N-CA	-5.27	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	Q	17	GLU	CA-C	-5.27	1.45	1.52
1	A	1393	U	C2'-C1'	-5.27	1.45	1.53
1	A	76	G	N7-C5	-5.26	1.28	1.39
1	A	1349	A	O4'-C1'	-5.26	1.33	1.41
1	A	1507	A	C4'-C3'	-5.26	1.44	1.52
5	E	37	VAL	C-N	-5.26	1.26	1.33
5	E	87	VAL	CA-C	-5.26	1.46	1.52
22	W	143	ARG	CD-NE	5.26	1.53	1.46
1	A	1045	C	C1'-N1	-5.26	1.40	1.48
1	A	959	A	C2'-C1'	-5.26	1.45	1.53
2	B	49	PHE	CA-C	-5.26	1.45	1.52
1	A	159	G	C4'-O4'	-5.26	1.37	1.45
1	A	194	C	C3'-C2'	-5.26	1.44	1.52
1	A	404	G	O3'-P	-5.26	1.53	1.61
1	A	1094	G	C1'-N9	-5.26	1.40	1.48
8	H	12	ARG	CA-C	-5.26	1.46	1.52
1	A	1296	C	C4'-O4'	-5.26	1.37	1.45
1	A	172	A	C4'-O4'	-5.26	1.37	1.45
1	A	437	U	C3'-C2'	-5.26	1.44	1.52
1	A	628	G	N7-C5	-5.26	1.28	1.39
1	A	629	A	C1'-N9	-5.26	1.40	1.48
1	A	946	A	C2'-O2'	-5.26	1.34	1.42
1	A	1233	G	O3'-P	-5.25	1.53	1.61
1	A	1421	G	P-O5'	-5.25	1.51	1.59
5	E	134	ASN	N-CA	-5.25	1.39	1.46
22	W	293	TYR	CA-C	-5.25	1.45	1.52
1	A	1526	G	C1'-N9	-5.25	1.40	1.48
4	D	182	LYS	N-CA	-5.25	1.39	1.46
1	A	322	C	C2'-C1'	-5.25	1.45	1.53
1	A	1090	U	O3'-P	-5.25	1.53	1.61
12	L	76	HIS	N-CA	-5.25	1.39	1.46
1	A	465	A	C2'-C1'	-5.25	1.45	1.53
1	A	1142	G	C5'-C4'	-5.25	1.43	1.51
1	A	1373	G	O4'-C1'	-5.25	1.33	1.41
5	E	39	GLY	N-CA	-5.25	1.37	1.45
1	A	105	G	C1'-N9	-5.25	1.40	1.48
1	A	289	G	C2'-C1'	-5.25	1.45	1.53
1	A	530	G	C4'-O4'	-5.25	1.37	1.45
1	A	765	G	P-O5'	-5.25	1.51	1.59
1	A	1268	G	C4'-C3'	-5.25	1.44	1.52
1	A	1530	G	O3'-P	-5.25	1.53	1.61
1	A	272	C	O3'-P	-5.25	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	648	A	C3'-C2'	-5.25	1.44	1.52
6	F	51	ILE	CA-C	-5.25	1.46	1.52
17	Q	25	GLU	CA-C	-5.25	1.45	1.53
1	A	1084	G	C5'-C4'	-5.24	1.43	1.51
1	A	1225	A	C4'-O4'	-5.24	1.38	1.45
1	A	327	A	C1'-N9	-5.24	1.39	1.47
1	A	1441	A	O3'-P	-5.24	1.53	1.61
1	A	93	U	P-O5'	-5.24	1.51	1.59
1	A	160	A	C1'-N9	-5.24	1.40	1.48
1	A	714	G	P-O5'	-5.24	1.51	1.59
1	A	977	A	C2'-C1'	-5.24	1.45	1.53
1	A	1146	A	P-O5'	-5.24	1.51	1.59
1	A	1264	U	C3'-C2'	-5.24	1.44	1.52
1	A	1316	G	C2'-C1'	-5.24	1.45	1.53
6	F	8	PHE	CA-C	-5.24	1.46	1.52
7	G	119	LEU	CA-C	-5.24	1.46	1.52
9	I	50	PRO	CA-C	-5.24	1.45	1.52
17	Q	57	VAL	N-CA	-5.24	1.40	1.46
1	A	344	A	P-O5'	-5.24	1.51	1.59
1	A	1474	U	C2'-C1'	-5.24	1.45	1.53
12	L	95	HIS	CA-C	-5.24	1.46	1.52
1	A	643	C	C3'-C2'	-5.24	1.44	1.52
6	F	10	VAL	CA-C	-5.24	1.47	1.53
11	K	46	ALA	CA-C	-5.24	1.45	1.52
14	N	12	ARG	CD-NE	5.24	1.53	1.46
1	A	1061	G	C1'-N9	-5.23	1.40	1.48
1	A	105	G	P-O5'	-5.23	1.51	1.59
1	A	325	A	C2'-C1'	-5.23	1.45	1.53
1	A	451	A	C3'-O3'	-5.23	1.35	1.43
1	A	673	A	P-O5'	-5.23	1.51	1.59
1	A	676	A	C2'-C1'	-5.23	1.45	1.53
1	A	230	G	C2'-C1'	-5.23	1.45	1.53
1	A	816	A	C3'-C2'	-5.23	1.45	1.52
1	A	359	G	O3'-P	-5.23	1.53	1.61
4	D	97	LEU	N-CA	-5.23	1.40	1.46
1	A	738	C	O3'-P	-5.22	1.53	1.61
1	A	1152	A	C5'-C4'	-5.22	1.43	1.51
1	A	1522	U	P-O5'	-5.22	1.51	1.59
1	A	372	C	C1'-N1	-5.22	1.40	1.48
2	B	88	GLN	N-CA	-5.22	1.40	1.46
22	W	80	VAL	CA-C	-5.22	1.46	1.52
1	A	1093	A	C4'-C3'	-5.22	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1417	G	O3'-P	-5.22	1.53	1.61
2	B	203	ASP	N-CA	-5.22	1.39	1.46
20	T	84	LYS	CA-C	-5.22	1.45	1.52
1	A	378	G	C1'-N9	-5.22	1.40	1.48
1	A	405	U	C4'-O4'	-5.22	1.37	1.45
1	A	115	G	C2'-C1'	-5.21	1.45	1.53
1	A	649	A	O3'-P	-5.21	1.53	1.61
1	A	767	A	C2'-C1'	-5.21	1.45	1.53
12	L	75	GLU	CA-C	-5.21	1.45	1.52
1	A	233	C	O3'-P	-5.21	1.53	1.61
1	A	595	A	P-O5'	-5.21	1.51	1.59
1	A	113	G	P-O5'	-5.21	1.51	1.59
1	A	771	G	C1'-N9	-5.21	1.40	1.48
1	A	978	A	P-O5'	-5.21	1.51	1.59
1	A	37	U	O5'-C5'	-5.21	1.34	1.42
1	A	1256	A	C8-N7	-5.21	1.21	1.31
1	A	1225	A	O4'-C1'	-5.21	1.34	1.42
1	A	1287	A	O4'-C1'	-5.21	1.33	1.41
1	A	1349	A	C4'-C3'	-5.21	1.44	1.52
11	K	20	ALA	N-CA	-5.21	1.40	1.46
4	D	93	LEU	CA-C	-5.21	1.46	1.52
1	A	713	G	C1'-N9	-5.21	1.40	1.48
3	C	193	GLY	CA-C	-5.21	1.44	1.51
1	A	321	A	C1'-N9	-5.20	1.40	1.48
1	A	977	A	C4'-C3'	-5.20	1.44	1.52
3	C	57	GLU	N-CA	-5.20	1.38	1.46
1	A	548	G	O3'-P	-5.20	1.53	1.61
1	A	1116	U	C3'-C2'	-5.20	1.45	1.52
2	B	46	VAL	N-CA	-5.20	1.40	1.46
3	C	50	SER	CA-C	-5.20	1.45	1.52
1	A	268	U	P-O5'	-5.20	1.51	1.59
6	F	14	GLN	CA-C	-5.20	1.46	1.53
12	L	58	ASN	CA-C	-5.20	1.45	1.52
1	A	522	C	C3'-C2'	-5.20	1.45	1.52
1	A	593	U	O4'-C1'	-5.20	1.33	1.41
1	A	960	U	O3'-P	-5.20	1.53	1.61
1	A	1017	U	C2'-C1'	-5.20	1.45	1.53
12	L	109	ARG	N-CA	-5.20	1.39	1.45
1	A	694	A	C2'-C1'	-5.20	1.45	1.53
1	A	770	C	P-O5'	-5.20	1.51	1.59
4	D	128	VAL	CA-C	-5.20	1.46	1.52
12	L	119	LYS	N-CA	-5.19	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	T	45	ALA	CA-C	-5.19	1.45	1.52
1	A	666	G	C4'-C3'	-5.19	1.44	1.52
1	A	896	C	O4'-C1'	-5.19	1.33	1.41
1	A	1369	C	O4'-C1'	-5.19	1.33	1.41
5	E	133	ILE	CA-C	-5.19	1.46	1.52
1	A	324	G	C2'-C1'	-5.19	1.45	1.53
1	A	391	G	C3'-C2'	-5.19	1.45	1.52
1	A	400	C	C2'-C1'	-5.19	1.45	1.53
1	A	739	C	C2'-C1'	-5.19	1.45	1.53
1	A	1048	G	O4'-C1'	-5.19	1.33	1.41
1	A	1142	G	O5'-C5'	-5.19	1.34	1.42
20	T	81	GLN	CA-C	-5.19	1.46	1.52
1	A	422	C	C1'-N1	-5.19	1.40	1.48
1	A	772	U	O5'-C5'	-5.19	1.34	1.42
1	A	1215	G	C4'-O4'	-5.19	1.37	1.45
1	A	1234	C	C1'-N1	-5.19	1.40	1.48
1	A	1297	G	C4'-O4'	-5.19	1.38	1.45
1	A	372	C	C4'-O4'	-5.19	1.37	1.45
5	E	153	ALA	N-CA	-5.18	1.39	1.46
12	L	9	LYS	N-CA	-5.18	1.40	1.46
1	A	202	G	C2'-C1'	-5.18	1.45	1.53
1	A	1303	C	C5'-C4'	-5.18	1.43	1.51
11	K	61	ALA	N-CA	-5.18	1.40	1.46
1	A	777	A	C3'-C2'	-5.18	1.45	1.52
1	A	990	C	P-O5'	-5.18	1.51	1.59
1	A	1103	C	C1'-N1	-5.18	1.40	1.48
1	A	16	A	O4'-C1'	-5.18	1.33	1.41
1	A	261	U	C4'-O4'	-5.18	1.37	1.45
1	A	327	A	P-O5'	-5.18	1.51	1.59
8	H	66	GLN	CA-C	-5.18	1.45	1.52
1	A	927	G	O3'-P	-5.18	1.53	1.61
1	A	268	U	O4'-C1'	-5.18	1.33	1.41
1	A	366	A	P-O5'	-5.18	1.51	1.59
1	A	528	C	C2'-C1'	-5.18	1.45	1.53
1	A	858	G	N9-C8	-5.18	1.27	1.37
1	A	1149	C	P-O5'	-5.18	1.51	1.59
22	W	189	MET	CA-C	-5.18	1.46	1.52
1	A	161	A	C4'-O4'	-5.17	1.37	1.45
1	A	675	A	C5'-C4'	-5.17	1.43	1.51
1	A	787	A	P-O5'	-5.17	1.51	1.59
10	J	80	THR	CA-C	-5.17	1.46	1.53
1	A	236	A	C1'-N9	-5.17	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	369	G	C2'-C1'	-5.17	1.45	1.53
1	A	920	U	C2'-C1'	-5.17	1.45	1.53
18	R	38	ILE	N-CA	-5.17	1.39	1.46
1	A	1255	G	C3'-C2'	-5.17	1.45	1.52
1	A	1313	U	O5'-C5'	-5.17	1.34	1.42
1	A	1469	C	C1'-N1	5.17	1.56	1.48
9	I	84	ARG	CA-C	-5.17	1.46	1.52
8	H	70	VAL	CA-C	-5.17	1.46	1.52
1	A	324	G	O3'-P	-5.17	1.53	1.61
3	C	179	ALA	CA-C	-5.17	1.46	1.52
6	F	34	GLY	N-CA	-5.17	1.38	1.45
13	M	18	LEU	CA-CB	-5.17	1.44	1.53
1	A	454	G	C2'-C1'	-5.17	1.45	1.53
1	A	1329	A	C2'-C1'	-5.17	1.45	1.53
1	A	926	G	P-O5'	-5.17	1.52	1.59
1	A	1447	A	C1'-N9	-5.17	1.40	1.48
1	A	991	U	C2'-C1'	-5.16	1.45	1.53
1	A	1417	G	C4'-C3'	-5.16	1.44	1.52
2	B	209	VAL	CA-CB	-5.16	1.47	1.54
5	E	60	GLN	N-CA	-5.16	1.40	1.46
20	T	82	ILE	CA-C	-5.16	1.45	1.52
1	A	559	A	C3'-C2'	-5.16	1.45	1.52
1	A	709	U	P-O5'	-5.16	1.52	1.59
1	A	171	A	C1'-N9	-5.16	1.40	1.48
1	A	200	G	C3'-C2'	-5.16	1.45	1.52
7	G	78	ARG	CA-C	-5.16	1.45	1.52
1	A	360	G	C1'-N9	-5.16	1.40	1.48
9	I	26	LYS	CA-C	-5.16	1.46	1.52
1	A	150	U	P-O5'	-5.16	1.52	1.59
1	A	384	G	O4'-C1'	-5.16	1.33	1.41
1	A	1326	U	C1'-N1	-5.16	1.40	1.48
3	C	181	ILE	N-CA	-5.16	1.39	1.46
10	J	50	THR	CA-C	5.16	1.58	1.52
1	A	587	G	C2'-C1'	-5.15	1.45	1.53
11	K	118	ASN	CA-C	-5.15	1.45	1.52
1	A	900	A	C1'-N9	-5.15	1.40	1.48
1	A	1349	A	P-O5'	-5.15	1.52	1.59
2	B	41	ASN	CA-C	-5.15	1.46	1.52
10	J	69	THR	CA-C	-5.15	1.46	1.52
20	T	17	ARG	CA-C	5.15	1.59	1.52
1	A	688	G	C4'-C3'	-5.15	1.44	1.52
3	C	134	LYS	N-CA	-5.15	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	248	C	C2'-C1'	-5.15	1.45	1.53
1	A	1334	G	C5-C6	-5.15	1.32	1.42
3	C	18	ASN	CA-C	-5.15	1.46	1.52
18	R	39	VAL	N-CA	-5.15	1.40	1.46
22	W	311	ALA	N-CA	-5.15	1.40	1.46
1	A	704	A	C2'-C1'	-5.15	1.45	1.53
1	A	108	G	O3'-P	-5.14	1.53	1.61
1	A	349	A	C3'-C2'	-5.14	1.45	1.52
1	A	570	G	C2'-O2'	-5.14	1.34	1.42
1	A	46	G	C3'-C2'	-5.14	1.45	1.52
14	N	21	ALA	CA-C	-5.14	1.45	1.52
3	C	187	GLU	CA-C	-5.14	1.45	1.52
4	D	172	VAL	CA-CB	-5.14	1.47	1.54
1	A	154	U	C3'-C2'	-5.14	1.45	1.52
1	A	365	U	C2'-C1'	-5.14	1.45	1.53
1	A	376	G	C2'-C1'	-5.14	1.45	1.53
1	A	946	A	C3'-C2'	-5.14	1.45	1.52
1	A	1444	U	C3'-C2'	-5.14	1.45	1.52
18	R	50	TYR	N-CA	-5.14	1.40	1.46
22	W	321	ILE	CA-C	-5.14	1.46	1.52
1	A	765	G	O3'-P	-5.14	1.53	1.61
1	A	1295	U	C2'-C1'	-5.14	1.45	1.53
1	A	1296	C	O4'-C1'	-5.14	1.33	1.41
1	A	1331	G	C3'-C2'	-5.14	1.45	1.52
1	A	392	C	C2'-C1'	-5.13	1.45	1.53
1	A	948	C	C1'-N1	-5.13	1.40	1.48
1	A	1523	G	C5'-C4'	-5.13	1.43	1.51
22	W	55	GLU	CA-C	-5.13	1.46	1.52
1	A	218	U	C2'-C1'	-5.13	1.45	1.53
1	A	345	C	O3'-P	-5.13	1.53	1.61
4	D	141	VAL	N-CA	-5.13	1.39	1.47
22	W	81	TRP	N-CA	-5.13	1.39	1.45
1	A	205	A	O3'-P	-5.13	1.53	1.61
1	A	518	C	C2'-C1'	-5.13	1.45	1.53
3	C	56	ILE	CA-CB	-5.13	1.47	1.54
10	J	34	ALA	CA-C	-5.13	1.46	1.52
1	A	144	G	C5-C6	-5.13	1.32	1.42
13	M	59	VAL	N-CA	-5.13	1.39	1.46
22	W	193	HIS	CA-C	-5.13	1.46	1.52
1	A	743	A	C3'-C2'	-5.13	1.45	1.52
1	A	1186	G	C2'-C1'	-5.13	1.45	1.53
4	D	31	CYS	CA-C	-5.13	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	I	65	THR	CA-C	-5.13	1.46	1.52
13	M	94	LEU	C-N	-5.13	1.27	1.33
22	W	47	ARG	N-CA	-5.13	1.39	1.46
1	A	770	C	C3'-C2'	-5.13	1.45	1.52
1	A	1201	A	O3'-P	-5.13	1.53	1.61
1	A	1229	A	C2'-C1'	-5.12	1.45	1.53
1	A	1334	G	C4'-O4'	-5.12	1.37	1.45
1	A	1362	A	C4'-O4'	-5.12	1.37	1.45
1	A	203	G	C4'-C3'	-5.12	1.44	1.52
1	A	1006	G	C2'-C1'	-5.12	1.45	1.53
3	C	182	ASP	CA-C	-5.12	1.46	1.52
12	L	80	LEU	N-CA	-5.12	1.39	1.46
13	M	51	GLN	CA-C	-5.12	1.45	1.52
14	N	99	SER	N-CA	-5.12	1.39	1.46
15	O	41	HIS	N-CA	-5.12	1.40	1.46
1	A	292	G	C3'-C2'	-5.12	1.45	1.52
1	A	954	G	N9-C8	-5.12	1.27	1.37
1	A	1144	G	C2'-O2'	-5.12	1.34	1.42
2	B	190	SER	CA-C	-5.12	1.46	1.52
4	D	147	LYS	CA-C	-5.12	1.48	1.53
22	W	328	ASN	CA-C	-5.12	1.45	1.52
1	A	21	G	C2'-C1'	-5.12	1.45	1.53
1	A	153	C	P-O5'	-5.12	1.52	1.59
1	A	1080	A	C4'-C3'	-5.12	1.44	1.52
1	A	1256	A	N7-C5	-5.12	1.29	1.39
3	C	53	ARG	CA-C	-5.12	1.46	1.52
8	H	13	ILE	CA-CB	-5.12	1.48	1.54
16	P	35	ARG	NE-CZ	5.12	1.38	1.33
19	S	61	VAL	N-CA	-5.12	1.40	1.46
1	A	136	C	P-O5'	-5.11	1.52	1.59
1	A	227	G	C3'-C2'	-5.11	1.45	1.52
1	A	597	G	P-O5'	-5.11	1.52	1.59
1	A	628	G	C2'-C1'	-5.11	1.45	1.53
18	R	70	THR	N-CA	-5.11	1.38	1.45
1	A	285	C	P-O5'	-5.11	1.52	1.59
1	A	295	C	C3'-C2'	-5.11	1.45	1.52
1	A	1502	A	N9-C4	-5.11	1.27	1.37
5	E	137	ARG	CA-C	-5.11	1.46	1.52
1	A	662	U	C2'-C1'	-5.11	1.45	1.53
1	A	269	C	C2'-C1'	-5.11	1.45	1.53
1	A	330	C	C2'-C1'	-5.11	1.45	1.53
1	A	750	C	O4'-C1'	-5.11	1.33	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	D	172	VAL	CA-C	-5.11	1.46	1.52
11	K	33	ILE	CA-C	-5.11	1.46	1.52
1	A	516	U	O3'-P	-5.11	1.53	1.61
1	A	614	C	O3'-P	-5.11	1.53	1.61
1	A	1180	A	C2'-C1'	-5.11	1.45	1.53
1	A	1210	C	C3'-C2'	-5.11	1.45	1.52
1	A	1102	A	P-O5'	-5.10	1.52	1.59
1	A	389	A	C1'-N9	-5.10	1.40	1.48
1	A	752	G	O4'-C1'	-5.10	1.33	1.41
1	A	1033	G	C2'-C1'	-5.10	1.45	1.53
1	A	1277	C	C1'-N1	-5.10	1.40	1.48
14	N	4	SER	CA-C	-5.10	1.46	1.52
15	O	47	LYS	N-CA	-5.10	1.38	1.46
1	A	45	G	C2'-O2'	-5.10	1.34	1.42
1	A	252	U	C4'-O4'	-5.10	1.38	1.45
1	A	282	A	C1'-N9	-5.10	1.40	1.48
1	A	1147	C	O3'-P	-5.10	1.53	1.61
7	G	4	ARG	C-N	5.10	1.40	1.33
1	A	541	G	P-O5'	-5.10	1.52	1.59
3	C	189	HIS	CA-C	-5.10	1.46	1.52
1	A	306	A	O3'-P	-5.09	1.53	1.61
1	A	326	G	C2'-C1'	-5.09	1.45	1.53
1	A	534	U	C4'-O4'	-5.09	1.38	1.45
1	A	707	U	C1'-N1	-5.09	1.40	1.48
1	A	1143	G	P-O5'	-5.09	1.52	1.59
1	A	1489	G	C2'-C1'	-5.09	1.45	1.53
13	M	17	ALA	N-CA	-5.09	1.40	1.46
1	A	123	U	C2'-C1'	-5.09	1.45	1.53
1	A	1007	U	O3'-P	-5.09	1.53	1.61
8	H	99	GLY	CA-C	-5.09	1.44	1.51
1	A	1376	U	C4'-O4'	-5.09	1.38	1.45
4	D	155	LYS	CA-C	-5.09	1.46	1.52
3	C	3	LYS	N-CA	-5.09	1.39	1.45
21	U	7	GLU	CA-C	-5.09	1.46	1.52
1	A	133	U	C3'-C2'	-5.08	1.45	1.52
1	A	363	A	C4'-O4'	-5.08	1.38	1.45
1	A	427	U	O3'-P	-5.08	1.53	1.61
1	A	1403	C	P-O5'	-5.08	1.52	1.59
1	A	1431	A	P-O5'	-5.08	1.52	1.59
1	A	203	G	C3'-O3'	-5.08	1.34	1.42
1	A	341	C	C2'-C1'	-5.08	1.45	1.53
1	A	706	A	P-O5'	-5.08	1.52	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	I	11	ARG	CA-C	-5.08	1.46	1.52
13	M	25	GLY	N-CA	-5.08	1.38	1.45
1	A	431	A	C2'-C1'	-5.08	1.45	1.53
1	A	615	G	C4'-C3'	-5.08	1.45	1.52
1	A	1143	G	C1'-N9	-5.08	1.40	1.48
1	A	300	A	N7-C5	-5.08	1.29	1.39
1	A	546	A	O4'-C1'	-5.08	1.34	1.41
1	A	917	G	C3'-C2'	-5.08	1.45	1.52
11	K	21	HIS	CA-C	-5.08	1.46	1.52
1	A	431	A	C4'-C3'	-5.08	1.45	1.52
1	A	657	U	O3'-P	-5.08	1.53	1.61
1	A	898	G	O3'-P	-5.08	1.53	1.61
1	A	290	C	C3'-C2'	-5.08	1.45	1.52
1	A	1369	C	O3'-P	-5.08	1.53	1.61
1	A	1382	C	P-O5'	-5.08	1.52	1.59
1	A	182	A	C5'-C4'	-5.07	1.43	1.51
1	A	495	A	C3'-C2'	-5.07	1.45	1.52
4	D	173	ASP	CA-C	-5.07	1.46	1.52
11	K	34	THR	N-CA	-5.07	1.39	1.45
1	A	539	A	C2'-C1'	-5.07	1.45	1.53
10	J	20	GLN	N-CA	-5.07	1.40	1.46
1	A	27	G	C2'-C1'	-5.07	1.45	1.53
1	A	438	U	O4'-C1'	-5.07	1.34	1.42
1	A	692	U	P-O5'	-5.07	1.52	1.59
1	A	1124	G	O4'-C1'	-5.07	1.34	1.41
1	A	1177	G	C2'-C1'	-5.07	1.45	1.53
1	A	37	U	C4'-O4'	-5.07	1.38	1.45
4	D	84	ASN	CA-C	-5.07	1.46	1.52
1	A	574	A	C2'-C1'	-5.07	1.45	1.53
1	A	678	U	P-O5'	-5.07	1.52	1.59
1	A	688	G	C1'-N9	-5.07	1.40	1.48
1	A	1046	A	C5'-C4'	-5.07	1.43	1.51
22	W	109	ARG	NE-CZ	5.07	1.38	1.33
1	A	155	A	C2'-C1'	-5.07	1.45	1.53
1	A	242	G	O3'-P	-5.07	1.53	1.61
1	A	416	G	P-O5'	-5.07	1.52	1.59
1	A	517	G	C2'-C1'	-5.07	1.45	1.53
1	A	674	G	O3'-P	-5.07	1.53	1.61
1	A	1135	U	C4'-C3'	-5.06	1.45	1.52
11	K	121	ARG	C-N	-5.06	1.27	1.33
1	A	64	G	C3'-O3'	-5.06	1.34	1.42
3	C	69	THR	CA-C	-5.06	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	G	123	LEU	CA-C	-5.06	1.46	1.52
1	A	130	A	N9-C4	-5.06	1.27	1.37
1	A	219	U	C3'-C2'	-5.06	1.45	1.52
1	A	958	A	O3'-P	-5.06	1.53	1.61
1	A	1502	A	C4'-C3'	-5.06	1.45	1.53
1	A	1514	G	O3'-P	5.06	1.68	1.61
3	C	116	ALA	CA-C	-5.06	1.46	1.52
4	D	118	SER	CA-C	-5.06	1.46	1.52
22	W	85	LYS	C-N	-5.06	1.26	1.34
1	A	642	A	N7-C5	-5.06	1.29	1.39
1	A	1231	G	C1'-N9	-5.06	1.40	1.48
3	C	63	ILE	CA-C	-5.06	1.46	1.52
4	D	61	ARG	CA-C	-5.06	1.46	1.52
4	D	117	VAL	CA-CB	-5.06	1.48	1.54
4	D	125	ASN	N-CA	-5.06	1.40	1.46
1	A	410	G	N9-C4	-5.06	1.27	1.38
1	A	906	A	C3'-C2'	-5.06	1.45	1.52
1	A	3	A	C4'-O4'	-5.05	1.38	1.45
1	A	265	G	C5'-C4'	-5.05	1.43	1.51
1	A	1065	U	C4'-O4'	-5.05	1.38	1.45
1	A	1117	A	O4'-C1'	-5.05	1.34	1.41
1	A	1128	C	C5'-C4'	-5.05	1.43	1.51
1	A	1209	C	C3'-C2'	-5.05	1.45	1.52
13	M	44	ILE	N-CA	-5.05	1.41	1.46
1	A	621	A	C2'-C1'	-5.05	1.45	1.53
1	A	1047	G	C1'-N9	-5.05	1.40	1.48
1	A	1488	G	C1'-N9	-5.05	1.40	1.48
1	A	1514	G	C3'-C2'	-5.05	1.45	1.52
3	C	21	TRP	N-CA	-5.05	1.39	1.46
9	I	4	GLN	N-CA	-5.05	1.39	1.46
1	A	438	U	C3'-O3'	-5.05	1.35	1.43
1	A	655	A	N9-C8	-5.05	1.27	1.37
1	A	1357	A	C1'-N9	-5.05	1.40	1.48
1	A	98	A	C1'-N9	-5.05	1.40	1.48
1	A	830	G	C2'-C1'	-5.05	1.45	1.53
1	A	570	G	C1'-N9	-5.05	1.40	1.48
1	A	928	G	C4'-O4'	-5.05	1.38	1.45
4	D	47	LEU	CA-C	-5.05	1.46	1.53
12	L	23	LEU	CA-C	-5.05	1.46	1.52
13	M	55	LEU	CA-C	-5.05	1.46	1.52
1	A	1274	A	C3'-C2'	-5.04	1.45	1.52
2	B	162	VAL	CA-C	-5.04	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	538	G	P-O5'	-5.04	1.52	1.59
1	A	704	A	C1'-N9	-5.04	1.40	1.48
1	A	1180	A	C3'-C2'	-5.04	1.45	1.52
1	A	73	C	C4'-C3'	-5.04	1.45	1.52
1	A	94	G	O3'-P	-5.04	1.53	1.61
1	A	109	A	C2'-C1'	-5.04	1.45	1.53
1	A	255	G	C2'-C1'	-5.04	1.45	1.53
1	A	457	G	C3'-C2'	-5.04	1.45	1.52
1	A	817	C	C5'-C4'	5.04	1.58	1.51
1	A	1370	G	O3'-P	-5.04	1.53	1.61
13	M	72	ILE	N-CA	-5.04	1.40	1.46
1	A	404	G	P-O5'	-5.04	1.52	1.59
1	A	163	C	O3'-P	-5.04	1.53	1.61
1	A	510	A	P-O5'	-5.04	1.52	1.59
1	A	517	G	O3'-P	-5.04	1.53	1.61
1	A	639	G	C1'-N9	-5.04	1.40	1.48
1	A	1216	A	O3'-P	-5.04	1.53	1.61
1	A	114	U	C3'-C2'	-5.04	1.45	1.52
1	A	294	U	C3'-C2'	-5.04	1.45	1.52
1	A	994	A	P-O5'	-5.04	1.52	1.59
2	B	91	VAL	N-CA	-5.04	1.39	1.46
10	J	8	ILE	CA-C	-5.04	1.46	1.52
15	O	74	VAL	C-O	-5.04	1.18	1.24
1	A	407	U	C3'-C2'	-5.03	1.45	1.52
1	A	911	U	C1'-N1	-5.03	1.40	1.48
1	A	949	A	C2'-C1'	-5.03	1.45	1.53
5	E	47	PHE	CA-C	-5.03	1.46	1.52
1	A	1205	U	C3'-C2'	-5.03	1.45	1.52
1	A	60	A	O3'-P	-5.03	1.53	1.61
6	F	82	ASP	CA-C	-5.03	1.46	1.52
11	K	31	VAL	CA-CB	-5.03	1.48	1.54
1	A	565	U	O3'-P	-5.03	1.53	1.61
4	D	80	ARG	NE-CZ	5.03	1.38	1.33
1	A	255	G	C4'-C3'	-5.03	1.45	1.52
1	A	627	G	C1'-N9	-5.03	1.40	1.48
5	E	37	VAL	N-CA	-5.03	1.40	1.46
22	W	45	ILE	CA-C	-5.03	1.46	1.52
1	A	1057	G	N7-C5	-5.02	1.29	1.39
1	A	616	G	C4'-C3'	-5.02	1.45	1.52
1	A	1050	G	C2'-C1'	-5.02	1.45	1.53
1	A	1173	U	P-O5'	-5.02	1.52	1.59
1	A	229	U	C2'-C1'	-5.02	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1100	C	O3'-P	-5.02	1.53	1.61
1	A	1327	C	C4'-C3'	-5.02	1.45	1.52
1	A	1290	G	P-O5'	-5.02	1.52	1.59
1	A	446	G	P-O5'	-5.02	1.52	1.59
1	A	861	G	O3'-P	-5.02	1.53	1.61
22	W	78	ARG	CA-C	-5.02	1.46	1.52
1	A	108	G	O4'-C1'	-5.01	1.34	1.41
1	A	302	G	C2'-C1'	-5.01	1.45	1.53
1	A	344	A	C3'-O3'	-5.01	1.35	1.43
1	A	740	U	O3'-P	-5.01	1.53	1.61
1	A	809	G	C3'-C2'	-5.01	1.45	1.52
3	C	90	VAL	CA-CB	-5.01	1.48	1.54
1	A	516	U	P-O5'	-5.01	1.52	1.59
1	A	761	G	C1'-N9	-5.01	1.40	1.48
1	A	102	G	P-O5'	-5.01	1.52	1.59
1	A	600	A	P-O5'	-5.01	1.52	1.59
1	A	1068	G	N7-C5	-5.01	1.29	1.39
1	A	1488	G	P-O5'	-5.01	1.52	1.59
8	H	117	GLN	CA-C	-5.01	1.46	1.52
1	A	313	A	N7-C5	-5.01	1.29	1.39
1	A	522	C	O4'-C1'	-5.01	1.34	1.41
1	A	939	G	C2'-C1'	-5.01	1.45	1.53
1	A	1409	C	C3'-C2'	-5.01	1.45	1.52
1	A	1450	U	C3'-C2'	-5.01	1.45	1.52
3	C	70	ALA	CA-C	-5.01	1.46	1.52
1	A	1439	G	C1'-N9	-5.01	1.40	1.48
1	A	124	C	O4'-C1'	-5.01	1.34	1.41
3	C	28	PHE	CA-C	-5.01	1.46	1.52
7	G	49	LEU	CA-C	-5.01	1.46	1.52
1	A	455	G	O4'-C1'	-5.00	1.34	1.41
1	A	474	G	C4'-C3'	-5.00	1.45	1.52
1	A	665	A	C4'-O4'	-5.00	1.38	1.45
1	A	1093	A	P-O5'	-5.00	1.52	1.59
1	A	1107	C	C2'-C1'	-5.00	1.45	1.53
1	A	1142	G	P-O5'	-5.00	1.52	1.59
1	A	356	A	C2'-C1'	-5.00	1.45	1.53
1	A	1372	U	C2'-C1'	-5.00	1.45	1.53
9	I	62	LEU	CA-C	-5.00	1.46	1.52
18	R	37	LYS	CA-C	-5.00	1.46	1.52
20	T	35	TYR	CA-C	-5.00	1.46	1.52

All (6361) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1399	C	P-O3'-C3'	37.32	176.18	120.20
1	A	1139	G	P-O3'-C3'	37.29	176.13	120.20
1	A	76	G	P-O5'-C5'	36.24	175.25	120.90
1	A	90	C	P-O5'-C5'	32.53	169.70	120.90
1	A	306	A	P-O3'-C3'	30.91	166.56	120.20
1	A	484	G	P-O3'-C3'	29.74	164.81	120.20
1	A	276	G	P-O5'-C5'	29.07	164.51	120.90
1	A	1500	A	P-O5'-C5'	28.73	164.00	120.90
1	A	1313	U	P-O5'-C5'	27.08	161.52	120.90
1	A	789	U	P-O5'-C5'	26.74	161.01	120.90
1	A	347	G	P-O5'-C5'	24.39	157.48	120.90
1	A	1287	A	P-O5'-C5'	24.15	157.12	120.90
1	A	569	C	P-O3'-C3'	24.14	156.41	120.20
1	A	776	G	P-O5'-C5'	23.07	155.51	120.90
1	A	1171	A	P-O5'-C5'	21.89	153.73	120.90
1	A	1087	G	P-O5'-C5'	21.82	153.63	120.90
1	A	1432	G	P-O3'-C3'	21.55	152.53	120.20
1	A	974	A	P-O5'-C5'	21.10	152.55	120.90
1	A	635	A	P-O5'-C5'	20.55	151.72	120.90
1	A	1393	U	C5'-C4'-C3'	20.53	146.79	116.00
1	A	470	C	P-O5'-C5'	20.50	151.64	120.90
1	A	1072	G	P-O5'-C5'	20.42	151.53	120.90
2	B	139	GLU	N-CA-C	20.21	133.31	111.28
1	A	93	U	P-O5'-C5'	19.82	150.63	120.90
1	A	1533	C	P-O5'-C5'	19.74	150.51	120.90
1	A	75	G	P-O5'-C5'	-19.65	91.42	120.90
1	A	243	A	P-O3'-C3'	19.54	149.50	120.20
1	A	438	U	P-O3'-C3'	19.48	149.42	120.20
1	A	1140	C	P-O3'-C3'	19.34	149.22	120.20
1	A	1417	G	O3'-P-O5'	-19.07	75.39	104.00
1	A	1529	G	P-O3'-C3'	18.93	148.59	120.20
1	A	411	A	P-O5'-C5'	18.49	148.64	120.90
1	A	1263	C	P-O5'-C5'	18.32	148.38	120.90
1	A	613	C	P-O5'-C5'	17.99	147.89	120.90
1	A	351	G	P-O3'-C3'	17.98	147.16	120.20
1	A	1488	G	P-O5'-C5'	17.94	147.81	120.90
1	A	847	G	P-O5'-C5'	17.76	147.53	120.90
1	A	1242	G	P-O5'-C5'	17.66	147.40	120.90
1	A	1469	C	C5'-C4'-C3'	-17.63	89.55	116.00
1	A	535	A	P-O5'-C5'	17.61	147.31	120.90
1	A	1142	G	C5'-C4'-C3'	-17.35	89.98	116.00
1	A	197	A	P-O5'-C5'	17.34	146.91	120.90
1	A	1482	G	O3'-P-O5'	-17.18	78.23	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	76	G	C5'-C4'-C3'	-17.06	90.40	116.00
1	A	391	G	P-O3'-C3'	17.00	145.70	120.20
4	D	7	LYS	N-CA-C	16.96	129.85	111.03
1	A	1455	G	O3'-P-O5'	-16.91	78.63	104.00
1	A	172	A	P-O3'-C3'	16.86	145.50	120.20
1	A	639	G	C5'-C4'-C3'	-16.86	90.72	116.00
1	A	812	G	P-O3'-C3'	16.82	145.43	120.20
1	A	772	U	P-O5'-C5'	16.77	146.06	120.90
1	A	963	G	C5'-C4'-C3'	-16.61	91.08	116.00
1	A	343	U	P-O5'-C5'	16.60	145.79	120.90
1	A	575	G	P-O3'-C3'	16.45	144.88	120.20
14	N	4	SER	N-CA-C	16.40	129.16	111.28
1	A	245	U	P-O3'-C3'	16.38	144.77	120.20
1	A	1487	G	C5'-C4'-C3'	16.38	140.57	116.00
11	K	60	PHE	CA-CB-CG	-16.36	97.44	113.80
1	A	122	G	C5'-C4'-C3'	-16.18	91.72	116.00
1	A	986	U	P-O5'-C5'	16.16	145.15	120.90
1	A	213	G	C5'-C4'-C3'	-16.14	91.78	116.00
1	A	75	G	O3'-P-O5'	-16.06	79.91	104.00
1	A	610	U	O3'-P-O5'	-15.97	80.05	104.00
1	A	182	A	C5'-C4'-C3'	-15.94	91.29	115.20
1	A	74	A	C5'-C4'-C3'	-15.86	92.21	116.00
1	A	801	U	P-O3'-C3'	15.84	143.96	120.20
1	A	486	U	C5'-C4'-C3'	-15.83	92.25	116.00
1	A	633	G	P-O5'-C5'	15.83	144.65	120.90
1	A	511	C	P-O3'-C3'	15.82	143.93	120.20
1	A	1253	G	C5'-C4'-C3'	-15.81	92.28	116.00
1	A	1241	G	P-O5'-C5'	15.78	144.57	120.90
1	A	1504	G	P-O3'-C3'	15.72	143.78	120.20
1	A	1008	U	C5'-C4'-C3'	-15.55	92.68	116.00
17	Q	44	HIS	CA-CB-CG	15.53	129.33	113.80
1	A	199	A	P-O5'-C5'	15.44	144.07	120.90
1	A	869	G	C5'-C4'-C3'	-15.41	92.88	116.00
1	A	468	A	C5'-C4'-C3'	-15.30	93.05	116.00
1	A	641	U	O3'-P-O5'	-15.29	81.07	104.00
1	A	1232	U	P-O5'-C5'	15.25	143.78	120.90
1	A	78	A	P-O3'-C3'	15.18	142.97	120.20
1	A	372	C	P-O3'-C3'	15.10	142.84	120.20
1	A	308	C	C5'-C4'-C3'	15.02	138.52	116.00
1	A	47	C	P-O3'-C3'	15.01	142.72	120.20
1	A	72	A	O3'-P-O5'	-14.95	81.57	104.00
1	A	70	U	O3'-P-O5'	-14.91	81.64	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	99	C	O3'-P-O5'	-14.86	81.71	104.00
1	A	90	C	O5'-C5'-C4'	-14.83	89.46	111.70
17	Q	47	ASP	N-CA-C	-14.82	86.86	109.24
1	A	1241	G	C5'-C4'-C3'	-14.79	93.82	116.00
1	A	894	G	P-O5'-C5'	14.78	143.07	120.90
1	A	851	G	C5'-C4'-C3'	-14.75	93.87	116.00
1	A	1392	G	P-O5'-C5'	14.70	142.96	120.90
17	Q	70	LYS	N-CA-C	-14.68	79.53	110.80
1	A	1482	G	O4'-C4'-C3'	-14.67	89.33	104.00
1	A	605	U	P-O3'-C3'	14.65	142.17	120.20
1	A	1514	G	O3'-P-O5'	14.63	125.95	104.00
1	A	98	A	C5'-C4'-C3'	-14.48	94.28	116.00
1	A	1050	G	C5'-C4'-C3'	-14.47	94.30	116.00
1	A	695	A	P-O5'-C5'	14.44	142.56	120.90
1	A	184	G	P-O5'-C5'	14.41	142.51	120.90
1	A	1145	A	C5'-C4'-C3'	14.39	137.58	116.00
1	A	1027	C	C5'-C4'-C3'	-14.34	94.50	116.00
1	A	718	A	P-O3'-C3'	14.31	141.67	120.20
1	A	568	G	P-O3'-C3'	14.30	141.66	120.20
1	A	313	A	C5'-C4'-C3'	-14.29	94.56	116.00
1	A	281	G	P-O3'-C3'	14.26	141.59	120.20
1	A	460	A	P-O5'-C5'	14.26	142.29	120.90
1	A	94	G	O5'-C5'-C4'	-14.14	90.30	111.50
1	A	127	G	C5'-C4'-C3'	14.10	137.14	116.00
1	A	264	C	C4'-C3'-O3'	-14.08	91.88	113.00
1	A	638	U	O3'-P-O5'	-14.08	82.89	104.00
8	H	122	GLY	N-CA-C	-13.98	95.56	112.48
1	A	1184	G	P-O5'-C5'	13.95	141.83	120.90
1	A	120	A	C1'-O4'-C4'	-13.94	95.97	109.90
1	A	508	U	C5'-C4'-C3'	-13.89	95.17	116.00
1	A	1186	G	C5'-C4'-C3'	13.84	136.75	116.00
1	A	568	G	O3'-P-O5'	13.81	124.72	104.00
1	A	698	G	C5'-C4'-C3'	-13.70	95.45	116.00
1	A	1236	A	C5'-C4'-C3'	-13.68	95.48	116.00
14	N	14	ALA	N-CA-C	13.64	125.83	110.97
1	A	411	A	O5'-C5'-C4'	13.62	131.93	111.50
1	A	106	C	P-O3'-C3'	13.60	140.60	120.20
1	A	264	C	P-O5'-C5'	13.54	141.21	120.90
1	A	252	U	O3'-P-O5'	-13.53	83.71	104.00
20	T	16	ALA	N-CA-C	13.53	125.72	110.97
1	A	76	G	C5'-C4'-O4'	13.47	130.00	109.80
12	L	19	ASN	CA-CB-CG	13.44	126.04	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	671	G	C5'-C4'-C3'	-13.42	95.87	116.00
13	M	41	ASP	N-CA-C	-13.42	96.65	113.55
21	U	49	ALA	N-CA-C	13.39	129.10	112.23
1	A	817	C	P-O3'-C3'	13.39	140.28	120.20
1	A	531	U	P-O5'-C5'	13.38	140.97	120.90
1	A	1058	G	P-O5'-C5'	13.38	140.96	120.90
1	A	1045	C	C5'-C4'-C3'	-13.37	95.94	116.00
1	A	1111	A	P-O5'-C5'	13.25	140.78	120.90
1	A	1531	A	P-O5'-C5'	13.23	140.74	120.90
1	A	589	U	C5'-C4'-C3'	-13.23	96.16	116.00
1	A	535	A	P-O3'-C3'	13.22	140.03	120.20
1	A	758	C	C5'-C4'-C3'	13.17	135.75	116.00
1	A	120	A	C4'-C3'-C2'	-13.17	89.43	102.60
1	A	1449	C	C5'-C4'-C3'	13.13	135.69	116.00
1	A	1197	A	O5'-C5'-C4'	13.07	131.10	111.50
1	A	1307	U	C5'-C4'-C3'	-13.04	96.44	116.00
1	A	1491	G	P-O5'-C5'	13.04	140.46	120.90
1	A	56	U	C5'-C4'-C3'	-13.01	96.48	116.00
1	A	1236	A	P-O3'-C3'	13.01	139.71	120.20
1	A	1336	C	C2'-C3'-O3'	13.00	129.00	109.50
1	A	1037	C	O4'-C4'-C3'	-12.99	91.01	104.00
1	A	1391	U	P-O3'-C3'	12.94	139.61	120.20
1	A	880	C	C5'-C4'-C3'	-12.93	96.61	116.00
1	A	652	U	P-O3'-C3'	12.88	139.52	120.20
1	A	792	A	P-O3'-C3'	12.86	139.48	120.20
1	A	180	U	C4'-C3'-O3'	-12.84	93.74	113.00
1	A	1140	C	P-O5'-C5'	12.82	140.13	120.90
1	A	816	A	C5'-C4'-C3'	-12.81	96.79	116.00
1	A	201	G	P-O3'-C3'	12.79	139.39	120.20
1	A	1391	U	C2'-C3'-O3'	12.79	132.88	113.70
1	A	1258	G	C5'-C4'-C3'	-12.79	96.82	116.00
1	A	805	C	O3'-P-O5'	12.78	123.18	104.00
1	A	579	A	O3'-P-O5'	-12.78	84.83	104.00
4	D	40	HIS	CA-CB-CG	12.78	126.58	113.80
1	A	164	G	C5'-C4'-C3'	-12.74	96.88	116.00
1	A	321	A	C5'-C4'-C3'	12.74	135.10	116.00
20	T	18	LYS	N-CA-C	12.73	125.24	111.36
1	A	1068	G	C5'-C4'-C3'	-12.72	96.91	116.00
1	A	697	U	C5'-C4'-C3'	-12.71	96.93	116.00
1	A	1401	G	C5'-C4'-C3'	-12.70	96.95	116.00
1	A	488	C	C5'-C4'-C3'	-12.66	97.00	116.00
1	A	1094	G	P-O5'-C5'	12.66	139.89	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1337	G	O3'-P-O5'	-12.66	85.01	104.00
1	A	321	A	O5'-C5'-C4'	12.66	130.49	111.50
1	A	1095	U	C5'-C4'-C3'	-12.64	97.03	116.00
1	A	1405	G	O3'-P-O5'	-12.64	85.04	104.00
1	A	95	C	O5'-C5'-C4'	12.62	130.43	111.50
1	A	681	A	P-O5'-C5'	-12.60	102.01	120.90
1	A	164	G	P-O5'-C5'	-12.59	102.02	120.90
1	A	252	U	C5'-C4'-C3'	-12.58	97.13	116.00
1	A	1113	C	C5'-C4'-C3'	-12.55	97.17	116.00
1	A	95	C	C5'-C4'-C3'	-12.55	97.17	116.00
1	A	1197	A	P-O5'-C5'	12.55	139.72	120.90
12	L	58	ASN	CA-CB-CG	-12.54	100.06	112.60
1	A	203	G	O3'-P-O5'	-12.53	85.20	104.00
1	A	426	U	C4'-C3'-O3'	-12.49	94.27	113.00
1	A	1239	A	C4'-C3'-O3'	12.48	128.12	109.40
1	A	755	G	C5'-C4'-C3'	-12.47	97.29	116.00
1	A	283	U	C5'-C4'-C3'	-12.47	97.29	116.00
1	A	49	U	O3'-P-O5'	-12.47	85.30	104.00
1	A	94	G	P-O3'-C3'	12.46	138.89	120.20
13	M	21	ILE	N-CA-CB	12.44	126.53	111.60
1	A	1474	U	P-O5'-C5'	12.41	139.52	120.90
1	A	1124	G	O3'-P-O5'	-12.40	85.40	104.00
1	A	120	A	O4'-C1'-N9	12.38	127.07	108.50
11	K	49	SER	N-CA-C	-12.37	95.06	110.65
9	I	123	ARG	N-CA-CB	12.37	122.89	111.27
1	A	1041	G	O3'-P-O5'	-12.35	85.47	104.00
1	A	1140	C	O4'-C1'-N1	12.35	127.03	108.50
1	A	683	G	P-O5'-C5'	12.33	139.39	120.90
1	A	359	G	C5'-C4'-C3'	-12.30	97.54	116.00
1	A	196	A	O3'-P-O5'	-12.30	85.55	104.00
1	A	1054	C	P-O3'-C3'	12.30	138.66	120.20
1	A	1088	G	P-O5'-C5'	12.28	139.32	120.90
1	A	426	U	C2'-C3'-O3'	12.27	132.11	113.70
1	A	1239	A	C1'-O4'-C4'	-12.25	97.45	109.70
1	A	1003	G	C5'-C4'-C3'	-12.24	97.64	116.00
1	A	1440	U	C4'-C3'-O3'	12.24	131.36	113.00
1	A	921	U	P-O5'-C5'	12.24	139.26	120.90
1	A	1007	U	P-O3'-C3'	12.24	138.56	120.20
1	A	584	G	C5'-C4'-C3'	-12.22	97.67	116.00
16	P	26	ASN	CA-CB-CG	-12.18	100.42	112.60
1	A	1481	U	P-O5'-C5'	12.17	139.15	120.90
1	A	190	A	P-O5'-C5'	12.15	139.12	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	70	U	P-O3'-C3'	12.14	138.41	120.20
2	B	150	ILE	N-CA-C	-12.14	100.82	112.96
1	A	904	U	P-O5'-C5'	12.12	139.08	120.90
1	A	745	G	P-O5'-C5'	12.11	139.06	120.90
1	A	187	G	P-O5'-C5'	12.10	139.06	120.90
1	A	1428	A	P-O5'-C5'	12.09	139.03	120.90
1	A	391	G	C5'-C4'-C3'	12.08	134.11	116.00
1	A	415	A	C5'-C4'-C3'	-12.07	97.90	116.00
1	A	974	A	O3'-P-O5'	-12.06	85.92	104.00
1	A	1187	G	C5'-C4'-C3'	-12.05	97.93	116.00
1	A	491	G	C5'-C4'-C3'	-12.03	97.95	116.00
1	A	545	C	P-O3'-C3'	12.02	138.23	120.20
17	Q	72	TRP	N-CA-C	-12.02	87.01	107.80
4	D	101	VAL	N-CA-C	-12.01	101.48	111.81
1	A	749	A	O3'-P-O5'	-11.99	86.01	104.00
4	D	125	ASN	N-CA-C	-11.98	95.56	110.65
1	A	867	G	O3'-P-O5'	-11.96	86.06	104.00
1	A	655	A	P-O5'-C5'	11.96	138.83	120.90
1	A	441	A	P-O5'-C5'	-11.95	102.98	120.90
1	A	450	G	O5'-C5'-C4'	-11.94	93.59	111.50
1	A	1236	A	C2'-C3'-O3'	11.93	131.60	113.70
1	A	973	G	O3'-P-O5'	11.93	121.89	104.00
1	A	1443	C	C5'-C4'-C3'	-11.92	98.12	116.00
1	A	251	G	O5'-C5'-C4'	-11.92	93.82	111.70
1	A	1417	G	O4'-C4'-C3'	-11.90	92.09	104.00
1	A	679	C	C5'-C4'-C3'	-11.90	98.15	116.00
1	A	775	G	P-O5'-C5'	11.90	138.75	120.90
1	A	1481	U	C5'-C4'-C3'	-11.89	98.16	116.00
1	A	925	G	C4'-C3'-C2'	11.88	114.48	102.60
1	A	1041	G	P-O5'-C5'	11.87	138.70	120.90
9	I	118	ARG	N-CA-C	-11.85	99.21	112.72
1	A	1054	C	O3'-P-O5'	-11.81	86.29	104.00
1	A	1451	U	P-O3'-C3'	11.81	137.91	120.20
1	A	1359	C	P-O5'-C5'	-11.78	103.23	120.90
1	A	873	A	P-O3'-C3'	-11.76	102.56	120.20
7	G	30	MET	CA-C-N	11.74	143.10	121.97
7	G	30	MET	C-N-CA	11.74	143.10	121.97
1	A	347	G	C5'-C4'-C3'	-11.73	98.40	116.00
1	A	1140	C	O3'-P-O5'	-11.73	86.41	104.00
1	A	287	U	C5'-C4'-C3'	-11.73	98.41	116.00
1	A	1184	G	P-O3'-C3'	-11.72	102.61	120.20
6	F	10	VAL	N-CA-C	-11.72	94.52	108.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	68	HIS	CA-CB-CG	-11.71	102.09	113.80
1	A	1034	G	O5'-C5'-C4'	11.71	129.06	111.50
1	A	1086	U	C5'-C4'-C3'	-11.67	98.50	116.00
1	A	417	G	C5'-C4'-C3'	-11.67	98.50	116.00
6	F	58	HIS	CA-CB-CG	11.67	125.47	113.80
17	Q	46	HIS	CA-C-N	11.65	141.08	122.21
17	Q	46	HIS	C-N-CA	11.65	141.08	122.21
2	B	197	PHE	CA-CB-CG	-11.64	102.16	113.80
1	A	1020	G	C5'-C4'-C3'	-11.63	98.55	116.00
1	A	210	C	P-O3'-C3'	11.63	137.65	120.20
1	A	110	C	P-O3'-C3'	11.62	137.63	120.20
1	A	1078	U	P-O3'-C3'	11.62	137.63	120.20
1	A	760	G	C5'-C4'-C3'	-11.59	98.61	116.00
22	W	65	ASN	CA-CB-CG	-11.59	101.01	112.60
1	A	861	G	C5'-C4'-C3'	-11.58	98.63	116.00
12	L	11	ARG	N-CA-C	11.58	129.26	112.94
1	A	153	C	P-O5'-C5'	11.57	138.26	120.90
1	A	643	C	C5'-C4'-C3'	-11.57	98.64	116.00
1	A	54	C	C5'-C4'-C3'	-11.56	98.67	116.00
1	A	866	C	C5'-C4'-C3'	-11.54	98.68	116.00
1	A	1064	G	P-O3'-C3'	-11.54	102.89	120.20
1	A	146	G	C5'-C4'-C3'	-11.53	98.71	116.00
17	Q	77	VAL	N-CA-C	-11.52	92.50	108.27
1	A	78	A	C4-N9-C1'	11.48	160.74	126.30
1	A	1120	C	C5'-C4'-C3'	-11.48	98.78	116.00
1	A	1192	C	P-O5'-C5'	11.47	138.10	120.90
1	A	1203	C	C5'-C4'-C3'	-11.47	98.80	116.00
1	A	1455	G	P-O5'-C5'	11.45	138.07	120.90
1	A	1501	C	P-O5'-C5'	-11.45	103.72	120.90
1	A	132	C	P-O5'-C5'	11.45	138.07	120.90
1	A	1126	U	P-O3'-C3'	-11.44	103.04	120.20
1	A	346	G	C5'-C4'-C3'	-11.43	98.86	116.00
1	A	1044	A	C5'-C4'-C3'	-11.43	98.86	116.00
1	A	737	C	C5'-C4'-C3'	-11.42	98.87	116.00
17	Q	6	THR	N-CA-C	-11.42	89.30	108.26
1	A	869	G	O3'-P-O5'	-11.39	86.91	104.00
1	A	1444	U	C5'-C4'-C3'	-11.39	98.92	116.00
1	A	901	A	C5'-C4'-C3'	-11.38	98.93	116.00
1	A	1186	G	P-O3'-C3'	11.37	137.25	120.20
1	A	1053	G	P-O5'-C5'	11.36	137.94	120.90
1	A	1064	G	C1'-O4'-C4'	-11.36	98.34	109.70
1	A	650	G	C5'-C4'-C3'	-11.36	98.96	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1432	G	C4'-C3'-C2'	11.35	113.95	102.60
1	A	7	A	P-O3'-C3'	11.35	137.22	120.20
1	A	178	C	C5'-C4'-C3'	-11.35	98.98	116.00
1	A	374	A	C5'-C4'-C3'	11.33	132.99	116.00
3	C	37	LYS	N-CA-C	-11.30	100.20	114.56
1	A	416	G	C5'-C4'-C3'	-11.30	99.05	116.00
1	A	400	C	C5'-C4'-C3'	11.29	132.94	116.00
1	A	1057	G	O5'-C5'-C4'	11.29	128.44	111.50
1	A	1227	A	C5'-C4'-C3'	-11.29	99.06	116.00
1	A	240	G	O5'-C5'-C4'	11.28	128.42	111.50
1	A	289	G	O5'-C5'-C4'	-11.28	94.58	111.50
1	A	1154	G	C5'-C4'-C3'	-11.26	99.11	116.00
1	A	1482	G	O5'-C5'-C4'	-11.24	94.63	111.50
13	M	106	ARG	N-CA-C	11.24	124.93	111.33
22	W	135	GLU	N-CA-C	-11.23	93.22	108.38
1	A	486	U	P-O5'-C5'	-11.22	104.06	120.90
1	A	332	G	O3'-P-O5'	11.22	120.83	104.00
1	A	925	G	P-O5'-C5'	11.21	137.71	120.90
1	A	953	G	C5'-C4'-C3'	-11.21	99.19	116.00
1	A	902	G	O5'-C5'-C4'	-11.20	94.70	111.50
1	A	602	A	C5'-C4'-C3'	-11.20	99.20	116.00
1	A	190	A	C5'-C4'-C3'	-11.20	99.20	116.00
1	A	127	G	P-O5'-C5'	11.18	137.67	120.90
17	Q	44	HIS	CB-CA-C	11.17	128.61	110.29
1	A	557	G	O5'-C5'-C4'	-11.17	94.75	111.50
1	A	1514	G	C5'-C4'-C3'	11.17	132.75	116.00
1	A	1042	A	C2'-C3'-O3'	11.16	130.43	113.70
1	A	1280	A	O5'-C5'-C4'	-11.15	94.77	111.50
1	A	80	A	P-O5'-C5'	-11.14	104.18	120.90
1	A	1403	C	C5'-C4'-C3'	-11.14	99.28	116.00
1	A	515	G	C5'-C4'-C3'	-11.14	99.29	116.00
8	H	29	SER	N-CA-C	-11.14	92.25	109.85
1	A	982	U	P-O3'-C3'	11.11	136.87	120.20
1	A	862	C	O3'-P-O5'	-11.11	87.34	104.00
1	A	422	C	O3'-P-O5'	-11.09	87.37	104.00
1	A	528	C	C5'-C4'-C3'	-11.08	99.38	116.00
1	A	1442	G	P-O3'-C3'	11.08	136.82	120.20
1	A	408	A	P-O3'-C3'	11.08	136.82	120.20
1	A	1395	C	C4'-C3'-O3'	-11.08	96.38	113.00
1	A	533	A	C5'-C4'-C3'	-11.06	98.61	115.20
1	A	1277	C	P-O5'-C5'	11.06	137.50	120.90
1	A	1046	A	P-O5'-C5'	-11.06	104.31	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	609	A	C5'-C4'-C3'	-11.05	99.42	116.00
1	A	705	G	C5'-C4'-C3'	-11.05	99.43	116.00
1	A	730	G	C5'-C4'-C3'	-11.04	99.44	116.00
1	A	688	G	C5'-C4'-C3'	-11.03	99.46	116.00
1	A	300	A	C5'-C4'-C3'	-11.02	99.47	116.00
1	A	889	A	O3'-P-O5'	11.02	120.53	104.00
1	A	217	C	O4'-C1'-N1	11.02	125.02	108.50
1	A	451	A	P-O3'-C3'	11.02	136.72	120.20
1	A	1163	A	C5'-C4'-C3'	-11.01	99.49	116.00
2	B	102	ASN	N-CA-C	-11.00	99.81	113.02
1	A	1001	C	C5'-C4'-C3'	-10.98	99.53	116.00
3	C	182	ASP	N-CA-C	-10.97	91.24	109.46
1	A	505	G	P-O5'-C5'	-10.97	104.44	120.90
1	A	866	C	C4'-C3'-O3'	-10.97	96.54	113.00
1	A	313	A	P-O5'-C5'	10.97	137.35	120.90
18	R	43	ILE	N-CA-C	-10.95	101.99	112.83
1	A	578	C	P-O5'-C5'	10.94	137.31	120.90
11	K	22	ILE	N-CA-C	-10.94	91.78	107.75
1	A	1094	G	P-O3'-C3'	10.93	136.60	120.20
1	A	631	C	P-O5'-C5'	10.91	137.26	120.90
1	A	301	G	O5'-C5'-C4'	-10.90	95.14	111.50
1	A	182	A	O3'-P-O5'	-10.90	87.65	104.00
1	A	115	G	P-O3'-C3'	10.90	136.55	120.20
1	A	70	U	C5'-C4'-C3'	-10.89	99.66	116.00
1	A	1145	A	C3'-C2'-C1'	-10.89	90.41	101.30
1	A	1055	A	P-O5'-C5'	10.88	137.22	120.90
1	A	1407	C	C5'-C4'-C3'	-10.88	99.69	116.00
17	Q	78	VAL	N-CA-C	-10.87	92.30	108.17
1	A	1458	G	O3'-P-O5'	-10.85	87.72	104.00
1	A	484	G	O3'-P-O5'	10.84	120.26	104.00
1	A	816	A	P-O3'-C3'	-10.84	103.93	120.20
1	A	780	A	P-O5'-C5'	10.84	137.16	120.90
2	B	30	ILE	N-CA-C	-10.82	86.83	109.34
1	A	344	A	P-O5'-C5'	10.80	137.10	120.90
1	A	1362	A	P-O3'-C3'	10.80	136.40	120.20
1	A	70	U	P-O5'-C5'	-10.80	104.70	120.90
1	A	1325	C	O3'-P-O5'	10.80	120.19	104.00
1	A	1139	G	O3'-P-O5'	-10.78	87.83	104.00
1	A	1506	U	C2'-C3'-O3'	10.78	125.67	109.50
1	A	104	G	C5'-C4'-C3'	-10.78	99.84	116.00
1	A	352	C	C5'-C4'-C3'	-10.77	99.84	116.00
1	A	101	A	C5'-C4'-C3'	-10.76	99.85	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	94	G	P-O5'-C5'	10.76	137.04	120.90
1	A	179	A	O3'-P-O5'	-10.76	87.87	104.00
1	A	531	U	O4'-C1'-N1	10.74	124.61	108.50
1	A	273	U	C5'-C4'-C3'	-10.73	99.90	116.00
1	A	366	A	C2'-C3'-O3'	10.73	125.59	109.50
1	A	617	G	C5'-C4'-C3'	-10.73	99.91	116.00
1	A	686	U	C2'-C3'-O3'	10.73	125.59	109.50
1	A	1450	U	C5'-C4'-C3'	-10.72	99.92	116.00
1	A	1471	U	C5'-C4'-C3'	-10.72	99.92	116.00
1	A	1368	A	P-O5'-C5'	-10.72	104.82	120.90
5	E	81	GLN	N-CA-C	-10.72	98.51	111.69
1	A	581	G	O3'-P-O5'	-10.71	87.94	104.00
1	A	846	G	C5'-C4'-O4'	10.70	125.85	109.80
1	A	1290	G	P-O5'-C5'	10.70	136.95	120.90
1	A	123	U	O3'-P-O5'	-10.70	87.95	104.00
1	A	531	U	P-O3'-C3'	-10.69	104.16	120.20
1	A	63	C	P-O3'-C3'	10.69	136.23	120.20
1	A	185	U	C5'-C4'-C3'	-10.67	100.00	116.00
1	A	1442	G	C5'-C4'-O4'	10.67	125.81	109.80
1	A	1040	U	O3'-P-O5'	-10.66	88.00	104.00
18	R	41	SER	N-CA-C	10.66	122.90	111.28
1	A	418	C	O5'-C5'-C4'	-10.66	95.51	111.50
2	B	198	VAL	N-CA-C	-10.65	93.24	108.58
1	A	1179	A	C5'-C4'-C3'	-10.65	100.03	116.00
1	A	863	U	C5'-C4'-C3'	-10.64	100.03	116.00
1	A	441	A	C5'-C4'-C3'	-10.64	100.04	116.00
1	A	1141	C	P-O5'-C5'	10.64	136.86	120.90
1	A	305	G	C2'-C3'-O3'	10.63	125.44	109.50
2	B	199	ILE	N-CA-C	-10.62	94.97	107.61
1	A	249	U	O3'-P-O5'	-10.61	88.08	104.00
21	U	42	THR	N-CA-C	-10.59	99.28	111.03
1	A	1399	C	O4'-C1'-C2'	10.58	116.38	105.80
5	E	21	SER	N-CA-CB	10.57	130.13	111.00
1	A	1514	G	C4'-C3'-O3'	10.56	128.84	113.00
1	A	735	C	O3'-P-O5'	10.55	119.83	104.00
1	A	451	A	C1'-O4'-C4'	-10.55	99.15	109.70
1	A	925	G	C5'-C4'-C3'	-10.54	100.19	116.00
1	A	120	A	C5'-C4'-C3'	10.54	131.81	116.00
1	A	1300	G	C2'-C3'-O3'	10.54	125.31	109.50
2	B	85	SER	CA-C-N	10.53	134.39	120.28
2	B	85	SER	C-N-CA	10.53	134.39	120.28
17	Q	30	HIS	N-CA-C	-10.51	94.63	109.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	D	195	ASN	CA-CB-CG	-10.51	102.09	112.60
22	W	273	PHE	CA-CB-CG	-10.50	103.30	113.80
10	J	17	LEU	N-CA-C	-10.50	101.02	114.04
1	A	231	U	C5'-C4'-C3'	-10.50	100.25	116.00
1	A	452	A	C5'-C4'-C3'	-10.49	100.27	116.00
1	A	876	C	C5'-C4'-C3'	-10.49	100.26	116.00
1	A	592	G	C5'-C4'-C3'	-10.49	100.27	116.00
9	I	122	ARG	N-CA-C	-10.48	93.28	109.52
1	A	79	G	O5'-C5'-C4'	-10.48	95.79	111.50
1	A	954	G	C5'-C4'-C3'	-10.48	100.28	116.00
16	P	14	ARG	CB-CA-C	-10.48	99.80	110.17
1	A	1432	G	C2'-C3'-O3'	10.47	125.21	109.50
1	A	73	C	C2-N1-C1'	10.46	150.18	118.80
1	A	266	G	P-O3'-C3'	10.45	135.87	120.20
1	A	1513	A	P-O3'-C3'	-10.44	104.54	120.20
13	M	26	LYS	N-CA-C	-10.44	100.07	113.12
9	I	63	TYR	N-CA-C	-10.42	91.53	108.52
1	A	1528	U	P-O5'-C5'	10.41	136.52	120.90
1	A	411	A	P-O3'-C3'	-10.41	104.59	120.20
1	A	180	U	C5'-C4'-C3'	-10.41	100.39	116.00
1	A	1380	U	P-O3'-C3'	10.40	135.81	120.20
1	A	431	A	C5'-C4'-C3'	-10.39	100.42	116.00
1	A	1259	C	C4'-C3'-O3'	-10.37	97.44	113.00
1	A	763	G	C5'-C4'-C3'	-10.36	100.46	116.00
1	A	1442	G	C4'-C3'-O3'	-10.36	97.47	113.00
1	A	1144	G	P-O3'-C3'	10.35	135.72	120.20
1	A	172	A	C4'-C3'-O3'	-10.35	97.48	113.00
1	A	531	U	O4'-C4'-C3'	-10.34	93.66	104.00
5	E	32	PHE	N-CA-C	-10.34	91.48	109.06
1	A	1181	G	P-O5'-C5'	10.33	136.40	120.90
1	A	74	A	C4'-C3'-O3'	-10.33	97.50	113.00
1	A	426	U	P-O3'-C3'	10.33	135.69	120.20
21	U	46	ARG	N-CA-C	10.33	124.49	112.72
1	A	186	C	C5'-C4'-C3'	-10.32	100.52	116.00
1	A	1259	C	P-O5'-C5'	10.31	136.37	120.90
1	A	180	U	P-O5'-C5'	10.31	136.36	120.90
1	A	583	A	C5'-C4'-C3'	-10.31	100.53	116.00
1	A	424	G	C5'-C4'-C3'	-10.31	100.54	116.00
1	A	789	U	O4'-C4'-C3'	-10.31	93.69	104.00
9	I	105	ARG	N-CA-C	-10.29	96.42	112.99
1	A	717	U	C2'-C3'-O3'	10.29	124.93	109.50
1	A	147	G	C5'-C4'-C3'	-10.28	100.58	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1288	A	P-O5'-C5'	10.27	136.31	120.90
1	A	890	G	P-O3'-C3'	10.27	135.60	120.20
1	A	1442	G	C5'-C4'-C3'	-10.27	100.60	116.00
1	A	1499	A	C5'-C4'-C3'	10.27	131.40	116.00
14	N	33	VAL	N-CA-C	-10.26	88.00	109.34
1	A	861	G	O3'-P-O5'	-10.26	88.61	104.00
1	A	349	A	C5'-C4'-C3'	-10.25	100.62	116.00
1	A	781	A	O5'-C5'-C4'	-10.24	96.13	111.50
1	A	1440	U	O4'-C4'-C3'	-10.24	93.76	104.00
1	A	1045	C	P-O5'-C5'	-10.24	105.54	120.90
6	F	55	HIS	CA-CB-CG	-10.24	103.56	113.80
1	A	80	A	C5'-C4'-C3'	-10.23	100.65	116.00
1	A	317	U	C5'-C4'-C3'	-10.23	100.65	116.00
1	A	1227	A	P-O5'-C5'	-10.23	105.55	120.90
1	A	1207	G	C5'-C4'-C3'	-10.23	100.66	116.00
1	A	1475	G	C5'-C4'-C3'	-10.22	100.67	116.00
1	A	770	C	O3'-P-O5'	-10.22	88.68	104.00
1	A	602	A	O3'-P-O5'	-10.21	88.68	104.00
1	A	806	C	C5'-C4'-C3'	10.21	131.31	116.00
3	C	188	ALA	N-CA-C	-10.20	91.89	108.52
1	A	652	U	C5'-C4'-C3'	-10.20	100.70	116.00
1	A	72	A	O5'-C5'-C4'	-10.19	96.21	111.50
1	A	496	A	C5'-C4'-C3'	-10.19	100.72	116.00
6	F	83	ALA	N-CA-C	-10.19	99.65	113.30
16	P	79	ASN	N-CA-C	-10.19	98.27	111.92
1	A	77	A	P-O5'-C5'	-10.18	105.63	120.90
1	A	1434	A	C5'-C4'-C3'	-10.18	100.73	116.00
1	A	1064	G	P-O5'-C5'	10.18	136.16	120.90
19	S	56	HIS	CA-CB-CG	-10.18	103.62	113.80
1	A	555	U	P-O3'-C3'	10.17	135.46	120.20
6	F	82	ASP	CA-CB-CG	-10.17	102.43	112.60
1	A	485	U	O4'-C1'-N1	10.17	123.45	108.20
1	A	617	G	C4'-C3'-O3'	-10.17	97.75	113.00
20	T	7	LYS	N-CA-C	10.17	125.84	113.23
1	A	1193	G	C5'-C4'-C3'	-10.16	100.75	116.00
1	A	1347	G	C4'-C3'-C2'	-10.16	92.44	102.60
1	A	99	C	P-O3'-C3'	10.16	135.44	120.20
21	U	8	ASN	N-CA-C	-10.15	101.21	114.31
1	A	378	G	C5'-C4'-C3'	10.15	131.23	116.00
1	A	523	A	P-O3'-C3'	-10.15	104.98	120.20
1	A	1022	A	O5'-C5'-C4'	10.14	126.71	111.50
1	A	495	A	O4'-C1'-C2'	10.14	115.94	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1181	G	C2'-C3'-O3'	10.14	124.71	109.50
1	A	481	G	O4'-C4'-C3'	-10.13	95.97	106.10
1	A	814	A	P-O3'-C3'	10.13	135.40	120.20
2	B	163	ILE	N-CA-C	-10.13	100.84	111.58
1	A	652	U	C2'-C3'-O3'	10.12	128.88	113.70
1	A	644	U	P-O5'-C5'	10.11	136.07	120.90
13	M	5	GLY	N-CA-C	-10.11	89.22	113.18
1	A	265	G	O5'-C5'-C4'	-10.11	96.34	111.50
17	Q	66	LEU	N-CA-C	-10.10	101.07	113.50
8	H	46	GLU	N-CA-C	-10.10	101.09	113.41
1	A	381	C	P-O5'-C5'	-10.09	105.76	120.90
1	A	936	C	C5'-C4'-C3'	-10.09	100.87	116.00
1	A	1530	G	P-O3'-C3'	10.09	135.33	120.20
1	A	799	G	C5'-C4'-C3'	10.08	131.12	116.00
1	A	877	G	O3'-P-O5'	-10.08	88.88	104.00
1	A	295	C	C5'-C4'-C3'	-10.08	100.88	116.00
1	A	1040	U	C4'-C3'-O3'	-10.07	97.90	113.00
1	A	996	A	C5'-C4'-C3'	-10.06	100.91	116.00
1	A	276	G	O5'-C5'-C4'	-10.06	96.41	111.50
1	A	529	G	O3'-P-O5'	10.05	119.08	104.00
1	A	578	C	O5'-C5'-C4'	-10.05	96.42	111.50
1	A	193	C	O5'-C5'-C4'	-10.04	96.44	111.50
1	A	1264	U	C5'-C4'-C3'	-10.04	100.94	116.00
2	B	91	VAL	N-CA-C	-10.04	90.37	107.24
3	C	181	ILE	N-CA-C	-10.04	89.81	107.18
1	A	655	A	C5'-C4'-C3'	-10.04	100.94	116.00
1	A	974	A	P-O3'-C3'	10.03	135.25	120.20
1	A	1140	C	O5'-C5'-C4'	10.03	126.55	111.50
1	A	422	C	O4'-C1'-N1	10.03	123.54	108.50
1	A	1141	C	C5'-C4'-C3'	-10.02	100.97	116.00
1	A	1175	G	C5'-C4'-C3'	-10.02	100.97	116.00
1	A	120	A	C3'-C2'-C1'	-10.02	91.28	101.30
1	A	414	A	O3'-P-O5'	-10.02	88.97	104.00
1	A	1350	A	O4'-C4'-C3'	-10.01	93.99	104.00
1	A	774	G	C5'-C4'-C3'	-10.01	100.98	116.00
1	A	1485	U	C5'-C4'-C3'	-10.01	100.99	116.00
1	A	883	C	P-O5'-C5'	10.01	135.91	120.90
1	A	1028	C	C5'-C4'-C3'	-10.00	101.00	116.00
1	A	348	G	O3'-P-O5'	-10.00	89.01	104.00
1	A	1392	G	O5'-C5'-C4'	-10.00	96.51	111.50
1	A	794	A	C5'-C4'-C3'	-9.99	101.02	116.00
4	D	117	VAL	CA-C-N	9.99	134.02	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	D	117	VAL	C-N-CA	9.99	134.02	120.54
1	A	1289	A	C5'-C4'-C3'	-9.98	101.03	116.00
1	A	1208	C	C5'-C4'-C3'	-9.98	101.03	116.00
1	A	75	G	P-O3'-C3'	-9.97	105.25	120.20
1	A	1521	C	O4'-C4'-C3'	-9.97	94.03	104.00
1	A	1459	G	C5'-C4'-C3'	-9.97	101.05	116.00
1	A	407	U	P-O5'-C5'	9.96	135.84	120.90
1	A	838	G	C5'-C4'-C3'	-9.95	101.07	116.00
1	A	881	G	P-O5'-C5'	-9.95	105.97	120.90
8	H	72	GLU	N-CA-C	-9.95	89.60	110.80
1	A	1403	C	O3'-P-O5'	-9.95	89.08	104.00
1	A	659	U	C5'-C4'-C3'	-9.95	101.08	116.00
10	J	72	ARG	N-CA-C	-9.94	94.33	109.14
1	A	279	A	O5'-C5'-C4'	-9.94	96.79	111.70
1	A	69	G	C1'-C2'-O2'	9.94	123.31	108.40
1	A	712	A	P-O3'-C3'	9.94	135.10	120.20
1	A	642	A	O3'-P-O5'	-9.93	89.10	104.00
1	A	1330	U	O4'-C4'-C3'	-9.93	94.07	104.00
1	A	910	C	P-O5'-C5'	9.92	135.79	120.90
1	A	855	U	C5'-C4'-C3'	-9.91	101.13	116.00
1	A	246	A	C5'-C4'-C3'	-9.91	100.33	115.20
1	A	274	A	C2'-C3'-O3'	9.91	124.36	109.50
5	E	135	VAL	N-CA-CB	9.90	121.41	110.62
1	A	405	U	P-O5'-C5'	9.90	135.75	120.90
1	A	846	G	C5'-C4'-C3'	-9.89	101.16	116.00
1	A	1197	A	C5'-C4'-C3'	-9.89	101.16	116.00
1	A	1113	C	P-O3'-C3'	9.89	135.03	120.20
1	A	1114	C	C1'-O4'-C4'	-9.89	100.01	109.90
1	A	47	C	O5'-C5'-C4'	-9.88	96.67	111.50
1	A	1184	G	C5'-C4'-C3'	-9.88	101.17	116.00
1	A	1037	C	P-O5'-C5'	9.87	135.70	120.90
1	A	1312	G	C5'-C4'-C3'	-9.86	101.20	116.00
1	A	719	C	P-O3'-C3'	-9.86	105.41	120.20
1	A	1520	C	O3'-P-O5'	9.86	118.79	104.00
1	A	66	A	C4'-C3'-O3'	-9.86	98.21	113.00
1	A	1357	A	C5'-C4'-C3'	-9.85	101.22	116.00
1	A	867	G	O5'-C5'-C4'	-9.85	96.73	111.50
1	A	1371	G	C4'-C3'-C2'	9.85	112.44	102.60
1	A	212	G	O5'-C5'-C4'	-9.84	96.73	111.50
16	P	16	PHE	N-CA-C	-9.84	86.91	107.67
1	A	848	C	O3'-P-O5'	9.84	118.76	104.00
1	A	1174	G	P-O5'-C5'	-9.84	106.15	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	167	A	O3'-P-O5'	-9.82	89.27	104.00
4	D	48	SER	N-CA-C	-9.82	95.13	108.38
1	A	801	U	C5'-C4'-C3'	9.81	130.72	116.00
1	A	635	A	P-O3'-C3'	-9.80	105.50	120.20
10	J	73	LEU	N-CA-C	-9.80	101.67	114.31
1	A	1482	G	P-O5'-C5'	9.79	135.58	120.90
1	A	324	G	C5'-C4'-C3'	-9.78	101.33	116.00
1	A	322	C	O3'-P-O5'	-9.78	89.33	104.00
1	A	248	C	O4'-C4'-C3'	-9.77	94.23	104.00
1	A	492	C	C4'-C3'-O3'	-9.77	98.34	113.00
1	A	699	C	O3'-P-O5'	-9.77	89.34	104.00
5	E	131	ASN	CB-CA-C	-9.77	98.84	110.08
1	A	1406	U	C5'-C4'-C3'	-9.77	101.34	116.00
1	A	1363	A	C3'-C2'-O2'	-9.77	99.95	114.60
1	A	784	A	P-O5'-C5'	-9.76	106.26	120.90
3	C	31	ASN	CA-CB-CG	-9.75	102.85	112.60
1	A	1363	A	P-O3'-C3'	9.75	134.82	120.20
1	A	1334	G	C4'-C3'-C2'	9.74	112.34	102.60
17	Q	73	THR	N-CA-C	-9.73	96.08	110.48
1	A	785	G	C5'-C4'-C3'	-9.73	101.41	116.00
1	A	371	A	C5'-C4'-C3'	-9.73	101.41	116.00
5	E	23	THR	CA-C-N	9.73	139.48	121.97
5	E	23	THR	C-N-CA	9.73	139.48	121.97
1	A	201	G	O5'-C5'-C4'	-9.72	96.91	111.50
1	A	241	G	C5'-C4'-C3'	-9.72	101.42	116.00
2	B	22	TRP	CB-CG-CD2	-9.72	113.19	126.80
1	A	1187	G	C1'-O4'-C4'	-9.72	100.18	109.90
1	A	1433	A	O3'-P-O5'	-9.72	89.42	104.00
1	A	186	C	O3'-P-O5'	-9.71	89.43	104.00
18	R	69	TYR	N-CA-C	-9.71	94.78	109.83
1	A	857	C	C5'-C4'-C3'	-9.71	101.44	116.00
1	A	1053	G	O5'-C5'-C4'	-9.70	96.95	111.50
1	A	1147	C	C4'-C3'-O3'	-9.70	98.45	113.00
1	A	1004	A	C4'-C3'-C2'	9.69	112.29	102.60
12	L	45	ASN	N-CA-C	-9.69	100.95	113.17
1	A	721	G	C1'-O4'-C4'	-9.68	100.02	109.70
13	M	14	ALA	N-CA-C	9.67	124.39	112.59
1	A	1147	C	P-O5'-C5'	9.67	135.41	120.90
8	H	45	ILE	N-CA-C	-9.67	95.23	108.96
1	A	1104	G	C5'-C4'-C3'	-9.66	101.50	116.00
1	A	145	G	C5'-C4'-C3'	-9.65	101.52	116.00
1	A	89	U	P-O3'-C3'	9.65	134.67	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	61	G	O4'-C4'-C3'	-9.64	94.36	104.00
1	A	605	U	O3'-P-O5'	9.64	118.46	104.00
1	A	772	U	O4'-C4'-C3'	-9.64	94.36	104.00
1	A	121	U	O5'-C5'-C4'	-9.64	97.04	111.50
1	A	119	A	P-O3'-C3'	9.63	134.65	120.20
14	N	13	VAL	N-CA-C	9.63	123.13	111.09
1	A	1253	G	O3'-P-O5'	9.63	118.44	104.00
1	A	1363	A	C1'-C2'-O2'	9.63	126.24	111.80
20	T	30	PHE	CA-CB-CG	-9.62	104.17	113.80
1	A	461	A	P-O5'-C5'	-9.62	106.47	120.90
1	A	1191	A	P-O5'-C5'	9.62	135.33	120.90
15	O	33	ALA	CA-C-N	9.62	133.35	120.65
15	O	33	ALA	C-N-CA	9.62	133.35	120.65
17	Q	68	LYS	N-CA-CB	9.62	126.75	110.49
1	A	450	G	P-O5'-C5'	9.62	135.33	120.90
1	A	1111	A	O4'-C4'-C3'	-9.62	94.38	104.00
1	A	1506	U	O3'-P-O5'	9.62	118.43	104.00
1	A	1133	G	C5'-C4'-C3'	-9.61	101.59	116.00
1	A	1139	G	C5'-C4'-C3'	9.61	129.61	115.20
1	A	1037	C	C5'-C4'-C3'	9.60	130.40	116.00
1	A	1094	G	C5'-C4'-C3'	-9.60	101.60	116.00
1	A	1145	A	O3'-P-O5'	-9.60	89.60	104.00
1	A	1343	G	C5'-C4'-C3'	-9.59	101.62	116.00
1	A	216	U	C1'-O4'-C4'	-9.58	100.32	109.90
1	A	361	G	C4'-C3'-O3'	-9.58	98.63	113.00
1	A	1064	G	O4'-C1'-N9	9.58	122.56	108.20
10	J	15	HIS	CA-C-N	9.58	139.72	122.38
10	J	15	HIS	C-N-CA	9.58	139.72	122.38
1	A	449	G	C4'-C3'-C2'	9.57	112.17	102.60
1	A	913	A	P-O3'-C3'	9.57	134.55	120.20
1	A	1183	U	C4'-C3'-C2'	-9.57	93.03	102.60
1	A	968	A	O3'-P-O5'	-9.56	89.65	104.00
1	A	1068	G	P-O3'-C3'	-9.56	105.86	120.20
1	A	246	A	C4'-C3'-C2'	9.56	112.16	102.60
1	A	856	C	O3'-P-O5'	-9.55	89.67	104.00
1	A	1158	C	O5'-C5'-C4'	-9.55	97.17	111.50
19	S	62	THR	N-CA-C	-9.55	91.31	108.02
1	A	813	U	P-O3'-C3'	-9.55	105.88	120.20
1	A	774	G	O3'-P-O5'	-9.55	89.68	104.00
5	E	100	GLU	N-CA-C	-9.54	101.31	113.72
1	A	207	C	C1'-O4'-C4'	9.54	119.44	109.90
1	A	312	C	C5'-C4'-C3'	9.54	130.31	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	499	A	C4'-C3'-C2'	9.54	112.14	102.60
9	I	12	LYS	CA-C-N	9.54	135.60	122.34
9	I	12	LYS	C-N-CA	9.54	135.60	122.34
2	B	152	ASP	N-CA-CB	9.54	124.27	110.16
1	A	795	C	P-O5'-C5'	9.53	135.20	120.90
1	A	393	A	O4'-C4'-C3'	-9.52	94.48	104.00
10	J	67	ILE	N-CA-C	9.52	123.23	107.24
1	A	76	G	P-O3'-C3'	9.51	134.46	120.20
1	A	414	A	C5'-C4'-C3'	-9.51	101.74	116.00
1	A	260	G	P-O3'-C3'	9.50	134.46	120.20
1	A	973	G	P-O3'-C3'	9.49	134.44	120.20
1	A	1014	A	P-O5'-C5'	-9.49	106.67	120.90
1	A	1278	G	P-O5'-C5'	-9.48	106.68	120.90
4	D	81	LEU	CA-C-N	9.48	134.22	120.38
4	D	81	LEU	C-N-CA	9.48	134.22	120.38
1	A	71	A	C5'-C4'-C3'	-9.48	101.78	116.00
1	A	805	C	P-O5'-C5'	9.48	135.12	120.90
18	R	24	ASP	CA-C-N	9.48	139.03	121.97
18	R	24	ASP	C-N-CA	9.48	139.03	121.97
1	A	344	A	P-O3'-C3'	9.47	134.40	120.20
1	A	415	A	O3'-P-O5'	-9.47	89.80	104.00
21	U	12	ASP	CA-CB-CG	-9.46	103.14	112.60
1	A	278	G	C5'-C4'-C3'	9.46	130.19	116.00
9	I	37	TYR	CA-C-N	9.46	134.74	120.17
9	I	37	TYR	C-N-CA	9.46	134.74	120.17
1	A	991	U	P-O3'-C3'	9.46	134.39	120.20
1	A	1152	A	C5'-C4'-C3'	-9.46	101.81	116.00
15	O	10	ILE	N-CA-C	-9.46	100.69	111.00
1	A	11	G	C5'-C4'-C3'	-9.45	101.82	116.00
1	A	992	U	C5'-C4'-C3'	9.45	129.37	115.20
1	A	1224	U	P-O3'-C3'	9.44	134.36	120.20
1	A	345	C	O4'-C1'-N1	9.44	122.66	108.50
1	A	451	A	O4'-C4'-C3'	-9.44	96.66	106.10
1	A	5	U	P-O3'-C3'	9.43	134.34	120.20
1	A	31	G	O3'-P-O5'	-9.43	89.86	104.00
1	A	31	G	P-O5'-C5'	-9.43	106.76	120.90
1	A	1241	G	C5'-C4'-O4'	9.43	123.94	109.80
2	B	87	ASP	N-CA-C	-9.43	99.68	112.03
1	A	1300	G	O5'-C5'-C4'	-9.42	97.57	111.70
1	A	67	C	C4'-C3'-O3'	-9.41	98.88	113.00
20	T	23	ARG	CA-C-N	9.41	133.24	120.54
20	T	23	ARG	C-N-CA	9.41	133.24	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1260	G	O5'-C5'-C4'	-9.41	97.39	111.50
1	A	1526	G	C5'-C4'-C3'	-9.40	101.89	116.00
1	A	176	C	P-O5'-C5'	9.40	135.00	120.90
2	B	50	ASN	CA-CB-CG	-9.40	103.20	112.60
6	F	68	GLN	CA-C-N	9.39	133.61	122.44
6	F	68	GLN	C-N-CA	9.39	133.61	122.44
1	A	1095	U	O4'-C4'-C3'	-9.39	94.61	104.00
9	I	95	SER	N-CA-C	-9.38	101.38	112.92
1	A	1002	G	P-O5'-C5'	-9.38	106.83	120.90
1	A	1071	C	P-O5'-C5'	9.38	134.97	120.90
1	A	991	U	C5'-C4'-C3'	-9.38	101.13	115.20
3	C	41	TYR	CA-C-N	9.38	133.20	120.44
3	C	41	TYR	C-N-CA	9.38	133.20	120.44
19	S	60	PHE	CA-CB-CG	-9.38	104.42	113.80
1	A	1216	A	C5'-C4'-C3'	9.38	130.07	116.00
1	A	888	G	P-O3'-C3'	9.37	134.25	120.20
1	A	285	C	C5'-C4'-C3'	-9.36	101.95	116.00
1	A	73	C	C5'-C4'-C3'	-9.36	101.95	116.00
1	A	1173	U	P-O3'-C3'	-9.36	106.16	120.20
1	A	142	G	N9-C1'-C2'	9.36	126.04	112.00
1	A	1322	C	P-O3'-C3'	9.36	134.24	120.20
1	A	1114	C	C3'-C2'-C1'	-9.35	91.95	101.30
21	U	41	THR	CA-C-N	9.35	133.35	120.63
21	U	41	THR	C-N-CA	9.35	133.35	120.63
1	A	440	C	C5'-C4'-C3'	-9.34	101.99	116.00
3	C	30	ASP	CA-CB-CG	-9.34	103.26	112.60
1	A	173	U	P-O5'-C5'	-9.34	106.89	120.90
1	A	74	A	P-O5'-C5'	-9.33	106.90	120.90
13	M	4	ALA	CA-C-N	9.33	139.70	121.41
13	M	4	ALA	C-N-CA	9.33	139.70	121.41
1	A	25	C	P-O3'-C3'	-9.33	106.21	120.20
1	A	710	G	C5'-C4'-C3'	-9.33	102.01	116.00
1	A	725	G	P-O5'-C5'	9.33	134.89	120.90
1	A	1094	G	C4'-C3'-O3'	-9.33	99.01	113.00
1	A	305	G	C5'-C4'-C3'	-9.32	101.21	115.20
1	A	654	G	P-O5'-C5'	9.32	134.89	120.90
1	A	72	A	C4'-C3'-C2'	-9.32	93.28	102.60
1	A	1251	A	O4'-C1'-N9	9.32	122.18	108.20
1	A	1117	A	O3'-P-O5'	-9.31	90.03	104.00
1	A	752	G	C5'-C4'-C3'	-9.31	102.03	116.00
1	A	547	A	P-O3'-C3'	9.30	134.15	120.20
1	A	697	U	C5'-C4'-O4'	9.30	123.75	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	T	13	SER	N-CA-C	9.30	123.89	112.54
1	A	444	G	C5'-C4'-C3'	-9.29	102.06	116.00
11	K	105	ARG	N-CA-C	-9.29	94.26	109.40
15	O	48	ASP	N-CA-CB	9.29	124.80	109.94
12	L	18	SER	N-CA-C	9.29	123.70	110.23
1	A	657	U	O5'-C5'-C4'	-9.28	97.57	111.50
1	A	554	A	C5'-C4'-C3'	9.28	129.91	116.00
1	A	1169	A	C4'-C3'-C2'	-9.27	93.33	102.60
18	R	24	ASP	N-CA-C	-9.27	90.63	107.60
1	A	1403	C	C3'-C2'-C1'	-9.27	92.03	101.30
1	A	119	A	O4'-C4'-C3'	9.27	113.27	104.00
1	A	82	G	O5'-C5'-C4'	-9.27	97.60	111.50
3	C	99	GLN	N-CA-C	-9.27	94.89	109.72
1	A	79	G	P-O5'-C5'	9.26	134.79	120.90
1	A	1215	G	C5'-C4'-C3'	-9.26	102.11	116.00
1	A	371	A	P-O5'-C5'	9.26	134.78	120.90
1	A	1274	A	C3'-C2'-C1'	-9.26	92.04	101.30
15	O	27	GLN	CA-C-N	9.26	132.90	120.77
15	O	27	GLN	C-N-CA	9.26	132.90	120.77
20	T	6	ALA	N-CA-C	-9.26	102.17	112.72
1	A	1470	U	O4'-C4'-C3'	-9.25	94.75	104.00
1	A	713	G	C5'-C4'-C3'	-9.25	102.13	116.00
1	A	1270	G	P-O5'-C5'	9.24	134.76	120.90
1	A	453	G	C5'-C4'-C3'	-9.23	102.15	116.00
5	E	88	HIS	N-CA-C	-9.23	91.13	110.80
1	A	1477	U	P-O5'-C5'	9.22	134.74	120.90
1	A	348	G	P-O5'-C5'	-9.22	107.07	120.90
1	A	1022	A	P-O5'-C5'	-9.22	107.07	120.90
1	A	155	A	C5'-C4'-C3'	-9.22	102.17	116.00
1	A	1322	C	C5'-C4'-C3'	9.21	129.02	115.20
1	A	880	C	P-O3'-C3'	-9.21	106.38	120.20
1	A	724	G	P-O5'-C5'	-9.21	107.08	120.90
1	A	1440	U	P-O5'-C5'	-9.21	107.08	120.90
1	A	689	C	C5'-C4'-C3'	-9.21	102.19	116.00
1	A	251	G	C4'-C3'-C2'	-9.21	93.39	102.60
16	P	45	GLU	N-CA-CB	9.21	123.52	110.36
1	A	343	U	O5'-C5'-C4'	-9.20	97.70	111.50
13	M	15	VAL	CB-CA-C	-9.20	100.86	110.88
13	M	106	ARG	O-C-N	-9.18	112.39	122.12
1	A	321	A	P-O5'-C5'	9.18	134.66	120.90
1	A	499	A	C2'-C3'-O3'	9.18	123.26	109.50
1	A	1171	A	O3'-P-O5'	-9.17	90.25	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	204	G	O4'-C4'-C3'	-9.17	94.83	104.00
1	A	245	U	O3'-P-O5'	-9.15	90.27	104.00
1	A	849	G	P-O5'-C5'	-9.15	107.17	120.90
10	J	40	ILE	N-CA-CB	9.15	120.33	110.17
1	A	345	C	C4'-C3'-C2'	-9.15	93.45	102.60
1	A	755	G	P-O3'-C3'	-9.15	106.48	120.20
1	A	1200	C	C5'-C4'-C3'	9.15	129.72	116.00
17	Q	71	SER	CA-C-N	9.14	135.70	122.44
17	Q	71	SER	C-N-CA	9.14	135.70	122.44
1	A	239	U	O3'-P-O5'	9.13	117.70	104.00
1	A	358	U	C5'-C4'-C3'	-9.13	102.30	116.00
2	B	20	ARG	N-CA-C	-9.13	102.72	114.04
11	K	62	ALA	N-CA-C	9.13	121.23	111.28
1	A	1205	U	O3'-P-O5'	-9.12	90.31	104.00
1	A	1162	C	P-O5'-C5'	9.12	134.59	120.90
1	A	608	A	C5'-C4'-C3'	-9.11	102.33	116.00
1	A	1277	C	O5'-C5'-C4'	-9.11	97.84	111.50
1	A	533	A	C5'-C4'-O4'	9.11	122.76	109.10
1	A	1095	U	C4'-C3'-O3'	9.10	126.65	113.00
1	A	230	G	P-O5'-C5'	9.09	134.54	120.90
1	A	1309	G	C5'-C4'-C3'	-9.09	102.37	116.00
1	A	40	C	C5'-C4'-C3'	-9.08	102.38	116.00
1	A	1489	G	C5'-C4'-C3'	9.08	129.62	116.00
1	A	618	C	C4'-C3'-C2'	-9.08	93.52	102.60
1	A	494	G	C5'-C4'-C3'	-9.07	102.39	116.00
1	A	510	A	O3'-P-O5'	-9.07	90.39	104.00
1	A	732	C	C4'-C3'-C2'	9.07	111.67	102.60
4	D	140	ASP	N-CA-C	-9.07	93.19	108.26
1	A	337	G	O3'-P-O5'	-9.07	90.40	104.00
1	A	511	C	C2'-C3'-O3'	9.07	123.10	109.50
1	A	1172	C	O3'-P-O5'	-9.06	90.40	104.00
3	C	140	ALA	N-CA-C	-9.06	101.79	113.12
1	A	1307	U	C4'-C3'-O3'	-9.06	99.42	113.00
1	A	456	A	C3'-C2'-C1'	-9.06	92.24	101.30
1	A	258	G	C5'-C4'-C3'	-9.05	102.42	116.00
1	A	1122	U	P-O3'-C3'	9.05	133.78	120.20
11	K	34	THR	N-CA-C	-9.05	95.57	109.24
1	A	1092	A	C2'-C3'-O3'	-9.04	100.14	113.70
1	A	1237	C	C4'-C3'-O3'	-9.04	99.44	113.00
6	F	6	ILE	N-CA-C	-9.04	96.42	108.35
1	A	1095	U	C4'-C3'-C2'	-9.04	93.56	102.60
1	A	701	U	C4'-C3'-O3'	-9.04	99.45	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	730	G	C4'-C3'-C2'	-9.03	93.57	102.60
1	A	1055	A	O5'-C5'-C4'	-9.03	97.95	111.50
1	A	1080	A	P-O5'-C5'	-9.03	107.35	120.90
1	A	54	C	P-O3'-C3'	-9.03	106.66	120.20
1	A	1519	A	O5'-C5'-C4'	-9.02	97.96	111.50
21	U	44	ARG	N-CA-C	-9.02	91.59	110.80
13	M	5	GLY	CA-C-N	9.01	138.19	121.97
13	M	5	GLY	C-N-CA	9.01	138.19	121.97
1	A	647	C	P-O5'-C5'	9.01	134.41	120.90
1	A	1464	U	O3'-P-O5'	9.01	117.51	104.00
1	A	822	U	C5'-C4'-C3'	-9.00	102.50	116.00
1	A	211	G	C5'-C4'-C3'	9.00	129.50	116.00
7	G	23	ALA	N-CA-C	9.00	120.70	111.07
9	I	115	VAL	N-CA-C	-8.99	100.25	110.05
1	A	264	C	O5'-C5'-C4'	-8.99	98.02	111.50
7	G	47	GLU	N-CA-C	-8.99	100.72	112.68
1	A	950	U	C5'-C4'-C3'	-8.98	102.52	116.00
1	A	771	G	O3'-P-O5'	-8.98	90.53	104.00
1	A	843	U	P-O3'-C3'	-8.98	106.73	120.20
1	A	1073	U	O3'-P-O5'	-8.97	90.54	104.00
19	S	63	ASP	CA-CB-CG	-8.97	103.63	112.60
1	A	957	U	P-O5'-C5'	8.97	134.35	120.90
1	A	607	A	C5'-C4'-C3'	-8.96	102.56	116.00
7	G	78	ARG	N-CA-CB	8.96	125.62	110.49
1	A	511	C	O3'-P-O5'	-8.95	90.57	104.00
1	A	867	G	C4'-C3'-C2'	-8.95	93.65	102.60
1	A	996	A	C3'-C2'-C1'	-8.95	92.35	101.30
1	A	183	C	O3'-P-O5'	-8.95	90.58	104.00
1	A	1306	A	C5'-C4'-C3'	-8.95	102.58	116.00
1	A	1172	C	C5'-C4'-C3'	-8.95	102.58	116.00
1	A	616	G	O3'-P-O5'	-8.94	90.58	104.00
1	A	1114	C	P-O5'-C5'	8.94	134.31	120.90
1	A	411	A	C2'-C3'-O3'	-8.94	100.29	113.70
10	J	46	LYS	N-CA-C	8.94	123.81	107.99
15	O	17	ASP	N-CA-CB	8.94	125.22	111.46
9	I	100	ALA	N-CA-C	-8.93	99.18	112.04
1	A	348	G	O5'-C5'-C4'	-8.93	98.11	111.50
1	A	1397	C	P-O3'-C3'	-8.93	106.81	120.20
1	A	162	A	C5'-C4'-C3'	-8.93	102.61	116.00
1	A	1027	C	O3'-P-O5'	-8.93	90.61	104.00
2	B	175	ALA	CA-C-N	8.93	135.38	121.19
2	B	175	ALA	C-N-CA	8.93	135.38	121.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	301	G	O3'-P-O5'	-8.92	90.61	104.00
1	A	191	G	O3'-P-O5'	-8.92	90.62	104.00
3	C	151	GLU	CA-C-N	8.92	133.71	120.95
3	C	151	GLU	C-N-CA	8.92	133.71	120.95
1	A	1401	G	P-O5'-C5'	8.92	134.28	120.90
1	A	1223	C	C5'-C4'-C3'	8.91	128.57	115.20
1	A	1407	C	P-O5'-C5'	8.91	134.26	120.90
1	A	1276	G	C5'-C4'-C3'	-8.90	102.64	116.00
1	A	1472	U	C4'-C3'-C2'	-8.90	93.70	102.60
14	N	92	ILE	N-CA-CB	-8.90	105.69	111.83
1	A	513	C	C5'-C4'-C3'	-8.89	102.66	116.00
1	A	1439	G	C5'-C4'-C3'	-8.89	102.67	116.00
1	A	197	A	C5'-C4'-C3'	8.89	128.53	115.20
1	A	1421	G	C3'-C2'-C1'	-8.88	92.42	101.30
1	A	616	G	C3'-C2'-O2'	8.87	124.00	110.70
1	A	274	A	C4'-C3'-O3'	8.87	122.70	109.40
1	A	868	C	C5'-C4'-C3'	-8.87	102.70	116.00
1	A	1003	G	P-O3'-C3'	8.87	133.50	120.20
13	M	85	TYR	N-CA-C	-8.87	101.39	113.18
18	R	37	LYS	CA-C-N	8.87	137.93	121.97
18	R	37	LYS	C-N-CA	8.87	137.93	121.97
1	A	1376	U	P-O5'-C5'	8.86	134.19	120.90
7	G	115	MET	N-CA-CB	8.86	125.37	110.32
1	A	387	U	O5'-C5'-C4'	-8.85	98.22	111.50
1	A	973	G	O5'-C5'-C4'	-8.84	98.23	111.50
1	A	814	A	C4'-C3'-O3'	-8.84	99.74	113.00
1	A	1256	A	O4'-C4'-C3'	-8.84	97.26	106.10
1	A	656	G	C5'-C4'-C3'	-8.84	102.74	116.00
1	A	1102	A	C4'-C3'-O3'	-8.84	99.75	113.00
1	A	1175	G	O3'-P-O5'	-8.84	90.74	104.00
1	A	30	U	P-O3'-C3'	8.83	133.45	120.20
7	G	6	ILE	N-CA-C	8.83	122.13	108.44
1	A	1308	U	C5'-C4'-C3'	-8.83	102.75	116.00
1	A	1042	A	C5'-C4'-C3'	-8.83	102.76	116.00
12	L	72	ASN	CA-CB-CG	-8.82	103.78	112.60
1	A	83	C	P-O3'-C3'	-8.82	106.97	120.20
1	A	704	A	P-O3'-C3'	-8.82	106.97	120.20
1	A	477	C	C5'-C4'-C3'	-8.82	102.77	116.00
1	A	724	G	C4'-C3'-O3'	-8.82	99.77	113.00
1	A	1481	U	P-O3'-C3'	-8.82	106.97	120.20
1	A	529	G	C4'-C3'-C2'	-8.82	93.78	102.60
1	A	129	A	C5'-C4'-C3'	-8.81	101.98	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	426	U	C5'-C4'-C3'	-8.81	102.78	116.00
1	A	557	G	O3'-P-O5'	-8.81	90.78	104.00
3	C	58	ARG	N-CA-C	-8.81	94.29	108.82
1	A	413	G	O4'-C4'-C3'	-8.80	97.30	106.10
1	A	434	U	C3'-C2'-C1'	-8.80	92.50	101.30
1	A	647	C	C3'-C2'-C1'	-8.80	92.50	101.30
5	E	38	VAL	N-CA-C	-8.80	94.28	108.90
6	F	11	HIS	N-CA-C	-8.80	98.87	110.40
19	S	64	GLU	N-CA-C	-8.80	102.08	113.17
1	A	267	C	C5'-C4'-O4'	-8.79	96.61	109.80
1	A	643	C	O3'-P-O5'	-8.79	90.81	104.00
1	A	52	C	O4'-C4'-C3'	-8.79	95.21	104.00
1	A	440	C	C4'-C3'-O3'	-8.79	99.81	113.00
8	H	111	THR	N-CA-CB	8.79	123.10	109.48
1	A	1260	G	C5'-C4'-C3'	-8.79	102.82	116.00
1	A	925	G	O4'-C1'-C2'	8.78	116.38	107.60
1	A	1191	A	C4'-C3'-O3'	-8.78	99.83	113.00
5	E	62	ALA	CA-C-N	8.77	132.40	120.38
5	E	62	ALA	C-N-CA	8.77	132.40	120.38
1	A	503	C	C5'-C4'-C3'	-8.77	102.84	116.00
17	Q	68	LYS	CB-CA-C	-8.77	92.97	110.42
1	A	1369	C	P-O5'-C5'	8.76	134.03	120.90
1	A	1443	C	C5'-C4'-O4'	8.76	122.94	109.80
14	N	6	LYS	CA-C-N	8.76	132.89	120.28
14	N	6	LYS	C-N-CA	8.76	132.89	120.28
1	A	198	G	P-O5'-C5'	8.75	134.03	120.90
1	A	449	G	P-O5'-C5'	8.75	134.03	120.90
1	A	529	G	C2'-C3'-O3'	-8.75	100.57	113.70
1	A	1364	U	O4'-C1'-N1	8.75	121.32	108.20
1	A	1496	C	P-O3'-C3'	8.75	133.32	120.20
7	G	38	ALA	CA-C-N	8.75	132.36	120.38
7	G	38	ALA	C-N-CA	8.75	132.36	120.38
1	A	117	G	O3'-P-O5'	-8.74	90.88	104.00
1	A	300	A	C4'-C3'-O3'	-8.74	99.88	113.00
1	A	1080	A	C4'-C3'-O3'	-8.74	99.89	113.00
1	A	1391	U	O3'-P-O5'	8.73	117.10	104.00
1	A	513	C	P-O5'-C5'	8.73	134.00	120.90
1	A	169	C	C5'-C4'-C3'	-8.72	102.91	116.00
1	A	456	A	C1'-O4'-C4'	-8.72	101.17	109.90
17	Q	48	GLU	N-CA-C	-8.72	92.22	110.80
1	A	912	C	C4'-C3'-O3'	-8.72	99.92	113.00
1	A	1494	G	O3'-P-O5'	-8.72	90.93	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	T	19	HIS	N-CA-CB	8.71	124.53	109.72
15	O	19	ASN	N-CA-C	-8.71	99.52	111.28
1	A	620	C	C5'-C4'-C3'	-8.71	102.93	116.00
1	A	1273	C	P-O5'-C5'	-8.71	107.83	120.90
1	A	606	G	C4'-C3'-C2'	8.71	111.31	102.60
1	A	134	G	O4'-C4'-C3'	-8.71	95.29	104.00
20	T	2	ASN	CA-CB-CG	-8.71	103.89	112.60
1	A	1319	A	P-O3'-C3'	8.71	133.26	120.20
1	A	1270	G	C4'-C3'-O3'	-8.70	99.94	113.00
1	A	1441	A	P-O5'-C5'	-8.70	107.85	120.90
1	A	580	C	C5'-C4'-C3'	-8.70	102.95	116.00
1	A	1232	U	C5'-C4'-C3'	-8.70	102.95	116.00
1	A	121	U	P-O5'-C5'	-8.70	107.86	120.90
1	A	60	A	P-O3'-C3'	8.69	133.24	120.20
1	A	1141	C	P-O3'-C3'	-8.69	107.17	120.20
1	A	1046	A	N9-C1'-C2'	-8.68	98.97	112.00
1	A	142	G	C1'-O4'-C4'	-8.68	101.22	109.90
1	A	265	G	C4'-C3'-C2'	-8.68	93.92	102.60
2	B	121	GLN	N-CA-C	8.68	120.74	111.28
3	C	33	ASP	CA-CB-CG	-8.68	103.92	112.60
1	A	492	C	C2'-C3'-O3'	8.67	126.71	113.70
1	A	1379	G	C5'-C4'-C3'	-8.67	102.99	116.00
1	A	1474	U	C5'-C4'-C3'	-8.67	103.00	116.00
1	A	1160	G	P-O5'-C5'	8.66	133.89	120.90
3	C	152	VAL	N-CA-C	8.66	119.49	110.05
1	A	1349	A	P-O5'-C5'	8.66	133.89	120.90
1	A	1129	C	O4'-C1'-C2'	8.66	116.26	107.60
1	A	476	U	C3'-C2'-C1'	-8.65	92.64	101.30
7	G	77	ARG	CA-C-N	8.65	138.07	121.54
7	G	77	ARG	C-N-CA	8.65	138.07	121.54
1	A	1099	G	C3'-C2'-C1'	-8.65	92.65	101.30
1	A	504	C	P-O5'-C5'	8.64	133.87	120.90
10	J	81	GLU	CA-C-N	8.64	132.19	120.44
10	J	81	GLU	C-N-CA	8.64	132.19	120.44
1	A	772	U	O5'-C5'-C4'	-8.64	98.54	111.50
1	A	1404	C	C5'-C4'-C3'	-8.63	103.05	116.00
1	A	1026	G	O3'-P-O5'	-8.63	91.06	104.00
1	A	948	C	C5'-C4'-C3'	-8.63	103.06	116.00
4	D	111	ALA	CA-C-N	8.63	131.66	120.44
4	D	111	ALA	C-N-CA	8.63	131.66	120.44
13	M	111	PRO	CA-C-N	8.63	138.02	121.54
13	M	111	PRO	C-N-CA	8.63	138.02	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	R	66	LEU	N-CA-C	-8.63	100.67	113.61
1	A	181	A	O5'-C5'-C4'	-8.62	98.57	111.50
1	A	253	A	P-O5'-C5'	-8.62	107.97	120.90
1	A	719	C	P-O5'-C5'	8.62	133.83	120.90
1	A	910	C	C5'-C4'-C3'	-8.62	103.07	116.00
1	A	327	A	P-O3'-C3'	8.62	133.13	120.20
1	A	1164	G	O3'-P-O5'	-8.62	91.08	104.00
1	A	403	C	C5'-C4'-C3'	-8.61	103.08	116.00
1	A	997	U	P-O5'-C5'	8.61	133.82	120.90
1	A	140	U	C2'-C3'-O3'	8.61	126.61	113.70
10	J	46	LYS	CA-C-N	8.61	134.22	122.77
10	J	46	LYS	C-N-CA	8.61	134.22	122.77
1	A	883	C	C5'-C4'-C3'	-8.61	103.09	116.00
1	A	1314	C	C5'-C4'-C3'	-8.60	103.09	116.00
16	P	39	PHE	N-CA-C	-8.60	92.64	107.61
3	C	197	VAL	N-CA-C	-8.59	96.07	108.53
1	A	962	C	C5'-C4'-C3'	-8.59	103.11	116.00
22	W	156	ILE	N-CA-C	-8.59	95.06	107.77
1	A	1131	G	C3'-C2'-C1'	-8.59	92.71	101.30
1	A	1084	G	C4'-C3'-O3'	-8.58	100.13	113.00
1	A	1005	A	C5'-C4'-C3'	-8.58	103.13	116.00
1	A	927	G	P-O5'-C5'	-8.58	108.03	120.90
1	A	826	C	C5'-C4'-C3'	-8.57	103.14	116.00
4	D	2	ARG	N-CA-C	-8.57	101.88	111.14
1	A	168	G	O3'-P-O5'	-8.57	91.14	104.00
1	A	662	U	P-O5'-C5'	8.57	133.76	120.90
1	A	288	A	O5'-C5'-C4'	-8.57	98.65	111.50
1	A	393	A	C5'-C4'-C3'	8.57	128.85	116.00
1	A	610	U	O4'-C1'-N1	8.57	121.36	108.50
1	A	1265	C	O3'-P-O5'	-8.57	91.14	104.00
7	G	32	ASP	N-CA-C	-8.57	102.58	113.72
13	M	72	ILE	N-CA-C	-8.57	101.99	110.30
10	J	57	VAL	CB-CA-C	8.56	125.33	111.29
1	A	480	U	P-O5'-C5'	-8.54	108.08	120.90
1	A	779	C	P-O3'-C3'	8.54	133.02	120.20
1	A	960	U	O5'-C5'-C4'	-8.54	98.88	111.70
1	A	1345	U	C2'-C3'-O3'	8.55	122.32	109.50
1	A	946	A	C1'-C2'-O2'	8.54	121.21	108.40
1	A	218	U	C4'-C3'-O3'	-8.54	100.19	113.00
1	A	366	A	P-O5'-C5'	-8.54	108.09	120.90
1	A	430	A	O3'-P-O5'	-8.54	91.19	104.00
1	A	384	G	P-O5'-C5'	8.54	133.71	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	766	A	C3'-C2'-C1'	-8.54	92.76	101.30
1	A	1440	U	C3'-C2'-C1'	-8.54	92.76	101.30
17	Q	39	ARG	N-CA-C	-8.54	95.49	109.40
11	K	40	ALA	N-CA-C	-8.53	95.59	108.99
1	A	660	C	C4'-C3'-O3'	8.53	125.79	113.00
1	A	889	A	P-O5'-C5'	-8.53	108.11	120.90
16	P	15	PRO	N-CA-C	-8.53	97.53	111.77
1	A	328	C	C2'-C3'-O3'	8.52	122.28	109.50
1	A	492	C	O3'-P-O5'	-8.52	91.22	104.00
1	A	595	A	P-O5'-C5'	8.52	133.69	120.90
1	A	1114	C	C5'-C4'-C3'	-8.52	103.22	116.00
22	W	274	GLY	N-CA-C	-8.52	92.98	113.18
1	A	687	A	P-O5'-C5'	-8.52	108.12	120.90
14	N	87	ALA	N-CA-C	8.52	121.50	111.71
12	L	77	SER	N-CA-C	-8.51	99.06	110.55
1	A	1085	U	P-O3'-C3'	-8.51	107.43	120.20
1	A	1133	G	O3'-P-O5'	-8.51	91.23	104.00
1	A	1239	A	O5'-C5'-C4'	-8.51	98.93	111.70
10	J	73	LEU	CA-C-N	8.51	137.29	121.97
10	J	73	LEU	C-N-CA	8.51	137.29	121.97
1	A	1462	C	C5'-C4'-C3'	-8.51	103.24	116.00
16	P	55	ASP	N-CA-C	8.50	120.32	111.14
16	P	52	LEU	N-CA-CB	8.50	124.11	110.77
1	A	813	U	C5'-C4'-C3'	-8.49	103.26	116.00
1	A	448	A	P-O3'-C3'	8.49	132.93	120.20
1	A	765	G	C4'-C3'-C2'	8.49	111.09	102.60
1	A	98	A	P-O5'-C5'	8.47	133.60	120.90
1	A	211	G	P-O3'-C3'	8.47	132.90	120.20
1	A	419	C	P-O5'-C5'	-8.47	108.20	120.90
1	A	426	U	C4'-C3'-C2'	-8.47	94.13	102.60
1	A	535	A	O4'-C4'-C3'	-8.46	95.54	104.00
1	A	1404	C	C2'-C3'-O3'	8.46	126.40	113.70
1	A	689	C	P-O3'-C3'	-8.46	107.51	120.20
1	A	1408	A	O5'-C5'-C4'	-8.46	98.81	111.50
1	A	77	A	C5'-C4'-O4'	8.46	122.49	109.80
1	A	267	C	P-O3'-C3'	8.46	132.89	120.20
1	A	963	G	P-O3'-C3'	-8.46	107.52	120.20
1	A	946	A	C2'-C3'-O3'	8.46	126.38	113.70
1	A	1028	C	O3'-P-O5'	-8.45	91.33	104.00
1	A	1270	G	C5'-C4'-O4'	8.44	122.47	109.80
1	A	1420	U	C5'-C4'-C3'	-8.44	103.34	116.00
2	B	174	GLU	CA-C-N	8.44	131.93	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	174	GLU	C-N-CA	8.44	131.93	120.54
1	A	338	A	C5'-C4'-C3'	-8.43	103.35	116.00
6	F	65	GLU	N-CA-C	-8.43	92.07	107.75
1	A	748	G	C5'-C4'-C3'	-8.43	103.36	116.00
1	A	1488	G	O5'-C5'-C4'	-8.43	98.86	111.50
14	N	76	PHE	CA-CB-CG	-8.42	105.38	113.80
9	I	36	GLN	N-CA-C	-8.42	100.47	110.41
17	Q	16	MET	CA-C-N	8.42	137.63	121.54
17	Q	16	MET	C-N-CA	8.42	137.63	121.54
1	A	1008	U	C3'-C2'-C1'	-8.42	92.88	101.30
1	A	27	G	C5'-C4'-C3'	8.42	128.62	116.00
1	A	216	U	C4'-C3'-C2'	-8.42	94.18	102.60
1	A	1274	A	O4'-C1'-N9	8.42	121.13	108.50
4	D	54	LEU	N-CA-C	-8.41	101.69	111.03
1	A	118	U	O4'-C1'-C2'	-8.41	99.19	107.60
1	A	477	C	P-O5'-C5'	8.41	133.51	120.90
1	A	1029	U	P-O3'-C3'	-8.41	107.59	120.20
1	A	259	G	C5'-C4'-C3'	-8.40	103.39	116.00
17	Q	30	HIS	CA-CB-CG	8.40	122.20	113.80
1	A	1022	A	C1'-O4'-C4'	-8.40	101.50	109.90
1	A	457	G	C3'-C2'-C1'	-8.40	92.90	101.30
1	A	627	G	O3'-P-O5'	8.40	116.60	104.00
1	A	643	C	C5'-C4'-O4'	8.40	122.39	109.80
1	A	1267	C	P-O5'-C5'	-8.40	108.30	120.90
1	A	812	G	C2'-C3'-O3'	8.39	122.09	109.50
3	C	57	GLU	N-CA-C	-8.39	97.02	108.86
1	A	277	C	C5'-C4'-C3'	8.39	128.59	116.00
5	E	134	ASN	CA-CB-CG	-8.39	104.21	112.60
1	A	154	U	C3'-C2'-C1'	-8.39	92.91	101.30
1	A	468	A	P-O3'-C3'	-8.39	107.62	120.20
1	A	1059	C	C4'-C3'-O3'	-8.39	100.42	113.00
1	A	1141	C	O3'-P-O5'	-8.39	91.42	104.00
9	I	118	ARG	CA-C-N	8.39	136.14	121.80
9	I	118	ARG	C-N-CA	8.39	136.14	121.80
1	A	326	G	C5'-C4'-C3'	-8.38	103.42	116.00
1	A	410	G	O3'-P-O5'	-8.39	91.42	104.00
1	A	1421	G	C5'-C4'-C3'	-8.38	103.43	116.00
4	D	188	SER	N-CA-C	-8.38	102.23	111.36
1	A	205	A	O5'-C5'-C4'	-8.37	98.94	111.50
2	B	38	HIS	N-CA-CB	8.37	124.64	110.49
1	A	75	G	C5'-C4'-C3'	-8.37	103.45	116.00
1	A	261	U	P-O5'-C5'	8.37	133.45	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	I	110	VAL	CA-C-N	8.37	137.52	121.54
9	I	110	VAL	C-N-CA	8.37	137.52	121.54
1	A	180	U	P-O3'-C3'	8.37	132.75	120.20
1	A	1251	A	C1'-C2'-O2'	-8.37	99.25	111.80
1	A	894	G	O5'-C5'-C4'	-8.36	98.96	111.50
1	A	1033	G	P-O3'-C3'	-8.36	107.67	120.20
1	A	337	G	C4'-C3'-O3'	-8.35	100.47	113.00
1	A	1250	A	O5'-C5'-C4'	-8.35	98.97	111.50
1	A	554	A	O4'-C4'-C3'	-8.35	95.66	104.00
1	A	823	C	C2'-C3'-O3'	8.34	126.21	113.70
1	A	566	G	P-O3'-C3'	8.34	132.71	120.20
1	A	802	A	P-O5'-C5'	8.34	133.41	120.90
1	A	430	A	C5'-C4'-C3'	-8.33	103.50	116.00
1	A	1185	G	C4'-C3'-C2'	-8.33	94.27	102.60
1	A	1292	G	C3'-C2'-C1'	-8.33	92.97	101.30
1	A	351	G	C2'-C3'-O3'	8.33	122.00	109.50
19	S	44	ILE	N-CA-CB	8.33	120.56	110.31
1	A	435	A	C5'-C4'-C3'	-8.33	103.51	116.00
1	A	225	C	C3'-C2'-C1'	-8.32	92.98	101.30
1	A	1358	U	O5'-C5'-C4'	-8.32	99.02	111.50
1	A	266	G	C5'-C4'-C3'	-8.32	102.73	115.20
1	A	854	U	C5'-C4'-C3'	-8.32	103.52	116.00
4	D	197	HIS	N-CA-C	-8.32	101.13	112.03
1	A	731	G	O3'-P-O5'	8.31	116.47	104.00
1	A	993	G	P-O3'-C3'	8.31	132.67	120.20
1	A	1032	G	C5'-C4'-C3'	-8.31	103.53	116.00
1	A	1402	C	C5'-C4'-C3'	-8.31	103.53	116.00
1	A	739	C	P-O5'-C5'	8.31	133.36	120.90
1	A	1287	A	C5'-C4'-C3'	8.30	128.45	116.00
1	A	275	G	O5'-C5'-C4'	-8.30	99.05	111.50
1	A	1464	U	C3'-C2'-C1'	-8.30	93.00	101.30
1	A	890	G	P-O5'-C5'	8.30	133.34	120.90
1	A	1061	G	C5'-C4'-C3'	-8.29	103.56	116.00
1	A	438	U	P-O5'-C5'	-8.29	108.46	120.90
1	A	731	G	O4'-C4'-C3'	-8.29	95.71	104.00
1	A	1129	C	C4'-C3'-C2'	8.29	110.89	102.60
1	A	142	G	C5'-C4'-C3'	-8.29	103.57	116.00
1	A	879	C	C5'-C4'-C3'	-8.29	103.57	116.00
1	A	1277	C	P-O3'-C3'	-8.29	107.77	120.20
1	A	1299	A	C5'-C4'-C3'	-8.29	102.77	115.20
4	D	98	ASP	CA-CB-CG	-8.29	104.31	112.60
11	K	86	LYS	N-CA-C	-8.29	96.38	109.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	W	322	ALA	CA-C-N	8.29	131.39	120.28
22	W	322	ALA	C-N-CA	8.29	131.39	120.28
1	A	109	A	P-O3'-C3'	8.29	132.63	120.20
1	A	130	A	O4'-C4'-C3'	-8.29	97.81	106.10
1	A	413	G	P-O3'-C3'	-8.28	107.78	120.20
1	A	1167	A	C5'-C4'-C3'	-8.28	103.59	116.00
1	A	164	G	O3'-P-O5'	-8.27	91.59	104.00
1	A	1387	G	P-O3'-C3'	8.27	132.60	120.20
22	W	229	GLY	N-CA-C	-8.27	103.77	115.43
1	A	878	A	P-O3'-C3'	-8.26	107.81	120.20
9	I	65	THR	N-CA-C	-8.26	96.43	109.23
1	A	627	G	C4'-C3'-C2'	-8.26	94.34	102.60
3	C	189	HIS	N-CA-C	-8.25	97.16	110.20
1	A	429	U	P-O3'-C3'	8.25	132.58	120.20
17	Q	80	LYS	N-CA-C	-8.25	96.44	109.23
1	A	499	A	P-O3'-C3'	8.25	132.57	120.20
1	A	1318	A	C5'-C4'-C3'	-8.25	103.63	116.00
8	H	8	ASP	N-CA-CB	8.25	122.03	110.07
20	T	44	ALA	N-CA-C	8.25	119.90	111.07
22	W	235	LEU	N-CA-C	-8.25	95.98	108.52
1	A	13	U	C5'-C4'-C3'	8.24	127.57	115.20
1	A	349	A	C3'-C2'-C1'	-8.24	93.06	101.30
1	A	927	G	C5'-C4'-C3'	8.24	128.37	116.00
1	A	1296	C	O4'-C1'-N1	8.24	120.87	108.50
1	A	1403	C	O4'-C1'-N1	8.24	120.87	108.50
1	A	1075	U	P-O3'-C3'	-8.24	107.83	120.20
1	A	180	U	O3'-P-O5'	-8.24	91.64	104.00
13	M	24	VAL	N-CA-C	-8.24	95.63	108.23
1	A	94	G	C5'-C4'-C3'	8.23	128.35	116.00
1	A	134	G	C3'-C2'-C1'	-8.23	93.07	101.30
1	A	1390	U	C5'-C4'-C3'	8.23	128.35	116.00
1	A	425	G	P-O5'-C5'	8.23	133.25	120.90
4	D	25	ARG	CD-NE-CZ	-8.22	112.89	124.40
1	A	1332	A	P-O5'-C5'	-8.22	108.57	120.90
1	A	908	A	O3'-P-O5'	-8.22	91.67	104.00
1	A	1310	G	P-O3'-C3'	-8.22	107.87	120.20
1	A	1382	C	P-O5'-C5'	8.22	133.23	120.90
1	A	1152	A	P-O5'-C5'	-8.22	108.57	120.90
16	P	14	ARG	N-CA-CB	8.22	122.15	110.07
3	C	118	SER	N-CA-C	-8.21	102.27	111.14
1	A	1442	G	C2'-C3'-O3'	8.21	126.02	113.70
5	E	65	LYS	CB-CA-C	8.21	124.64	110.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	346	G	C4'-C3'-O3'	-8.21	100.69	113.00
1	A	1203	C	P-O5'-C5'	8.21	133.21	120.90
1	A	902	G	C4'-C3'-C2'	-8.21	94.39	102.60
1	A	466	A	C5'-C4'-C3'	-8.20	103.70	116.00
1	A	1089	G	C1'-O4'-C4'	-8.20	101.70	109.90
1	A	1201	A	O3'-P-O5'	-8.20	91.70	104.00
1	A	1248	A	C5'-C4'-C3'	8.20	128.30	116.00
1	A	120	A	O4'-C1'-C2'	-8.20	99.40	107.60
9	I	13	SER	N-CA-CB	8.19	124.36	111.91
1	A	1178	G	C4'-C3'-C2'	-8.19	94.41	102.60
1	A	1399	C	O5'-C5'-C4'	-8.19	99.41	111.70
1	A	633	G	C5'-C4'-C3'	8.19	128.28	116.00
1	A	681	A	P-O3'-C3'	8.19	132.48	120.20
1	A	1001	C	P-O5'-C5'	8.19	133.18	120.90
17	Q	44	HIS	CB-CG-CD2	-8.18	120.56	131.20
1	A	1309	G	C4'-C3'-O3'	-8.18	100.73	113.00
1	A	172	A	O3'-P-O5'	8.18	116.27	104.00
1	A	746	A	O4'-C4'-C3'	-8.18	95.82	104.00
1	A	1353	G	C5'-C4'-C3'	-8.18	103.73	116.00
1	A	432	A	C5'-C4'-C3'	-8.17	103.74	116.00
1	A	490	C	O3'-P-O5'	-8.17	91.74	104.00
1	A	1262	C	O3'-P-O5'	-8.17	91.74	104.00
2	B	31	PHE	N-CA-CB	8.17	125.91	111.69
1	A	336	A	O3'-P-O5'	-8.17	91.75	104.00
1	A	542	G	O3'-P-O5'	8.17	116.25	104.00
1	A	610	U	O4'-C4'-C3'	-8.17	95.83	104.00
1	A	139	A	C5'-C4'-C3'	-8.16	103.75	116.00
1	A	714	G	O5'-C5'-C4'	-8.16	99.26	111.50
1	A	1014	A	O3'-P-O5'	-8.16	91.76	104.00
1	A	1404	C	C4'-C3'-O3'	-8.16	100.75	113.00
3	C	44	LYS	N-CA-C	-8.16	102.92	113.12
17	Q	57	VAL	CB-CA-C	8.16	120.45	111.80
3	C	165	GLU	N-CA-C	-8.16	96.67	109.72
8	H	105	THR	CA-CB-CG2	8.16	124.37	110.50
1	A	309	A	P-O5'-C5'	8.15	133.13	120.90
1	A	1528	U	O5'-C5'-C4'	-8.15	99.47	111.70
1	A	422	C	O4'-C1'-C2'	-8.15	99.45	107.60
1	A	1435	G	C5'-C4'-C3'	-8.15	103.78	116.00
15	O	82	GLU	CA-CB-CG	8.15	130.40	114.10
1	A	18	C	C5'-C4'-C3'	8.15	128.22	116.00
1	A	851	G	C4'-C3'-O3'	-8.15	100.78	113.00
1	A	66	A	O3'-P-O5'	-8.14	91.78	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	66	A	O4'-C1'-C2'	-8.14	99.46	107.60
5	E	103	GLY	N-CA-C	-8.14	102.48	112.33
1	A	1364	U	O5'-C5'-C4'	8.14	123.91	111.70
8	H	2	MET	N-CA-C	-8.14	102.27	114.64
1	A	1276	G	P-O5'-C5'	8.14	133.11	120.90
1	A	1336	C	O5'-C5'-C4'	-8.14	99.49	111.70
1	A	1350	A	O4'-C1'-N9	8.14	120.71	108.50
1	A	262	A	O3'-P-O5'	-8.13	91.80	104.00
1	A	431	A	O3'-P-O5'	-8.13	91.80	104.00
1	A	647	C	O3'-P-O5'	-8.13	91.80	104.00
1	A	1302	C	C5'-C4'-C3'	-8.13	103.80	116.00
20	T	52	GLU	N-CA-C	-8.13	102.25	112.90
1	A	866	C	P-O3'-C3'	8.13	132.39	120.20
1	A	207	C	P-O5'-C5'	8.12	133.09	120.90
1	A	445	G	C5'-C4'-C3'	-8.12	103.81	116.00
1	A	1520	C	C2'-C3'-O3'	-8.12	101.51	113.70
10	J	86	ALA	CA-C-N	8.12	131.50	120.54
10	J	86	ALA	C-N-CA	8.12	131.50	120.54
1	A	579	A	C5'-C4'-C3'	-8.12	103.82	116.00
2	B	101	THR	N-CA-C	-8.11	100.37	113.19
1	A	125	U	P-O3'-C3'	8.11	132.37	120.20
1	A	1350	A	C5'-C4'-C3'	8.11	128.17	116.00
1	A	77	A	O5'-C5'-C4'	8.11	123.66	111.50
4	D	179	GLY	N-CA-C	-8.11	93.97	113.18
12	L	106	VAL	N-CA-CB	8.11	119.82	110.82
1	A	1033	G	C5'-C4'-C3'	-8.10	103.84	116.00
1	A	752	G	O3'-P-O5'	-8.10	91.85	104.00
1	A	944	G	O3'-P-O5'	-8.10	91.85	104.00
1	A	1515	G	O4'-C4'-C3'	-8.10	95.90	104.00
1	A	1125	U	P-O3'-C3'	8.10	132.35	120.20
1	A	1083	U	P-O3'-C3'	8.09	132.34	120.20
20	T	2	ASN	CA-C-N	8.09	136.54	121.97
20	T	2	ASN	C-N-CA	8.09	136.54	121.97
1	A	198	G	O3'-P-O5'	8.09	116.14	104.00
1	A	1234	C	P-O3'-C3'	-8.09	108.06	120.20
1	A	1469	C	O5'-C5'-C4'	8.09	123.64	111.50
1	A	1482	G	C3'-C2'-C1'	-8.09	93.21	101.30
1	A	74	A	O5'-C5'-C4'	8.08	123.62	111.50
22	W	50	MET	N-CA-CB	-8.08	98.22	110.26
1	A	167	A	C3'-C2'-C1'	-8.08	93.22	101.30
1	A	1529	G	C2'-C3'-O3'	8.08	121.62	109.50
1	A	1147	C	O3'-P-O5'	-8.08	91.88	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1268	G	P-O3'-C3'	8.08	132.31	120.20
12	L	45	ASN	CA-C-N	8.08	136.97	121.54
12	L	45	ASN	C-N-CA	8.08	136.97	121.54
1	A	163	C	O5'-C5'-C4'	-8.07	99.39	111.50
1	A	423	G	C5'-C4'-C3'	-8.07	103.89	116.00
1	A	425	G	C5'-C4'-C3'	-8.07	103.89	116.00
1	A	562	U	C5'-C4'-C3'	8.07	128.11	116.00
1	A	1047	G	P-O5'-C5'	-8.07	108.79	120.90
1	A	39	G	P-O3'-C3'	-8.07	108.09	120.20
1	A	73	C	O4'-C1'-C2'	-8.07	99.53	107.60
1	A	1347	G	C2'-C3'-O3'	8.07	121.61	109.50
1	A	681	A	C2'-C3'-O3'	8.06	125.80	113.70
16	P	6	LEU	N-CA-CB	8.06	123.21	110.55
1	A	525	C	P-O5'-C5'	8.06	133.00	120.90
1	A	862	C	C4'-C3'-O3'	-8.06	100.91	113.00
1	A	422	C	C1'-O4'-C4'	-8.06	101.84	109.90
1	A	1278	G	O5'-C5'-C4'	-8.06	99.61	111.70
1	A	752	G	P-O3'-C3'	8.05	132.28	120.20
1	A	144	G	P-O5'-C5'	8.05	132.98	120.90
1	A	418	C	C4'-C3'-O3'	-8.05	100.92	113.00
1	A	454	G	O3'-P-O5'	-8.05	91.92	104.00
1	A	1309	G	O3'-P-O5'	-8.05	91.92	104.00
5	E	64	GLU	CA-C-N	8.04	131.40	120.38
5	E	64	GLU	C-N-CA	8.04	131.40	120.38
1	A	154	U	O4'-C4'-C3'	-8.04	95.96	104.00
1	A	839	C	C1'-O4'-C4'	-8.04	101.86	109.90
1	A	484	G	C4'-C3'-O3'	8.04	121.45	109.40
1	A	451	A	C4'-C3'-C2'	8.03	110.63	102.60
1	A	1129	C	O4'-C1'-N1	8.03	120.55	108.50
1	A	821	G	O4'-C4'-C3'	-8.03	95.97	104.00
1	A	5	U	O4'-C4'-C3'	-8.03	98.07	106.10
1	A	199	A	P-O3'-C3'	-8.03	108.16	120.20
1	A	1258	G	O3'-P-O5'	-8.03	91.96	104.00
1	A	298	A	O3'-P-O5'	-8.02	91.97	104.00
1	A	711	G	C5'-C4'-C3'	8.02	128.04	116.00
1	A	1147	C	C5'-C4'-C3'	-8.02	103.97	116.00
1	A	1447	A	C4'-C3'-O3'	8.02	125.03	113.00
10	J	92	LEU	N-CA-C	-8.02	103.21	113.16
1	A	1377	A	P-O5'-C5'	-8.02	108.87	120.90
1	A	1507	A	C4'-C3'-O3'	-8.02	100.97	113.00
3	C	19	SER	N-CA-C	-8.02	99.19	110.50
1	A	1201	A	P-O5'-C5'	-8.02	108.88	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	594	U	P-O3'-C3'	8.01	132.22	120.20
1	A	24	U	O4'-C1'-N1	8.01	120.52	108.50
5	E	14	LEU	N-CA-C	-8.01	95.46	108.52
1	A	118	U	C5'-C4'-C3'	-8.01	103.99	116.00
1	A	244	U	C5'-C4'-C3'	-8.01	103.19	115.20
1	A	495	A	C4'-C3'-O3'	8.01	121.41	109.40
1	A	888	G	C5'-C4'-C3'	-8.01	103.99	116.00
1	A	1370	G	O4'-C4'-C3'	8.01	112.01	104.00
2	B	135	MET	N-CA-C	-8.01	103.51	113.28
1	A	194	C	O5'-C5'-C4'	-8.00	99.50	111.50
1	A	1225	A	O5'-C5'-C4'	-8.00	99.69	111.70
1	A	1358	U	C2'-C3'-O3'	8.00	125.70	113.70
1	A	1428	A	C5'-C4'-C3'	-8.00	104.00	116.00
19	S	80	ARG	N-CA-CB	8.00	124.11	110.50
1	A	1362	A	C5'-C4'-C3'	8.00	128.00	116.00
1	A	1515	G	P-O5'-C5'	-8.00	108.90	120.90
1	A	122	G	P-O5'-C5'	8.00	132.90	120.90
1	A	368	U	O5'-C5'-C4'	-8.00	99.71	111.70
1	A	1502	A	O4'-C1'-C2'	8.00	113.80	105.80
1	A	817	C	P-O5'-C5'	7.99	132.89	120.90
1	A	366	A	O5'-C5'-C4'	-7.99	99.71	111.70
1	A	1413	A	C5'-C4'-C3'	7.99	127.98	116.00
4	D	25	ARG	N-CA-C	-7.99	95.61	108.55
2	B	164	ASP	CA-CB-CG	-7.98	104.62	112.60
1	A	935	A	O3'-P-O5'	-7.98	92.03	104.00
1	A	940	C	C5'-C4'-C3'	-7.98	104.03	116.00
1	A	180	U	C2'-C3'-O3'	7.98	125.67	113.70
1	A	119	A	P-O5'-C5'	-7.97	108.94	120.90
1	A	489	C	C5'-C4'-C3'	-7.97	104.04	116.00
1	A	369	G	P-O5'-C5'	-7.97	108.94	120.90
1	A	1361	G	O3'-P-O5'	-7.97	92.04	104.00
6	F	52	ASN	CA-CB-CG	-7.97	104.63	112.60
8	H	108	GLY	CA-C-N	7.96	133.57	123.14
8	H	108	GLY	C-N-CA	7.96	133.57	123.14
1	A	1454	G	C4'-C3'-C2'	-7.96	94.64	102.60
9	I	105	ARG	CA-C-N	7.96	131.74	120.28
9	I	105	ARG	C-N-CA	7.96	131.74	120.28
1	A	505	G	C4'-C3'-C2'	-7.96	94.64	102.60
1	A	1074	G	O3'-P-O5'	-7.96	92.06	104.00
8	H	17	GLN	N-CA-CB	7.96	121.80	109.94
1	A	536	C	O5'-C5'-C4'	-7.96	99.57	111.50
1	A	1408	A	O3'-P-O5'	-7.96	92.07	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	418	C	C4'-C3'-C2'	-7.95	94.65	102.60
1	A	1364	U	C1'-O4'-C4'	-7.95	101.75	109.70
8	H	54	THR	N-CA-C	-7.95	103.60	113.38
22	W	48	PHE	CA-CB-CG	-7.95	105.85	113.80
1	A	737	C	O5'-C5'-C4'	-7.95	99.58	111.50
3	C	19	SER	CB-CA-C	-7.95	94.92	109.54
1	A	669	G	C5'-C4'-C3'	-7.95	104.08	116.00
1	A	1262	C	C5'-C4'-C3'	-7.94	104.09	116.00
2	B	41	ASN	CA-CB-CG	-7.94	104.66	112.60
1	A	410	G	O5'-C5'-C4'	-7.94	99.59	111.50
1	A	1153	G	O3'-P-O5'	-7.94	92.09	104.00
1	A	179	A	C5'-C4'-C3'	-7.94	104.09	116.00
1	A	1105	A	O3'-P-O5'	7.94	115.91	104.00
1	A	539	A	C5'-C4'-C3'	-7.93	104.10	116.00
1	A	1267	C	C5'-C4'-C3'	-7.93	104.10	116.00
1	A	1374	A	O3'-P-O5'	-7.93	92.10	104.00
1	A	248	C	C3'-C2'-C1'	-7.93	93.37	101.30
1	A	777	A	O4'-C4'-C3'	-7.92	96.08	104.00
1	A	1031	C	P-O3'-C3'	-7.92	108.31	120.20
1	A	1329	A	C5'-C4'-C3'	-7.92	104.12	116.00
1	A	1410	A	C4'-C3'-O3'	-7.92	101.12	113.00
13	M	51	GLN	N-CA-C	-7.92	103.64	113.38
1	A	80	A	P-O3'-C3'	-7.92	108.32	120.20
1	A	941	G	C2'-C3'-O3'	7.92	125.58	113.70
1	A	943	U	C4'-C3'-C2'	7.92	110.52	102.60
1	A	553	A	C5'-C4'-C3'	-7.92	104.12	116.00
1	A	686	U	C3'-C2'-C1'	-7.92	93.58	101.50
1	A	504	C	O5'-C5'-C4'	-7.91	99.63	111.50
1	A	918	A	O5'-C5'-C4'	-7.91	99.64	111.50
1	A	862	C	C5'-C4'-C3'	-7.91	104.14	116.00
1	A	1451	U	P-O5'-C5'	-7.91	109.04	120.90
10	J	95	GLY	N-CA-C	-7.91	102.11	115.08
1	A	840	C	C1'-O4'-C4'	-7.91	101.99	109.90
1	A	1432	G	O4'-C4'-C3'	-7.91	98.19	106.10
1	A	329	A	P-O5'-C5'	-7.90	109.04	120.90
1	A	1514	G	O4'-C4'-C3'	-7.90	96.10	104.00
1	A	977	A	P-O5'-C5'	-7.90	109.05	120.90
1	A	297	G	P-O3'-C3'	-7.90	108.36	120.20
1	A	811	C	O4'-C1'-N1	7.90	120.35	108.50
11	K	45	THR	CA-C-N	7.90	135.94	122.36
11	K	45	THR	C-N-CA	7.90	135.94	122.36
1	A	93	U	O4'-C4'-C3'	-7.89	96.11	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	339	C	P-O5'-C5'	7.89	132.73	120.90
1	A	367	U	C5'-C4'-C3'	-7.89	103.37	115.20
1	A	1062	U	C2'-C3'-O3'	7.89	125.53	113.70
3	C	164	THR	CA-C-N	7.88	135.19	122.81
3	C	164	THR	C-N-CA	7.88	135.19	122.81
13	M	51	GLN	CB-CA-C	-7.88	95.93	109.65
1	A	368	U	C2'-C3'-O3'	7.88	121.32	109.50
1	A	447	G	C1'-O4'-C4'	-7.88	102.02	109.90
9	I	117	LEU	CA-C-N	7.88	135.41	122.73
9	I	117	LEU	C-N-CA	7.88	135.41	122.73
1	A	1450	U	C4'-C3'-O3'	-7.88	101.19	113.00
13	M	97	ARG	N-CA-CB	7.88	125.20	111.42
1	A	1101	A	C2'-C3'-O3'	7.87	121.31	109.50
1	A	70	U	C4'-C3'-O3'	-7.87	101.19	113.00
1	A	1038	C	P-O5'-C5'	-7.87	109.09	120.90
1	A	1387	G	C5'-C4'-C3'	-7.87	104.19	116.00
1	A	451	A	O4'-C1'-N9	7.87	120.00	108.20
1	A	1039	G	O3'-P-O5'	-7.87	92.19	104.00
1	A	485	U	O3'-P-O5'	-7.87	92.20	104.00
1	A	1272	G	C4'-C3'-C2'	-7.87	94.73	102.60
1	A	787	A	P-O5'-C5'	7.87	132.70	120.90
1	A	1074	G	C5'-C4'-C3'	-7.87	104.20	116.00
1	A	373	A	C5'-C4'-C3'	7.87	127.80	116.00
1	A	1359	C	C5'-C4'-C3'	7.87	127.80	116.00
1	A	1299	A	P-O3'-C3'	-7.86	108.41	120.20
1	A	531	U	O3'-P-O5'	-7.86	92.21	104.00
12	L	80	LEU	N-CA-C	-7.86	96.09	108.90
1	A	414	A	C4'-C3'-C2'	-7.86	94.74	102.60
1	A	117	G	C5'-C4'-C3'	-7.85	104.22	116.00
13	M	105	ALA	CA-C-N	7.85	131.14	120.38
13	M	105	ALA	C-N-CA	7.85	131.14	120.38
15	O	82	GLU	CB-CG-CD	-7.85	99.25	112.60
1	A	84	U	P-O5'-C5'	-7.85	109.12	120.90
1	A	531	U	C5'-C4'-O4'	7.85	121.57	109.80
1	A	700	G	C5'-C4'-C3'	-7.85	104.23	116.00
1	A	115	G	C4'-C3'-C2'	7.85	110.45	102.60
1	A	93	U	C3'-C2'-C1'	-7.84	93.45	101.30
1	A	373	A	O5'-C5'-C4'	-7.84	99.73	111.50
1	A	76	G	C2'-C3'-O3'	7.84	125.47	113.70
1	A	184	G	O3'-P-O5'	-7.84	92.24	104.00
1	A	836	G	C5'-C4'-C3'	-7.84	104.24	116.00
1	A	31	G	O4'-C1'-N9	7.84	119.96	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	804	U	C4'-C3'-C2'	7.84	110.44	102.60
1	A	106	C	C5'-C4'-C3'	-7.84	104.25	116.00
1	A	1516	G	C5'-C4'-C3'	7.84	127.75	116.00
22	W	135	GLU	N-CA-CB	7.84	123.62	111.24
1	A	1406	U	C3'-C2'-C1'	-7.83	93.47	101.30
1	A	1024	G	C3'-C2'-C1'	-7.83	93.47	101.30
1	A	1460	C	C5'-C4'-C3'	-7.83	104.25	116.00
15	O	34	GLN	N-CA-CB	-7.83	98.47	109.91
3	C	150	VAL	N-CA-C	-7.83	96.98	108.89
1	A	262	A	O5'-C5'-C4'	-7.83	99.75	111.50
1	A	715	A	C5'-C4'-C3'	7.83	127.75	116.00
1	A	1478	U	P-O5'-C5'	-7.83	109.15	120.90
2	B	31	PHE	CA-CB-CG	7.83	121.63	113.80
3	C	178	ARG	CA-C-N	7.83	133.52	122.72
3	C	178	ARG	C-N-CA	7.83	133.52	122.72
1	A	502	A	C4'-C3'-C2'	-7.83	94.78	102.60
1	A	851	G	O5'-C5'-C4'	-7.82	99.77	111.50
1	A	1089	G	C4'-C3'-C2'	-7.82	94.78	102.60
7	G	6	ILE	CA-C-N	7.82	129.39	122.43
7	G	6	ILE	C-N-CA	7.82	129.39	122.43
1	A	1263	C	C5'-C4'-C3'	-7.82	104.27	116.00
12	L	99	GLY	CA-C-N	7.82	135.49	121.89
12	L	99	GLY	C-N-CA	7.82	135.49	121.89
1	A	129	A	O4'-C1'-C2'	7.82	113.62	105.80
1	A	192	A	C2'-C3'-O3'	7.82	125.42	113.70
1	A	638	U	C2'-C3'-O3'	7.82	125.43	113.70
1	A	1075	U	C5'-C4'-C3'	-7.82	104.28	116.00
14	N	79	SER	CA-C-N	7.82	136.47	121.54
14	N	79	SER	C-N-CA	7.82	136.47	121.54
1	A	771	G	C5'-C4'-C3'	-7.81	104.28	116.00
5	E	46	GLY	N-CA-C	-7.81	98.95	110.90
1	A	1520	C	O4'-C4'-C3'	-7.81	96.19	104.00
1	A	464	U	O3'-P-O5'	-7.81	92.29	104.00
1	A	1358	U	C4'-C3'-C2'	7.81	110.41	102.60
1	A	58	C	C2'-C3'-O3'	7.81	125.41	113.70
1	A	283	U	C5'-C4'-O4'	7.81	121.51	109.80
1	A	1089	G	O3'-P-O5'	7.80	115.70	104.00
1	A	1381	U	P-O5'-C5'	-7.80	109.20	120.90
13	M	10	ASP	CA-C-N	7.80	136.44	121.54
13	M	10	ASP	C-N-CA	7.80	136.44	121.54
13	M	13	HIS	N-CA-C	-7.80	97.92	109.15
1	A	651	C	C5'-C4'-C3'	-7.80	104.30	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1342	C	O3'-P-O5'	-7.80	92.30	104.00
1	A	105	G	P-O3'-C3'	7.80	131.90	120.20
1	A	386	C	C4'-C3'-O3'	-7.79	101.31	113.00
2	B	204	ASP	CA-CB-CG	-7.79	104.81	112.60
1	A	1115	U	C3'-C2'-C1'	-7.79	93.51	101.30
1	A	774	G	C4'-C3'-C2'	7.79	110.39	102.60
8	H	2	MET	CA-CB-CG	7.79	129.68	114.10
1	A	126	G	C5'-C4'-C3'	7.79	127.68	116.00
1	A	555	U	O3'-P-O5'	7.79	115.68	104.00
22	W	81	TRP	N-CA-C	-7.79	97.45	109.52
1	A	187	G	O5'-C5'-C4'	-7.79	99.82	111.50
1	A	723	U	P-O3'-C3'	-7.79	108.52	120.20
1	A	1231	G	C2'-C3'-O3'	7.79	125.38	113.70
10	J	85	ASP	CA-CB-CG	-7.79	104.81	112.60
1	A	523	A	P-O5'-C5'	7.78	132.58	120.90
1	A	738	C	O3'-P-O5'	-7.78	92.33	104.00
6	F	2	ARG	N-CA-C	-7.78	94.23	110.80
1	A	982	U	C2'-C3'-O3'	7.78	121.16	109.50
1	A	345	C	O4'-C1'-C2'	-7.77	99.83	107.60
10	J	64	GLN	N-CA-C	7.77	121.49	108.20
1	A	139	A	C3'-C2'-C1'	-7.77	93.53	101.30
1	A	463	U	P-O3'-C3'	-7.77	108.54	120.20
1	A	1314	C	C3'-C2'-C1'	-7.77	93.53	101.30
1	A	284	C	C5'-C4'-C3'	-7.77	104.35	116.00
14	N	15	LEU	CA-C-N	7.77	133.13	120.63
14	N	15	LEU	C-N-CA	7.77	133.13	120.63
1	A	904	U	C5'-C4'-C3'	-7.77	104.35	116.00
1	A	1489	G	O4'-C1'-N9	7.76	120.15	108.50
1	A	1522	U	C3'-C2'-C1'	-7.76	93.53	101.30
2	B	190	SER	N-CA-C	-7.76	96.80	108.99
1	A	52	C	O4'-C1'-N1	7.76	120.14	108.50
1	A	1323	G	C5'-C4'-C3'	7.75	127.63	116.00
1	A	361	G	P-O5'-C5'	7.75	132.53	120.90
1	A	510	A	C4'-C3'-C2'	7.75	110.35	102.60
1	A	616	G	N9-C1'-C2'	-7.75	100.37	112.00
1	A	711	G	C4'-C3'-C2'	-7.75	94.85	102.60
1	A	1342	C	O5'-C5'-C4'	-7.75	99.88	111.50
1	A	1005	A	C4'-C3'-C2'	-7.75	94.85	102.60
1	A	1091	U	P-O5'-C5'	-7.75	109.28	120.90
1	A	1393	U	C5'-C4'-O4'	-7.75	98.18	109.80
22	W	66	ILE	CB-CA-C	7.75	120.66	110.12
1	A	294	U	C3'-C2'-C1'	-7.74	93.56	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	598	U	P-O3'-C3'	-7.74	108.59	120.20
13	M	21	ILE	CA-C-N	7.74	136.32	121.54
13	M	21	ILE	C-N-CA	7.74	136.32	121.54
1	A	172	A	C2'-C3'-O3'	7.73	125.30	113.70
3	C	114	LEU	N-CA-CB	7.73	121.22	110.01
1	A	908	A	C5'-C4'-O4'	7.73	121.40	109.80
1	A	1311	A	P-O5'-C5'	-7.73	109.30	120.90
1	A	977	A	C4'-C3'-C2'	-7.73	94.87	102.60
1	A	940	C	P-O3'-C3'	-7.73	108.61	120.20
1	A	1239	A	C2'-C3'-O3'	7.73	121.09	109.50
1	A	257	G	C4'-C3'-C2'	-7.73	94.87	102.60
1	A	1101	A	P-O3'-C3'	7.72	131.79	120.20
11	K	83	VAL	N-CA-C	-7.72	97.33	108.53
1	A	1154	G	C3'-C2'-C1'	-7.72	93.58	101.30
15	O	48	ASP	CB-CA-C	-7.72	97.88	110.77
1	A	472	U	C3'-C2'-C1'	-7.72	93.58	101.30
1	A	575	G	O5'-C5'-C4'	7.72	123.27	111.70
17	Q	47	ASP	CA-CB-CG	-7.72	104.88	112.60
1	A	713	G	C1'-O4'-C4'	-7.71	102.19	109.90
1	A	212	G	O4'-C4'-C3'	-7.71	96.29	104.00
1	A	197	A	O4'-C1'-N9	7.70	119.76	108.20
1	A	386	C	C5'-C4'-C3'	-7.70	104.44	116.00
1	A	679	C	C3'-C2'-C1'	-7.70	93.60	101.30
1	A	721	G	P-O3'-C3'	7.70	131.76	120.20
1	A	1417	G	C3'-C2'-C1'	-7.70	93.60	101.30
1	A	131	A	O5'-C5'-C4'	-7.70	99.95	111.50
2	B	170	ILE	N-CA-CB	7.70	123.94	111.23
1	A	334	C	C3'-C2'-C1'	-7.70	93.60	101.30
1	A	652	U	O4'-C1'-N1	7.70	120.05	108.50
1	A	55	A	P-O5'-C5'	-7.70	109.36	120.90
1	A	202	G	O3'-P-O5'	-7.70	92.46	104.00
1	A	1334	G	P-O5'-C5'	7.70	132.44	120.90
1	A	1192	C	O5'-C5'-C4'	-7.69	99.96	111.50
1	A	130	A	C3'-C2'-C1'	-7.69	93.81	101.50
1	A	249	U	P-O3'-C3'	-7.69	108.67	120.20
2	B	146	SER	N-CA-C	-7.69	104.04	113.50
10	J	48	ARG	NE-CZ-NH1	7.69	129.19	121.50
1	A	418	C	O4'-C1'-C2'	-7.69	99.91	107.60
1	A	761	G	O5'-C5'-C4'	-7.69	99.97	111.50
1	A	253	A	C4'-C3'-C2'	-7.68	94.92	102.60
1	A	417	G	C2'-C3'-O3'	7.68	125.23	113.70
1	A	1455	G	P-O3'-C3'	7.68	131.73	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1491	G	O4'-C4'-C3'	-7.68	96.31	104.00
1	A	24	U	C4'-C3'-C2'	7.68	110.28	102.60
1	A	1239	A	C5'-C4'-O4'	7.68	120.62	109.10
5	E	148	SER	N-CA-C	-7.68	98.48	109.62
7	G	81	GLY	N-CA-C	-7.68	104.44	115.27
1	A	1111	A	O4'-C1'-N9	7.68	120.02	108.50
1	A	1411	C	C5'-C4'-C3'	-7.68	104.49	116.00
1	A	243	A	C4-N9-C1'	-7.67	103.30	126.30
1	A	843	U	O4'-C4'-C3'	-7.67	96.33	104.00
1	A	397	A	O4'-C4'-C3'	-7.67	96.33	104.00
5	E	43	GLY	N-CA-C	-7.67	105.36	114.48
1	A	851	G	O3'-P-O5'	-7.66	92.50	104.00
16	P	47	GLU	N-CA-C	-7.66	101.65	111.92
1	A	129	A	P-O5'-C5'	7.66	132.39	120.90
1	A	254	G	O3'-P-O5'	-7.66	92.51	104.00
1	A	464	U	O5'-C5'-C4'	-7.66	100.01	111.50
1	A	223	A	C5'-C4'-C3'	-7.66	104.52	116.00
1	A	1418	A	O5'-C5'-C4'	-7.66	100.02	111.50
4	D	49	ASP	N-CA-CB	7.66	121.54	110.06
8	H	9	MET	CA-C-N	7.66	130.87	120.54
8	H	9	MET	C-N-CA	7.66	130.87	120.54
18	R	58	ILE	N-CA-C	-7.66	103.33	110.53
1	A	1095	U	C2'-C3'-O3'	-7.65	102.22	113.70
1	A	73	C	P-O5'-C5'	7.65	132.38	120.90
1	A	877	G	P-O5'-C5'	-7.65	109.42	120.90
5	E	40	ASP	N-CA-C	-7.65	101.47	111.71
1	A	103	U	P-O3'-C3'	-7.64	108.74	120.20
1	A	316	C	O4'-C1'-N1	7.64	119.96	108.50
1	A	787	A	P-O3'-C3'	-7.64	108.74	120.20
1	A	1085	U	C4'-C3'-O3'	-7.64	101.54	113.00
1	A	1111	A	C1'-O4'-C4'	-7.64	102.26	109.90
1	A	1289	A	P-O5'-C5'	-7.64	109.44	120.90
18	R	64	LEU	N-CA-C	-7.64	104.19	113.97
1	A	124	C	C4'-C3'-O3'	-7.64	101.54	113.00
1	A	1515	G	P-O3'-C3'	-7.64	108.74	120.20
1	A	658	C	P-O3'-C3'	-7.64	108.74	120.20
1	A	672	U	C5'-C4'-C3'	-7.64	104.54	116.00
1	A	1432	G	C5'-C4'-C3'	7.64	126.66	115.20
1	A	93	U	P-O3'-C3'	-7.64	108.75	120.20
1	A	205	A	C4'-C3'-O3'	-7.64	101.55	113.00
9	I	121	ARG	N-CA-C	-7.64	94.53	110.80
1	A	409	U	C5'-C4'-C3'	-7.63	104.55	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	418	C	P-O5'-C5'	7.63	132.35	120.90
1	A	1383	C	O5'-C5'-C4'	-7.63	100.05	111.50
16	P	70	ARG	N-CA-C	-7.63	103.56	113.17
10	J	27	GLU	N-CA-C	7.63	119.68	111.36
3	C	194	VAL	CA-CB-CG1	-7.63	97.43	110.40
1	A	1454	G	O3'-P-O5'	-7.63	92.56	104.00
1	A	1363	A	C3'-C2'-C1'	-7.62	93.88	101.50
1	A	1427	C	C5'-C4'-C3'	7.62	127.43	116.00
1	A	1504	G	O3'-P-O5'	-7.62	92.57	104.00
6	F	36	ILE	N-CA-C	-7.62	97.36	108.71
11	K	107	THR	N-CA-C	-7.62	104.11	113.41
15	O	48	ASP	N-CA-C	-7.62	96.86	108.67
1	A	269	C	C3'-C2'-C1'	-7.62	93.68	101.30
1	A	186	C	C1'-O4'-C4'	-7.61	102.29	109.90
1	A	27	G	O5'-C5'-C4'	7.61	122.92	111.50
1	A	593	U	C2'-C3'-O3'	7.61	125.12	113.70
1	A	1197	A	C4'-C3'-O3'	-7.61	101.58	113.00
2	B	31	PHE	N-CA-C	-7.61	97.75	109.24
1	A	420	U	C4'-C3'-O3'	-7.61	101.59	113.00
1	A	28	A	C5'-C4'-C3'	-7.61	104.59	116.00
1	A	1272	G	C5'-C4'-C3'	-7.61	104.59	116.00
1	A	1448	C	O4'-C1'-N1	7.60	119.91	108.50
11	K	27	ASN	N-CA-C	-7.60	104.41	112.93
1	A	345	C	P-O3'-C3'	7.60	131.60	120.20
1	A	781	A	O3'-P-O5'	-7.60	92.60	104.00
13	M	53	ASP	CA-CB-CG	-7.60	105.00	112.60
22	W	96	ILE	N-CA-C	-7.60	96.95	107.75
2	B	59	ILE	CA-C-N	7.60	136.05	121.54
2	B	59	ILE	C-N-CA	7.60	136.05	121.54
3	C	183	TYR	N-CA-C	-7.60	97.45	109.23
1	A	428	G	O5'-C5'-C4'	-7.59	100.31	111.70
1	A	960	U	C2'-C3'-O3'	7.59	120.89	109.50
19	S	12	LEU	N-CA-CB	7.59	121.08	110.07
1	A	83	C	O4'-C1'-N1	7.59	119.89	108.50
1	A	138	G	C3'-C2'-C1'	-7.59	93.71	101.30
1	A	240	G	O4'-C4'-C3'	-7.59	96.41	104.00
1	A	884	U	O5'-C5'-C4'	-7.59	100.31	111.70
9	I	117	LEU	N-CA-C	-7.59	94.50	108.24
22	W	134	PRO	CA-C-N	7.59	134.70	122.10
22	W	134	PRO	C-N-CA	7.59	134.70	122.10
1	A	354	G	C4'-C3'-O3'	-7.59	101.62	113.00
1	A	49	U	P-O3'-C3'	-7.59	108.82	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	989	U	C5'-C4'-C3'	-7.59	104.62	116.00
1	A	1253	G	C5'-C4'-O4'	7.59	121.18	109.80
15	O	50	HIS	CA-CB-CG	-7.59	106.21	113.80
1	A	1074	G	C4'-C3'-O3'	-7.58	101.62	113.00
1	A	69	G	O3'-P-O5'	-7.58	92.63	104.00
22	W	66	ILE	N-CA-C	-7.58	96.48	107.78
1	A	465	A	O3'-P-O5'	-7.58	92.63	104.00
1	A	858	G	C5'-C4'-C3'	-7.58	104.63	116.00
1	A	1433	A	C5'-C4'-C3'	-7.58	104.63	116.00
1	A	753	A	C5'-C4'-C3'	-7.58	103.83	115.20
1	A	97	G	C5'-C4'-C3'	-7.58	104.64	116.00
1	A	1035	A	P-O3'-C3'	-7.58	108.84	120.20
1	A	1440	U	C1'-O4'-C4'	-7.58	102.33	109.90
1	A	1140	C	C5'-C4'-C3'	7.57	127.36	116.00
21	U	38	GLU	N-CA-C	-7.57	102.00	112.30
1	A	964	A	O3'-P-O5'	-7.57	92.64	104.00
1	A	237	G	P-O5'-C5'	-7.57	109.55	120.90
1	A	184	G	C5'-C4'-C3'	-7.56	104.65	116.00
1	A	94	G	O3'-P-O5'	7.56	115.34	104.00
1	A	1094	G	O5'-C5'-C4'	-7.56	100.16	111.50
1	A	1096	C	O4'-C4'-C3'	-7.56	96.44	104.00
2	B	134	LEU	N-CA-CB	7.56	123.27	110.49
1	A	890	G	C3'-C2'-C1'	-7.56	93.94	101.50
22	W	77	ASP	CA-CB-CG	-7.56	105.04	112.60
1	A	1173	U	C3'-C2'-C1'	-7.56	93.74	101.30
2	B	201	GLY	N-CA-C	-7.56	102.82	112.65
1	A	768	A	O4'-C1'-C2'	-7.56	100.04	107.60
22	W	162	ILE	CA-C-N	7.56	130.41	120.28
22	W	162	ILE	C-N-CA	7.56	130.41	120.28
1	A	957	U	O5'-C5'-C4'	-7.55	100.17	111.50
2	B	78	ALA	N-CA-C	-7.55	103.86	113.23
22	W	291	HIS	CA-CB-CG	7.55	121.35	113.80
1	A	678	U	O5'-C5'-C4'	-7.55	100.18	111.50
1	A	1008	U	C1'-O4'-C4'	-7.55	102.35	109.90
1	A	1142	G	P-O5'-C5'	-7.55	109.58	120.90
1	A	816	A	O5'-C5'-C4'	-7.55	100.18	111.50
1	A	1290	G	C5'-C4'-C3'	-7.54	104.68	116.00
4	D	67	LEU	N-CA-CB	7.54	121.13	110.04
12	L	82	ARG	N-CA-C	-7.54	101.22	110.88
2	B	105	THR	N-CA-C	-7.54	102.61	112.41
1	A	190	A	C4'-C3'-O3'	-7.54	101.69	113.00
1	A	219	U	C5'-C4'-C3'	-7.54	104.69	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	409	U	C3'-C2'-C1'	-7.54	93.76	101.30
1	A	1140	C	O4'-C1'-C2'	-7.54	100.06	107.60
2	B	82	ALA	N-CA-C	-7.54	103.65	112.92
10	J	71	LEU	N-CA-CB	7.54	123.41	111.20
21	U	47	ALA	N-CA-C	7.53	122.06	113.02
1	A	607	A	O3'-P-O5'	-7.53	92.70	104.00
1	A	1402	C	P-O3'-C3'	-7.53	108.90	120.20
1	A	172	A	P-O5'-C5'	7.53	132.19	120.90
12	L	88	ASP	CA-CB-CG	7.53	120.13	112.60
1	A	429	U	O5'-C5'-C4'	-7.53	100.41	111.70
1	A	647	C	C5'-C4'-C3'	-7.52	104.72	116.00
14	N	71	GLY	CA-C-N	7.52	132.11	120.75
14	N	71	GLY	C-N-CA	7.52	132.11	120.75
1	A	203	G	C5'-C4'-O4'	7.52	121.08	109.80
1	A	1111	A	C5'-C4'-O4'	7.52	121.08	109.80
1	A	1345	U	C4'-C3'-C2'	7.52	110.12	102.60
1	A	20	U	C3'-C2'-C1'	-7.52	93.78	101.30
1	A	256	U	O3'-P-O5'	-7.51	92.73	104.00
1	A	155	A	P-O5'-C5'	7.51	132.17	120.90
1	A	204	G	C3'-C2'-C1'	-7.51	93.79	101.30
1	A	320	A	C2'-C3'-O3'	7.51	120.77	109.50
1	A	329	A	C2'-C3'-O3'	7.51	120.77	109.50
20	T	46	ALA	N-CA-C	-7.51	102.24	111.40
1	A	62	U	C5'-C4'-C3'	-7.51	104.74	116.00
1	A	1187	G	O3'-P-O5'	7.51	115.26	104.00
3	C	94	ALA	N-CA-C	-7.51	104.36	113.97
1	A	1199	U	C2'-C3'-O3'	7.50	124.95	113.70
1	A	1234	C	C5'-C4'-C3'	-7.50	104.75	116.00
1	A	1127	G	P-O3'-C3'	-7.50	108.95	120.20
1	A	143	A	C3'-C2'-C1'	-7.50	93.80	101.30
6	F	37	HIS	N-CA-C	-7.50	102.20	112.03
22	W	283	ILE	CA-C-N	7.50	130.33	120.28
22	W	283	ILE	C-N-CA	7.50	130.33	120.28
1	A	78	A	C8-N9-C1'	-7.50	105.20	127.70
1	A	1242	G	P-O3'-C3'	-7.50	108.96	120.20
2	B	22	TRP	CB-CA-C	-7.50	100.59	111.23
1	A	1303	C	C2'-C3'-O3'	-7.49	102.46	113.70
1	A	1304	G	C1'-O4'-C4'	-7.49	102.41	109.90
1	A	495	A	C4'-C3'-C2'	7.49	110.09	102.60
1	A	658	C	O4'-C1'-N1	7.49	119.74	108.50
1	A	43	C	C5'-C4'-C3'	-7.49	104.77	116.00
1	A	96	U	O4'-C1'-C2'	7.49	113.29	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1388	C	O4'-C1'-N1	7.49	119.73	108.50
3	C	1	GLY	N-CA-C	-7.49	91.58	113.30
15	O	64	LYS	N-CA-CB	7.49	121.13	110.12
1	A	812	G	O3'-P-O5'	-7.49	92.77	104.00
1	A	1090	U	O4'-C1'-N1	7.49	119.73	108.50
1	A	1201	A	P-O3'-C3'	7.49	131.43	120.20
1	A	1507	A	C5'-C4'-C3'	-7.49	104.77	116.00
8	H	44	PHE	CA-CB-CG	-7.49	106.31	113.80
1	A	1419	G	O4'-C1'-C2'	-7.48	100.12	107.60
2	B	138	ARG	N-CA-C	7.48	120.50	111.82
1	A	516	U	C5'-C4'-C3'	-7.48	104.78	116.00
8	H	42	GLU	N-CA-C	-7.48	102.23	112.03
1	A	32	A	C5'-C4'-C3'	-7.48	104.78	116.00
1	A	680	C	C5'-C4'-C3'	-7.48	104.78	116.00
1	A	685	G	P-O5'-C5'	7.48	132.12	120.90
22	W	80	VAL	N-CA-C	-7.48	96.96	107.80
1	A	1468	A	C5'-C4'-O4'	7.47	121.01	109.80
2	B	41	ASN	N-CA-C	-7.47	97.64	109.23
1	A	1043	G	O5'-C5'-C4'	-7.47	100.29	111.50
1	A	1230	C	C4'-C3'-C2'	-7.47	95.13	102.60
1	A	64	G	O3'-P-O5'	-7.47	92.79	104.00
4	D	98	ASP	N-CA-CB	7.47	121.72	110.22
1	A	26	A	O3'-P-O5'	7.47	115.20	104.00
1	A	261	U	P-O3'-C3'	-7.47	109.00	120.20
4	D	168	THR	N-CA-C	-7.46	103.63	112.89
1	A	416	G	C5'-C4'-O4'	7.46	120.99	109.80
1	A	1098	C	O5'-C5'-C4'	-7.46	100.31	111.50
1	A	787	A	C4'-C3'-O3'	-7.46	101.81	113.00
17	Q	28	VAL	N-CA-CB	7.46	123.66	111.58
1	A	1270	G	O5'-C5'-C4'	-7.46	100.32	111.50
5	E	21	SER	CB-CA-C	-7.46	94.59	109.35
1	A	1246	A	C5'-C4'-C3'	-7.45	104.82	116.00
1	A	158	G	C3'-C2'-C1'	-7.45	93.85	101.30
1	A	852	G	O5'-C5'-C4'	-7.45	100.32	111.50
1	A	554	A	O4'-C1'-N9	7.45	119.67	108.50
1	A	651	C	O3'-P-O5'	-7.45	92.83	104.00
1	A	1522	U	P-O3'-C3'	-7.45	109.03	120.20
1	A	221	C	C3'-C2'-C1'	-7.45	93.85	101.30
1	A	459	A	C5'-C4'-C3'	-7.45	104.83	116.00
1	A	641	U	P-O3'-C3'	7.45	131.37	120.20
1	A	816	A	O4'-C1'-C2'	-7.45	100.15	107.60
1	A	1266	G	C5'-C4'-C3'	-7.45	104.83	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	506	G	P-O5'-C5'	-7.45	109.73	120.90
1	A	916	U	C3'-C2'-C1'	-7.45	93.85	101.30
1	A	1490	U	O4'-C1'-N1	7.45	119.67	108.50
1	A	45	G	N9-C1'-C2'	-7.44	100.83	112.00
1	A	256	U	C3'-C2'-C1'	-7.44	93.86	101.30
1	A	772	U	O3'-P-O5'	-7.44	92.83	104.00
1	A	197	A	C4'-C3'-C2'	7.44	110.04	102.60
2	B	97	GLY	N-CA-C	-7.44	102.12	114.48
7	G	11	ILE	N-CA-C	-7.44	98.39	108.96
10	J	67	ILE	CB-CA-C	-7.44	101.88	110.73
1	A	451	A	C5'-C4'-O4'	7.44	120.26	109.10
1	A	1090	U	C3'-C2'-O2'	7.44	121.86	110.70
7	G	4	ARG	CA-C-N	7.44	135.36	121.97
7	G	4	ARG	C-N-CA	7.44	135.36	121.97
1	A	940	C	P-O5'-C5'	7.44	132.05	120.90
1	A	959	A	O3'-P-O5'	7.43	115.15	104.00
1	A	314	C	C4'-C3'-C2'	-7.43	95.17	102.60
1	A	212	G	N9-C1'-C2'	7.43	123.14	112.00
3	C	23	ALA	N-CA-C	-7.43	98.35	109.86
1	A	52	C	P-O3'-C3'	-7.42	109.06	120.20
1	A	434	U	C1'-O4'-C4'	-7.42	102.48	109.90
1	A	435	A	C2'-C3'-O3'	7.42	124.84	113.70
2	B	69	VAL	N-CA-CB	7.42	119.27	110.95
1	A	694	A	P-O5'-C5'	7.42	132.03	120.90
1	A	1354	U	O5'-C5'-C4'	-7.42	100.37	111.50
1	A	726	C	P-O5'-C5'	-7.42	109.77	120.90
1	A	1405	G	C2'-C3'-O3'	7.42	124.83	113.70
11	K	36	ARG	CA-C-N	7.42	130.09	120.44
11	K	36	ARG	C-N-CA	7.42	130.09	120.44
1	A	1369	C	C5'-C4'-C3'	-7.42	104.88	116.00
1	A	424	G	P-O5'-C5'	7.42	132.02	120.90
1	A	713	G	C4'-C3'-O3'	-7.41	101.88	113.00
1	A	794	A	P-O3'-C3'	-7.41	109.08	120.20
1	A	582	C	C4'-C3'-C2'	-7.41	95.19	102.60
1	A	3	A	P-O5'-C5'	-7.41	109.78	120.90
1	A	108	G	C4'-C3'-O3'	-7.41	101.88	113.00
1	A	164	G	C4'-C3'-O3'	-7.41	101.88	113.00
1	A	449	G	P-O3'-C3'	-7.41	109.08	120.20
1	A	610	U	P-O5'-C5'	-7.41	109.78	120.90
1	A	314	C	C1'-C2'-O2'	7.41	119.51	108.40
1	A	1295	U	P-O5'-C5'	7.41	132.01	120.90
1	A	1415	G	P-O5'-C5'	7.41	132.01	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	252	U	C4'-C3'-O3'	-7.41	101.89	113.00
1	A	837	U	O3'-P-O5'	-7.41	92.89	104.00
1	A	1100	C	C5'-C4'-C3'	-7.40	104.89	116.00
1	A	61	G	C3'-C2'-C1'	-7.40	93.90	101.30
1	A	601	G	O3'-P-O5'	-7.40	92.90	104.00
22	W	43	ILE	N-CA-C	-7.40	97.43	108.46
1	A	192	A	C4'-C3'-O3'	-7.40	101.90	113.00
1	A	320	A	O3'-P-O5'	7.40	115.10	104.00
1	A	1518	A	O5'-C5'-C4'	-7.40	100.40	111.50
2	B	155	GLY	N-CA-C	-7.40	95.64	113.18
1	A	613	C	O5'-C5'-C4'	-7.39	100.41	111.50
1	A	1022	A	C3'-C2'-C1'	-7.39	93.91	101.30
1	A	1471	U	P-O5'-C5'	-7.39	109.81	120.90
1	A	1532	U	O3'-P-O5'	-7.39	92.91	104.00
8	H	37	ASN	CB-CA-C	-7.39	99.27	110.88
1	A	498	A	N9-C1'-C2'	7.39	123.09	112.00
1	A	1172	C	P-O5'-C5'	-7.39	109.81	120.90
19	S	76	THR	CA-CB-OG1	7.39	120.69	109.60
1	A	146	G	O5'-C5'-C4'	-7.39	100.42	111.50
1	A	1185	G	O3'-P-O5'	-7.39	92.92	104.00
1	A	1238	A	O3'-P-O5'	-7.39	92.92	104.00
1	A	393	A	P-O3'-C3'	-7.39	109.12	120.20
1	A	123	U	C5'-C4'-C3'	-7.39	104.92	116.00
1	A	786	G	P-O5'-C5'	7.39	131.98	120.90
1	A	805	C	O5'-C5'-C4'	-7.39	100.42	111.50
4	D	40	HIS	CB-CG-CD2	-7.39	121.60	131.20
20	T	22	SER	CA-C-N	7.38	130.04	120.44
20	T	22	SER	C-N-CA	7.38	130.04	120.44
1	A	1313	U	C3'-C2'-O2'	7.38	121.77	110.70
2	B	26	MET	N-CA-CB	7.38	120.49	110.38
1	A	1290	G	P-O3'-C3'	-7.38	109.13	120.20
5	E	33	THR	N-CA-C	-7.38	96.14	108.75
1	A	1273	C	C5'-C4'-C3'	-7.37	104.94	116.00
1	A	351	G	C4'-C3'-O3'	7.37	120.46	109.40
8	H	105	THR	CA-C-N	7.37	135.62	121.54
8	H	105	THR	C-N-CA	7.37	135.62	121.54
1	A	650	G	C2'-C3'-O3'	7.37	124.75	113.70
1	A	644	U	C4'-C3'-C2'	-7.37	95.23	102.60
1	A	1254	A	O4'-C4'-C3'	-7.37	96.63	104.00
7	G	97	ALA	N-CA-C	7.37	118.95	111.07
1	A	1037	C	O4'-C1'-N1	7.37	119.55	108.50
2	B	22	TRP	CB-CG-CD1	7.37	137.95	126.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	K	50	GLY	CA-C-N	7.37	135.61	121.54
11	K	50	GLY	C-N-CA	7.37	135.61	121.54
1	A	634	C	C5'-C4'-C3'	-7.36	104.96	116.00
8	H	58	LEU	N-CA-C	-7.36	95.12	110.80
1	A	410	G	P-O3'-C3'	7.36	131.24	120.20
1	A	170	U	O3'-P-O5'	-7.36	92.96	104.00
1	A	368	U	O4'-C1'-C2'	7.36	113.16	105.80
1	A	875	U	P-O3'-C3'	-7.36	109.16	120.20
1	A	1532	U	C4'-C3'-C2'	7.36	109.96	102.60
1	A	396	C	C1'-O4'-C4'	-7.36	102.54	109.90
1	A	182	A	O4'-C4'-C3'	-7.36	98.74	106.10
1	A	513	C	C4'-C3'-C2'	-7.36	95.24	102.60
3	C	112	ALA	N-CA-C	-7.36	103.20	111.07
1	A	310	G	O4'-C4'-C3'	-7.35	96.65	104.00
3	C	111	ASP	CA-C-N	7.35	130.00	120.44
3	C	111	ASP	C-N-CA	7.35	130.00	120.44
1	A	1313	U	O5'-C5'-C4'	-7.35	100.47	111.50
1	A	479	U	C5'-C4'-C3'	-7.35	104.97	116.00
1	A	986	U	O5'-C5'-C4'	-7.35	100.47	111.50
1	A	1116	U	C4'-C3'-C2'	7.35	109.95	102.60
22	W	226	ALA	CB-CA-C	-7.35	98.59	110.79
1	A	227	G	P-O3'-C3'	-7.35	109.18	120.20
1	A	143	A	P-O3'-C3'	-7.34	109.18	120.20
1	A	1262	C	C4'-C3'-O3'	-7.34	101.98	113.00
1	A	1350	A	P-O5'-C5'	7.34	131.91	120.90
1	A	1158	C	O4'-C4'-C3'	7.34	111.34	104.00
11	K	125	LYS	CA-C-N	7.34	133.28	120.87
11	K	125	LYS	C-N-CA	7.34	133.28	120.87
1	A	1355	G	C5'-C4'-C3'	-7.34	104.99	116.00
13	M	43	LYS	N-CA-C	7.34	126.43	110.80
10	J	14	ASP	CA-CB-CG	-7.33	105.27	112.60
1	A	840	C	C3'-C2'-C1'	-7.33	93.97	101.30
1	A	1158	C	C5'-C4'-C3'	-7.33	105.00	116.00
16	P	42	ILE	CA-C-N	7.33	135.54	121.54
16	P	42	ILE	C-N-CA	7.33	135.54	121.54
1	A	1391	U	O4'-C1'-N1	7.33	119.49	108.50
1	A	1483	A	P-O5'-C5'	-7.33	109.91	120.90
20	T	8	LYS	N-CA-CB	7.33	121.00	110.16
1	A	723	U	O4'-C4'-C3'	-7.33	96.67	104.00
1	A	1402	C	O3'-P-O5'	-7.33	93.01	104.00
3	C	24	ASN	N-CA-C	-7.32	98.18	109.24
15	O	69	LEU	CA-C-O	-7.32	112.72	120.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1531	A	O3'-P-O5'	-7.32	93.02	104.00
1	A	161	A	C5'-C4'-C3'	7.32	126.98	116.00
1	A	401	C	P-O3'-C3'	-7.32	109.22	120.20
1	A	497	G	P-O5'-C5'	-7.31	109.93	120.90
1	A	1242	G	O4'-C4'-C3'	-7.31	96.69	104.00
1	A	1154	G	C1'-O4'-C4'	-7.31	102.59	109.90
2	B	135	MET	N-CA-CB	7.31	121.94	110.46
1	A	167	A	C2'-C3'-O3'	7.31	124.66	113.70
1	A	471	U	C1'-O4'-C4'	-7.31	102.59	109.90
1	A	989	U	P-O5'-C5'	-7.30	109.94	120.90
15	O	49	HIS	N-CA-C	-7.30	103.25	111.07
1	A	812	G	P-O5'-C5'	-7.30	109.95	120.90
1	A	923	A	C4'-C3'-C2'	-7.30	95.30	102.60
1	A	1323	G	C3'-C2'-C1'	-7.30	94.00	101.30
1	A	832	G	C4'-C3'-C2'	-7.30	95.30	102.60
10	J	49	PHE	N-CA-C	7.30	121.23	108.75
1	A	93	U	O4'-C1'-N1	7.30	119.45	108.50
22	W	330	HIS	N-CA-C	7.30	119.31	111.36
1	A	88	U	C1'-O4'-C4'	7.30	117.00	109.70
1	A	186	C	C3'-C2'-C1'	-7.30	94.00	101.30
1	A	356	A	O5'-C5'-C4'	-7.29	100.56	111.50
1	A	850	U	C5'-C4'-C3'	-7.29	105.06	116.00
1	A	1190	G	O4'-C4'-C3'	-7.29	98.81	106.10
1	A	908	A	C5'-C4'-C3'	-7.29	105.06	116.00
1	A	956	U	C5'-C4'-C3'	-7.29	105.06	116.00
1	A	1490	U	O5'-C5'-C4'	7.29	122.44	111.50
1	A	67	C	C2'-C3'-O3'	7.29	124.64	113.70
1	A	93	U	N1-C1'-C2'	-7.29	101.06	112.00
1	A	240	G	N9-C1'-C2'	-7.29	101.06	112.00
1	A	600	A	C3'-C2'-C1'	-7.29	94.01	101.30
1	A	265	G	C4'-C3'-O3'	-7.29	102.07	113.00
1	A	306	A	C4'-C3'-O3'	-7.29	102.07	113.00
1	A	484	G	C1'-O4'-C4'	-7.29	102.42	109.70
5	E	47	PHE	CA-CB-CG	-7.29	106.52	113.80
1	A	434	U	C5'-C4'-C3'	-7.28	105.08	116.00
1	A	36	C	C5'-C4'-C3'	7.28	126.92	116.00
1	A	816	A	O3'-P-O5'	7.28	114.92	104.00
1	A	1116	U	O3'-P-O5'	-7.28	93.08	104.00
1	A	1200	C	C5'-C4'-O4'	-7.28	98.88	109.80
1	A	566	G	O5'-C5'-C4'	-7.28	100.78	111.70
2	B	29	PHE	CA-C-N	7.28	135.07	121.97
2	B	29	PHE	C-N-CA	7.28	135.07	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1435	G	C1'-O4'-C4'	-7.28	102.62	109.90
1	A	1447	A	C5'-C4'-C3'	-7.28	105.08	116.00
1	A	746	A	O4'-C1'-N9	7.28	119.41	108.50
1	A	865	A	C4'-C3'-C2'	-7.28	95.33	102.60
1	A	1364	U	C3'-C2'-C1'	-7.28	94.22	101.50
1	A	614	C	C5'-C4'-C3'	7.27	126.91	116.00
1	A	152	A	C4'-C3'-C2'	7.27	109.87	102.60
1	A	483	C	O5'-C5'-C4'	-7.27	100.59	111.50
1	A	154	U	C5'-C4'-C3'	7.27	126.91	116.00
1	A	165	G	C5'-C4'-C3'	-7.27	105.09	116.00
12	L	30	ARG	N-CA-CB	7.27	122.54	110.47
1	A	416	G	O3'-P-O5'	-7.27	93.10	104.00
1	A	1237	C	O5'-C5'-C4'	-7.27	100.60	111.50
1	A	1250	A	P-O3'-C3'	-7.27	109.30	120.20
1	A	865	A	C2'-C3'-O3'	7.26	124.59	113.70
1	A	389	A	C2'-C3'-O3'	-7.26	102.81	113.70
1	A	703	G	O3'-P-O5'	-7.26	93.11	104.00
1	A	824	G	O3'-P-O5'	-7.26	93.11	104.00
1	A	256	U	C2'-C3'-O3'	7.26	124.59	113.70
1	A	702	A	P-O5'-C5'	-7.26	110.01	120.90
1	A	639	G	C5'-C4'-O4'	7.26	120.69	109.80
1	A	839	C	C5'-C4'-C3'	-7.25	105.12	116.00
1	A	637	C	C5'-C4'-C3'	-7.25	105.12	116.00
1	A	703	G	C5'-C4'-C3'	-7.25	104.32	115.20
1	A	1152	A	P-O3'-C3'	-7.25	109.32	120.20
1	A	1453	G	C5'-C4'-C3'	-7.25	105.12	116.00
20	T	3	ILE	N-CA-C	7.25	124.42	109.34
1	A	941	G	C4'-C3'-C2'	-7.25	95.35	102.60
1	A	433	G	O3'-P-O5'	-7.25	93.13	104.00
1	A	523	A	O3'-P-O5'	7.25	114.87	104.00
1	A	806	C	O4'-C4'-C3'	-7.25	96.75	104.00
8	H	109	VAL	CB-CA-C	-7.25	99.91	110.63
1	A	488	C	P-O3'-C3'	-7.25	109.33	120.20
1	A	16	A	P-O5'-C5'	-7.24	110.04	120.90
1	A	274	A	O5'-C5'-C4'	-7.24	100.84	111.70
3	C	18	ASN	N-CA-CB	7.24	120.85	110.13
4	D	84	ASN	N-CA-C	-7.24	96.75	108.41
13	M	97	ARG	N-CA-C	-7.24	102.54	112.03
18	R	53	GLN	CA-C-N	7.24	130.85	120.79
18	R	53	GLN	C-N-CA	7.24	130.85	120.79
20	T	58	ASP	CA-CB-CG	-7.24	105.36	112.60
22	W	267	SER	CA-C-N	7.24	127.24	119.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	W	267	SER	C-N-CA	7.24	127.24	119.28
1	A	357	G	P-O3'-C3'	-7.23	109.35	120.20
1	A	646	G	C5'-C4'-C3'	-7.23	105.15	116.00
8	H	64	TYR	N-CA-C	-7.23	96.54	108.76
3	C	37	LYS	N-CA-CB	7.23	120.61	111.00
15	O	70	LYS	N-CA-CB	7.23	120.49	110.01
1	A	69	G	P-O5'-C5'	-7.22	110.06	120.90
1	A	168	G	C2'-C3'-O3'	7.22	124.54	113.70
1	A	439	U	O4'-C1'-N1	7.22	119.34	108.50
1	A	1261	A	N9-C1'-C2'	-7.22	101.16	112.00
9	I	100	ALA	N-CA-CB	7.22	121.39	110.19
1	A	636	U	P-O5'-C5'	-7.22	110.07	120.90
1	A	1162	C	C1'-O4'-C4'	-7.22	102.68	109.90
1	A	1458	G	O4'-C1'-C2'	-7.22	100.38	107.60
1	A	297	G	P-O5'-C5'	-7.22	110.07	120.90
1	A	752	G	O4'-C1'-N9	7.22	119.33	108.50
1	A	1362	A	C2'-C3'-O3'	7.22	124.53	113.70
1	A	934	C	P-O3'-C3'	7.22	131.03	120.20
1	A	1460	C	P-O5'-C5'	7.22	131.73	120.90
1	A	581	G	C3'-C2'-C1'	-7.21	94.08	101.30
1	A	921	U	P-O3'-C3'	-7.21	109.38	120.20
8	H	19	ALA	CA-C-N	7.21	132.63	122.46
8	H	19	ALA	C-N-CA	7.21	132.63	122.46
1	A	157	U	C3'-C2'-C1'	-7.21	94.09	101.30
1	A	1180	A	P-O3'-C3'	-7.21	109.38	120.20
1	A	718	A	C5'-C4'-C3'	7.21	126.82	116.00
3	C	176	THR	N-CA-C	-7.21	95.23	107.99
1	A	905	U	P-O3'-C3'	-7.21	109.39	120.20
22	W	192	SER	CA-C-N	7.21	130.24	120.44
22	W	192	SER	C-N-CA	7.21	130.24	120.44
1	A	256	U	C5'-C4'-C3'	-7.21	105.19	116.00
1	A	886	G	P-O3'-C3'	-7.20	109.39	120.20
1	A	102	G	C5'-C4'-C3'	-7.20	105.20	116.00
1	A	183	C	C1'-O4'-C4'	-7.20	102.50	109.70
13	M	2	ARG	N-CA-C	-7.20	104.12	113.12
17	Q	67	SER	N-CA-CB	7.20	122.61	111.24
1	A	1346	A	O5'-C5'-C4'	-7.20	100.91	111.70
1	A	557	G	C4'-C3'-O3'	-7.20	102.21	113.00
17	Q	59	GLU	N-CA-C	-7.20	98.58	110.17
1	A	472	U	C1'-O4'-C4'	-7.19	102.71	109.90
4	D	198	LEU	N-CA-C	-7.19	104.36	113.43
1	A	1007	U	N1-C1'-C2'	7.19	122.78	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	K	82	GLU	N-CA-C	-7.19	98.89	110.32
1	A	46	G	O3'-P-O5'	-7.19	93.22	104.00
1	A	1241	G	C1'-O4'-C4'	-7.19	102.71	109.90
1	A	1402	C	C5'-C4'-O4'	7.19	120.58	109.80
1	A	737	C	P-O5'-C5'	7.19	131.68	120.90
1	A	452	A	P-O3'-C3'	-7.18	109.42	120.20
1	A	1305	G	C1'-O4'-C4'	-7.18	102.72	109.90
1	A	791	G	C5'-C4'-C3'	-7.18	105.23	116.00
1	A	935	A	O4'-C4'-C3'	-7.18	96.82	104.00
1	A	166	U	O5'-C5'-C4'	-7.18	100.73	111.50
1	A	210	C	O3'-P-O5'	-7.18	93.23	104.00
1	A	1209	C	C5'-C4'-C3'	-7.18	105.23	116.00
7	G	107	ALA	CA-C-N	7.18	135.25	121.54
7	G	107	ALA	C-N-CA	7.18	135.25	121.54
20	T	3	ILE	CA-C-N	7.18	135.25	121.54
20	T	3	ILE	C-N-CA	7.18	135.25	121.54
1	A	127	G	O4'-C4'-C3'	-7.17	96.83	104.00
1	A	185	U	C4'-C3'-O3'	-7.17	102.24	113.00
1	A	746	A	P-O3'-C3'	-7.17	109.44	120.20
1	A	928	G	P-O3'-C3'	-7.17	109.44	120.20
1	A	1355	G	C1'-O4'-C4'	-7.17	102.73	109.90
1	A	154	U	O4'-C1'-N1	7.17	119.26	108.50
1	A	1391	U	O4'-C1'-C2'	-7.17	100.43	107.60
1	A	512	U	C5'-C4'-C3'	-7.17	105.25	116.00
1	A	1249	C	C4'-C3'-O3'	7.17	123.75	113.00
1	A	239	U	C1'-O4'-C4'	-7.17	102.73	109.90
1	A	1321	U	O5'-C5'-C4'	-7.17	100.75	111.50
20	T	59	ARG	CA-C-N	7.17	129.88	120.28
20	T	59	ARG	C-N-CA	7.17	129.88	120.28
1	A	67	C	C1'-C2'-O2'	7.17	119.15	108.40
1	A	1285	A	P-O3'-C3'	7.17	130.95	120.20
1	A	365	U	P-O3'-C3'	-7.16	109.46	120.20
1	A	383	A	C5'-C4'-C3'	-7.16	105.25	116.00
1	A	1321	U	P-O3'-C3'	-7.16	109.45	120.20
1	A	446	G	C5'-C4'-C3'	-7.16	105.26	116.00
1	A	143	A	P-O5'-C5'	-7.16	110.16	120.90
2	B	199	ILE	CB-CA-C	7.16	117.08	110.13
1	A	345	C	C1'-O4'-C4'	-7.16	102.74	109.90
1	A	1419	G	P-O5'-C5'	7.16	131.64	120.90
1	A	217	C	O4'-C4'-C3'	-7.16	96.84	104.00
22	W	268	PRO	CA-C-N	7.16	127.92	119.98
22	W	268	PRO	C-N-CA	7.16	127.92	119.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1330	U	C3'-C2'-C1'	-7.15	94.15	101.30
1	A	37	U	O5'-C5'-C4'	-7.15	100.77	111.50
1	A	167	A	C5'-C4'-C3'	-7.15	105.28	116.00
1	A	637	C	O3'-P-O5'	-7.15	93.28	104.00
1	A	24	U	O5'-C5'-C4'	-7.15	100.78	111.50
1	A	459	A	C5'-C4'-O4'	7.15	120.52	109.80
1	A	637	C	C4'-C3'-C2'	-7.15	95.45	102.60
1	A	861	G	C5'-C4'-O4'	7.15	120.52	109.80
1	A	460	A	C1'-O4'-C4'	-7.15	102.75	109.90
2	B	167	HIS	CA-CB-CG	-7.14	106.66	113.80
1	A	1430	A	C5'-C4'-C3'	-7.14	105.28	116.00
1	A	1298	U	P-O3'-C3'	-7.14	109.49	120.20
1	A	113	G	O4'-C4'-C3'	-7.14	96.86	104.00
1	A	183	C	P-O5'-C5'	7.14	131.61	120.90
15	O	16	ARG	N-CA-C	-7.14	103.22	113.21
1	A	816	A	N9-C1'-C2'	7.14	122.71	112.00
1	A	1185	G	O4'-C4'-C3'	-7.14	96.86	104.00
1	A	688	G	O3'-P-O5'	-7.14	93.30	104.00
1	A	770	C	C3'-C2'-C1'	-7.14	94.16	101.30
1	A	1165	U	O4'-C1'-N1	7.14	119.20	108.50
1	A	79	G	C5'-C4'-O4'	7.13	120.50	109.80
1	A	742	G	P-O3'-C3'	-7.13	109.50	120.20
1	A	869	G	C5'-C4'-O4'	7.13	120.50	109.80
1	A	1062	U	C4'-C3'-C2'	7.13	109.73	102.60
1	A	1158	C	N1-C1'-C2'	7.13	122.70	112.00
13	M	20	SER	N-CA-C	-7.13	104.18	113.17
1	A	417	G	C4'-C3'-O3'	-7.13	102.30	113.00
1	A	480	U	P-O3'-C3'	7.13	130.90	120.20
16	P	14	ARG	N-CA-C	-7.13	95.85	108.69
1	A	54	C	C3'-C2'-C1'	-7.13	94.17	101.30
1	A	1174	G	O5'-C5'-C4'	7.13	122.19	111.50
1	A	1032	G	C3'-C2'-C1'	-7.13	94.17	101.30
3	C	4	VAL	N-CA-C	-7.13	94.51	109.34
1	A	471	U	C3'-C2'-C1'	-7.12	94.17	101.30
1	A	912	C	C2'-C3'-O3'	7.12	124.39	113.70
11	K	33	ILE	N-CA-C	-7.12	98.10	108.71
1	A	1337	G	C4'-C3'-O3'	-7.12	102.32	113.00
10	J	57	VAL	CA-C-N	7.12	135.14	121.54
10	J	57	VAL	C-N-CA	7.12	135.14	121.54
13	M	109	LYS	CA-C-N	7.12	133.05	121.87
13	M	109	LYS	C-N-CA	7.12	133.05	121.87
1	A	553	A	P-O5'-C5'	7.12	131.58	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1470	U	C5'-C4'-C3'	7.12	126.68	116.00
1	A	869	G	C1'-O4'-C4'	-7.12	102.78	109.90
1	A	417	G	O3'-P-O5'	-7.12	93.33	104.00
1	A	971	G	C5'-C4'-C3'	-7.12	105.33	116.00
1	A	1249	C	P-O3'-C3'	-7.11	109.53	120.20
22	W	219	GLY	CA-C-N	7.11	129.81	120.28
22	W	219	GLY	C-N-CA	7.11	129.81	120.28
1	A	197	A	O4'-C4'-C3'	-7.11	98.99	106.10
1	A	455	G	P-O5'-C5'	7.11	131.56	120.90
1	A	884	U	P-O3'-C3'	7.11	130.87	120.20
1	A	909	A	C5'-C4'-C3'	-7.11	105.33	116.00
1	A	1090	U	C4'-C3'-O3'	-7.11	102.33	113.00
1	A	1463	U	C2'-C3'-O3'	7.11	124.36	113.70
2	B	62	ARG	N-CA-C	-7.11	103.72	113.18
1	A	817	C	O5'-C5'-C4'	7.11	122.36	111.70
1	A	1239	A	C1'-C2'-O2'	7.11	122.46	111.80
1	A	773	G	C5'-C4'-C3'	7.11	126.66	116.00
1	A	9	G	O4'-C4'-C3'	-7.11	96.89	104.00
1	A	1006	G	C5'-C4'-C3'	7.11	126.66	116.00
1	A	1504	G	P-O5'-C5'	-7.11	110.24	120.90
5	E	77	ASN	N-CA-CB	7.10	122.49	110.49
3	C	19	SER	N-CA-CB	7.10	120.39	110.17
14	N	67	GLY	N-CA-C	-7.10	105.27	115.64
1	A	246	A	C2'-C3'-O3'	7.10	120.14	109.50
1	A	726	C	O4'-C1'-N1	7.09	119.14	108.50
1	A	1480	A	C5'-C4'-C3'	-7.09	105.36	116.00
15	O	44	GLU	N-CA-CB	7.09	120.54	109.83
1	A	971	G	P-O3'-C3'	7.09	130.84	120.20
1	A	1519	A	P-O3'-C3'	-7.09	109.57	120.20
1	A	889	A	P-O3'-C3'	-7.09	109.57	120.20
1	A	1099	G	P-O3'-C3'	-7.09	109.57	120.20
1	A	679	C	P-O3'-C3'	-7.09	109.57	120.20
1	A	894	G	P-O3'-C3'	-7.09	109.57	120.20
1	A	1000	A	C5'-C4'-C3'	-7.09	105.37	116.00
1	A	1023	U	O4'-C4'-C3'	-7.09	96.91	104.00
1	A	1461	G	P-O5'-C5'	7.09	131.53	120.90
1	A	1186	G	C1'-O4'-C4'	-7.08	102.82	109.90
2	B	126	ASP	CA-CB-CG	-7.08	105.52	112.60
1	A	750	C	P-O3'-C3'	-7.08	109.58	120.20
1	A	929	G	P-O3'-C3'	-7.08	109.58	120.20
22	W	234	ILE	N-CA-C	-7.08	97.14	108.90
14	N	34	ASN	N-CA-C	-7.08	103.56	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	360	G	C5'-C4'-C3'	-7.08	105.38	116.00
1	A	1098	C	P-O3'-C3'	-7.08	109.58	120.20
1	A	1057	G	P-O5'-C5'	-7.08	110.28	120.90
5	E	73	VAL	CA-C-N	7.08	135.06	121.54
5	E	73	VAL	C-N-CA	7.08	135.06	121.54
1	A	332	G	P-O5'-C5'	7.08	131.51	120.90
1	A	368	U	C4'-C3'-C2'	7.08	109.68	102.60
9	I	94	ARG	N-CA-C	-7.08	102.71	113.89
1	A	1045	C	P-O3'-C3'	-7.07	109.59	120.20
1	A	657	U	C4'-C3'-O3'	-7.07	102.40	113.00
6	F	65	GLU	N-CA-CB	7.07	122.06	110.39
14	N	58	ARG	N-CA-C	-7.07	104.62	113.18
1	A	1324	A	C3'-C2'-C1'	-7.07	94.23	101.30
5	E	137	ARG	N-CA-C	-7.07	95.75	110.80
1	A	132	C	C4'-C3'-O3'	-7.07	102.40	113.00
1	A	239	U	O4'-C1'-N1	7.07	119.10	108.50
1	A	529	G	C1'-O4'-C4'	-7.07	102.83	109.90
1	A	1287	A	O5'-C5'-C4'	-7.06	100.91	111.50
1	A	1488	G	C2'-C3'-O3'	7.06	124.29	113.70
1	A	28	A	C3'-C2'-C1'	-7.06	94.24	101.30
1	A	1166	G	P-O3'-C3'	7.06	130.79	120.20
1	A	1507	A	P-O3'-C3'	-7.06	109.62	120.20
5	E	144	GLU	CA-C-N	7.06	135.02	121.54
5	E	144	GLU	C-N-CA	7.06	135.02	121.54
21	U	45	LYS	N-CA-C	7.06	120.37	111.69
1	A	178	C	O4'-C4'-C3'	-7.05	96.95	104.00
1	A	501	C	C4'-C3'-C2'	-7.05	95.55	102.60
1	A	358	U	O3'-P-O5'	-7.05	93.42	104.00
1	A	439	U	O4'-C1'-C2'	-7.05	100.55	107.60
1	A	1057	G	C4-N9-C1'	7.05	147.66	126.50
1	A	1226	C	P-O3'-C3'	7.05	130.78	120.20
8	H	66	GLN	CB-CG-CD	-7.05	100.61	112.60
1	A	313	A	P-O3'-C3'	-7.05	109.62	120.20
1	A	1415	G	C5'-C4'-C3'	7.05	126.57	116.00
1	A	137	U	C3'-C2'-C1'	-7.05	94.25	101.30
1	A	1053	G	C8-N9-C1'	7.05	148.14	127.00
1	A	1125	U	C5'-C4'-C3'	-7.05	105.43	116.00
3	C	164	THR	N-CA-C	7.05	120.46	109.96
1	A	431	A	C5'-C4'-O4'	7.04	120.37	109.80
1	A	649	A	C2'-C3'-O3'	7.04	124.27	113.70
1	A	1110	A	C5'-C4'-C3'	7.04	126.57	116.00
1	A	1120	C	C4'-C3'-C2'	-7.04	95.56	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1148	U	C5'-C4'-C3'	-7.04	105.44	116.00
1	A	1242	G	O5'-C5'-C4'	-7.04	100.93	111.50
1	A	1310	G	C5'-C4'-C3'	-7.04	105.44	116.00
1	A	776	G	O5'-C5'-C4'	-7.04	100.94	111.50
1	A	860	A	C5'-C4'-C3'	-7.04	105.44	116.00
10	J	69	THR	N-CA-CB	7.04	121.88	110.90
1	A	457	G	C1'-O4'-C4'	-7.04	102.86	109.90
19	S	74	ALA	CA-C-N	7.04	127.99	120.11
19	S	74	ALA	C-N-CA	7.04	127.99	120.11
1	A	222	C	O4'-C1'-N1	7.04	119.06	108.50
1	A	1230	C	C5'-C4'-C3'	-7.04	105.44	116.00
1	A	1056	U	C1'-O4'-C4'	-7.04	102.86	109.90
1	A	1276	G	C5'-C4'-O4'	7.03	120.35	109.80
15	O	3	SER	CA-C-N	7.03	130.01	120.38
15	O	3	SER	C-N-CA	7.03	130.01	120.38
1	A	70	U	C5'-C4'-O4'	7.03	120.35	109.80
1	A	247	G	C4'-C3'-C2'	-7.03	95.57	102.60
1	A	1111	A	O5'-C5'-C4'	-7.03	100.95	111.50
1	A	1505	G	C5'-C4'-C3'	-7.03	105.45	116.00
1	A	304	U	C3'-C2'-C1'	-7.03	94.27	101.30
1	A	556	C	C2'-C3'-O3'	7.03	124.24	113.70
1	A	1099	G	O4'-C4'-C3'	-7.03	96.97	104.00
1	A	1457	G	O5'-C5'-C4'	-7.03	100.96	111.50
1	A	1523	G	C3'-C2'-C1'	-7.03	94.27	101.30
1	A	183	C	O4'-C1'-N1	7.03	118.74	108.20
1	A	1331	G	P-O3'-C3'	7.03	130.74	120.20
1	A	1359	C	O3'-P-O5'	-7.03	93.46	104.00
1	A	1529	G	O3'-P-O5'	7.03	114.54	104.00
1	A	1236	A	O4'-C4'-C3'	7.02	111.02	104.00
10	J	40	ILE	CB-CA-C	-7.02	102.60	110.68
1	A	314	C	C1'-O4'-C4'	-7.02	102.88	109.90
19	S	32	THR	N-CA-C	-7.02	98.64	109.52
1	A	788	U	P-O3'-C3'	-7.02	109.67	120.20
1	A	333	U	P-O3'-C3'	7.01	130.72	120.20
1	A	476	U	P-O5'-C5'	7.01	131.42	120.90
1	A	903	G	C4-N9-C1'	7.01	147.54	126.50
1	A	1293	C	C3'-C2'-C1'	-7.01	94.29	101.30
1	A	690	G	O4'-C4'-C3'	-7.01	96.99	104.00
1	A	991	U	C3'-C2'-C1'	7.01	108.51	101.50
1	A	1288	A	P-O3'-C3'	-7.01	109.69	120.20
20	T	49	ALA	CB-CA-C	7.01	123.53	110.70
1	A	435	A	C1'-O4'-C4'	-7.01	102.89	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	351	G	C4-N9-C1'	7.00	147.51	126.50
1	A	1490	U	P-O3'-C3'	7.00	130.70	120.20
12	L	84	GLY	CA-C-N	7.00	133.72	122.10
12	L	84	GLY	C-N-CA	7.00	133.72	122.10
14	N	2	LYS	N-CA-C	-7.00	98.67	109.52
1	A	304	U	C5'-C4'-C3'	-7.00	105.50	116.00
1	A	1096	C	O4'-C1'-N1	7.00	119.00	108.50
1	A	1482	G	O4'-C1'-N9	7.00	119.00	108.50
1	A	416	G	C4'-C3'-O3'	-7.00	102.51	113.00
1	A	1043	G	C5'-C4'-C3'	-7.00	105.50	116.00
1	A	1023	U	C3'-C2'-C1'	-7.00	94.31	101.30
1	A	1085	U	C5'-C4'-C3'	-6.99	105.51	116.00
1	A	1173	U	C5'-C4'-C3'	-6.99	105.51	116.00
1	A	190	A	C5'-C4'-O4'	6.99	120.28	109.80
1	A	1298	U	O4'-C4'-C3'	-6.99	99.11	106.10
1	A	1344	C	C4'-C3'-O3'	-6.99	102.52	113.00
16	P	26	ASN	N-CA-CB	6.98	120.25	109.85
4	D	173	ASP	N-CA-C	-6.98	98.46	109.07
20	T	52	GLU	CA-CB-CG	6.98	128.06	114.10
1	A	952	U	O3'-P-O5'	-6.98	93.53	104.00
20	T	53	MET	N-CA-C	6.98	121.80	113.28
22	W	263	ASP	CA-CB-CG	-6.98	105.62	112.60
1	A	25	C	C5'-C4'-C3'	-6.98	105.53	116.00
1	A	163	C	O4'-C4'-C3'	-6.98	97.02	104.00
1	A	711	G	P-O5'-C5'	-6.98	110.44	120.90
1	A	1181	G	C5'-C4'-O4'	6.98	119.57	109.10
1	A	32	A	O3'-P-O5'	-6.97	93.54	104.00
1	A	177	G	O4'-C4'-C3'	-6.97	97.03	104.00
1	A	183	C	C5'-C4'-O4'	6.97	119.56	109.10
1	A	858	G	O4'-C1'-C2'	-6.97	100.62	107.60
1	A	925	G	O5'-C5'-C4'	-6.97	101.04	111.50
1	A	1160	G	N9-C1'-C2'	-6.97	101.54	112.00
1	A	463	U	O4'-C1'-C2'	-6.97	100.63	107.60
1	A	1026	G	P-O3'-C3'	6.97	130.66	120.20
5	E	59	ILE	N-CA-CB	6.97	122.73	111.23
1	A	647	C	C1'-O4'-C4'	-6.97	102.93	109.90
1	A	31	G	P-O3'-C3'	-6.97	109.75	120.20
2	B	151	LYS	N-CA-C	-6.97	105.05	113.97
1	A	63	C	C4'-C3'-O3'	-6.97	102.55	113.00
1	A	500	G	N9-C1'-C2'	-6.97	101.55	112.00
1	A	1092	A	O4'-C4'-C3'	-6.96	97.04	104.00
15	O	34	GLN	CA-CB-CG	6.96	128.03	114.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	W	292	ASP	CA-CB-CG	-6.96	105.64	112.60
1	A	664	G	O3'-P-O5'	-6.96	93.56	104.00
1	A	757	U	O5'-C5'-C4'	-6.96	101.06	111.50
1	A	1379	G	C2'-C3'-O3'	6.96	124.14	113.70
21	U	50	SER	N-CA-C	6.96	121.37	113.02
1	A	183	C	O4'-C4'-C3'	-6.96	99.14	106.10
1	A	732	C	N1-C1'-C2'	-6.96	101.56	112.00
1	A	696	A	C5'-C4'-C3'	-6.95	105.57	116.00
1	A	348	G	C5'-C4'-C3'	-6.95	105.57	116.00
1	A	357	G	C5'-C4'-C3'	-6.95	105.57	116.00
1	A	1325	C	C1'-O4'-C4'	-6.95	102.95	109.90
1	A	762	U	C4'-C3'-O3'	-6.95	102.57	113.00
1	A	89	U	O4'-C1'-C2'	-6.95	98.85	105.80
1	A	1090	U	O5'-C5'-C4'	-6.95	101.08	111.50
1	A	504	C	O3'-P-O5'	-6.95	93.58	104.00
1	A	157	U	C1'-O4'-C4'	-6.95	102.95	109.90
1	A	704	A	C5'-C4'-C3'	-6.95	105.58	116.00
15	O	74	VAL	N-CA-C	-6.95	103.01	110.23
1	A	1263	C	O3'-P-O5'	-6.94	93.58	104.00
1	A	1501	C	O3'-P-O5'	-6.94	93.58	104.00
4	D	135	GLN	CA-C-N	6.94	130.00	120.35
4	D	135	GLN	C-N-CA	6.94	130.00	120.35
1	A	52	C	C5'-C4'-C3'	-6.94	105.59	116.00
10	J	63	ASP	CA-CB-CG	6.94	119.54	112.60
12	L	57	THR	N-CA-CB	6.94	120.11	111.79
1	A	334	C	C1'-O4'-C4'	-6.93	102.97	109.90
1	A	496	A	P-O5'-C5'	6.93	131.30	120.90
1	A	939	G	P-O5'-C5'	-6.93	110.50	120.90
2	B	149	GLY	N-CA-C	-6.93	105.63	114.37
1	A	1032	G	C8-N9-C1'	-6.93	106.20	127.00
1	A	1102	A	O3'-P-O5'	-6.93	93.60	104.00
12	L	115	LYS	N-CA-C	-6.93	98.11	108.99
1	A	312	C	C3'-C2'-C1'	-6.93	94.37	101.30
1	A	324	G	P-O5'-C5'	6.93	131.29	120.90
1	A	569	C	O3'-P-O5'	-6.93	93.61	104.00
1	A	782	A	C4'-C3'-C2'	-6.93	95.67	102.60
1	A	1174	G	C5'-C4'-O4'	6.93	120.19	109.80
4	D	195	ASN	N-CA-C	-6.93	98.78	109.52
1	A	547	A	C1'-O4'-C4'	-6.92	102.78	109.70
1	A	605	U	C4'-C3'-C2'	-6.92	95.67	102.60
1	A	901	A	C4'-C3'-O3'	-6.92	102.61	113.00
1	A	754	C	C5'-C4'-C3'	-6.92	105.61	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	94	G	O4'-C4'-C3'	6.92	110.92	104.00
1	A	1156	G	O4'-C1'-N9	6.92	118.88	108.50
1	A	1208	C	C3'-C2'-C1'	-6.92	94.38	101.30
1	A	60	A	C2'-C3'-O3'	6.92	119.88	109.50
1	A	776	G	C4'-C3'-O3'	-6.92	102.62	113.00
1	A	1253	G	C1'-O4'-C4'	-6.92	102.98	109.90
1	A	850	U	P-O5'-C5'	6.92	131.28	120.90
4	D	132	ALA	N-CA-C	-6.92	104.45	113.17
1	A	443	C	C3'-C2'-C1'	-6.92	94.38	101.30
1	A	1086	U	O5'-C5'-C4'	6.92	121.87	111.50
1	A	1260	G	P-O3'-C3'	-6.92	109.82	120.20
1	A	794	A	P-O5'-C5'	-6.92	110.53	120.90
1	A	832	G	O4'-C1'-C2'	-6.91	100.69	107.60
16	P	71	VAL	N-CA-CB	6.91	122.64	111.23
1	A	860	A	P-O5'-C5'	6.91	131.27	120.90
1	A	1303	C	O3'-P-O5'	-6.91	93.63	104.00
1	A	1322	C	C2'-C3'-O3'	6.91	119.87	109.50
9	I	89	TYR	N-CA-C	-6.91	102.22	111.96
10	J	92	LEU	CA-C-N	6.91	134.74	121.54
10	J	92	LEU	C-N-CA	6.91	134.74	121.54
1	A	582	C	O5'-C5'-C4'	-6.91	101.14	111.50
1	A	785	G	C5'-C4'-O4'	6.91	120.16	109.80
1	A	1432	G	O3'-P-O5'	-6.91	93.64	104.00
1	A	221	C	C5'-C4'-C3'	-6.91	105.64	116.00
1	A	638	U	C4'-C3'-O3'	-6.91	102.64	113.00
1	A	1378	C	C5'-C4'-O4'	6.91	120.16	109.80
14	N	24	ALA	N-CA-C	6.91	125.51	110.80
11	K	71	ASP	N-CA-C	-6.90	97.27	108.52
1	A	1440	U	O4'-C1'-N1	6.90	118.86	108.50
1	A	371	A	C3'-C2'-C1'	-6.90	94.40	101.30
1	A	1448	C	C5'-C4'-C3'	-6.90	105.65	116.00
7	G	139	ASP	N-CA-C	-6.90	106.75	114.62
1	A	328	C	O4'-C1'-N1	6.90	118.55	108.20
13	M	113	LYS	O-C-N	6.90	127.21	121.83
1	A	1038	C	C5'-C4'-C3'	6.90	126.34	116.00
15	O	64	LYS	CB-CA-C	-6.90	99.34	110.79
1	A	660	C	C4'-C3'-C2'	-6.89	95.70	102.60
1	A	761	G	C5'-C4'-C3'	-6.89	105.66	116.00
1	A	1506	U	N1-C1'-C2'	6.89	124.34	114.00
1	A	1489	G	O4'-C4'-C3'	-6.89	97.11	104.00
1	A	500	G	C5'-C4'-C3'	-6.89	105.67	116.00
9	I	71	ILE	CA-C-N	6.89	130.20	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	I	71	ILE	C-N-CA	6.89	130.20	120.28
1	A	143	A	C4'-C3'-C2'	6.89	109.49	102.60
1	A	993	G	C5'-C4'-O4'	6.89	119.43	109.10
1	A	91	U	O4'-C1'-N1	6.88	118.83	108.50
1	A	926	G	P-O3'-C3'	6.88	130.53	120.20
1	A	1332	A	O4'-C4'-C3'	-6.88	97.11	104.00
2	B	40	ILE	CA-CB-CG1	6.88	122.10	110.40
1	A	76	G	C4'-C3'-O3'	-6.88	102.67	113.00
6	F	49	TYR	N-CA-CB	6.88	122.62	110.37
7	G	10	LYS	N-CA-CB	6.88	122.12	110.49
1	A	273	U	C4'-C3'-O3'	-6.88	102.68	113.00
1	A	430	A	C4'-C3'-C2'	-6.88	95.72	102.60
1	A	996	A	C1'-O4'-C4'	-6.88	103.02	109.90
1	A	1329	A	P-O3'-C3'	-6.88	109.89	120.20
1	A	996	A	P-O5'-C5'	6.87	131.21	120.90
1	A	1062	U	C5'-C4'-C3'	-6.87	105.69	116.00
1	A	1357	A	C4'-C3'-O3'	-6.87	102.69	113.00
2	B	140	LEU	N-CA-C	6.87	125.44	110.80
1	A	559	A	C4'-C3'-O3'	6.87	119.71	109.40
1	A	1263	C	O4'-C4'-C3'	-6.87	97.13	104.00
1	A	1389	C	O4'-C1'-N1	6.87	118.81	108.50
14	N	84	ARG	CB-CA-C	-6.87	99.38	110.79
20	T	17	ARG	CA-C-N	6.87	130.05	120.29
20	T	17	ARG	C-N-CA	6.87	130.05	120.29
1	A	54	C	C1'-O4'-C4'	-6.87	103.03	109.90
1	A	568	G	C1'-O4'-C4'	-6.87	103.03	109.90
1	A	1042	A	O3'-P-O5'	-6.87	93.69	104.00
1	A	1099	G	O4'-C1'-N9	6.87	118.81	108.50
8	H	96	ALA	N-CA-C	-6.87	104.78	113.02
1	A	995	C	O3'-P-O5'	-6.87	93.70	104.00
1	A	1179	A	C5'-C4'-O4'	6.87	120.10	109.80
1	A	682	G	C5'-C4'-C3'	6.87	126.30	116.00
1	A	1465	A	C5'-C4'-C3'	6.87	126.30	116.00
4	D	8	LEU	N-CA-CB	6.86	119.96	110.01
1	A	115	G	O4'-C1'-C2'	6.86	112.66	105.80
1	A	151	A	O4'-C4'-C3'	-6.86	97.14	104.00
1	A	391	G	O5'-C5'-C4'	-6.86	101.21	111.50
1	A	472	U	C5'-C4'-C3'	-6.86	105.71	116.00
1	A	1131	G	P-O3'-C3'	-6.86	109.91	120.20
1	A	1474	U	C4'-C3'-O3'	-6.86	102.71	113.00
1	A	1504	G	C3'-C2'-O2'	-6.86	104.31	114.60
11	K	21	HIS	CA-CB-CG	-6.86	106.94	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	81	ASP	N-CA-C	-6.86	96.19	110.80
1	A	471	U	C5'-C4'-C3'	-6.85	105.72	116.00
1	A	1073	U	P-O5'-C5'	-6.85	110.62	120.90
1	A	1273	C	N1-C1'-C2'	-6.85	101.72	112.00
1	A	1375	A	C5'-C4'-C3'	-6.85	105.72	116.00
1	A	952	U	C5'-C4'-C3'	-6.85	105.73	116.00
1	A	1200	C	P-O5'-C5'	-6.85	110.62	120.90
6	F	90	MET	CA-C-N	6.85	131.23	121.98
6	F	90	MET	C-N-CA	6.85	131.23	121.98
1	A	212	G	C4'-C3'-O3'	-6.85	102.73	113.00
1	A	733	G	P-O5'-C5'	-6.85	110.63	120.90
1	A	1124	G	C5'-C4'-C3'	6.85	126.27	116.00
1	A	1162	C	C3'-C2'-C1'	-6.85	94.45	101.30
1	A	1213	A	P-O3'-C3'	-6.85	109.93	120.20
16	P	45	GLU	CA-C-N	6.85	134.62	121.54
16	P	45	GLU	C-N-CA	6.85	134.62	121.54
20	T	69	ASN	CA-C-N	6.85	132.14	120.71
20	T	69	ASN	C-N-CA	6.85	132.14	120.71
1	A	53	A	O3'-P-O5'	-6.85	93.73	104.00
1	A	750	C	C5'-C4'-C3'	-6.85	105.73	116.00
1	A	1474	U	C3'-C2'-C1'	-6.85	94.45	101.30
5	E	69	ASN	CA-CB-CG	-6.85	105.75	112.60
3	C	126	ARG	N-CA-CB	6.84	122.06	110.49
1	A	73	C	C6-N1-C1'	-6.84	100.27	120.80
10	J	66	GLU	CA-C-N	6.84	132.55	123.11
10	J	66	GLU	C-N-CA	6.84	132.55	123.11
1	A	324	G	O5'-C5'-C4'	-6.84	101.24	111.50
1	A	623	C	O3'-P-O5'	6.84	114.26	104.00
1	A	1171	A	O5'-C5'-C4'	-6.84	101.24	111.50
1	A	1011	C	C5'-C4'-C3'	-6.84	105.74	116.00
1	A	210	C	P-O5'-C5'	6.84	131.16	120.90
8	H	64	TYR	CA-CB-CG	-6.84	101.60	113.90
1	A	447	G	C3'-C2'-C1'	-6.83	94.47	101.30
1	A	840	C	C5'-C4'-C3'	-6.83	105.75	116.00
6	F	75	GLU	CB-CG-CD	6.83	124.22	112.60
1	A	124	C	P-O5'-C5'	-6.83	110.66	120.90
1	A	205	A	O3'-P-O5'	-6.83	93.76	104.00
1	A	914	A	P-O3'-C3'	-6.83	109.96	120.20
1	A	1117	A	C4'-C3'-O3'	-6.83	102.76	113.00
1	A	895	G	C4'-C3'-C2'	-6.83	95.77	102.60
1	A	588	G	O3'-P-O5'	-6.83	93.76	104.00
1	A	582	C	O3'-P-O5'	-6.82	93.77	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	863	U	C1'-O4'-C4'	-6.82	103.08	109.90
1	A	1049	U	P-O3'-C3'	6.82	130.43	120.20
11	K	17	ASP	N-CA-C	-6.82	97.78	108.90
1	A	179	A	C4'-C3'-O3'	-6.82	102.77	113.00
1	A	1057	G	C5'-C4'-C3'	-6.82	105.77	116.00
1	A	1454	G	C5'-C4'-C3'	-6.82	105.77	116.00
2	B	44	LYS	N-CA-C	-6.82	104.44	112.89
7	G	118	ARG	CD-NE-CZ	-6.82	114.85	124.40
1	A	868	C	P-O5'-C5'	6.82	131.12	120.90
1	A	696	A	C5'-C4'-O4'	6.81	120.02	109.80
1	A	782	A	O5'-C5'-C4'	-6.81	101.28	111.50
1	A	1186	G	C4'-C3'-C2'	-6.81	95.79	102.60
1	A	1029	U	C3'-C2'-C1'	-6.81	94.49	101.30
1	A	1261	A	O4'-C1'-C2'	-6.81	100.79	107.60
1	A	635	A	C4'-C3'-C2'	-6.81	95.79	102.60
1	A	1493	A	O3'-P-O5'	-6.81	93.79	104.00
1	A	721	G	C5'-C4'-O4'	6.81	119.31	109.10
12	L	26	CYS	N-CA-C	-6.81	94.76	109.81
1	A	392	C	P-O5'-C5'	-6.80	110.69	120.90
1	A	1395	C	C4'-C3'-C2'	-6.80	95.80	102.60
1	A	1404	C	C4'-C3'-C2'	-6.80	95.80	102.60
1	A	1133	G	C3'-C2'-C1'	-6.80	94.50	101.30
9	I	35	GLU	CB-CG-CD	-6.80	101.04	112.60
12	L	88	ASP	N-CA-C	-6.80	104.72	113.16
1	A	1300	G	O4'-C4'-C3'	-6.80	99.30	106.10
5	E	42	ASN	N-CA-C	-6.80	96.02	107.99
1	A	610	U	C4'-C3'-O3'	-6.80	102.80	113.00
17	Q	28	VAL	CA-C-N	6.80	130.46	120.95
17	Q	28	VAL	C-N-CA	6.80	130.46	120.95
1	A	232	G	C4-N9-C1'	-6.79	106.12	126.50
1	A	299	G	P-O5'-C5'	6.79	131.09	120.90
1	A	537	G	C4'-C3'-C2'	-6.79	95.81	102.60
1	A	593	U	O3'-P-O5'	6.79	114.19	104.00
1	A	287	U	O3'-P-O5'	-6.79	93.82	104.00
1	A	1422	G	C3'-C2'-C1'	-6.79	94.51	101.30
1	A	1520	C	C4'-C3'-O3'	6.79	123.19	113.00
1	A	151	A	P-O3'-C3'	-6.79	110.02	120.20
1	A	969	A	P-O3'-C3'	-6.79	110.02	120.20
3	C	180	ASP	N-CA-CB	6.79	120.73	109.60
1	A	785	G	P-O5'-C5'	-6.79	110.72	120.90
1	A	1346	A	P-O3'-C3'	6.78	130.38	120.20
1	A	87	C	O4'-C1'-N1	6.78	118.67	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	76	ILE	N-CA-C	-6.78	103.61	111.00
1	A	362	G	P-O5'-C5'	-6.77	110.74	120.90
1	A	566	G	C2'-C3'-O3'	6.77	119.66	109.50
13	M	57	ASP	CA-CB-CG	-6.77	105.83	112.60
1	A	579	A	N9-C1'-C2'	-6.77	101.84	112.00
1	A	609	A	C2'-C3'-O3'	6.77	123.86	113.70
1	A	600	A	O4'-C4'-C3'	-6.77	97.23	104.00
1	A	1157	A	C5'-C4'-O4'	6.77	119.25	109.10
1	A	1277	C	O4'-C1'-N1	6.77	118.65	108.50
1	A	1469	C	C2'-C3'-O3'	6.77	123.86	113.70
1	A	195	A	C5'-C4'-C3'	-6.77	105.85	116.00
1	A	815	A	O5'-C5'-C4'	-6.77	101.35	111.50
1	A	78	A	C2'-C3'-O3'	6.77	123.85	113.70
1	A	63	C	P-O5'-C5'	6.76	131.05	120.90
1	A	535	A	C3'-C2'-C1'	-6.76	94.54	101.30
1	A	866	C	P-O5'-C5'	6.76	131.04	120.90
1	A	1066	C	O5'-C5'-C4'	-6.76	101.36	111.50
11	K	119	GLY	N-CA-C	-6.76	97.15	113.18
1	A	356	A	C5'-C4'-C3'	-6.76	105.86	116.00
1	A	1145	A	N9-C1'-C2'	6.76	122.14	112.00
1	A	563	A	C4'-C3'-C2'	6.76	109.36	102.60
9	I	38	PHE	N-CA-C	-6.75	102.35	113.50
9	I	125	GLN	N-CA-CB	-6.75	98.32	110.82
1	A	418	C	O3'-P-O5'	-6.75	93.87	104.00
1	A	1533	C	O3'-P-O5'	-6.75	93.87	104.00
11	K	106	ILE	N-CA-C	-6.75	98.61	108.87
1	A	186	C	C4'-C3'-O3'	-6.75	102.88	113.00
1	A	199	A	O4'-C4'-C3'	-6.75	97.25	104.00
22	W	135	GLU	CB-CG-CD	6.75	124.08	112.60
1	A	437	U	O3'-P-O5'	6.75	114.12	104.00
1	A	1261	A	O4'-C4'-C3'	-6.75	97.25	104.00
1	A	337	G	O5'-C5'-C4'	-6.75	101.38	111.50
12	L	12	ALA	N-CA-C	6.75	125.17	110.80
1	A	756	C	O4'-C4'-C3'	-6.75	97.25	104.00
12	L	41	PRO	N-CA-C	-6.75	98.58	112.47
1	A	149	A	C5'-C4'-C3'	-6.74	105.89	116.00
17	Q	64	ARG	CB-CA-C	-6.74	98.40	109.46
1	A	766	A	O4'-C4'-C3'	-6.74	97.26	104.00
1	A	948	C	O3'-P-O5'	-6.74	93.89	104.00
1	A	1066	C	C5'-C4'-C3'	-6.74	105.89	116.00
7	G	53	SER	N-CA-C	-6.74	105.18	113.41
1	A	148	G	C1'-O4'-C4'	-6.74	103.16	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	823	C	C4'-C3'-C2'	-6.74	95.86	102.60
1	A	1301	U	P-O3'-C3'	-6.74	110.09	120.20
1	A	460	A	O3'-P-O5'	6.74	114.10	104.00
1	A	1107	C	P-O3'-C3'	-6.74	110.10	120.20
6	F	57	ALA	N-CA-C	-6.74	96.45	110.80
1	A	416	G	P-O5'-C5'	6.73	131.00	120.90
1	A	492	C	C5'-C4'-C3'	-6.73	105.90	116.00
1	A	898	G	O5'-C5'-C4'	-6.73	101.40	111.50
13	M	96	VAL	N-CA-C	-6.73	106.24	112.43
1	A	460	A	C3'-C2'-C1'	-6.73	94.57	101.30
1	A	352	C	C5'-C4'-O4'	6.73	119.89	109.80
1	A	666	G	O4'-C1'-C2'	-6.73	100.87	107.60
1	A	101	A	C5'-C4'-O4'	6.73	119.89	109.80
1	A	489	C	C4'-C3'-O3'	-6.73	102.91	113.00
1	A	770	C	O4'-C4'-C3'	-6.73	97.27	104.00
15	O	48	ASP	CA-C-N	6.73	129.19	120.44
15	O	48	ASP	C-N-CA	6.73	129.19	120.44
1	A	73	C	C4'-C3'-C2'	6.72	109.33	102.60
15	O	59	VAL	N-CA-CB	6.72	119.18	110.57
1	A	180	U	C1'-O4'-C4'	-6.72	103.18	109.90
1	A	546	A	O4'-C1'-N9	6.72	118.58	108.50
1	A	1058	G	C5'-C4'-C3'	-6.72	105.92	116.00
15	O	69	LEU	N-CA-C	6.72	122.46	111.37
1	A	31	G	C3'-C2'-C1'	-6.72	94.78	101.50
1	A	1072	G	O5'-C5'-C4'	-6.72	101.42	111.50
1	A	1461	G	O4'-C1'-N9	6.72	118.58	108.50
9	I	98	ARG	N-CA-CB	6.72	121.84	110.49
14	N	18	LYS	CB-CA-C	6.72	121.43	110.88
1	A	890	G	O4'-C4'-C3'	-6.72	99.38	106.10
1	A	1126	U	O3'-P-O5'	-6.72	93.92	104.00
3	C	64	ARG	N-CA-C	-6.72	96.01	107.23
1	A	1081	A	C1'-O4'-C4'	-6.71	103.19	109.90
1	A	928	G	C4'-C3'-C2'	6.71	109.31	102.60
3	C	55	VAL	N-CA-C	-6.71	97.92	108.86
14	N	71	GLY	N-CA-C	-6.71	106.90	115.42
20	T	8	LYS	CB-CA-C	6.71	122.26	110.85
1	A	312	C	O3'-P-O5'	-6.71	93.94	104.00
1	A	625	U	O3'-P-O5'	-6.71	93.94	104.00
14	N	7	ALA	N-CA-CB	6.71	120.55	110.22
22	W	66	ILE	N-CA-CB	-6.71	102.06	111.99
1	A	903	G	O4'-C1'-C2'	-6.71	100.89	107.60
3	C	199	VAL	CA-C-N	6.71	134.04	122.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	199	VAL	C-N-CA	6.71	134.04	122.64
12	L	35	ARG	N-CA-C	-6.71	98.53	108.79
1	A	197	A	O5'-C5'-C4'	6.70	121.75	111.70
1	A	1266	G	O4'-C1'-N9	6.70	118.55	108.50
1	A	580	C	P-O5'-C5'	6.70	130.95	120.90
1	A	195	A	P-O3'-C3'	-6.70	110.15	120.20
1	A	578	C	P-O3'-C3'	-6.70	110.15	120.20
3	C	148	ILE	N-CA-C	-6.70	95.41	109.34
9	I	30	ASN	CA-C-N	6.70	131.93	122.08
9	I	30	ASN	C-N-CA	6.70	131.93	122.08
18	R	28	LEU	CB-CA-C	-6.70	99.67	110.79
1	A	287	U	C5'-C4'-O4'	6.70	119.84	109.80
1	A	354	G	O3'-P-O5'	-6.70	93.96	104.00
1	A	658	C	C3'-C2'-C1'	-6.70	94.60	101.30
1	A	1019	A	N9-C1'-C2'	-6.70	101.96	112.00
15	O	81	ILE	N-CA-C	-6.70	103.79	110.62
1	A	943	U	O5'-C5'-C4'	-6.69	101.46	111.50
4	D	178	GLU	CB-CG-CD	-6.69	101.22	112.60
1	A	62	U	C4'-C3'-C2'	-6.69	95.91	102.60
1	A	349	A	C4'-C3'-O3'	-6.69	102.96	113.00
1	A	1042	A	O4'-C1'-C2'	-6.69	100.91	107.60
1	A	1194	U	P-O5'-C5'	-6.69	110.86	120.90
1	A	1468	A	C4'-C3'-O3'	-6.69	102.96	113.00
22	W	311	ALA	CB-CA-C	-6.69	99.47	110.85
1	A	100	G	O3'-P-O5'	-6.69	93.97	104.00
1	A	185	U	O3'-P-O5'	-6.69	93.96	104.00
1	A	255	G	C5'-C4'-C3'	-6.69	105.97	116.00
1	A	1280	A	P-O5'-C5'	-6.69	110.86	120.90
1	A	585	G	O5'-C5'-C4'	-6.68	101.47	111.50
1	A	736	C	C5'-C4'-C3'	6.68	126.03	116.00
1	A	780	A	C1'-O4'-C4'	-6.68	103.22	109.90
1	A	962	C	P-O5'-C5'	-6.68	110.87	120.90
1	A	1134	G	C3'-C2'-C1'	-6.68	94.61	101.30
1	A	1513	A	O4'-C4'-C3'	-6.68	97.32	104.00
2	B	160	LEU	N-CA-C	-6.68	99.41	110.17
1	A	1069	C	C2'-C3'-O3'	6.68	123.72	113.70
1	A	865	A	O4'-C1'-C2'	-6.68	100.92	107.60
1	A	1172	C	O4'-C4'-C3'	-6.68	97.32	104.00
20	T	14	GLU	CA-C-N	6.68	129.53	120.38
20	T	14	GLU	C-N-CA	6.68	129.53	120.38
1	A	1468	A	C2'-C3'-O3'	6.68	123.72	113.70
11	K	51	PHE	CA-CB-CG	6.68	120.48	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	10	A	C3'-C2'-C1'	-6.68	94.62	101.30
10	J	68	ARG	N-CA-C	6.68	120.38	109.76
17	Q	36	PHE	CA-C-N	6.68	129.41	122.27
17	Q	36	PHE	C-N-CA	6.68	129.41	122.27
1	A	384	G	C5'-C4'-C3'	-6.68	105.98	116.00
4	D	112	GLU	CB-CG-CD	-6.68	101.25	112.60
15	O	23	SER	N-CA-C	-6.68	96.58	110.80
18	R	61	ALA	CA-C-N	6.68	129.23	120.28
18	R	61	ALA	C-N-CA	6.68	129.23	120.28
1	A	230	G	C3'-C2'-C1'	-6.67	94.63	101.30
1	A	563	A	C1'-O4'-C4'	6.67	116.58	109.90
20	T	8	LYS	N-CA-C	-6.67	104.09	111.36
1	A	90	C	O3'-P-O5'	-6.67	93.99	104.00
1	A	139	A	P-O3'-C3'	-6.67	110.19	120.20
1	A	669	G	O5'-C5'-C4'	-6.67	101.49	111.50
1	A	1075	U	P-O5'-C5'	6.67	130.91	120.90
1	A	1267	C	C4'-C3'-O3'	-6.67	102.99	113.00
19	S	48	ILE	N-CA-C	6.67	117.73	108.12
1	A	949	A	C3'-C2'-C1'	-6.67	94.63	101.30
6	F	72	ASP	CA-CB-CG	-6.67	105.93	112.60
1	A	692	U	C4'-C3'-O3'	-6.67	103.00	113.00
1	A	1191	A	C4'-C3'-C2'	6.67	109.27	102.60
15	O	44	GLU	CA-C-O	-6.67	113.86	121.19
1	A	1443	C	C2'-C3'-O3'	6.67	123.70	113.70
1	A	244	U	O5'-C5'-C4'	6.66	121.69	111.70
1	A	531	U	N1-C1'-C2'	-6.66	102.01	112.00
1	A	1323	G	O4'-C4'-C3'	-6.66	97.34	104.00
1	A	180	U	C3'-C2'-C1'	-6.66	94.64	101.30
1	A	739	C	C5'-C4'-C3'	-6.66	106.01	116.00
1	A	1121	U	O4'-C1'-N1	6.66	118.49	108.50
15	O	81	ILE	CA-C-N	6.66	129.87	120.28
15	O	81	ILE	C-N-CA	6.66	129.87	120.28
1	A	398	U	O5'-C5'-C4'	-6.66	101.51	111.50
1	A	583	A	C5'-C4'-O4'	6.66	119.79	109.80
1	A	614	C	N1-C1'-C2'	-6.66	102.01	112.00
2	B	161	PHE	N-CA-C	-6.66	96.91	108.69
12	L	24	GLU	CB-CG-CD	-6.66	101.28	112.60
1	A	17	U	O4'-C1'-N1	6.66	118.48	108.50
1	A	659	U	P-O3'-C3'	-6.66	110.22	120.20
1	A	547	A	C2'-C3'-O3'	6.65	119.48	109.50
1	A	1416	G	P-O3'-C3'	-6.65	110.22	120.20
1	A	484	G	N9-C1'-C2'	-6.65	104.02	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	854	U	C4'-C3'-C2'	-6.65	95.95	102.60
1	A	949	A	C2'-C3'-O3'	6.65	123.68	113.70
1	A	460	A	P-O3'-C3'	-6.65	110.22	120.20
1	A	740	U	P-O5'-C5'	-6.65	110.92	120.90
3	C	57	GLU	CA-C-N	6.65	128.13	122.28
3	C	57	GLU	C-N-CA	6.65	128.13	122.28
1	A	47	C	C5'-C4'-O4'	-6.65	99.83	109.80
1	A	467	U	P-O3'-C3'	-6.65	110.23	120.20
1	A	666	G	P-O3'-C3'	-6.65	110.23	120.20
1	A	1500	A	O3'-P-O5'	-6.65	94.03	104.00
2	B	10	LYS	N-CA-C	-6.65	103.32	112.03
11	K	49	SER	CA-C-N	6.65	134.44	121.41
11	K	49	SER	C-N-CA	6.65	134.44	121.41
1	A	218	U	C5'-C4'-O4'	6.65	119.77	109.80
1	A	499	A	O4'-C4'-C3'	-6.65	99.45	106.10
1	A	767	A	C4'-C3'-C2'	-6.65	95.95	102.60
1	A	812	G	C3'-C2'-O2'	-6.64	104.63	114.60
1	A	219	U	C1'-C2'-O2'	6.64	118.36	108.40
1	A	1493	A	P-O3'-C3'	6.64	130.16	120.20
1	A	348	G	C3'-C2'-O2'	6.64	120.66	110.70
1	A	621	A	P-O3'-C3'	-6.64	110.24	120.20
4	D	104	MET	N-CA-C	-6.64	105.31	113.41
1	A	1142	G	C4'-C3'-C2'	-6.64	95.96	102.60
1	A	371	A	O4'-C4'-C3'	-6.64	97.36	104.00
1	A	686	U	C1'-O4'-C4'	-6.64	103.06	109.70
1	A	706	A	C4'-C3'-O3'	-6.64	103.05	113.00
1	A	1067	A	O3'-P-O5'	-6.64	94.05	104.00
1	A	1477	U	C5'-C4'-C3'	-6.64	106.05	116.00
11	K	58	THR	CA-C-N	6.64	126.58	119.28
11	K	58	THR	C-N-CA	6.64	126.58	119.28
1	A	254	G	O5'-C5'-C4'	-6.63	101.55	111.50
1	A	765	G	C3'-C2'-C1'	-6.63	94.67	101.30
1	A	914	A	C3'-C2'-C1'	-6.63	94.67	101.30
1	A	1506	U	C3'-C2'-C1'	6.63	108.13	101.50
15	O	78	THR	N-CA-C	-6.63	104.05	111.28
1	A	1192	C	C5'-C4'-C3'	-6.63	106.05	116.00
1	A	1263	C	P-O3'-C3'	-6.63	110.25	120.20
3	C	33	ASP	CA-C-N	6.63	129.46	120.38
3	C	33	ASP	C-N-CA	6.63	129.46	120.38
9	I	63	TYR	CA-CB-CG	-6.63	101.96	113.90
10	J	71	LEU	CA-C-N	6.63	132.97	122.36
10	J	71	LEU	C-N-CA	6.63	132.97	122.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	Q	75	VAL	N-CA-C	-6.63	95.55	109.34
1	A	962	C	C5'-C4'-O4'	6.63	119.74	109.80
1	A	947	G	P-O3'-C3'	-6.62	110.26	120.20
1	A	507	C	C4'-C3'-O3'	-6.62	103.06	113.00
1	A	38	G	P-O3'-C3'	-6.62	110.27	120.20
1	A	195	A	C5'-C4'-O4'	6.62	119.73	109.80
1	A	470	C	C5'-C4'-C3'	-6.62	106.07	116.00
1	A	1205	U	C5'-C4'-C3'	-6.62	106.07	116.00
1	A	1217	C	C5'-C4'-C3'	-6.62	106.07	116.00
12	L	67	GLY	N-CA-C	6.62	121.95	112.81
1	A	186	C	C4'-C3'-C2'	-6.62	95.98	102.60
1	A	321	A	C4'-C3'-C2'	-6.62	95.98	102.60
1	A	1417	G	P-O3'-C3'	-6.62	110.27	120.20
8	H	115	ALA	N-CA-C	6.62	118.49	111.28
9	I	97	LEU	CA-C-N	6.62	134.18	121.54
9	I	97	LEU	C-N-CA	6.62	134.18	121.54
1	A	31	G	C5'-C4'-O4'	6.61	119.02	109.10
1	A	254	G	C4'-C3'-O3'	-6.61	103.08	113.00
4	D	170	LEU	N-CA-C	-6.61	96.98	108.69
1	A	598	U	C3'-C2'-C1'	-6.61	94.69	101.30
1	A	1270	G	C5'-C4'-C3'	-6.61	106.08	116.00
1	A	1053	G	C4-N9-C1'	-6.61	106.67	126.50
4	D	146	GLU	N-CA-C	6.61	124.88	110.80
1	A	509	A	O5'-C5'-C4'	-6.61	101.59	111.50
1	A	813	U	C2'-C3'-O3'	-6.61	103.79	113.70
1	A	895	G	O5'-C5'-C4'	-6.61	101.59	111.50
1	A	1158	C	C3'-C2'-C1'	6.61	107.91	101.30
1	A	505	G	C2'-C3'-O3'	6.61	123.61	113.70
1	A	630	A	C4'-C3'-O3'	-6.60	103.09	113.00
3	C	29	ALA	N-CA-C	-6.60	104.01	111.14
1	A	265	G	C2'-C3'-O3'	6.60	123.60	113.70
9	I	4	GLN	N-CA-C	-6.60	96.74	110.80
1	A	315	A	O4'-C1'-N9	6.60	118.40	108.50
1	A	797	C	C4'-C3'-C2'	6.60	109.20	102.60
1	A	1086	U	P-O5'-C5'	-6.60	111.00	120.90
1	A	1087	G	C5'-C4'-C3'	-6.60	106.10	116.00
1	A	416	G	C2'-C3'-O3'	6.60	123.60	113.70
1	A	1134	G	C5'-C4'-C3'	-6.60	106.11	116.00
1	A	1349	A	P-O3'-C3'	-6.60	110.30	120.20
2	B	158	ASP	N-CA-CB	6.60	117.94	110.35
1	A	226	G	P-O3'-C3'	-6.60	110.31	120.20
1	A	700	G	O5'-C5'-C4'	-6.60	101.61	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	90	PHE	N-CA-C	-6.60	98.63	108.99
1	A	315	A	O3'-P-O5'	6.59	113.89	104.00
1	A	561	U	C2'-C3'-O3'	6.59	119.39	109.50
1	A	712	A	C5'-C4'-C3'	6.59	125.89	116.00
1	A	1069	C	C3'-C2'-C1'	-6.59	94.71	101.30
17	Q	23	ALA	CA-C-N	6.59	129.84	122.59
17	Q	23	ALA	C-N-CA	6.59	129.84	122.59
1	A	1472	U	C2'-C3'-O3'	6.59	123.59	113.70
1	A	253	A	C1'-C2'-O2'	6.59	118.29	108.40
1	A	697	U	C3'-C2'-C1'	-6.59	94.71	101.30
9	I	26	LYS	N-CA-C	-6.59	107.11	114.62
3	C	18	ASN	N-CA-C	-6.59	103.36	111.40
1	A	1026	G	C4'-C3'-O3'	-6.59	103.12	113.00
9	I	98	ARG	N-CA-C	-6.59	96.77	110.80
1	A	1123	U	O5'-C5'-C4'	-6.58	101.63	111.50
1	A	1382	C	O3'-P-O5'	-6.58	94.13	104.00
1	A	1455	G	C2'-C3'-O3'	6.58	123.57	113.70
8	H	29	SER	N-CA-CB	6.58	121.86	111.20
1	A	1111	A	C4'-C3'-C2'	-6.58	96.02	102.60
1	A	936	C	C5'-C4'-O4'	6.58	119.67	109.80
1	A	1145	A	C4'-C3'-C2'	-6.58	96.02	102.60
1	A	1173	U	O4'-C1'-N1	6.58	118.37	108.50
1	A	1183	U	C2'-C3'-O3'	-6.58	103.83	113.70
1	A	61	G	O4'-C1'-N9	6.58	118.36	108.50
5	E	45	VAL	N-CA-C	-6.58	98.72	108.45
8	H	35	ILE	CA-C-N	6.58	129.39	120.38
8	H	35	ILE	C-N-CA	6.58	129.39	120.38
1	A	248	C	O4'-C1'-N1	6.57	118.36	108.50
1	A	314	C	C3'-C2'-C1'	-6.57	94.73	101.30
1	A	656	G	O5'-C5'-C4'	-6.57	101.64	111.50
1	A	779	C	O3'-P-O5'	6.57	113.86	104.00
2	B	130	LYS	CA-C-N	6.57	131.64	121.19
2	B	130	LYS	C-N-CA	6.57	131.64	121.19
10	J	53	ILE	N-CA-C	6.57	118.61	111.77
1	A	279	A	C5'-C4'-C3'	6.57	125.06	115.20
20	T	17	ARG	N-CA-C	6.57	124.80	110.80
1	A	265	G	P-O3'-C3'	6.57	130.05	120.20
1	A	395	C	C3'-C2'-C1'	-6.57	94.73	101.30
1	A	1075	U	C4'-C3'-C2'	-6.57	96.03	102.60
1	A	1219	A	C5'-C4'-C3'	-6.57	106.15	116.00
20	T	69	ASN	N-CA-C	-6.57	105.23	112.72
1	A	453	G	P-O5'-C5'	-6.57	111.05	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	77	A	C4'-C3'-O3'	-6.57	103.15	113.00
1	A	1148	U	C4'-C3'-C2'	-6.57	96.03	102.60
2	B	89	PHE	CA-CB-CG	-6.57	107.23	113.80
10	J	13	PHE	N-CA-C	-6.56	104.30	112.90
1	A	904	U	O5'-C5'-C4'	-6.56	101.66	111.50
1	A	1300	G	P-O3'-C3'	6.56	130.04	120.20
1	A	1367	C	C1'-O4'-C4'	-6.56	103.34	109.90
1	A	1523	G	P-O3'-C3'	-6.56	110.36	120.20
9	I	96	GLU	N-CA-C	-6.56	100.55	109.54
19	S	47	THR	N-CA-C	-6.56	97.08	108.69
1	A	71	A	P-O5'-C5'	6.56	130.74	120.90
1	A	405	U	O5'-C5'-C4'	-6.56	101.66	111.50
1	A	1527	U	C4'-C3'-O3'	-6.56	103.16	113.00
1	A	1243	C	C5'-C4'-C3'	-6.56	106.17	116.00
1	A	165	G	O5'-C5'-C4'	-6.55	101.67	111.50
1	A	396	C	O3'-P-O5'	6.55	113.83	104.00
1	A	830	G	O5'-C5'-C4'	-6.55	101.67	111.50
22	W	305	ASP	CA-CB-CG	-6.55	106.05	112.60
1	A	366	A	O3'-P-O5'	6.55	113.83	104.00
1	A	375	U	P-O5'-C5'	6.55	130.73	120.90
1	A	798	U	P-O3'-C3'	-6.55	110.37	120.20
1	A	822	U	C2'-C3'-O3'	6.55	123.53	113.70
1	A	858	G	C3'-C2'-C1'	-6.55	94.75	101.30
1	A	1034	G	C5'-C4'-C3'	-6.55	106.17	116.00
1	A	1303	C	O5'-C5'-C4'	6.55	121.33	111.50
1	A	220	G	C3'-C2'-C1'	-6.55	94.75	101.30
1	A	529	G	C4'-C3'-O3'	6.55	122.82	113.00
1	A	731	G	P-O3'-C3'	-6.55	110.38	120.20
17	Q	33	TYR	CA-C-N	6.55	134.24	121.41
17	Q	33	TYR	C-N-CA	6.55	134.24	121.41
1	A	893	C	C5'-C4'-C3'	-6.55	106.18	116.00
1	A	1087	G	O5'-C5'-C4'	-6.55	101.68	111.50
1	A	1185	G	N9-C1'-C2'	-6.55	102.18	112.00
1	A	1007	U	C5'-C4'-C3'	-6.54	106.18	116.00
2	B	102	ASN	CA-CB-CG	-6.54	106.06	112.60
1	A	1253	G	O5'-C5'-C4'	-6.54	101.69	111.50
1	A	1259	C	C2'-C3'-O3'	6.54	123.51	113.70
1	A	1359	C	P-O3'-C3'	-6.54	110.39	120.20
1	A	1470	U	O4'-C1'-N1	6.54	118.31	108.50
1	A	602	A	C4'-C3'-O3'	-6.54	103.19	113.00
1	A	1498	U	C4'-C3'-O3'	6.54	119.21	109.40
1	A	133	U	C5'-C4'-C3'	6.54	125.81	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	215	C	P-O5'-C5'	6.54	130.71	120.90
1	A	1405	G	C1'-O4'-C4'	-6.54	103.36	109.90
1	A	523	A	O4'-C1'-N9	6.54	118.31	108.50
1	A	1476	A	O3'-P-O5'	-6.54	94.19	104.00
6	F	87	SER	N-CA-C	-6.54	97.41	108.26
1	A	231	U	P-O3'-C3'	-6.54	110.40	120.20
1	A	1307	U	P-O5'-C5'	6.54	130.70	120.90
1	A	1491	G	C4'-C3'-C2'	6.54	109.14	102.60
9	I	35	GLU	CA-C-N	6.54	131.53	121.53
9	I	35	GLU	C-N-CA	6.54	131.53	121.53
1	A	823	C	C5'-C4'-C3'	-6.53	106.20	116.00
1	A	902	G	O3'-P-O5'	-6.53	94.20	104.00
12	L	104	SER	N-CA-C	-6.53	100.23	110.36
1	A	65	A	O4'-C1'-C2'	-6.53	99.27	105.80
1	A	181	A	P-O5'-C5'	-6.53	111.11	120.90
1	A	305	G	O4'-C1'-C2'	6.53	112.33	105.80
1	A	878	A	P-O5'-C5'	6.53	130.70	120.90
1	A	1283	U	O4'-C1'-N1	6.53	118.30	108.50
1	A	1428	A	C1'-O4'-C4'	-6.53	103.37	109.90
1	A	1123	U	O4'-C1'-C2'	-6.53	101.07	107.60
13	M	60	ALA	N-CA-C	-6.53	105.70	113.21
1	A	1481	U	C3'-C2'-C1'	-6.53	94.77	101.30
1	A	1253	G	P-O3'-C3'	-6.52	110.42	120.20
2	B	131	LYS	N-CA-CB	-6.52	98.63	109.72
2	B	152	ASP	N-CA-C	-6.52	104.25	111.36
13	M	110	GLY	CA-C-O	-6.52	112.19	121.52
1	A	105	G	C2'-C3'-O3'	6.52	123.48	113.70
14	N	55	SER	N-CA-C	-6.52	102.26	108.13
1	A	637	C	C5'-C4'-O4'	6.52	119.58	109.80
10	J	42	LEU	N-CA-C	-6.52	97.75	109.09
1	A	153	C	P-O3'-C3'	-6.52	110.42	120.20
1	A	491	G	C5'-C4'-O4'	6.52	119.58	109.80
8	H	21	LYS	N-CA-C	-6.52	97.02	108.23
8	H	103	VAL	CA-C-O	-6.52	115.46	121.72
9	I	104	THR	CA-C-N	6.52	131.11	120.23
9	I	104	THR	C-N-CA	6.52	131.11	120.23
1	A	947	G	P-O5'-C5'	6.52	130.68	120.90
1	A	1227	A	O3'-P-O5'	-6.52	94.23	104.00
5	E	24	VAL	N-CA-C	6.52	122.89	109.34
1	A	474	G	O4'-C1'-C2'	-6.51	101.08	107.60
1	A	212	G	C5'-C4'-C3'	6.51	125.77	116.00
1	A	789	U	P-O3'-C3'	-6.51	110.43	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	357	G	O3'-P-O5'	-6.51	94.23	104.00
1	A	626	G	C3'-C2'-C1'	-6.51	94.79	101.30
1	A	67	C	C4'-C3'-C2'	-6.51	96.09	102.60
1	A	906	A	C4-N9-C1'	-6.51	106.78	126.30
1	A	1332	A	N9-C1'-C2'	-6.51	102.24	112.00
1	A	1342	C	O4'-C1'-N1	6.51	118.26	108.50
1	A	272	C	O3'-P-O5'	-6.50	94.24	104.00
1	A	1281	C	C5'-C4'-C3'	-6.50	106.24	116.00
5	E	139	THR	CA-C-N	6.50	128.76	120.56
5	E	139	THR	C-N-CA	6.50	128.76	120.56
1	A	437	U	C5'-C4'-C3'	6.50	125.76	116.00
1	A	1321	U	C5'-C4'-C3'	-6.50	106.24	116.00
8	H	97	GLY	N-CA-C	-6.50	106.80	115.32
1	A	547	A	O4'-C1'-C2'	-6.50	99.30	105.80
14	N	97	LYS	N-CA-C	-6.50	96.95	110.80
1	A	1097	C	O4'-C1'-N1	6.50	118.25	108.50
1	A	1181	G	O5'-C5'-C4'	-6.50	101.95	111.70
2	B	44	LYS	CA-C-N	6.50	129.82	120.79
2	B	44	LYS	C-N-CA	6.50	129.82	120.79
4	D	147	LYS	N-CA-CB	6.50	122.32	111.53
4	D	139	ASN	CA-CB-CG	-6.50	106.10	112.60
1	A	1375	A	C4'-C3'-O3'	-6.49	103.26	113.00
1	A	371	A	O3'-P-O5'	-6.49	94.27	104.00
17	Q	44	HIS	CB-CG-ND1	6.49	132.44	122.70
1	A	219	U	C3'-C2'-C1'	-6.49	94.81	101.30
1	A	351	G	C8-N9-C1'	-6.49	107.53	127.00
1	A	1054	C	C4'-C3'-C2'	-6.49	96.11	102.60
17	Q	61	ARG	N-CA-C	-6.49	98.03	109.06
19	S	13	HIS	N-CA-CB	6.49	119.66	110.12
1	A	695	A	O5'-C5'-C4'	-6.49	101.77	111.50
1	A	1046	A	P-O3'-C3'	-6.49	110.47	120.20
1	A	317	U	C5'-C4'-O4'	6.48	119.52	109.80
1	A	875	U	O4'-C4'-C3'	-6.48	97.52	104.00
1	A	1069	C	C4'-C3'-O3'	-6.48	103.28	113.00
1	A	339	C	C3'-C2'-C1'	-6.48	94.82	101.30
1	A	839	C	P-O3'-C3'	6.48	129.92	120.20
1	A	1270	G	O3'-P-O5'	-6.48	94.28	104.00
4	D	52	VAL	CB-CA-C	-6.48	103.59	111.88
22	W	203	GLU	CB-CA-C	6.48	123.11	110.67
1	A	139	A	O4'-C4'-C3'	-6.48	97.52	104.00
1	A	352	C	P-O3'-C3'	-6.48	110.48	120.20
1	A	501	C	C5'-C4'-C3'	-6.48	106.28	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	50	ASN	CA-C-N	6.48	129.61	120.28
2	B	50	ASN	C-N-CA	6.48	129.61	120.28
1	A	467	U	O4'-C4'-C3'	-6.48	97.52	104.00
1	A	325	A	C3'-C2'-C1'	-6.47	94.83	101.30
1	A	395	C	C1'-O4'-C4'	-6.47	103.43	109.90
1	A	993	G	O4'-C4'-C3'	-6.47	99.63	106.10
1	A	1368	A	C4'-C3'-C2'	-6.47	96.12	102.60
1	A	441	A	O3'-P-O5'	-6.47	94.29	104.00
17	Q	18	LYS	N-CA-CB	-6.47	101.40	113.89
1	A	249	U	C3'-C2'-C1'	-6.47	94.83	101.30
1	A	699	C	C3'-C2'-C1'	-6.47	94.83	101.30
1	A	1439	G	P-O5'-C5'	6.47	130.61	120.90
3	C	201	ILE	N-CA-CB	6.47	120.97	111.52
1	A	679	C	C5'-C4'-O4'	6.47	119.50	109.80
18	R	52	ARG	NE-CZ-NH2	6.47	125.02	119.20
1	A	284	C	C1'-O4'-C4'	-6.46	103.44	109.90
1	A	713	G	P-O5'-C5'	6.46	130.60	120.90
13	M	48	SER	CA-C-N	6.46	129.82	120.38
13	M	48	SER	C-N-CA	6.46	129.82	120.38
1	A	370	C	C3'-C2'-C1'	-6.46	94.84	101.30
1	A	977	A	O4'-C1'-C2'	-6.46	101.14	107.60
1	A	1358	U	P-O3'-C3'	6.46	129.89	120.20
11	K	119	GLY	CA-C-N	6.46	133.88	121.54
11	K	119	GLY	C-N-CA	6.46	133.88	121.54
22	W	78	ARG	N-CA-C	-6.46	99.11	109.96
1	A	168	G	C5'-C4'-C3'	-6.46	106.31	116.00
1	A	1118	U	C5'-C4'-O4'	-6.46	100.11	109.80
1	A	184	G	O5'-C5'-C4'	-6.46	101.81	111.50
1	A	372	C	P-O5'-C5'	-6.46	111.21	120.90
1	A	522	C	C4'-C3'-C2'	6.46	109.06	102.60
1	A	708	C	P-O3'-C3'	-6.46	110.51	120.20
1	A	1339	A	O3'-P-O5'	-6.46	94.31	104.00
12	L	6	LEU	CB-CA-C	-6.46	99.87	110.85
1	A	499	A	C5'-C4'-C3'	-6.46	105.52	115.20
1	A	533	A	O3'-P-O5'	-6.46	94.32	104.00
2	B	212	TYR	CA-C-N	6.46	129.17	120.65
2	B	212	TYR	C-N-CA	6.46	129.17	120.65
3	C	129	PHE	CA-CB-CG	6.46	120.26	113.80
17	Q	46	HIS	N-CA-CB	6.46	120.27	109.94
1	A	1500	A	C5'-C4'-C3'	-6.45	106.32	116.00
7	G	26	VAL	N-CA-CB	6.45	119.32	110.54
1	A	1458	G	C4'-C3'-C2'	-6.45	96.15	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	O	24	THR	CA-C-N	6.45	129.25	120.54
15	O	24	THR	C-N-CA	6.45	129.25	120.54
16	P	11	ALA	CA-C-N	6.45	133.86	121.54
16	P	11	ALA	C-N-CA	6.45	133.86	121.54
1	A	582	C	C5'-C4'-C3'	-6.45	106.33	116.00
1	A	145	G	O3'-P-O5'	-6.45	94.33	104.00
1	A	127	G	O3'-P-O5'	6.45	113.67	104.00
1	A	359	G	C4'-C3'-O3'	-6.45	103.33	113.00
1	A	395	C	C5'-C4'-C3'	-6.45	106.33	116.00
1	A	430	A	C2'-C3'-O3'	-6.45	104.03	113.70
1	A	1202	U	O4'-C1'-N1	6.45	118.17	108.50
1	A	1529	G	C5'-C4'-C3'	6.45	124.87	115.20
1	A	895	G	O3'-P-O5'	-6.44	94.33	104.00
1	A	1181	G	C1'-C2'-O2'	-6.44	102.13	111.80
22	W	183	ILE	CB-CA-C	6.44	126.39	111.77
1	A	63	C	O5'-C5'-C4'	-6.44	101.84	111.50
1	A	1396	A	O4'-C1'-C2'	6.44	112.24	105.80
3	C	6	PRO	CA-C-N	6.44	132.15	122.23
3	C	6	PRO	C-N-CA	6.44	132.15	122.23
1	A	749	A	O5'-C5'-C4'	-6.44	101.84	111.50
1	A	521	G	O5'-C5'-C4'	-6.44	101.85	111.50
1	A	644	U	O5'-C5'-C4'	-6.44	101.85	111.50
1	A	508	U	C4'-C3'-C2'	6.43	109.03	102.60
1	A	1300	G	C8-N9-C1'	6.43	146.30	127.00
1	A	1334	G	O5'-C5'-C4'	-6.43	101.85	111.50
1	A	392	C	C5'-C4'-C3'	6.43	125.65	116.00
1	A	901	A	C5'-C4'-O4'	6.43	119.45	109.80
12	L	102	ASP	CA-CB-CG	6.43	119.03	112.60
22	W	271	ARG	N-CA-C	6.43	118.29	111.28
1	A	263	A	N9-C1'-C2'	-6.43	102.35	112.00
1	A	1102	A	C5'-C4'-C3'	-6.43	106.35	116.00
17	Q	18	LYS	CB-CA-C	6.43	124.78	110.76
1	A	306	A	C2'-C3'-O3'	6.43	123.34	113.70
1	A	1274	A	C4'-C3'-O3'	6.43	122.64	113.00
1	A	1305	G	C8-N9-C1'	6.43	146.29	127.00
1	A	194	C	C4'-C3'-O3'	-6.43	103.36	113.00
11	K	19	VAL	N-CA-C	-6.43	98.40	108.81
1	A	277	C	O5'-C5'-C4'	6.43	121.14	111.50
1	A	495	A	C5'-C4'-C3'	-6.43	105.56	115.20
1	A	590	U	C5'-C4'-C3'	-6.43	106.36	116.00
1	A	1133	G	C1'-O4'-C4'	-6.43	103.47	109.90
1	A	1418	A	C2'-C3'-O3'	6.43	123.34	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	O	45	HIS	N-CA-CB	6.43	121.35	110.49
1	A	345	C	C1'-C2'-O2'	6.42	118.04	108.40
1	A	504	C	C3'-C2'-C1'	-6.42	94.88	101.30
1	A	648	A	O5'-C5'-C4'	-6.42	101.86	111.50
1	A	1032	G	C4-N9-C1'	6.42	145.77	126.50
1	A	584	G	C2'-C3'-O3'	6.42	123.33	113.70
1	A	981	U	O3'-P-O5'	-6.42	94.37	104.00
1	A	1519	A	O4'-C4'-C3'	-6.42	97.58	104.00
1	A	173	U	P-O3'-C3'	6.42	129.83	120.20
1	A	500	G	O3'-P-O5'	-6.42	94.37	104.00
1	A	1146	A	P-O5'-C5'	-6.42	111.27	120.90
1	A	1223	C	C2'-C3'-O3'	6.42	119.13	109.50
1	A	1406	U	C4'-C3'-C2'	6.42	109.02	102.60
3	C	203	LYS	N-CA-C	-6.42	105.37	113.72
1	A	528	C	C1'-O4'-C4'	-6.42	103.48	109.90
5	E	102	THR	N-CA-C	-6.42	104.70	113.30
1	A	1160	G	C3'-C2'-O2'	6.42	120.33	110.70
2	B	152	ASP	CB-CA-C	-6.42	99.94	110.85
1	A	206	C	C4'-C3'-O3'	-6.42	103.38	113.00
1	A	1255	G	C5'-C4'-C3'	6.41	125.62	116.00
1	A	400	C	C3'-C2'-C1'	-6.41	94.89	101.30
1	A	79	G	C5'-C4'-C3'	-6.41	106.39	116.00
1	A	1064	G	C3'-C2'-C1'	-6.41	95.09	101.50
1	A	1226	C	O5'-C5'-C4'	-6.41	102.09	111.70
1	A	1236	A	O3'-P-O5'	-6.41	94.39	104.00
1	A	1084	G	P-O5'-C5'	-6.41	111.29	120.90
1	A	1520	C	O4'-C1'-N1	6.41	118.11	108.50
1	A	86	G	C1'-O4'-C4'	-6.41	103.30	109.70
1	A	129	A	C4'-C3'-C2'	6.41	109.00	102.60
1	A	131	A	C4'-C3'-C2'	6.41	109.00	102.60
1	A	393	A	C3'-C2'-C1'	-6.41	94.89	101.30
1	A	944	G	O4'-C4'-C3'	-6.41	97.59	104.00
7	G	5	VAL	N-CA-C	6.41	122.66	109.34
1	A	270	A	C3'-C2'-C1'	-6.40	94.90	101.30
1	A	384	G	C3'-C2'-C1'	-6.40	94.90	101.30
1	A	434	U	P-O5'-C5'	6.40	130.50	120.90
1	A	899	C	C1'-O4'-C4'	-6.40	103.50	109.90
1	A	962	C	C1'-O4'-C4'	-6.40	103.50	109.90
1	A	1060	U	O5'-C5'-C4'	-6.40	101.89	111.50
1	A	1090	U	P-O5'-C5'	6.40	130.50	120.90
5	E	37	VAL	N-CA-C	-6.40	98.42	108.86
1	A	313	A	C1'-O4'-C4'	-6.40	103.50	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1318	A	O3'-P-O5'	-6.40	94.40	104.00
5	E	122	VAL	CB-CA-C	-6.40	101.61	110.96
1	A	72	A	P-O5'-C5'	-6.40	111.30	120.90
1	A	824	G	C4'-C3'-O3'	-6.40	103.40	113.00
1	A	862	C	C2'-C3'-O3'	6.40	123.30	113.70
1	A	1323	G	C2'-C3'-O3'	-6.40	104.10	113.70
3	C	66	THR	CA-C-N	6.40	130.62	122.37
3	C	66	THR	C-N-CA	6.40	130.62	122.37
1	A	464	U	C5'-C4'-O4'	6.40	119.39	109.80
1	A	3	A	C5'-C4'-C3'	6.39	125.59	116.00
1	A	145	G	N9-C1'-C2'	-6.39	102.41	112.00
1	A	491	G	C4'-C3'-O3'	-6.39	103.41	113.00
1	A	947	G	C4'-C3'-O3'	-6.39	103.41	113.00
1	A	1272	G	N9-C1'-C2'	-6.39	102.41	112.00
1	A	1300	G	C4-N9-C1'	-6.39	107.32	126.50
1	A	144	G	C5'-C4'-C3'	-6.39	106.41	116.00
1	A	599	C	C5'-C4'-C3'	-6.39	106.41	116.00
1	A	1033	G	C2'-C3'-O3'	6.39	123.29	113.70
1	A	1239	A	C3'-C2'-C1'	-6.39	95.11	101.50
1	A	1277	C	O4'-C4'-C3'	-6.39	97.61	104.00
1	A	882	C	P-O3'-C3'	6.39	129.79	120.20
1	A	1171	A	N9-C1'-C2'	-6.39	102.42	112.00
3	C	110	LEU	N-CA-C	-6.39	105.24	113.16
1	A	306	A	O5'-C5'-C4'	-6.39	101.92	111.50
1	A	985	C	O4'-C1'-N1	6.39	118.08	108.50
1	A	1354	U	P-O5'-C5'	6.39	130.48	120.90
9	I	123	ARG	CA-C-N	6.39	127.82	119.84
9	I	123	ARG	C-N-CA	6.39	127.82	119.84
13	M	3	ILE	CA-C-N	6.39	133.74	121.54
13	M	3	ILE	C-N-CA	6.39	133.74	121.54
1	A	398	U	C4'-C3'-C2'	6.38	108.98	102.60
1	A	1263	C	C3'-C2'-C1'	-6.38	94.92	101.30
1	A	1505	G	C4'-C3'-O3'	-6.38	103.42	113.00
14	N	91	GLU	CA-C-N	6.38	131.62	122.24
14	N	91	GLU	C-N-CA	6.38	131.62	122.24
1	A	1202	U	C5'-C4'-C3'	6.38	125.57	116.00
1	A	1485	U	O3'-P-O5'	-6.38	94.43	104.00
1	A	31	G	C1'-O4'-C4'	-6.38	103.32	109.70
1	A	1208	C	C1'-O4'-C4'	-6.38	103.52	109.90
1	A	386	C	O5'-C5'-C4'	-6.38	101.93	111.50
12	L	30	ARG	CB-CG-CD	6.38	125.97	111.30
17	Q	60	ILE	N-CA-C	-6.38	98.31	108.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	305	G	P-O3'-C3'	6.38	129.76	120.20
1	A	471	U	O5'-C5'-C4'	-6.38	101.94	111.50
1	A	1515	G	N9-C1'-C2'	-6.38	102.44	112.00
16	P	18	GLN	CB-CG-CD	6.38	123.44	112.60
1	A	740	U	C4'-C3'-O3'	-6.38	103.44	113.00
18	R	31	TYR	CA-C-N	6.38	133.45	121.97
18	R	31	TYR	C-N-CA	6.38	133.45	121.97
1	A	747	A	P-O3'-C3'	-6.37	110.64	120.20
1	A	1032	G	C1'-O4'-C4'	-6.37	103.53	109.90
1	A	544	G	C5'-C4'-C3'	-6.37	106.44	116.00
1	A	865	A	O4'-C4'-C3'	-6.37	97.63	104.00
1	A	1419	G	O5'-C5'-C4'	-6.37	101.94	111.50
15	O	44	GLU	CA-CB-CG	6.37	126.84	114.10
1	A	930	C	O3'-P-O5'	6.37	113.55	104.00
1	A	29	U	C5'-C4'-C3'	-6.37	106.45	116.00
8	H	90	GLU	N-CA-C	-6.37	102.83	111.55
11	K	71	ASP	CA-CB-CG	-6.37	106.23	112.60
1	A	1088	G	C3'-C2'-C1'	-6.37	94.93	101.30
1	A	1283	U	C4'-C3'-C2'	6.37	108.97	102.60
1	A	1172	C	O4'-C1'-N1	6.36	118.05	108.50
21	U	51	ALA	N-CA-C	6.36	124.35	110.80
1	A	421	U	P-O5'-C5'	-6.36	111.36	120.90
1	A	284	C	O3'-P-O5'	-6.36	94.46	104.00
1	A	727	G	P-O3'-C3'	-6.36	110.66	120.20
1	A	1257	A	P-O5'-C5'	-6.36	111.36	120.90
1	A	90	C	C4'-C3'-O3'	-6.36	99.86	109.40
1	A	779	C	C5'-C4'-C3'	6.36	125.54	116.00
1	A	1000	A	O3'-P-O5'	-6.36	94.46	104.00
1	A	1256	A	C2'-C3'-O3'	6.36	119.04	109.50
1	A	1412	C	P-O5'-C5'	-6.36	111.36	120.90
4	D	126	GLY	CA-C-N	6.36	133.68	121.54
4	D	126	GLY	C-N-CA	6.36	133.68	121.54
1	A	209	U	C5'-C4'-C3'	-6.36	106.47	116.00
1	A	1041	G	P-O3'-C3'	-6.36	110.67	120.20
2	B	68	PHE	CA-CB-CG	-6.36	107.44	113.80
12	L	24	GLU	CB-CA-C	-6.36	107.44	116.34
1	A	599	C	P-O3'-C3'	-6.35	110.67	120.20
1	A	1187	G	C2'-C3'-O3'	6.35	123.23	113.70
1	A	1246	A	C1'-O4'-C4'	-6.35	103.55	109.90
1	A	338	A	P-O3'-C3'	-6.35	110.67	120.20
1	A	474	G	O5'-C5'-C4'	-6.35	101.97	111.50
6	F	34	GLY	N-CA-C	-6.35	102.37	112.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	823	C	C4'-C3'-O3'	-6.35	103.47	113.00
1	A	165	G	C4'-C3'-C2'	-6.35	96.25	102.60
1	A	475	C	O3'-P-O5'	-6.35	94.48	104.00
1	A	653	U	O4'-C1'-N1	6.35	118.02	108.50
1	A	895	G	P-O5'-C5'	-6.35	111.37	120.90
12	L	69	GLU	CB-CA-C	6.35	120.00	109.53
15	O	6	ALA	N-CA-C	-6.35	104.23	112.23
21	U	8	ASN	CA-CB-CG	-6.35	106.25	112.60
1	A	857	C	C2'-C3'-O3'	6.35	123.22	113.70
1	A	1003	G	C4'-C3'-O3'	-6.35	103.48	113.00
1	A	1343	G	O3'-P-O5'	-6.35	94.48	104.00
5	E	19	ARG	CA-C-N	6.35	131.59	122.77
5	E	19	ARG	C-N-CA	6.35	131.59	122.77
1	A	438	U	O3'-P-O5'	-6.35	94.48	104.00
1	A	333	U	O3'-P-O5'	6.34	113.52	104.00
1	A	975	A	C2'-C3'-O3'	6.34	119.02	109.50
1	A	1177	G	C5'-C4'-C3'	-6.34	106.48	116.00
1	A	208	U	O5'-C5'-C4'	-6.34	101.99	111.50
9	I	100	ALA	CB-CA-C	-6.34	98.95	110.56
1	A	26	A	C1'-O4'-C4'	-6.34	103.56	109.90
1	A	839	C	O3'-P-O5'	6.34	113.51	104.00
1	A	863	U	C4'-C3'-C2'	-6.34	96.26	102.60
1	A	1202	U	O4'-C4'-C3'	-6.34	97.66	104.00
1	A	823	C	O5'-C5'-C4'	-6.34	101.99	111.50
1	A	1401	G	O3'-P-O5'	-6.34	94.49	104.00
1	A	485	U	C4'-C3'-C2'	6.34	108.94	102.60
1	A	916	U	C1'-O4'-C4'	-6.34	103.56	109.90
1	A	1393	U	O4'-C4'-C3'	-6.34	97.66	104.00
1	A	143	A	C5'-C4'-C3'	-6.34	106.50	116.00
1	A	915	A	C3'-C2'-C1'	-6.34	94.96	101.30
1	A	934	C	C4'-C3'-C2'	6.34	108.94	102.60
6	F	4	TYR	CB-CG-CD2	-6.34	111.30	120.80
1	A	176	C	O5'-C5'-C4'	-6.33	102.00	111.50
1	A	421	U	C5'-C4'-C3'	-6.33	105.70	115.20
1	A	1132	C	C5'-C4'-C3'	-6.33	106.50	116.00
1	A	30	U	C4'-C3'-C2'	6.33	108.93	102.60
1	A	482	A	P-O5'-C5'	-6.33	111.40	120.90
1	A	531	U	C4'-C3'-C2'	-6.33	96.27	102.60
1	A	685	G	C5'-C4'-C3'	-6.33	106.50	116.00
1	A	1295	U	C5'-C4'-C3'	-6.33	106.50	116.00
9	I	37	TYR	O-C-N	6.33	128.93	122.09
1	A	653	U	O3'-P-O5'	-6.33	94.50	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	165	ALA	CA-C-N	6.33	129.09	120.54
2	B	165	ALA	C-N-CA	6.33	129.09	120.54
1	A	58	C	C4'-C3'-C2'	6.33	108.93	102.60
1	A	71	A	P-O3'-C3'	-6.33	110.71	120.20
1	A	1321	U	P-O5'-C5'	6.33	130.39	120.90
1	A	564	C	C5'-C4'-C3'	-6.33	106.51	116.00
1	A	746	A	C2'-C3'-O3'	-6.33	104.21	113.70
1	A	308	C	C5'-C4'-O4'	-6.32	100.31	109.80
1	A	439	U	C4'-C3'-C2'	-6.32	96.28	102.60
1	A	557	G	P-O5'-C5'	6.32	130.38	120.90
10	J	72	ARG	N-CA-CB	6.32	121.86	111.62
12	L	111	GLN	N-CA-C	-6.32	102.68	110.65
16	P	81	ALA	N-CA-C	-6.32	95.24	107.44
1	A	860	A	C4'-C3'-C2'	-6.32	96.28	102.60
1	A	368	U	C5'-C4'-C3'	6.32	124.68	115.20
1	A	387	U	C4'-C3'-O3'	-6.32	103.52	113.00
1	A	648	A	O3'-P-O5'	-6.32	94.52	104.00
16	P	60	TRP	CA-C-N	6.32	129.12	120.46
16	P	60	TRP	C-N-CA	6.32	129.12	120.46
1	A	238	A	O4'-C1'-N9	6.32	117.98	108.50
1	A	594	U	C4'-C3'-C2'	6.32	108.92	102.60
1	A	868	C	C4'-C3'-O3'	-6.32	103.52	113.00
1	A	1148	U	C4'-C3'-O3'	-6.32	103.52	113.00
6	F	7	VAL	N-CA-CB	6.32	121.38	110.96
1	A	213	G	C5'-C4'-O4'	6.32	119.27	109.80
1	A	750	C	C4'-C3'-O3'	-6.32	103.53	113.00
4	D	20	LEU	N-CA-C	6.32	124.25	110.80
1	A	73	C	O4'-C1'-N1	6.31	117.97	108.50
1	A	86	G	O4'-C1'-N9	6.31	117.67	108.20
1	A	1405	G	C3'-C2'-C1'	-6.31	94.99	101.30
1	A	946	A	C5'-C4'-C3'	-6.31	106.53	116.00
1	A	1515	G	C4'-C3'-O3'	6.31	122.47	113.00
1	A	276	G	C8-N9-C1'	6.31	145.93	127.00
1	A	547	A	C5'-C4'-O4'	6.31	118.56	109.10
1	A	822	U	C4'-C3'-O3'	-6.31	103.54	113.00
1	A	1468	A	P-O3'-C3'	6.31	129.66	120.20
1	A	164	G	C3'-C2'-C1'	-6.31	94.99	101.30
1	A	222	C	C5'-C4'-O4'	-6.31	100.34	109.80
1	A	649	A	C4'-C3'-O3'	-6.31	103.54	113.00
1	A	292	G	C4'-C3'-C2'	6.31	108.91	102.60
1	A	606	G	O4'-C4'-C3'	-6.31	97.69	104.00
1	A	270	A	O5'-C5'-C4'	-6.30	102.04	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1160	G	P-O3'-C3'	-6.30	110.74	120.20
1	A	720	C	P-O5'-C5'	6.30	130.35	120.90
1	A	471	U	N1-C1'-C2'	6.30	121.45	112.00
1	A	660	C	P-O3'-C3'	-6.30	110.75	120.20
1	A	891	U	O3'-P-O5'	-6.30	94.55	104.00
2	B	91	VAL	CA-CB-CG1	-6.30	99.69	110.40
1	A	140	U	P-O3'-C3'	6.30	129.65	120.20
1	A	1420	U	P-O5'-C5'	6.30	130.35	120.90
1	A	321	A	N9-C1'-C2'	-6.30	102.56	112.00
1	A	704	A	C4'-C3'-C2'	-6.30	96.30	102.60
7	G	123	LEU	N-CA-C	6.29	118.66	111.11
1	A	196	A	C5'-C4'-C3'	6.29	125.44	116.00
1	A	344	A	C4'-C3'-O3'	6.29	118.84	109.40
1	A	1231	G	O3'-P-O5'	-6.29	94.56	104.00
1	A	1474	U	O3'-P-O5'	-6.29	94.56	104.00
1	A	1524	C	O4'-C4'-C3'	-6.29	97.71	104.00
10	J	14	ASP	N-CA-C	-6.29	99.95	109.95
1	A	455	G	C1'-O4'-C4'	-6.29	103.61	109.90
1	A	1493	A	C2'-C3'-O3'	6.29	123.14	113.70
12	L	99	GLY	N-CA-C	-6.29	107.00	115.36
1	A	178	C	O4'-C1'-N1	6.29	117.93	108.50
1	A	1315	U	O4'-C1'-C2'	6.29	113.89	107.60
1	A	1524	C	C3'-C2'-C1'	-6.29	95.01	101.30
22	W	276	TRP	N-CA-C	6.29	119.79	109.85
22	W	307	ASP	N-CA-C	-6.29	95.91	109.81
1	A	260	G	C4'-C3'-O3'	-6.29	103.57	113.00
1	A	650	G	C1'-O4'-C4'	-6.29	103.61	109.90
10	J	56	HIS	N-CA-C	-6.29	98.74	109.24
1	A	412	A	C5'-C4'-C3'	-6.29	105.77	115.20
1	A	887	G	P-O5'-C5'	-6.29	111.47	120.90
4	D	88	ASN	CA-C-N	6.29	128.61	120.44
4	D	88	ASN	C-N-CA	6.29	128.61	120.44
10	J	99	GLN	N-CA-CB	6.29	122.38	111.00
12	L	42	LYS	CA-C-N	6.29	131.49	121.62
12	L	42	LYS	C-N-CA	6.29	131.49	121.62
1	A	316	C	O5'-C5'-C4'	6.28	120.93	111.50
1	A	1080	A	C5'-C4'-C3'	-6.28	106.58	116.00
20	T	5	SER	N-CA-CB	6.28	121.11	110.49
1	A	958	A	O5'-C5'-C4'	-6.28	102.08	111.50
1	A	1457	G	O3'-P-O5'	-6.28	94.58	104.00
4	D	38	GLY	N-CA-C	-6.28	105.25	112.79
1	A	451	A	O4'-C1'-C2'	6.28	112.08	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	872	A	P-O3'-C3'	6.28	129.62	120.20
3	C	180	ASP	N-CA-C	-6.28	100.11	109.15
4	D	42	ALA	N-CA-C	-6.28	104.78	112.88
1	A	660	C	C1'-O4'-C4'	-6.28	103.62	109.90
1	A	705	G	C5'-C4'-O4'	6.28	119.22	109.80
22	W	160	ASN	N-CA-C	-6.28	100.69	110.42
1	A	126	G	C1'-C2'-O2'	-6.28	98.98	108.40
1	A	940	C	C3'-C2'-C1'	-6.28	95.02	101.30
1	A	1114	C	C5'-C4'-O4'	6.28	119.22	109.80
1	A	338	A	C3'-C2'-C1'	-6.28	95.02	101.30
1	A	622	A	O3'-P-O5'	6.28	113.41	104.00
2	B	60	ALA	N-CA-C	-6.27	97.44	110.80
5	E	52	ALA	N-CA-CB	6.27	121.09	110.49
10	J	88	MET	CA-C-N	6.27	133.52	121.54
10	J	88	MET	C-N-CA	6.27	133.52	121.54
1	A	78	A	O4'-C1'-C2'	-6.27	101.33	107.60
1	A	1507	A	O4'-C1'-N9	6.27	117.91	108.50
1	A	232	G	C8-N9-C1'	6.27	145.81	127.00
1	A	648	A	C2'-C3'-O3'	6.27	123.11	113.70
1	A	1095	U	P-O3'-C3'	-6.27	110.79	120.20
2	B	96	LEU	N-CA-CB	-6.27	102.15	111.43
22	W	279	GLU	CA-C-N	6.27	126.01	119.05
22	W	279	GLU	C-N-CA	6.27	126.01	119.05
1	A	287	U	P-O3'-C3'	-6.27	110.80	120.20
1	A	298	A	P-O5'-C5'	-6.27	111.50	120.90
1	A	425	G	O4'-C1'-N9	6.27	117.90	108.50
1	A	832	G	O3'-P-O5'	6.27	113.40	104.00
1	A	963	G	C5'-C4'-O4'	6.27	119.20	109.80
1	A	1093	A	C4'-C3'-C2'	-6.27	96.33	102.60
13	M	26	LYS	N-CA-CB	-6.27	100.83	110.42
14	N	3	GLN	CA-C-N	6.27	128.68	120.28
14	N	3	GLN	C-N-CA	6.27	128.68	120.28
15	O	44	GLU	N-CA-C	-6.27	101.14	110.23
1	A	1131	G	C5'-C4'-C3'	-6.27	106.60	116.00
18	R	45	GLY	N-CA-C	-6.27	106.39	114.85
1	A	657	U	C4'-C3'-C2'	-6.27	96.33	102.60
1	A	18	C	P-O3'-C3'	-6.26	110.81	120.20
1	A	197	A	O3'-P-O5'	6.26	113.40	104.00
4	D	197	HIS	CA-CB-CG	6.26	120.06	113.80
1	A	269	C	C2'-C3'-O3'	6.26	123.09	113.70
1	A	274	A	P-O3'-C3'	6.26	129.59	120.20
14	N	88	MET	N-CA-C	6.26	117.90	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	235	C	C4'-C3'-O3'	-6.26	103.61	113.00
1	A	372	C	O3'-P-O5'	-6.26	94.61	104.00
1	A	1041	G	C5'-C4'-C3'	-6.26	106.61	116.00
1	A	1143	G	O4'-C1'-N9	6.26	117.89	108.50
2	B	95	TRP	N-CA-C	6.26	120.44	109.80
6	F	38	ARG	N-CA-CB	6.26	121.07	110.49
1	A	121	U	C3'-C2'-C1'	-6.26	95.04	101.30
1	A	270	A	C5'-C4'-C3'	-6.26	106.62	116.00
1	A	341	C	P-O5'-C5'	6.26	130.29	120.90
1	A	873	A	P-O5'-C5'	6.26	130.28	120.90
1	A	1266	G	P-O3'-C3'	-6.26	110.81	120.20
1	A	1273	C	O4'-C1'-N1	6.26	117.89	108.50
22	W	36	PHE	N-CA-C	-6.26	99.94	108.38
1	A	729	A	O5'-C5'-C4'	-6.25	102.12	111.50
2	B	155	GLY	CA-C-N	6.25	137.06	121.80
2	B	155	GLY	C-N-CA	6.25	137.06	121.80
1	A	1421	G	P-O5'-C5'	6.25	130.28	120.90
6	F	78	PHE	CB-CA-C	-6.25	97.24	110.31
7	G	24	LYS	CA-C-N	6.25	128.94	120.44
7	G	24	LYS	C-N-CA	6.25	128.94	120.44
14	N	16	ALA	N-CA-C	6.25	120.47	112.34
16	P	27	ALA	N-CA-C	-6.25	99.02	108.96
1	A	644	U	C5'-C4'-C3'	-6.25	106.62	116.00
14	N	19	TYR	CB-CG-CD2	-6.25	111.42	120.80
1	A	90	C	O4'-C1'-N1	6.25	117.57	108.20
1	A	122	G	C4'-C3'-C2'	-6.25	96.35	102.60
1	A	257	G	C1'-O4'-C4'	-6.25	103.65	109.90
1	A	833	G	O4'-C4'-C3'	-6.25	97.75	104.00
1	A	1486	G	O5'-C5'-C4'	-6.25	102.13	111.50
1	A	1520	C	N1-C1'-C2'	-6.25	102.63	112.00
7	G	27	ASN	CA-C-O	-6.25	114.22	120.90
1	A	191	G	O5'-C5'-C4'	-6.25	102.13	111.50
1	A	264	C	C4'-C3'-C2'	-6.25	96.35	102.60
1	A	1485	U	P-O5'-C5'	6.25	130.27	120.90
1	A	1032	G	C1'-C2'-O2'	6.25	117.77	108.40
1	A	1046	A	C1'-O4'-C4'	-6.25	103.66	109.90
1	A	690	G	O3'-P-O5'	-6.24	94.64	104.00
1	A	867	G	O4'-C1'-C2'	-6.24	101.36	107.60
1	A	914	A	C5'-C4'-C3'	-6.24	106.64	116.00
1	A	1128	C	C1'-O4'-C4'	-6.24	103.66	109.90
1	A	75	G	N9-C1'-C2'	-6.24	102.64	112.00
1	A	183	C	C2'-C3'-O3'	6.24	118.86	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	212	G	O3'-P-O5'	-6.24	94.64	104.00
1	A	910	C	O3'-P-O5'	-6.24	94.64	104.00
1	A	964	A	P-O5'-C5'	6.24	130.26	120.90
1	A	439	U	O3'-P-O5'	-6.24	94.64	104.00
1	A	641	U	C5'-C4'-C3'	-6.24	106.64	116.00
1	A	1046	A	C4'-C3'-C2'	-6.24	96.36	102.60
1	A	1434	A	P-O5'-C5'	6.24	130.26	120.90
4	D	35	GLN	N-CA-C	-6.24	104.47	113.21
4	D	146	GLU	CA-C-N	6.24	132.35	122.93
4	D	146	GLU	C-N-CA	6.24	132.35	122.93
7	G	91	ARG	CA-C-N	6.24	127.64	119.84
7	G	91	ARG	C-N-CA	6.24	127.64	119.84
9	I	83	THR	CB-CA-C	-6.24	100.83	110.81
1	A	824	G	O5'-C5'-C4'	-6.24	102.15	111.50
1	A	1069	C	C4'-C3'-C2'	-6.24	96.36	102.60
2	B	195	VAL	CA-C-N	6.24	129.26	120.28
2	B	195	VAL	C-N-CA	6.24	129.26	120.28
1	A	1153	G	N9-C1'-C2'	-6.23	102.65	112.00
1	A	1299	A	O4'-C1'-C2'	6.23	112.03	105.80
1	A	1480	A	P-O5'-C5'	6.23	130.25	120.90
10	J	20	GLN	N-CA-C	-6.23	104.41	111.14
15	O	21	THR	CB-CA-C	6.23	122.83	110.42
20	T	38	ILE	CB-CA-C	-6.23	104.02	111.81
1	A	225	C	C1'-O4'-C4'	-6.23	103.67	109.90
1	A	590	U	O3'-P-O5'	-6.23	94.65	104.00
1	A	680	C	P-O3'-C3'	-6.23	110.85	120.20
1	A	1159	U	P-O3'-C3'	-6.23	110.85	120.20
1	A	225	C	O4'-C4'-C3'	-6.23	97.77	104.00
1	A	255	G	O3'-P-O5'	-6.23	94.65	104.00
1	A	558	G	O5'-C5'-C4'	-6.23	102.15	111.50
15	O	6	ALA	N-CA-CB	6.23	119.89	110.30
1	A	259	G	P-O5'-C5'	6.23	130.24	120.90
20	T	7	LYS	CA-C-O	-6.23	111.98	119.27
1	A	424	G	O3'-P-O5'	-6.22	94.66	104.00
1	A	879	C	O3'-P-O5'	-6.22	94.66	104.00
1	A	1367	C	P-O3'-C3'	-6.22	110.87	120.20
1	A	5	U	C5'-C4'-C3'	6.22	124.53	115.20
1	A	65	A	C4'-C3'-C2'	-6.22	96.38	102.60
1	A	70	U	N1-C1'-C2'	-6.22	102.67	112.00
1	A	95	C	O3'-P-O5'	-6.22	94.67	104.00
1	A	453	G	C2'-C3'-O3'	6.22	123.03	113.70
1	A	689	C	P-O5'-C5'	6.22	130.23	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1463	U	C3'-C2'-C1'	-6.22	95.08	101.30
1	A	140	U	C5'-C4'-C3'	-6.22	106.67	116.00
1	A	741	G	P-O3'-C3'	-6.22	110.87	120.20
1	A	626	G	P-O3'-C3'	-6.22	110.87	120.20
1	A	784	A	C5'-C4'-C3'	6.22	125.33	116.00
1	A	832	G	O5'-C5'-C4'	-6.22	102.18	111.50
1	A	1350	A	N9-C1'-C2'	-6.21	102.68	112.00
1	A	147	G	C1'-O4'-C4'	-6.21	103.69	109.90
1	A	427	U	C4'-C3'-O3'	-6.21	103.68	113.00
1	A	583	A	P-O5'-C5'	6.21	130.22	120.90
1	A	187	G	O4'-C4'-C3'	-6.21	97.79	104.00
1	A	1353	G	P-O3'-C3'	-6.21	110.89	120.20
17	Q	22	VAL	N-CA-CB	6.21	119.98	111.41
20	T	77	ASN	N-CA-C	6.21	119.02	111.82
1	A	1020	G	P-O5'-C5'	-6.20	111.59	120.90
1	A	1335	U	C2'-C3'-O3'	6.20	123.01	113.70
5	E	78	GLY	N-CA-C	-6.20	105.35	114.90
6	F	7	VAL	N-CA-C	-6.20	98.94	107.75
1	A	346	G	C4'-C3'-C2'	6.20	108.80	102.60
1	A	881	G	N9-C1'-C2'	-6.20	102.70	112.00
11	K	82	GLU	N-CA-CB	6.20	120.51	110.41
1	A	702	A	O4'-C4'-C3'	-6.19	97.81	104.00
1	A	1499	A	C4'-C3'-C2'	6.19	108.79	102.60
2	B	103	TRP	N-CA-CB	6.19	119.23	110.12
1	A	702	A	O3'-P-O5'	-6.19	94.71	104.00
1	A	703	G	C2'-C3'-O3'	6.19	118.79	109.50
1	A	1502	A	C2'-C3'-O3'	6.19	118.79	109.50
16	P	27	ALA	CA-C-N	6.19	132.08	123.04
16	P	27	ALA	C-N-CA	6.19	132.08	123.04
1	A	1231	G	C4'-C3'-O3'	-6.19	103.72	113.00
1	A	911	U	C4'-C3'-O3'	-6.19	103.72	113.00
1	A	1095	U	O4'-C1'-N1	6.19	117.78	108.50
21	U	43	GLU	CA-C-N	6.19	133.36	121.54
21	U	43	GLU	C-N-CA	6.19	133.36	121.54
1	A	31	G	O4'-C1'-C2'	-6.19	99.61	105.80
1	A	300	A	C3'-C2'-C1'	-6.19	95.11	101.30
1	A	445	G	O3'-P-O5'	-6.19	94.72	104.00
1	A	94	G	O4'-C1'-N9	-6.19	99.22	108.50
1	A	515	G	C5'-C4'-O4'	6.18	119.08	109.80
1	A	791	G	O3'-P-O5'	-6.18	94.72	104.00
1	A	1087	G	C3'-C2'-C1'	6.18	107.48	101.30
1	A	1174	G	C5'-C4'-C3'	-6.18	106.72	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	440	C	C3'-C2'-C1'	-6.18	95.12	101.30
1	A	1500	A	P-O3'-C3'	-6.18	110.93	120.20
17	Q	56	ASP	N-CA-C	-6.18	98.45	108.41
1	A	1373	G	O4'-C1'-C2'	6.18	113.78	107.60
1	A	369	G	O5'-C5'-C4'	6.18	120.77	111.50
1	A	652	U	C3'-C2'-O2'	6.18	119.97	110.70
1	A	977	A	C5'-C4'-C3'	-6.18	106.73	116.00
1	A	1241	G	P-O3'-C3'	-6.18	110.93	120.20
1	A	1295	U	O5'-C5'-C4'	-6.18	102.23	111.50
2	B	71	THR	N-CA-C	-6.18	96.36	107.98
11	K	120	CYS	N-CA-C	6.18	123.96	110.80
20	T	70	LYS	N-CA-C	-6.18	103.86	111.40
1	A	618	C	P-O3'-C3'	-6.18	110.93	120.20
1	A	1128	C	O5'-C5'-C4'	-6.18	102.23	111.50
1	A	191	G	C4'-C3'-C2'	-6.18	96.42	102.60
1	A	335	C	O4'-C1'-N1	6.18	117.76	108.50
16	P	54	LEU	CA-C-N	6.18	128.84	120.44
16	P	54	LEU	C-N-CA	6.18	128.84	120.44
1	A	560	A	C3'-C2'-C1'	-6.17	95.33	101.50
1	A	642	A	C5'-C4'-C3'	-6.17	106.74	116.00
1	A	772	U	P-O3'-C3'	-6.17	110.94	120.20
16	P	56	ARG	CA-C-N	6.17	128.85	120.77
16	P	56	ARG	C-N-CA	6.17	128.85	120.77
19	S	49	ALA	N-CA-C	6.17	118.91	107.99
1	A	1128	C	C4'-C3'-O3'	-6.17	103.75	113.00
1	A	1324	A	P-O5'-C5'	6.17	130.16	120.90
1	A	1374	A	O4'-C4'-C3'	-6.17	97.83	104.00
1	A	770	C	P-O3'-C3'	-6.17	110.95	120.20
1	A	1007	U	C4'-C3'-C2'	6.17	108.77	102.60
1	A	1180	A	C3'-C2'-C1'	-6.17	95.13	101.30
1	A	1373	G	C5'-C4'-C3'	6.17	125.25	116.00
1	A	318	G	O5'-C5'-C4'	-6.17	102.25	111.50
10	J	42	LEU	CB-CA-C	-6.17	99.85	109.22
1	A	256	U	O5'-C5'-C4'	-6.16	102.25	111.50
1	A	335	C	O3'-P-O5'	-6.16	94.75	104.00
1	A	1125	U	P-O5'-C5'	-6.16	111.66	120.90
2	B	204	ASP	N-CA-C	-6.16	105.27	114.64
1	A	198	G	O4'-C1'-C2'	6.16	113.76	107.60
1	A	669	G	C4'-C3'-C2'	-6.16	96.44	102.60
1	A	749	A	C5'-C4'-C3'	-6.16	106.76	116.00
1	A	1252	A	O4'-C1'-N9	6.16	117.74	108.50
1	A	1269	A	O3'-P-O5'	-6.16	94.76	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	89	VAL	CA-C-N	6.16	128.90	120.46
3	C	89	VAL	C-N-CA	6.16	128.90	120.46
1	A	465	A	N1-C6-N6	6.16	137.08	118.60
1	A	1361	G	C4'-C3'-O3'	-6.16	103.76	113.00
5	E	24	VAL	CA-C-N	6.16	132.54	122.07
5	E	24	VAL	C-N-CA	6.16	132.54	122.07
1	A	156	C	C3'-C2'-C1'	-6.16	95.14	101.30
1	A	689	C	O4'-C1'-N1	6.16	117.73	108.50
1	A	16	A	C5'-C4'-C3'	6.16	125.23	116.00
1	A	114	U	C3'-C2'-C1'	-6.16	95.14	101.30
1	A	422	C	C3'-C2'-C1'	-6.16	95.14	101.30
5	E	51	LYS	N-CA-C	-6.16	97.26	108.65
14	N	7	ALA	CA-C-N	6.16	128.85	120.54
14	N	7	ALA	C-N-CA	6.16	128.85	120.54
15	O	83	ARG	N-CA-C	-6.16	105.73	113.18
22	W	231	GLN	N-CA-CB	6.16	119.02	109.85
17	Q	51	GLU	N-CA-C	-6.15	105.42	113.17
1	A	669	G	P-O3'-C3'	-6.15	110.97	120.20
1	A	886	G	C3'-C2'-C1'	-6.15	95.15	101.30
1	A	922	G	P-O5'-C5'	-6.15	111.67	120.90
1	A	972	C	N1-C1'-C2'	-6.15	102.77	112.00
1	A	1338	G	O3'-P-O5'	-6.15	94.78	104.00
1	A	159	G	C4-N9-C1'	-6.15	108.06	126.50
1	A	1016	A	O3'-P-O5'	-6.15	94.78	104.00
1	A	1447	A	P-O5'-C5'	-6.15	111.68	120.90
1	A	667	G	C5'-C4'-C3'	6.14	125.22	116.00
1	A	1203	C	P-O3'-C3'	-6.14	110.98	120.20
12	L	69	GLU	CB-CG-CD	6.14	123.05	112.60
22	W	109	ARG	O-C-N	-6.14	117.78	121.71
1	A	932	C	C5'-C4'-C3'	-6.14	106.78	116.00
1	A	1335	U	C4'-C3'-O3'	-6.14	103.79	113.00
1	A	1477	U	O3'-P-O5'	-6.14	94.78	104.00
1	A	654	G	O3'-P-O5'	-6.14	94.79	104.00
1	A	986	U	O4'-C4'-C3'	-6.14	97.86	104.00
1	A	1443	C	C1'-O4'-C4'	-6.14	103.76	109.90
11	K	59	PRO	CA-C-N	6.14	128.83	120.54
11	K	59	PRO	C-N-CA	6.14	128.83	120.54
16	P	72	ALA	N-CA-CB	6.14	119.67	110.22
1	A	204	G	C2'-C3'-O3'	6.14	122.91	113.70
1	A	522	C	O5'-C5'-C4'	-6.14	102.30	111.50
1	A	1039	G	C5'-C4'-C3'	6.14	125.20	116.00
20	T	57	VAL	N-CA-CB	6.14	117.58	110.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	W	258	PHE	N-CA-CB	6.14	117.45	110.03
1	A	867	G	C2'-C3'-O3'	6.13	122.90	113.70
1	A	1029	U	O5'-C5'-C4'	-6.13	102.30	111.50
2	B	130	LYS	N-CA-CB	6.13	120.40	110.40
1	A	964	A	C4'-C3'-C2'	6.13	108.73	102.60
1	A	1278	G	C4'-C3'-C2'	-6.13	96.47	102.60
4	D	93	LEU	CA-C-N	6.13	129.11	120.28
4	D	93	LEU	C-N-CA	6.13	129.11	120.28
1	A	1325	C	C3'-C2'-C1'	-6.13	95.17	101.30
14	N	32	ASP	CA-CB-CG	6.13	118.73	112.60
20	T	67	HIS	CA-C-N	6.13	133.25	121.54
20	T	67	HIS	C-N-CA	6.13	133.25	121.54
1	A	83	C	C2'-C3'-O3'	6.13	122.89	113.70
1	A	450	G	C3'-C2'-C1'	-6.13	95.17	101.30
1	A	896	C	C3'-C2'-C1'	-6.13	95.17	101.30
1	A	1228	C	O3'-P-O5'	-6.13	94.81	104.00
1	A	1324	A	O3'-P-O5'	6.13	113.19	104.00
1	A	45	G	O5'-C5'-C4'	-6.13	102.31	111.50
1	A	440	C	C5'-C4'-O4'	6.13	118.99	109.80
2	B	68	PHE	N-CA-C	-6.13	97.21	107.99
10	J	56	HIS	CA-CB-CG	-6.13	107.67	113.80
11	K	45	THR	N-CA-CB	6.13	119.83	110.70
1	A	135	C	O5'-C5'-C4'	-6.12	102.31	111.50
2	B	176	ASN	CA-CB-CG	-6.12	106.47	112.60
1	A	159	G	C8-N9-C1'	6.12	145.37	127.00
1	A	535	A	O3'-P-O5'	-6.12	94.81	104.00
19	S	72	GLU	CB-CA-C	-6.12	100.50	110.79
5	E	68	ARG	N-CA-CB	6.12	120.83	110.49
17	Q	34	GLY	N-CA-C	6.12	127.69	113.18
1	A	230	G	C5'-C4'-C3'	-6.12	106.82	116.00
1	A	1082	A	C5'-C4'-C3'	-6.12	106.82	116.00
1	A	585	G	O3'-P-O5'	-6.12	94.82	104.00
1	A	945	G	C5'-C4'-C3'	6.12	125.18	116.00
4	D	99	ASN	CB-CA-C	-6.12	100.45	110.85
8	H	22	ALA	N-CA-C	-6.12	105.80	113.20
1	A	691	G	C4-N9-C1'	-6.12	108.15	126.50
12	L	63	THR	N-CA-C	-6.12	99.74	109.59
1	A	508	U	C5'-C4'-O4'	6.12	118.97	109.80
1	A	699	C	C4'-C3'-O3'	-6.12	103.83	113.00
1	A	831	A	N9-C1'-C2'	-6.12	102.83	112.00
1	A	340	U	O5'-C5'-C4'	-6.11	102.33	111.50
1	A	846	G	C4'-C3'-C2'	6.11	108.71	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	69	G	P-O3'-C3'	-6.11	111.03	120.20
1	A	799	G	P-O3'-C3'	6.11	129.37	120.20
1	A	531	U	C4'-C3'-O3'	6.11	122.17	113.00
1	A	1442	G	O3'-P-O5'	6.11	113.17	104.00
15	O	46	LYS	CB-CA-C	-6.11	98.26	110.42
1	A	289	G	C3'-C2'-C1'	-6.11	95.19	101.30
1	A	448	A	C4'-C3'-O3'	6.11	122.16	113.00
1	A	755	G	C3'-C2'-C1'	-6.11	95.19	101.30
19	S	51	HIS	CB-CA-C	-6.11	99.20	109.65
1	A	857	C	O3'-P-O5'	-6.11	94.84	104.00
1	A	1259	C	P-O3'-C3'	-6.11	111.04	120.20
6	F	5	GLU	N-CA-C	-6.11	101.44	110.48
10	J	86	ALA	CB-CA-C	-6.11	101.25	110.90
1	A	275	G	C5'-C4'-C3'	-6.10	106.84	116.00
1	A	1304	G	O5'-C5'-C4'	-6.10	102.34	111.50
1	A	79	G	O4'-C1'-C2'	-6.10	101.50	107.60
1	A	1127	G	C5'-C4'-O4'	-6.10	100.64	109.80
1	A	399	G	C1'-O4'-C4'	-6.10	103.80	109.90
1	A	519	C	O5'-C5'-C4'	-6.10	102.35	111.50
1	A	992	U	C3'-C2'-C1'	-6.10	95.40	101.50
1	A	1264	U	C3'-C2'-C1'	-6.10	95.20	101.30
1	A	575	G	C2'-C3'-O3'	6.10	118.65	109.50
1	A	1377	A	C4'-C3'-O3'	-6.10	103.85	113.00
1	A	1377	A	C5'-C4'-C3'	-6.10	106.85	116.00
15	O	49	HIS	CA-C-N	6.10	130.89	121.19
15	O	49	HIS	C-N-CA	6.10	130.89	121.19
22	W	300	ARG	CA-C-N	6.10	133.19	121.54
22	W	300	ARG	C-N-CA	6.10	133.19	121.54
1	A	637	C	C4'-C3'-O3'	-6.10	103.85	113.00
4	D	184	LYS	CA-C-N	6.10	126.42	119.83
4	D	184	LYS	C-N-CA	6.10	126.42	119.83
1	A	365	U	O4'-C4'-C3'	-6.09	97.91	104.00
1	A	753	A	P-O3'-C3'	6.09	129.34	120.20
1	A	1434	A	C4'-C3'-C2'	6.09	108.69	102.60
1	A	647	C	O5'-C5'-C4'	-6.09	102.36	111.50
1	A	797	C	O4'-C1'-N1	6.09	117.64	108.50
3	C	199	VAL	N-CA-CB	6.09	120.41	111.52
1	A	145	G	C1'-O4'-C4'	-6.09	103.81	109.90
1	A	159	G	C3'-C2'-C1'	-6.09	95.21	101.30
1	A	478	A	C3'-C2'-C1'	-6.09	95.21	101.30
1	A	1333	A	C5'-C4'-C3'	-6.09	106.87	116.00
1	A	1398	A	C5'-C4'-C3'	-6.09	106.87	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	M	80	MET	CG-SD-CE	-6.09	87.51	100.90
1	A	255	G	C4'-C3'-O3'	-6.08	103.88	113.00
1	A	931	C	C5'-C4'-C3'	6.08	125.12	116.00
1	A	1155	A	O3'-P-O5'	6.08	113.12	104.00
1	A	1247	U	O3'-P-O5'	6.08	113.13	104.00
1	A	729	A	O4'-C1'-N9	6.08	117.62	108.50
1	A	730	G	O4'-C1'-N9	6.08	117.62	108.50
1	A	1321	U	C4'-C3'-C2'	6.08	108.68	102.60
1	A	1421	G	C1'-O4'-C4'	-6.08	103.82	109.90
11	K	58	THR	N-CA-CB	6.08	116.80	109.74
12	L	101	LEU	N-CA-C	6.08	123.75	110.80
1	A	434	U	O3'-P-O5'	-6.08	94.88	104.00
19	S	54	ARG	N-CA-C	-6.08	104.85	112.93
1	A	373	A	C2'-C3'-O3'	-6.08	104.58	113.70
1	A	959	A	C1'-C2'-O2'	-6.08	99.28	108.40
1	A	61	G	O3'-P-O5'	-6.08	94.89	104.00
1	A	586	C	C2'-C3'-O3'	6.08	122.81	113.70
1	A	883	C	O5'-C5'-C4'	-6.08	102.39	111.50
14	N	60	ARG	N-CA-C	6.08	121.55	114.62
1	A	45	G	C2'-C3'-O3'	6.07	122.81	113.70
1	A	374	A	P-O3'-C3'	-6.07	111.09	120.20
1	A	626	G	O4'-C1'-N9	6.07	117.61	108.50
1	A	693	G	C4'-C3'-O3'	-6.07	103.89	113.00
1	A	1174	G	O4'-C4'-C3'	6.07	110.07	104.00
1	A	191	G	C8-N9-C1'	6.07	145.22	127.00
1	A	76	G	O4'-C1'-N9	-6.07	99.39	108.50
1	A	751	U	C4'-C3'-O3'	-6.07	103.89	113.00
1	A	1264	U	C2'-C3'-O3'	6.07	122.81	113.70
1	A	1444	U	O3'-P-O5'	-6.07	94.89	104.00
1	A	1461	G	O5'-C5'-C4'	-6.07	102.39	111.50
1	A	1058	G	O5'-C5'-C4'	-6.07	102.40	111.50
1	A	36	C	O3'-P-O5'	6.07	113.10	104.00
1	A	1324	A	C1'-O4'-C4'	-6.07	103.83	109.90
1	A	1429	A	P-O5'-C5'	-6.07	111.80	120.90
1	A	1439	G	C4'-C3'-O3'	-6.07	103.90	113.00
16	P	61	VAL	CA-C-N	6.07	126.85	119.99
16	P	61	VAL	C-N-CA	6.07	126.85	119.99
1	A	593	U	C4'-C3'-O3'	-6.07	103.90	113.00
1	A	1259	C	O3'-P-O5'	-6.07	94.90	104.00
1	A	1266	G	C8-N9-C1'	6.07	145.20	127.00
6	F	4	TYR	CA-CB-CG	-6.07	102.98	113.90
1	A	866	C	C2'-C3'-O3'	6.06	122.80	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	9	G	O5'-C5'-C4'	6.06	120.59	111.50
1	A	565	U	C4'-C3'-O3'	-6.06	103.91	113.00
1	A	824	G	C2'-C3'-O3'	6.06	122.79	113.70
1	A	835	U	P-O5'-C5'	6.06	129.99	120.90
1	A	919	A	C1'-O4'-C4'	-6.06	103.84	109.90
1	A	185	U	C5'-C4'-O4'	6.06	118.89	109.80
1	A	599	C	C1'-C2'-O2'	6.06	117.49	108.40
1	A	962	C	C3'-C2'-C1'	-6.06	95.24	101.30
1	A	1214	C	O3'-P-O5'	-6.06	94.91	104.00
4	D	139	ASN	N-CA-CB	6.06	120.73	110.49
5	E	34	ALA	N-CA-CB	6.06	121.28	110.80
7	G	74	VAL	N-CA-C	-6.06	99.43	108.46
8	H	100	ILE	CA-CB-CG2	-6.06	100.20	110.50
1	A	338	A	C8-N9-C1'	6.06	145.88	127.70
1	A	455	G	C8-N9-C1'	6.06	145.17	127.00
1	A	646	G	C4'-C3'-O3'	-6.06	103.92	113.00
1	A	1158	C	O4'-C1'-C2'	-6.05	101.55	107.60
1	A	1498	U	O4'-C1'-C2'	6.05	111.85	105.80
22	W	323	GLU	CA-C-N	6.05	128.39	120.28
22	W	323	GLU	C-N-CA	6.05	128.39	120.28
1	A	326	G	O3'-P-O5'	-6.05	94.92	104.00
1	A	921	U	O4'-C1'-N1	6.05	117.58	108.50
1	A	970	C	C4'-C3'-O3'	-6.05	103.92	113.00
3	C	122	GLN	N-CA-C	-6.05	103.32	112.04
1	A	82	G	C3'-C2'-C1'	-6.05	95.25	101.30
1	A	496	A	P-O3'-C3'	-6.05	111.12	120.20
1	A	648	A	C3'-C2'-C1'	-6.05	95.25	101.30
1	A	1246	A	C3'-C2'-C1'	-6.05	95.25	101.30
1	A	187	G	C5'-C4'-C3'	-6.05	106.93	116.00
1	A	278	G	O4'-C1'-C2'	6.05	113.65	107.60
1	A	399	G	P-O3'-C3'	-6.05	111.13	120.20
1	A	838	G	C1'-O4'-C4'	-6.05	103.85	109.90
1	A	919	A	C5'-C4'-C3'	-6.05	106.92	116.00
1	A	1156	G	C4-N9-C1'	-6.05	108.35	126.50
2	B	141	GLU	N-CA-C	6.05	123.69	110.80
8	H	77	VAL	N-CA-CB	6.05	121.21	111.23
18	R	44	THR	N-CA-C	-6.05	102.31	111.56
1	A	1168	U	C4'-C3'-C2'	-6.05	96.55	102.60
19	S	19	GLU	N-CA-C	-6.05	104.25	111.69
1	A	685	G	C4'-C3'-O3'	-6.05	103.93	113.00
1	A	854	U	P-O3'-C3'	-6.05	111.13	120.20
1	A	859	G	C4'-C3'-C2'	-6.05	96.55	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1108	G	C5'-C4'-C3'	-6.05	106.93	116.00
1	A	1444	U	C5'-C4'-O4'	6.05	118.87	109.80
22	W	312	ILE	N-CA-C	-6.05	104.61	110.72
1	A	709	U	C3'-C2'-C1'	-6.04	95.25	101.30
3	C	100	ILE	N-CA-C	-6.04	98.77	107.78
20	T	81	GLN	CB-CG-CD	-6.04	102.32	112.60
1	A	78	A	C4'-C3'-O3'	-6.04	103.94	113.00
1	A	239	U	C6-N1-C1'	6.04	139.33	121.20
1	A	377	G	P-O3'-C3'	-6.04	111.14	120.20
1	A	665	A	P-O3'-C3'	-6.04	111.13	120.20
1	A	210	C	C2'-C3'-O3'	6.04	118.56	109.50
1	A	500	G	O5'-C5'-C4'	-6.04	102.44	111.50
1	A	722	G	C4'-C3'-C2'	6.04	108.64	102.60
1	A	424	G	O4'-C1'-C2'	-6.04	101.56	107.60
1	A	1305	G	C4-N9-C1'	-6.04	108.38	126.50
1	A	852	G	P-O3'-C3'	-6.04	111.14	120.20
1	A	1004	A	O4'-C4'-C3'	-6.04	97.96	104.00
1	A	606	G	C3'-C2'-C1'	-6.04	95.26	101.30
5	E	76	ASN	N-CA-CB	6.04	120.69	110.49
1	A	160	A	P-O5'-C5'	-6.04	111.85	120.90
1	A	164	G	P-O3'-C3'	-6.04	111.15	120.20
1	A	509	A	P-O5'-C5'	-6.04	111.84	120.90
1	A	697	U	C4'-C3'-O3'	-6.04	103.95	113.00
1	A	1131	G	O4'-C4'-C3'	-6.04	97.96	104.00
1	A	1236	A	C3'-C2'-O2'	6.04	119.75	110.70
8	H	48	PHE	N-CA-C	-6.04	100.58	109.81
1	A	361	G	O5'-C5'-C4'	-6.03	102.45	111.50
1	A	513	C	C3'-C2'-C1'	-6.03	95.27	101.30
1	A	868	C	O3'-P-O5'	-6.03	94.95	104.00
1	A	1248	A	O4'-C4'-C3'	-6.03	97.97	104.00
1	A	203	G	O4'-C1'-N9	6.03	117.55	108.50
1	A	1526	G	P-O3'-C3'	-6.03	111.15	120.20
8	H	4	ASP	N-CA-CB	6.03	121.11	110.37
10	J	99	GLN	CB-CG-CD	6.03	122.86	112.60
1	A	671	G	C1'-O4'-C4'	-6.03	103.87	109.90
1	A	1145	A	O4'-C4'-C3'	-6.03	97.97	104.00
1	A	1279	G	C5'-C4'-O4'	6.03	118.14	109.10
1	A	1442	G	O5'-C5'-C4'	6.03	120.55	111.50
1	A	1467	C	O4'-C1'-N1	6.03	117.55	108.50
1	A	1488	G	C5'-C4'-C3'	-6.03	106.95	116.00
1	A	65	A	C4'-C3'-O3'	6.03	118.44	109.40
1	A	270	A	C1'-O4'-C4'	-6.03	103.87	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	658	C	O4'-C4'-C3'	-6.03	97.97	104.00
1	A	197	A	P-O3'-C3'	6.03	129.24	120.20
1	A	222	C	O4'-C4'-C3'	-6.03	97.97	104.00
1	A	253	A	O5'-C5'-C4'	-6.03	102.46	111.50
1	A	855	U	C4'-C3'-O3'	-6.03	103.96	113.00
1	A	1365	G	O4'-C1'-N9	6.03	117.54	108.50
1	A	686	U	O5'-C5'-C4'	-6.03	102.66	111.70
1	A	1182	G	O4'-C1'-C2'	6.03	111.83	105.80
1	A	1331	G	O4'-C1'-N9	6.03	117.54	108.50
3	C	38	VAL	N-CA-C	-6.03	103.85	112.35
10	J	70	HIS	CA-CB-CG	-6.03	107.78	113.80
12	L	101	LEU	CA-C-N	6.03	133.05	121.54
12	L	101	LEU	C-N-CA	6.03	133.05	121.54
1	A	320	A	P-O3'-C3'	-6.02	111.16	120.20
1	A	1439	G	C3'-C2'-C1'	-6.02	95.28	101.30
1	A	64	G	O4'-C4'-C3'	6.02	110.02	104.00
1	A	100	G	C5'-C4'-C3'	-6.02	106.97	116.00
1	A	123	U	O5'-C5'-C4'	-6.02	102.47	111.50
1	A	279	A	O3'-P-O5'	-6.02	94.97	104.00
2	B	162	VAL	N-CA-C	-6.02	99.04	108.86
1	A	978	A	C4'-C3'-O3'	-6.02	103.97	113.00
4	D	50	TYR	CB-CA-C	-6.02	100.75	110.74
12	L	85	ARG	N-CA-CB	6.02	120.75	111.24
1	A	765	G	P-O3'-C3'	-6.02	111.17	120.20
1	A	1163	A	P-O3'-C3'	-6.02	111.17	120.20
1	A	1463	U	C4'-C3'-O3'	-6.02	103.97	113.00
1	A	1497	G	C2'-C3'-O3'	6.02	122.73	113.70
2	B	30	ILE	CB-CA-C	-6.02	101.42	111.29
3	C	3	LYS	CA-C-N	6.02	132.81	121.97
3	C	3	LYS	C-N-CA	6.02	132.81	121.97
1	A	1115	U	O4'-C4'-C3'	-6.02	97.98	104.00
13	M	16	ILE	N-CA-C	-6.02	104.89	113.07
1	A	217	C	P-O5'-C5'	-6.01	111.88	120.90
1	A	1059	C	C4'-C3'-C2'	-6.01	96.59	102.60
1	A	1071	C	C5'-C4'-C3'	6.01	125.02	116.00
1	A	1363	A	O4'-C4'-C3'	-6.01	100.09	106.10
1	A	490	C	P-O5'-C5'	-6.01	111.88	120.90
21	U	41	THR	N-CA-C	-6.01	104.77	114.09
1	A	330	C	O3'-P-O5'	-6.01	94.99	104.00
1	A	485	U	P-O3'-C3'	6.01	129.22	120.20
1	A	712	A	O3'-P-O5'	-6.01	94.99	104.00
1	A	1127	G	C4'-C3'-O3'	-6.01	103.98	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1164	G	C4'-C3'-C2'	-6.01	96.59	102.60
3	C	6	PRO	O-C-N	6.01	128.67	122.18
11	K	36	ARG	N-CA-C	-6.01	104.81	111.36
1	A	1431	A	C4'-C3'-O3'	-6.01	103.99	113.00
17	Q	70	LYS	CB-CA-C	6.01	122.38	110.42
1	A	184	G	C4'-C3'-C2'	-6.01	96.59	102.60
1	A	586	C	O4'-C1'-N1	6.01	117.51	108.50
11	K	85	VAL	N-CA-C	-6.01	99.93	108.58
1	A	176	C	P-O3'-C3'	-6.00	111.20	120.20
1	A	177	G	O4'-C1'-C2'	-6.00	101.60	107.60
1	A	759	A	O3'-P-O5'	-6.00	95.00	104.00
1	A	859	G	O3'-P-O5'	-6.00	95.00	104.00
1	A	117	G	C4'-C3'-O3'	-6.00	104.00	113.00
1	A	129	A	C2'-C3'-O3'	6.00	118.50	109.50
1	A	516	U	C4'-C3'-O3'	-6.00	104.00	113.00
1	A	252	U	O4'-C1'-C2'	-6.00	101.60	107.60
1	A	257	G	C2'-C3'-O3'	6.00	122.69	113.70
1	A	271	C	O3'-P-O5'	-6.00	95.01	104.00
1	A	846	G	C2'-C3'-O3'	6.00	122.69	113.70
1	A	862	C	C5'-C4'-O4'	6.00	118.79	109.80
14	N	18	LYS	N-CA-C	6.00	117.49	111.07
15	O	71	ARG	NE-CZ-NH1	-6.00	115.50	121.50
1	A	795	C	O5'-C5'-C4'	-6.00	102.51	111.50
1	A	55	A	O3'-P-O5'	-5.99	95.01	104.00
1	A	153	C	O5'-C5'-C4'	-5.99	102.51	111.50
1	A	61	G	C8-N9-C1'	5.99	144.97	127.00
1	A	305	G	O5'-C5'-C4'	-5.99	102.71	111.70
1	A	735	C	C5'-C4'-C3'	5.99	124.99	116.00
8	H	82	LEU	CA-C-N	5.99	132.46	121.85
8	H	82	LEU	C-N-CA	5.99	132.46	121.85
1	A	166	U	C3'-C2'-C1'	-5.99	95.31	101.30
1	A	273	U	C2'-C3'-O3'	5.99	122.69	113.70
1	A	373	A	C5'-C4'-O4'	-5.99	100.81	109.80
1	A	896	C	C4'-C3'-O3'	-5.99	104.01	113.00
1	A	1363	A	C5'-C4'-O4'	5.99	118.08	109.10
1	A	600	A	P-O3'-C3'	-5.99	111.22	120.20
1	A	1409	C	C4'-C3'-O3'	-5.99	104.02	113.00
1	A	181	A	O3'-P-O5'	-5.99	95.02	104.00
1	A	178	C	O3'-P-O5'	-5.99	95.02	104.00
1	A	937	A	O5'-C5'-C4'	-5.99	102.52	111.50
1	A	325	A	P-O5'-C5'	-5.98	111.92	120.90
5	E	109	ALA	N-CA-C	-5.98	106.63	112.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	811	C	C4'-C3'-C2'	-5.98	96.62	102.60
16	P	47	GLU	CB-CA-C	5.98	119.77	111.63
1	A	721	G	O4'-C1'-N9	5.98	117.17	108.20
1	A	1047	G	C4'-C3'-O3'	-5.98	104.03	113.00
8	H	92	PRO	N-CA-C	-5.98	100.15	112.47
8	H	108	GLY	O-C-N	5.98	129.08	122.68
1	A	451	A	C2'-C3'-O3'	5.98	118.47	109.50
1	A	946	A	C3'-C2'-O2'	5.98	119.67	110.70
1	A	1292	G	C4'-C3'-O3'	5.98	121.97	113.00
1	A	1329	A	C3'-C2'-C1'	-5.98	95.32	101.30
1	A	1230	C	O5'-C5'-C4'	-5.98	102.54	111.50
1	A	99	C	O4'-C1'-N1	5.97	117.46	108.50
1	A	609	A	O3'-P-O5'	-5.97	95.04	104.00
1	A	87	C	C3'-C2'-C1'	5.97	107.27	101.30
1	A	1150	A	O3'-P-O5'	5.97	112.96	104.00
2	B	59	ILE	CA-C-O	5.97	128.25	120.78
15	O	54	GLY	CA-C-N	5.97	128.28	120.28
15	O	54	GLY	C-N-CA	5.97	128.28	120.28
20	T	69	ASN	CA-CB-CG	-5.97	106.63	112.60
1	A	273	U	C5'-C4'-O4'	5.97	118.75	109.80
1	A	1514	G	C3'-C2'-C1'	-5.97	95.33	101.30
7	G	8	GLN	N-CA-C	5.97	123.52	110.80
14	N	42	ASN	CA-CB-CG	-5.97	106.63	112.60
1	A	489	C	C4'-C3'-C2'	-5.97	96.63	102.60
1	A	887	G	N9-C1'-C2'	-5.97	103.05	112.00
1	A	1236	A	C5'-C4'-O4'	5.97	118.75	109.80
3	C	29	ALA	CA-C-N	5.97	128.87	120.28
3	C	29	ALA	C-N-CA	5.97	128.87	120.28
1	A	13	U	P-O3'-C3'	5.96	129.15	120.20
1	A	329	A	P-O3'-C3'	5.96	129.15	120.20
1	A	672	U	O5'-C5'-C4'	-5.96	102.55	111.50
1	A	759	A	O5'-C5'-C4'	-5.96	102.55	111.50
1	A	1261	A	C4'-C3'-C2'	-5.96	96.64	102.60
1	A	1343	G	C4'-C3'-O3'	-5.96	104.05	113.00
8	H	61	THR	CA-C-N	5.96	129.30	120.95
8	H	61	THR	C-N-CA	5.96	129.30	120.95
1	A	564	C	O3'-P-O5'	-5.96	95.06	104.00
4	D	31	CYS	N-CA-C	-5.96	98.10	110.80
8	H	124	ILE	CB-CA-C	-5.96	105.88	112.68
18	R	20	ILE	N-CA-C	-5.96	104.96	113.07
1	A	615	G	P-O3'-C3'	-5.96	111.26	120.20
1	A	1211	U	P-O5'-C5'	5.96	129.84	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1235	U	P-O5'-C5'	-5.96	111.96	120.90
1	A	1263	C	C1'-O4'-C4'	-5.96	103.94	109.90
3	C	195	ILE	CB-CA-C	-5.96	102.81	110.98
9	I	117	LEU	N-CA-CB	5.96	119.25	110.49
16	P	39	PHE	CA-CB-CG	-5.96	107.84	113.80
3	C	4	VAL	CA-CB-CG1	5.96	120.53	110.40
1	A	78	A	C3'-C2'-C1'	5.96	107.26	101.30
1	A	1278	G	O3'-P-O5'	-5.96	95.06	104.00
14	N	12	ARG	CA-C-N	5.96	130.07	120.30
14	N	12	ARG	C-N-CA	5.96	130.07	120.30
1	A	252	U	P-O5'-C5'	-5.96	111.96	120.90
1	A	462	G	C3'-C2'-C1'	-5.96	95.34	101.30
1	A	1007	U	C2'-C3'-O3'	5.96	122.63	113.70
1	A	1334	G	C3'-C2'-O2'	5.96	119.63	110.70
13	M	74	MET	CA-C-N	5.96	128.54	120.38
13	M	74	MET	C-N-CA	5.96	128.54	120.38
17	Q	22	VAL	CB-CA-C	-5.96	101.81	110.63
18	R	30	ASN	N-CA-C	-5.96	106.05	113.38
1	A	282	A	C5'-C4'-C3'	-5.96	107.07	116.00
1	A	1455	G	O4'-C1'-C2'	-5.96	101.64	107.60
10	J	97	ASP	CA-C-N	5.96	130.94	123.14
10	J	97	ASP	C-N-CA	5.96	130.94	123.14
19	S	45	GLY	N-CA-C	-5.96	99.07	113.18
5	E	135	VAL	CA-C-O	-5.95	114.92	121.29
19	S	42	ASN	N-CA-C	-5.95	105.98	113.18
1	A	691	G	C8-N9-C1'	5.95	144.86	127.00
1	A	177	G	P-O3'-C3'	-5.95	111.27	120.20
1	A	272	C	C4'-C3'-O3'	-5.95	104.08	113.00
1	A	738	C	C4'-C3'-O3'	-5.95	104.08	113.00
1	A	1082	A	O5'-C5'-C4'	-5.95	102.57	111.50
1	A	1223	C	N1-C1'-C2'	5.95	122.92	114.00
1	A	322	C	C3'-C2'-C1'	-5.95	95.35	101.30
1	A	599	C	C1'-O4'-C4'	-5.95	103.95	109.90
1	A	983	A	P-O3'-C3'	-5.95	111.28	120.20
1	A	1414	U	C4'-C3'-C2'	5.95	108.55	102.60
1	A	1496	C	P-O5'-C5'	5.95	129.82	120.90
3	C	169	GLU	N-CA-C	-5.95	98.13	110.80
7	G	31	VAL	CA-C-N	5.95	131.72	122.26
7	G	31	VAL	C-N-CA	5.95	131.72	122.26
11	K	33	ILE	N-CA-CB	5.95	120.38	110.86
1	A	877	G	N9-C1'-C2'	-5.95	103.08	112.00
1	A	885	G	P-O3'-C3'	-5.95	111.28	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1450	U	C1'-O4'-C4'	-5.95	103.95	109.90
1	A	96	U	C4'-C3'-C2'	5.95	108.55	102.60
1	A	227	G	C3'-C2'-C1'	-5.95	95.36	101.30
1	A	519	C	C4'-C3'-O3'	-5.95	104.08	113.00
1	A	12	U	O5'-C5'-C4'	-5.94	102.58	111.50
1	A	556	C	C6-N1-C2	-5.94	102.37	120.20
1	A	843	U	C1'-O4'-C4'	-5.94	103.96	109.90
4	D	25	ARG	N-CA-CB	5.94	121.51	110.99
1	A	71	A	C1'-O4'-C4'	5.94	115.84	109.90
1	A	155	A	C3'-C2'-C1'	-5.94	95.36	101.30
1	A	456	A	C4'-C3'-C2'	5.94	108.54	102.60
1	A	750	C	O3'-P-O5'	-5.94	95.08	104.00
1	A	937	A	O4'-C1'-N9	5.94	117.42	108.50
1	A	991	U	C1'-C2'-O2'	-5.94	102.89	111.80
1	A	1172	C	P-O3'-C3'	-5.94	111.29	120.20
1	A	95	C	C4'-C3'-C2'	5.94	108.54	102.60
1	A	142	G	C5'-C4'-O4'	5.94	118.71	109.80
1	A	196	A	C4-N9-C1'	5.94	144.11	126.30
1	A	366	A	C4'-C3'-C2'	5.94	108.54	102.60
1	A	904	U	C3'-C2'-C1'	-5.94	95.36	101.30
1	A	1512	U	C5'-C4'-C3'	5.94	124.91	116.00
19	S	44	ILE	N-CA-C	-5.94	101.88	109.30
1	A	200	G	C3'-C2'-C1'	-5.94	95.36	101.30
1	A	906	A	C8-N9-C1'	5.94	145.51	127.70
1	A	1258	G	P-O5'-C5'	5.94	129.80	120.90
12	L	5	GLN	CB-CA-C	-5.94	100.94	110.79
1	A	680	C	C3'-C2'-C1'	-5.93	95.36	101.30
1	A	226	G	O4'-C4'-C3'	-5.93	98.07	104.00
1	A	1005	A	P-O3'-C3'	-5.93	111.30	120.20
1	A	1237	C	C2'-C3'-O3'	5.93	122.60	113.70
1	A	1342	C	P-O5'-C5'	5.93	129.80	120.90
1	A	186	C	O5'-C5'-C4'	-5.93	102.60	111.50
1	A	579	A	C3'-C2'-O2'	5.93	119.60	110.70
1	A	737	C	O4'-C1'-N1	5.93	117.40	108.50
1	A	1364	U	C5'-C4'-O4'	5.93	118.00	109.10
1	A	290	C	O5'-C5'-C4'	-5.93	102.61	111.50
1	A	724	G	O3'-P-O5'	-5.93	95.11	104.00
1	A	848	C	C3'-C2'-C1'	-5.93	95.37	101.30
1	A	1070	U	O5'-C5'-C4'	-5.93	102.60	111.50
1	A	1374	A	C5'-C4'-C3'	-5.93	107.11	116.00
3	C	189	HIS	CA-C-N	-5.93	113.32	122.87
3	C	189	HIS	C-N-CA	-5.93	113.32	122.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	E	139	THR	N-CA-CB	5.93	118.94	110.16
9	I	115	VAL	CB-CA-C	-5.93	105.07	111.59
1	A	150	U	P-O3'-C3'	-5.93	111.31	120.20
2	B	122	ASP	CA-C-N	5.93	133.03	121.41
2	B	122	ASP	C-N-CA	5.93	133.03	121.41
12	L	102	ASP	CB-CA-C	-5.93	98.62	110.42
14	N	49	THR	N-CA-C	-5.93	106.03	113.20
1	A	635	A	C5'-C4'-O4'	5.93	118.69	109.80
1	A	1157	A	C4'-C3'-C2'	-5.93	96.67	102.60
1	A	1168	U	P-O3'-C3'	5.93	129.09	120.20
19	S	24	SER	N-CA-C	-5.93	104.71	112.41
21	U	9	GLU	CA-C-N	5.93	125.93	119.89
21	U	9	GLU	C-N-CA	5.93	125.93	119.89
1	A	71	A	C4'-C3'-O3'	-5.92	104.11	113.00
1	A	314	C	O4'-C1'-N1	5.92	117.39	108.50
1	A	947	G	C5'-C4'-C3'	-5.92	107.11	116.00
1	A	1005	A	O5'-C5'-C4'	-5.92	102.61	111.50
1	A	1043	G	C4'-C3'-O3'	-5.92	104.11	113.00
1	A	1484	C	O5'-C5'-C4'	-5.92	102.61	111.50
1	A	1020	G	O5'-C5'-C4'	-5.92	102.61	111.50
1	A	193	C	C4'-C3'-O3'	-5.92	104.12	113.00
1	A	254	G	C5'-C4'-C3'	-5.92	107.12	116.00
1	A	286	C	P-O5'-C5'	-5.92	112.02	120.90
1	A	343	U	C2-N1-C1'	-5.92	99.93	117.70
1	A	345	C	C3'-C2'-C1'	-5.92	95.38	101.30
1	A	503	C	C4'-C3'-O3'	-5.92	104.12	113.00
20	T	42	ASP	N-CA-CB	5.92	118.83	110.24
1	A	91	U	C2'-C3'-O3'	-5.92	104.82	113.70
8	H	39	LEU	CA-C-N	5.92	128.47	120.65
8	H	39	LEU	C-N-CA	5.92	128.47	120.65
1	A	95	C	O4'-C1'-N1	5.92	117.38	108.50
1	A	79	G	N9-C1'-C2'	5.92	120.88	112.00
1	A	313	A	C3'-C2'-C1'	-5.92	95.38	101.30
1	A	431	A	O4'-C4'-C3'	-5.92	98.08	104.00
1	A	485	U	C5'-C4'-C3'	-5.92	106.33	115.20
4	D	122	ILE	N-CA-C	-5.92	100.54	108.35
1	A	1198	G	O5'-C5'-C4'	-5.92	102.63	111.50
1	A	1345	U	O5'-C5'-C4'	-5.92	102.83	111.70
13	M	64	VAL	CA-C-N	5.92	132.84	121.54
13	M	64	VAL	C-N-CA	5.92	132.84	121.54
1	A	392	C	C3'-C2'-C1'	5.91	107.21	101.30
1	A	538	G	C3'-C2'-C1'	-5.91	95.39	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	146	LYS	N-CA-C	-5.91	103.85	113.19
4	D	33	ILE	N-CA-C	-5.91	99.97	108.42
1	A	530	G	C4'-C3'-C2'	5.91	108.51	102.60
1	A	327	A	C5'-C4'-C3'	-5.91	106.34	115.20
1	A	274	A	P-O5'-C5'	5.91	129.76	120.90
1	A	650	G	O4'-C4'-C3'	5.91	109.91	104.00
1	A	895	G	N9-C1'-C2'	-5.91	103.14	112.00
22	W	224	LEU	N-CA-C	-5.91	104.84	111.28
1	A	278	G	P-O3'-C3'	-5.90	111.34	120.20
1	A	780	A	N1-C6-N6	5.90	136.31	118.60
1	A	281	G	C2'-C3'-O3'	5.90	118.35	109.50
1	A	564	C	C4'-C3'-O3'	-5.90	104.14	113.00
1	A	713	G	C5'-C4'-O4'	5.90	118.65	109.80
1	A	914	A	O4'-C1'-N9	5.90	117.35	108.50
6	F	9	MET	N-CA-C	-5.90	102.18	110.50
1	A	563	A	P-O5'-C5'	-5.90	112.05	120.90
1	A	862	C	O4'-C1'-N1	5.90	117.35	108.50
1	A	956	U	C1'-C2'-O2'	5.90	117.25	108.40
1	A	1115	U	P-O3'-C3'	-5.90	111.35	120.20
1	A	1035	A	O4'-C1'-N9	5.90	117.35	108.50
1	A	566	G	P-O5'-C5'	-5.90	112.06	120.90
1	A	1191	A	O5'-C5'-C4'	-5.90	102.66	111.50
1	A	322	C	O4'-C4'-C3'	-5.89	98.11	104.00
1	A	1429	A	C3'-C2'-C1'	-5.89	95.41	101.30
16	P	23	ASP	N-CA-CB	5.89	119.48	109.87
1	A	813	U	O4'-C1'-N1	5.89	117.34	108.50
1	A	1469	C	C4'-C3'-O3'	-5.89	104.16	113.00
5	E	99	SER	N-CA-C	-5.89	100.45	109.41
15	O	45	HIS	CA-CB-CG	5.89	119.69	113.80
1	A	231	U	C3'-C2'-C1'	-5.89	95.41	101.30
1	A	517	G	P-O3'-C3'	5.89	129.03	120.20
1	A	1115	U	P-O5'-C5'	5.89	129.73	120.90
1	A	1406	U	P-O3'-C3'	-5.89	111.36	120.20
2	B	159	ALA	N-CA-CB	5.89	120.44	110.49
1	A	198	G	O4'-C1'-N9	5.89	117.33	108.50
1	A	21	G	C1'-O4'-C4'	-5.89	104.01	109.90
1	A	287	U	C1'-O4'-C4'	-5.89	104.01	109.90
1	A	1024	G	O4'-C1'-N9	5.89	117.33	108.50
2	B	145	ASN	N-CA-CB	-5.89	101.97	110.56
1	A	241	G	O3'-P-O5'	-5.88	95.17	104.00
1	A	582	C	P-O5'-C5'	5.88	129.73	120.90
1	A	936	C	O4'-C4'-C3'	-5.88	98.11	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	938	A	O5'-C5'-C4'	-5.88	102.67	111.50
1	A	1110	A	O3'-P-O5'	-5.88	95.17	104.00
1	A	1355	G	P-O5'-C5'	-5.88	112.07	120.90
18	R	38	ILE	CA-C-N	5.88	133.02	122.13
18	R	38	ILE	C-N-CA	5.88	133.02	122.13
1	A	622	A	C3'-C2'-C1'	-5.88	95.42	101.30
5	E	135	VAL	N-CA-C	5.88	116.01	110.30
14	N	8	ARG	CB-CA-C	-5.88	101.40	110.81
1	A	839	C	C3'-C2'-C1'	-5.88	95.42	101.30
1	A	1488	G	C3'-C2'-O2'	5.88	119.52	110.70
1	A	1498	U	P-O5'-C5'	-5.88	112.08	120.90
17	Q	57	VAL	N-CA-CB	-5.88	105.55	111.90
18	R	51	GLN	N-CA-CB	5.88	118.77	110.12
1	A	165	G	C2'-C3'-O3'	5.88	122.52	113.70
19	S	18	VAL	N-CA-C	-5.88	103.56	111.44
1	A	846	G	C1'-O4'-C4'	-5.88	104.02	109.90
1	A	848	C	C1'-O4'-C4'	-5.88	104.02	109.90
1	A	1153	G	O4'-C1'-N9	5.88	117.32	108.50
7	G	100	MET	CG-SD-CE	-5.88	87.97	100.90
11	K	122	PRO	CB-CA-C	-5.88	103.75	110.92
12	L	77	SER	N-CA-CB	5.88	119.39	110.45
18	R	54	LEU	CA-C-N	5.88	128.43	120.38
18	R	54	LEU	C-N-CA	5.88	128.43	120.38
1	A	169	C	O3'-P-O5'	-5.88	95.19	104.00
1	A	997	U	C3'-C2'-C1'	-5.88	95.42	101.30
6	F	59	TYR	N-CA-C	-5.88	100.12	109.23
20	T	66	ILE	N-CA-CB	5.88	120.92	111.23
1	A	470	C	C3'-C2'-C1'	-5.87	95.43	101.30
1	A	1193	G	N9-C1'-C2'	-5.87	103.19	112.00
1	A	1265	C	O4'-C1'-N1	5.87	117.31	108.50
16	P	50	THR	N-CA-C	-5.87	98.03	108.13
1	A	678	U	C5'-C4'-C3'	5.87	124.81	116.00
1	A	943	U	O3'-P-O5'	-5.87	95.19	104.00
14	N	32	ASP	N-CA-C	-5.87	99.82	109.80
17	Q	36	PHE	CA-CB-CG	-5.87	107.93	113.80
1	A	163	C	P-O3'-C3'	-5.87	111.40	120.20
1	A	1041	G	C5'-C4'-O4'	5.87	118.60	109.80
1	A	725	G	O5'-C5'-C4'	-5.87	102.70	111.50
1	A	845	A	C5'-C4'-C3'	5.87	124.80	116.00
1	A	1089	G	C5'-C4'-C3'	-5.87	107.20	116.00
1	A	1268	G	O5'-C5'-C4'	-5.87	102.70	111.50
1	A	1450	U	P-O5'-C5'	5.87	129.70	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	S	51	HIS	N-CA-CB	5.87	118.59	109.97
1	A	44	A	P-O5'-C5'	-5.86	112.11	120.90
1	A	144	G	C5'-C4'-O4'	5.86	118.59	109.80
1	A	201	G	C5'-C4'-C3'	-5.86	107.21	116.00
1	A	230	G	P-O3'-C3'	-5.86	111.41	120.20
1	A	874	G	C3'-C2'-C1'	-5.86	95.44	101.30
1	A	1093	A	O3'-P-O5'	5.86	112.80	104.00
1	A	1514	G	P-O3'-C3'	-5.86	111.40	120.20
12	L	118	VAL	CA-C-N	5.86	130.89	122.21
12	L	118	VAL	C-N-CA	5.86	130.89	122.21
1	A	243	A	C2'-C3'-O3'	-5.86	104.91	113.70
1	A	1307	U	C3'-C2'-C1'	-5.86	95.44	101.30
2	B	151	LYS	N-CA-CB	5.86	118.82	110.67
1	A	595	A	O5'-C5'-C4'	-5.86	102.91	111.70
1	A	1066	C	O3'-P-O5'	-5.86	95.21	104.00
1	A	1447	A	O4'-C1'-N9	5.86	117.29	108.50
7	G	95	ARG	CA-C-N	5.86	128.94	120.79
7	G	95	ARG	C-N-CA	5.86	128.94	120.79
8	H	127	TYR	N-CA-C	5.86	117.99	108.26
1	A	753	A	P-O5'-C5'	-5.86	112.11	120.90
1	A	1323	G	C5'-C4'-O4'	-5.86	101.01	109.80
1	A	1349	A	C5'-C4'-C3'	-5.86	107.21	116.00
5	E	111	ARG	N-CA-CB	5.86	120.39	110.49
1	A	1455	G	O5'-C5'-C4'	-5.86	102.72	111.50
1	A	970	C	P-O5'-C5'	5.85	129.68	120.90
1	A	1345	U	C3'-C2'-C1'	-5.85	95.65	101.50
1	A	1526	G	P-O5'-C5'	5.85	129.68	120.90
2	B	196	ASP	CA-CB-CG	-5.85	106.75	112.60
15	O	41	HIS	CB-CG-CD2	-5.85	123.59	131.20
1	A	873	A	N9-C1'-C2'	-5.85	105.22	114.00
1	A	522	C	O4'-C1'-N1	5.85	117.27	108.50
1	A	638	U	P-O3'-C3'	5.85	128.97	120.20
1	A	908	A	C4-N9-C1'	5.85	143.85	126.30
1	A	1121	U	C5'-C4'-C3'	-5.85	107.22	116.00
4	D	6	PRO	CA-C-N	5.85	128.58	120.63
4	D	6	PRO	C-N-CA	5.85	128.58	120.63
22	W	52	ALA	N-CA-C	-5.85	99.12	109.06
1	A	127	G	C4'-C3'-O3'	5.85	121.77	113.00
1	A	679	C	O4'-C4'-C3'	-5.85	98.15	104.00
1	A	1433	A	C4'-C3'-C2'	5.85	108.45	102.60
1	A	296	U	O5'-C5'-C4'	-5.84	102.73	111.50
22	W	63	ARG	N-CA-C	-5.84	100.47	109.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	103	U	O5'-C5'-C4'	-5.84	102.74	111.50
1	A	276	G	C4-N9-C1'	-5.84	108.98	126.50
1	A	1519	A	C3'-C2'-C1'	-5.84	95.46	101.30
12	L	48	LEU	N-CA-C	-5.84	99.82	108.99
19	S	33	TRP	CA-C-N	5.84	129.40	121.05
19	S	33	TRP	C-N-CA	5.84	129.40	121.05
1	A	206	C	C5'-C4'-C3'	-5.84	107.24	116.00
1	A	1492	A	P-O5'-C5'	5.84	129.66	120.90
5	E	47	PHE	N-CA-C	-5.84	100.18	109.23
18	R	48	ALA	N-CA-C	-5.84	104.28	111.40
19	S	28	LYS	CA-C-N	5.84	127.14	119.84
19	S	28	LYS	C-N-CA	5.84	127.14	119.84
1	A	325	A	P-O3'-C3'	-5.84	111.44	120.20
1	A	601	G	P-O5'-C5'	-5.84	112.14	120.90
1	A	770	C	C4'-C3'-O3'	-5.84	104.24	113.00
1	A	835	U	P-O3'-C3'	-5.84	111.44	120.20
1	A	1187	G	O4'-C4'-C3'	5.84	109.84	104.00
1	A	1222	G	C5'-C4'-C3'	-5.84	107.25	116.00
1	A	1224	U	O3'-P-O5'	-5.84	95.25	104.00
1	A	1369	C	C4'-C3'-O3'	-5.84	104.24	113.00
2	B	91	VAL	N-CA-CB	5.84	119.57	112.10
1	A	936	C	C3'-C2'-C1'	-5.83	95.47	101.30
1	A	1403	C	C5'-C4'-O4'	5.83	118.55	109.80
1	A	187	G	C4'-C3'-O3'	-5.83	104.25	113.00
1	A	888	G	C1'-O4'-C4'	-5.83	104.07	109.90
1	A	317	U	C4'-C3'-O3'	-5.83	104.25	113.00
1	A	803	G	O3'-P-O5'	-5.83	95.25	104.00
2	B	129	THR	N-CA-C	-5.83	103.60	112.99
11	K	93	GLU	CA-C-N	5.83	128.09	120.28
11	K	93	GLU	C-N-CA	5.83	128.09	120.28
6	F	68	GLN	N-CA-C	-5.83	106.21	113.15
1	A	202	G	P-O3'-C3'	-5.83	111.46	120.20
1	A	380	G	O4'-C1'-N9	5.83	117.24	108.50
1	A	436	C	C4'-C3'-C2'	5.83	108.43	102.60
1	A	732	C	O4'-C4'-C3'	-5.83	98.17	104.00
16	P	73	ALA	CA-C-N	5.83	128.41	120.54
16	P	73	ALA	C-N-CA	5.83	128.41	120.54
1	A	396	C	P-O3'-C3'	5.83	128.94	120.20
1	A	467	U	O4'-C1'-N1	5.83	117.24	108.50
1	A	534	U	P-O3'-C3'	-5.83	111.46	120.20
1	A	801	U	P-O5'-C5'	-5.83	112.16	120.90
1	A	1303	C	C5'-C4'-C3'	-5.82	107.27	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	288	A	C3'-C2'-C1'	-5.82	95.48	101.30
1	A	769	G	C4'-C3'-O3'	-5.82	104.27	113.00
1	A	149	A	C2'-C3'-O3'	5.82	122.43	113.70
1	A	908	A	C4'-C3'-O3'	-5.82	104.27	113.00
1	A	954	G	C3'-C2'-C1'	-5.82	95.48	101.30
1	A	1099	G	C1'-C2'-O2'	5.82	117.13	108.40
9	I	16	ALA	CA-C-N	-5.82	114.90	123.05
9	I	16	ALA	C-N-CA	-5.82	114.90	123.05
1	A	819	A	C5'-C4'-C3'	-5.82	106.47	115.20
1	A	1108	G	C1'-O4'-C4'	-5.82	104.08	109.90
1	A	1150	A	C4'-C3'-O3'	-5.82	104.27	113.00
1	A	1419	G	O3'-P-O5'	-5.82	95.27	104.00
16	P	66	THR	CA-C-N	5.82	131.09	122.71
16	P	66	THR	C-N-CA	5.82	131.09	122.71
1	A	20	U	C6-N1-C1'	5.82	138.64	121.20
1	A	883	C	C3'-C2'-C1'	-5.82	95.48	101.30
1	A	1429	A	C1'-O4'-C4'	-5.82	104.08	109.90
11	K	93	GLU	N-CA-C	-5.82	98.41	110.80
1	A	1224	U	O4'-C1'-N1	5.81	117.22	108.50
1	A	232	G	C5'-C4'-C3'	5.81	124.72	116.00
1	A	537	G	O5'-C5'-C4'	-5.81	102.78	111.50
9	I	75	ALA	N-CA-C	5.81	118.08	111.11
22	W	299	TYR	N-CA-C	-5.81	105.95	113.16
1	A	618	C	P-O5'-C5'	5.81	129.62	120.90
1	A	263	A	P-O5'-C5'	-5.81	112.19	120.90
1	A	602	A	P-O5'-C5'	5.81	129.62	120.90
1	A	723	U	O4'-C1'-N1	5.81	117.22	108.50
1	A	1449	C	O4'-C1'-N1	5.81	117.21	108.50
1	A	1469	C	O4'-C1'-N1	5.81	117.21	108.50
7	G	40	SER	N-CA-C	5.81	118.36	111.33
1	A	653	U	C1'-O4'-C4'	-5.81	104.09	109.90
1	A	771	G	C3'-C2'-C1'	-5.81	95.49	101.30
1	A	986	U	P-O3'-C3'	-5.81	111.49	120.20
1	A	651	C	C4'-C3'-O3'	-5.81	104.29	113.00
1	A	189	A	O4'-C4'-C3'	-5.80	98.19	104.00
1	A	547	A	C8-N9-C1'	-5.80	110.28	127.70
1	A	745	G	O5'-C5'-C4'	-5.80	102.79	111.50
1	A	1272	G	P-O5'-C5'	-5.80	112.19	120.90
1	A	1283	U	P-O5'-C5'	5.80	129.61	120.90
3	C	130	ARG	CA-C-O	-5.80	114.91	121.00
12	L	73	LEU	N-CA-CB	5.80	118.57	110.04
1	A	286	C	O3'-P-O5'	-5.80	95.30	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	400	C	O5'-C5'-C4'	5.80	120.20	111.50
1	A	1232	U	O3'-P-O5'	-5.80	95.30	104.00
1	A	1438	G	C3'-C2'-C1'	-5.80	95.50	101.30
1	A	1485	U	P-O3'-C3'	-5.80	111.50	120.20
10	J	74	VAL	N-CA-CB	5.80	120.81	111.23
1	A	214	C	C4'-C3'-O3'	-5.80	104.30	113.00
1	A	234	C	O5'-C5'-C4'	-5.80	102.80	111.50
1	A	500	G	O4'-C1'-N9	5.80	117.20	108.50
1	A	648	A	C4'-C3'-O3'	-5.80	104.30	113.00
1	A	894	G	C5'-C4'-C3'	-5.80	107.30	116.00
1	A	1147	C	C2'-C3'-O3'	5.80	122.40	113.70
8	H	101	ALA	CA-C-N	5.80	132.41	121.97
8	H	101	ALA	C-N-CA	5.80	132.41	121.97
1	A	293	G	O4'-C4'-C3'	-5.80	98.20	104.00
16	P	67	ILE	N-CA-C	5.80	117.03	108.45
1	A	586	C	C3'-C2'-C1'	-5.80	95.50	101.30
1	A	1352	C	C1'-C2'-O2'	5.80	117.10	108.40
1	A	1391	U	C5'-C4'-O4'	-5.80	101.10	109.80
17	Q	72	TRP	CA-CB-CG	-5.80	102.58	113.60
1	A	92	U	C2-N1-C1'	-5.80	100.31	117.70
1	A	141	G	O3'-P-O5'	-5.80	95.30	104.00
16	P	80	LYS	N-CA-CB	5.80	118.64	110.12
18	R	69	TYR	CB-CG-CD2	-5.80	112.11	120.80
22	W	49	GLY	CA-C-N	5.80	133.99	121.64
22	W	49	GLY	C-N-CA	5.80	133.99	121.64
1	A	879	C	O4'-C1'-N1	5.79	117.19	108.50
1	A	984	C	O4'-C1'-N1	5.79	117.19	108.50
4	D	39	GLN	CB-CG-CD	-5.79	102.75	112.60
1	A	409	U	C1'-O4'-C4'	-5.79	104.11	109.90
4	D	69	ARG	CB-CA-C	-5.79	101.12	110.74
13	M	102	LYS	N-CA-C	-5.79	104.88	111.14
1	A	94	G	C4'-C3'-C2'	-5.79	96.81	102.60
1	A	508	U	P-O3'-C3'	5.79	128.89	120.20
1	A	934	C	O4'-C1'-C2'	5.79	111.59	105.80
4	D	106	PHE	N-CA-C	-5.79	103.79	111.96
10	J	58	ASN	N-CA-CB	5.79	120.28	110.49
1	A	64	G	O5'-C5'-C4'	-5.79	102.82	111.50
1	A	678	U	O4'-C4'-C3'	-5.79	98.21	104.00
1	A	797	C	O4'-C1'-C2'	5.79	113.39	107.60
1	A	958	A	O3'-P-O5'	-5.79	95.32	104.00
1	A	1405	G	O4'-C1'-N9	5.79	117.18	108.50
3	C	129	PHE	N-CA-CB	5.79	118.72	110.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	504	C	C1'-O4'-C4'	-5.79	104.11	109.90
1	A	651	C	C2'-C3'-O3'	5.79	122.38	113.70
1	A	1064	G	O5'-C5'-C4'	-5.79	103.02	111.70
1	A	1144	G	O4'-C1'-N9	5.79	117.18	108.50
1	A	1045	C	O4'-C1'-N1	5.78	117.17	108.50
1	A	1079	G	P-O3'-C3'	5.78	128.87	120.20
1	A	1124	G	P-O3'-C3'	-5.78	111.53	120.20
1	A	1296	C	O4'-C1'-C2'	5.78	113.38	107.60
1	A	51	A	O5'-C5'-C4'	-5.78	103.03	111.70
1	A	542	G	C3'-C2'-C1'	-5.78	95.52	101.30
1	A	974	A	C4'-C3'-O3'	5.78	118.07	109.40
1	A	1074	G	C5'-C4'-O4'	5.78	118.47	109.80
22	W	201	LEU	CA-C-N	5.78	128.02	120.28
22	W	201	LEU	C-N-CA	5.78	128.02	120.28
1	A	496	A	O4'-C1'-C2'	5.78	113.38	107.60
1	A	888	G	C4'-C3'-O3'	-5.78	104.33	113.00
1	A	966	G	O4'-C1'-N9	5.78	117.17	108.50
1	A	1245	C	C3'-C2'-C1'	-5.78	95.52	101.30
12	L	109	ARG	N-CA-C	-5.78	99.92	108.99
14	N	34	ASN	CA-C-N	5.78	132.10	121.70
14	N	34	ASN	C-N-CA	5.78	132.10	121.70
1	A	874	G	C2'-C3'-O3'	-5.78	105.04	113.70
1	A	882	C	P-O5'-C5'	-5.78	112.23	120.90
1	A	1090	U	C5'-C4'-C3'	-5.78	107.34	116.00
1	A	1292	G	C1'-O4'-C4'	-5.78	104.12	109.90
5	E	20	VAL	N-CA-CB	-5.78	105.15	112.60
1	A	163	C	C3'-C2'-C1'	-5.77	95.53	101.30
1	A	956	U	P-O3'-C3'	-5.77	111.54	120.20
1	A	1396	A	C1'-C2'-O2'	-5.77	103.14	111.80
9	I	13	SER	CB-CA-C	-5.77	104.12	111.86
1	A	45	G	C4'-C3'-C2'	5.77	108.37	102.60
1	A	434	U	C2'-C3'-O3'	5.77	122.36	113.70
1	A	1185	G	O4'-C1'-N9	5.77	117.16	108.50
1	A	1195	C	C4'-C3'-C2'	5.77	108.37	102.60
1	A	1484	C	C5'-C4'-C3'	-5.77	107.34	116.00
1	A	105	G	C4'-C3'-O3'	-5.77	104.34	113.00
1	A	173	U	O3'-P-O5'	5.77	112.66	104.00
1	A	216	U	O4'-C4'-C3'	5.77	109.77	104.00
1	A	248	C	P-O5'-C5'	-5.77	112.24	120.90
1	A	191	G	P-O5'-C5'	-5.77	112.25	120.90
1	A	611	C	C4'-C3'-O3'	-5.77	104.35	113.00
1	A	958	A	C5'-C4'-C3'	-5.77	107.35	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1131	G	O3'-P-O5'	-5.77	95.34	104.00
1	A	1174	G	C1'-O4'-C4'	-5.77	104.13	109.90
1	A	1507	A	O4'-C4'-C3'	-5.77	98.23	104.00
1	A	431	A	P-O3'-C3'	-5.77	111.55	120.20
20	T	72	ALA	CA-C-N	5.77	132.56	121.54
20	T	72	ALA	C-N-CA	5.77	132.56	121.54
1	A	214	C	C3'-C2'-C1'	-5.77	95.53	101.30
1	A	491	G	C2'-C3'-O3'	5.77	122.35	113.70
6	F	66	ALA	N-CA-C	-5.77	97.07	109.81
1	A	1019	A	P-O5'-C5'	-5.76	112.25	120.90
8	H	16	GLY	CA-C-N	5.76	128.32	120.54
8	H	16	GLY	C-N-CA	5.76	128.32	120.54
1	A	17	U	O3'-P-O5'	5.76	112.64	104.00
1	A	1066	C	O4'-C4'-C3'	5.76	109.76	104.00
1	A	1514	G	C4'-C3'-C2'	-5.76	96.84	102.60
1	A	600	A	N9-C1'-C2'	-5.76	103.36	112.00
4	D	49	ASP	CA-CB-CG	-5.76	106.84	112.60
12	L	67	GLY	CA-C-N	5.76	129.39	120.00
12	L	67	GLY	C-N-CA	5.76	129.39	120.00
1	A	235	C	O5'-C5'-C4'	-5.76	102.86	111.50
1	A	941	G	P-O3'-C3'	5.76	128.84	120.20
15	O	58	MET	N-CA-C	5.76	117.56	111.28
13	M	82	LEU	CB-CA-C	-5.76	100.16	110.70
14	N	68	ARG	CA-C-N	5.76	125.43	119.56
14	N	68	ARG	C-N-CA	5.76	125.43	119.56
22	W	191	SER	N-CA-C	-5.76	100.79	109.95
1	A	172	A	O5'-C5'-C4'	-5.76	102.86	111.50
1	A	263	A	C4'-C3'-O3'	-5.76	104.36	113.00
1	A	387	U	O3'-P-O5'	-5.76	95.37	104.00
1	A	829	G	O4'-C1'-C2'	-5.76	101.84	107.60
1	A	1120	C	O4'-C1'-N1	5.76	117.13	108.50
1	A	1318	A	P-O5'-C5'	5.76	129.53	120.90
1	A	1431	A	C5'-C4'-C3'	-5.76	107.36	116.00
4	D	67	LEU	CB-CA-C	-5.76	99.32	109.62
4	D	145	ARG	CA-C-N	5.76	132.53	121.54
4	D	145	ARG	C-N-CA	5.76	132.53	121.54
1	A	1190	G	O5'-C5'-C4'	5.75	120.33	111.70
1	A	1385	G	P-O3'-C3'	-5.75	111.57	120.20
1	A	198	G	C4'-C3'-O3'	5.75	121.63	113.00
1	A	730	G	O4'-C1'-C2'	-5.75	101.85	107.60
1	A	1018	G	P-O3'-C3'	-5.75	111.57	120.20
1	A	1272	G	P-O3'-C3'	-5.75	111.57	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	K	14	GLN	CB-CG-CD	-5.75	102.82	112.60
1	A	165	G	O3'-P-O5'	-5.75	95.37	104.00
1	A	1002	G	C4'-C3'-O3'	-5.75	104.37	113.00
17	Q	79	GLU	CB-CG-CD	-5.75	102.83	112.60
1	A	166	U	O3'-P-O5'	-5.75	95.38	104.00
1	A	15	G	P-O3'-C3'	-5.75	111.58	120.20
1	A	138	G	C1'-O4'-C4'	-5.75	104.16	109.90
10	J	54	SER	N-CA-CB	5.75	120.60	110.37
1	A	455	G	O5'-C5'-C4'	-5.74	102.89	111.50
1	A	458	U	C4'-C3'-C2'	-5.74	96.86	102.60
1	A	499	A	C5'-C4'-O4'	5.74	117.72	109.10
1	A	1190	G	C5'-C4'-O4'	5.74	117.72	109.10
2	B	128	LEU	N-CA-C	-5.74	105.54	113.18
8	H	26	MET	CA-C-N	5.74	125.75	119.89
8	H	26	MET	C-N-CA	5.74	125.75	119.89
1	A	1527	U	C5'-C4'-C3'	-5.74	107.39	116.00
4	D	193	ASP	N-CA-C	-5.74	106.19	113.43
6	F	20	GLY	CA-C-N	5.74	128.29	120.54
6	F	20	GLY	C-N-CA	5.74	128.29	120.54
1	A	1310	G	N9-C1'-C2'	-5.74	103.39	112.00
1	A	1356	G	O5'-C5'-C4'	-5.74	102.89	111.50
8	H	111	THR	CA-C-O	5.74	127.22	120.96
1	A	161	A	C3'-C2'-C1'	-5.74	95.56	101.30
1	A	1392	G	O4'-C4'-C3'	5.74	109.74	104.00
16	P	25	ARG	N-CA-C	-5.74	98.58	110.80
1	A	1306	A	C5'-C4'-O4'	5.74	118.41	109.80
15	O	74	VAL	N-CA-CB	5.74	116.64	110.62
1	A	322	C	C4'-C3'-O3'	-5.74	104.40	113.00
1	A	351	G	O4'-C1'-C2'	5.74	111.53	105.80
1	A	783	C	P-O3'-C3'	-5.74	111.60	120.20
1	A	890	G	O4'-C1'-C2'	-5.74	100.06	105.80
9	I	82	ILE	CA-C-O	-5.73	115.15	121.29
1	A	806	C	P-O3'-C3'	-5.73	111.60	120.20
1	A	897	C	C5'-C4'-C3'	-5.73	107.40	116.00
1	A	1039	G	P-O5'-C5'	-5.73	112.30	120.90
1	A	1049	U	C1'-O4'-C4'	-5.73	103.97	109.70
9	I	120	ALA	CA-C-N	5.73	132.49	121.54
9	I	120	ALA	C-N-CA	5.73	132.49	121.54
1	A	200	G	O3'-P-O5'	-5.73	95.40	104.00
1	A	1083	U	C5'-C4'-C3'	-5.73	107.41	116.00
1	A	1287	A	O3'-P-O5'	-5.73	95.40	104.00
3	C	178	ARG	N-CA-C	-5.73	103.56	111.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	121	U	C4'-C3'-O3'	-5.73	104.41	113.00
1	A	198	G	C3'-C2'-O2'	5.73	119.29	110.70
1	A	648	A	C4'-C3'-C2'	-5.73	96.87	102.60
1	A	672	U	C4'-C3'-O3'	-5.73	104.41	113.00
1	A	1156	G	C5'-C4'-C3'	5.73	124.59	116.00
1	A	1365	G	P-O5'-C5'	-5.73	112.31	120.90
1	A	1411	C	C4'-C3'-O3'	-5.73	104.41	113.00
9	I	93	LEU	N-CA-C	-5.73	105.60	112.59
1	A	1326	U	P-O3'-C3'	-5.73	111.61	120.20
1	A	75	G	C2'-C3'-O3'	5.72	122.29	113.70
1	A	297	G	O4'-C1'-N9	5.72	117.09	108.50
1	A	889	A	O4'-C1'-C2'	5.72	111.53	105.80
1	A	1383	C	O3'-P-O5'	-5.72	95.41	104.00
1	A	22	G	C3'-C2'-C1'	-5.72	95.58	101.30
1	A	104	G	C5'-C4'-O4'	5.72	118.38	109.80
1	A	710	G	P-O5'-C5'	-5.72	112.32	120.90
1	A	868	C	O4'-C1'-C2'	-5.72	101.88	107.60
1	A	1159	U	O3'-P-O5'	-5.72	95.42	104.00
1	A	1171	A	O4'-C1'-N9	5.72	117.08	108.50
1	A	1206	G	C4'-C3'-O3'	-5.72	104.42	113.00
1	A	76	G	C4-N9-C1'	5.72	143.66	126.50
1	A	1152	A	O4'-C1'-C2'	-5.72	101.88	107.60
1	A	1475	G	O3'-P-O5'	-5.72	95.42	104.00
6	F	17	GLN	N-CA-C	-5.72	106.16	113.02
1	A	61	G	C4'-C3'-O3'	-5.72	104.42	113.00
1	A	71	A	O3'-P-O5'	-5.72	95.42	104.00
1	A	276	G	C4'-C3'-O3'	-5.72	104.42	113.00
1	A	489	C	C2'-C3'-O3'	5.72	122.28	113.70
1	A	531	U	C2'-C3'-O3'	-5.72	105.12	113.70
1	A	896	C	O4'-C1'-N1	5.72	117.08	108.50
1	A	1194	U	C4'-C3'-C2'	-5.72	96.88	102.60
1	A	1113	C	C1'-O4'-C4'	-5.72	104.18	109.90
1	A	1199	U	C3'-C2'-O2'	5.72	119.28	110.70
1	A	1403	C	O4'-C4'-C3'	-5.72	98.28	104.00
5	E	129	SER	N-CA-C	5.72	122.98	110.80
22	W	192	SER	CB-CA-C	-5.72	101.87	110.90
1	A	581	G	C5'-C4'-C3'	-5.71	107.43	116.00
1	A	1008	U	C2'-C3'-O3'	5.71	122.27	113.70
9	I	58	GLU	CB-CG-CD	-5.71	102.88	112.60
9	I	121	ARG	N-CA-CB	5.71	120.15	110.49
1	A	1145	A	O5'-C5'-C4'	-5.71	102.93	111.50
1	A	1510	C	C5'-C4'-C3'	-5.71	107.43	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	L	111	GLN	CA-C-N	5.71	132.45	121.54
12	L	111	GLN	C-N-CA	5.71	132.45	121.54
1	A	42	G	C1'-O4'-C4'	-5.71	104.19	109.90
1	A	917	G	C4'-C3'-O3'	-5.71	104.44	113.00
13	M	61	LYS	N-CA-C	-5.71	105.24	114.09
21	U	52	VAL	CA-C-N	5.71	131.98	121.70
21	U	52	VAL	C-N-CA	5.71	131.98	121.70
1	A	749	A	O4'-C1'-N9	5.71	117.06	108.50
1	A	1304	G	P-O3'-C3'	-5.71	111.64	120.20
17	Q	48	GLU	CB-CG-CD	-5.71	102.89	112.60
1	A	765	G	C2'-C3'-O3'	5.71	122.26	113.70
1	A	937	A	C3'-C2'-C1'	-5.71	95.59	101.30
1	A	1163	A	C3'-C2'-C1'	-5.71	95.59	101.30
2	B	67	LEU	N-CA-CB	5.71	120.14	110.49
9	I	79	ARG	N-CA-C	5.71	117.98	111.02
1	A	1241	G	O3'-P-O5'	5.70	112.56	104.00
1	A	64	G	C4'-C3'-C2'	-5.70	96.90	102.60
1	A	580	C	P-O3'-C3'	-5.70	111.65	120.20
1	A	641	U	O5'-C5'-C4'	-5.70	102.95	111.50
1	A	731	G	C3'-C2'-C1'	-5.70	95.60	101.30
1	A	1024	G	C1'-O4'-C4'	-5.70	104.20	109.90
1	A	684	U	C5'-C4'-C3'	-5.70	107.45	116.00
1	A	1457	G	P-O5'-C5'	5.70	129.44	120.90
22	W	95	GLY	N-CA-C	-5.70	99.68	113.18
1	A	122	G	C5'-C4'-O4'	5.70	118.34	109.80
1	A	314	C	C5'-C4'-C3'	-5.70	107.46	116.00
8	H	71	VAL	N-CA-C	-5.70	100.12	109.12
9	I	125	GLN	CA-C-N	5.70	132.42	121.54
9	I	125	GLN	C-N-CA	5.70	132.42	121.54
1	A	144	G	N9-C1'-C2'	-5.69	103.46	112.00
1	A	466	A	O4'-C1'-C2'	-5.69	101.91	107.60
1	A	1369	C	O5'-C5'-C4'	-5.69	102.96	111.50
1	A	1032	G	C4'-C3'-O3'	-5.69	104.46	113.00
1	A	1201	A	C2'-C3'-O3'	5.69	118.04	109.50
4	D	32	LYS	CA-C-N	5.69	130.43	122.23
4	D	32	LYS	C-N-CA	5.69	130.43	122.23
5	E	128	GLY	CA-C-N	5.69	132.41	121.54
5	E	128	GLY	C-N-CA	5.69	132.41	121.54
1	A	170	U	C5'-C4'-C3'	-5.69	107.47	116.00
1	A	531	U	C6-N1-C1'	-5.69	104.13	121.20
1	A	635	A	O4'-C1'-N9	5.69	117.04	108.50
1	A	954	G	C1'-O4'-C4'	-5.69	104.21	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	D	117	VAL	CB-CA-C	-5.69	104.59	111.88
12	L	9	LYS	CA-C-N	5.69	126.48	120.11
12	L	9	LYS	C-N-CA	5.69	126.48	120.11
15	O	7	THR	N-CA-CB	5.69	118.58	110.16
20	T	80	ALA	N-CA-C	5.69	117.48	111.28
1	A	192	A	C4'-C3'-C2'	-5.69	96.91	102.60
1	A	1331	G	C4'-C3'-C2'	-5.69	96.91	102.60
1	A	1017	U	O4'-C4'-C3'	-5.69	98.31	104.00
13	M	106	ARG	CA-C-O	-5.69	114.49	120.63
22	W	99	ALA	N-CA-CB	5.69	120.37	111.56
1	A	31	G	O4'-C4'-C3'	-5.68	100.42	106.10
1	A	404	G	C4'-C3'-O3'	-5.68	104.47	113.00
1	A	412	A	O4'-C1'-C2'	5.68	111.48	105.80
1	A	525	C	O5'-C5'-C4'	-5.68	102.97	111.50
1	A	547	A	O3'-P-O5'	5.68	112.53	104.00
1	A	640	A	C5'-C4'-C3'	-5.68	107.47	116.00
1	A	646	G	C3'-C2'-C1'	-5.68	95.61	101.30
15	O	30	LEU	CB-CA-C	-5.68	101.96	110.88
17	Q	76	ARG	CA-C-N	5.68	131.43	122.33
17	Q	76	ARG	C-N-CA	5.68	131.43	122.33
1	A	980	C	O5'-C5'-C4'	-5.68	102.98	111.50
1	A	1352	C	C1'-O4'-C4'	-5.68	104.22	109.90
17	Q	68	LYS	N-CA-C	-5.68	98.70	110.80
22	W	102	GLU	N-CA-C	-5.68	99.26	108.52
1	A	345	C	O3'-P-O5'	-5.68	95.48	104.00
1	A	1128	C	P-O5'-C5'	-5.68	112.38	120.90
4	D	160	LEU	CA-C-N	5.68	128.21	120.54
4	D	160	LEU	C-N-CA	5.68	128.21	120.54
1	A	24	U	P-O5'-C5'	5.68	129.42	120.90
1	A	93	U	C6-N1-C1'	5.68	138.24	121.20
1	A	383	A	C4'-C3'-O3'	-5.68	104.48	113.00
1	A	545	C	P-O5'-C5'	5.68	129.42	120.90
17	Q	72	TRP	CB-CG-CD2	-5.68	118.85	126.80
1	A	194	C	O4'-C1'-N1	5.68	117.02	108.50
1	A	386	C	C2'-C3'-O3'	5.68	122.22	113.70
1	A	546	A	C1'-C2'-O2'	-5.68	99.88	108.40
1	A	851	G	C2'-C3'-O3'	5.68	122.22	113.70
1	A	1259	C	C4'-C3'-C2'	-5.68	96.92	102.60
1	A	69	G	O5'-C5'-C4'	-5.68	102.98	111.50
1	A	1070	U	C4'-C3'-C2'	-5.68	96.92	102.60
1	A	1522	U	C5'-C4'-C3'	-5.68	107.48	116.00
8	H	33	VAL	CA-C-N	5.68	128.16	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	H	33	VAL	C-N-CA	5.68	128.16	120.38
2	B	156	LEU	CA-C-N	5.67	125.68	119.89
2	B	156	LEU	C-N-CA	5.67	125.68	119.89
4	D	178	GLU	N-CA-C	-5.67	100.91	108.74
15	O	14	PHE	CA-C-N	5.67	125.37	119.92
15	O	14	PHE	C-N-CA	5.67	125.37	119.92
1	A	313	A	C5'-C4'-O4'	5.67	118.31	109.80
1	A	769	G	P-O5'-C5'	-5.67	112.39	120.90
1	A	847	G	C3'-C2'-C1'	-5.67	95.63	101.30
1	A	1117	A	C2'-C3'-O3'	5.67	122.21	113.70
1	A	1214	C	P-O3'-C3'	-5.67	111.69	120.20
1	A	1233	G	C5'-C4'-C3'	-5.67	107.49	116.00
1	A	1293	C	P-O5'-C5'	-5.67	112.39	120.90
1	A	1338	G	O4'-C4'-C3'	-5.67	98.33	104.00
1	A	1373	G	C3'-C2'-O2'	5.67	119.21	110.70
1	A	1518	A	C4'-C3'-O3'	-5.67	104.49	113.00
4	D	9	LYS	N-CA-CB	5.67	118.57	110.06
7	G	114	SER	CA-C-N	5.67	129.68	120.60
7	G	114	SER	C-N-CA	5.67	129.68	120.60
1	A	194	C	C1'-O4'-C4'	-5.67	104.23	109.90
1	A	904	U	P-O3'-C3'	-5.67	111.69	120.20
1	A	940	C	O4'-C1'-N1	5.67	117.00	108.50
1	A	1522	U	O4'-C4'-C3'	-5.67	98.33	104.00
2	B	107	ARG	CA-C-N	5.67	131.06	121.14
2	B	107	ARG	C-N-CA	5.67	131.06	121.14
1	A	9	G	O4'-C1'-N9	5.67	117.00	108.50
1	A	1296	C	C2-N1-C1'	-5.67	101.80	118.80
1	A	1409	C	O3'-P-O5'	-5.67	95.50	104.00
22	W	310	CYS	CA-C-N	5.67	128.34	120.29
22	W	310	CYS	C-N-CA	5.67	128.34	120.29
1	A	304	U	C4'-C3'-O3'	-5.67	104.50	113.00
1	A	1181	G	C4'-C3'-C2'	-5.67	96.93	102.60
1	A	1518	A	C3'-C2'-C1'	-5.67	95.63	101.30
3	C	181	ILE	CB-CA-C	5.67	116.87	110.41
3	C	191	THR	N-CA-C	-5.67	106.58	112.93
1	A	966	G	C4'-C3'-C2'	-5.67	96.94	102.60
1	A	493	A	O5'-C5'-C4'	-5.66	103.00	111.50
1	A	760	G	C3'-C2'-C1'	-5.66	95.64	101.30
14	N	90	GLY	CA-C-N	5.66	132.36	121.54
14	N	90	GLY	C-N-CA	5.66	132.36	121.54
1	A	654	G	C5'-C4'-C3'	-5.66	107.51	116.00
1	A	787	A	O5'-C5'-C4'	-5.66	103.01	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	848	C	O4'-C1'-N1	5.66	116.99	108.50
1	A	861	G	O5'-C5'-C4'	-5.66	103.01	111.50
1	A	1379	G	P-O3'-C3'	-5.66	111.71	120.20
9	I	28	VAL	CA-C-N	5.66	128.16	120.63
9	I	28	VAL	C-N-CA	5.66	128.16	120.63
14	N	70	HIS	N-CA-C	-5.66	100.70	109.14
1	A	601	G	N9-C1'-C2'	-5.66	103.51	112.00
1	A	1152	A	O4'-C1'-N9	5.66	116.99	108.50
1	A	1189	U	O3'-P-O5'	5.66	112.49	104.00
3	C	132	ALA	CA-C-N	5.66	127.80	120.44
3	C	132	ALA	C-N-CA	5.66	127.80	120.44
1	A	668	G	O5'-C5'-C4'	-5.66	103.01	111.50
1	A	747	A	O4'-C4'-C3'	-5.66	98.34	104.00
1	A	766	A	P-O3'-C3'	-5.66	111.71	120.20
1	A	774	G	N9-C1'-C2'	5.66	120.49	112.00
1	A	1143	G	C3'-C2'-C1'	-5.66	95.64	101.30
1	A	131	A	C4-N9-C1'	-5.66	109.33	126.30
1	A	324	G	C2'-C3'-O3'	-5.66	105.22	113.70
1	A	782	A	C4'-C3'-O3'	-5.66	104.52	113.00
17	Q	45	VAL	N-CA-C	-5.66	97.57	109.34
1	A	131	A	C2'-C3'-O3'	5.66	122.18	113.70
1	A	145	G	C4'-C3'-O3'	-5.66	104.52	113.00
1	A	358	U	C3'-C2'-C1'	-5.66	95.64	101.30
1	A	1518	A	O4'-C4'-C3'	-5.66	98.34	104.00
2	B	153	MET	CB-CA-C	5.66	120.37	111.77
6	F	18	VAL	CA-C-O	-5.66	112.37	119.95
8	H	111	THR	CA-C-N	5.66	127.86	120.28
8	H	111	THR	C-N-CA	5.66	127.86	120.28
1	A	289	G	P-O5'-C5'	-5.65	112.42	120.90
1	A	1013	G	O3'-P-O5'	5.65	112.48	104.00
1	A	284	C	C3'-C2'-C1'	-5.65	95.65	101.30
1	A	767	A	P-O3'-C3'	5.65	128.68	120.20
1	A	1336	C	C4'-C3'-C2'	5.65	108.25	102.60
1	A	4	U	C5'-C4'-C3'	-5.65	106.72	115.20
1	A	9	G	P-O5'-C5'	-5.65	112.42	120.90
1	A	517	G	C4'-C3'-C2'	-5.65	96.95	102.60
1	A	1123	U	C2-N1-C1'	-5.65	100.75	117.70
1	A	1173	U	O4'-C4'-C3'	-5.65	98.35	104.00
1	A	1292	G	P-O3'-C3'	-5.65	111.72	120.20
1	A	1522	U	O4'-C1'-N1	5.65	116.97	108.50
15	O	45	HIS	CA-C-N	5.65	132.33	121.54
15	O	45	HIS	C-N-CA	5.65	132.33	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	Q	6	THR	CB-CA-C	5.65	118.84	110.14
1	A	432	A	C2'-C3'-O3'	5.65	122.17	113.70
1	A	214	C	O4'-C4'-C3'	-5.65	98.35	104.00
1	A	323	U	C5'-C4'-C3'	-5.65	107.53	116.00
1	A	355	C	P-O3'-C3'	5.65	128.67	120.20
13	M	92	ARG	N-CA-C	-5.65	106.06	113.17
1	A	1264	U	O3'-P-O5'	-5.65	95.53	104.00
1	A	37	U	O5'-P-OP2	-5.64	91.06	108.00
1	A	587	G	C3'-C2'-O2'	5.64	119.17	110.70
1	A	319	G	O5'-C5'-C4'	-5.64	103.04	111.50
1	A	1390	U	O3'-P-O5'	-5.64	95.54	104.00
1	A	81	A	P-O3'-C3'	-5.64	111.74	120.20
1	A	637	C	P-O5'-C5'	-5.64	112.44	120.90
1	A	101	A	C4'-C3'-O3'	-5.64	104.54	113.00
1	A	1179	A	C1'-O4'-C4'	-5.64	104.26	109.90
1	A	1439	G	C1'-O4'-C4'	-5.64	104.26	109.90
1	A	1432	G	O5'-C5'-C4'	-5.64	103.24	111.70
1	A	824	G	C3'-C2'-C1'	-5.64	95.66	101.30
1	A	1067	A	O4'-C4'-C3'	-5.64	100.46	106.10
1	A	1076	U	C5'-C4'-C3'	5.64	124.45	116.00
1	A	76	G	C4'-C3'-C2'	5.63	108.23	102.60
1	A	94	G	C2'-C3'-O3'	-5.63	105.25	113.70
1	A	468	A	O4'-C1'-N9	5.63	116.95	108.50
1	A	822	U	O3'-P-O5'	-5.63	95.55	104.00
3	C	2	GLN	N-CA-C	-5.63	98.81	110.80
5	E	124	ALA	N-CA-C	5.63	117.97	109.41
11	K	98	ALA	N-CA-CB	-5.63	102.41	110.57
1	A	1141	C	C4'-C3'-O3'	-5.63	104.55	113.00
20	T	84	LYS	N-CA-C	-5.63	98.81	110.80
1	A	102	G	P-O5'-C5'	5.63	129.34	120.90
1	A	150	U	O5'-C5'-C4'	-5.63	103.06	111.50
1	A	1062	U	C3'-C2'-C1'	-5.63	95.67	101.30
1	A	1425	U	C5'-C4'-C3'	-5.63	107.56	116.00
1	A	226	G	C3'-C2'-C1'	-5.63	95.67	101.30
1	A	361	G	C2'-C3'-O3'	5.63	122.14	113.70
11	K	26	PHE	CA-CB-CG	-5.63	108.17	113.80
16	P	53	ASP	CA-C-N	5.63	128.38	120.28
16	P	53	ASP	C-N-CA	5.63	128.38	120.28
1	A	771	G	O5'-C5'-C4'	-5.62	103.06	111.50
1	A	208	U	C5'-C4'-C3'	-5.62	107.56	116.00
1	A	501	C	P-O3'-C3'	-5.62	111.76	120.20
1	A	593	U	O5'-C5'-C4'	-5.62	103.06	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1098	C	C1'-O4'-C4'	-5.62	104.28	109.90
1	A	433	G	O5'-C5'-C4'	-5.62	103.07	111.50
1	A	453	G	C4'-C3'-O3'	-5.62	104.57	113.00
1	A	1379	G	O5'-C5'-C4'	-5.62	103.07	111.50
3	C	2	GLN	N-CA-CB	5.62	119.99	110.49
5	E	12	GLU	CA-C-N	-5.62	113.99	122.81
5	E	12	GLU	C-N-CA	-5.62	113.99	122.81
1	A	244	U	C2'-C3'-O3'	5.62	117.92	109.50
1	A	1037	C	O3'-P-O5'	-5.62	95.57	104.00
4	D	151	GLN	N-CA-C	-5.62	102.97	110.55
20	T	47	GLN	CB-CA-C	-5.62	102.06	110.88
1	A	29	U	C1'-O4'-C4'	-5.62	104.28	109.90
1	A	226	G	C5'-C4'-C3'	-5.62	107.58	116.00
1	A	581	G	O4'-C1'-N9	5.62	116.92	108.50
1	A	1251	A	C5'-C4'-O4'	5.62	117.52	109.10
1	A	113	G	C3'-C2'-C1'	-5.61	95.69	101.30
1	A	207	C	O4'-C1'-C2'	-5.61	101.99	107.60
1	A	1024	G	C5'-C4'-C3'	5.61	124.42	116.00
1	A	1229	A	C4'-C3'-C2'	-5.61	96.99	102.60
5	E	19	ARG	CA-C-O	5.61	126.37	120.36
22	W	331	ARG	N-CA-CB	5.61	118.37	110.12
1	A	636	U	C4'-C3'-C2'	-5.61	96.99	102.60
3	C	39	ARG	N-CA-CB	5.61	118.37	110.12
12	L	11	ARG	CB-CA-C	-5.61	100.99	110.64
1	A	228	A	C3'-C2'-C1'	-5.61	95.69	101.30
1	A	369	G	C4'-C3'-C2'	-5.61	96.99	102.60
1	A	732	C	C3'-C2'-O2'	5.61	119.12	110.70
1	A	1239	A	C5'-C4'-C3'	-5.61	106.78	115.20
1	A	1511	G	O5'-C5'-C4'	-5.61	103.08	111.50
1	A	1521	C	N1-C1'-C2'	-5.61	103.58	112.00
5	E	9	GLU	CA-C-N	5.61	132.26	121.54
5	E	9	GLU	C-N-CA	5.61	132.26	121.54
19	S	72	GLU	N-CA-C	-5.61	104.56	111.40
1	A	28	A	C1'-O4'-C4'	-5.61	104.29	109.90
1	A	385	C	C5'-C4'-C3'	-5.61	107.59	116.00
1	A	823	C	O3'-P-O5'	-5.61	95.59	104.00
1	A	77	A	C5'-C4'-C3'	-5.61	107.59	116.00
1	A	100	G	C4'-C3'-O3'	-5.61	104.59	113.00
1	A	354	G	C1'-O4'-C4'	-5.61	104.29	109.90
1	A	569	C	C4'-C3'-C2'	5.61	108.21	102.60
1	A	1517	G	O3'-P-O5'	-5.61	95.59	104.00
3	C	184	ASN	N-CA-C	-5.61	100.84	108.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	301	G	C5'-C4'-C3'	-5.61	107.59	116.00
1	A	599	C	N1-C1'-C2'	-5.61	103.59	112.00
1	A	719	C	O4'-C4'-C3'	-5.61	98.39	104.00
1	A	965	U	O4'-C4'-C3'	-5.61	100.49	106.10
1	A	1288	A	O4'-C4'-C3'	-5.61	98.39	104.00
1	A	1483	A	O4'-C1'-N9	5.61	116.91	108.50
1	A	46	G	P-O5'-C5'	-5.60	112.49	120.90
1	A	1030	U	O4'-C1'-N1	5.60	116.90	108.50
1	A	1249	C	C3'-C2'-C1'	-5.60	95.70	101.30
3	C	105	VAL	CB-CA-C	-5.60	102.10	111.29
7	G	36	SER	N-CA-C	-5.60	106.21	113.16
14	N	99	SER	N-CA-C	-5.60	98.87	110.80
1	A	169	C	C1'-O4'-C4'	-5.60	104.30	109.90
1	A	472	U	P-O5'-C5'	-5.60	112.50	120.90
1	A	502	A	C1'-O4'-C4'	-5.60	104.30	109.90
1	A	828	U	O5'-C5'-C4'	5.60	119.90	111.50
1	A	987	G	P-O3'-C3'	-5.60	111.80	120.20
1	A	1058	G	C5'-C4'-O4'	5.60	118.20	109.80
1	A	311	C	O4'-C1'-N1	5.60	116.90	108.50
1	A	644	U	P-O3'-C3'	-5.60	111.80	120.20
1	A	707	U	O3'-P-O5'	-5.60	95.60	104.00
1	A	919	A	C3'-C2'-C1'	-5.60	95.70	101.30
1	A	1060	U	P-O3'-C3'	-5.60	111.80	120.20
1	A	1138	G	O3'-P-O5'	5.60	112.39	104.00
1	A	1259	C	C5'-C4'-C3'	-5.60	107.60	116.00
1	A	1525	G	C3'-C2'-C1'	-5.60	95.70	101.30
1	A	232	G	C1'-C2'-O2'	5.60	116.79	108.40
1	A	659	U	P-O5'-C5'	-5.60	112.51	120.90
1	A	1205	U	C1'-O4'-C4'	-5.60	104.30	109.90
1	A	6	G	O5'-C5'-C4'	-5.59	103.11	111.50
1	A	257	G	C3'-C2'-C1'	-5.59	95.71	101.30
1	A	772	U	C2'-C3'-O3'	5.59	122.09	113.70
2	B	185	ILE	CB-CA-C	5.59	118.36	111.25
8	H	43	GLY	CA-C-N	5.59	127.71	120.44
8	H	43	GLY	C-N-CA	5.59	127.71	120.44
1	A	605	U	O4'-C4'-C3'	5.59	109.59	104.00
1	A	804	U	O3'-P-O5'	-5.59	95.61	104.00
1	A	1503	A	C2'-C3'-O3'	5.59	117.89	109.50
1	A	238	A	C8-N9-C1'	5.59	144.48	127.70
1	A	315	A	O4'-C1'-C2'	5.59	113.19	107.60
1	A	1485	U	O4'-C1'-N1	5.59	116.89	108.50
1	A	219	U	P-O5'-C5'	-5.59	112.52	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	354	G	C5'-C4'-O4'	5.59	118.19	109.80
1	A	1308	U	O5'-C5'-C4'	-5.59	103.11	111.50
12	L	119	LYS	N-CA-C	-5.59	102.04	110.70
1	A	218	U	P-O3'-C3'	-5.59	111.82	120.20
2	B	40	ILE	N-CA-C	-5.59	97.72	109.34
1	A	575	G	C4'-C3'-O3'	5.59	117.78	109.40
1	A	1096	C	P-O3'-C3'	-5.59	111.82	120.20
1	A	1120	C	P-O3'-C3'	-5.59	111.82	120.20
1	A	1170	A	O3'-P-O5'	-5.59	95.62	104.00
1	A	1185	G	O5'-C5'-C4'	-5.59	103.12	111.50
4	D	127	ARG	CB-CG-CD	5.59	124.15	111.30
1	A	1083	U	C4'-C3'-O3'	-5.58	104.62	113.00
1	A	224	U	C3'-C2'-C1'	-5.58	95.72	101.30
1	A	796	C	O5'-C5'-C4'	-5.58	103.12	111.50
1	A	1134	G	C4'-C3'-C2'	-5.58	97.02	102.60
1	A	1437	A	C5'-C4'-C3'	5.58	124.37	116.00
4	D	123	MET	CG-SD-CE	-5.58	88.62	100.90
1	A	617	G	C1'-O4'-C4'	-5.58	104.32	109.90
1	A	754	C	O4'-C4'-C3'	5.58	109.58	104.00
1	A	760	G	C5'-C4'-O4'	5.58	118.17	109.80
1	A	790	A	P-O3'-C3'	-5.58	111.83	120.20
1	A	807	A	P-O5'-C5'	-5.58	112.53	120.90
1	A	890	G	O5'-C5'-C4'	5.58	120.07	111.70
1	A	101	A	O3'-P-O5'	-5.58	95.63	104.00
1	A	218	U	C3'-C2'-C1'	-5.58	95.72	101.30
1	A	500	G	C8-N9-C1'	5.58	143.74	127.00
1	A	621	A	O4'-C4'-C3'	-5.58	98.42	104.00
1	A	654	G	C4'-C3'-O3'	-5.58	104.63	113.00
1	A	1077	G	P-O5'-C5'	-5.58	112.53	120.90
1	A	1095	U	P-O5'-C5'	-5.58	112.53	120.90
1	A	1447	A	C4-N9-C1'	-5.58	109.56	126.30
1	A	378	G	P-O5'-C5'	-5.58	112.53	120.90
1	A	167	A	C5'-C4'-O4'	5.58	118.16	109.80
1	A	385	C	O4'-C1'-N1	5.58	116.86	108.50
4	D	134	TYR	CA-CB-CG	-5.58	103.86	113.90
22	W	258	PHE	CB-CA-C	-5.58	100.83	108.86
1	A	493	A	O3'-P-O5'	-5.57	95.64	104.00
1	A	660	C	C3'-C2'-C1'	-5.57	95.73	101.30
1	A	702	A	O4'-C1'-N9	5.57	116.86	108.50
1	A	1296	C	C3'-C2'-O2'	5.57	119.06	110.70
5	E	64	GLU	CB-CA-C	-5.57	102.38	110.96
1	A	328	C	N1-C1'-C2'	-5.57	105.64	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1243	C	O5'-C5'-C4'	-5.57	103.14	111.50
1	A	483	C	C5'-C4'-O4'	5.57	118.16	109.80
1	A	980	C	O4'-C1'-N1	5.57	116.86	108.50
1	A	997	U	O4'-C1'-N1	5.57	116.86	108.50
13	M	40	GLU	N-CA-C	-5.57	104.39	113.19
1	A	380	G	C5'-C4'-C3'	-5.57	107.65	116.00
1	A	698	G	C5'-C4'-O4'	5.57	118.15	109.80
1	A	775	G	O5'-C5'-C4'	-5.57	103.15	111.50
1	A	1498	U	C5'-C4'-C3'	5.57	123.55	115.20
1	A	1530	G	O4'-C1'-N9	5.57	116.55	108.20
1	A	874	G	C5'-C4'-O4'	-5.57	101.45	109.80
1	A	1251	A	N9-C1'-C2'	-5.57	105.65	114.00
2	B	145	ASN	CA-CB-CG	-5.57	107.03	112.60
1	A	339	C	O5'-C5'-C4'	-5.56	103.15	111.50
1	A	1319	A	O3'-P-O5'	-5.56	95.66	104.00
1	A	1519	A	O4'-C1'-C2'	-5.56	102.04	107.60
2	B	149	GLY	CA-C-N	5.56	128.13	121.84
2	B	149	GLY	C-N-CA	5.56	128.13	121.84
19	S	69	LYS	N-CA-CB	5.56	118.06	110.38
1	A	555	U	C2'-C3'-O3'	5.56	122.04	113.70
1	A	699	C	C2'-C3'-O3'	5.56	122.04	113.70
1	A	1206	G	P-O3'-C3'	-5.56	111.86	120.20
1	A	681	A	C5'-C4'-C3'	5.56	124.34	116.00
11	K	54	SER	CA-C-N	5.56	127.67	120.44
11	K	54	SER	C-N-CA	5.56	127.67	120.44
22	W	271	ARG	CA-C-O	-5.56	114.66	120.55
1	A	75	G	O4'-C1'-N9	5.56	116.83	108.50
1	A	181	A	C5'-C4'-C3'	5.56	124.34	116.00
1	A	281	G	O5'-C5'-C4'	-5.56	103.36	111.70
1	A	597	G	O5'-C5'-C4'	-5.56	103.16	111.50
1	A	649	A	C1'-O4'-C4'	-5.56	104.34	109.90
1	A	1129	C	C5'-C4'-O4'	-5.56	101.46	109.80
1	A	1402	C	C1'-C2'-O2'	5.56	116.74	108.40
8	H	11	THR	CA-C-N	5.56	128.18	120.29
8	H	11	THR	C-N-CA	5.56	128.18	120.29
19	S	78	THR	N-CA-C	-5.56	100.26	108.99
2	B	53	LEU	CB-CA-C	-5.56	98.60	110.32
6	F	80	PHE	CB-CA-C	-5.56	101.52	110.74
16	P	78	VAL	N-CA-C	-5.56	107.07	112.29
1	A	168	G	C3'-C2'-C1'	-5.55	95.75	101.30
1	A	380	G	C8-N9-C1'	5.55	143.66	127.00
1	A	458	U	O4'-C1'-C2'	-5.55	102.05	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1203	C	C5'-C4'-O4'	5.55	118.13	109.80
1	A	1313	U	O4'-C1'-N1	5.55	116.83	108.50
1	A	1506	U	C1'-O4'-C4'	5.55	115.25	109.70
17	Q	70	LYS	N-CA-CB	-5.55	101.10	110.49
1	A	172	A	N9-C1'-C2'	5.55	120.33	112.00
1	A	1305	G	C4'-C3'-O3'	5.55	121.33	113.00
1	A	358	U	C1'-O4'-C4'	-5.55	104.35	109.90
1	A	689	C	C3'-C2'-C1'	-5.55	95.75	101.30
3	C	104	GLU	N-CA-CB	5.55	119.27	110.55
22	W	220	LYS	N-CA-C	-5.55	105.23	111.28
1	A	30	U	P-O5'-C5'	-5.55	112.58	120.90
1	A	616	G	O5'-C5'-C4'	-5.55	103.17	111.50
1	A	1034	G	C4'-C3'-C2'	-5.55	97.05	102.60
1	A	1135	U	O4'-C1'-N1	5.55	116.83	108.50
1	A	1185	G	C5'-C4'-C3'	5.55	124.33	116.00
1	A	181	A	C4'-C3'-C2'	-5.55	97.05	102.60
2	B	30	ILE	N-CA-CB	5.55	120.38	111.23
3	C	6	PRO	N-CA-C	-5.55	104.79	113.78
5	E	13	LYS	N-CA-C	-5.55	100.84	109.72
1	A	1171	A	C3'-C2'-O2'	5.55	119.02	110.70
1	A	1479	C	C1'-O4'-C4'	-5.55	104.35	109.90
9	I	30	ASN	CA-CB-CG	5.55	118.15	112.60
1	A	138	G	P-O3'-C3'	-5.54	111.89	120.20
1	A	614	C	C4'-C3'-C2'	5.54	108.14	102.60
1	A	627	G	C1'-O4'-C4'	-5.54	104.36	109.90
1	A	828	U	C5'-C4'-C3'	5.54	124.32	116.00
1	A	1508	A	O3'-P-O5'	5.54	112.31	104.00
11	K	74	LYS	CA-C-N	5.54	127.71	120.28
11	K	74	LYS	C-N-CA	5.54	127.71	120.28
20	T	20	ASN	CA-C-O	-5.54	114.53	121.02
1	A	868	C	P-O3'-C3'	-5.54	111.89	120.20
1	A	419	C	O4'-C1'-N1	5.54	116.81	108.50
1	A	949	A	C4'-C3'-O3'	-5.54	104.69	113.00
22	W	65	ASN	N-CA-C	-5.54	102.56	110.59
1	A	283	U	C1'-O4'-C4'	-5.54	104.36	109.90
6	F	37	HIS	CA-C-N	5.54	132.12	121.54
6	F	37	HIS	C-N-CA	5.54	132.12	121.54
1	A	476	U	C1'-O4'-C4'	-5.54	104.36	109.90
1	A	1206	G	C5'-C4'-O4'	5.54	118.11	109.80
1	A	746	A	C3'-C2'-C1'	-5.54	95.77	101.30
1	A	1001	C	C4'-C3'-O3'	-5.54	104.69	113.00
1	A	1121	U	O4'-C4'-C3'	-5.54	98.46	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	22	PHE	N-CA-CB	5.54	118.68	110.49
3	C	40	GLN	N-CA-CB	-5.54	101.98	110.01
9	I	82	ILE	CA-C-N	5.54	128.01	120.54
9	I	82	ILE	C-N-CA	5.54	128.01	120.54
1	A	295	C	O5'-C5'-C4'	-5.53	103.20	111.50
1	A	769	G	P-O3'-C3'	-5.53	111.90	120.20
1	A	1168	U	O4'-C1'-N1	5.53	116.80	108.50
2	B	158	ASP	CA-CB-CG	5.53	118.13	112.60
22	W	174	ASN	CA-CB-CG	-5.53	107.07	112.60
1	A	180	U	O4'-C1'-C2'	5.53	113.13	107.60
1	A	1167	A	C3'-C2'-C1'	5.53	106.83	101.30
1	A	439	U	P-O3'-C3'	-5.53	111.90	120.20
1	A	1148	U	N1-C1'-C2'	5.53	120.30	112.00
1	A	1260	G	C1'-O4'-C4'	-5.53	104.37	109.90
1	A	1418	A	C1'-O4'-C4'	-5.53	104.37	109.90
9	I	102	PHE	CA-CB-CG	-5.53	108.27	113.80
13	M	15	VAL	CA-C-N	5.53	130.22	121.09
13	M	15	VAL	C-N-CA	5.53	130.22	121.09
15	O	82	GLU	N-CA-C	5.53	118.07	111.71
1	A	178	C	C1'-O4'-C4'	-5.53	104.37	109.90
1	A	645	G	C5'-C4'-C3'	5.53	124.29	116.00
1	A	1279	G	O3'-P-O5'	-5.53	95.71	104.00
1	A	1397	C	O4'-C1'-C2'	-5.53	102.07	107.60
1	A	1468	A	C5'-C4'-C3'	-5.53	107.71	116.00
1	A	578	C	C3'-C2'-C1'	-5.53	95.77	101.30
1	A	1330	U	O4'-C1'-N1	5.52	116.79	108.50
1	A	1406	U	O4'-C1'-N1	5.52	116.79	108.50
7	G	30	MET	CA-C-O	5.52	127.35	121.16
1	A	784	A	P-O3'-C3'	5.52	128.48	120.20
1	A	1047	G	C5'-C4'-C3'	-5.52	107.72	116.00
1	A	1487	G	C5'-C4'-O4'	-5.52	101.52	109.80
1	A	1521	C	O4'-C1'-N1	5.52	116.78	108.50
5	E	76	ASN	CA-C-N	5.52	132.09	121.54
5	E	76	ASN	C-N-CA	5.52	132.09	121.54
14	N	49	THR	CA-CB-OG1	5.52	117.88	109.60
1	A	239	U	P-O3'-C3'	5.52	128.48	120.20
1	A	277	C	O4'-C1'-N1	5.52	116.78	108.50
1	A	909	A	O5'-C5'-C4'	-5.52	103.22	111.50
1	A	1060	U	C3'-C2'-C1'	-5.52	95.78	101.30
7	G	126	ALA	CA-C-N	5.52	127.68	120.28
7	G	126	ALA	C-N-CA	5.52	127.68	120.28
1	A	289	G	C1'-O4'-C4'	-5.52	104.38	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	635	A	C5'-C4'-C3'	-5.52	107.72	116.00
1	A	703	G	C3'-C2'-O2'	-5.52	106.32	114.60
1	A	834	U	C4'-C3'-C2'	5.52	108.12	102.60
1	A	271	C	C5'-C4'-C3'	-5.52	107.72	116.00
1	A	541	G	O5'-C5'-C4'	-5.52	103.23	111.50
1	A	1459	G	O3'-P-O5'	-5.52	95.73	104.00
1	A	741	G	O5'-C5'-C4'	-5.51	103.23	111.50
12	L	10	PRO	CA-C-O	-5.51	114.37	122.31
1	A	43	C	C4'-C3'-O3'	-5.51	104.73	113.00
1	A	191	G	O4'-C1'-C2'	-5.51	102.09	107.60
1	A	330	C	P-O5'-C5'	-5.51	112.63	120.90
1	A	817	C	C2'-C3'-O3'	5.51	117.77	109.50
1	A	924	C	C1'-O4'-C4'	-5.51	104.39	109.90
10	J	48	ARG	N-CA-C	5.51	118.27	110.50
1	A	931	C	O4'-C1'-N1	5.51	116.77	108.50
1	A	1149	C	O5'-C5'-C4'	-5.51	103.23	111.50
2	B	171	ALA	CA-C-N	5.51	127.99	120.77
2	B	171	ALA	C-N-CA	5.51	127.99	120.77
1	A	780	A	O5'-C5'-C4'	5.51	119.76	111.50
1	A	1158	C	O3'-P-O5'	-5.51	95.74	104.00
1	A	1282	C	O4'-C4'-C3'	-5.51	98.49	104.00
1	A	1398	A	O4'-C4'-C3'	-5.51	98.49	104.00
7	G	108	ARG	N-CA-C	5.51	122.53	110.80
1	A	980	C	C5'-C4'-C3'	-5.51	107.74	116.00
5	E	44	ARG	CB-CA-C	-5.51	103.13	110.79
1	A	500	G	C4-N9-C1'	-5.51	109.98	126.50
8	H	116	ARG	CB-CA-C	-5.51	102.48	110.96
10	J	49	PHE	CA-C-N	5.51	131.22	122.74
10	J	49	PHE	C-N-CA	5.51	131.22	122.74
1	A	175	C	C1'-O4'-C4'	-5.50	104.39	109.90
1	A	104	G	C3'-C2'-C1'	-5.50	95.80	101.30
1	A	879	C	C3'-C2'-C1'	-5.50	95.80	101.30
1	A	1207	G	P-O5'-C5'	5.50	129.16	120.90
1	A	1365	G	C5'-C4'-C3'	5.50	124.26	116.00
4	D	70	GLN	N-CA-C	5.50	117.36	111.36
1	A	299	G	P-O3'-C3'	-5.50	111.95	120.20
2	B	107	ARG	N-CA-C	-5.50	105.36	111.36
1	A	121	U	C2'-C3'-O3'	5.50	121.95	113.70
1	A	162	A	C5'-C4'-O4'	5.50	118.05	109.80
1	A	426	U	C6-N1-C1'	5.50	137.69	121.20
1	A	771	G	C4'-C3'-C2'	-5.50	97.10	102.60
15	O	34	GLN	CB-CA-C	5.50	119.43	110.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	257	G	C5'-C4'-C3'	-5.50	107.76	116.00
1	A	348	G	C3'-C2'-C1'	-5.50	95.80	101.30
7	G	122	GLU	CA-C-N	5.50	127.96	120.54
7	G	122	GLU	C-N-CA	5.50	127.96	120.54
1	A	426	U	C3'-C2'-C1'	-5.50	95.81	101.30
1	A	1256	A	P-O5'-C5'	-5.50	112.66	120.90
1	A	177	G	O4'-C1'-N9	5.49	116.74	108.50
1	A	791	G	C5'-C4'-O4'	5.49	118.04	109.80
1	A	998	C	P-O5'-C5'	-5.49	112.66	120.90
1	A	1522	U	C1'-O4'-C4'	-5.49	104.41	109.90
2	B	157	PRO	CA-C-O	-5.49	115.28	121.43
1	A	715	A	P-O3'-C3'	-5.49	111.96	120.20
1	A	1314	C	C1'-O4'-C4'	-5.49	104.41	109.90
5	E	135	VAL	CA-CB-CG2	5.49	119.74	110.40
1	A	403	C	O5'-C5'-C4'	5.49	119.74	111.50
6	F	65	GLU	CB-CA-C	-5.49	102.08	111.31
21	U	14	ALA	N-CA-C	-5.49	107.59	114.56
1	A	126	G	C3'-C2'-C1'	5.49	106.79	101.30
1	A	1274	A	C1'-O4'-C4'	-5.49	104.41	109.90
1	A	1347	G	P-O5'-C5'	-5.49	112.67	120.90
22	W	310	CYS	N-CA-C	-5.49	98.28	107.99
7	G	118	ARG	CA-C-N	5.49	127.90	120.44
7	G	118	ARG	C-N-CA	5.49	127.90	120.44
1	A	51	A	C2'-C3'-O3'	5.49	117.73	109.50
1	A	576	C	O3'-P-O5'	-5.49	95.77	104.00
1	A	1017	U	C5'-C4'-C3'	-5.49	107.77	116.00
1	A	1236	A	C3'-C2'-C1'	5.49	106.79	101.30
1	A	1423	G	N9-C1'-C2'	-5.49	103.77	112.00
1	A	1471	U	P-O3'-C3'	-5.49	111.97	120.20
22	W	291	HIS	N-CA-CB	5.49	118.19	110.12
1	A	280	C	C4'-C3'-C2'	-5.48	97.12	102.60
16	P	52	LEU	CB-CA-C	-5.48	101.37	110.14
10	J	67	ILE	O-C-N	-5.48	117.71	123.03
1	A	61	G	P-O3'-C3'	-5.48	111.98	120.20
1	A	643	C	C4'-C3'-O3'	-5.48	104.78	113.00
1	A	856	C	C4'-C3'-C2'	-5.48	97.12	102.60
1	A	1026	G	C1'-O4'-C4'	-5.48	104.42	109.90
1	A	1108	G	C3'-C2'-C1'	-5.48	95.82	101.30
1	A	1497	G	C1'-C2'-O2'	5.48	116.62	108.40
15	O	46	LYS	N-CA-CB	5.48	119.75	110.49
1	A	70	U	C1'-C2'-O2'	5.48	116.62	108.40
1	A	285	C	O3'-P-O5'	-5.48	95.78	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1197	A	P-O3'-C3'	-5.48	111.98	120.20
13	M	113	LYS	CA-C-O	-5.48	114.45	119.76
16	P	7	ALA	N-CA-C	-5.48	100.37	109.46
1	A	1039	G	O4'-C1'-C2'	-5.48	102.12	107.60
1	A	1049	U	C4'-C3'-O3'	5.48	117.61	109.40
7	G	56	SER	CA-C-N	5.48	127.62	120.28
7	G	56	SER	C-N-CA	5.48	127.62	120.28
1	A	165	G	C8-N9-C1'	5.47	143.43	127.00
1	A	994	A	C4'-C3'-C2'	-5.47	97.13	102.60
1	A	1059	C	O3'-P-O5'	-5.47	95.79	104.00
1	A	1384	C	P-O5'-C5'	5.47	129.11	120.90
1	A	1506	U	O4'-C4'-C3'	5.47	111.57	106.10
1	A	1533	C	O4'-C1'-C2'	-5.47	100.33	105.80
13	M	6	ILE	N-CA-C	5.47	120.73	109.34
19	S	76	THR	N-CA-C	-5.47	99.14	110.80
1	A	1085	U	O3'-P-O5'	-5.47	95.79	104.00
4	D	130	ASN	N-CA-C	-5.47	99.14	110.80
16	P	24	SER	N-CA-CB	5.47	119.74	110.49
22	W	160	ASN	CB-CA-C	-5.47	100.77	109.80
1	A	7	A	O5'-C5'-C4'	5.47	119.91	111.70
1	A	420	U	O4'-C1'-N1	5.47	116.71	108.50
1	A	1409	C	O5'-C5'-C4'	-5.47	103.29	111.50
1	A	669	G	O4'-C1'-N9	5.47	116.70	108.50
13	M	19	THR	O-C-N	5.47	127.78	122.09
1	A	310	G	C5'-C4'-C3'	-5.47	107.80	116.00
1	A	1271	A	P-O3'-C3'	-5.47	112.00	120.20
22	W	153	ILE	N-CA-C	-5.47	100.61	108.48
1	A	563	A	P-O3'-C3'	-5.47	112.00	120.20
1	A	883	C	C1'-O4'-C4'	-5.47	104.43	109.90
1	A	1266	G	C4-N9-C1'	-5.47	110.10	126.50
22	W	117	LYS	CA-C-N	5.47	125.39	119.76
22	W	117	LYS	C-N-CA	5.47	125.39	119.76
1	A	191	G	C4-N9-C1'	-5.46	110.11	126.50
1	A	1231	G	P-O5'-C5'	-5.46	112.70	120.90
1	A	1507	A	C4'-C3'-C2'	5.46	108.06	102.60
8	H	8	ASP	CA-CB-CG	-5.46	107.14	112.60
8	H	72	GLU	CA-C-N	5.46	131.98	121.54
8	H	72	GLU	C-N-CA	5.46	131.98	121.54
2	B	209	VAL	CA-CB-CG2	-5.46	101.12	110.40
1	A	777	A	O4'-C1'-N9	5.46	116.69	108.50
1	A	46	G	C2'-C3'-O3'	-5.46	105.51	113.70
1	A	425	G	P-O3'-C3'	-5.46	112.01	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	477	C	C3'-C2'-C1'	-5.46	95.84	101.30
1	A	788	U	C3'-C2'-O2'	5.46	118.89	110.70
1	A	1011	C	C4'-C3'-O3'	-5.46	104.81	113.00
1	A	752	G	O4'-C1'-C2'	5.46	113.06	107.60
1	A	830	G	C4'-C3'-O3'	-5.46	104.81	113.00
1	A	1137	C	O4'-C4'-C3'	-5.46	100.64	106.10
3	C	23	ALA	N-CA-CB	5.46	119.07	110.39
2	B	154	GLY	N-CA-C	-5.46	107.15	115.66
11	K	75	GLU	N-CA-C	-5.46	105.33	111.28
1	A	142	G	P-O3'-C3'	5.45	128.38	120.20
1	A	271	C	C4'-C3'-C2'	-5.45	97.15	102.60
1	A	988	G	C1'-O4'-C4'	-5.45	104.45	109.90
1	A	1266	G	C1'-O4'-C4'	-5.45	104.45	109.90
5	E	157	GLY	N-CA-C	-5.45	100.26	113.18
7	G	7	GLY	CA-C-N	5.45	131.95	121.54
7	G	7	GLY	C-N-CA	5.45	131.95	121.54
9	I	7	GLY	N-CA-C	-5.45	100.26	113.18
20	T	50	PHE	N-CA-CB	5.45	118.14	110.12
1	A	949	A	C1'-O4'-C4'	-5.45	104.45	109.90
1	A	1029	U	O4'-C4'-C3'	-5.45	98.55	104.00
20	T	70	LYS	N-CA-CB	-5.45	102.06	110.13
22	W	139	ASN	CA-CB-CG	-5.45	107.15	112.60
1	A	354	G	C3'-C2'-C1'	-5.45	95.85	101.30
1	A	420	U	O3'-P-O5'	5.45	112.17	104.00
1	A	893	C	P-O5'-C5'	5.45	129.08	120.90
1	A	56	U	C3'-C2'-C1'	-5.45	95.85	101.30
1	A	301	G	P-O3'-C3'	-5.45	112.03	120.20
1	A	347	G	P-O3'-C3'	-5.45	112.03	120.20
7	G	34	LYS	N-CA-CB	5.45	119.70	110.49
7	G	27	ASN	N-CA-C	5.45	117.65	111.11
12	L	2	THR	CA-C-N	5.45	127.63	120.60
12	L	2	THR	C-N-CA	5.45	127.63	120.60
1	A	144	G	P-O3'-C3'	-5.45	112.03	120.20
1	A	208	U	C4'-C3'-O3'	-5.45	104.83	113.00
1	A	429	U	C1'-O4'-C4'	-5.45	104.25	109.70
1	A	462	G	C1'-O4'-C4'	-5.45	104.45	109.90
1	A	512	U	P-O3'-C3'	-5.45	112.03	120.20
1	A	528	C	C4'-C3'-C2'	-5.45	97.16	102.60
1	A	955	U	O3'-P-O5'	-5.45	95.83	104.00
1	A	1163	A	C5'-C4'-O4'	5.45	117.97	109.80
1	A	1363	A	C4'-C3'-C2'	-5.45	97.15	102.60
2	B	65	LYS	CA-C-N	5.45	131.77	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	65	LYS	C-N-CA	5.45	131.77	121.97
12	L	89	LEU	CB-CA-C	-5.45	102.38	110.71
1	A	353	A	C4'-C3'-O3'	-5.44	104.83	113.00
1	A	106	C	C4'-C3'-O3'	-5.44	104.84	113.00
1	A	418	C	O4'-C1'-N1	5.44	116.67	108.50
1	A	717	U	O4'-C1'-C2'	5.44	111.24	105.80
7	G	67	ASN	N-CA-C	-5.44	104.88	112.45
13	M	86	ARG	CB-CA-C	-5.44	101.60	110.85
1	A	1366	C	O3'-P-O5'	-5.44	95.84	104.00
1	A	1408	A	C5'-C4'-C3'	-5.44	107.84	116.00
1	A	1475	G	P-O5'-C5'	-5.44	112.74	120.90
14	N	54	SER	N-CA-CB	5.44	119.68	110.49
1	A	156	C	C5'-C4'-C3'	-5.44	107.84	116.00
1	A	192	A	C1'-O4'-C4'	-5.44	104.46	109.90
1	A	696	A	N9-C1'-C2'	-5.44	103.84	112.00
1	A	708	C	C3'-C2'-C1'	-5.44	95.86	101.30
1	A	886	G	O4'-C4'-C3'	-5.44	98.56	104.00
1	A	1021	A	C1'-O4'-C4'	-5.44	104.46	109.90
1	A	1461	G	C8-N9-C1'	5.44	143.31	127.00
2	B	10	LYS	CA-C-N	5.44	131.93	121.54
2	B	10	LYS	C-N-CA	5.44	131.93	121.54
5	E	20	VAL	CB-CA-C	5.44	118.64	111.19
15	O	18	ALA	N-CA-C	-5.44	100.04	108.90
1	A	378	G	C3'-C2'-C1'	-5.44	95.86	101.30
1	A	391	G	C4-N9-C1'	-5.43	110.19	126.50
1	A	506	G	O4'-C4'-C3'	5.43	109.43	104.00
1	A	1075	U	O4'-C1'-C2'	-5.43	102.17	107.60
1	A	1158	C	C4'-C3'-C2'	-5.43	97.17	102.60
2	B	122	ASP	N-CA-C	-5.43	103.98	111.81
1	A	530	G	P-O3'-C3'	-5.43	112.05	120.20
1	A	599	C	O3'-P-O5'	5.43	112.15	104.00
1	A	1057	G	C4'-C3'-O3'	-5.43	104.85	113.00
1	A	1410	A	C2'-C3'-O3'	5.43	121.85	113.70
1	A	1526	G	O5'-C5'-C4'	-5.43	103.35	111.50
20	T	34	VAL	CA-C-N	5.43	127.82	120.38
20	T	34	VAL	C-N-CA	5.43	127.82	120.38
1	A	452	A	C2'-C3'-O3'	-5.43	105.55	113.70
1	A	728	A	P-O3'-C3'	-5.43	112.05	120.20
1	A	1234	C	C4'-C3'-C2'	-5.43	97.17	102.60
1	A	797	C	C2-N1-C1'	-5.43	102.51	118.80
1	A	840	C	P-O5'-C5'	5.43	129.05	120.90
1	A	1486	G	P-O3'-C3'	-5.43	112.06	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1496	C	C4'-C3'-O3'	-5.43	104.86	113.00
1	A	11	G	O3'-P-O5'	5.43	112.14	104.00
1	A	670	G	O4'-C1'-N9	5.43	116.64	108.50
1	A	945	G	C1'-C2'-O2'	5.43	116.54	108.40
1	A	303	A	C3'-C2'-C1'	-5.43	95.87	101.30
1	A	463	U	C3'-C2'-C1'	-5.43	95.87	101.30
1	A	669	G	C2'-C3'-O3'	5.43	121.84	113.70
1	A	869	G	C1'-C2'-O2'	5.43	116.54	108.40
1	A	1395	C	C5'-C4'-O4'	-5.43	101.66	109.80
10	J	71	LEU	N-CA-C	-5.43	101.28	109.85
1	A	117	G	O5'-C5'-C4'	-5.42	103.36	111.50
1	A	131	A	C5'-C4'-C3'	-5.42	107.86	116.00
1	A	169	C	C3'-C2'-C1'	-5.42	95.88	101.30
1	A	201	G	O4'-C1'-C2'	5.42	113.02	107.60
1	A	952	U	P-O3'-C3'	-5.42	112.06	120.20
1	A	1199	U	C4'-C3'-O3'	-5.42	104.86	113.00
1	A	1322	C	O4'-C4'-C3'	-5.42	100.67	106.10
2	B	199	ILE	N-CA-CB	-5.42	106.62	112.37
11	K	113	THR	N-CA-C	5.42	115.11	108.11
17	Q	37	ILE	N-CA-CB	5.42	118.25	112.07
1	A	418	C	C3'-C2'-C1'	5.42	106.72	101.30
1	A	134	G	P-O5'-C5'	5.42	129.03	120.90
1	A	1187	G	C4'-C3'-C2'	-5.42	97.18	102.60
10	J	80	THR	CA-C-N	5.42	128.30	120.38
10	J	80	THR	C-N-CA	5.42	128.30	120.38
19	S	22	VAL	N-CA-CB	5.42	120.18	111.23
1	A	857	C	C5'-C4'-O4'	5.42	117.93	109.80
6	F	73	GLU	N-CA-CB	5.42	118.61	109.78
1	A	833	G	C3'-C2'-C1'	-5.42	95.88	101.30
1	A	1269	A	O4'-C1'-N9	5.42	116.63	108.50
18	R	57	ALA	CB-CA-C	-5.42	99.17	109.95
7	G	25	PHE	CA-CB-CG	5.42	119.22	113.80
15	O	65	LEU	N-CA-C	5.42	116.86	111.07
1	A	464	U	C2'-C3'-O3'	-5.41	105.58	113.70
1	A	1462	C	O4'-C1'-N1	5.41	116.62	108.50
20	T	34	VAL	N-CA-CB	5.41	116.77	110.65
1	A	742	G	C5'-C4'-C3'	-5.41	107.88	116.00
1	A	1283	U	P-O3'-C3'	-5.41	112.08	120.20
7	G	29	LEU	N-CA-C	-5.41	105.54	111.82
15	O	73	ASP	CA-CB-CG	-5.41	107.19	112.60
1	A	29	U	C2'-C3'-O3'	5.41	121.82	113.70
1	A	1163	A	P-O5'-C5'	5.41	129.02	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	T	51	ASN	N-CA-C	-5.41	106.45	113.16
1	A	61	G	C4-N9-C1'	-5.41	110.27	126.50
1	A	421	U	O4'-C1'-N1	5.41	116.31	108.20
1	A	581	G	C8-N9-C1'	5.41	143.22	127.00
1	A	1048	G	P-O5'-C5'	-5.41	112.79	120.90
1	A	1327	C	O4'-C4'-C3'	-5.41	98.59	104.00
10	J	34	ALA	N-CA-C	-5.41	100.42	109.24
15	O	34	GLN	CB-CG-CD	-5.41	103.40	112.60
1	A	264	C	C2'-C3'-O3'	5.41	121.81	113.70
1	A	566	G	C4'-C3'-O3'	5.41	117.51	109.40
1	A	868	C	O4'-C1'-N1	5.41	116.61	108.50
1	A	1199	U	C5'-C4'-C3'	-5.41	107.89	116.00
4	D	161	ALA	CA-C-N	5.41	127.52	120.28
4	D	161	ALA	C-N-CA	5.41	127.52	120.28
1	A	492	C	O4'-C4'-C3'	5.40	109.40	104.00
1	A	972	C	O5'-C5'-C4'	-5.40	103.39	111.50
1	A	1465	A	C3'-C2'-C1'	-5.40	95.90	101.30
1	A	616	G	C2'-C3'-O3'	5.40	121.80	113.70
1	A	867	G	C5'-C4'-C3'	-5.40	107.89	116.00
1	A	1266	G	O5'-C5'-C4'	-5.40	103.40	111.50
1	A	445	G	P-O5'-C5'	-5.40	112.80	120.90
1	A	640	A	C1'-O4'-C4'	-5.40	104.50	109.90
13	M	109	LYS	N-CA-C	-5.40	102.34	110.06
1	A	7	A	C4'-C3'-O3'	5.40	117.50	109.40
1	A	248	C	C5'-C4'-C3'	-5.40	107.90	116.00
1	A	384	G	P-O3'-C3'	-5.40	112.10	120.20
1	A	816	A	C4'-C3'-C2'	-5.40	97.20	102.60
1	A	924	C	C4'-C3'-C2'	-5.40	97.20	102.60
1	A	1098	C	C5'-C4'-O4'	5.40	117.90	109.80
1	A	1365	G	O4'-C4'-C3'	-5.40	98.60	104.00
1	A	1408	A	C4'-C3'-O3'	-5.40	104.90	113.00
1	A	1442	G	C1'-O4'-C4'	-5.40	104.50	109.90
1	A	400	C	O4'-C4'-C3'	-5.40	98.60	104.00
3	C	53	ARG	N-CA-CB	5.40	119.61	110.49
1	A	136	C	C5'-C4'-C3'	-5.39	107.91	116.00
3	C	176	THR	N-CA-CB	5.39	119.42	110.47
13	M	76	ILE	CB-CA-C	-5.39	105.06	111.97
14	N	50	LEU	CA-C-N	5.39	125.39	119.89
14	N	50	LEU	C-N-CA	5.39	125.39	119.89
16	P	73	ALA	N-CA-CB	5.39	117.78	109.91
22	W	170	MET	CG-SD-CE	-5.39	89.03	100.90
3	C	147	GLY	N-CA-C	-5.39	100.53	110.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
14	N	19	TYR	CB-CG-CD1	5.39	128.89	120.80
22	W	40	ASP	N-CA-C	-5.39	100.87	109.07
22	W	131	ALA	CA-C-N	5.39	129.76	121.19
22	W	131	ALA	C-N-CA	5.39	129.76	121.19
1	A	478	A	P-O5'-C5'	5.39	128.99	120.90
1	A	634	C	C5'-C4'-O4'	5.39	117.88	109.80
1	A	991	U	O5'-C5'-C4'	-5.39	103.62	111.70
1	A	797	C	P-O3'-C3'	-5.39	112.12	120.20
1	A	984	C	O4'-C1'-C2'	5.39	112.99	107.60
4	D	109	THR	N-CA-C	-5.39	102.90	110.50
14	N	50	LEU	CA-C-O	-5.39	115.31	120.64
1	A	50	A	P-O5'-C5'	5.39	128.98	120.90
1	A	720	C	P-O3'-C3'	-5.39	112.12	120.20
1	A	1135	U	O5'-C5'-C4'	-5.39	103.42	111.50
1	A	1136	C	C4'-C3'-C2'	5.39	107.99	102.60
1	A	1389	C	O4'-C4'-C3'	-5.39	98.61	104.00
5	E	20	VAL	CA-C-O	-5.39	115.96	121.67
5	E	22	LYS	CA-C-N	5.39	131.83	121.54
5	E	22	LYS	C-N-CA	5.39	131.83	121.54
1	A	116	A	C5'-C4'-C3'	-5.38	107.92	116.00
1	A	251	G	P-O3'-C3'	5.38	128.28	120.20
1	A	1053	G	C2'-C3'-O3'	5.38	121.78	113.70
1	A	1346	A	N9-C1'-C2'	-5.38	105.92	114.00
4	D	187	ARG	CA-C-N	5.38	127.94	120.29
4	D	187	ARG	C-N-CA	5.38	127.94	120.29
1	A	1359	C	O5'-C5'-C4'	5.38	119.58	111.50
16	P	68	SER	N-CA-C	5.38	117.78	110.35
1	A	90	C	C1'-C2'-O2'	-5.38	103.73	111.80
1	A	122	G	P-O3'-C3'	-5.38	112.13	120.20
1	A	341	C	O4'-C4'-C3'	-5.38	98.62	104.00
1	A	390	U	C4'-C3'-C2'	-5.38	97.22	102.60
1	A	1203	C	O4'-C1'-N1	5.38	116.57	108.50
5	E	143	LEU	CA-C-N	5.38	129.75	121.19
5	E	143	LEU	C-N-CA	5.38	129.75	121.19
22	W	124	ASP	CA-CB-CG	-5.38	107.22	112.60
1	A	104	G	C4'-C3'-C2'	-5.38	97.22	102.60
1	A	997	U	C6-N1-C1'	5.38	137.34	121.20
1	A	1243	C	C3'-C2'-C1'	-5.38	95.92	101.30
1	A	106	C	C2'-C3'-O3'	5.38	121.77	113.70
9	I	41	GLU	N-CA-CB	-5.38	102.57	110.85
1	A	181	A	P-O3'-C3'	5.38	128.27	120.20
1	A	531	U	C1'-O4'-C4'	-5.38	104.52	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1207	G	C5'-C4'-O4'	5.38	117.86	109.80
1	A	287	U	C3'-C2'-C1'	-5.37	95.93	101.30
6	F	88	MET	CG-SD-CE	-5.37	89.08	100.90
7	G	110	ARG	CA-C-N	5.37	131.94	121.41
7	G	110	ARG	C-N-CA	5.37	131.94	121.41
10	J	16	ARG	CB-CA-C	-5.37	100.34	110.01
1	A	769	G	O3'-P-O5'	-5.37	95.94	104.00
1	A	1497	G	C4'-C3'-C2'	5.37	107.97	102.60
4	D	40	HIS	CE1-NE2-CD2	-5.37	103.63	109.00
8	H	13	ILE	N-CA-CB	5.37	116.47	110.62
17	Q	35	LYS	N-CA-CB	5.37	119.57	110.49
22	W	273	PHE	N-CA-C	5.37	122.24	110.80
1	A	747	A	N9-C1'-C2'	-5.37	103.94	112.00
1	A	1223	C	C1'-O4'-C4'	-5.37	104.33	109.70
13	M	5	GLY	O-C-N	5.37	129.68	122.70
1	A	8	A	C3'-C2'-C1'	-5.37	96.13	101.50
1	A	314	C	C4'-C3'-O3'	5.37	121.05	113.00
1	A	814	A	C5'-C4'-C3'	-5.37	107.95	116.00
1	A	1278	G	C2'-C3'-O3'	5.37	117.55	109.50
1	A	1422	G	C4'-C3'-O3'	5.37	121.05	113.00
2	B	216	VAL	N-CA-C	-5.37	104.78	112.35
18	R	22	TYR	N-CA-C	5.37	118.65	111.24
1	A	176	C	C4'-C3'-C2'	-5.37	97.23	102.60
1	A	526	C	P-O3'-C3'	-5.37	112.15	120.20
4	D	21	LYS	N-CA-CB	5.37	119.56	110.49
1	A	589	U	C2'-C3'-O3'	5.37	121.75	113.70
1	A	1003	G	O4'-C1'-C2'	-5.37	102.23	107.60
1	A	1112	C	P-O5'-C5'	-5.37	112.85	120.90
8	H	59	GLU	N-CA-C	-5.37	99.67	108.41
1	A	159	G	P-O3'-C3'	-5.36	112.15	120.20
1	A	305	G	C5'-C4'-O4'	5.36	117.14	109.10
1	A	339	C	C6-N1-C1'	5.36	136.89	120.80
1	A	614	C	C1'-C2'-O2'	-5.36	100.36	108.40
1	A	940	C	O4'-C4'-C3'	-5.36	98.64	104.00
1	A	1305	G	N9-C1'-C2'	5.36	120.04	112.00
1	A	302	G	P-O3'-C3'	-5.36	112.16	120.20
1	A	789	U	O5'-C5'-C4'	-5.36	103.46	111.50
1	A	860	A	O5'-C5'-C4'	-5.36	103.46	111.50
1	A	865	A	C3'-C2'-C1'	-5.36	95.94	101.30
5	E	115	GLU	N-CA-CB	5.36	118.09	110.16
10	J	54	SER	CA-C-N	5.36	125.43	119.32
10	J	54	SER	C-N-CA	5.36	125.43	119.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
14	N	13	VAL	CA-C-N	5.36	127.72	120.65
14	N	13	VAL	C-N-CA	5.36	127.72	120.65
1	A	532	A	P-O3'-C3'	-5.36	112.16	120.20
1	A	810	C	C5'-C4'-C3'	-5.36	107.96	116.00
1	A	955	U	C5'-C4'-C3'	-5.36	107.96	116.00
1	A	1178	G	C4'-C3'-O3'	-5.36	104.96	113.00
7	G	31	VAL	N-CA-C	-5.36	98.19	109.34
19	S	68	HIS	CA-CB-CG	-5.36	108.44	113.80
1	A	573	A	P-O5'-C5'	-5.36	112.86	120.90
1	A	607	A	P-O5'-C5'	5.36	128.94	120.90
1	A	793	U	O4'-C4'-C3'	-5.36	98.64	104.00
1	A	1346	A	O4'-C4'-C3'	-5.36	100.74	106.10
1	A	1420	U	C3'-C2'-C1'	-5.36	95.94	101.30
1	A	1531	A	O5'-C5'-C4'	-5.36	103.46	111.50
4	D	129	VAL	CA-CB-CG1	-5.36	101.29	110.40
20	T	47	GLN	CA-C-N	5.36	127.77	120.54
20	T	47	GLN	C-N-CA	5.36	127.77	120.54
1	A	391	G	C1'-C2'-O2'	5.36	116.43	108.40
1	A	718	A	C2'-C3'-O3'	-5.36	105.67	113.70
1	A	761	G	O3'-P-O5'	-5.36	95.97	104.00
1	A	996	A	O4'-C1'-N9	5.36	116.53	108.50
1	A	1342	C	C4'-C3'-C2'	-5.36	97.25	102.60
1	A	1461	G	O3'-P-O5'	-5.36	95.97	104.00
6	F	8	PHE	N-CA-C	-5.36	99.59	108.75
1	A	336	A	C5'-C4'-C3'	-5.35	107.97	116.00
1	A	1426	G	O5'-C5'-C4'	-5.35	103.47	111.50
4	D	68	GLU	N-CA-CB	5.35	117.99	110.12
12	L	26	CYS	N-CA-CB	5.35	119.90	110.37
1	A	244	U	O4'-C1'-N1	5.35	116.23	108.20
1	A	452	A	O4'-C1'-C2'	5.35	112.95	107.60
1	A	667	G	O4'-C4'-C3'	-5.35	98.65	104.00
1	A	1047	G	O3'-P-O5'	-5.35	95.97	104.00
1	A	1265	C	P-O5'-C5'	-5.35	112.87	120.90
14	N	10	VAL	CA-C-N	5.35	129.66	120.72
14	N	10	VAL	C-N-CA	5.35	129.66	120.72
1	A	221	C	C4'-C3'-O3'	-5.35	104.97	113.00
1	A	167	A	O4'-C4'-C3'	-5.35	98.65	104.00
1	A	174	A	O3'-P-O5'	5.35	112.03	104.00
1	A	263	A	O4'-C4'-C3'	-5.35	98.65	104.00
1	A	636	U	C5'-C4'-C3'	5.35	124.03	116.00
9	I	123	ARG	O-C-N	5.35	127.79	122.17
11	K	17	ASP	CA-CB-CG	-5.35	107.25	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	O	76	ARG	CB-CA-C	-5.35	101.91	110.79
1	A	614	C	C2'-C3'-O3'	5.35	121.72	113.70
1	A	691	G	C2'-C3'-O3'	5.35	121.72	113.70
1	A	1093	A	P-O3'-C3'	-5.35	112.18	120.20
3	C	38	VAL	CA-C-O	-5.35	114.31	119.92
15	O	82	GLU	N-CA-CB	-5.35	101.98	110.22
1	A	78	A	P-O5'-C5'	-5.35	112.88	120.90
1	A	456	A	N9-C1'-C2'	5.34	120.02	112.00
18	R	34	GLU	CA-C-N	5.34	130.46	122.23
18	R	34	GLU	C-N-CA	5.34	130.46	122.23
1	A	478	A	C1'-O4'-C4'	-5.34	104.56	109.90
1	A	656	G	O4'-C1'-N9	5.34	116.51	108.50
1	A	785	G	C4'-C3'-O3'	-5.34	104.99	113.00
1	A	1239	A	C4'-C3'-C2'	-5.34	97.26	102.60
1	A	1494	G	C2'-C3'-O3'	5.34	121.71	113.70
22	W	327	GLU	CA-C-N	5.34	128.43	120.31
22	W	327	GLU	C-N-CA	5.34	128.43	120.31
1	A	185	U	P-O5'-C5'	5.34	128.91	120.90
1	A	341	C	C5'-C4'-C3'	5.34	124.01	116.00
1	A	895	G	O4'-C1'-N9	5.34	116.51	108.50
1	A	997	U	O4'-C4'-C3'	-5.34	98.66	104.00
1	A	1230	C	O3'-P-O5'	-5.34	95.99	104.00
3	C	187	GLU	N-CA-CB	5.34	119.51	110.49
7	G	99	ALA	CB-CA-C	-5.34	102.27	110.81
1	A	1156	G	C8-N9-C1'	5.34	143.01	127.00
1	A	1401	G	C4'-C3'-O3'	-5.34	104.99	113.00
1	A	65	A	C3'-C2'-C1'	5.34	106.84	101.50
1	A	549	C	O4'-C1'-N1	5.34	116.50	108.50
1	A	690	G	O4'-C1'-N9	5.34	116.50	108.50
1	A	1273	C	P-O3'-C3'	-5.34	112.19	120.20
2	B	135	MET	CB-CA-C	-5.34	99.47	109.72
13	M	113	LYS	CB-CA-C	-5.34	102.66	109.92
1	A	466	A	O5'-C5'-C4'	-5.33	103.50	111.50
1	A	876	C	C1'-O4'-C4'	-5.33	104.57	109.90
13	M	76	ILE	CA-C-N	5.33	127.74	120.54
13	M	76	ILE	C-N-CA	5.33	127.74	120.54
1	A	253	A	P-O3'-C3'	-5.33	112.20	120.20
1	A	709	U	C1'-O4'-C4'	-5.33	104.57	109.90
6	F	71	ILE	CA-C-N	5.33	127.86	120.29
6	F	71	ILE	C-N-CA	5.33	127.86	120.29
22	W	97	VAL	N-CA-C	-5.33	100.80	108.48
1	A	562	U	O4'-C1'-N1	5.33	116.50	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	418	C	C2'-C3'-O3'	5.33	121.69	113.70
1	A	809	G	C5'-C4'-C3'	-5.33	108.01	116.00
1	A	1459	G	C4'-C3'-O3'	-5.33	105.01	113.00
15	O	52	ARG	CB-CA-C	-5.33	101.79	110.85
1	A	275	G	O3'-P-O5'	-5.33	96.01	104.00
1	A	457	G	C5'-C4'-C3'	-5.33	108.01	116.00
1	A	548	G	C2'-C3'-O3'	-5.33	105.71	113.70
1	A	1159	U	C4'-C3'-C2'	5.33	107.93	102.60
1	A	1196	A	O3'-P-O5'	-5.33	96.01	104.00
1	A	15	G	C4'-C3'-O3'	-5.33	105.01	113.00
1	A	223	A	P-O5'-C5'	5.33	128.89	120.90
1	A	648	A	C1'-O4'-C4'	-5.33	104.57	109.90
1	A	812	G	O5'-C5'-C4'	5.33	119.69	111.70
1	A	838	G	C4'-C3'-C2'	-5.33	97.27	102.60
1	A	910	C	P-O3'-C3'	-5.33	112.21	120.20
1	A	1016	A	C2'-C3'-O3'	-5.33	105.71	113.70
2	B	130	LYS	N-CA-C	-5.33	106.29	112.89
2	B	133	ALA	CA-C-N	5.33	131.71	121.54
2	B	133	ALA	C-N-CA	5.33	131.71	121.54
9	I	24	ASN	CA-CB-CG	-5.33	107.27	112.60
1	A	165	G	N9-C1'-C2'	-5.32	104.01	112.00
1	A	306	A	O4'-C4'-C3'	5.32	109.32	104.00
1	A	768	A	C4'-C3'-C2'	-5.32	97.28	102.60
1	A	843	U	O4'-C1'-N1	5.32	116.49	108.50
1	A	1370	G	C4-N9-C1'	-5.32	110.53	126.50
2	B	102	ASN	CA-C-N	5.32	127.42	120.28
2	B	102	ASN	C-N-CA	5.32	127.42	120.28
5	E	39	GLY	N-CA-C	-5.32	100.56	113.18
13	M	13	HIS	CB-CA-C	5.32	118.76	110.67
17	Q	52	CYS	N-CA-C	-5.32	100.05	108.73
20	T	73	ARG	CA-CB-CG	5.32	124.75	114.10
1	A	613	C	O4'-C1'-C2'	5.32	112.92	107.60
1	A	822	U	C5'-C4'-O4'	5.32	117.78	109.80
1	A	1042	A	P-O5'-C5'	5.32	128.88	120.90
1	A	1524	C	P-O5'-C5'	-5.32	112.92	120.90
5	E	63	MET	CA-C-N	5.32	127.67	120.65
5	E	63	MET	C-N-CA	5.32	127.67	120.65
1	A	151	A	C3'-C2'-C1'	-5.32	95.98	101.30
1	A	198	G	O5'-C5'-C4'	5.32	119.48	111.50
1	A	393	A	P-O5'-C5'	-5.32	112.92	120.90
1	A	821	G	C2'-C3'-O3'	-5.32	105.72	113.70
11	K	110	THR	CA-C-N	5.32	130.49	122.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	K	110	THR	C-N-CA	5.32	130.49	122.99
19	S	46	LEU	CA-C-N	5.32	131.27	122.33
19	S	46	LEU	C-N-CA	5.32	131.27	122.33
22	W	188	LEU	N-CA-C	-5.32	99.77	108.76
22	W	302	CYS	N-CA-CB	5.32	119.48	110.49
1	A	213	G	C4'-C3'-C2'	-5.32	97.28	102.60
1	A	441	A	C3'-C2'-C1'	-5.32	95.98	101.30
1	A	61	G	C5'-C4'-C3'	-5.32	108.03	116.00
1	A	90	C	P-O3'-C3'	5.32	128.18	120.20
1	A	234	C	C2'-C3'-O3'	5.32	121.67	113.70
1	A	289	G	C5'-C4'-C3'	-5.32	108.02	116.00
1	A	1017	U	C4'-C3'-C2'	5.32	107.92	102.60
1	A	1180	A	P-O5'-C5'	-5.32	112.92	120.90
5	E	15	ILE	N-CA-C	-5.32	105.42	110.42
1	A	335	C	P-O5'-C5'	-5.32	112.93	120.90
1	A	1453	G	O5'-C5'-C4'	-5.32	103.53	111.50
17	Q	59	GLU	N-CA-CB	5.32	119.29	110.63
1	A	339	C	C2'-C3'-O3'	5.31	121.67	113.70
1	A	829	G	C5'-C4'-C3'	-5.31	108.03	116.00
1	A	854	U	O4'-C4'-C3'	-5.31	98.69	104.00
5	E	49	TYR	CA-C-N	5.31	128.22	122.16
5	E	49	TYR	C-N-CA	5.31	128.22	122.16
1	A	52	C	C4'-C3'-O3'	5.31	120.97	113.00
1	A	58	C	O5'-C5'-C4'	-5.31	103.53	111.50
1	A	138	G	O4'-C4'-C3'	-5.31	98.69	104.00
1	A	485	U	C2'-C3'-O3'	5.31	117.47	109.50
1	A	640	A	C3'-C2'-C1'	-5.31	95.99	101.30
1	A	872	A	P-O5'-C5'	-5.31	112.93	120.90
1	A	1384	C	C4'-C3'-O3'	-5.31	105.03	113.00
8	H	84	ILE	N-CA-CB	5.31	120.00	111.23
13	M	11	HIS	CB-CA-C	5.31	120.99	110.42
15	O	75	ALA	N-CA-C	5.31	120.08	111.37
20	T	8	LYS	CB-CG-CD	5.31	123.52	111.30
1	A	115	G	C4'-C3'-O3'	5.31	117.37	109.40
1	A	422	C	C5'-C4'-O4'	5.31	117.77	109.80
1	A	64	G	P-O3'-C3'	5.31	128.17	120.20
1	A	687	A	C3'-C2'-C1'	-5.31	96.19	101.50
1	A	895	G	C2'-C3'-O3'	5.31	121.66	113.70
1	A	1408	A	C4'-C3'-C2'	-5.31	97.29	102.60
2	B	48	MET	CG-SD-CE	-5.31	89.22	100.90
1	A	179	A	C5'-C4'-O4'	5.31	117.76	109.80
1	A	447	G	C4'-C3'-C2'	-5.31	97.29	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	486	U	P-O3'-C3'	-5.31	112.24	120.20
1	A	570	G	C5'-C4'-C3'	-5.31	108.04	116.00
1	A	1146	A	O3'-P-O5'	-5.31	96.04	104.00
1	A	1268	G	C4'-C3'-O3'	5.31	120.96	113.00
2	B	194	GLY	N-CA-C	-5.31	100.60	113.18
4	D	96	ARG	N-CA-CB	5.31	117.65	110.38
1	A	107	G	O4'-C4'-C3'	-5.31	98.69	104.00
1	A	115	G	O4'-C1'-N9	5.31	116.16	108.20
1	A	193	C	C5'-C4'-O4'	5.31	117.76	109.80
1	A	1273	C	C1'-O4'-C4'	-5.31	104.59	109.90
1	A	1399	C	C4'-C3'-C2'	5.31	107.91	102.60
1	A	403	C	P-O3'-C3'	-5.30	112.24	120.20
1	A	822	U	C3'-C2'-C1'	-5.30	96.00	101.30
1	A	1116	U	C5'-C4'-C3'	-5.30	108.04	116.00
1	A	1505	G	O3'-P-O5'	-5.30	96.04	104.00
3	C	98	ALA	CB-CA-C	-5.30	101.19	109.84
8	H	108	GLY	CA-C-O	-5.30	115.86	122.65
11	K	99	LEU	CB-CA-C	-5.30	101.67	110.37
1	A	785	G	C2'-C3'-O3'	5.30	121.66	113.70
1	A	960	U	C1'-O4'-C4'	-5.30	104.40	109.70
1	A	37	U	P-O5'-C5'	5.30	128.85	120.90
1	A	260	G	P-O5'-C5'	-5.30	112.95	120.90
1	A	772	U	O4'-C1'-N1	5.30	116.45	108.50
1	A	888	G	O4'-C1'-C2'	5.30	112.90	107.60
10	J	86	ALA	N-CA-C	-5.30	105.41	111.14
13	M	91	ARG	N-CA-CB	5.30	119.31	110.41
1	A	637	C	C2'-C3'-O3'	5.30	121.65	113.70
1	A	1006	G	C4'-C3'-C2'	-5.30	97.30	102.60
1	A	1268	G	O4'-C4'-C3'	-5.30	98.70	104.00
1	A	1475	G	O5'-C5'-C4'	-5.30	103.55	111.50
9	I	18	VAL	N-CA-C	-5.30	100.75	108.17
13	M	98	GLY	CA-C-N	5.30	131.66	121.54
13	M	98	GLY	C-N-CA	5.30	131.66	121.54
1	A	291	U	P-O5'-C5'	-5.30	112.95	120.90
8	H	123	GLU	N-CA-CB	-5.30	101.42	110.16
1	A	187	G	C4-N9-C1'	-5.30	110.61	126.50
1	A	221	C	O3'-P-O5'	-5.30	96.05	104.00
1	A	259	G	C4'-C3'-O3'	-5.30	105.05	113.00
1	A	911	U	C5'-C4'-C3'	-5.30	108.06	116.00
1	A	1069	C	P-O5'-C5'	-5.30	112.95	120.90
1	A	1154	G	O5'-C5'-C4'	-5.30	103.55	111.50
1	A	1228	C	P-O5'-C5'	-5.30	112.95	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	193	ASP	N-CA-C	-5.30	106.98	113.50
7	G	77	ARG	N-CA-CB	-5.30	101.54	110.49
1	A	182	A	O4'-C1'-N9	5.29	116.14	108.20
1	A	368	U	C4'-C3'-O3'	-5.29	101.46	109.40
1	A	474	G	O3'-P-O5'	-5.29	96.06	104.00
1	A	910	C	C5'-C4'-O4'	5.29	117.74	109.80
1	A	1370	G	C5'-C4'-C3'	5.29	123.94	116.00
5	E	151	MET	CA-CB-CG	5.29	124.68	114.10
22	W	53	ASP	CA-CB-CG	-5.29	107.31	112.60
1	A	456	A	P-O5'-C5'	-5.29	112.97	120.90
1	A	1171	A	C5'-C4'-O4'	5.29	117.73	109.80
9	I	119	LYS	N-CA-C	-5.29	100.88	108.60
1	A	195	A	C4-N9-C1'	5.29	142.16	126.30
1	A	681	A	C4'-C3'-C2'	-5.29	97.31	102.60
1	A	788	U	P-O5'-C5'	5.29	128.83	120.90
1	A	890	G	O4'-C1'-N9	5.29	116.13	108.20
1	A	1129	C	N1-C1'-C2'	5.29	119.93	112.00
1	A	1479	C	C3'-C2'-C1'	-5.29	96.01	101.30
4	D	44	LYS	CA-CB-CG	5.29	124.68	114.10
1	A	4	U	C2'-C3'-O3'	5.29	117.43	109.50
1	A	268	U	C2'-C3'-O3'	5.29	121.63	113.70
1	A	383	A	C5'-C4'-O4'	5.29	117.73	109.80
1	A	1169	A	O4'-C1'-C2'	-5.29	102.31	107.60
1	A	1264	U	C1'-O4'-C4'	-5.29	104.61	109.90
1	A	1378	C	C4'-C3'-O3'	-5.29	105.07	113.00
4	D	7	LYS	N-CA-CB	-5.29	102.31	109.98
1	A	428	G	C4'-C3'-O3'	5.29	117.33	109.40
1	A	1027	C	C4'-C3'-O3'	-5.29	105.07	113.00
1	A	1091	U	P-O3'-C3'	5.29	128.13	120.20
1	A	1478	U	O4'-C1'-N1	5.29	116.43	108.50
20	T	34	VAL	CB-CA-C	-5.29	105.05	111.87
1	A	216	U	C2-N1-C1'	-5.28	101.85	117.70
1	A	431	A	P-O5'-C5'	-5.28	112.97	120.90
1	A	520	A	O5'-C5'-C4'	-5.28	103.58	111.50
1	A	917	G	C5'-C4'-C3'	-5.28	108.08	116.00
1	A	1033	G	C4'-C3'-O3'	-5.28	105.08	113.00
1	A	1080	A	O4'-C1'-N9	-5.28	100.57	108.50
1	A	1158	C	P-O5'-C5'	5.28	128.83	120.90
1	A	1449	C	C5'-C4'-O4'	-5.28	101.88	109.80
4	D	5	GLY	CA-C-N	5.28	126.44	119.84
4	D	5	GLY	C-N-CA	5.28	126.44	119.84
12	L	28	GLN	N-CA-C	-5.28	101.68	109.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	P	55	ASP	CA-C-N	5.28	127.79	120.29
16	P	55	ASP	C-N-CA	5.28	127.79	120.29
20	T	55	PRO	N-CA-CB	5.28	108.80	103.25
1	A	216	U	C3'-C2'-C1'	-5.28	96.02	101.30
1	A	991	U	O4'-C1'-N1	5.28	116.12	108.20
1	A	1260	G	C4'-C3'-C2'	-5.28	97.32	102.60
8	H	57	GLU	N-CA-CB	5.28	119.42	110.49
1	A	81	A	O5'-C5'-C4'	-5.28	103.78	111.70
1	A	164	G	C5'-C4'-O4'	5.28	117.72	109.80
1	A	271	C	N1-C1'-C2'	-5.28	104.08	112.00
1	A	449	G	C4'-C3'-O3'	-5.28	105.08	113.00
1	A	457	G	O5'-C5'-C4'	5.28	119.42	111.50
1	A	626	G	C4'-C3'-O3'	-5.28	105.08	113.00
1	A	701	U	O3'-P-O5'	5.28	111.92	104.00
1	A	855	U	P-O5'-C5'	-5.28	112.98	120.90
1	A	947	G	O5'-C5'-C4'	-5.28	103.58	111.50
1	A	963	G	C4'-C3'-C2'	-5.28	97.32	102.60
1	A	1294	G	O3'-P-O5'	-5.28	96.08	104.00
1	A	131	A	O4'-C1'-N9	5.28	116.42	108.50
1	A	1015	G	P-O3'-C3'	-5.28	112.28	120.20
1	A	589	U	C4'-C3'-O3'	-5.28	105.08	113.00
1	A	1348	U	C5'-C4'-C3'	5.28	123.92	116.00
3	C	68	HIS	N-CA-C	-5.28	99.92	108.52
13	M	68	LEU	N-CA-C	-5.28	105.12	112.45
1	A	14	U	O5'-C5'-C4'	5.28	119.41	111.50
1	A	567	G	C3'-C2'-C1'	-5.28	96.03	101.30
1	A	810	C	O5'-C5'-C4'	-5.28	103.59	111.50
9	I	97	LEU	N-CA-CB	5.28	119.40	110.49
1	A	166	U	C5'-C4'-C3'	-5.27	108.09	116.00
1	A	989	U	C3'-C2'-C1'	-5.27	96.03	101.30
1	A	649	A	C3'-C2'-C1'	-5.27	96.03	101.30
1	A	669	G	O4'-C4'-C3'	-5.27	98.73	104.00
1	A	679	C	O3'-P-O5'	-5.27	96.09	104.00
1	A	685	G	O5'-C5'-C4'	-5.27	103.59	111.50
1	A	893	C	C4'-C3'-O3'	-5.27	105.09	113.00
1	A	1153	G	C4-N9-C1'	-5.27	110.69	126.50
13	M	44	ILE	N-CA-C	-5.27	108.14	113.47
1	A	178	C	C3'-C2'-C1'	-5.27	96.03	101.30
1	A	527	G	P-O3'-C3'	-5.27	112.29	120.20
1	A	203	G	N9-C1'-C2'	-5.27	104.09	112.00
1	A	590	U	C2'-C3'-O3'	5.27	121.61	113.70
1	A	1050	G	P-O5'-C5'	-5.27	113.00	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1093	A	O5'-C5'-C4'	-5.27	103.59	111.50
1	A	1186	G	C3'-C2'-C1'	-5.27	96.03	101.30
13	M	51	GLN	CB-CG-CD	-5.27	103.64	112.60
1	A	533	A	O5'-C5'-C4'	-5.27	103.80	111.70
1	A	1255	G	C8-N9-C1'	5.27	142.80	127.00
1	A	1271	A	O3'-P-O5'	-5.27	96.10	104.00
3	C	123	LEU	CB-CA-C	-5.27	102.05	110.79
1	A	58	C	C5'-C4'-C3'	-5.26	108.10	116.00
1	A	242	G	N9-C1'-C2'	-5.26	104.10	112.00
1	A	434	U	C4'-C3'-O3'	-5.26	105.10	113.00
1	A	559	A	O4'-C1'-C2'	5.26	111.06	105.80
1	A	804	U	P-O3'-C3'	-5.26	112.30	120.20
1	A	997	U	O5'-C5'-C4'	-5.26	103.61	111.50
1	A	1080	A	C2'-C3'-O3'	5.26	121.60	113.70
1	A	1313	U	O4'-C4'-C3'	-5.26	98.73	104.00
2	B	159	ALA	N-CA-C	-5.26	99.58	110.80
1	A	17	U	C5'-C4'-C3'	5.26	123.89	116.00
1	A	612	C	O5'-C5'-C4'	-5.26	103.61	111.50
3	C	22	PHE	CA-CB-CG	-5.26	108.54	113.80
5	E	112	ALA	CA-C-N	5.26	127.95	120.53
5	E	112	ALA	C-N-CA	5.26	127.95	120.53
15	O	48	ASP	CA-CB-CG	5.26	117.86	112.60
16	P	8	ARG	N-CA-C	-5.26	101.20	109.25
1	A	93	U	C4'-C3'-O3'	5.26	120.89	113.00
1	A	277	C	C4'-C3'-C2'	5.26	107.86	102.60
1	A	1113	C	C5'-C4'-O4'	5.26	117.69	109.80
1	A	1137	C	C5'-C4'-O4'	5.26	116.99	109.10
1	A	1278	G	P-O3'-C3'	5.26	128.09	120.20
1	A	34	C	O4'-C4'-C3'	-5.26	98.74	104.00
1	A	1240	U	O3'-P-O5'	5.26	111.89	104.00
1	A	1446	A	P-O5'-C5'	5.26	128.79	120.90
1	A	387	U	C5'-C4'-C3'	5.26	123.89	116.00
1	A	707	U	O5'-C5'-C4'	-5.26	103.62	111.50
1	A	1160	G	O5'-C5'-C4'	-5.26	103.62	111.50
1	A	1502	A	C1'-O4'-C4'	-5.26	104.44	109.70
15	O	21	THR	N-CA-C	-5.26	99.60	110.80
1	A	169	C	P-O3'-C3'	-5.25	112.32	120.20
1	A	203	G	P-O5'-C5'	-5.25	113.02	120.90
1	A	527	G	C5'-C4'-C3'	-5.25	108.12	116.00
1	A	1477	U	O5'-C5'-C4'	-5.25	103.62	111.50
3	C	81	GLU	N-CA-CB	5.25	117.69	110.07
6	F	82	ASP	CA-C-N	5.25	130.63	122.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	F	82	ASP	C-N-CA	5.25	130.63	122.49
13	M	73	SER	N-CA-C	5.25	118.47	111.75
1	A	450	G	C4'-C3'-C2'	-5.25	97.35	102.60
1	A	637	C	O4'-C1'-N1	5.25	116.38	108.50
1	A	1527	U	P-O5'-C5'	-5.25	113.02	120.90
6	F	94	HIS	CB-CG-CD2	-5.25	124.37	131.20
16	P	35	ARG	N-CA-CB	5.25	117.87	110.36
1	A	428	G	C5'-C4'-O4'	-5.25	101.22	109.10
1	A	1019	A	C3'-C2'-C1'	-5.25	96.05	101.30
14	N	99	SER	CB-CA-C	-5.25	99.97	110.42
1	A	3	A	C4'-C3'-C2'	-5.25	97.35	102.60
1	A	126	G	O4'-C1'-N9	5.25	116.37	108.50
1	A	165	G	C3'-C2'-C1'	-5.25	96.05	101.30
1	A	686	U	C4'-C3'-O3'	-5.25	101.53	109.40
1	A	1268	G	P-O5'-C5'	5.25	128.77	120.90
1	A	1370	G	C8-N9-C1'	5.25	142.75	127.00
1	A	1525	G	C1'-C2'-O2'	5.25	116.27	108.40
9	I	92	SER	N-CA-C	-5.25	106.65	113.16
1	A	311	C	P-O5'-C5'	-5.25	113.03	120.90
1	A	625	U	P-O5'-C5'	-5.25	113.03	120.90
1	A	731	G	C2'-C3'-O3'	-5.25	105.83	113.70
1	A	1068	G	O3'-P-O5'	-5.25	96.13	104.00
10	J	47	GLU	N-CA-C	5.25	117.28	108.73
12	L	111	GLN	CB-CA-C	5.25	118.93	111.74
19	S	22	VAL	N-CA-C	-5.25	98.43	109.34
1	A	177	G	N9-C1'-C2'	-5.25	104.13	112.00
1	A	691	G	C4'-C3'-O3'	-5.24	105.13	113.00
1	A	1407	C	C5'-C4'-O4'	5.24	117.66	109.80
12	L	17	LYS	CA-C-N	5.24	128.16	120.71
12	L	17	LYS	C-N-CA	5.24	128.16	120.71
22	W	148	CYS	CA-C-N	5.24	127.74	120.29
22	W	148	CYS	C-N-CA	5.24	127.74	120.29
1	A	724	G	C5'-C4'-C3'	-5.24	108.14	116.00
1	A	547	A	C4-N9-C1'	5.24	142.02	126.30
1	A	403	C	C5'-C4'-O4'	5.24	117.66	109.80
1	A	825	A	C3'-C2'-C1'	-5.24	96.06	101.30
1	A	1205	U	C3'-C2'-C1'	-5.24	96.06	101.30
1	A	271	C	O5'-C5'-C4'	-5.24	103.65	111.50
1	A	410	G	C3'-C2'-C1'	-5.24	96.06	101.30
1	A	737	C	C5'-C4'-O4'	5.24	117.65	109.80
1	A	1006	G	N9-C1'-C2'	-5.24	104.15	112.00
1	A	1206	G	C5'-C4'-C3'	-5.24	108.15	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	190	SER	N-CA-CB	5.24	121.26	111.52
9	I	30	ASN	N-CA-C	-5.24	104.67	111.74
1	A	693	G	O3'-P-O5'	-5.23	96.15	104.00
12	L	16	ALA	CA-C-N	5.23	131.54	121.54
12	L	16	ALA	C-N-CA	5.23	131.54	121.54
1	A	481	G	C4'-C3'-C2'	-5.23	97.37	102.60
1	A	1008	U	P-O5'-C5'	-5.23	113.05	120.90
22	W	228	LEU	N-CA-C	-5.23	105.66	111.36
1	A	2	A	C5'-C4'-C3'	-5.23	108.15	116.00
1	A	864	A	O3'-P-O5'	-5.23	96.15	104.00
1	A	916	U	C4'-C3'-O3'	5.23	120.84	113.00
1	A	1144	G	P-O5'-C5'	5.23	128.75	120.90
1	A	1244	G	C3'-C2'-C1'	-5.23	96.07	101.30
7	G	99	ALA	N-CA-C	5.23	117.39	111.11
13	M	29	SER	CB-CA-C	-5.23	99.50	110.17
1	A	36	C	P-O5'-C5'	-5.23	113.06	120.90
1	A	327	A	C1'-O4'-C4'	-5.23	104.47	109.70
1	A	25	C	C1'-O4'-C4'	-5.23	104.67	109.90
1	A	799	G	C4'-C3'-C2'	-5.23	97.37	102.60
1	A	989	U	O3'-P-O5'	-5.23	96.16	104.00
1	A	1385	G	O5'-C5'-C4'	-5.23	103.66	111.50
3	C	200	TRP	CB-CA-C	-5.23	100.67	109.50
7	G	44	SER	CB-CA-C	-5.23	100.96	110.63
8	H	83	ARG	N-CA-C	-5.23	100.78	108.99
22	W	310	CYS	N-CA-CB	5.23	119.15	110.47
1	A	530	G	C5'-C4'-O4'	5.23	117.64	109.80
1	A	243	A	C3'-C2'-C1'	-5.22	96.08	101.30
1	A	618	C	O3'-P-O5'	-5.22	96.16	104.00
1	A	714	G	O4'-C1'-N9	5.22	116.33	108.50
1	A	1145	A	C3'-C2'-O2'	5.22	118.54	110.70
15	O	8	ALA	CA-C-N	5.22	127.28	120.28
15	O	8	ALA	C-N-CA	5.22	127.28	120.28
1	A	28	A	O5'-C5'-C4'	-5.22	103.67	111.50
1	A	54	C	O4'-C1'-C2'	-5.22	102.38	107.60
1	A	1139	G	C3'-C2'-C1'	5.22	106.72	101.50
1	A	1369	C	O3'-P-O5'	5.22	111.83	104.00
17	Q	44	HIS	CE1-NE2-CD2	-5.22	103.78	109.00
1	A	105	G	C1'-O4'-C4'	-5.22	104.68	109.90
1	A	482	A	O3'-P-O5'	-5.22	96.17	104.00
1	A	669	G	O3'-P-O5'	-5.22	96.17	104.00
11	K	122	PRO	CA-C-N	5.22	126.37	119.84
11	K	122	PRO	C-N-CA	5.22	126.37	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	R	32	ILE	N-CA-C	-5.22	98.48	109.34
1	A	81	A	C3'-C2'-C1'	-5.22	96.28	101.50
1	A	1058	G	P-O3'-C3'	-5.22	112.37	120.20
1	A	1480	A	C5'-C4'-O4'	5.22	117.63	109.80
20	T	56	ILE	N-CA-C	5.22	116.57	110.62
22	W	109	ARG	CA-C-O	-5.22	115.70	120.50
1	A	1023	U	O4'-C1'-N1	5.22	116.33	108.50
1	A	1503	A	C5'-C4'-C3'	-5.22	107.37	115.20
2	B	13	VAL	N-CA-C	-5.22	104.73	112.04
7	G	20	GLU	N-CA-CB	5.22	117.88	110.16
1	A	319	G	N9-C1'-C2'	-5.22	104.17	112.00
1	A	621	A	C3'-C2'-C1'	-5.22	96.08	101.30
7	G	71	THR	N-CA-C	-5.22	107.29	113.97
8	H	98	LEU	N-CA-C	-5.22	106.86	113.43
1	A	982	U	O5'-C5'-C4'	-5.21	103.88	111.70
1	A	1281	C	C4'-C3'-C2'	5.21	107.81	102.60
1	A	1393	U	C4'-C3'-O3'	-5.21	105.18	113.00
1	A	1402	C	O5'-C5'-C4'	-5.21	103.68	111.50
1	A	1461	G	P-O3'-C3'	-5.21	112.38	120.20
17	Q	4	ILE	N-CA-C	5.21	120.19	109.34
1	A	205	A	C2'-C3'-O3'	5.21	121.52	113.70
1	A	529	G	O5'-C5'-C4'	-5.21	103.68	111.50
1	A	884	U	C2'-C3'-O3'	5.21	117.32	109.50
1	A	1056	U	O5'-C5'-C4'	-5.21	103.68	111.50
12	L	30	ARG	N-CA-C	-5.21	98.76	107.99
18	R	69	TYR	CB-CG-CD1	5.21	128.62	120.80
1	A	320	A	O5'-C5'-C4'	-5.21	103.88	111.70
1	A	374	A	C2'-C3'-O3'	-5.21	105.88	113.70
1	A	417	G	C4'-C3'-C2'	-5.21	97.39	102.60
3	C	111	ASP	N-CA-CB	5.21	118.76	110.16
4	D	64	TYR	CB-CA-C	5.21	118.77	109.29
10	J	13	PHE	CA-CB-CG	-5.21	108.59	113.80
15	O	77	TYR	CA-C-N	5.21	127.26	120.28
15	O	77	TYR	C-N-CA	5.21	127.26	120.28
1	A	98	A	C5'-C4'-O4'	5.21	117.61	109.80
1	A	442	G	C4'-C3'-O3'	-5.21	105.19	113.00
1	A	450	G	C5-C6-O6	-5.21	112.97	128.60
1	A	1048	G	C1'-O4'-C4'	-5.21	104.69	109.90
1	A	1123	U	O4'-C1'-N1	5.21	116.31	108.50
1	A	1365	G	C5'-C4'-O4'	-5.21	101.99	109.80
1	A	56	U	C4'-C3'-O3'	-5.21	105.19	113.00
1	A	375	U	C5'-C4'-C3'	-5.21	108.19	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	737	C	P-O3'-C3'	-5.21	112.39	120.20
1	A	872	A	O5'-C5'-C4'	-5.21	103.89	111.70
1	A	1485	U	C2'-C3'-O3'	5.21	121.51	113.70
6	F	3	HIS	N-CA-CB	5.21	118.20	110.29
17	Q	47	ASP	N-CA-CB	5.21	120.75	111.69
1	A	162	A	P-O5'-C5'	-5.21	113.09	120.90
6	F	81	ASN	CA-CB-CG	-5.21	107.39	112.60
1	A	65	A	O4'-C1'-N9	5.20	116.01	108.20
1	A	299	G	O4'-C1'-N9	5.20	116.31	108.50
1	A	656	G	C2'-C3'-O3'	5.20	121.51	113.70
1	A	1064	G	C5'-C4'-O4'	5.20	116.90	109.10
3	C	31	ASN	N-CA-C	-5.20	105.69	111.36
13	M	107	THR	N-CA-CB	5.20	117.77	110.12
22	W	51	HIS	CB-CA-C	-5.20	101.39	112.63
1	A	291	U	O3'-P-O5'	5.20	111.80	104.00
1	A	1223	C	P-O5'-C5'	-5.20	113.10	120.90
1	A	593	U	C1'-O4'-C4'	-5.20	104.70	109.90
1	A	1028	C	O5'-C5'-C4'	-5.20	103.70	111.50
1	A	1182	G	O3'-P-O5'	-5.20	96.20	104.00
1	A	1466	C	O4'-C1'-N1	5.20	116.30	108.50
1	A	1515	G	C3'-C2'-C1'	-5.20	96.10	101.30
3	C	190	THR	O-C-N	5.20	129.71	123.16
1	A	241	G	N9-C1'-C2'	-5.20	104.20	112.00
1	A	263	A	C3'-C2'-O2'	5.20	118.50	110.70
1	A	507	C	C2'-C3'-O3'	5.20	121.50	113.70
1	A	1255	G	C3'-C2'-C1'	-5.20	96.10	101.30
15	O	57	ARG	N-CA-C	5.20	117.03	111.36
1	A	1261	A	O3'-P-O5'	-5.20	96.20	104.00
19	S	33	TRP	N-CA-C	-5.20	107.11	113.50
1	A	12	U	O3'-P-O5'	5.20	111.79	104.00
1	A	301	G	O4'-C1'-N9	5.20	116.30	108.50
1	A	655	A	C2'-C3'-O3'	5.20	121.49	113.70
3	C	116	ALA	CB-CA-C	-5.20	102.72	110.88
5	E	79	THR	CA-CB-CG2	5.20	119.33	110.50
16	P	9	HIS	N-CA-C	-5.20	101.53	108.86
1	A	1077	G	C4'-C3'-C2'	-5.19	97.41	102.60
4	D	128	VAL	N-CA-CB	5.19	119.80	111.23
1	A	237	G	C4'-C3'-C2'	-5.19	97.41	102.60
1	A	263	A	O4'-C1'-N9	5.19	116.29	108.50
1	A	987	G	C3'-C2'-C1'	-5.19	96.11	101.30
1	A	1038	C	C4'-C3'-C2'	-5.19	97.41	102.60
4	D	36	ALA	O-C-N	5.19	127.29	121.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	J	58	ASN	CA-CB-CG	-5.19	107.41	112.60
11	K	113	THR	O-C-N	-5.19	117.78	121.83
1	A	60	A	O3'-P-O5'	-5.19	96.22	104.00
1	A	370	C	C5'-C4'-C3'	-5.19	108.21	116.00
1	A	497	G	C8-N9-C1'	5.19	142.57	127.00
1	A	704	A	O3'-P-O5'	-5.19	96.21	104.00
3	C	52	SER	N-CA-C	-5.19	107.33	113.97
7	G	23	ALA	CB-CA-C	-5.19	102.73	110.88
1	A	21	G	C3'-C2'-C1'	-5.19	96.11	101.30
1	A	149	A	O5'-C5'-C4'	-5.19	103.72	111.50
1	A	247	G	P-O3'-C3'	-5.19	112.42	120.20
1	A	543	U	P-O5'-C5'	5.19	128.68	120.90
1	A	647	C	P-O3'-C3'	-5.19	112.42	120.20
1	A	710	G	C2'-C3'-O3'	5.19	121.48	113.70
1	A	169	C	C4'-C3'-C2'	-5.19	97.41	102.60
1	A	398	U	N1-C1'-C2'	5.19	119.78	112.00
1	A	1282	C	C5'-C4'-O4'	-5.19	102.02	109.80
1	A	52	C	C2'-C3'-O3'	-5.18	105.92	113.70
1	A	253	A	C1'-O4'-C4'	-5.18	104.72	109.90
1	A	297	G	C8-N9-C1'	5.18	142.56	127.00
1	A	690	G	C5'-C4'-C3'	-5.18	108.22	116.00
1	A	805	C	C4'-C3'-C2'	-5.18	97.42	102.60
1	A	917	G	P-O5'-C5'	5.18	128.68	120.90
1	A	365	U	C5'-C4'-C3'	-5.18	108.22	116.00
1	A	1379	G	C3'-C2'-O2'	5.18	118.47	110.70
9	I	19	PHE	N-CA-CB	-5.18	102.96	110.84
13	M	52	ILE	N-CA-C	-5.18	107.36	113.42
13	M	99	GLN	CA-C-N	5.18	131.44	121.54
13	M	99	GLN	C-N-CA	5.18	131.44	121.54
1	A	420	U	N1-C1'-C2'	5.18	119.77	112.00
1	A	1343	G	O4'-C1'-N9	5.18	116.27	108.50
1	A	1441	A	C5'-C4'-C3'	-5.18	108.23	116.00
1	A	310	G	P-O3'-C3'	-5.18	112.43	120.20
1	A	340	U	C3'-C2'-C1'	-5.18	96.12	101.30
1	A	398	U	C1'-C2'-O2'	5.18	116.17	108.40
1	A	412	A	P-O3'-C3'	5.18	127.97	120.20
1	A	775	G	C5'-C4'-C3'	-5.18	108.23	116.00
1	A	1207	G	P-O3'-C3'	-5.18	112.43	120.20
1	A	28	A	C8-N9-C1'	5.18	143.24	127.70
1	A	1128	C	C5'-C4'-C3'	-5.18	108.23	116.00
1	A	1300	G	P-O5'-C5'	5.18	128.67	120.90
3	C	142	ARG	N-CA-CB	-5.18	102.51	110.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	K	35	ASP	N-CA-C	-5.18	103.70	110.53
1	A	46	G	P-O3'-C3'	5.18	127.96	120.20
1	A	225	C	O4'-C1'-N1	5.18	116.27	108.50
1	A	249	U	O4'-C4'-C3'	-5.18	98.82	104.00
1	A	723	U	C5'-C4'-C3'	5.18	123.77	116.00
1	A	1450	U	O4'-C1'-N1	5.18	116.27	108.50
4	D	145	ARG	N-CA-C	-5.18	100.46	108.90
8	H	32	LYS	N-CA-C	5.18	117.33	111.02
1	A	385	C	O5'-C5'-C4'	-5.17	103.74	111.50
1	A	483	C	O3'-P-O5'	5.17	111.76	104.00
1	A	1209	C	C1'-O4'-C4'	-5.17	104.73	109.90
1	A	1229	A	C5'-C4'-C3'	-5.17	108.24	116.00
7	G	21	LEU	CA-C-N	5.17	127.21	120.28
7	G	21	LEU	C-N-CA	5.17	127.21	120.28
20	T	34	VAL	O-C-N	5.17	127.48	121.94
1	A	1187	G	P-O5'-C5'	-5.17	113.14	120.90
1	A	134	G	C2'-C3'-O3'	5.17	121.46	113.70
1	A	646	G	C5'-C4'-O4'	5.17	117.56	109.80
1	A	688	G	O5'-C5'-C4'	-5.17	103.74	111.50
1	A	706	A	C5'-C4'-C3'	-5.17	108.24	116.00
1	A	1018	G	C3'-C2'-C1'	-5.17	96.13	101.30
1	A	1051	C	O3'-P-O5'	-5.17	96.24	104.00
4	D	12	ARG	N-CA-C	5.17	116.73	111.14
13	M	44	ILE	CA-CB-CG1	5.17	119.19	110.40
1	A	100	G	C4'-C3'-C2'	-5.17	97.43	102.60
1	A	440	C	P-O5'-C5'	5.17	128.66	120.90
1	A	966	G	C1'-O4'-C4'	-5.17	104.73	109.90
6	F	93	LYS	N-CA-C	5.17	118.80	112.03
17	Q	40	THR	CB-CA-C	5.17	120.19	109.38
1	A	252	U	O5'-C5'-C4'	-5.17	103.75	111.50
1	A	265	G	O4'-C4'-C3'	5.17	109.17	104.00
1	A	725	G	C2'-C3'-O3'	5.17	121.45	113.70
8	H	93	LYS	N-CA-C	5.17	116.70	108.79
9	I	37	TYR	CB-CA-C	-5.17	102.73	110.90
11	K	57	SER	N-CA-C	-5.17	107.00	113.15
22	W	276	TRP	CA-CB-CG	5.17	123.42	113.60
1	A	75	G	O4'-C4'-C3'	-5.17	98.83	104.00
1	A	480	U	O5'-C5'-C4'	-5.17	103.75	111.50
1	A	821	G	O4'-C1'-N9	5.17	116.25	108.50
1	A	945	G	P-O5'-C5'	-5.17	113.15	120.90
1	A	1004	A	O3'-P-O5'	-5.17	96.25	104.00
1	A	1216	A	O3'-P-O5'	-5.17	96.25	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1440	U	O5'-C5'-C4'	-5.17	103.75	111.50
1	A	515	G	O3'-P-O5'	-5.17	96.25	104.00
1	A	649	A	C5'-C4'-C3'	-5.16	108.26	116.00
1	A	850	U	O3'-P-O5'	-5.16	96.26	104.00
7	G	109	LYS	N-CA-C	-5.16	102.22	109.96
10	J	35	GLN	N-CA-C	5.16	121.80	110.80
1	A	64	G	C2'-C3'-O3'	-5.16	105.96	113.70
1	A	84	U	C2'-C3'-O3'	5.16	117.24	109.50
1	A	488	C	C4'-C3'-O3'	-5.16	105.26	113.00
1	A	529	G	P-O3'-C3'	5.16	127.94	120.20
1	A	997	U	P-O3'-C3'	-5.16	112.46	120.20
1	A	1171	A	C1'-O4'-C4'	-5.16	104.74	109.90
1	A	1427	C	C1'-O4'-C4'	-5.16	104.74	109.90
1	A	1533	C	O4'-C4'-C3'	-5.16	100.94	106.10
3	C	133	MET	CB-CA-C	-5.16	102.78	110.88
9	I	3	ASN	CA-C-N	5.16	131.40	121.54
9	I	3	ASN	C-N-CA	5.16	131.40	121.54
1	A	278	G	C4'-C3'-O3'	5.16	120.74	113.00
1	A	1458	G	O4'-C1'-N9	5.16	116.24	108.50
4	D	142	VAL	N-CA-C	-5.16	98.61	109.34
17	Q	22	VAL	N-CA-C	-5.16	100.89	108.11
1	A	603	U	O5'-C5'-C4'	-5.16	103.77	111.50
1	A	759	A	N9-C1'-C2'	-5.16	104.27	112.00
1	A	786	G	O5'-C5'-C4'	-5.16	103.77	111.50
13	M	25	GLY	CA-C-N	-5.16	112.63	122.53
13	M	25	GLY	C-N-CA	-5.16	112.63	122.53
19	S	5	LYS	N-CA-C	-5.15	100.11	108.41
1	A	526	C	C4'-C3'-C2'	-5.15	97.45	102.60
1	A	1014	A	C3'-C2'-C1'	-5.15	96.15	101.30
1	A	1263	C	O5'-C5'-C4'	-5.15	103.77	111.50
1	A	1436	U	C2-N1-C1'	-5.15	102.24	117.70
3	C	11	LEU	CB-CA-C	-5.15	102.43	109.28
1	A	7	A	C2'-C3'-O3'	5.15	117.23	109.50
1	A	533	A	O4'-C4'-C3'	-5.15	100.95	106.10
1	A	773	G	P-O5'-C5'	-5.15	113.17	120.90
1	A	911	U	C2'-C3'-O3'	5.15	121.43	113.70
1	A	1172	C	C5'-C4'-O4'	5.15	117.53	109.80
5	E	82	HIS	CA-C-N	5.15	125.06	119.76
5	E	82	HIS	C-N-CA	5.15	125.06	119.76
16	P	13	LYS	CA-C-N	5.15	130.72	121.76
16	P	13	LYS	C-N-CA	5.15	130.72	121.76
1	A	1373	G	C4'-C3'-C2'	5.15	107.75	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1436	U	O5'-C5'-C4'	-5.15	103.78	111.50
1	A	145	G	C2'-C3'-O3'	5.15	121.42	113.70
1	A	473	U	C5'-C4'-C3'	-5.15	108.28	116.00
1	A	777	A	N9-C1'-C2'	-5.15	104.28	112.00
1	A	1468	A	C4'-C3'-C2'	5.15	107.75	102.60
1	A	1512	U	C1'-C2'-O2'	-5.15	100.68	108.40
18	R	29	LYS	N-CA-C	5.15	119.05	112.87
22	W	297	CYS	N-CA-CB	5.15	119.78	110.83
1	A	577	G	C5'-C4'-O4'	-5.15	102.08	109.80
1	A	899	C	C5'-C4'-O4'	5.15	117.52	109.80
1	A	1125	U	O4'-C1'-N1	5.15	116.22	108.50
9	I	17	ARG	CB-CA-C	-5.15	101.75	110.19
1	A	155	A	C1'-O4'-C4'	-5.14	104.75	109.90
1	A	1268	G	C5'-C4'-O4'	5.14	117.52	109.80
1	A	1380	U	C2'-C3'-O3'	-5.14	105.98	113.70
2	B	34	ARG	CA-C-N	5.14	131.37	121.54
2	B	34	ARG	C-N-CA	5.14	131.37	121.54
10	J	13	PHE	N-CA-CB	5.14	118.05	110.33
1	A	46	G	C4'-C3'-C2'	-5.14	97.46	102.60
1	A	508	U	C1'-C2'-O2'	5.14	116.11	108.40
1	A	1327	C	O4'-C1'-N1	5.14	116.21	108.50
1	A	1334	G	O3'-P-O5'	-5.14	96.29	104.00
1	A	468	A	C4'-C3'-O3'	-5.14	105.29	113.00
1	A	17	U	P-O5'-C5'	5.14	128.61	120.90
1	A	96	U	N1-C1'-C2'	-5.14	106.29	114.00
1	A	121	U	O4'-C4'-C3'	-5.14	98.86	104.00
1	A	231	U	O4'-C1'-N1	5.14	116.21	108.50
1	A	646	G	P-O5'-C5'	5.14	128.61	120.90
1	A	690	G	P-O5'-C5'	5.14	128.61	120.90
1	A	759	A	O5'-P-OP2	-5.14	92.58	108.00
1	A	1166	G	C8-N9-C1'	5.14	142.42	127.00
1	A	1311	A	N9-C1'-C2'	-5.14	104.29	112.00
7	G	31	VAL	N-CA-CB	5.14	119.71	111.23
12	L	102	ASP	N-CA-CB	5.14	119.18	110.49
17	Q	41	THR	N-CA-CB	5.14	119.45	110.81
1	A	267	C	OP2-P-O3'	5.14	123.41	108.00
1	A	327	A	O4'-C4'-C3'	-5.14	100.96	106.10
1	A	1022	A	C4'-C3'-O3'	5.14	120.71	113.00
1	A	541	G	P-O3'-C3'	-5.14	112.49	120.20
1	A	855	U	C5'-C4'-O4'	5.14	117.51	109.80
1	A	1126	U	O4'-C4'-C3'	-5.14	100.96	106.10
1	A	1379	G	P-O5'-C5'	-5.14	113.19	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	200	PRO	N-CA-C	-5.14	101.89	112.47
1	A	99	C	C3'-C2'-C1'	-5.13	96.17	101.30
1	A	188	C	P-O5'-C5'	-5.13	113.20	120.90
1	A	311	C	O4'-C4'-C3'	-5.13	98.86	104.00
1	A	444	G	N9-C1'-C2'	-5.13	104.30	112.00
1	A	492	C	P-O3'-C3'	5.13	127.90	120.20
1	A	652	U	C4'-C3'-C2'	5.13	107.73	102.60
1	A	668	G	C8-N9-C1'	5.13	142.40	127.00
1	A	1458	G	C2'-C3'-O3'	5.13	121.40	113.70
1	A	1496	C	O5'-C5'-C4'	-5.13	103.80	111.50
4	D	93	LEU	CB-CA-C	-5.13	102.76	110.92
9	I	64	ILE	N-CA-C	-5.13	100.49	108.86
13	M	76	ILE	N-CA-CB	-5.13	104.54	110.55
17	Q	72	TRP	CB-CG-CD1	5.13	134.60	126.90
1	A	293	G	C3'-C2'-C1'	-5.13	96.17	101.30
1	A	854	U	O4'-C1'-N1	5.13	116.20	108.50
7	G	57	GLU	CA-C-N	5.13	127.11	120.44
7	G	57	GLU	C-N-CA	5.13	127.11	120.44
10	J	70	HIS	CB-CA-C	-5.13	100.73	109.51
1	A	374	A	P-O5'-C5'	-5.13	113.20	120.90
1	A	475	C	C3'-C2'-C1'	-5.13	96.17	101.30
1	A	489	C	C1'-O4'-C4'	-5.13	104.77	109.90
1	A	1216	A	N9-C1'-C2'	-5.13	104.30	112.00
1	A	846	G	O5'-C5'-C4'	5.13	119.19	111.50
1	A	1152	A	O3'-P-O5'	-5.13	96.31	104.00
1	A	1438	G	C1'-O4'-C4'	-5.13	104.77	109.90
9	I	113	LYS	N-CA-CB	5.13	117.75	110.16
12	L	57	THR	N-CA-C	-5.13	104.36	110.41
13	M	90	HIS	CB-CA-C	-5.13	102.13	110.85
15	O	52	ARG	N-CA-C	5.13	116.95	111.36
17	Q	34	GLY	CA-C-N	5.13	131.33	121.54
17	Q	34	GLY	C-N-CA	5.13	131.33	121.54
1	A	269	C	P-O3'-C3'	-5.13	112.51	120.20
1	A	288	A	C1'-O4'-C4'	-5.13	104.77	109.90
1	A	337	G	C2'-C3'-O3'	5.13	121.39	113.70
1	A	341	C	C3'-C2'-C1'	-5.13	96.17	101.30
1	A	603	U	C2'-C3'-O3'	5.13	121.39	113.70
1	A	667	G	O3'-P-O5'	5.13	111.69	104.00
1	A	784	A	C5'-C4'-O4'	-5.13	102.11	109.80
1	A	1126	U	C5'-C4'-O4'	5.13	116.79	109.10
1	A	1211	U	C5'-C4'-C3'	-5.13	107.51	115.20
1	A	1222	G	O3'-P-O5'	5.13	111.69	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1244	G	C4'-C3'-C2'	-5.13	97.47	102.60
3	C	49	ALA	N-CA-C	-5.13	107.08	113.38
16	P	73	ALA	N-CA-C	-5.13	105.38	110.97
2	B	29	PHE	N-CA-C	-5.12	99.32	108.13
1	A	609	A	N9-C1'-C2'	5.12	119.69	112.00
1	A	641	U	C3'-C2'-O2'	5.12	118.39	110.70
1	A	771	G	C4'-C3'-O3'	-5.12	105.31	113.00
1	A	1062	U	C6-N1-C2	-5.12	105.63	121.00
1	A	1531	A	N9-C1'-C2'	-5.12	104.32	112.00
3	C	201	ILE	CB-CA-C	-5.12	102.85	110.33
1	A	620	C	P-O3'-C3'	-5.12	112.52	120.20
1	A	1248	A	P-O3'-C3'	-5.12	112.52	120.20
6	F	70	VAL	N-CA-CB	5.12	123.32	111.23
9	I	66	VAL	N-CA-CB	5.12	118.11	111.19
10	J	62	ARG	CB-CA-C	5.12	120.61	110.42
1	A	685	G	C5-C6-O6	-5.12	113.24	128.60
3	C	205	GLU	N-CA-C	-5.12	101.33	108.96
14	N	70	HIS	CE1-NE2-CD2	-5.12	103.88	109.00
1	A	317	U	P-O5'-C5'	-5.12	113.22	120.90
1	A	447	G	C4'-C3'-O3'	5.12	120.68	113.00
1	A	1347	G	O3'-P-O5'	5.12	111.68	104.00
19	S	12	LEU	CA-C-O	-5.12	115.43	120.70
1	A	258	G	C5'-C4'-O4'	5.12	117.47	109.80
1	A	1162	C	C5'-C4'-C3'	-5.12	108.33	116.00
12	L	73	LEU	CB-CA-C	-5.12	100.46	109.62
13	M	32	ILE	N-CA-C	-5.12	106.08	110.74
1	A	261	U	O3'-P-O5'	-5.12	96.33	104.00
1	A	1005	A	C3'-C2'-C1'	5.12	106.42	101.30
19	S	5	LYS	N-CA-CB	5.12	118.34	110.21
1	A	14	U	P-O5'-C5'	-5.11	113.23	120.90
1	A	507	C	O5'-C5'-C4'	-5.11	103.83	111.50
13	M	45	SER	N-CA-CB	5.11	119.10	110.46
22	W	117	LYS	N-CA-CB	5.11	119.47	110.37
1	A	106	C	P-O5'-C5'	-5.11	113.23	120.90
1	A	476	U	O5'-C5'-C4'	-5.11	103.83	111.50
1	A	520	A	C5-C6-N6	-5.11	108.36	123.70
1	A	734	G	C4'-C3'-O3'	-5.11	105.33	113.00
6	F	91	ARG	CB-CG-CD	5.11	123.06	111.30
1	A	102	G	C4'-C3'-O3'	-5.11	105.33	113.00
1	A	223	A	O4'-C4'-C3'	-5.11	98.89	104.00
1	A	425	G	O3'-P-O5'	-5.11	96.33	104.00
1	A	894	G	O4'-C4'-C3'	-5.11	98.89	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1138	G	P-O5'-C5'	-5.11	113.23	120.90
1	A	1395	C	P-O5'-C5'	-5.11	113.23	120.90
11	K	47	GLY	CA-C-N	5.11	131.43	121.41
11	K	47	GLY	C-N-CA	5.11	131.43	121.41
16	P	13	LYS	N-CA-CB	5.11	119.12	110.49
1	A	272	C	C4'-C3'-C2'	-5.11	97.49	102.60
1	A	756	C	O4'-C1'-N1	5.11	116.16	108.50
1	A	820	U	P-O5'-C5'	5.11	128.56	120.90
1	A	1244	G	O5'-C5'-C4'	-5.11	103.84	111.50
1	A	1441	A	O5'-C5'-C4'	-5.11	103.84	111.50
4	D	91	ALA	CB-CA-C	-5.11	102.64	110.81
1	A	397	A	O4'-C1'-N9	5.11	116.16	108.50
1	A	1049	U	O4'-C1'-N1	5.11	115.86	108.20
1	A	1461	G	C3'-C2'-C1'	-5.11	96.19	101.30
3	C	22	PHE	N-CA-C	-5.11	98.38	107.98
4	D	52	VAL	N-CA-C	5.11	115.72	110.36
1	A	72	A	C4'-C3'-O3'	-5.11	105.34	113.00
10	J	50	THR	N-CA-C	5.11	117.39	108.76
12	L	76	HIS	CE1-NE2-CD2	-5.11	103.89	109.00
1	A	818	G	P-O5'-C5'	-5.10	113.24	120.90
1	A	1306	A	P-O3'-C3'	-5.10	112.54	120.20
1	A	379	C	C3'-C2'-O2'	5.10	118.35	110.70
1	A	908	A	C2'-C3'-O3'	5.10	121.35	113.70
1	A	1346	A	O3'-P-O5'	-5.10	96.35	104.00
1	A	510	A	O5'-C5'-C4'	-5.10	103.85	111.50
1	A	1072	G	C4'-C3'-C2'	-5.10	97.50	102.60
5	E	84	VAL	CB-CA-C	5.10	119.84	110.71
7	G	36	SER	N-CA-CB	5.10	118.25	110.44
1	A	171	A	C4'-C3'-O3'	-5.10	105.35	113.00
1	A	171	A	O4'-C1'-N9	5.10	116.15	108.50
1	A	486	U	O4'-C1'-C2'	-5.10	102.50	107.60
1	A	529	G	O4'-C4'-C3'	-5.10	98.90	104.00
1	A	673	A	O4'-C4'-C3'	-5.10	98.90	104.00
1	A	680	C	O4'-C1'-N1	5.10	116.15	108.50
1	A	1301	U	O5'-P-OP2	-5.10	92.70	108.00
17	Q	39	ARG	N-CA-CB	5.10	119.70	110.83
1	A	73	C	C6-N1-C2	-5.10	104.91	120.20
1	A	1259	C	C3'-C2'-C1'	-5.10	96.20	101.30
6	F	16	GLU	N-CA-C	-5.10	107.73	114.31
1	A	999	C	O3'-P-O5'	-5.10	96.36	104.00
1	A	526	C	C4'-C3'-O3'	-5.09	105.36	113.00
1	A	562	U	N1-C1'-C2'	-5.09	104.36	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	800	G	P-O5'-C5'	5.09	128.54	120.90
3	C	41	TYR	N-CA-C	5.09	116.52	111.07
11	K	69	CYS	CA-C-N	5.09	129.23	120.72
11	K	69	CYS	C-N-CA	5.09	129.23	120.72
19	S	51	HIS	CB-CG-CD2	-5.09	124.58	131.20
1	A	180	U	C5'-C4'-O4'	5.09	117.44	109.80
1	A	191	G	C2'-C3'-O3'	5.09	121.34	113.70
1	A	1454	G	N9-C1'-C2'	-5.09	104.36	112.00
6	F	11	HIS	CA-CB-CG	-5.09	108.71	113.80
9	I	42	THR	N-CA-C	5.09	121.65	110.80
1	A	218	U	O3'-P-O5'	-5.09	96.36	104.00
1	A	297	G	C4-N9-C1'	-5.09	111.22	126.50
1	A	320	A	C4-N9-C1'	-5.09	111.03	126.30
1	A	380	G	C4-N9-C1'	-5.09	111.23	126.50
1	A	642	A	C5'-C4'-O4'	5.09	117.44	109.80
1	A	879	C	P-O3'-C3'	-5.09	112.56	120.20
1	A	995	C	C5'-C4'-C3'	-5.09	108.36	116.00
1	A	996	A	O5'-C5'-C4'	-5.09	103.86	111.50
1	A	1039	G	C4'-C3'-C2'	-5.09	97.51	102.60
1	A	1316	G	O3'-P-O5'	-5.09	96.36	104.00
1	A	1447	A	O5'-C5'-C4'	-5.09	103.86	111.50
2	B	197	PHE	CA-C-N	5.09	128.94	122.37
2	B	197	PHE	C-N-CA	5.09	128.94	122.37
1	A	242	G	P-O3'-C3'	5.09	127.83	120.20
1	A	1268	G	C5'-C4'-C3'	-5.09	108.36	116.00
1	A	1274	A	O4'-C4'-C3'	-5.09	98.91	104.00
2	B	222	GLU	N-CA-C	-5.09	102.93	110.46
4	D	144	ILE	N-CA-CB	5.09	117.23	110.26
5	E	139	THR	N-CA-C	-5.09	105.81	111.36
1	A	81	A	N9-C1'-C2'	5.09	121.63	114.00
1	A	83	C	C4'-C3'-C2'	5.09	107.69	102.60
1	A	241	G	P-O3'-C3'	-5.09	112.57	120.20
7	G	132	THR	CA-C-N	5.09	127.05	120.44
7	G	132	THR	C-N-CA	5.09	127.05	120.44
1	A	439	U	C2-N1-C1'	5.09	132.96	117.70
1	A	1226	C	C5'-C4'-C3'	-5.09	107.57	115.20
1	A	1332	A	O4'-C1'-N9	5.09	116.13	108.50
1	A	1492	A	C4'-C3'-C2'	-5.09	97.51	102.60
9	I	111	GLU	N-CA-C	5.09	121.64	110.80
17	Q	30	HIS	CE1-NE2-CD2	-5.09	103.91	109.00
1	A	234	C	C4'-C3'-O3'	-5.08	105.37	113.00
3	C	3	LYS	O-C-N	5.08	128.59	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	L	78	VAL	N-CA-C	-5.08	102.13	108.84
1	A	738	C	P-O5'-C5'	-5.08	113.28	120.90
1	A	1009	U	C3'-C2'-C1'	-5.08	96.22	101.30
1	A	1166	G	O4'-C1'-N9	5.08	116.13	108.50
7	G	117	LEU	CB-CA-C	-5.08	102.90	110.88
22	W	219	GLY	CA-C-O	5.08	126.19	119.58
1	A	285	C	C5'-C4'-O4'	5.08	117.42	109.80
1	A	498	A	O3'-P-O5'	-5.08	96.38	104.00
1	A	599	C	C3'-C2'-C1'	-5.08	96.22	101.30
1	A	860	A	C2'-C3'-O3'	5.08	121.32	113.70
1	A	1092	A	C5'-C4'-C3'	5.08	123.62	116.00
22	W	225	ASN	CA-CB-CG	-5.08	107.52	112.60
1	A	829	G	C1'-C2'-O2'	5.08	116.02	108.40
9	I	24	ASN	CA-C-N	5.08	128.22	121.01
9	I	24	ASN	C-N-CA	5.08	128.22	121.01
1	A	92	U	N1-C1'-C2'	5.08	119.62	112.00
6	F	3	HIS	CE1-NE2-CD2	-5.08	103.92	109.00
19	S	68	HIS	N-CA-C	-5.08	99.98	110.80
22	W	162	ILE	CB-CA-C	-5.08	105.28	112.14
22	W	196	ASP	CA-CB-CG	-5.08	107.52	112.60
1	A	1064	G	C4-N9-C1'	-5.08	111.27	126.50
17	Q	77	VAL	N-CA-CB	5.08	120.57	111.63
22	W	212	PHE	CB-CA-C	-5.08	102.66	110.78
1	A	187	G	O4'-C1'-N9	5.08	116.11	108.50
1	A	339	C	C5'-C4'-C3'	-5.08	108.39	116.00
1	A	668	G	C2'-C3'-O3'	5.08	121.31	113.70
1	A	1116	U	C3'-C2'-O2'	5.08	118.31	110.70
1	A	1386	G	O5'-C5'-C4'	-5.08	103.89	111.50
14	N	20	PHE	CA-CB-CG	-5.08	108.72	113.80
1	A	488	C	C5'-C4'-O4'	5.07	117.41	109.80
1	A	489	C	O3'-P-O5'	-5.07	96.39	104.00
1	A	944	G	C5'-C4'-C3'	5.07	123.61	116.00
6	F	36	ILE	N-CA-CB	5.07	118.98	110.86
20	T	61	ALA	N-CA-CB	5.07	117.36	110.01
1	A	613	C	O4'-C1'-N1	5.07	116.11	108.50
1	A	768	A	C4'-C3'-O3'	-5.07	105.39	113.00
1	A	832	G	P-O5'-C5'	-5.07	113.29	120.90
1	A	918	A	O4'-C1'-N9	5.07	116.11	108.50
1	A	970	C	O3'-P-O5'	-5.07	96.39	104.00
1	A	975	A	C5'-C4'-O4'	-5.07	101.49	109.10
1	A	1361	G	P-O3'-C3'	-5.07	112.59	120.20
5	E	34	ALA	N-CA-C	5.07	117.33	108.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	K	72	ALA	N-CA-CB	5.07	119.06	110.49
17	Q	49	ASN	CA-CB-CG	-5.07	107.53	112.60
19	S	65	MET	CB-CA-C	-5.07	102.58	110.74
1	A	1518	A	C1'-C2'-O2'	5.07	116.00	108.40
1	A	1526	G	C5'-C4'-O4'	5.07	117.40	109.80
22	W	80	VAL	N-CA-CB	5.07	117.85	111.46
1	A	61	G	N9-C1'-C2'	-5.07	104.40	112.00
1	A	210	C	O4'-C4'-C3'	-5.07	101.03	106.10
1	A	586	C	O5'-C5'-C4'	-5.07	103.90	111.50
1	A	1513	A	P-O5'-C5'	-5.07	113.30	120.90
13	M	55	LEU	N-CA-C	-5.07	105.46	111.69
17	Q	44	HIS	ND1-CE1-NE2	5.07	113.47	108.40
1	A	7	A	O4'-C1'-C2'	-5.07	100.73	105.80
1	A	217	C	C5'-C4'-C3'	5.07	123.60	116.00
1	A	496	A	C5'-C4'-O4'	5.07	117.40	109.80
1	A	666	G	C5'-C4'-O4'	5.07	117.40	109.80
1	A	1275	A	P-O5'-C5'	-5.07	113.30	120.90
1	A	1318	A	C4'-C3'-O3'	-5.07	105.40	113.00
1	A	1452	C	C4'-C3'-O3'	-5.07	101.80	109.40
1	A	463	U	C6-N1-C2	-5.06	105.81	121.00
1	A	811	C	C3'-C2'-C1'	5.06	106.36	101.30
1	A	829	G	P-O3'-C3'	-5.06	112.61	120.20
1	A	1312	G	C5'-C4'-O4'	5.06	117.39	109.80
1	A	582	C	C2'-C3'-O3'	5.06	121.29	113.70
1	A	1170	A	C4'-C3'-O3'	-5.06	105.41	113.00
10	J	70	HIS	CA-C-O	-5.06	115.28	121.36
20	T	78	LEU	N-CA-CB	5.06	117.56	110.12
1	A	643	C	C3'-C2'-C1'	-5.06	96.24	101.30
1	A	1156	G	C5'-C4'-O4'	-5.06	102.21	109.80
1	A	1427	C	C3'-C2'-C1'	-5.06	96.24	101.30
1	A	135	C	O4'-C4'-C3'	-5.06	98.94	104.00
1	A	246	A	C1'-O4'-C4'	5.06	114.76	109.70
1	A	315	A	O5'-C5'-C4'	5.06	119.09	111.50
1	A	537	G	P-O3'-C3'	-5.06	112.61	120.20
1	A	567	G	C1'-O4'-C4'	-5.06	104.84	109.90
1	A	650	G	C5'-C4'-O4'	5.06	117.39	109.80
1	A	672	U	O4'-C1'-N1	5.06	116.09	108.50
1	A	1043	G	O3'-P-O5'	-5.06	96.41	104.00
1	A	1304	G	O4'-C1'-N9	5.06	116.09	108.50
7	G	8	GLN	CG-CD-NE2	5.06	123.99	116.40
7	G	9	ARG	CA-C-N	5.06	131.20	121.54
7	G	9	ARG	C-N-CA	5.06	131.20	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	H	6	ILE	N-CA-C	-5.06	104.77	111.09
22	W	126	ILE	N-CA-C	-5.06	101.03	108.11
1	A	365	U	O4'-C1'-N1	5.06	116.09	108.50
1	A	399	G	C4'-C3'-C2'	-5.06	97.54	102.60
1	A	455	G	C5'-C4'-C3'	-5.06	108.41	116.00
1	A	999	C	C5'-C4'-C3'	-5.06	108.41	116.00
1	A	1353	G	C4'-C3'-O3'	-5.06	105.41	113.00
1	A	1375	A	C5'-C4'-O4'	5.06	117.39	109.80
1	A	1460	C	C3'-C2'-C1'	-5.06	96.24	101.30
4	D	103	ARG	N-CA-C	5.06	119.21	113.19
10	J	15	HIS	ND1-CE1-NE2	5.06	113.46	108.40
1	A	5	U	C4'-C3'-C2'	-5.06	97.54	102.60
1	A	1043	G	C5'-C4'-O4'	5.06	117.38	109.80
1	A	1106	G	P-O3'-C3'	-5.06	112.62	120.20
1	A	1136	C	P-O3'-C3'	5.06	127.78	120.20
1	A	1179	A	P-O3'-C3'	-5.06	112.62	120.20
3	C	194	VAL	CA-C-O	-5.06	115.23	120.64
20	T	20	ASN	CA-CB-CG	-5.06	107.54	112.60
1	A	678	U	C3'-C2'-C1'	-5.05	96.25	101.30
1	A	1508	A	C3'-C2'-C1'	-5.05	96.25	101.30
3	C	155	ARG	NE-CZ-NH1	5.05	126.56	121.50
8	H	126	CYS	CA-C-O	-5.05	116.00	121.36
17	Q	31	PRO	CA-C-N	5.05	127.38	120.46
17	Q	31	PRO	C-N-CA	5.05	127.38	120.46
1	A	492	C	P-O5'-C5'	-5.05	113.32	120.90
1	A	666	G	O4'-C4'-C3'	-5.05	98.95	104.00
1	A	697	U	C1'-O4'-C4'	-5.05	104.85	109.90
1	A	1249	C	O3'-P-O5'	-5.05	96.42	104.00
4	D	166	LYS	CB-CG-CD	5.05	122.92	111.30
19	S	60	PHE	N-CA-CB	5.05	118.42	110.23
20	T	68	LYS	N-CA-CB	5.05	119.03	110.49
1	A	104	G	P-O3'-C3'	-5.05	112.62	120.20
1	A	115	G	C4-N9-C1'	-5.05	111.35	126.50
1	A	840	C	C6-N1-C2	-5.05	105.04	120.20
1	A	1406	U	C2'-C3'-O3'	5.05	121.28	113.70
1	A	160	A	C5'-C4'-O4'	5.05	117.38	109.80
1	A	614	C	C3'-C2'-O2'	5.05	118.27	110.70
1	A	870	U	O5'-C5'-C4'	-5.05	104.13	111.70
1	A	1126	U	C2-N1-C1'	-5.05	102.55	117.70
1	A	1390	U	C4'-C3'-O3'	-5.05	105.42	113.00
1	A	1463	U	O4'-C1'-N1	5.05	116.07	108.50
1	A	339	C	O4'-C1'-N1	5.05	116.07	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1174	G	C2'-C3'-O3'	5.05	121.27	113.70
4	D	76	LYS	N-CA-C	5.05	117.44	111.33
1	A	77	A	O3'-P-O5'	-5.04	96.43	104.00
1	A	590	U	C3'-C2'-C1'	-5.04	96.25	101.30
1	A	1108	G	O4'-C4'-C3'	-5.04	98.95	104.00
4	D	13	ARG	N-CA-C	5.04	116.59	111.14
13	M	103	THR	N-CA-C	5.04	116.63	108.41
1	A	178	C	C5'-C4'-O4'	5.04	117.37	109.80
1	A	269	C	C6-N1-C1'	5.04	135.93	120.80
1	A	487	A	P-O5'-C5'	-5.04	113.34	120.90
1	A	690	G	C3'-C2'-C1'	-5.04	96.26	101.30
1	A	821	G	N9-C1'-C2'	-5.04	104.44	112.00
1	A	1242	G	C3'-C2'-C1'	-5.04	96.26	101.30
1	A	130	A	P-O5'-C5'	5.04	128.46	120.90
1	A	185	U	C2'-C3'-O3'	5.04	121.26	113.70
1	A	357	G	C5'-C4'-O4'	5.04	117.36	109.80
1	A	559	A	C4'-C3'-C2'	5.04	107.64	102.60
1	A	705	G	N1-C6-O6	5.04	135.03	119.90
1	A	1034	G	O4'-C1'-N9	5.04	116.06	108.50
1	A	1064	G	C8-N9-C1'	5.04	142.12	127.00
1	A	1120	C	O4'-C4'-C3'	-5.04	98.96	104.00
1	A	1122	U	O4'-C1'-N1	5.04	116.06	108.50
1	A	1244	G	O3'-P-O5'	-5.04	96.44	104.00
1	A	1244	G	P-O5'-C5'	-5.04	113.34	120.90
1	A	959	A	P-O5'-C5'	-5.04	113.34	120.90
1	A	1116	U	P-O3'-C3'	-5.04	112.64	120.20
20	T	61	ALA	N-CA-C	-5.04	105.68	111.07
1	A	140	U	C3'-C2'-C1'	-5.04	96.26	101.30
1	A	250	A	O3'-P-O5'	-5.04	96.44	104.00
1	A	355	C	P-O5'-C5'	-5.04	113.34	120.90
1	A	1373	G	O3'-P-O5'	5.04	111.56	104.00
18	R	69	TYR	N-CA-CB	5.04	118.60	111.19
1	A	75	G	O4'-C1'-C2'	-5.04	102.56	107.60
22	W	130	SER	N-CA-C	5.04	116.85	109.24
1	A	25	C	C3'-C2'-C1'	-5.04	96.26	101.30
1	A	537	G	O3'-P-O5'	-5.04	96.44	104.00
1	A	1014	A	C4'-C3'-C2'	-5.04	97.56	102.60
1	A	1193	G	C4'-C3'-C2'	-5.04	97.56	102.60
1	A	1523	G	O5'-C5'-C4'	-5.04	103.95	111.50
15	O	87	ARG	CA-C-N	5.04	130.76	121.70
15	O	87	ARG	C-N-CA	5.04	130.76	121.70
1	A	123	U	C4'-C3'-C2'	-5.03	97.57	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	248	C	P-O3'-C3'	-5.03	112.65	120.20
1	A	878	A	O5'-C5'-C4'	-5.03	103.95	111.50
1	A	1428	A	C3'-C2'-C1'	-5.03	96.27	101.30
2	B	130	LYS	CB-CA-C	-5.03	99.47	109.99
3	C	148	ILE	N-CA-CB	5.03	119.53	111.23
6	F	2	ARG	N-CA-CB	5.03	119.00	110.49
7	G	111	GLY	CA-C-N	-5.03	113.62	121.87
7	G	111	GLY	C-N-CA	-5.03	113.62	121.87
1	A	850	U	C2'-C3'-O3'	5.03	121.25	113.70
1	A	1217	C	C3'-C2'-C1'	-5.03	96.27	101.30
9	I	119	LYS	O-C-N	-5.03	117.98	123.26
1	A	224	U	O4'-C4'-C3'	-5.03	98.97	104.00
1	A	405	U	P-O3'-C3'	-5.03	112.65	120.20
1	A	848	C	C4'-C3'-C2'	-5.03	97.57	102.60
1	A	1269	A	C4'-C3'-O3'	-5.03	105.45	113.00
1	A	645	G	C3'-C2'-C1'	-5.03	96.27	101.30
4	D	119	HIS	CB-CA-C	-5.03	103.48	111.17
1	A	128	G	C4'-C3'-C2'	5.03	107.63	102.60
1	A	284	C	P-O5'-C5'	5.03	128.44	120.90
1	A	420	U	C2'-C3'-O3'	5.03	121.24	113.70
1	A	513	C	O5'-C5'-C4'	-5.03	103.96	111.50
1	A	1164	G	P-O5'-C5'	-5.03	113.36	120.90
1	A	1448	C	C1'-O4'-C4'	-5.03	104.87	109.90
10	J	29	ALA	N-CA-C	-5.03	106.99	112.72
14	N	81	ILE	CA-C-N	5.03	128.64	120.60
14	N	81	ILE	C-N-CA	5.03	128.64	120.60
1	A	261	U	C5'-C4'-C3'	-5.03	108.46	116.00
1	A	278	G	C4'-C3'-C2'	5.03	107.62	102.60
1	A	553	A	O5'-C5'-C4'	-5.03	103.96	111.50
1	A	865	A	O4'-C1'-N9	5.03	116.04	108.50
1	A	1133	G	O5'-C5'-C4'	-5.03	103.96	111.50
3	C	24	ASN	CA-C-N	5.03	131.14	121.54
3	C	24	ASN	C-N-CA	5.03	131.14	121.54
3	C	40	GLN	CB-CG-CD	-5.03	104.06	112.60
3	C	112	ALA	N-CA-CB	-5.03	102.72	110.01
5	E	79	THR	N-CA-C	-5.03	101.77	109.41
13	M	90	HIS	CA-CB-CG	5.03	118.83	113.80
15	O	41	HIS	ND1-CE1-NE2	5.03	113.42	108.40
22	W	62	HIS	CE1-NE2-CD2	-5.03	103.97	109.00
22	W	281	GLU	CA-C-N	5.03	127.02	120.28
22	W	281	GLU	C-N-CA	5.03	127.02	120.28
1	A	435	A	C4'-C3'-O3'	-5.02	105.46	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	466	A	C4-N9-C1'	5.02	141.37	126.30
1	A	1362	A	P-O5'-C5'	-5.02	113.36	120.90
1	A	371	A	C1'-O4'-C4'	-5.02	104.88	109.90
6	F	29	ILE	N-CA-C	5.02	115.14	110.42
1	A	222	C	C4'-C3'-O3'	5.02	120.53	113.00
1	A	446	G	C4'-C3'-O3'	-5.02	105.47	113.00
1	A	963	G	C1'-O4'-C4'	-5.02	104.88	109.90
1	A	1448	C	C3'-C2'-C1'	5.02	106.32	101.30
1	A	129	A	C4-N9-C1'	-5.02	111.24	126.30
1	A	303	A	P-O3'-C3'	-5.02	112.67	120.20
1	A	807	A	N9-C1'-C2'	-5.02	104.47	112.00
1	A	886	G	N9-C1'-C2'	-5.02	104.47	112.00
1	A	942	G	O4'-C1'-C2'	-5.02	102.58	107.60
1	A	1369	C	C6-N1-C1'	5.02	135.86	120.80
13	M	35	ALA	N-CA-C	-5.02	107.00	112.72
1	A	91	U	C5'-C4'-C3'	-5.02	108.47	116.00
1	A	135	C	P-O3'-C3'	-5.02	112.67	120.20
1	A	673	A	O4'-C1'-N9	5.02	116.03	108.50
1	A	1346	A	O4'-C1'-C2'	5.02	110.82	105.80
2	B	94	ARG	CD-NE-CZ	-5.02	117.38	124.40
4	D	9	LYS	CA-C-N	5.02	127.76	120.79
4	D	9	LYS	C-N-CA	5.02	127.76	120.79
22	W	131	ALA	N-CA-C	-5.02	101.44	109.07
1	A	338	A	O5'-C5'-C4'	-5.02	103.98	111.50
1	A	402	G	C3'-C2'-C1'	-5.02	96.28	101.30
1	A	703	G	O4'-C1'-N9	5.01	115.72	108.20
17	Q	56	ASP	CA-CB-CG	-5.01	107.59	112.60
18	R	27	THR	N-CA-C	-5.01	105.91	112.23
18	R	73	HIS	CE1-NE2-CD2	-5.01	103.99	109.00
22	W	72	SER	CA-C-N	5.01	128.81	120.94
22	W	72	SER	C-N-CA	5.01	128.81	120.94
1	A	668	G	P-O3'-C3'	-5.01	112.68	120.20
1	A	997	U	C2-N1-C1'	-5.01	102.66	117.70
13	M	4	ALA	CA-C-O	5.01	127.68	120.51
1	A	361	G	C1'-O4'-C4'	5.01	114.91	109.90
1	A	1316	G	C1'-O4'-C4'	-5.01	104.89	109.90
1	A	133	U	C4'-C3'-C2'	5.01	107.61	102.60
1	A	647	C	O4'-C4'-C3'	-5.01	98.99	104.00
1	A	991	U	C4'-C3'-O3'	5.01	116.92	109.40
1	A	1141	C	O4'-C1'-N1	5.01	116.02	108.50
1	A	1202	U	C4'-C3'-C2'	-5.01	97.59	102.60
1	A	1506	U	C4'-C3'-C2'	-5.01	97.59	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1157	A	C2'-C3'-O3'	5.01	117.01	109.50
14	N	66	THR	N-CA-C	-5.01	108.91	114.62
1	A	743	A	C4-N9-C1'	-5.01	111.28	126.30
1	A	750	C	C3'-C2'-C1'	-5.01	96.29	101.30
1	A	783	C	C5'-C4'-C3'	-5.01	108.49	116.00
1	A	1066	C	C3'-C2'-C1'	5.01	106.31	101.30
1	A	1090	U	C1'-O4'-C4'	-5.01	104.89	109.90
1	A	1162	C	O4'-C1'-N1	5.01	116.01	108.50
1	A	1315	U	P-O5'-C5'	5.01	128.41	120.90
2	B	80	LYS	N-CA-CB	5.01	118.95	110.49
20	T	33	LYS	CA-CB-CG	-5.01	104.09	114.10
1	A	498	A	C5'-C4'-O4'	-5.00	102.29	109.80
1	A	580	C	O5'-C5'-C4'	-5.00	104.00	111.50
1	A	1296	C	C6-N1-C1'	5.00	135.81	120.80
20	T	69	ASN	CB-CA-C	5.00	119.20	110.94
1	A	193	C	O3'-P-O5'	-5.00	96.50	104.00
1	A	705	G	P-O3'-C3'	-5.00	112.70	120.20
13	M	93	GLY	N-CA-C	-5.00	108.71	115.36

There are no chirality outliers.

All (1419) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	10	A	Sidechain
1	A	100	G	Sidechain
1	A	1001	C	Sidechain
1	A	1002	G	Sidechain
1	A	1003	G	Sidechain
1	A	1004	A	Sidechain
1	A	1005	A	Sidechain
1	A	1006	G	Sidechain
1	A	1007	U	Sidechain
1	A	1008	U	Sidechain
1	A	1009	U	Sidechain
1	A	1010	U	Sidechain
1	A	1012	A	Sidechain
1	A	1013	G	Sidechain
1	A	1014	A	Sidechain
1	A	1016	A	Sidechain
1	A	1017	U	Sidechain
1	A	1018	G	Sidechain
1	A	1019	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	102	G	Sidechain
1	A	1020	G	Sidechain
1	A	1021	A	Sidechain
1	A	1022	A	Sidechain
1	A	1023	U	Sidechain
1	A	1024	G	Sidechain
1	A	1025	U	Sidechain
1	A	1026	G	Sidechain
1	A	1029	U	Sidechain
1	A	1030	U	Sidechain
1	A	1032	G	Sidechain
1	A	1033	G	Sidechain
1	A	1035	A	Sidechain
1	A	1036	A	Sidechain
1	A	1037	C	Sidechain
1	A	1038	C	Sidechain
1	A	1039	G	Sidechain
1	A	104	G	Sidechain
1	A	1040	U	Sidechain
1	A	1041	G	Sidechain
1	A	1043	G	Sidechain
1	A	1044	A	Sidechain
1	A	1045	C	Sidechain
1	A	1047	G	Sidechain
1	A	1048	G	Sidechain
1	A	1049	U	Sidechain
1	A	105	G	Sidechain
1	A	1050	G	Sidechain
1	A	1052	U	Sidechain
1	A	1053	G	Sidechain
1	A	1054	C	Sidechain
1	A	1055	A	Sidechain
1	A	1056	U	Sidechain
1	A	1058	G	Sidechain
1	A	1059	C	Sidechain
1	A	106	C	Sidechain
1	A	1060	U	Sidechain
1	A	1061	G	Sidechain
1	A	1062	U	Sidechain
1	A	1063	C	Sidechain
1	A	1064	G	Sidechain
1	A	1065	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1066	C	Sidechain
1	A	1067	A	Sidechain
1	A	1068	G	Sidechain
1	A	1069	C	Sidechain
1	A	107	G	Sidechain
1	A	1070	U	Sidechain
1	A	1072	G	Sidechain
1	A	1073	U	Sidechain
1	A	1074	G	Sidechain
1	A	1075	U	Sidechain
1	A	1076	U	Sidechain
1	A	1077	G	Sidechain
1	A	1079	G	Sidechain
1	A	108	G	Sidechain
1	A	1080	A	Sidechain
1	A	1081	A	Sidechain
1	A	1083	U	Sidechain
1	A	1084	G	Sidechain
1	A	1085	U	Sidechain
1	A	1086	U	Sidechain
1	A	1087	G	Sidechain
1	A	1088	G	Sidechain
1	A	1089	G	Sidechain
1	A	109	A	Sidechain
1	A	1090	U	Sidechain
1	A	1091	U	Sidechain
1	A	1092	A	Sidechain
1	A	1093	A	Sidechain
1	A	1094	G	Sidechain
1	A	1095	U	Sidechain
1	A	1096	C	Sidechain
1	A	1098	C	Sidechain
1	A	1099	G	Sidechain
1	A	11	G	Sidechain
1	A	1100	C	Sidechain
1	A	1101	A	Sidechain
1	A	1102	A	Sidechain
1	A	1103	C	Sidechain
1	A	1104	G	Sidechain
1	A	1106	G	Sidechain
1	A	1108	G	Sidechain
1	A	111	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1110	A	Sidechain
1	A	1113	C	Sidechain
1	A	1114	C	Sidechain
1	A	1115	U	Sidechain
1	A	1116	U	Sidechain
1	A	1117	A	Sidechain
1	A	1118	U	Sidechain
1	A	1119	C	Sidechain
1	A	112	G	Sidechain
1	A	1120	C	Sidechain
1	A	1121	U	Sidechain
1	A	1122	U	Sidechain
1	A	1123	U	Sidechain
1	A	1124	G	Sidechain
1	A	1126	U	Sidechain
1	A	1127	G	Sidechain
1	A	1129	C	Sidechain
1	A	1130	A	Sidechain
1	A	1131	G	Sidechain
1	A	1133	G	Sidechain
1	A	1134	G	Sidechain
1	A	1136	C	Sidechain
1	A	1138	G	Sidechain
1	A	1139	G	Sidechain
1	A	114	U	Sidechain
1	A	1140	C	Sidechain
1	A	1141	C	Sidechain
1	A	1142	G	Sidechain
1	A	1144	G	Sidechain
1	A	1145	A	Sidechain
1	A	1146	A	Sidechain
1	A	1147	C	Sidechain
1	A	1148	U	Sidechain
1	A	1149	C	Sidechain
1	A	1150	A	Sidechain
1	A	1151	A	Sidechain
1	A	1152	A	Sidechain
1	A	1153	G	Sidechain
1	A	1156	G	Sidechain
1	A	1157	A	Sidechain
1	A	1159	U	Sidechain
1	A	116	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1160	G	Sidechain
1	A	1161	C	Sidechain
1	A	1162	C	Sidechain
1	A	1163	A	Sidechain
1	A	1164	G	Sidechain
1	A	1165	U	Sidechain
1	A	1166	G	Sidechain
1	A	1167	A	Sidechain
1	A	1168	U	Sidechain
1	A	117	G	Sidechain
1	A	1171	A	Sidechain
1	A	1173	U	Sidechain
1	A	1174	G	Sidechain
1	A	1175	G	Sidechain
1	A	1177	G	Sidechain
1	A	1178	G	Sidechain
1	A	1179	A	Sidechain
1	A	118	U	Sidechain
1	A	1180	A	Sidechain
1	A	1181	G	Sidechain
1	A	1182	G	Sidechain
1	A	1183	U	Sidechain
1	A	1184	G	Sidechain
1	A	1185	G	Sidechain
1	A	1186	G	Sidechain
1	A	1187	G	Sidechain
1	A	1188	A	Sidechain
1	A	1189	U	Sidechain
1	A	119	A	Sidechain
1	A	1190	G	Sidechain
1	A	1191	A	Sidechain
1	A	1192	C	Sidechain
1	A	1193	G	Sidechain
1	A	1194	U	Sidechain
1	A	1195	C	Sidechain
1	A	1196	A	Sidechain
1	A	1197	A	Sidechain
1	A	1199	U	Sidechain
1	A	12	U	Sidechain
1	A	120	A	Sidechain
1	A	1201	A	Sidechain
1	A	1204	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1205	U	Sidechain
1	A	1206	G	Sidechain
1	A	1207	G	Sidechain
1	A	1209	C	Sidechain
1	A	121	U	Sidechain
1	A	1210	C	Sidechain
1	A	1211	U	Sidechain
1	A	1212	U	Sidechain
1	A	1213	A	Sidechain
1	A	1214	C	Sidechain
1	A	1215	G	Sidechain
1	A	1219	A	Sidechain
1	A	122	G	Sidechain
1	A	1221	G	Sidechain
1	A	1222	G	Sidechain
1	A	1223	C	Sidechain
1	A	1224	U	Sidechain
1	A	1226	C	Sidechain
1	A	1227	A	Sidechain
1	A	1228	C	Sidechain
1	A	1229	A	Sidechain
1	A	123	U	Sidechain
1	A	1231	G	Sidechain
1	A	1232	U	Sidechain
1	A	1233	G	Sidechain
1	A	1234	C	Sidechain
1	A	1235	U	Sidechain
1	A	1236	A	Sidechain
1	A	1237	C	Sidechain
1	A	1238	A	Sidechain
1	A	1239	A	Sidechain
1	A	124	C	Sidechain
1	A	1240	U	Sidechain
1	A	1241	G	Sidechain
1	A	1242	G	Sidechain
1	A	1244	G	Sidechain
1	A	1245	C	Sidechain
1	A	1246	A	Sidechain
1	A	1247	U	Sidechain
1	A	1248	A	Sidechain
1	A	1249	C	Sidechain
1	A	125	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1250	A	Sidechain
1	A	1251	A	Sidechain
1	A	1252	A	Sidechain
1	A	1253	G	Sidechain
1	A	1254	A	Sidechain
1	A	1256	A	Sidechain
1	A	1257	A	Sidechain
1	A	1258	G	Sidechain
1	A	1259	C	Sidechain
1	A	126	G	Sidechain
1	A	1262	C	Sidechain
1	A	1263	C	Sidechain
1	A	1264	U	Sidechain
1	A	1265	C	Sidechain
1	A	1266	G	Sidechain
1	A	1267	C	Sidechain
1	A	1268	G	Sidechain
1	A	1269	A	Sidechain
1	A	127	G	Sidechain
1	A	1270	G	Sidechain
1	A	1272	G	Sidechain
1	A	1273	C	Sidechain
1	A	1274	A	Sidechain
1	A	1275	A	Sidechain
1	A	1276	G	Sidechain
1	A	1277	C	Sidechain
1	A	1278	G	Sidechain
1	A	1279	G	Sidechain
1	A	128	G	Sidechain
1	A	1280	A	Sidechain
1	A	1281	C	Sidechain
1	A	1282	C	Sidechain
1	A	1283	U	Sidechain
1	A	1284	C	Sidechain
1	A	1285	A	Sidechain
1	A	1286	U	Sidechain
1	A	1288	A	Sidechain
1	A	1289	A	Sidechain
1	A	129	A	Sidechain
1	A	1290	G	Sidechain
1	A	1291	U	Sidechain
1	A	1292	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1293	C	Sidechain
1	A	1294	G	Sidechain
1	A	1295	U	Sidechain
1	A	1296	C	Sidechain
1	A	1297	G	Sidechain
1	A	1298	U	Sidechain
1	A	1299	A	Sidechain
1	A	13	U	Sidechain
1	A	130	A	Sidechain
1	A	1300	G	Sidechain
1	A	1302	C	Sidechain
1	A	1303	C	Sidechain
1	A	1304	G	Sidechain
1	A	1305	G	Sidechain
1	A	1306	A	Sidechain
1	A	1308	U	Sidechain
1	A	1309	G	Sidechain
1	A	131	A	Sidechain
1	A	1310	G	Sidechain
1	A	1311	A	Sidechain
1	A	1312	G	Sidechain
1	A	1313	U	Sidechain
1	A	1314	C	Sidechain
1	A	1315	U	Sidechain
1	A	1316	G	Sidechain
1	A	1317	C	Sidechain
1	A	1318	A	Sidechain
1	A	1319	A	Sidechain
1	A	132	C	Sidechain
1	A	1321	U	Sidechain
1	A	1323	G	Sidechain
1	A	1324	A	Sidechain
1	A	1325	C	Sidechain
1	A	1326	U	Sidechain
1	A	1328	C	Sidechain
1	A	133	U	Sidechain
1	A	1331	G	Sidechain
1	A	1332	A	Sidechain
1	A	1334	G	Sidechain
1	A	1335	U	Sidechain
1	A	1336	C	Sidechain
1	A	1337	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1338	G	Sidechain
1	A	134	G	Sidechain
1	A	1340	A	Sidechain
1	A	1342	C	Sidechain
1	A	1345	U	Sidechain
1	A	1346	A	Sidechain
1	A	1347	G	Sidechain
1	A	1349	A	Sidechain
1	A	135	C	Sidechain
1	A	1350	A	Sidechain
1	A	1351	U	Sidechain
1	A	1352	C	Sidechain
1	A	1353	G	Sidechain
1	A	1355	G	Sidechain
1	A	1356	G	Sidechain
1	A	1357	A	Sidechain
1	A	1358	U	Sidechain
1	A	1359	C	Sidechain
1	A	136	C	Sidechain
1	A	1360	A	Sidechain
1	A	1361	G	Sidechain
1	A	1362	A	Sidechain
1	A	1363	A	Sidechain
1	A	1364	U	Sidechain
1	A	1365	G	Sidechain
1	A	1366	C	Sidechain
1	A	1367	C	Sidechain
1	A	1368	A	Sidechain
1	A	1369	C	Sidechain
1	A	1370	G	Sidechain
1	A	1371	G	Sidechain
1	A	1372	U	Sidechain
1	A	1373	G	Sidechain
1	A	1374	A	Sidechain
1	A	1375	A	Sidechain
1	A	1376	U	Sidechain
1	A	1377	A	Sidechain
1	A	1379	G	Sidechain
1	A	1380	U	Sidechain
1	A	1382	C	Sidechain
1	A	1383	C	Sidechain
1	A	1384	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1385	G	Sidechain
1	A	1386	G	Sidechain
1	A	139	A	Sidechain
1	A	1390	U	Sidechain
1	A	1391	U	Sidechain
1	A	1392	G	Sidechain
1	A	1393	U	Sidechain
1	A	1394	A	Sidechain
1	A	1395	C	Sidechain
1	A	1399	C	Sidechain
1	A	14	U	Sidechain
1	A	140	U	Sidechain
1	A	1401	G	Sidechain
1	A	1402	C	Sidechain
1	A	1403	C	Sidechain
1	A	1404	C	Sidechain
1	A	1405	G	Sidechain
1	A	1406	U	Sidechain
1	A	1407	C	Sidechain
1	A	1408	A	Sidechain
1	A	1409	C	Sidechain
1	A	141	G	Sidechain
1	A	1410	A	Sidechain
1	A	1413	A	Sidechain
1	A	1414	U	Sidechain
1	A	1415	G	Sidechain
1	A	1416	G	Sidechain
1	A	1417	G	Sidechain
1	A	1418	A	Sidechain
1	A	1419	G	Sidechain
1	A	142	G	Sidechain
1	A	1421	G	Sidechain
1	A	1422	G	Sidechain
1	A	1425	U	Sidechain
1	A	1427	C	Sidechain
1	A	1428	A	Sidechain
1	A	143	A	Sidechain
1	A	1430	A	Sidechain
1	A	1431	A	Sidechain
1	A	1432	G	Sidechain
1	A	1433	A	Sidechain
1	A	1435	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1436	U	Sidechain
1	A	1437	A	Sidechain
1	A	1438	G	Sidechain
1	A	1439	G	Sidechain
1	A	144	G	Sidechain
1	A	1441	A	Sidechain
1	A	1442	G	Sidechain
1	A	1443	C	Sidechain
1	A	1444	U	Sidechain
1	A	1445	U	Sidechain
1	A	1446	A	Sidechain
1	A	1448	C	Sidechain
1	A	145	G	Sidechain
1	A	1450	U	Sidechain
1	A	1451	U	Sidechain
1	A	1452	C	Sidechain
1	A	1453	G	Sidechain
1	A	1454	G	Sidechain
1	A	1455	G	Sidechain
1	A	1456	A	Sidechain
1	A	1458	G	Sidechain
1	A	1459	G	Sidechain
1	A	146	G	Sidechain
1	A	1460	C	Sidechain
1	A	1461	G	Sidechain
1	A	1462	C	Sidechain
1	A	1463	U	Sidechain
1	A	1464	U	Sidechain
1	A	1465	A	Sidechain
1	A	1468	A	Sidechain
1	A	1469	C	Sidechain
1	A	147	G	Sidechain
1	A	1470	U	Sidechain
1	A	1471	U	Sidechain
1	A	1472	U	Sidechain
1	A	1473	G	Sidechain
1	A	1474	U	Sidechain
1	A	1476	A	Sidechain
1	A	1477	U	Sidechain
1	A	1479	C	Sidechain
1	A	148	G	Sidechain
1	A	1480	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1481	U	Sidechain
1	A	1482	G	Sidechain
1	A	1483	A	Sidechain
1	A	1485	U	Sidechain
1	A	1486	G	Sidechain
1	A	1487	G	Sidechain
1	A	1489	G	Sidechain
1	A	1491	G	Sidechain
1	A	1493	A	Sidechain
1	A	1494	G	Sidechain
1	A	1497	G	Sidechain
1	A	1499	A	Sidechain
1	A	15	G	Sidechain
1	A	150	U	Sidechain
1	A	1500	A	Sidechain
1	A	1501	C	Sidechain
1	A	1502	A	Sidechain
1	A	1503	A	Sidechain
1	A	1504	G	Sidechain
1	A	1506	U	Sidechain
1	A	151	A	Sidechain
1	A	1510	C	Sidechain
1	A	1513	A	Sidechain
1	A	1514	G	Sidechain
1	A	1515	G	Sidechain
1	A	1516	G	Sidechain
1	A	1519	A	Sidechain
1	A	152	A	Sidechain
1	A	1520	C	Sidechain
1	A	1522	U	Sidechain
1	A	1523	G	Sidechain
1	A	1524	C	Sidechain
1	A	1525	G	Sidechain
1	A	1526	G	Sidechain
1	A	1527	U	Sidechain
1	A	1529	G	Sidechain
1	A	153	C	Sidechain
1	A	1531	A	Sidechain
1	A	1533	C	Sidechain
1	A	1534	A	Sidechain
1	A	154	U	Sidechain
1	A	155	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	157	U	Sidechain
1	A	158	G	Sidechain
1	A	159	G	Sidechain
1	A	16	A	Sidechain
1	A	160	A	Sidechain
1	A	161	A	Sidechain
1	A	162	A	Sidechain
1	A	163	C	Sidechain
1	A	167	A	Sidechain
1	A	168	G	Sidechain
1	A	169	C	Sidechain
1	A	17	U	Sidechain
1	A	170	U	Sidechain
1	A	172	A	Sidechain
1	A	174	A	Sidechain
1	A	176	C	Sidechain
1	A	177	G	Sidechain
1	A	178	C	Sidechain
1	A	180	U	Sidechain
1	A	181	A	Sidechain
1	A	182	A	Sidechain
1	A	183	C	Sidechain
1	A	184	G	Sidechain
1	A	185	U	Sidechain
1	A	186	C	Sidechain
1	A	187	G	Sidechain
1	A	188	C	Sidechain
1	A	190	A	Sidechain
1	A	191	G	Sidechain
1	A	192	A	Sidechain
1	A	193	C	Sidechain
1	A	194	C	Sidechain
1	A	195	A	Sidechain
1	A	196	A	Sidechain
1	A	197	A	Sidechain
1	A	2	A	Sidechain
1	A	200	G	Sidechain
1	A	201	G	Sidechain
1	A	203	G	Sidechain
1	A	204	G	Sidechain
1	A	207	C	Sidechain
1	A	208	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	21	G	Sidechain
1	A	210	C	Sidechain
1	A	211	G	Sidechain
1	A	212	G	Sidechain
1	A	213	G	Sidechain
1	A	214	C	Sidechain
1	A	215	C	Sidechain
1	A	216	U	Sidechain
1	A	218	U	Sidechain
1	A	219	U	Sidechain
1	A	220	G	Sidechain
1	A	221	C	Sidechain
1	A	222	C	Sidechain
1	A	223	A	Sidechain
1	A	225	C	Sidechain
1	A	226	G	Sidechain
1	A	227	G	Sidechain
1	A	228	A	Sidechain
1	A	229	U	Sidechain
1	A	231	U	Sidechain
1	A	232	G	Sidechain
1	A	233	C	Sidechain
1	A	234	C	Sidechain
1	A	235	C	Sidechain
1	A	237	G	Sidechain
1	A	239	U	Sidechain
1	A	24	U	Sidechain
1	A	240	G	Sidechain
1	A	242	G	Sidechain
1	A	243	A	Sidechain
1	A	244	U	Sidechain
1	A	246	A	Sidechain
1	A	247	G	Sidechain
1	A	249	U	Sidechain
1	A	25	C	Sidechain
1	A	251	G	Sidechain
1	A	254	G	Sidechain
1	A	255	G	Sidechain
1	A	256	U	Sidechain
1	A	257	G	Sidechain
1	A	258	G	Sidechain
1	A	259	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	261	U	Sidechain
1	A	262	A	Sidechain
1	A	263	A	Sidechain
1	A	264	C	Sidechain
1	A	265	G	Sidechain
1	A	266	G	Sidechain
1	A	267	C	Sidechain
1	A	268	U	Sidechain
1	A	269	C	Sidechain
1	A	270	A	Sidechain
1	A	271	C	Sidechain
1	A	272	C	Sidechain
1	A	273	U	Sidechain
1	A	274	A	Sidechain
1	A	275	G	Sidechain
1	A	276	G	Sidechain
1	A	278	G	Sidechain
1	A	28	A	Sidechain
1	A	281	G	Sidechain
1	A	282	A	Sidechain
1	A	283	U	Sidechain
1	A	284	C	Sidechain
1	A	286	C	Sidechain
1	A	287	U	Sidechain
1	A	288	A	Sidechain
1	A	289	G	Sidechain
1	A	29	U	Sidechain
1	A	291	U	Sidechain
1	A	292	G	Sidechain
1	A	293	G	Sidechain
1	A	294	U	Sidechain
1	A	295	C	Sidechain
1	A	296	U	Sidechain
1	A	297	G	Sidechain
1	A	298	A	Sidechain
1	A	3	A	Sidechain
1	A	30	U	Sidechain
1	A	301	G	Sidechain
1	A	303	A	Sidechain
1	A	304	U	Sidechain
1	A	305	G	Sidechain
1	A	306	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	308	C	Sidechain
1	A	309	A	Sidechain
1	A	31	G	Sidechain
1	A	310	G	Sidechain
1	A	312	C	Sidechain
1	A	314	C	Sidechain
1	A	315	A	Sidechain
1	A	316	C	Sidechain
1	A	317	U	Sidechain
1	A	318	G	Sidechain
1	A	319	G	Sidechain
1	A	32	A	Sidechain
1	A	320	A	Sidechain
1	A	321	A	Sidechain
1	A	322	C	Sidechain
1	A	323	U	Sidechain
1	A	324	G	Sidechain
1	A	325	A	Sidechain
1	A	326	G	Sidechain
1	A	328	C	Sidechain
1	A	329	A	Sidechain
1	A	33	A	Sidechain
1	A	330	C	Sidechain
1	A	331	G	Sidechain
1	A	332	G	Sidechain
1	A	333	U	Sidechain
1	A	334	C	Sidechain
1	A	335	C	Sidechain
1	A	337	G	Sidechain
1	A	338	A	Sidechain
1	A	339	C	Sidechain
1	A	34	C	Sidechain
1	A	340	U	Sidechain
1	A	341	C	Sidechain
1	A	342	C	Sidechain
1	A	343	U	Sidechain
1	A	345	C	Sidechain
1	A	346	G	Sidechain
1	A	347	G	Sidechain
1	A	348	G	Sidechain
1	A	349	A	Sidechain
1	A	35	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	350	G	Sidechain
1	A	351	G	Sidechain
1	A	352	C	Sidechain
1	A	353	A	Sidechain
1	A	356	A	Sidechain
1	A	357	G	Sidechain
1	A	358	U	Sidechain
1	A	359	G	Sidechain
1	A	360	G	Sidechain
1	A	361	G	Sidechain
1	A	362	G	Sidechain
1	A	363	A	Sidechain
1	A	365	U	Sidechain
1	A	366	A	Sidechain
1	A	368	U	Sidechain
1	A	369	G	Sidechain
1	A	370	C	Sidechain
1	A	371	A	Sidechain
1	A	372	C	Sidechain
1	A	373	A	Sidechain
1	A	374	A	Sidechain
1	A	376	G	Sidechain
1	A	377	G	Sidechain
1	A	378	G	Sidechain
1	A	38	G	Sidechain
1	A	380	G	Sidechain
1	A	381	C	Sidechain
1	A	382	A	Sidechain
1	A	384	G	Sidechain
1	A	388	G	Sidechain
1	A	389	A	Sidechain
1	A	39	G	Sidechain
1	A	391	G	Sidechain
1	A	393	A	Sidechain
1	A	394	G	Sidechain
1	A	396	C	Sidechain
1	A	397	A	Sidechain
1	A	398	U	Sidechain
1	A	399	G	Sidechain
1	A	4	U	Sidechain
1	A	401	C	Sidechain
1	A	403	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	404	G	Sidechain
1	A	405	U	Sidechain
1	A	406	G	Sidechain
1	A	408	A	Sidechain
1	A	409	U	Sidechain
1	A	410	G	Sidechain
1	A	411	A	Sidechain
1	A	412	A	Sidechain
1	A	413	G	Sidechain
1	A	418	C	Sidechain
1	A	42	G	Sidechain
1	A	420	U	Sidechain
1	A	421	U	Sidechain
1	A	422	C	Sidechain
1	A	423	G	Sidechain
1	A	424	G	Sidechain
1	A	425	G	Sidechain
1	A	426	U	Sidechain
1	A	427	U	Sidechain
1	A	428	G	Sidechain
1	A	429	U	Sidechain
1	A	43	C	Sidechain
1	A	430	A	Sidechain
1	A	431	A	Sidechain
1	A	432	A	Sidechain
1	A	433	G	Sidechain
1	A	434	U	Sidechain
1	A	435	A	Sidechain
1	A	436	C	Sidechain
1	A	437	U	Sidechain
1	A	438	U	Sidechain
1	A	439	U	Sidechain
1	A	440	C	Sidechain
1	A	441	A	Sidechain
1	A	442	G	Sidechain
1	A	443	C	Sidechain
1	A	444	G	Sidechain
1	A	446	G	Sidechain
1	A	447	G	Sidechain
1	A	448	A	Sidechain
1	A	449	G	Sidechain
1	A	45	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	450	G	Sidechain
1	A	451	A	Sidechain
1	A	452	A	Sidechain
1	A	453	G	Sidechain
1	A	454	G	Sidechain
1	A	455	G	Sidechain
1	A	456	A	Sidechain
1	A	457	G	Sidechain
1	A	458	U	Sidechain
1	A	459	A	Sidechain
1	A	46	G	Sidechain
1	A	460	A	Sidechain
1	A	461	A	Sidechain
1	A	462	G	Sidechain
1	A	463	U	Sidechain
1	A	464	U	Sidechain
1	A	465	A	Sidechain
1	A	466	A	Sidechain
1	A	467	U	Sidechain
1	A	468	A	Sidechain
1	A	469	C	Sidechain
1	A	47	C	Sidechain
1	A	470	C	Sidechain
1	A	471	U	Sidechain
1	A	472	U	Sidechain
1	A	473	U	Sidechain
1	A	474	G	Sidechain
1	A	476	U	Sidechain
1	A	477	C	Sidechain
1	A	478	A	Sidechain
1	A	479	U	Sidechain
1	A	480	U	Sidechain
1	A	481	G	Sidechain
1	A	482	A	Sidechain
1	A	483	C	Sidechain
1	A	484	G	Sidechain
1	A	485	U	Sidechain
1	A	486	U	Sidechain
1	A	49	U	Sidechain
1	A	490	C	Sidechain
1	A	491	G	Sidechain
1	A	492	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	494	G	Sidechain
1	A	495	A	Sidechain
1	A	496	A	Sidechain
1	A	497	G	Sidechain
1	A	498	A	Sidechain
1	A	499	A	Sidechain
1	A	5	U	Sidechain
1	A	50	A	Sidechain
1	A	500	G	Sidechain
1	A	501	C	Sidechain
1	A	502	A	Sidechain
1	A	503	C	Sidechain
1	A	505	G	Sidechain
1	A	506	G	Sidechain
1	A	507	C	Sidechain
1	A	508	U	Sidechain
1	A	509	A	Sidechain
1	A	51	A	Sidechain
1	A	510	A	Sidechain
1	A	511	C	Sidechain
1	A	512	U	Sidechain
1	A	514	C	Sidechain
1	A	515	G	Sidechain
1	A	516	U	Sidechain
1	A	517	G	Sidechain
1	A	518	C	Sidechain
1	A	519	C	Sidechain
1	A	52	C	Sidechain
1	A	520	A	Sidechain
1	A	521	G	Sidechain
1	A	522	C	Sidechain
1	A	524	G	Sidechain
1	A	525	C	Sidechain
1	A	526	C	Sidechain
1	A	527	G	Sidechain
1	A	528	C	Sidechain
1	A	529	G	Sidechain
1	A	53	A	Sidechain
1	A	530	G	Sidechain
1	A	531	U	Sidechain
1	A	532	A	Sidechain
1	A	533	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	534	U	Sidechain
1	A	535	A	Sidechain
1	A	536	C	Sidechain
1	A	537	G	Sidechain
1	A	538	G	Sidechain
1	A	54	C	Sidechain
1	A	543	U	Sidechain
1	A	545	C	Sidechain
1	A	546	A	Sidechain
1	A	547	A	Sidechain
1	A	548	G	Sidechain
1	A	549	C	Sidechain
1	A	55	A	Sidechain
1	A	550	G	Sidechain
1	A	554	A	Sidechain
1	A	555	U	Sidechain
1	A	556	C	Sidechain
1	A	558	G	Sidechain
1	A	559	A	Sidechain
1	A	56	U	Sidechain
1	A	561	U	Sidechain
1	A	562	U	Sidechain
1	A	564	C	Sidechain
1	A	566	G	Sidechain
1	A	568	G	Sidechain
1	A	569	C	Sidechain
1	A	57	G	Sidechain
1	A	572	A	Sidechain
1	A	573	A	Sidechain
1	A	575	G	Sidechain
1	A	576	C	Sidechain
1	A	577	G	Sidechain
1	A	579	A	Sidechain
1	A	58	C	Sidechain
1	A	580	C	Sidechain
1	A	581	G	Sidechain
1	A	582	C	Sidechain
1	A	583	A	Sidechain
1	A	584	G	Sidechain
1	A	585	G	Sidechain
1	A	586	C	Sidechain
1	A	587	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	588	G	Sidechain
1	A	589	U	Sidechain
1	A	592	G	Sidechain
1	A	593	U	Sidechain
1	A	594	U	Sidechain
1	A	595	A	Sidechain
1	A	596	A	Sidechain
1	A	597	G	Sidechain
1	A	6	G	Sidechain
1	A	60	A	Sidechain
1	A	600	A	Sidechain
1	A	601	G	Sidechain
1	A	602	A	Sidechain
1	A	603	U	Sidechain
1	A	604	G	Sidechain
1	A	606	G	Sidechain
1	A	608	A	Sidechain
1	A	609	A	Sidechain
1	A	61	G	Sidechain
1	A	610	U	Sidechain
1	A	611	C	Sidechain
1	A	613	C	Sidechain
1	A	614	C	Sidechain
1	A	615	G	Sidechain
1	A	616	G	Sidechain
1	A	617	G	Sidechain
1	A	618	C	Sidechain
1	A	619	U	Sidechain
1	A	62	U	Sidechain
1	A	620	C	Sidechain
1	A	621	A	Sidechain
1	A	622	A	Sidechain
1	A	623	C	Sidechain
1	A	624	C	Sidechain
1	A	625	U	Sidechain
1	A	628	G	Sidechain
1	A	629	A	Sidechain
1	A	63	C	Sidechain
1	A	630	A	Sidechain
1	A	631	C	Sidechain
1	A	632	U	Sidechain
1	A	633	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	634	C	Sidechain
1	A	635	A	Sidechain
1	A	636	U	Sidechain
1	A	637	C	Sidechain
1	A	638	U	Sidechain
1	A	639	G	Sidechain
1	A	64	G	Sidechain
1	A	640	A	Sidechain
1	A	641	U	Sidechain
1	A	643	C	Sidechain
1	A	645	G	Sidechain
1	A	646	G	Sidechain
1	A	647	C	Sidechain
1	A	648	A	Sidechain
1	A	649	A	Sidechain
1	A	650	G	Sidechain
1	A	651	C	Sidechain
1	A	652	U	Sidechain
1	A	653	U	Sidechain
1	A	654	G	Sidechain
1	A	655	A	Sidechain
1	A	656	G	Sidechain
1	A	657	U	Sidechain
1	A	658	C	Sidechain
1	A	659	U	Sidechain
1	A	66	A	Sidechain
1	A	660	C	Sidechain
1	A	661	G	Sidechain
1	A	662	U	Sidechain
1	A	667	G	Sidechain
1	A	668	G	Sidechain
1	A	67	C	Sidechain
1	A	670	G	Sidechain
1	A	671	G	Sidechain
1	A	672	U	Sidechain
1	A	673	A	Sidechain
1	A	676	A	Sidechain
1	A	678	U	Sidechain
1	A	679	C	Sidechain
1	A	68	G	Sidechain
1	A	680	C	Sidechain
1	A	681	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	682	G	Sidechain
1	A	684	U	Sidechain
1	A	685	G	Sidechain
1	A	686	U	Sidechain
1	A	687	A	Sidechain
1	A	688	G	Sidechain
1	A	69	G	Sidechain
1	A	690	G	Sidechain
1	A	691	G	Sidechain
1	A	692	U	Sidechain
1	A	693	G	Sidechain
1	A	694	A	Sidechain
1	A	695	A	Sidechain
1	A	696	A	Sidechain
1	A	697	U	Sidechain
1	A	698	G	Sidechain
1	A	699	C	Sidechain
1	A	7	A	Sidechain
1	A	70	U	Sidechain
1	A	700	G	Sidechain
1	A	701	U	Sidechain
1	A	702	A	Sidechain
1	A	703	G	Sidechain
1	A	704	A	Sidechain
1	A	705	G	Sidechain
1	A	706	A	Sidechain
1	A	707	U	Sidechain
1	A	708	C	Sidechain
1	A	709	U	Sidechain
1	A	71	A	Sidechain
1	A	710	G	Sidechain
1	A	711	G	Sidechain
1	A	712	A	Sidechain
1	A	713	G	Sidechain
1	A	714	G	Sidechain
1	A	715	A	Sidechain
1	A	716	A	Sidechain
1	A	717	U	Sidechain
1	A	719	C	Sidechain
1	A	72	A	Sidechain
1	A	721	G	Sidechain
1	A	722	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	723	U	Sidechain
1	A	724	G	Sidechain
1	A	725	G	Sidechain
1	A	727	G	Sidechain
1	A	728	A	Sidechain
1	A	729	A	Sidechain
1	A	73	C	Sidechain
1	A	730	G	Sidechain
1	A	732	C	Sidechain
1	A	733	G	Sidechain
1	A	734	G	Sidechain
1	A	735	C	Sidechain
1	A	736	C	Sidechain
1	A	737	C	Sidechain
1	A	739	C	Sidechain
1	A	74	A	Sidechain
1	A	740	U	Sidechain
1	A	743	A	Sidechain
1	A	745	G	Sidechain
1	A	746	A	Sidechain
1	A	747	A	Sidechain
1	A	748	G	Sidechain
1	A	749	A	Sidechain
1	A	75	G	Sidechain
1	A	750	C	Sidechain
1	A	751	U	Sidechain
1	A	752	G	Sidechain
1	A	753	A	Sidechain
1	A	754	C	Sidechain
1	A	755	G	Sidechain
1	A	756	C	Sidechain
1	A	757	U	Sidechain
1	A	758	C	Sidechain
1	A	759	A	Sidechain
1	A	76	G	Sidechain
1	A	760	G	Sidechain
1	A	765	G	Sidechain
1	A	766	A	Sidechain
1	A	767	A	Sidechain
1	A	769	G	Sidechain
1	A	77	A	Sidechain
1	A	770	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	771	G	Sidechain
1	A	772	U	Sidechain
1	A	773	G	Sidechain
1	A	774	G	Sidechain
1	A	775	G	Sidechain
1	A	776	G	Sidechain
1	A	777	A	Sidechain
1	A	778	G	Sidechain
1	A	779	C	Sidechain
1	A	78	A	Sidechain
1	A	780	A	Sidechain
1	A	781	A	Sidechain
1	A	782	A	Sidechain
1	A	783	C	Sidechain
1	A	784	A	Sidechain
1	A	785	G	Sidechain
1	A	786	G	Sidechain
1	A	787	A	Sidechain
1	A	788	U	Sidechain
1	A	789	U	Sidechain
1	A	79	G	Sidechain
1	A	790	A	Sidechain
1	A	794	A	Sidechain
1	A	795	C	Sidechain
1	A	796	C	Sidechain
1	A	797	C	Sidechain
1	A	798	U	Sidechain
1	A	799	G	Sidechain
1	A	8	A	Sidechain
1	A	80	A	Sidechain
1	A	800	G	Sidechain
1	A	801	U	Sidechain
1	A	802	A	Sidechain
1	A	803	G	Sidechain
1	A	804	U	Sidechain
1	A	805	C	Sidechain
1	A	806	C	Sidechain
1	A	807	A	Sidechain
1	A	808	C	Sidechain
1	A	809	G	Sidechain
1	A	81	A	Sidechain
1	A	810	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	811	C	Sidechain
1	A	812	G	Sidechain
1	A	813	U	Sidechain
1	A	814	A	Sidechain
1	A	815	A	Sidechain
1	A	816	A	Sidechain
1	A	817	C	Sidechain
1	A	818	G	Sidechain
1	A	819	A	Sidechain
1	A	82	G	Sidechain
1	A	822	U	Sidechain
1	A	823	C	Sidechain
1	A	824	G	Sidechain
1	A	825	A	Sidechain
1	A	827	U	Sidechain
1	A	828	U	Sidechain
1	A	829	G	Sidechain
1	A	83	C	Sidechain
1	A	830	G	Sidechain
1	A	831	A	Sidechain
1	A	832	G	Sidechain
1	A	835	U	Sidechain
1	A	837	U	Sidechain
1	A	838	G	Sidechain
1	A	839	C	Sidechain
1	A	84	U	Sidechain
1	A	840	C	Sidechain
1	A	841	C	Sidechain
1	A	842	U	Sidechain
1	A	844	G	Sidechain
1	A	845	A	Sidechain
1	A	846	G	Sidechain
1	A	847	G	Sidechain
1	A	848	C	Sidechain
1	A	849	G	Sidechain
1	A	85	U	Sidechain
1	A	850	U	Sidechain
1	A	851	G	Sidechain
1	A	855	U	Sidechain
1	A	856	C	Sidechain
1	A	857	C	Sidechain
1	A	858	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	859	G	Sidechain
1	A	860	A	Sidechain
1	A	861	G	Sidechain
1	A	864	A	Sidechain
1	A	868	C	Sidechain
1	A	869	G	Sidechain
1	A	87	C	Sidechain
1	A	870	U	Sidechain
1	A	871	U	Sidechain
1	A	872	A	Sidechain
1	A	873	A	Sidechain
1	A	874	G	Sidechain
1	A	875	U	Sidechain
1	A	876	C	Sidechain
1	A	877	G	Sidechain
1	A	879	C	Sidechain
1	A	88	U	Sidechain
1	A	880	C	Sidechain
1	A	881	G	Sidechain
1	A	882	C	Sidechain
1	A	883	C	Sidechain
1	A	884	U	Sidechain
1	A	885	G	Sidechain
1	A	886	G	Sidechain
1	A	887	G	Sidechain
1	A	888	G	Sidechain
1	A	889	A	Sidechain
1	A	890	G	Sidechain
1	A	891	U	Sidechain
1	A	892	A	Sidechain
1	A	894	G	Sidechain
1	A	895	G	Sidechain
1	A	897	C	Sidechain
1	A	898	G	Sidechain
1	A	899	C	Sidechain
1	A	9	G	Sidechain
1	A	90	C	Sidechain
1	A	900	A	Sidechain
1	A	902	G	Sidechain
1	A	903	G	Sidechain
1	A	904	U	Sidechain
1	A	905	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	906	A	Sidechain
1	A	907	A	Sidechain
1	A	908	A	Sidechain
1	A	909	A	Sidechain
1	A	91	U	Sidechain
1	A	910	C	Sidechain
1	A	911	U	Sidechain
1	A	913	A	Sidechain
1	A	914	A	Sidechain
1	A	915	A	Sidechain
1	A	916	U	Sidechain
1	A	917	G	Sidechain
1	A	919	A	Sidechain
1	A	92	U	Sidechain
1	A	920	U	Sidechain
1	A	921	U	Sidechain
1	A	922	G	Sidechain
1	A	923	A	Sidechain
1	A	924	C	Sidechain
1	A	925	G	Sidechain
1	A	927	G	Sidechain
1	A	928	G	Sidechain
1	A	929	G	Sidechain
1	A	93	U	Sidechain
1	A	931	C	Sidechain
1	A	933	G	Sidechain
1	A	934	C	Sidechain
1	A	935	A	Sidechain
1	A	936	C	Sidechain
1	A	937	A	Sidechain
1	A	938	A	Sidechain
1	A	939	G	Sidechain
1	A	94	G	Sidechain
1	A	941	G	Sidechain
1	A	942	G	Sidechain
1	A	943	U	Sidechain
1	A	944	G	Sidechain
1	A	945	G	Sidechain
1	A	946	A	Sidechain
1	A	947	G	Sidechain
1	A	95	C	Sidechain
1	A	950	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	953	G	Sidechain
1	A	954	G	Sidechain
1	A	955	U	Sidechain
1	A	957	U	Sidechain
1	A	958	A	Sidechain
1	A	959	A	Sidechain
1	A	96	U	Sidechain
1	A	960	U	Sidechain
1	A	961	U	Sidechain
1	A	962	C	Sidechain
1	A	963	G	Sidechain
1	A	964	A	Sidechain
1	A	965	U	Sidechain
1	A	967	C	Sidechain
1	A	968	A	Sidechain
1	A	97	G	Sidechain
1	A	970	C	Sidechain
1	A	971	G	Sidechain
1	A	973	G	Sidechain
1	A	974	A	Sidechain
1	A	975	A	Sidechain
1	A	976	G	Sidechain
1	A	977	A	Sidechain
1	A	978	A	Sidechain
1	A	98	A	Sidechain
1	A	980	C	Sidechain
1	A	981	U	Sidechain
1	A	982	U	Sidechain
1	A	984	C	Sidechain
1	A	985	C	Sidechain
1	A	986	U	Sidechain
1	A	987	G	Sidechain
1	A	989	U	Sidechain
1	A	990	C	Sidechain
1	A	991	U	Sidechain
1	A	992	U	Sidechain
1	A	993	G	Sidechain
1	A	994	A	Sidechain
1	A	995	C	Sidechain
1	A	996	A	Sidechain
1	A	997	U	Sidechain
1	A	998	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	999	C	Sidechain
2	B	107	ARG	Sidechain
2	B	133	ALA	Mainchain
2	B	136	ARG	Sidechain
2	B	167	HIS	Sidechain
2	B	197	PHE	Sidechain
2	B	20	ARG	Sidechain
2	B	207	ARG	Sidechain
2	B	21	TYR	Sidechain
2	B	212	TYR	Sidechain
2	B	94	ARG	Mainchain,Peptide,Sidechain
2	B	95	TRP	Mainchain,Peptide
3	C	106	ARG	Sidechain
3	C	129	PHE	Sidechain
3	C	130	ARG	Sidechain
3	C	131	ARG	Sidechain
3	C	163	ARG	Sidechain
3	C	168	ARG	Sidechain
3	C	171	ARG	Sidechain
3	C	176	THR	Mainchain,Peptide
3	C	192	TYR	Sidechain
3	C	202	PHE	Sidechain
3	C	53	ARG	Sidechain
3	C	58	ARG	Sidechain
3	C	64	ARG	Sidechain
3	C	68	HIS	Sidechain
3	C	96	VAL	Mainchain
4	D	114	ARG	Sidechain
4	D	127	ARG	Sidechain
4	D	134	TYR	Sidechain
4	D	138	PRO	Mainchain,Peptide
4	D	181	PHE	Sidechain
4	D	25	ARG	Sidechain
4	D	3	TYR	Sidechain
4	D	40	HIS	Sidechain
4	D	43	ARG	Sidechain
4	D	50	TYR	Sidechain
4	D	55	ARG	Sidechain
4	D	61	ARG	Sidechain
4	D	62	ARG	Sidechain
4	D	74	TYR	Sidechain
5	E	111	ARG	Sidechain

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Mol	Chain	Res	Type	Group
5	E	137	ARG	Sidechain
5	E	19	ARG	Sidechain
5	E	28	ARG	Sidechain
5	E	47	PHE	Sidechain
5	E	94	PHE	Sidechain
6	F	24	ARG	Sidechain
6	F	25	TYR	Sidechain
6	F	33	GLU	Peptide
6	F	45	ARG	Sidechain
6	F	49	TYR	Sidechain
6	F	55	HIS	Sidechain
6	F	94	HIS	Sidechain
7	G	118	ARG	Sidechain
7	G	78	ARG	Sidechain
7	G	84	TYR	Sidechain
7	G	94	ARG	Sidechain
8	H	106	SER	Mainchain
8	H	113	ARG	Sidechain
8	H	116	ARG	Sidechain
8	H	127	TYR	Sidechain
8	H	47	ASP	Peptide
8	H	48	PHE	Sidechain
8	H	64	TYR	Sidechain
8	H	76	ARG	Sidechain
8	H	79	ARG	Sidechain
8	H	83	ARG	Sidechain
8	H	85	TYR	Sidechain
8	H	87	ARG	Sidechain
9	I	10	ARG	Sidechain
9	I	11	ARG	Sidechain
9	I	118	ARG	Sidechain
9	I	122	ARG	Sidechain
9	I	124	PRO	Mainchain
9	I	129	ARG	Sidechain
9	I	19	PHE	Sidechain
9	I	44	ARG	Sidechain
9	I	49	GLN	Mainchain
9	I	5	TYR	Sidechain
9	I	6	TYR	Sidechain
9	I	63	TYR	Sidechain
9	I	89	TYR	Sidechain
9	I	94	ARG	Sidechain

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Mol	Chain	Res	Type	Group
9	I	98	ARG	Sidechain
10	J	48	ARG	Sidechain
10	J	56	HIS	Mainchain
10	J	65	TYR	Sidechain
10	J	7	ARG	Sidechain
10	J	70	HIS	Sidechain
10	J	72	ARG	Sidechain
11	K	105	ARG	Sidechain
11	K	12	ARG	Sidechain
11	K	121	ARG	Sidechain
11	K	126	ARG	Sidechain
11	K	127	ARG	Sidechain
11	K	23	HIS	Sidechain
11	K	51	PHE	Sidechain
11	K	52	ARG	Sidechain
11	K	60	PHE	Sidechain
11	K	68	ARG	Sidechain
12	L	116	TYR	Sidechain
12	L	120	ARG	Sidechain
12	L	13	ARG	Sidechain
12	L	22	ALA	Peptide
12	L	30	ARG	Sidechain
12	L	49	ARG	Sidechain
12	L	82	ARG	Sidechain
13	M	100	ARG	Sidechain
13	M	106	ARG	Sidechain
13	M	111	PRO	Mainchain
13	M	112	ARG	Sidechain
13	M	13	HIS	Mainchain,Peptide
13	M	22	TYR	Sidechain
13	M	78	ARG	Sidechain
13	M	86	ARG	Sidechain
13	M	90	HIS	Sidechain
13	M	91	ARG	Sidechain
13	M	96	VAL	Mainchain
13	M	97	ARG	Sidechain
14	N	23	ARG	Sidechain
14	N	32	ASP	Mainchain
14	N	34	ASN	Mainchain
14	N	52	ARG	Sidechain
14	N	60	ARG	Sidechain
14	N	62	ARG	Sidechain

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Mol	Chain	Res	Type	Group
14	N	68	ARG	Sidechain
14	N	8	ARG	Sidechain
14	N	89	ARG	Sidechain
15	O	16	ARG	Sidechain
15	O	21	THR	Mainchain
15	O	46	LYS	Mainchain
15	O	50	HIS	Sidechain
15	O	57	ARG	Sidechain
15	O	68	TYR	Sidechain
15	O	71	ARG	Sidechain
15	O	83	ARG	Sidechain
15	O	87	ARG	Sidechain
16	P	25	ARG	Sidechain
16	P	27	ALA	Mainchain
16	P	28	ARG	Sidechain
16	P	38	PHE	Sidechain
16	P	39	PHE	Sidechain
17	Q	27	PHE	Peptide
17	Q	39	ARG	Mainchain
17	Q	44	HIS	Mainchain,Peptide
17	Q	46	HIS	Mainchain
17	Q	61	ARG	Sidechain
17	Q	64	ARG	Sidechain
18	R	50	TYR	Sidechain
18	R	63	TYR	Sidechain
18	R	65	SER	Peptide
18	R	69	TYR	Sidechain
19	S	13	HIS	Sidechain
19	S	35	ARG	Sidechain
19	S	47	THR	Mainchain
19	S	51	HIS	Sidechain
19	S	54	ARG	Sidechain
19	S	62	THR	Mainchain
19	S	73	PHE	Sidechain
19	S	77	ARG	Sidechain
20	T	28	ARG	Sidechain
20	T	35	TYR	Sidechain
20	T	5	SER	Mainchain,Peptide
20	T	50	PHE	Sidechain
21	U	34	ARG	Sidechain
21	U	46	ARG	Mainchain
22	W	103	ARG	Sidechain

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Mol	Chain	Res	Type	Group
22	W	186	ARG	Sidechain
22	W	256	TYR	Sidechain
22	W	300	ARG	Sidechain
22	W	326	PHE	Sidechain
22	W	48	PHE	Sidechain
22	W	67	ARG	Sidechain

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	A	32892	0	16464	9852	0
2	B	1705	0	1732	217	0
3	C	1625	0	1699	211	0
4	D	1643	0	1710	182	0
5	E	1106	0	1148	148	0
6	F	818	0	808	113	0
7	G	1182	0	1240	128	0
8	H	979	0	1034	141	0
9	I	1022	0	1070	133	0
10	J	787	0	828	133	0
11	K	877	0	887	165	0
12	L	955	0	1019	108	0
13	M	884	0	944	128	0
14	N	775	0	827	117	0
15	O	714	0	737	112	0
16	P	649	0	666	71	0
17	Q	649	0	691	145	0
18	R	456	0	478	58	0
19	S	638	0	665	79	0
20	T	665	0	714	113	0
21	U	426	0	449	19	0
22	W	2186	0	2180	109	0
All	All	53633	0	37990	11571	0

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 127.

All (11571) close contacts within the same asymmetric unit are listed below, sorted by their clash

magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:429:U:H5'	4:D:8:LEU:HD13	1.45	0.99
1:A:688:G:H5"	1:A:688:G:C8	1.99	0.98
1:A:82:G:H22	1:A:84:U:H3	1.11	0.95
1:A:450:G:H1	1:A:483:C:H42	1.13	0.95
1:A:1469:C:H5'	1:A:1469:C:C6	2.02	0.94
1:A:996:A:H1'	1:A:1046:A:H4'	1.49	0.93
1:A:73:C:H3'	1:A:74:A:H5"	1.51	0.92
1:A:121:U:C5	1:A:122:G:C8	2.57	0.92
1:A:1066:C:C6	1:A:1066:C:H5"	2.05	0.92
1:A:37:U:H3	1:A:397:A:H61	1.12	0.92
1:A:94:G:H4'	1:A:95:C:C5'	2.00	0.91
1:A:650:G:H5"	1:A:650:G:C8	2.04	0.91
8:H:103:VAL:HG22	8:H:112:ASP:HA	1.52	0.90
1:A:1022:A:H5'	1:A:1022:A:C8	2.06	0.90
1:A:151:A:C2	1:A:152:A:H1'	2.07	0.90
1:A:54:C:C6	1:A:54:C:H5"	2.07	0.89
1:A:1135:U:H3	1:A:1138:G:H22	1.14	0.89
1:A:862:C:H1'	1:A:874:G:H5"	1.54	0.89
1:A:80:A:C6	1:A:81:A:H1'	2.08	0.89
1:A:1068:G:C6	1:A:1069:C:C5	2.61	0.89
1:A:512:U:C5	1:A:534:U:H4'	2.08	0.88
1:A:577:G:C8	1:A:816:A:C2	2.61	0.88
11:K:33:ILE:HB	11:K:73:VAL:HG11	1.55	0.88
1:A:67:C:H2'	1:A:68:G:C8	2.09	0.88
3:C:63:ILE:HB	3:C:96:VAL:HG23	1.57	0.87
1:A:533:A:C2	1:A:535:A:C8	2.62	0.87
1:A:664:G:H22	1:A:741:G:H1	1.20	0.87
1:A:780:A:H3'	1:A:800:G:H1	1.41	0.86
11:K:45:THR:HG22	11:K:46:ALA:H	1.38	0.86
1:A:486:U:C6	1:A:486:U:H5"	2.11	0.86
1:A:94:G:H4'	1:A:95:C:H5"	1.58	0.86
1:A:1090:U:H2'	1:A:1091:U:C6	2.11	0.86
1:A:453:G:C6	1:A:480:U:C4	2.64	0.85
1:A:896:C:H2'	1:A:897:C:H6	1.40	0.85
1:A:594:U:H3'	1:A:595:A:C8	2.12	0.85
1:A:1439:G:C2	1:A:1440:U:H1'	2.11	0.85
17:Q:11:VAL:HG13	17:Q:58:VAL:HG11	1.57	0.85
1:A:1098:C:H4'	1:A:1168:U:C5	2.12	0.84
1:A:861:G:H21	1:A:874:G:H5'	1.39	0.84
1:A:813:U:C4	1:A:816:A:C2	2.65	0.84
8:H:103:VAL:HG21	8:H:115:ALA:HB3	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:74:A:C2	1:A:97:G:C5	2.65	0.84
1:A:66:A:C2	1:A:104:G:C4	2.67	0.83
1:A:1033:G:H2'	1:A:1034:G:H5'	1.58	0.83
1:A:1144:G:C4	1:A:1145:A:H1'	2.12	0.83
1:A:1090:U:H5'	1:A:1170:A:C2	2.13	0.83
17:Q:22:VAL:HG11	17:Q:60:ILE:HD13	1.61	0.83
1:A:275:G:H5"	1:A:275:G:C8	2.14	0.83
1:A:1231:G:H3'	1:A:1232:U:C6	2.14	0.83
1:A:256:U:H3	1:A:270:A:H61	1.27	0.82
1:A:1057:G:H3'	1:A:1058:G:C8	2.13	0.82
1:A:1408:A:C2	1:A:1494:G:C5	2.68	0.82
1:A:1008:U:C5	1:A:1022:A:C2	2.66	0.82
1:A:10:A:C2	1:A:25:C:C2	2.68	0.82
1:A:1502:A:H5'	1:A:1504:G:N7	1.95	0.82
1:A:77:A:H61	1:A:92:U:H3	1.25	0.82
1:A:811:C:H2'	1:A:812:G:H5'	1.62	0.82
1:A:1069:C:C5	1:A:1094:G:C6	2.68	0.82
1:A:1230:C:H2'	1:A:1231:G:C8	2.14	0.82
1:A:847:G:C2	1:A:848:C:H1'	2.14	0.82
1:A:1502:A:H3'	1:A:1503:A:C5'	2.10	0.82
6:F:18:VAL:HA	6:F:21:MET:HE2	1.60	0.82
1:A:411:A:H61	1:A:428:G:H1'	1.43	0.81
1:A:1142:G:H5"	1:A:1142:G:C8	2.15	0.81
1:A:449:G:H21	16:P:13:LYS:HA	1.44	0.81
1:A:896:C:H2'	1:A:897:C:C6	2.15	0.81
1:A:1098:C:H4'	1:A:1168:U:C4	2.14	0.81
1:A:1483:A:C8	1:A:1484:C:C6	2.68	0.81
1:A:664:G:H1'	1:A:726:C:H5'	1.62	0.81
1:A:904:U:C4	1:A:905:U:C4	2.67	0.81
1:A:79:G:H2'	1:A:80:A:C8	2.16	0.81
1:A:1528:U:C6	21:U:42:THR:HA	2.15	0.81
1:A:1420:U:C2	1:A:1421:G:C8	2.69	0.81
22:W:195:GLN:CD	22:W:226:ALA:HB2	2.06	0.81
1:A:69:G:H2'	1:A:70:U:C6	2.16	0.81
1:A:396:C:H2'	1:A:398:U:H5	1.46	0.81
1:A:751:U:H5	1:A:752:G:C6	1.98	0.81
1:A:563:A:C2	1:A:567:G:C6	2.68	0.81
2:B:149:GLY:H	2:B:152:ASP:H	1.23	0.81
1:A:1198:G:C5	1:A:1199:U:C5	2.69	0.80
22:W:205:LEU:HD13	22:W:258:PHE:CZ	2.16	0.80
1:A:466:A:H2'	1:A:467:U:C2	2.16	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:695:A:C2	1:A:696:A:C4	2.69	0.80
1:A:1141:C:C2	1:A:1142:G:C8	2.69	0.80
1:A:66:A:C2	1:A:67:C:C4	2.69	0.80
1:A:141:G:C6	1:A:142:G:C8	2.70	0.80
1:A:1142:G:C5	1:A:1143:G:H1'	2.16	0.80
1:A:405:U:H4'	1:A:498:A:C5	2.16	0.80
6:F:54:LEU:HD23	6:F:85:ILE:HD11	1.61	0.80
1:A:79:G:C6	1:A:80:A:C6	2.69	0.80
1:A:136:C:C2	1:A:228:A:C2	2.69	0.80
1:A:1186:G:H2'	1:A:1187:G:H8	1.45	0.80
3:C:127:VAL:HG21	3:C:135:ARG:HH22	1.46	0.80
1:A:50:A:H1'	1:A:52:C:C6	2.17	0.80
1:A:1527:U:C2	1:A:1528:U:C5	2.70	0.80
1:A:118:U:H2'	1:A:121:U:C5	2.17	0.80
1:A:64:G:C2	1:A:67:C:C4	2.70	0.80
1:A:340:U:H1'	1:A:350:G:N2	1.96	0.80
1:A:393:A:C2	1:A:394:G:C8	2.70	0.80
1:A:564:C:C6	1:A:565:U:C5	2.70	0.80
1:A:604:G:H3'	1:A:605:U:C6	2.17	0.80
1:A:979:C:C5	1:A:980:C:C6	2.70	0.80
1:A:1043:G:C6	1:A:1044:A:C6	2.70	0.80
1:A:780:A:C2	1:A:801:U:C5	2.69	0.79
1:A:1095:U:C5	1:A:1096:C:C5	2.69	0.79
1:A:1187:G:C2	1:A:1188:A:C8	2.70	0.79
1:A:1223:C:H5"	1:A:1225:A:C8	2.16	0.79
1:A:37:U:H3	1:A:397:A:N6	1.80	0.79
1:A:857:C:C5	1:A:858:G:C8	2.69	0.79
1:A:300:A:C5	1:A:301:G:H1'	2.17	0.79
1:A:606:G:H3'	1:A:607:A:C5'	2.12	0.79
1:A:1255:G:C6	1:A:1279:G:C5	2.69	0.79
15:O:41:HIS:CE1	15:O:45:HIS:CE1	2.70	0.79
1:A:465:A:C2	1:A:466:A:C4	2.70	0.79
1:A:626:G:C2	1:A:627:G:C4	2.70	0.79
1:A:1132:C:H3'	1:A:1133:G:H8	1.46	0.79
1:A:1306:A:H61	1:A:1331:G:H1'	1.46	0.79
1:A:181:A:H1'	1:A:194:C:C4	2.17	0.79
1:A:1047:G:H1	1:A:1210:C:H42	1.31	0.79
1:A:19:A:C2	1:A:917:G:C5	2.70	0.79
1:A:12:U:H4'	1:A:526:C:H4'	1.65	0.79
1:A:729:A:H61	15:O:49:HIS:CD2	2.01	0.79
1:A:1329:A:O2'	13:M:68:LEU:HD21	1.84	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:148:ILE:HD12	3:C:201:ILE:CD1	2.12	0.79
1:A:141:G:C6	1:A:223:A:C6	2.71	0.78
1:A:1072:G:H21	2:B:105:THR:HG21	1.45	0.78
1:A:238:A:C2	1:A:239:U:C2	2.71	0.78
1:A:1149:C:H2'	1:A:1150:A:C8	2.18	0.78
1:A:1299:A:C2	1:A:1301:U:C2	2.72	0.78
1:A:1419:G:H5"	1:A:1419:G:C8	2.18	0.78
1:A:212:G:H2'	1:A:214:C:C5	2.19	0.78
1:A:606:G:H3'	1:A:607:A:H5'	1.64	0.78
1:A:1127:G:C6	1:A:1128:C:C5	2.72	0.78
1:A:685:G:C2	1:A:686:U:C4	2.71	0.78
1:A:946:A:H2'	1:A:947:G:C8	2.18	0.78
1:A:80:A:C5	1:A:81:A:H1'	2.18	0.78
1:A:976:G:H5"	14:N:60:ARG:HH22	1.48	0.78
1:A:1128:C:C2	1:A:1129:C:C5	2.72	0.78
1:A:451:A:C4	1:A:480:U:C5	2.72	0.78
1:A:450:G:H2'	1:A:481:G:H1	1.49	0.78
1:A:668:G:H1'	15:O:45:HIS:CD2	2.19	0.78
1:A:1163:A:C2	1:A:1174:G:C5	2.72	0.78
1:A:1176:A:C6	1:A:1177:G:C6	2.71	0.78
1:A:181:A:H1'	1:A:194:C:C5	2.19	0.78
15:O:48:ASP:HB3	15:O:51:SER:H	1.46	0.78
1:A:133:U:H4'	1:A:325:A:H1'	1.66	0.78
1:A:1102:A:C2	1:A:1103:C:C2	2.72	0.78
1:A:21:G:H1'	1:A:914:A:H61	1.49	0.77
1:A:182:A:H5"	1:A:193:C:N4	1.99	0.77
1:A:413:G:H3'	1:A:414:A:C5'	2.14	0.77
1:A:563:A:C2	1:A:567:G:C5	2.72	0.77
1:A:946:A:C2	1:A:1236:A:C2	2.72	0.77
1:A:74:A:C2	1:A:75:G:C4	2.72	0.77
13:M:23:GLY:HA2	13:M:68:LEU:HD23	1.66	0.77
21:U:37:TYR:O	21:U:41:THR:HG21	1.84	0.77
1:A:3:A:C4	1:A:628:G:H1'	2.20	0.77
1:A:301:G:C6	1:A:302:G:C5	2.73	0.77
1:A:1494:G:H1'	22:W:254:ARG:HH22	1.48	0.77
11:K:20:ALA:HB1	11:K:99:LEU:HD22	1.65	0.77
1:A:214:C:C5	1:A:215:C:C5	2.73	0.77
1:A:1301:U:C4	1:A:1303:C:C2	2.72	0.77
11:K:66:ALA:HB3	11:K:98:ALA:HB3	1.66	0.77
1:A:72:A:H2'	1:A:73:C:C6	2.18	0.77
1:A:160:A:H1'	1:A:344:A:H2'	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:668:G:C6	1:A:669:G:C6	2.73	0.77
1:A:978:A:C8	1:A:979:C:C5	2.73	0.77
1:A:1502:A:H3'	1:A:1503:A:H5'	1.65	0.77
1:A:1256:A:H2'	1:A:1278:G:C6	2.19	0.77
1:A:1526:G:C5	1:A:1527:U:C5	2.73	0.77
18:R:46:THR:HG21	18:R:50:TYR:CD1	2.20	0.77
1:A:1055:A:C6	1:A:1206:G:C5	2.71	0.77
1:A:1433:A:H3'	1:A:1434:A:C8	2.20	0.77
3:C:51:VAL:HG21	3:C:54:ILE:HG23	1.66	0.77
1:A:167:A:C2	1:A:168:G:C5	2.73	0.77
1:A:589:U:H2'	1:A:590:U:C6	2.20	0.77
1:A:1513:A:C2	1:A:1523:G:C5	2.73	0.77
9:I:18:VAL:HG11	9:I:82:ILE:HA	1.66	0.77
1:A:594:U:C4	1:A:595:A:C6	2.73	0.76
1:A:652:U:H2'	1:A:752:G:C2	2.19	0.76
1:A:655:A:C2	1:A:656:G:H1'	2.20	0.76
1:A:1166:G:C2'	1:A:1170:A:H61	1.98	0.76
1:A:1419:G:C6	1:A:1420:U:C5	2.73	0.76
1:A:68:G:C5	1:A:69:G:H1'	2.21	0.76
1:A:1067:A:H1'	1:A:1068:G:C8	2.20	0.76
1:A:1306:A:H2'	1:A:1307:U:H5'	1.65	0.76
4:D:115:GLN:HG2	4:D:153:ARG:HH12	1.51	0.76
1:A:72:A:C4	1:A:73:C:C5	2.73	0.76
1:A:828:U:C2	1:A:858:G:H2'	2.20	0.76
13:M:90:HIS:CG	13:M:96:VAL:HG21	2.20	0.76
15:O:78:THR:O	15:O:82:GLU:HB2	1.86	0.76
1:A:1306:A:H1'	1:A:1332:A:C5	2.20	0.76
8:H:42:GLU:HG3	8:H:100:ILE:HG21	1.68	0.76
1:A:169:C:C4	1:A:170:U:C4	2.73	0.76
1:A:323:U:C5	1:A:324:G:C5	2.73	0.76
1:A:413:G:H3'	1:A:414:A:H5"	1.67	0.76
1:A:698:G:H1'	1:A:798:U:H4'	1.66	0.76
1:A:1095:U:C5	1:A:1096:C:C6	2.72	0.76
1:A:517:G:H2'	1:A:530:G:H4'	1.68	0.76
1:A:1053:G:H2'	1:A:1199:U:C5	2.20	0.76
1:A:1093:A:H2'	1:A:1095:U:H5'	1.68	0.76
1:A:1158:C:C2	1:A:1160:G:C8	2.74	0.76
1:A:1262:C:C5	1:A:1263:C:C6	2.73	0.76
1:A:1312:G:C8	1:A:1312:G:H5"	2.21	0.76
1:A:1439:G:C5	1:A:1440:U:C6	2.74	0.76
2:B:185:ILE:HG23	2:B:199:ILE:HG22	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:953:G:H3'	1:A:954:G:H8	1.50	0.76
10:J:16:ARG:HA	10:J:16:ARG:HE	1.49	0.76
1:A:59:A:C2	1:A:331:G:C5	2.74	0.76
1:A:597:G:C2	1:A:598:U:H1'	2.21	0.76
1:A:720:C:C5	1:A:733:G:C5	2.74	0.76
1:A:1478:U:H2'	1:A:1479:C:C6	2.21	0.76
1:A:155:A:C2	1:A:156:C:C2	2.74	0.75
1:A:253:A:C2	1:A:254:G:C4	2.73	0.75
1:A:1408:A:C2	1:A:1494:G:C6	2.73	0.75
17:Q:11:VAL:HG21	17:Q:53:GLY:H	1.51	0.75
22:W:161:LYS:HA	22:W:193:HIS:CE1	2.22	0.75
1:A:600:A:C2	1:A:601:G:C4	2.75	0.75
1:A:857:C:C6	1:A:858:G:C8	2.73	0.75
1:A:1006:G:C6	1:A:1024:G:C2	2.75	0.75
1:A:1239:A:H3'	7:G:115:MET:SD	2.27	0.75
1:A:198:G:H2'	1:A:199:A:C8	2.22	0.75
1:A:454:G:C4	1:A:455:G:C8	2.75	0.75
1:A:606:G:C8	1:A:631:C:C6	2.74	0.75
1:A:616:G:H21	16:P:48:GLU:CG	1.99	0.75
1:A:627:G:C6	1:A:628:G:C6	2.75	0.75
1:A:779:C:H2'	1:A:780:A:C8	2.21	0.75
1:A:1262:C:C5	1:A:1274:A:C2	2.74	0.75
1:A:192:A:C2	1:A:193:C:C5	2.75	0.75
10:J:12:ALA:HB2	10:J:96:VAL:HG13	1.69	0.75
17:Q:10:ARG:HA	17:Q:58:VAL:H	1.52	0.75
1:A:771:G:C6	1:A:809:G:C6	2.74	0.75
1:A:831:A:C6	1:A:832:G:C8	2.75	0.75
1:A:1055:A:C5	1:A:1056:U:C6	2.74	0.75
1:A:1275:A:C4	1:A:1276:G:C8	2.75	0.75
1:A:1478:U:H2'	1:A:1479:C:H6	1.52	0.75
1:A:1501:C:H2'	1:A:1504:G:C6	2.21	0.75
14:N:52:ARG:HH22	19:S:13:HIS:CE1	2.02	0.75
18:R:32:ILE:HG22	18:R:37:LYS:H	1.52	0.75
1:A:804:U:C5	1:A:805:C:C4	2.74	0.75
1:A:900:A:C2	1:A:901:A:C4	2.75	0.75
1:A:1472:U:H2'	1:A:1473:G:C8	2.22	0.75
3:C:122:GLN:O	3:C:127:VAL:HG22	1.87	0.75
1:A:142:G:N2	1:A:143:A:H1'	2.01	0.75
1:A:521:G:C6	1:A:529:G:H1'	2.22	0.75
1:A:695:A:C2	1:A:787:A:H4'	2.21	0.75
1:A:1346:A:N1	1:A:1374:A:H5"	2.02	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:78:A:H3'	1:A:79:G:C8	2.21	0.75
1:A:81:A:C8	1:A:83:C:C2	2.75	0.75
1:A:120:A:H61	1:A:239:U:H3'	1.52	0.75
1:A:987:G:H21	1:A:1014:A:H2	1.33	0.75
17:Q:11:VAL:HG11	17:Q:52:CYS:HB3	1.67	0.75
1:A:90:C:C2	1:A:91:U:C5	2.75	0.74
1:A:559:A:H1'	1:A:561:U:H2'	1.69	0.74
1:A:1044:A:C6	1:A:1045:C:H1'	2.22	0.74
1:A:1375:A:H3'	1:A:1376:U:C6	2.22	0.74
1:A:198:G:C2	1:A:220:G:H1'	2.22	0.74
1:A:648:A:H2'	1:A:649:A:C8	2.22	0.74
1:A:1014:A:C5	1:A:1015:G:C6	2.74	0.74
1:A:32:A:H4'	1:A:48:C:H42	1.52	0.74
1:A:469:C:C5	1:A:470:C:C4	2.76	0.74
1:A:228:A:C2	1:A:229:U:H1'	2.21	0.74
3:C:127:VAL:HG21	3:C:135:ARG:NH2	2.03	0.74
1:A:595:A:C6	1:A:641:U:H2'	2.21	0.74
1:A:1253:G:H4'	10:J:48:ARG:HH11	1.52	0.74
1:A:1266:G:H1'	1:A:1270:G:C2	2.23	0.74
1:A:84:U:H3'	1:A:86:G:H21	1.52	0.74
1:A:215:C:C4	1:A:216:U:C2	2.75	0.74
1:A:603:U:H2'	1:A:604:G:C8	2.23	0.74
1:A:1261:A:C4	1:A:1275:A:C5	2.75	0.74
1:A:322:C:C2	1:A:323:U:C5	2.75	0.74
1:A:528:C:C6	1:A:528:C:H5"	2.23	0.74
1:A:755:G:H21	8:H:3:GLN:HE22	1.35	0.74
1:A:1044:A:C5	1:A:1045:C:H1'	2.23	0.74
1:A:1111:A:H5"	2:B:129:THR:HG23	1.68	0.74
1:A:1125:U:C5	1:A:1127:G:C4	2.75	0.74
1:A:181:A:H4'	1:A:182:A:O5'	1.88	0.74
1:A:466:A:C2	1:A:468:A:C4	2.75	0.74
1:A:1287:A:N1	1:A:1371:G:H1'	2.01	0.74
1:A:1346:A:C6	1:A:1374:A:C8	2.76	0.74
8:H:42:GLU:HG3	8:H:100:ILE:HD13	1.70	0.74
13:M:82:LEU:HD13	19:S:65:MET:HG2	1.70	0.74
1:A:118:U:C4	1:A:288:A:C5	2.76	0.74
1:A:679:C:C2	1:A:712:A:C2	2.75	0.74
1:A:1376:U:H4'	7:G:101:ARG:HH21	1.52	0.74
1:A:440:C:H42	1:A:496:A:N6	1.86	0.74
1:A:704:A:C6	1:A:705:G:C4	2.76	0.74
1:A:858:G:H22	1:A:869:G:H2'	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1022:A:C2	1:A:1023:U:C6	2.75	0.74
1:A:198:G:H5”	1:A:198:G:C8	2.23	0.73
1:A:1206:G:C6	1:A:1207:G:C5	2.76	0.73
8:H:38:VAL:HG11	8:H:111:THR:HA	1.69	0.73
1:A:1069:C:H5	1:A:1094:G:C5	2.07	0.73
1:A:1162:C:C2	1:A:1175:G:C4	2.76	0.73
1:A:1278:G:H4’	1:A:1279:G:C5	2.22	0.73
1:A:1461:G:C5	1:A:1462:C:C5	2.77	0.73
1:A:666:G:H5’	1:A:726:C:H1’	1.70	0.73
1:A:687:A:C6	1:A:701:U:H4’	2.23	0.73
1:A:700:G:H2’	1:A:701:U:C6	2.22	0.73
1:A:1287:A:C6	1:A:1288:A:C6	2.76	0.73
1:A:1332:A:C6	1:A:1333:A:C5	2.76	0.73
1:A:1419:G:H3’	1:A:1420:U:C5	2.23	0.73
3:C:137:VAL:HA	3:C:148:ILE:HD13	1.70	0.73
1:A:121:U:C6	1:A:122:G:C8	2.77	0.73
1:A:237:G:C2	1:A:238:A:H1’	2.24	0.73
1:A:766:A:C8	1:A:814:A:C5	2.77	0.73
1:A:1527:U:H2’	1:A:1528:U:C6	2.23	0.73
1:A:57:G:C6	1:A:58:C:C4	2.77	0.73
1:A:454:G:H22	1:A:479:U:H1’	1.53	0.73
1:A:459:A:H61	1:A:472:U:H3	1.37	0.73
1:A:675:A:C2	11:K:117:HIS:HB2	2.22	0.73
1:A:1056:U:C6	1:A:1056:U:H5”	2.23	0.73
1:A:1309:G:C4	1:A:1329:A:C2	2.77	0.73
1:A:380:G:C2	1:A:384:G:C6	2.76	0.73
1:A:396:C:H2’	1:A:398:U:C5	2.24	0.73
1:A:1191:A:H5’	1:A:1191:A:C8	2.23	0.73
1:A:1531:A:H2’	1:A:1532:U:C5	2.23	0.73
1:A:260:G:H2’	1:A:261:U:C6	2.23	0.73
1:A:473:U:H2’	1:A:474:G:C8	2.23	0.73
1:A:1269:A:C5	1:A:1270:G:H1’	2.24	0.73
1:A:1391:U:H2’	1:A:1392:G:C8	2.24	0.73
1:A:1408:A:H1’	1:A:1494:G:C2	2.22	0.73
1:A:335:C:H1’	1:A:1434:A:H1’	1.69	0.73
1:A:1143:G:C4	1:A:1144:G:C8	2.77	0.73
1:A:1239:A:H2’	1:A:1298:U:C4	2.23	0.73
1:A:1319:A:C6	1:A:1323:G:H1’	2.24	0.73
1:A:289:G:C8	1:A:289:G:H5”	2.24	0.73
1:A:381:C:C5	1:A:382:A:C4	2.76	0.73
1:A:509:A:C4	1:A:510:A:C2	2.77	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:979:C:C5	1:A:980:C:C5	2.77	0.73
1:A:1140:C:C2	1:A:1141:C:C6	2.77	0.73
1:A:1355:G:H1'	1:A:1368:A:C2	2.24	0.73
1:A:69:G:C2	1:A:70:U:C2	2.76	0.73
1:A:252:U:H6	1:A:252:U:H5"	1.53	0.73
1:A:558:G:H2'	1:A:559:A:C2	2.24	0.73
4:D:97:LEU:O	4:D:101:VAL:HG23	1.89	0.73
1:A:334:C:H1'	1:A:1435:G:C5'	2.19	0.72
5:E:15:ILE:HD11	5:E:37:VAL:HB	1.70	0.72
1:A:582:C:C2	1:A:583:A:C8	2.78	0.72
1:A:662:U:H2'	1:A:663:A:C8	2.23	0.72
1:A:703:G:H3'	1:A:704:A:H5'	1.69	0.72
1:A:838:G:H22	2:B:34:ARG:HH12	1.36	0.72
1:A:838:G:C4	1:A:849:G:C2	2.77	0.72
1:A:1096:C:C6	1:A:1096:C:H3'	2.24	0.72
1:A:1405:G:H1'	1:A:1519:A:H4'	1.72	0.72
1:A:1483:A:C5	1:A:1484:C:H1'	2.24	0.72
1:A:160:A:H4'	1:A:344:A:C6	2.24	0.72
1:A:1004:A:N6	1:A:1027:C:H41	1.87	0.72
1:A:1238:A:C2	1:A:1241:G:H2'	2.24	0.72
2:B:22:TRP:CG	2:B:30:ILE:HG23	2.24	0.72
17:Q:46:HIS:ND1	17:Q:66:LEU:HD13	2.04	0.72
1:A:540:G:H21	4:D:40:HIS:HB3	1.55	0.72
1:A:1244:G:C6	1:A:1245:C:C4	2.78	0.72
1:A:1356:G:C2	1:A:1367:C:C2	2.77	0.72
13:M:15:VAL:HG12	13:M:33:LEU:HD13	1.70	0.72
1:A:253:A:C2	1:A:275:G:H1'	2.25	0.72
1:A:648:A:C2	1:A:649:A:C5	2.78	0.72
1:A:802:A:C8	1:A:803:G:C5	2.78	0.72
1:A:1072:G:C2	1:A:1073:U:C2	2.77	0.72
3:C:110:LEU:HA	3:C:201:ILE:HG21	1.71	0.72
18:R:32:ILE:HG21	18:R:58:ILE:HG21	1.71	0.72
1:A:704:A:C4	1:A:705:G:C8	2.77	0.72
1:A:903:G:C6	1:A:904:U:C4	2.77	0.72
1:A:1073:U:C2	1:A:1074:G:C8	2.77	0.72
1:A:1159:U:H5"	1:A:1181:G:H21	1.54	0.72
1:A:124:C:C2	1:A:238:A:C2	2.77	0.72
1:A:143:A:H5'	1:A:144:G:H5'	1.72	0.72
1:A:410:G:C2	1:A:429:U:C2	2.77	0.72
1:A:468:A:C5	1:A:469:C:H5	2.07	0.72
1:A:588:G:C4	1:A:753:A:C5	2.78	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:706:A:C6	1:A:707:U:C2	2.78	0.72
1:A:717:U:H2'	1:A:734:G:C8	2.24	0.72
1:A:1068:G:C8	1:A:1068:G:H5"	2.25	0.72
1:A:1366:C:C4	1:A:1367:C:C4	2.77	0.72
1:A:685:G:C6	1:A:686:U:C5	2.78	0.72
1:A:951:G:C6	1:A:1231:G:C6	2.78	0.72
1:A:1423:G:C6	1:A:1424:U:C4	2.78	0.72
1:A:1441:A:H8	1:A:1441:A:H5"	1.55	0.72
20:T:38:ILE:HA	20:T:86:ALA:HB2	1.72	0.72
1:A:839:C:C2	1:A:840:C:C5	2.78	0.72
1:A:1462:C:H3'	1:A:1463:U:H6	1.54	0.72
1:A:1515:G:C8	1:A:1515:G:H3'	2.23	0.72
1:A:601:G:N1	1:A:602:A:C8	2.58	0.72
1:A:606:G:C8	1:A:631:C:C5	2.78	0.72
1:A:872:A:C5	1:A:874:G:C8	2.77	0.72
1:A:958:A:C5	1:A:959:A:C6	2.77	0.72
1:A:977:A:OP1	14:N:70:HIS:CE1	2.42	0.72
3:C:63:ILE:HD12	3:C:94:ALA:CB	2.20	0.72
1:A:1093:A:H2'	1:A:1095:U:C5'	2.19	0.71
1:A:1306:A:C2'	1:A:1307:U:H5'	2.18	0.71
1:A:1511:G:C6	1:A:1525:G:C6	2.77	0.71
13:M:33:LEU:HD11	13:M:44:ILE:HG21	1.71	0.71
1:A:147:G:H21	1:A:1447:A:H2'	1.55	0.71
1:A:511:C:C2	1:A:512:U:C5	2.77	0.71
1:A:1157:A:H2'	1:A:1180:A:C2	2.25	0.71
1:A:1332:A:C5	1:A:1333:A:C8	2.78	0.71
1:A:1368:A:C2	1:A:1369:C:C6	2.79	0.71
1:A:1479:C:H2'	1:A:1480:A:C8	2.26	0.71
1:A:693:G:H1	1:A:788:U:H4'	1.54	0.71
1:A:1184:G:C5	1:A:1185:G:C8	2.77	0.71
1:A:1515:G:C4	1:A:1521:C:C2	2.79	0.71
1:A:1527:U:H2'	1:A:1528:U:H6	1.55	0.71
1:A:107:G:H1'	1:A:379:C:H5'	1.70	0.71
1:A:1015:G:H4'	14:N:52:ARG:H	1.54	0.71
1:A:1466:C:H3'	1:A:1467:C:C6	2.26	0.71
14:N:69:PRO:HG2	14:N:70:HIS:CD2	2.24	0.71
19:S:47:THR:HG21	19:S:60:PHE:CZ	2.25	0.71
22:W:48:PHE:H	22:W:52:ALA:HA	1.56	0.71
1:A:238:A:C2	1:A:239:U:H1'	2.26	0.71
1:A:439:U:C5	1:A:440:C:C5	2.78	0.71
1:A:913:A:C2	1:A:914:A:H1'	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1128:C:H2'	1:A:1129:C:C6	2.25	0.71
1:A:1130:A:H1'	1:A:1146:A:C2	2.25	0.71
1:A:1502:A:C8	1:A:1504:G:C5	2.79	0.71
1:A:36:C:C4	1:A:37:U:C5	2.79	0.71
1:A:69:G:C5	1:A:70:U:C5	2.79	0.71
1:A:177:G:H2'	1:A:178:C:H5'	1.73	0.71
1:A:925:G:H2'	1:A:927:G:C8	2.25	0.71
1:A:1309:G:C5	1:A:1329:A:C2	2.78	0.71
1:A:1513:A:C2	1:A:1514:G:C4	2.79	0.71
1:A:342:C:C4	1:A:343:U:C4	2.79	0.71
1:A:404:G:H2'	1:A:498:A:C2	2.25	0.71
1:A:505:G:H2'	1:A:506:G:C8	2.26	0.71
1:A:620:C:C5	1:A:621:A:C5	2.79	0.71
1:A:654:G:C4	1:A:655:A:C8	2.78	0.71
1:A:1394:A:H3'	1:A:1395:C:H5'	1.73	0.71
2:B:126:ASP:HA	2:B:130:LYS:HB2	1.72	0.71
1:A:512:U:C6	1:A:534:U:H5'	2.25	0.71
1:A:217:C:H1'	1:A:469:C:H42	1.56	0.71
1:A:298:A:H3'	1:A:299:G:C8	2.26	0.71
1:A:455:G:C2	1:A:478:A:C2	2.79	0.71
1:A:859:G:C6	1:A:860:A:C6	2.79	0.71
1:A:1223:C:H5"	1:A:1225:A:H8	1.55	0.71
1:A:1239:A:H2'	1:A:1298:U:N3	2.05	0.71
1:A:1457:G:H5"	20:T:29:THR:HB	1.71	0.71
20:T:34:VAL:HA	20:T:49:ALA:CB	2.21	0.71
1:A:116:A:C4	1:A:117:G:C8	2.79	0.71
1:A:600:A:C5	1:A:639:G:C6	2.79	0.71
1:A:1314:C:C2	1:A:1324:A:C2	2.79	0.71
1:A:1433:A:C6	1:A:1434:A:C6	2.79	0.71
1:A:1439:G:C6	1:A:1440:U:C2	2.79	0.71
19:S:33:TRP:CD1	19:S:51:HIS:CD2	2.78	0.71
1:A:595:A:C8	1:A:641:U:C4	2.79	0.70
1:A:615:G:C2	1:A:616:G:C4	2.79	0.70
1:A:658:C:H1'	15:O:21:THR:HA	1.73	0.70
1:A:857:C:H5	1:A:871:U:O4	1.73	0.70
1:A:1324:A:C2	1:A:1325:C:C5	2.78	0.70
1:A:1434:A:C5	1:A:1435:G:C5	2.79	0.70
1:A:341:C:C2	1:A:342:C:C6	2.79	0.70
1:A:369:G:H22	1:A:393:A:H1'	1.56	0.70
1:A:687:A:N1	1:A:704:A:C5	2.59	0.70
1:A:744:C:H2'	1:A:745:G:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1256:A:H1'	1:A:1258:G:C4	2.26	0.70
5:E:38:VAL:HG22	5:E:46:GLY:O	1.91	0.70
1:A:59:A:H4'	1:A:388:G:H3'	1.73	0.70
1:A:151:A:C6	1:A:171:A:C6	2.79	0.70
1:A:203:G:H21	1:A:215:C:C1'	2.03	0.70
1:A:384:G:C6	1:A:385:C:C4	2.79	0.70
1:A:403:C:N4	1:A:547:A:H5"	2.07	0.70
1:A:771:G:C4	1:A:809:G:C2	2.80	0.70
1:A:928:G:C2	1:A:929:G:C5	2.79	0.70
1:A:1074:G:H4'	2:B:101:THR:C	2.16	0.70
1:A:1134:G:C4	1:A:1135:U:H1'	2.26	0.70
1:A:1304:G:C6	1:A:1305:G:C6	2.79	0.70
1:A:1349:A:H1'	1:A:1374:A:C6	2.25	0.70
5:E:109:ALA:HB1	5:E:139:THR:HG21	1.71	0.70
17:Q:60:ILE:HD12	17:Q:72:TRP:CD2	2.26	0.70
1:A:240:G:C8	1:A:240:G:H3'	2.26	0.70
1:A:240:G:C6	1:A:241:G:C5	2.79	0.70
1:A:760:G:C6	1:A:761:G:C4	2.79	0.70
1:A:942:G:C4	1:A:943:U:C5	2.79	0.70
1:A:1134:G:C2	1:A:1141:C:C2	2.78	0.70
1:A:1421:G:C2	1:A:1422:G:C8	2.80	0.70
13:M:82:LEU:HD11	19:S:64:GLU:HB2	1.74	0.70
1:A:214:C:C5	1:A:215:C:C4	2.78	0.70
1:A:425:G:C5	1:A:426:U:C5	2.79	0.70
1:A:595:A:N1	1:A:641:U:H2'	2.06	0.70
1:A:694:A:C6	1:A:695:A:C4	2.79	0.70
1:A:807:A:C2	1:A:808:C:C2	2.79	0.70
1:A:68:G:C4	1:A:69:G:H1'	2.26	0.70
1:A:186:C:C2	1:A:192:A:C2	2.79	0.70
1:A:348:G:N2	1:A:349:A:H1'	2.06	0.70
1:A:429:U:H2'	4:D:25:ARG:HH22	1.56	0.70
1:A:654:G:H3'	1:A:655:A:C8	2.26	0.70
1:A:776:G:H4'	1:A:777:A:N7	2.07	0.70
1:A:780:A:C3'	1:A:800:G:H1	2.04	0.70
1:A:1220:G:H21	19:S:53:GLY:HA2	1.56	0.70
1:A:1287:A:C5	1:A:1288:A:C6	2.79	0.70
1:A:1301:U:C6	1:A:1303:C:C5	2.80	0.70
1:A:1418:A:C6	1:A:1483:A:C5	2.79	0.70
1:A:83:C:C6	1:A:83:C:H3'	2.27	0.70
1:A:408:A:C2	1:A:435:A:C4	2.79	0.70
1:A:1288:A:H3'	1:A:1288:A:C8	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1371:G:C8	9:I:110:VAL:HG21	2.27	0.70
1:A:1464:U:O5'	1:A:1464:U:H6	1.75	0.70
1:A:112:G:C2	1:A:330:C:C5	2.79	0.70
1:A:124:C:N3	1:A:238:A:C2	2.60	0.70
1:A:457:G:N2	1:A:458:U:C2	2.60	0.70
1:A:559:A:H4'	1:A:560:A:H3'	1.74	0.70
1:A:627:G:H2'	1:A:628:G:C8	2.26	0.70
1:A:849:G:C5	1:A:850:U:C5	2.79	0.70
1:A:1034:G:C5	1:A:1035:A:C5	2.79	0.70
1:A:1198:G:C6	1:A:1199:U:C4	2.80	0.70
1:A:1244:G:C6	1:A:1294:G:C6	2.80	0.70
1:A:179:A:C5	1:A:180:U:C4	2.79	0.70
1:A:302:G:C5	1:A:303:A:C8	2.80	0.70
1:A:408:A:C2	1:A:409:U:C6	2.80	0.70
1:A:533:A:C2	1:A:536:C:C6	2.80	0.70
1:A:933:G:N1	1:A:935:A:H1'	2.07	0.70
1:A:953:G:H3'	1:A:954:G:C8	2.26	0.70
1:A:1480:A:C5	1:A:1481:U:C5	2.80	0.70
3:C:185:THR:HA	3:C:198:LYS:HA	1.74	0.70
1:A:342:C:H3'	1:A:343:U:C6	2.27	0.69
1:A:1087:G:C2	1:A:1099:G:H1'	2.27	0.69
1:A:1115:U:C2	1:A:1186:G:C2	2.80	0.69
1:A:1514:G:C2	1:A:1522:U:C2	2.80	0.69
3:C:145:ALA:HB1	3:C:147:GLY:O	1.90	0.69
1:A:39:G:C2	1:A:498:A:C2	2.80	0.69
1:A:441:A:C4	1:A:442:G:C8	2.80	0.69
1:A:1020:G:H5"	1:A:1020:G:C8	2.27	0.69
1:A:1304:G:H22	1:A:1332:A:H5'	1.57	0.69
4:D:78:ALA:HB1	4:D:85:THR:O	1.92	0.69
8:H:10:LEU:HD12	8:H:75:GLN:C	2.17	0.69
13:M:2:ARG:HH11	13:M:6:ILE:HG22	1.56	0.69
14:N:20:PHE:CZ	14:N:50:LEU:HD13	2.28	0.69
1:A:65:A:C6	1:A:200:G:H1'	2.27	0.69
1:A:184:G:C6	1:A:185:U:C4	2.79	0.69
1:A:295:C:C2	1:A:303:A:C2	2.80	0.69
1:A:300:A:C8	1:A:301:G:H1'	2.27	0.69
1:A:356:A:C6	1:A:357:G:C4	2.79	0.69
1:A:511:C:C2	1:A:512:U:C6	2.80	0.69
1:A:567:G:C6	1:A:568:G:C5	2.80	0.69
1:A:603:U:C2	1:A:604:G:C5	2.80	0.69
1:A:687:A:N6	1:A:701:U:H4'	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:817:C:C2	1:A:819:A:C8	2.80	0.69
1:A:1117:A:H3'	1:A:1118:U:C6	2.27	0.69
16:P:6:LEU:HD12	16:P:17:TYR:HB3	1.73	0.69
20:T:35:TYR:HA	20:T:38:ILE:HD12	1.75	0.69
1:A:184:G:C6	1:A:185:U:C5	2.80	0.69
1:A:185:U:C4	1:A:186:C:C5	2.80	0.69
1:A:247:G:H1'	1:A:282:A:C2	2.27	0.69
1:A:363:A:C5'	12:L:30:ARG:HG3	2.21	0.69
1:A:432:A:H3'	1:A:433:G:H8	1.58	0.69
1:A:452:A:C5	1:A:453:G:H1'	2.27	0.69
1:A:994:A:H61	1:A:1047:G:H1'	1.56	0.69
1:A:1043:G:H2'	1:A:1044:A:C8	2.28	0.69
1:A:1301:U:C2	1:A:1303:C:C6	2.80	0.69
1:A:1440:U:H2'	1:A:1441:A:N7	2.07	0.69
2:B:67:LEU:HD11	2:B:150:ILE:HB	1.72	0.69
1:A:103:U:H1'	1:A:151:A:C2	2.27	0.69
1:A:130:A:C8	1:A:264:C:H1'	2.27	0.69
1:A:252:U:H2'	1:A:253:A:C8	2.27	0.69
1:A:465:A:C6	1:A:466:A:C6	2.80	0.69
1:A:897:C:C2	1:A:903:G:C2	2.80	0.69
1:A:1228:C:H6	1:A:1228:C:C5'	2.05	0.69
1:A:109:A:C6	1:A:327:A:C6	2.81	0.69
1:A:168:G:C6	1:A:169:C:C5	2.81	0.69
1:A:537:G:C6	1:A:538:G:C5	2.81	0.69
1:A:579:A:C6	1:A:580:C:C4	2.81	0.69
1:A:905:U:C4	1:A:906:A:C5	2.81	0.69
1:A:1256:A:H2'	1:A:1278:G:C5	2.27	0.69
1:A:1261:A:C2	1:A:1274:A:C2	2.81	0.69
1:A:1279:G:H1'	1:A:1281:C:C5	2.27	0.69
11:K:30:ILE:HD13	11:K:43:TRP:CE3	2.27	0.69
1:A:121:U:C6	1:A:122:G:H8	2.10	0.69
1:A:138:G:H1'	1:A:226:G:C2	2.26	0.69
1:A:201:G:H1'	1:A:469:C:C1'	2.23	0.69
1:A:451:A:C8	1:A:480:U:H2'	2.27	0.69
1:A:528:C:H2'	1:A:535:A:C8	2.28	0.69
1:A:541:G:H4'	4:D:39:GLN:HE21	1.57	0.69
1:A:583:A:C5	1:A:584:G:C8	2.81	0.69
1:A:839:C:C2	1:A:840:C:H5	2.10	0.69
1:A:1054:C:C6	1:A:1196:A:C5	2.81	0.69
1:A:1165:U:C4	1:A:1166:G:C6	2.81	0.69
1:A:1196:A:OP1	1:A:1197:A:H5"	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1234:C:H1'	1:A:1364:U:C5	2.27	0.69
1:A:1500:A:C5	1:A:1501:C:C5	2.80	0.69
1:A:109:A:C5	1:A:326:G:C5	2.80	0.69
1:A:126:G:H4'	1:A:634:C:O2	1.91	0.69
1:A:202:G:H1'	1:A:468:A:C8	2.27	0.69
1:A:240:G:C5	1:A:241:G:C8	2.81	0.69
1:A:335:C:H1'	1:A:1434:A:C1'	2.22	0.69
1:A:341:C:C2	1:A:349:A:C2	2.81	0.69
1:A:362:G:H3'	12:L:30:ARG:HD2	1.75	0.69
1:A:583:A:H3'	1:A:584:G:H8	1.58	0.69
1:A:589:U:H2'	1:A:590:U:H6	1.55	0.69
1:A:604:G:C2	1:A:635:A:C2	2.81	0.69
1:A:679:C:H1'	1:A:712:A:C2	2.28	0.69
1:A:712:A:C2	1:A:713:G:C5	2.81	0.69
1:A:838:G:C6	1:A:849:G:C5	2.81	0.69
1:A:903:G:N2	1:A:904:U:H1'	2.07	0.69
1:A:982:U:H4'	1:A:983:A:O5'	1.93	0.69
1:A:1116:U:H2'	1:A:1117:A:C8	2.27	0.69
1:A:1218:C:H2'	1:A:1219:A:C8	2.27	0.69
1:A:1298:U:H4'	1:A:1299:A:C2	2.27	0.69
1:A:1355:G:C4	1:A:1368:A:C2	2.81	0.69
1:A:1428:A:C4	1:A:1473:G:C2	2.81	0.69
5:E:75:LEU:H	5:E:146:MET:HE1	1.57	0.69
8:H:93:LYS:HZ2	8:H:116:ARG:HE	1.39	0.69
13:M:78:ARG:HH21	13:M:79:LEU:HD21	1.57	0.69
15:O:41:HIS:CE1	15:O:45:HIS:NE2	2.61	0.69
17:Q:66:LEU:HD12	17:Q:70:LYS:C	2.17	0.69
1:A:11:G:C2	1:A:24:U:H1'	2.27	0.69
1:A:64:G:C2	1:A:67:C:C5	2.80	0.69
1:A:122:G:H22	1:A:239:U:H2'	1.58	0.69
1:A:581:G:N2	1:A:761:G:C6	2.61	0.69
1:A:592:G:H3'	1:A:593:U:H6	1.58	0.69
1:A:638:U:H2'	1:A:639:G:H8	1.58	0.69
1:A:903:G:C5	1:A:904:U:C4	2.81	0.69
1:A:1064:G:C4	1:A:1066:C:C5	2.81	0.69
1:A:1164:G:C6	1:A:1165:U:C4	2.81	0.69
1:A:1213:A:C6	1:A:1215:G:H1'	2.27	0.69
1:A:1304:G:H2'	1:A:1305:G:H1'	1.75	0.69
15:O:25:GLU:H	15:O:25:GLU:CD	1.99	0.69
1:A:64:G:N1	1:A:69:G:C2	2.61	0.69
1:A:66:A:C2	1:A:104:G:C5	2.81	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:275:G:C2	1:A:276:G:H1’	2.28	0.69
1:A:363:A:H5”	12:L:30:ARG:HG3	1.75	0.69
1:A:562:U:H4’	1:A:563:A:C4	2.28	0.69
1:A:838:G:C2	1:A:839:C:C6	2.80	0.69
1:A:1074:G:C4	1:A:1102:A:C2	2.81	0.69
1:A:1238:A:N6	1:A:1241:G:H21	1.91	0.69
1:A:1375:A:H3’	1:A:1376:U:H6	1.56	0.69
15:O:44:GLU:O	15:O:45:HIS:CD2	2.46	0.69
17:Q:48:GLU:H	17:Q:50:ASN:H	1.39	0.69
17:Q:60:ILE:HD12	17:Q:72:TRP:CE3	2.27	0.69
1:A:46:G:H4’	1:A:48:C:H41	1.57	0.68
1:A:69:G:C6	1:A:70:U:C4	2.81	0.68
1:A:473:U:C2	1:A:474:G:C5	2.81	0.68
1:A:495:A:H1’	1:A:496:A:C5	2.28	0.68
1:A:655:A:H1’	1:A:755:G:H5’	1.75	0.68
1:A:656:G:H21	15:O:22:GLY:HA3	1.58	0.68
1:A:903:G:C2	1:A:904:U:C2	2.81	0.68
1:A:960:U:H2’	1:A:1223:C:H4’	1.75	0.68
1:A:1406:U:H2’	1:A:1407:C:H5’	1.75	0.68
1:A:64:G:H2’	1:A:99:C:H41	1.57	0.68
1:A:419:C:H5’	4:D:40:HIS:CE1	2.28	0.68
1:A:603:U:O5’	1:A:603:U:H6	1.75	0.68
1:A:616:G:H2’	1:A:617:G:H8	1.57	0.68
1:A:628:G:C6	1:A:629:A:C5	2.81	0.68
1:A:639:G:C2	1:A:640:A:C8	2.81	0.68
1:A:695:A:H61	1:A:797:C:H4’	1.59	0.68
1:A:700:G:C5	1:A:701:U:C4	2.80	0.68
1:A:1060:U:O2	10:J:57:VAL:HG11	1.92	0.68
1:A:1068:G:H5”	1:A:1068:G:H8	1.58	0.68
1:A:1095:U:N3	1:A:1096:C:C2	2.60	0.68
1:A:1133:G:N2	1:A:1142:G:C4	2.61	0.68
1:A:1194:U:H2’	1:A:1195:C:C6	2.28	0.68
1:A:1238:A:H4’	1:A:1336:C:N4	2.08	0.68
1:A:1248:A:C2	1:A:1249:C:C2	2.81	0.68
1:A:1461:G:C4	1:A:1462:C:C6	2.81	0.68
1:A:452:A:H5”	1:A:452:A:H8	1.59	0.68
1:A:512:U:C6	1:A:534:U:H4’	2.28	0.68
1:A:827:U:C2	1:A:874:G:C2	2.81	0.68
1:A:907:A:H5”	1:A:907:A:C8	2.29	0.68
1:A:1011:C:C2	1:A:1019:A:C2	2.82	0.68
1:A:1060:U:C4	3:C:2:GLN:HA	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1083:U:H3'	1:A:1084:G:C8	2.28	0.68
1:A:1169:A:C5	1:A:1170:A:C5	2.81	0.68
1:A:1231:G:H3'	1:A:1232:U:C5	2.29	0.68
1:A:173:U:H3	1:A:198:G:H21	1.42	0.68
1:A:203:G:H1'	1:A:465:A:H61	1.57	0.68
1:A:397:A:H5"	1:A:398:U:C4	2.29	0.68
1:A:633:G:C6	1:A:634:C:C4	2.81	0.68
1:A:939:G:C2	1:A:940:C:C2	2.82	0.68
1:A:1343:G:C5	1:A:1344:C:C4	2.81	0.68
1:A:1526:G:C6	1:A:1527:U:C5	2.82	0.68
11:K:30:ILE:HD12	11:K:31:VAL:N	2.08	0.68
13:M:18:LEU:HB2	13:M:29:SER:HB3	1.75	0.68
1:A:380:G:C2	1:A:382:A:H3'	2.28	0.68
1:A:529:G:H4'	1:A:533:A:N1	2.08	0.68
1:A:654:G:C4	1:A:753:A:C6	2.81	0.68
1:A:667:G:N2	15:O:41:HIS:HE1	1.92	0.68
1:A:1104:G:C6	1:A:1105:A:C6	2.81	0.68
1:A:1177:G:C6	1:A:1178:G:C2	2.82	0.68
1:A:1236:A:H3'	1:A:1237:C:C6	2.27	0.68
1:A:1250:A:H2'	1:A:1251:A:O4'	1.93	0.68
1:A:1358:U:H5"	14:N:74:ARG:H	1.59	0.68
1:A:218:U:H4'	1:A:470:C:H1'	1.75	0.68
1:A:299:G:C4	1:A:300:A:C8	2.82	0.68
1:A:568:G:C8	1:A:568:G:H5"	2.28	0.68
1:A:596:A:H61	1:A:644:U:H3	1.41	0.68
1:A:1241:G:C2	1:A:1242:G:C5	2.82	0.68
1:A:178:C:H3'	1:A:178:C:C6	2.29	0.68
1:A:185:U:H3'	1:A:186:C:C6	2.29	0.68
1:A:289:G:H5"	1:A:289:G:H8	1.57	0.68
1:A:301:G:C6	1:A:302:G:C6	2.82	0.68
1:A:821:G:C6	1:A:822:U:C4	2.82	0.68
1:A:861:G:C5	1:A:862:C:C4	2.81	0.68
1:A:945:G:H2'	1:A:946:A:C8	2.29	0.68
1:A:1059:C:C4	1:A:1060:U:C5	2.82	0.68
1:A:1197:A:C5'	1:A:1197:A:C8	2.77	0.68
1:A:1422:G:C2	1:A:1479:C:C2	2.82	0.68
13:M:15:VAL:HA	13:M:33:LEU:HD13	1.75	0.68
17:Q:11:VAL:HG13	17:Q:58:VAL:CG1	2.23	0.68
1:A:73:C:C3'	1:A:74:A:H5"	2.23	0.68
1:A:231:U:H5'	1:A:325:A:C2	2.27	0.68
1:A:454:G:N1	1:A:455:G:C4	2.62	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:723:U:H3	1:A:832:G:N2	1.92	0.68
1:A:763:G:H1'	15:O:56:LEU:HD21	1.75	0.68
1:A:867:G:C5	1:A:868:C:C5	2.82	0.68
1:A:923:A:C2	1:A:924:C:C5	2.81	0.68
1:A:977:A:H4'	1:A:981:U:H3	1.57	0.68
1:A:1061:G:C4	1:A:1197:A:C2	2.82	0.68
1:A:1095:U:C4	1:A:1096:C:C4	2.81	0.68
1:A:1146:A:C6	1:A:1147:C:C2	2.81	0.68
1:A:1239:A:C8	1:A:1241:G:C4	2.82	0.68
1:A:1285:A:H61	1:A:1355:G:H4'	1.58	0.68
1:A:1329:A:C2	1:A:1330:U:H1'	2.29	0.68
1:A:1421:G:C2	1:A:1480:A:C6	2.82	0.68
2:B:19:THR:HG23	2:B:38:HIS:CD2	2.29	0.68
3:C:51:VAL:HG23	3:C:67:ILE:HG23	1.74	0.68
1:A:249:U:C2	1:A:276:G:C2	2.81	0.68
1:A:478:A:C2	1:A:479:U:C4	2.82	0.68
1:A:506:G:H3'	1:A:507:C:C6	2.28	0.68
1:A:780:A:H3'	1:A:800:G:N1	2.09	0.68
1:A:1158:C:H3'	1:A:1181:G:N2	2.08	0.68
1:A:1168:U:C5	1:A:1169:A:C4	2.82	0.68
1:A:1239:A:H2'	1:A:1298:U:H3	1.58	0.68
1:A:1285:A:C2	1:A:1286:U:C5	2.82	0.68
1:A:1349:A:C2	7:G:31:VAL:HA	2.29	0.68
1:A:1433:A:H3'	1:A:1434:A:H8	1.55	0.68
11:K:30:ILE:HD12	11:K:31:VAL:H	1.58	0.68
1:A:139:A:C2	1:A:225:C:H1'	2.28	0.68
1:A:585:G:C2	1:A:586:C:C2	2.83	0.68
1:A:824:G:H1'	8:H:2:MET:HB2	1.74	0.68
3:C:63:ILE:HD12	3:C:94:ALA:HB2	1.75	0.68
1:A:19:A:C2	1:A:20:U:C2	2.82	0.67
1:A:111:G:H22	1:A:330:C:H41	1.41	0.67
1:A:119:A:N6	1:A:288:A:H1'	2.09	0.67
1:A:159:G:H5'	1:A:159:G:C8	2.29	0.67
1:A:287:U:C2	1:A:288:A:C8	2.82	0.67
1:A:342:C:C5	1:A:343:U:C4	2.82	0.67
1:A:599:C:C2	1:A:640:A:C2	2.81	0.67
1:A:780:A:C8	1:A:780:A:O5'	2.46	0.67
1:A:979:C:C6	1:A:980:C:C6	2.81	0.67
1:A:984:C:H2'	1:A:985:C:C6	2.29	0.67
1:A:1240:U:H6	1:A:1241:G:H5'	1.58	0.67
1:A:1402:C:C5	1:A:1403:C:C5	2.82	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1417:G:H2'	1:A:1418:A:C8	2.29	0.67
1:A:1419:G:N1	1:A:1482:G:H1'	2.09	0.67
17:Q:11:VAL:HG11	17:Q:52:CYS:CB	2.24	0.67
1:A:49:U:C4	1:A:361:G:C2	2.82	0.67
1:A:151:A:N1	1:A:152:A:H1'	2.08	0.67
1:A:159:G:C2	1:A:163:C:C2	2.83	0.67
1:A:160:A:C2	1:A:161:A:C4	2.82	0.67
1:A:424:G:C6	1:A:425:G:C6	2.82	0.67
1:A:438:U:C4	1:A:494:G:C8	2.82	0.67
1:A:1090:U:O2'	1:A:1171:A:H4'	1.94	0.67
1:A:1239:A:C8	1:A:1298:U:N3	2.62	0.67
17:Q:64:ARG:HD3	17:Q:66:LEU:HD23	1.75	0.67
1:A:69:G:C4	1:A:70:U:C5	2.82	0.67
1:A:103:U:C2	1:A:104:G:C8	2.82	0.67
1:A:218:U:H3'	1:A:219:U:C6	2.30	0.67
1:A:669:G:C6	1:A:670:G:C5	2.82	0.67
1:A:1242:G:C1'	1:A:1303:C:H4'	2.24	0.67
1:A:1442:G:H3'	1:A:1443:C:C5	2.29	0.67
1:A:1469:C:H5'	1:A:1469:C:H6	1.56	0.67
1:A:1483:A:H3'	1:A:1484:C:H6	1.59	0.67
2:B:125:PHE:HA	2:B:129:THR:HB	1.77	0.67
8:H:103:VAL:HG13	8:H:112:ASP:HB3	1.76	0.67
17:Q:22:VAL:CG1	17:Q:60:ILE:HD13	2.24	0.67
1:A:87:C:C5	1:A:88:U:C5	2.83	0.67
1:A:126:G:O2'	1:A:635:A:H4'	1.94	0.67
1:A:171:A:N1	1:A:172:A:C2	2.63	0.67
1:A:250:A:C4	1:A:252:U:C2	2.83	0.67
1:A:251:G:C5	1:A:252:U:C5	2.82	0.67
1:A:655:A:C2	1:A:754:C:C4	2.82	0.67
1:A:1008:U:O2	1:A:1022:A:H1'	1.93	0.67
1:A:1095:U:H5	1:A:1096:C:C5	2.09	0.67
1:A:1126:U:O2	10:J:42:LEU:HD22	1.94	0.67
1:A:1129:C:C5	1:A:1139:G:C2'	2.78	0.67
1:A:1300:G:H1'	1:A:1334:G:O6	1.95	0.67
2:B:68:PHE:CD2	2:B:83:ALA:HA	2.29	0.67
2:B:68:PHE:H	2:B:90:PHE:HA	1.59	0.67
2:B:95:TRP:CE3	2:B:99:MET:HG2	2.29	0.67
1:A:628:G:C2	1:A:629:A:C8	2.82	0.67
1:A:670:G:C2	1:A:671:G:C8	2.82	0.67
1:A:781:A:H1'	1:A:1523:G:H1'	1.76	0.67
1:A:832:G:C5	1:A:855:U:N3	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:889:A:C2	1:A:907:A:H5'	2.30	0.67
1:A:961:U:OP1	1:A:1223:C:H1'	1.94	0.67
1:A:1092:A:H3'	1:A:1093:A:C8	2.28	0.67
1:A:105:G:H2'	1:A:106:C:C6	2.30	0.67
1:A:356:A:C2	1:A:368:U:O2	2.48	0.67
1:A:638:U:H2'	1:A:639:G:C8	2.30	0.67
1:A:696:A:C2	1:A:697:U:C5	2.83	0.67
1:A:704:A:C5	1:A:705:G:C5	2.82	0.67
1:A:1128:C:C2	1:A:1129:C:H5	2.12	0.67
1:A:1206:G:H4'	3:C:191:THR:HA	1.76	0.67
1:A:1277:C:H1'	1:A:1282:C:C2	2.29	0.67
2:B:11:ALA:HA	2:B:14:HIS:CE1	2.29	0.67
2:B:80:LYS:HA	2:B:83:ALA:HB3	1.77	0.67
2:B:84:LEU:HA	2:B:90:PHE:CD1	2.30	0.67
19:S:65:MET:SD	19:S:68:HIS:CG	2.87	0.67
1:A:583:A:H3'	1:A:584:G:C8	2.30	0.67
1:A:956:U:C5	1:A:957:U:C5	2.83	0.67
1:A:1019:A:C6	1:A:1020:G:C8	2.82	0.67
1:A:1279:G:H1'	1:A:1281:C:H5	1.58	0.67
1:A:1355:G:H21	10:J:48:ARG:HH21	1.42	0.67
2:B:49:PHE:CE1	2:B:199:ILE:HG23	2.30	0.67
5:E:43:GLY:H	5:E:73:VAL:HG23	1.57	0.67
6:F:52:ASN:H	18:R:73:HIS:HB3	1.58	0.67
1:A:19:A:C2	1:A:917:G:C6	2.83	0.67
1:A:46:G:C2	1:A:366:A:C8	2.82	0.67
1:A:75:G:H2'	1:A:76:G:C8	2.29	0.67
1:A:119:A:H61	1:A:288:A:H1'	1.60	0.67
1:A:208:U:C6	1:A:210:C:C6	2.82	0.67
1:A:298:A:C6	1:A:299:G:C2	2.82	0.67
1:A:336:A:C2	1:A:337:G:H1'	2.29	0.67
1:A:778:G:H21	11:K:121:ARG:HG3	1.60	0.67
1:A:953:G:C6	1:A:954:G:C4	2.83	0.67
1:A:1066:C:C4	1:A:1067:A:C2	2.83	0.67
1:A:1205:U:O4'	3:C:189:HIS:CE1	2.48	0.67
1:A:1261:A:C8	1:A:1275:A:C4	2.82	0.67
1:A:1268:G:H2'	1:A:1269:A:O4'	1.95	0.67
1:A:1306:A:C4	1:A:1332:A:C4	2.82	0.67
1:A:1380:U:C2	7:G:2:ARG:HG2	2.30	0.67
3:C:18:ASN:HB2	14:N:91:GLU:HA	1.77	0.67
6:F:3:HIS:HA	6:F:65:GLU:HA	1.74	0.67
1:A:66:A:C6	1:A:67:C:N4	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:173:U:C5'	1:A:199:A:H5'	2.25	0.67
1:A:297:G:C2	1:A:301:G:C6	2.83	0.67
1:A:406:G:C8	1:A:495:A:H3'	2.30	0.67
1:A:532:A:H4'	1:A:533:A:OP2	1.94	0.67
1:A:600:A:C2	1:A:639:G:C4	2.82	0.67
1:A:712:A:C2	1:A:713:G:C8	2.83	0.67
1:A:723:U:C4	1:A:855:U:H1'	2.30	0.67
1:A:770:C:H2'	1:A:771:G:C8	2.30	0.67
1:A:825:A:C2	1:A:876:C:C2	2.82	0.67
1:A:843:U:H2'	1:A:846:G:H21	1.60	0.67
1:A:1239:A:C5	1:A:1241:G:C2	2.83	0.67
15:O:7:THR:HA	15:O:30:LEU:HD21	1.76	0.67
22:W:231:GLN:HG3	22:W:233:GLU:H	1.59	0.67
1:A:49:U:C2	1:A:362:G:H1'	2.30	0.67
1:A:100:G:C6	1:A:101:A:C6	2.83	0.67
1:A:321:A:C8	1:A:328:C:C2	2.83	0.67
1:A:337:G:H2'	1:A:338:A:C8	2.29	0.67
1:A:410:G:H1'	1:A:433:G:C2	2.30	0.67
1:A:450:G:O6	1:A:481:G:H1'	1.95	0.67
1:A:468:A:N7	1:A:469:C:C5	2.63	0.67
1:A:584:G:C6	1:A:585:G:C6	2.83	0.67
1:A:815:A:C2	1:A:1528:U:H4'	2.30	0.67
5:E:93:VAL:HG11	5:E:139:THR:HA	1.77	0.67
13:M:15:VAL:CG1	13:M:33:LEU:HD13	2.24	0.67
19:S:31:ARG:CZ	19:S:56:HIS:CD2	2.78	0.67
1:A:145:G:C6	1:A:178:C:N4	2.63	0.66
1:A:286:C:C2	1:A:287:U:C6	2.83	0.66
1:A:429:U:OP2	4:D:8:LEU:HD22	1.94	0.66
1:A:676:A:C2	1:A:677:U:C4	2.83	0.66
1:A:811:C:C2'	1:A:812:G:H5'	2.24	0.66
1:A:818:G:H3'	1:A:818:G:C8	2.30	0.66
1:A:1033:G:H2'	1:A:1034:G:C5'	2.25	0.66
1:A:1068:G:C6	1:A:1108:G:C4	2.83	0.66
1:A:1315:U:C2	1:A:1323:G:C2	2.83	0.66
1:A:1485:U:H2'	1:A:1486:G:C8	2.30	0.66
2:B:185:ILE:HD12	2:B:209:VAL:HG22	1.76	0.66
1:A:27:G:C6	1:A:557:G:C6	2.84	0.66
1:A:102:G:C6	1:A:103:U:C4	2.83	0.66
1:A:184:G:N1	1:A:194:C:C5	2.63	0.66
1:A:207:C:H2'	1:A:208:U:C2	2.30	0.66
1:A:383:A:C5	1:A:384:G:H1'	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:410:G:H1	1:A:430:A:C5'	2.07	0.66
1:A:652:U:C5	1:A:752:G:H2'	2.29	0.66
1:A:668:G:C5	1:A:669:G:C5	2.83	0.66
1:A:695:A:H2'	1:A:696:A:C8	2.31	0.66
1:A:720:C:H2'	1:A:733:G:C2	2.31	0.66
1:A:779:C:H1'	11:K:121:ARG:HE	1.60	0.66
1:A:1142:G:C4	1:A:1143:G:H1'	2.30	0.66
1:A:1401:G:C2	1:A:1402:C:H1'	2.31	0.66
1:A:80:A:OP2	1:A:81:A:C8	2.48	0.66
1:A:102:G:OP1	20:T:11:ILE:HD11	1.96	0.66
1:A:133:U:O5'	1:A:133:U:H6	1.79	0.66
1:A:484:G:C2	1:A:486:U:H6	2.13	0.66
1:A:659:U:H1'	1:A:747:A:C2	2.30	0.66
1:A:796:C:C5	1:A:797:C:C5	2.83	0.66
1:A:1131:G:C5	1:A:1132:C:C5	2.84	0.66
1:A:1142:G:C2	1:A:1143:G:H1'	2.30	0.66
6:F:75:GLU:CG	6:F:89:VAL:HG22	2.26	0.66
8:H:103:VAL:HG23	8:H:110:MET:SD	2.35	0.66
1:A:272:C:H2'	1:A:273:U:C6	2.30	0.66
1:A:455:G:C2	1:A:456:A:C8	2.84	0.66
1:A:626:G:H1'	16:P:47:GLU:HB3	1.77	0.66
1:A:868:C:H1'	1:A:873:A:C4	2.29	0.66
1:A:917:G:C6	1:A:918:A:C5	2.83	0.66
1:A:1089:G:C2	1:A:1090:U:H1'	2.30	0.66
1:A:1144:G:C6	1:A:1145:A:C4	2.82	0.66
1:A:1494:G:C6	1:A:1495:U:C6	2.82	0.66
1:A:35:G:H21	12:L:114:SER:HB2	1.61	0.66
1:A:90:C:H2'	1:A:92:U:C4	2.30	0.66
1:A:160:A:C6	1:A:346:G:C5	2.83	0.66
1:A:380:G:N2	1:A:382:A:H3'	2.10	0.66
1:A:519:C:C4	1:A:520:A:C6	2.84	0.66
1:A:825:A:C2	1:A:826:C:C6	2.83	0.66
1:A:861:G:N2	1:A:874:G:H5'	2.11	0.66
1:A:1250:A:H61	1:A:1354:U:C4'	2.08	0.66
1:A:1343:G:C6	1:A:1344:C:C4	2.84	0.66
1:A:1410:A:H5"	22:W:48:PHE:CD2	2.31	0.66
11:K:44:ALA:HB3	11:K:65:ALA:O	1.95	0.66
20:T:42:ASP:O	20:T:86:ALA:HB1	1.95	0.66
1:A:582:C:C2	1:A:760:G:C6	2.83	0.66
1:A:911:U:H2'	1:A:912:C:C5	2.30	0.66
1:A:1276:G:C6	1:A:1277:C:C4	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1306:A:C4	1:A:1307:U:C6	2.84	0.66
1:A:1421:G:N2	1:A:1480:A:C5	2.63	0.66
8:H:103:VAL:CG2	8:H:115:ALA:HB3	2.25	0.66
1:A:19:A:C2	1:A:20:U:H1'	2.30	0.66
1:A:244:U:C2	1:A:894:G:H1'	2.31	0.66
1:A:592:G:H3'	1:A:593:U:C6	2.30	0.66
1:A:600:A:C5	1:A:601:G:C8	2.84	0.66
1:A:1366:C:H5"	9:I:118:ARG:HE	1.60	0.66
1:A:1501:C:H3'	1:A:1504:G:C8	2.31	0.66
1:A:55:A:C4	1:A:56:U:H6	2.14	0.66
1:A:115:G:C2	1:A:313:A:C4	2.83	0.66
1:A:450:G:H1	1:A:483:C:N4	1.90	0.66
1:A:560:A:C2	1:A:567:G:H4'	2.31	0.66
1:A:588:G:H1'	1:A:753:A:C6	2.29	0.66
1:A:727:G:C5	1:A:731:G:C6	2.83	0.66
1:A:911:U:H2'	1:A:912:C:C6	2.31	0.66
1:A:1167:A:H1'	1:A:1168:U:C2	2.31	0.66
1:A:1242:G:C5	1:A:1243:C:C5	2.84	0.66
1:A:1383:C:C4	1:A:1384:C:C4	2.84	0.66
1:A:1408:A:C2	1:A:1409:C:C4	2.83	0.66
5:E:39:GLY:HA2	5:E:45:VAL:HA	1.77	0.66
1:A:15:G:C5	1:A:1396:A:C2	2.84	0.66
1:A:55:A:C4	1:A:56:U:C6	2.83	0.66
1:A:59:A:C5	1:A:354:G:C6	2.84	0.66
1:A:205:A:H3'	1:A:206:C:C5	2.31	0.66
1:A:253:A:C6	1:A:254:G:C6	2.84	0.66
1:A:342:C:C2	1:A:348:G:N2	2.64	0.66
1:A:410:G:C6	1:A:430:A:H5'	2.31	0.66
1:A:597:G:N2	1:A:644:U:C2	2.64	0.66
1:A:849:G:C5	1:A:850:U:C6	2.84	0.66
1:A:1242:G:C5	1:A:1243:C:C6	2.84	0.66
1:A:1301:U:OP2	1:A:1304:G:C6	2.49	0.66
1:A:1370:G:C2	1:A:1371:G:C8	2.84	0.66
1:A:1421:G:H1'	1:A:1480:A:C2	2.31	0.66
2:B:51:GLU:HG3	2:B:197:PHE:CD1	2.31	0.66
14:N:61:ASN:HB3	14:N:72:PHE:CD1	2.31	0.66
1:A:53:A:C5	1:A:54:C:C6	2.84	0.66
1:A:181:A:C2'	1:A:194:C:C5	2.79	0.66
1:A:187:G:H21	1:A:190:A:P	2.18	0.66
1:A:352:C:H42	1:A:357:G:N2	1.94	0.66
1:A:482:A:C6	1:A:483:C:C2	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:632:U:H3'	1:A:633:G:C8	2.31	0.66
1:A:654:G:C2	1:A:753:A:C4	2.84	0.66
1:A:687:A:C2	1:A:704:A:C6	2.84	0.66
1:A:728:A:C5	1:A:729:A:C5	2.83	0.66
1:A:1246:A:C2	1:A:1292:G:C4	2.84	0.66
1:A:1266:G:N2	1:A:1269:A:C8	2.64	0.66
1:A:1283:U:H2'	1:A:1284:C:C6	2.31	0.66
1:A:1407:C:C2	1:A:1408:A:C8	2.83	0.66
1:A:1417:G:C8	1:A:1417:G:H3'	2.31	0.66
1:A:22:G:C6	1:A:23:C:C4	2.84	0.65
1:A:610:U:C6	1:A:610:U:H3'	2.31	0.65
1:A:621:A:C2	1:A:622:A:C4	2.84	0.65
1:A:626:G:C4	1:A:627:G:C8	2.84	0.65
1:A:773:G:C2	1:A:807:A:C2	2.84	0.65
1:A:961:U:H1'	1:A:984:C:H1'	1.78	0.65
1:A:986:U:H2'	1:A:987:G:C8	2.31	0.65
1:A:1033:G:C2'	1:A:1034:G:H5'	2.26	0.65
1:A:1114:C:H4'	14:N:100:TRP:CE2	2.30	0.65
1:A:1250:A:C2	1:A:1287:A:C2	2.84	0.65
1:A:1433:A:C2	1:A:1434:A:C4	2.83	0.65
1:A:1472:U:H2'	1:A:1473:G:H8	1.59	0.65
4:D:8:LEU:HD23	4:D:8:LEU:O	1.96	0.65
12:L:30:ARG:HB2	12:L:57:THR:HG22	1.79	0.65
1:A:22:G:C5	1:A:23:C:C5	2.85	0.65
1:A:80:A:N7	1:A:81:A:C8	2.64	0.65
1:A:201:G:H1'	1:A:469:C:H1'	1.78	0.65
1:A:347:G:C2	1:A:348:G:H1'	2.31	0.65
1:A:382:A:C2	1:A:383:A:C4	2.84	0.65
1:A:457:G:C2	1:A:476:U:C2	2.84	0.65
1:A:564:C:C5	1:A:565:U:C4	2.84	0.65
1:A:663:A:N7	6:F:94:HIS:CE1	2.64	0.65
1:A:693:G:C6	1:A:694:A:C6	2.84	0.65
1:A:706:A:H4'	11:K:23:HIS:CD2	2.30	0.65
1:A:762:U:H2'	1:A:763:G:C8	2.32	0.65
1:A:829:G:C6	1:A:858:G:H1'	2.30	0.65
1:A:836:G:C6	1:A:851:G:C6	2.85	0.65
1:A:895:G:C2	1:A:896:C:H1'	2.31	0.65
1:A:1114:C:C5	1:A:1187:G:C2	2.83	0.65
1:A:1132:C:H3'	1:A:1133:G:C8	2.31	0.65
1:A:1343:G:H4'	9:I:123:ARG:CG	2.27	0.65
1:A:1365:G:C6	1:A:1366:C:N3	2.64	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:30:ILE:CB	11:K:45:THR:HG23	2.26	0.65
1:A:342:C:N3	1:A:348:G:C2	2.64	0.65
1:A:464:U:O2	1:A:468:A:C2	2.49	0.65
1:A:654:G:C2	1:A:655:A:H1'	2.31	0.65
1:A:685:G:C5	1:A:686:U:C5	2.84	0.65
1:A:1184:G:C6	1:A:1185:G:C5	2.85	0.65
1:A:1186:G:N2	1:A:1187:G:C8	2.64	0.65
1:A:1238:A:H4'	1:A:1336:C:H41	1.59	0.65
1:A:1258:G:C6	1:A:1259:C:C4	2.84	0.65
1:A:70:U:C5	1:A:94:G:H1'	2.32	0.65
1:A:499:A:C2	1:A:547:A:C2	2.84	0.65
1:A:953:G:C5	1:A:954:G:C8	2.84	0.65
1:A:976:G:C8	1:A:1362:A:C6	2.84	0.65
1:A:994:A:C4	1:A:995:C:C6	2.85	0.65
1:A:1175:G:C4	1:A:1176:A:C8	2.85	0.65
1:A:1301:U:OP2	1:A:1303:C:H5	1.79	0.65
1:A:1303:C:N4	1:A:1304:G:C4	2.65	0.65
1:A:1329:A:C2	1:A:1330:U:C1'	2.79	0.65
5:E:52:ALA:HB2	5:E:61:LYS:HZ3	1.61	0.65
5:E:76:ASN:O	5:E:79:THR:HG22	1.95	0.65
1:A:155:A:C2	1:A:167:A:C4	2.84	0.65
1:A:188:C:C4	1:A:189:A:C4	2.84	0.65
1:A:214:C:C6	1:A:215:C:C5	2.84	0.65
1:A:605:U:H3'	1:A:606:G:C6	2.32	0.65
1:A:1005:A:H4'	1:A:1036:A:H1'	1.78	0.65
1:A:1058:G:C6	1:A:1059:C:C4	2.84	0.65
1:A:1072:G:C2	1:A:1104:G:C2	2.84	0.65
1:A:1258:G:C4	1:A:1259:C:C6	2.85	0.65
1:A:1312:G:C6	1:A:1313:U:C6	2.84	0.65
1:A:1324:A:C2	1:A:1325:C:C6	2.85	0.65
1:A:118:U:C2'	1:A:121:U:C5	2.79	0.65
1:A:254:G:N2	1:A:273:U:H1'	2.11	0.65
1:A:337:G:C2	1:A:338:A:C5	2.85	0.65
1:A:373:A:C2	1:A:374:A:C4	2.85	0.65
1:A:628:G:C8	1:A:628:G:O5'	2.50	0.65
1:A:713:G:C5	1:A:714:G:C6	2.85	0.65
1:A:1057:G:C5'	3:C:154:GLY:HA3	2.27	0.65
1:A:1087:G:H2'	1:A:1088:G:C8	2.32	0.65
1:A:1146:A:C2	1:A:1147:C:H1'	2.31	0.65
4:D:170:LEU:HB2	4:D:181:PHE:HA	1.79	0.65
11:K:30:ILE:HB	11:K:45:THR:HG23	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:41:HIS:CE1	15:O:45:HIS:HE2	2.15	0.65
22:W:296:LEU:HD23	22:W:311:ALA:HB1	1.76	0.65
1:A:57:G:C5	1:A:58:C:C5	2.84	0.65
1:A:77:A:N6	1:A:92:U:H3	1.93	0.65
1:A:371:A:H1'	1:A:391:G:C2	2.30	0.65
1:A:1140:C:C2	1:A:1141:C:C5	2.84	0.65
1:A:1240:U:C6	1:A:1241:G:H5'	2.32	0.65
1:A:1294:G:C5	1:A:1295:U:C5	2.85	0.65
1:A:1343:G:C2	1:A:1344:C:C2	2.84	0.65
1:A:118:U:C2	1:A:288:A:C6	2.85	0.65
1:A:256:U:H3	1:A:270:A:N6	1.94	0.65
1:A:302:G:C6	1:A:303:A:C5	2.85	0.65
1:A:481:G:H21	1:A:482:A:N6	1.95	0.65
1:A:761:G:C6	1:A:762:U:C4	2.84	0.65
1:A:985:C:C2	1:A:1221:G:C2	2.84	0.65
1:A:994:A:C4	1:A:1216:A:H4'	2.31	0.65
1:A:1006:G:C6	1:A:1007:U:C6	2.85	0.65
1:A:1244:G:C6	1:A:1294:G:C5	2.85	0.65
1:A:1295:U:H2'	1:A:1296:C:C6	2.32	0.65
16:P:6:LEU:HD12	16:P:17:TYR:CB	2.27	0.65
1:A:97:G:H3'	1:A:98:A:C8	2.31	0.65
1:A:107:G:C6	20:T:6:ALA:HA	2.31	0.65
1:A:134:G:C8	1:A:325:A:C5	2.85	0.65
1:A:142:G:H21	1:A:143:A:H1'	1.59	0.65
1:A:193:C:H4'	20:T:55:PRO:HA	1.79	0.65
1:A:302:G:N2	1:A:303:A:H1'	2.12	0.65
1:A:424:G:C6	1:A:425:G:C5	2.85	0.65
1:A:812:G:H5"	1:A:903:G:H2'	1.79	0.65
1:A:935:A:C2	1:A:936:C:C2	2.85	0.65
1:A:942:G:C8	1:A:942:G:O5'	2.49	0.65
1:A:959:A:H61	19:S:77:ARG:HA	1.61	0.65
1:A:1017:U:C2	1:A:1018:G:C8	2.85	0.65
1:A:1115:U:H1'	1:A:1186:G:N2	2.12	0.65
1:A:1161:C:H2'	1:A:1162:C:C6	2.31	0.65
1:A:1527:U:C5	21:U:41:THR:HB	2.32	0.65
1:A:1532:U:C5	1:A:1534:A:C2	2.85	0.65
8:H:111:THR:HG23	8:H:114:ALA:H	1.60	0.65
14:N:42:ASN:HA	14:N:45:LEU:HD12	1.79	0.65
18:R:31:TYR:CD1	18:R:44:THR:HA	2.31	0.65
1:A:191:G:H2'	1:A:192:A:C8	2.32	0.65
1:A:313:A:C4	1:A:314:C:C6	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:456:A:C2	1:A:477:C:C2	2.85	0.65
1:A:512:U:H3	1:A:539:A:H61	1.43	0.65
1:A:521:G:N1	1:A:529:G:H1'	2.11	0.65
1:A:530:G:H3'	1:A:531:U:C5'	2.25	0.65
1:A:613:C:C4	1:A:614:C:C4	2.85	0.65
1:A:676:A:H1'	11:K:117:HIS:H	1.62	0.65
1:A:688:G:C6	1:A:689:C:C5	2.85	0.65
1:A:813:U:C5	1:A:816:A:C2	2.84	0.65
1:A:946:A:H1'	1:A:1334:G:C5'	2.27	0.65
1:A:981:U:C2	1:A:982:U:C5	2.85	0.65
1:A:1130:A:N7	1:A:1131:G:C5	2.65	0.65
1:A:1205:U:H2'	1:A:1206:G:C8	2.31	0.65
1:A:1288:A:C6	1:A:1289:A:C5	2.84	0.65
2:B:162:VAL:HG21	2:B:165:ALA:HA	1.79	0.65
5:E:47:PHE:C	5:E:66:ALA:HA	2.22	0.65
16:P:25:ARG:HE	16:P:25:ARG:HA	1.61	0.65
1:A:35:G:C6	1:A:36:C:C4	2.85	0.64
1:A:155:A:C6	1:A:167:A:C2	2.85	0.64
1:A:217:C:H5'	1:A:463:U:H5	1.61	0.64
1:A:257:G:C2	1:A:270:A:C4	2.86	0.64
1:A:384:G:C5	1:A:385:C:C5	2.85	0.64
1:A:512:U:O2	4:D:40:HIS:CE1	2.50	0.64
1:A:547:A:H4'	1:A:548:G:O5'	1.96	0.64
1:A:557:G:C2	1:A:558:G:C2	2.84	0.64
1:A:582:C:N3	1:A:583:A:C8	2.65	0.64
1:A:594:U:C4	1:A:646:G:C6	2.85	0.64
1:A:599:C:H41	8:H:87:ARG:HD3	1.62	0.64
1:A:1107:C:C4	1:A:1108:G:C8	2.85	0.64
1:A:1129:C:C5	1:A:1139:G:H2'	2.33	0.64
1:A:1130:A:C5	1:A:1131:G:C4	2.85	0.64
1:A:1309:G:N2	1:A:1329:A:H1'	2.12	0.64
1:A:1410:A:C2	1:A:1411:C:C2	2.86	0.64
1:A:1439:G:N1	1:A:1463:U:H1'	2.12	0.64
1:A:1526:G:C6	1:A:1527:U:C4	2.84	0.64
2:B:216:VAL:O	2:B:220:VAL:HG23	1.98	0.64
3:C:137:VAL:HG12	3:C:169:GLU:OE1	1.97	0.64
13:M:11:HIS:H	13:M:43:LYS:HA	1.61	0.64
1:A:53:A:C2	1:A:54:C:H1'	2.31	0.64
1:A:91:U:C5	1:A:92:U:C2	2.85	0.64
1:A:152:A:C6	1:A:153:C:H1'	2.32	0.64
1:A:430:A:C5	1:A:431:A:C8	2.85	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:626:G:C6	1:A:627:G:C6	2.84	0.64
1:A:944:G:H1'	1:A:1340:A:C2	2.32	0.64
1:A:1084:G:C8	1:A:1085:U:C6	2.86	0.64
1:A:1501:C:H2'	1:A:1504:G:C5	2.32	0.64
4:D:99:ASN:HA	4:D:102:TYR:CE2	2.33	0.64
1:A:59:A:C6	1:A:354:G:C6	2.85	0.64
1:A:265:G:H3'	1:A:267:C:C5	2.32	0.64
1:A:334:C:H1'	1:A:1435:G:H5'	1.79	0.64
1:A:597:G:C6	1:A:598:U:C2	2.84	0.64
1:A:602:A:H8	1:A:602:A:O5'	1.79	0.64
1:A:923:A:H2'	1:A:924:C:H6	1.63	0.64
1:A:980:C:C5	1:A:981:U:C2	2.85	0.64
1:A:1057:G:H3'	1:A:1058:G:H8	1.58	0.64
1:A:1114:C:C6	1:A:1187:G:N2	2.65	0.64
2:B:94:ARG:HE	2:B:168:GLU:HA	1.62	0.64
4:D:167:PRO:HB2	4:D:170:LEU:HG	1.79	0.64
1:A:8:A:H4'	5:E:110:MET:SD	2.38	0.64
1:A:44:A:C2	1:A:399:G:C4	2.85	0.64
1:A:122:G:C2	1:A:123:U:H1'	2.32	0.64
1:A:127:G:N2	1:A:235:C:H1'	2.12	0.64
1:A:155:A:C4	1:A:167:A:C2	2.85	0.64
1:A:469:C:C4	1:A:470:C:C2	2.86	0.64
1:A:627:G:C2	1:A:628:G:C5	2.84	0.64
1:A:635:A:C2	1:A:636:U:C2	2.86	0.64
1:A:688:G:C6	1:A:700:G:C6	2.86	0.64
1:A:714:G:H1'	1:A:777:A:H1'	1.79	0.64
1:A:907:A:C8	1:A:907:A:C5'	2.80	0.64
1:A:1009:U:C2	1:A:1021:A:C2	2.85	0.64
1:A:1073:U:H2'	1:A:1074:G:C8	2.33	0.64
1:A:1170:A:C8	1:A:1170:A:O5'	2.50	0.64
1:A:1268:G:O2'	1:A:1326:U:H4'	1.97	0.64
1:A:1421:G:H1	1:A:1479:C:H42	1.45	0.64
3:C:189:HIS:ND1	3:C:194:VAL:HG13	2.13	0.64
10:J:53:ILE:HG22	10:J:58:ASN:HD22	1.63	0.64
14:N:2:LYS:HG3	14:N:5:MET:H	1.63	0.64
17:Q:45:VAL:HG21	17:Q:60:ILE:CG2	2.27	0.64
1:A:133:U:H4'	1:A:325:A:C1'	2.28	0.64
1:A:203:G:H21	1:A:215:C:H1'	1.60	0.64
1:A:302:G:C2	1:A:303:A:H1'	2.32	0.64
1:A:809:G:N2	1:A:810:C:H1'	2.13	0.64
1:A:851:G:H5"	1:A:851:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1112:C:H3'	1:A:1113:C:C5	2.33	0.64
1:A:1133:G:C2	1:A:1134:G:C8	2.86	0.64
1:A:1255:G:C5	1:A:1279:G:C6	2.86	0.64
1:A:1436:U:H2'	1:A:1437:A:C8	2.32	0.64
1:A:1438:G:C2	1:A:1464:U:C2	2.85	0.64
17:Q:12:VAL:HA	17:Q:55:GLY:H	1.63	0.64
1:A:104:G:C6	1:A:105:G:C5	2.86	0.64
1:A:228:A:C6	1:A:229:U:C2	2.85	0.64
1:A:453:G:H2'	1:A:454:G:C8	2.33	0.64
1:A:689:C:OP1	11:K:45:THR:HG21	1.98	0.64
1:A:849:G:C2	1:A:850:U:H1'	2.32	0.64
1:A:857:C:C4	1:A:858:G:C8	2.84	0.64
1:A:864:A:H2'	1:A:865:A:C1'	2.28	0.64
1:A:1262:C:C5	1:A:1274:A:H2	2.15	0.64
1:A:1309:G:OP1	13:M:90:HIS:CE1	2.51	0.64
4:D:53:GLN:HA	4:D:56:GLU:HB2	1.80	0.64
4:D:101:VAL:HG21	4:D:117:VAL:CG2	2.28	0.64
13:M:76:ILE:HG22	13:M:80:MET:HE1	1.80	0.64
1:A:39:G:N3	1:A:498:A:C2	2.66	0.64
1:A:109:A:C6	1:A:326:G:C6	2.85	0.64
1:A:111:G:H4'	16:P:27:ALA:HB3	1.80	0.64
1:A:321:A:C8	1:A:321:A:C3'	2.81	0.64
1:A:453:G:C6	1:A:480:U:C5	2.86	0.64
1:A:453:G:C6	1:A:454:G:C5	2.86	0.64
1:A:564:C:H2'	1:A:565:U:C6	2.32	0.64
1:A:581:G:C2	1:A:761:G:C6	2.86	0.64
1:A:598:U:C2	1:A:599:C:C5	2.86	0.64
1:A:604:G:C2	1:A:605:U:C2	2.86	0.64
1:A:686:U:C5	1:A:703:G:C2	2.85	0.64
1:A:924:C:C6	1:A:924:C:O5'	2.50	0.64
1:A:925:G:C6	1:A:927:G:C6	2.85	0.64
1:A:1272:G:C5	1:A:1273:C:C6	2.86	0.64
1:A:1323:G:C2	1:A:1324:A:C8	2.86	0.64
1:A:1418:A:C8	1:A:1419:G:C8	2.86	0.64
8:H:109:VAL:HG13	8:H:125:ILE:HD11	1.79	0.64
1:A:66:A:C4	1:A:67:C:C5	2.86	0.64
1:A:70:U:H2'	1:A:94:G:C4	2.32	0.64
1:A:155:A:C5	1:A:167:A:C2	2.86	0.64
1:A:600:A:C4	1:A:601:G:C8	2.86	0.64
1:A:632:U:C5	1:A:633:G:C5	2.86	0.64
1:A:829:G:C6	1:A:830:G:C5	2.86	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:903:G:C2	1:A:904:U:H1'	2.32	0.64
1:A:939:G:N3	1:A:1375:A:C2	2.66	0.64
1:A:949:A:H1'	1:A:1364:U:C4	2.32	0.64
1:A:953:G:C4	1:A:954:G:C8	2.86	0.64
1:A:960:U:C4	19:S:78:THR:O	2.51	0.64
1:A:984:C:H2'	1:A:985:C:H6	1.62	0.64
1:A:1273:C:C4	1:A:1274:A:C4	2.85	0.64
1:A:44:A:C2	1:A:45:G:C4	2.86	0.64
1:A:610:U:C5	1:A:627:G:OP2	2.51	0.64
1:A:679:C:C2	1:A:680:C:C6	2.85	0.64
1:A:688:G:N2	1:A:689:C:H1'	2.12	0.64
1:A:712:A:C2	1:A:713:G:C4	2.86	0.64
1:A:838:G:C2	1:A:849:G:C4	2.86	0.64
1:A:1223:C:C5'	1:A:1225:A:C8	2.80	0.64
1:A:1415:G:N2	1:A:1486:G:H1'	2.13	0.64
3:C:116:ALA:CB	3:C:184:ASN:HD21	2.10	0.64
20:T:59:ARG:HD3	20:T:60:GLN:HE21	1.63	0.64
1:A:109:A:C5	1:A:327:A:C5	2.86	0.64
1:A:218:U:H4'	1:A:470:C:C1'	2.28	0.64
1:A:346:G:N2	1:A:346:G:H5"	2.13	0.64
1:A:411:A:OP2	1:A:429:U:C6	2.50	0.64
1:A:469:C:H3'	1:A:470:C:C6	2.33	0.64
1:A:579:A:C6	1:A:763:G:C6	2.86	0.64
1:A:587:G:C2	1:A:755:G:C8	2.86	0.64
1:A:598:U:C2	1:A:599:C:C6	2.86	0.64
1:A:654:G:H21	1:A:755:G:C4'	2.10	0.64
1:A:902:G:H2'	1:A:903:G:H8	1.61	0.64
1:A:1152:A:OP1	10:J:70:HIS:CG	2.51	0.64
1:A:1371:G:C8	9:I:110:VAL:HG11	2.31	0.64
15:O:45:HIS:CE1	15:O:48:ASP:CG	2.76	0.64
18:R:32:ILE:HG23	18:R:58:ILE:HD13	1.80	0.64
1:A:139:A:C2	1:A:140:U:C2	2.86	0.63
1:A:142:G:C2	1:A:143:A:H1'	2.34	0.63
1:A:184:G:C4	1:A:224:U:H5"	2.32	0.63
1:A:249:U:H3'	1:A:249:U:C6	2.33	0.63
1:A:335:C:H2'	1:A:336:A:C8	2.33	0.63
1:A:363:A:H3'	1:A:364:A:C8	2.33	0.63
1:A:380:G:H2'	1:A:382:A:C8	2.33	0.63
1:A:451:A:H1'	1:A:480:U:C4	2.33	0.63
1:A:579:A:C2	1:A:763:G:C4	2.86	0.63
1:A:857:C:H3'	1:A:858:G:C8	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:942:G:H3'	1:A:943:U:C5	2.33	0.63
1:A:1059:C:H2'	1:A:1060:U:H6	1.63	0.63
1:A:1071:C:H2'	1:A:1072:G:C8	2.33	0.63
1:A:1250:A:C8	1:A:1287:A:C8	2.86	0.63
1:A:1255:G:C4	1:A:1279:G:C6	2.87	0.63
1:A:1312:G:C6	1:A:1326:U:C4	2.86	0.63
1:A:1385:G:C6	1:A:1386:G:C6	2.85	0.63
3:C:148:ILE:HD12	3:C:201:ILE:HD12	1.80	0.63
13:M:9:PRO:HG3	13:M:18:LEU:HD11	1.79	0.63
17:Q:45:VAL:HG21	17:Q:60:ILE:HG22	1.78	0.63
1:A:177:G:N7	1:A:178:C:C6	2.66	0.63
1:A:347:G:C4	1:A:348:G:H1'	2.33	0.63
1:A:615:G:C2	1:A:626:G:C2	2.86	0.63
1:A:657:U:H4'	15:O:27:GLN:HB3	1.80	0.63
1:A:809:G:C5	1:A:810:C:C5	2.86	0.63
1:A:903:G:C4	1:A:904:U:C6	2.87	0.63
1:A:942:G:C2	1:A:943:U:C6	2.86	0.63
1:A:1055:A:C6	1:A:1056:U:C6	2.85	0.63
1:A:1068:G:C6	1:A:1108:G:C5	2.86	0.63
1:A:1299:A:C2	1:A:1301:U:N3	2.67	0.63
1:A:1371:G:C6	1:A:1372:U:C4	2.87	0.63
5:E:42:ASN:OD1	5:E:119:VAL:HG21	1.98	0.63
1:A:92:U:C4	1:A:93:U:N3	2.67	0.63
1:A:98:A:C6	1:A:99:C:C2	2.86	0.63
1:A:149:A:H5"	1:A:149:A:C8	2.33	0.63
1:A:463:U:C5	1:A:464:U:O4'	2.51	0.63
1:A:951:G:C2	1:A:1231:G:C2	2.86	0.63
1:A:1513:A:C2	1:A:1523:G:C4	2.86	0.63
4:D:91:ALA:HB2	4:D:187:ARG:HH22	1.62	0.63
9:I:38:PHE:CE2	9:I:75:ALA:HA	2.32	0.63
15:O:53:ARG:HH12	15:O:57:ARG:HG3	1.64	0.63
1:A:73:C:C6	1:A:73:C:H5"	2.33	0.63
1:A:220:G:C2	1:A:221:C:C6	2.87	0.63
1:A:318:G:C2	1:A:336:A:C2	2.86	0.63
1:A:495:A:C6	4:D:119:HIS:CE1	2.86	0.63
1:A:530:G:H3'	1:A:531:U:H5'	1.81	0.63
1:A:600:A:C8	1:A:600:A:H3'	2.33	0.63
1:A:639:G:C8	1:A:639:G:H5"	2.33	0.63
1:A:943:U:C2	1:A:944:G:C8	2.86	0.63
1:A:1095:U:C5	1:A:1096:C:C4	2.87	0.63
1:A:1242:G:H1'	1:A:1303:C:H4'	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:57:G:C6	1:A:356:A:N1	2.66	0.63
1:A:151:A:C6	1:A:152:A:C4	2.86	0.63
1:A:160:A:C2	1:A:346:G:C6	2.87	0.63
1:A:432:A:H3'	1:A:433:G:C8	2.33	0.63
1:A:499:A:C5'	1:A:547:A:H61	2.12	0.63
1:A:929:G:C6	1:A:930:C:C4	2.87	0.63
1:A:946:A:C2	1:A:947:G:C5	2.87	0.63
1:A:1117:A:C6	1:A:1156:G:C2	2.87	0.63
1:A:1206:G:C5	1:A:1207:G:C8	2.87	0.63
1:A:1374:A:C4	1:A:1375:A:C8	2.87	0.63
1:A:1462:C:H3'	1:A:1463:U:C6	2.34	0.63
10:J:70:HIS:H	10:J:70:HIS:CD2	2.17	0.63
11:K:75:GLU:HG3	11:K:76:TYR:CD2	2.34	0.63
15:O:45:HIS:HB3	15:O:47:LYS:H	1.63	0.63
1:A:124:C:H2'	1:A:125:U:C6	2.34	0.63
1:A:148:G:C8	1:A:1447:A:O2'	2.52	0.63
1:A:160:A:C6	1:A:161:A:C6	2.86	0.63
1:A:253:A:H2'	1:A:254:G:C8	2.33	0.63
1:A:327:A:H2'	1:A:329:A:C8	2.33	0.63
1:A:391:G:C6	1:A:392:C:C4	2.87	0.63
1:A:397:A:N6	1:A:548:G:C5	2.66	0.63
1:A:580:C:C4	1:A:581:G:C6	2.87	0.63
1:A:668:G:C1'	15:O:45:HIS:CD2	2.81	0.63
1:A:693:G:H1	1:A:788:U:C4'	2.11	0.63
1:A:1012:A:C6	1:A:1018:G:C6	2.86	0.63
1:A:1088:G:C2	1:A:1098:C:C2	2.87	0.63
1:A:1089:G:H2'	1:A:1170:A:C2	2.34	0.63
1:A:1091:U:C2	1:A:1095:U:N3	2.66	0.63
1:A:1306:A:N6	1:A:1307:U:C4	2.66	0.63
1:A:1317:C:C5	1:A:1318:A:C6	2.85	0.63
1:A:1343:G:H4'	9:I:123:ARG:HG2	1.81	0.63
1:A:1355:G:N2	1:A:1356:G:C4	2.66	0.63
4:D:117:VAL:HG21	4:D:132:ALA:HB2	1.80	0.63
17:Q:60:ILE:HA	17:Q:74:LEU:HA	1.81	0.63
1:A:61:G:H1	1:A:105:G:H22	1.47	0.63
1:A:78:A:O5'	1:A:78:A:H8	1.81	0.63
1:A:113:G:O4'	1:A:354:G:H4'	1.99	0.63
1:A:146:G:C6	1:A:177:G:C5	2.86	0.63
1:A:319:G:C5	1:A:320:A:C8	2.86	0.63
1:A:348:G:N2	1:A:349:A:C4	2.66	0.63
1:A:690:G:C6	1:A:691:G:C4	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:941:G:N2	1:A:1343:G:C4	2.67	0.63
1:A:1021:A:C2	1:A:1022:A:C8	2.86	0.63
1:A:1068:G:O6	1:A:1108:G:C6	2.52	0.63
1:A:1091:U:H4'	1:A:1172:C:H5'	1.80	0.63
1:A:1098:C:C4	1:A:1099:G:C5	2.87	0.63
1:A:1228:C:C5'	1:A:1228:C:C6	2.82	0.63
1:A:1306:A:C8	1:A:1332:A:C2	2.87	0.63
1:A:1355:G:C2	1:A:1368:A:C4	2.87	0.63
1:A:1395:C:H1'	1:A:1399:C:C6	2.33	0.63
1:A:1418:A:C5	1:A:1483:A:C6	2.87	0.63
1:A:1532:U:C6	1:A:1534:A:C2	2.87	0.63
2:B:23:ASN:HD22	2:B:188:THR:HA	1.62	0.63
1:A:51:A:C6	1:A:116:A:C8	2.87	0.63
1:A:72:A:H2'	1:A:73:C:C5	2.33	0.63
1:A:92:U:C5	1:A:93:U:C4	2.87	0.63
1:A:161:A:C6	1:A:162:A:C5	2.87	0.63
1:A:373:A:C4	1:A:374:A:C8	2.87	0.63
1:A:704:A:C5	1:A:705:G:C8	2.86	0.63
1:A:840:C:H1'	1:A:843:U:H3	1.64	0.63
1:A:915:A:C8	1:A:915:A:H3'	2.34	0.63
1:A:1239:A:C4	1:A:1241:G:C5	2.87	0.63
1:A:1261:A:C6	1:A:1275:A:C8	2.86	0.63
1:A:1262:C:H2'	1:A:1263:C:H5'	1.79	0.63
1:A:1276:G:C8	1:A:1276:G:O5'	2.52	0.63
1:A:1304:G:H1'	1:A:1334:G:C2	2.34	0.63
1:A:1333:A:H3'	1:A:1334:G:C8	2.33	0.63
1:A:1429:A:C2	1:A:1472:U:C2	2.86	0.63
3:C:132:ALA:HA	3:C:135:ARG:HH21	1.62	0.63
8:H:103:VAL:HG13	8:H:112:ASP:CB	2.29	0.63
8:H:103:VAL:HG12	8:H:124:ILE:HA	1.80	0.63
1:A:64:G:H2'	1:A:99:C:N4	2.14	0.63
1:A:78:A:C8	1:A:79:G:C5	2.87	0.63
1:A:138:G:H1'	1:A:226:G:N2	2.14	0.63
1:A:138:G:C2	1:A:139:A:C8	2.87	0.63
1:A:211:G:N2	1:A:213:G:C8	2.67	0.63
1:A:213:G:C6	1:A:214:C:H1'	2.33	0.63
1:A:347:G:O5'	1:A:347:G:C8	2.52	0.63
1:A:378:G:C6	1:A:379:C:C4	2.87	0.63
1:A:438:U:C5	1:A:494:G:OP2	2.52	0.63
1:A:466:A:C6	1:A:468:A:C6	2.87	0.63
1:A:592:G:C5	1:A:648:A:C2	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:656:G:C6	1:A:657:U:C4	2.87	0.63
1:A:750:C:C2	1:A:751:U:C5	2.87	0.63
1:A:804:U:C6	1:A:805:C:C5	2.87	0.63
1:A:1004:A:H8	1:A:1005:A:C8	2.16	0.63
1:A:1129:C:C2	1:A:1144:G:C2	2.87	0.63
1:A:1131:G:H22	1:A:1144:G:H4'	1.63	0.63
1:A:1193:G:C8	1:A:1193:G:H3'	2.34	0.63
1:A:1312:G:C2	1:A:1326:U:C2	2.87	0.63
1:A:1332:A:N3	1:A:1332:A:H5"	2.14	0.63
6:F:38:ARG:HH22	6:F:61:LEU:HD23	1.63	0.63
8:H:126:CYS:HA	8:H:127:TYR:CE2	2.33	0.63
13:M:10:ASP:HB2	13:M:11:HIS:CD2	2.33	0.63
17:Q:22:VAL:HG21	17:Q:60:ILE:HG21	1.81	0.63
17:Q:58:VAL:HA	17:Q:77:VAL:HA	1.80	0.63
1:A:38:G:H4'	1:A:547:A:N6	2.14	0.62
1:A:321:A:C4'	1:A:1436:U:H4'	2.28	0.62
1:A:444:G:C5	1:A:491:G:C6	2.86	0.62
1:A:579:A:C5	1:A:580:C:C5	2.87	0.62
1:A:581:G:C6	1:A:758:C:H3'	2.34	0.62
1:A:596:A:C2	1:A:597:G:C4	2.87	0.62
1:A:627:G:H2'	1:A:628:G:H8	1.62	0.62
1:A:695:A:H2	1:A:787:A:C4'	2.11	0.62
1:A:904:U:C5	1:A:905:U:C5	2.86	0.62
1:A:942:G:C2	1:A:1342:C:C2	2.87	0.62
1:A:976:G:C4	1:A:1359:C:H1'	2.34	0.62
1:A:1108:G:C6	1:A:1109:C:C4	2.86	0.62
1:A:1163:A:C2	1:A:1164:G:C4	2.87	0.62
1:A:1238:A:C8	1:A:1298:U:O2	2.52	0.62
1:A:1374:A:C6	1:A:1375:A:C5	2.86	0.62
1:A:1394:A:C2	1:A:1501:C:H4'	2.34	0.62
1:A:1395:C:C2	1:A:1399:C:C5	2.87	0.62
1:A:1406:U:C5	1:A:1407:C:C5	2.86	0.62
2:B:40:ILE:HG21	2:B:201:GLY:H	1.64	0.62
11:K:31:VAL:CG1	11:K:99:LEU:HD21	2.29	0.62
17:Q:8:GLN:HA	17:Q:59:GLU:HA	1.80	0.62
1:A:64:G:C4	1:A:99:C:C4	2.86	0.62
1:A:145:G:C2	1:A:178:C:C2	2.87	0.62
1:A:245:U:O2	1:A:284:C:C2	2.52	0.62
1:A:251:G:C2	1:A:266:G:C5	2.87	0.62
1:A:253:A:H1'	1:A:276:G:C4'	2.29	0.62
1:A:296:U:H1'	1:A:302:G:N2	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:411:A:C2	1:A:428:G:N2	2.67	0.62
1:A:448:A:C5	1:A:449:G:C8	2.87	0.62
1:A:449:G:C6	1:A:450:G:C6	2.87	0.62
1:A:615:G:N2	16:P:47:GLU:HB3	2.14	0.62
1:A:858:G:N2	1:A:869:G:H2'	2.14	0.62
1:A:929:G:C5	1:A:930:C:C5	2.87	0.62
1:A:933:G:C2	1:A:1385:G:C2	2.86	0.62
1:A:941:G:C2	1:A:942:G:C8	2.87	0.62
1:A:952:U:C2	1:A:953:G:C8	2.87	0.62
1:A:1033:G:C5	1:A:1034:G:N7	2.67	0.62
1:A:1057:G:C1'	3:C:194:VAL:HG11	2.28	0.62
1:A:1059:C:H2'	1:A:1060:U:C6	2.34	0.62
1:A:1083:U:H1'	1:A:1101:A:C8	2.34	0.62
1:A:1165:U:H3'	1:A:1166:G:C8	2.33	0.62
1:A:1179:A:C4	1:A:1180:A:C8	2.88	0.62
1:A:1198:G:C4	1:A:1199:U:C6	2.87	0.62
1:A:1219:A:C6	1:A:1220:G:C6	2.87	0.62
1:A:1300:G:C4	1:A:1334:G:C6	2.88	0.62
1:A:1350:A:N3	7:G:33:GLY:HA3	2.14	0.62
1:A:1406:U:C6	1:A:1406:U:H5"	2.34	0.62
1:A:1421:G:H21	1:A:1422:G:H1'	1.62	0.62
2:B:79:VAL:HG23	2:B:92:ASN:HA	1.79	0.62
2:B:80:LYS:CA	2:B:83:ALA:HB3	2.29	0.62
8:H:39:LEU:HD23	8:H:100:ILE:HD11	1.82	0.62
1:A:80:A:C8	1:A:81:A:C8	2.88	0.62
1:A:94:G:O4'	1:A:96:U:C5	2.52	0.62
1:A:195:A:H2'	1:A:196:A:C8	2.35	0.62
1:A:237:G:C6	1:A:238:A:C4	2.87	0.62
1:A:509:A:C5	1:A:510:A:C2	2.88	0.62
1:A:597:G:C2	1:A:644:U:C2	2.86	0.62
1:A:656:G:C2	1:A:751:U:N3	2.67	0.62
1:A:865:A:H3'	1:A:865:A:C8	2.33	0.62
1:A:867:G:C6	1:A:868:C:C4	2.87	0.62
1:A:895:G:C6	1:A:896:C:C2	2.87	0.62
1:A:941:G:C4	1:A:942:G:C8	2.87	0.62
1:A:953:G:C2	1:A:954:G:H1'	2.34	0.62
1:A:1015:G:C6	1:A:1016:A:C5	2.87	0.62
1:A:1048:G:H5"	14:N:3:GLN:H	1.63	0.62
1:A:1082:A:C5	1:A:1083:U:C4	2.88	0.62
1:A:1233:G:H21	1:A:1364:U:H5	1.47	0.62
1:A:1235:U:H2'	1:A:1236:A:C8	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1270:G:H4'	1:A:1314:C:H5'	1.82	0.62
1:A:1307:U:H5"	13:M:99:GLN:HE22	1.62	0.62
1:A:1333:A:C6	1:A:1334:G:C4	2.87	0.62
1:A:1402:C:H2'	1:A:1403:C:O4'	2.00	0.62
1:A:1530:G:C4	1:A:1531:A:C2	2.87	0.62
3:C:155:ARG:HB2	3:C:194:VAL:H	1.65	0.62
13:M:84:CYS:HB2	13:M:87:GLY:H	1.63	0.62
1:A:162:A:C8	1:A:163:C:H1'	2.34	0.62
1:A:300:A:N7	1:A:301:G:H1'	2.14	0.62
1:A:464:U:O5'	1:A:464:U:H6	1.83	0.62
1:A:654:G:C4	1:A:753:A:C5	2.87	0.62
1:A:676:A:H2'	1:A:677:U:C6	2.33	0.62
1:A:703:G:H4'	1:A:704:A:C8	2.35	0.62
1:A:838:G:C5	1:A:849:G:C6	2.87	0.62
1:A:847:G:C5	1:A:848:C:C6	2.86	0.62
1:A:904:U:C5	1:A:905:U:C4	2.87	0.62
1:A:974:A:C2	14:N:70:HIS:CD2	2.87	0.62
1:A:1014:A:H3'	1:A:1015:G:C8	2.35	0.62
1:A:1022:A:C8	1:A:1022:A:C5'	2.81	0.62
1:A:1063:C:H41	1:A:1190:G:H1'	1.64	0.62
1:A:1153:G:C6	1:A:1154:G:C8	2.87	0.62
1:A:1183:U:H2'	2:B:131:LYS:HB3	1.79	0.62
1:A:1195:C:H6	1:A:1195:C:O5'	1.81	0.62
1:A:1209:C:H2'	1:A:1210:C:C6	2.34	0.62
1:A:1356:G:C2	1:A:1357:A:C4	2.86	0.62
10:J:42:LEU:HD21	10:J:73:LEU:HG	1.82	0.62
1:A:207:C:H3'	1:A:208:U:C5	2.34	0.62
1:A:270:A:C6	1:A:271:C:C4	2.88	0.62
1:A:500:G:H2'	1:A:501:C:C6	2.34	0.62
1:A:626:G:H2'	1:A:627:G:C8	2.34	0.62
1:A:771:G:C6	1:A:772:U:N3	2.67	0.62
1:A:908:A:C2	1:A:909:A:C6	2.88	0.62
1:A:1091:U:H2'	1:A:1093:A:N7	2.14	0.62
1:A:1129:C:C2	1:A:1139:G:C4	2.87	0.62
1:A:1294:G:C6	1:A:1295:U:C4	2.87	0.62
1:A:1309:G:H5"	13:M:76:ILE:CG1	2.29	0.62
1:A:1315:U:H2'	1:A:1316:G:C8	2.35	0.62
8:H:7:ALA:HB2	8:H:76:ARG:HD2	1.79	0.62
10:J:68:ARG:HE	10:J:70:HIS:CE1	2.17	0.62
1:A:10:A:C2	1:A:11:G:N7	2.67	0.62
1:A:161:A:C5	1:A:162:A:C8	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:220:G:C2	1:A:221:C:C5	2.87	0.62
1:A:248:C:C2	1:A:277:C:C2	2.88	0.62
1:A:413:G:O2'	1:A:426:U:C5	2.52	0.62
1:A:458:U:H2'	1:A:459:A:C8	2.34	0.62
1:A:606:G:C4	1:A:631:C:H1'	2.33	0.62
1:A:655:A:N6	1:A:656:G:C6	2.67	0.62
1:A:932:C:C5	7:G:2:ARG:CZ	2.82	0.62
1:A:946:A:H1'	1:A:1334:G:H5'	1.81	0.62
1:A:1030:U:H3'	1:A:1032:G:C5	2.35	0.62
1:A:1064:G:O6	1:A:1191:A:C6	2.52	0.62
1:A:1088:G:C2	1:A:1089:G:C5	2.88	0.62
1:A:1114:C:C2	1:A:1115:U:C6	2.87	0.62
1:A:1185:G:N1	1:A:1186:G:C4	2.67	0.62
1:A:1313:U:C6	1:A:1313:U:OP2	2.53	0.62
1:A:1319:A:C8	1:A:1323:G:C5	2.88	0.62
2:B:26:MET:HE2	2:B:191:ASP:HA	1.80	0.62
2:B:185:ILE:HD13	2:B:209:VAL:HA	1.82	0.62
12:L:35:ARG:HB3	12:L:37:TYR:CE1	2.34	0.62
17:Q:11:VAL:HG12	17:Q:21:VAL:O	1.99	0.62
1:A:201:G:C6	1:A:202:G:C6	2.88	0.62
1:A:255:G:C6	1:A:256:U:C2	2.88	0.62
1:A:394:G:C5	1:A:395:C:C5	2.88	0.62
1:A:425:G:C4	1:A:426:U:C6	2.86	0.62
1:A:444:G:C6	1:A:491:G:C6	2.88	0.62
1:A:449:G:C6	1:A:450:G:O6	2.53	0.62
1:A:450:G:C6	1:A:481:G:H1'	2.35	0.62
1:A:600:A:C6	1:A:639:G:C5	2.88	0.62
1:A:929:G:H1'	1:A:1533:C:C4	2.34	0.62
1:A:1033:G:C8	1:A:1036:A:N1	2.68	0.62
1:A:1055:A:C2	1:A:1056:U:H1'	2.34	0.62
1:A:1186:G:H2'	1:A:1187:G:C8	2.32	0.62
1:A:1237:C:H4'	1:A:1303:C:O2	1.99	0.62
1:A:1279:G:H8	1:A:1281:C:C5	2.18	0.62
1:A:1298:U:C4'	1:A:1299:A:C2	2.83	0.62
1:A:1454:G:C2	1:A:1455:G:H1'	2.34	0.62
5:E:82:HIS:CE1	5:E:147:ASN:H	2.17	0.62
1:A:160:A:C1'	1:A:344:A:H2'	2.29	0.62
1:A:167:A:N3	1:A:168:G:C8	2.68	0.62
1:A:246:A:C4	1:A:279:A:C5	2.88	0.62
1:A:292:G:C5	1:A:293:G:H1'	2.35	0.62
1:A:448:A:C8	1:A:487:A:C6	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:559:A:H4'	1:A:560:A:H5"	1.82	0.62
1:A:585:G:C6	1:A:586:C:C4	2.87	0.62
1:A:656:G:C2	1:A:657:U:C2	2.88	0.62
1:A:693:G:C6	1:A:694:A:C5	2.88	0.62
1:A:1024:G:C2	1:A:1025:U:C6	2.86	0.62
1:A:1379:G:N1	1:A:1380:U:C4	2.68	0.62
1:A:1408:A:C2	1:A:1409:C:N3	2.67	0.62
1:A:1438:G:N2	1:A:1439:G:C5	2.68	0.62
6:F:24:ARG:HH21	6:F:77:THR:HB	1.65	0.62
8:H:103:VAL:HG11	8:H:116:ARG:HH21	1.64	0.62
12:L:98:ARG:HH11	12:L:104:SER:HB2	1.65	0.62
1:A:94:G:C4'	1:A:95:C:H5"	2.28	0.62
1:A:301:G:C2	1:A:302:G:C4	2.87	0.62
1:A:496:A:C2	1:A:497:G:C5	2.88	0.62
1:A:522:C:H1'	1:A:536:C:H5"	1.81	0.62
1:A:525:C:C4	1:A:526:C:C4	2.88	0.62
1:A:675:A:C2	1:A:676:A:H1'	2.35	0.62
1:A:677:U:H1'	11:K:119:GLY:H	1.65	0.62
1:A:864:A:C6	1:A:865:A:C6	2.88	0.62
1:A:1160:G:H5'	2:B:134:LEU:HB3	1.82	0.62
1:A:1170:A:C6	1:A:1171:A:C4	2.87	0.62
1:A:1206:G:H4'	3:C:191:THR:CA	2.29	0.62
1:A:1244:G:C5	1:A:1245:C:C5	2.88	0.62
1:A:1301:U:C5	1:A:1303:C:C4	2.88	0.62
1:A:1310:G:C4	1:A:1311:A:C8	2.87	0.62
1:A:1392:G:H4'	1:A:1532:U:OP1	1.99	0.62
1:A:1403:C:H1'	1:A:1500:A:C2	2.35	0.62
1:A:1420:U:H3'	1:A:1421:G:H8	1.65	0.62
1:A:1433:A:C5	1:A:1434:A:C5	2.87	0.62
3:C:115:VAL:HG13	3:C:136:ALA:HB1	1.80	0.62
6:F:4:TYR:CG	6:F:71:ILE:HD13	2.35	0.62
13:M:6:ILE:HG23	13:M:65:GLU:OE2	2.00	0.62
1:A:55:A:C6	1:A:56:U:C6	2.88	0.62
1:A:118:U:H2'	1:A:121:U:C4	2.35	0.62
1:A:160:A:C2	1:A:346:G:N1	2.68	0.62
1:A:198:G:C2	1:A:199:A:C4	2.88	0.62
1:A:232:G:N2	1:A:233:C:H1'	2.14	0.62
1:A:302:G:C4	1:A:303:A:C8	2.88	0.62
1:A:515:G:C6	1:A:516:U:C4	2.88	0.62
1:A:633:G:C5	1:A:634:C:C5	2.87	0.62
1:A:661:G:H1'	1:A:745:G:C2	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:688:G:O5'	11:K:48:GLY:HA2	2.00	0.62
1:A:713:G:C2	1:A:714:G:C2	2.87	0.62
1:A:785:G:C2	1:A:786:G:C8	2.87	0.62
1:A:840:C:C2	1:A:847:G:C2	2.88	0.62
1:A:849:G:C4	1:A:850:U:C6	2.88	0.62
1:A:936:C:H4'	1:A:1383:C:C2	2.35	0.62
1:A:963:G:C6	1:A:973:G:C6	2.88	0.62
1:A:1069:C:C5	1:A:1094:G:C5	2.87	0.62
1:A:1088:G:N2	1:A:1089:G:C4	2.68	0.62
1:A:1091:U:H2'	1:A:1091:U:O2	2.00	0.62
1:A:1153:G:OP1	10:J:15:HIS:CE1	2.53	0.62
1:A:1304:G:N2	1:A:1332:A:C2	2.68	0.62
1:A:1444:U:C2	1:A:1459:G:C2	2.88	0.62
1:A:1445:U:O5'	1:A:1445:U:H6	1.82	0.62
1:A:1468:A:H3'	1:A:1469:C:C5	2.34	0.62
9:I:14:SER:HB2	9:I:77:ALA:HB2	1.82	0.62
1:A:9:G:N2	1:A:10:A:H1'	2.15	0.61
1:A:30:U:O3'	1:A:399:G:H4'	2.00	0.61
1:A:35:G:C5	1:A:36:C:C5	2.88	0.61
1:A:144:G:C6	1:A:145:G:N7	2.68	0.61
1:A:174:A:C5	1:A:175:C:C5	2.88	0.61
1:A:282:A:H3'	1:A:283:U:C5	2.35	0.61
1:A:299:G:C6	1:A:300:A:C5	2.88	0.61
1:A:437:U:C4	1:A:438:U:C5	2.88	0.61
1:A:620:C:C4	1:A:621:A:C4	2.88	0.61
1:A:700:G:O2'	1:A:704:A:C4	2.53	0.61
1:A:771:G:C6	1:A:772:U:C2	2.88	0.61
1:A:996:A:C2	1:A:1046:A:H5'	2.35	0.61
1:A:1170:A:C5	1:A:1171:A:C4	2.87	0.61
1:A:1419:G:H3'	1:A:1420:U:C6	2.35	0.61
9:I:42:THR:N	9:I:71:ILE:HG21	2.15	0.61
13:M:11:HIS:H	13:M:43:LYS:CA	2.12	0.61
1:A:27:G:H21	1:A:297:G:H5'	1.64	0.61
1:A:28:A:C5	1:A:29:U:C5	2.88	0.61
1:A:60:A:H3'	20:T:4:LYS:HA	1.81	0.61
1:A:145:G:C6	1:A:146:G:C8	2.88	0.61
1:A:295:C:N3	1:A:303:A:C2	2.68	0.61
1:A:296:U:H1'	1:A:302:G:H22	1.63	0.61
1:A:468:A:C5	1:A:469:C:C5	2.88	0.61
1:A:559:A:H4'	1:A:560:A:C5'	2.29	0.61
1:A:565:U:C4	1:A:566:G:C5	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:652:U:H1'	1:A:653:U:C6	2.34	0.61
1:A:811:C:H2'	1:A:812:G:C5'	2.31	0.61
1:A:838:G:C6	1:A:839:C:C5	2.88	0.61
1:A:1221:G:C4	1:A:1222:G:C8	2.88	0.61
1:A:1272:G:C6	1:A:1273:C:C5	2.88	0.61
1:A:1305:G:C8	1:A:1305:G:OP2	2.53	0.61
1:A:1414:U:H3	1:A:1486:G:H22	1.47	0.61
20:T:34:VAL:HA	20:T:49:ALA:HB1	1.82	0.61
1:A:10:A:C2	1:A:11:G:C8	2.87	0.61
1:A:39:G:C5	1:A:40:C:C5	2.88	0.61
1:A:58:C:H2'	1:A:59:A:H8	1.65	0.61
1:A:62:U:H5"	1:A:385:C:C2'	2.30	0.61
1:A:77:A:C8	1:A:77:A:OP2	2.53	0.61
1:A:83:C:H2'	1:A:86:G:H22	1.65	0.61
1:A:208:U:C5	1:A:210:C:H1'	2.35	0.61
1:A:439:U:C5	4:D:119:HIS:CE1	2.88	0.61
1:A:446:G:C2	1:A:489:C:C2	2.88	0.61
1:A:466:A:H5"	1:A:466:A:C8	2.35	0.61
1:A:577:G:H5'	1:A:816:A:C8	2.35	0.61
1:A:605:U:H2'	1:A:606:G:C2	2.34	0.61
1:A:656:G:C5	1:A:657:U:C4	2.88	0.61
1:A:673:A:C2	1:A:674:G:C2	2.89	0.61
1:A:790:A:C6	1:A:791:G:C6	2.88	0.61
1:A:923:A:C4	1:A:924:C:C5	2.88	0.61
1:A:938:A:C2	1:A:939:G:H1'	2.35	0.61
1:A:976:G:C6	1:A:1359:C:C6	2.88	0.61
1:A:1131:G:C6	1:A:1132:C:C4	2.89	0.61
1:A:1161:C:H3'	1:A:1161:C:H6	1.66	0.61
1:A:1251:A:C6	1:A:1252:A:C5	2.88	0.61
1:A:1405:G:H2'	1:A:1406:U:H6	1.65	0.61
1:A:1406:U:H1'	1:A:1518:A:O4'	2.00	0.61
1:A:1428:A:C6	1:A:1429:A:C5	2.88	0.61
1:A:1462:C:C4	1:A:1463:U:C4	2.89	0.61
1:A:1498:U:H4'	1:A:1519:A:C2	2.35	0.61
19:S:33:TRP:CD2	19:S:56:HIS:CE1	2.88	0.61
22:W:57:ALA:HA	22:W:78:ARG:HH22	1.65	0.61
1:A:45:G:H2'	1:A:46:G:H8	1.65	0.61
1:A:55:A:C5	1:A:56:U:C6	2.88	0.61
1:A:102:G:C5	1:A:103:U:C5	2.89	0.61
1:A:158:G:H2'	1:A:159:G:H5"	1.83	0.61
1:A:160:A:H4'	1:A:344:A:C5	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:182:A:C2	1:A:183:C:C6	2.88	0.61
1:A:184:G:C8	1:A:224:U:H4'	2.34	0.61
1:A:223:A:C2	1:A:224:U:H1'	2.36	0.61
1:A:230:G:N2	1:A:231:U:H1'	2.15	0.61
1:A:455:G:C2	1:A:478:A:N3	2.68	0.61
1:A:634:C:C4	1:A:635:A:C5	2.88	0.61
1:A:806:C:H42	1:A:807:A:H62	1.48	0.61
1:A:1507:A:C2	1:A:1508:A:C4	2.89	0.61
1:A:1523:G:C6	1:A:1524:C:C4	2.87	0.61
2:B:56:LEU:HD13	2:B:216:VAL:HG22	1.81	0.61
3:C:22:PHE:H	10:J:94:ALA:HB1	1.64	0.61
5:E:110:MET:SD	5:E:124:ALA:HB3	2.40	0.61
1:A:3:A:C8	1:A:3:A:H3'	2.36	0.61
1:A:22:G:C2	1:A:914:A:C8	2.88	0.61
1:A:27:G:C6	1:A:28:A:C5	2.89	0.61
1:A:70:U:H2'	1:A:94:G:N9	2.15	0.61
1:A:134:G:H5'	1:A:325:A:OP1	2.00	0.61
1:A:206:C:C4	1:A:207:C:C2	2.89	0.61
1:A:275:G:C8	1:A:275:G:C5'	2.83	0.61
1:A:354:G:C6	1:A:355:C:C5	2.88	0.61
1:A:369:G:C2	1:A:393:A:C2	2.89	0.61
1:A:385:C:C4	1:A:386:C:C5	2.89	0.61
1:A:448:A:H3'	1:A:449:G:C8	2.36	0.61
1:A:474:G:C6	1:A:475:C:C2	2.88	0.61
1:A:482:A:C2	1:A:483:C:H1'	2.35	0.61
1:A:495:A:H1'	1:A:496:A:C6	2.36	0.61
1:A:592:G:C6	1:A:648:A:C6	2.89	0.61
1:A:610:U:C5	1:A:627:G:N7	2.69	0.61
1:A:745:G:H5'	1:A:852:G:H1'	1.81	0.61
1:A:759:A:C5	1:A:760:G:C8	2.88	0.61
1:A:766:A:H1'	1:A:814:A:C2	2.35	0.61
1:A:859:G:C4	1:A:860:A:C8	2.88	0.61
1:A:917:G:C6	1:A:918:A:C6	2.89	0.61
1:A:941:G:C2	1:A:1343:G:C2	2.87	0.61
1:A:1133:G:C8	1:A:1133:G:H5"	2.35	0.61
1:A:1139:G:N2	1:A:1141:C:C5	2.69	0.61
1:A:1176:A:H3'	1:A:1177:G:C8	2.35	0.61
1:A:1365:G:C6	1:A:1366:C:C4	2.89	0.61
1:A:1399:C:H1'	1:A:1401:G:C4	2.35	0.61
9:I:124:PRO:HA	9:I:125:GLN:HG2	1.82	0.61
17:Q:18:LYS:HB3	17:Q:49:ASN:H	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:76:G:H3'	1:A:77:A:C8	2.36	0.61
1:A:184:G:C2	1:A:185:U:C6	2.88	0.61
1:A:316:C:O2	1:A:338:A:C2	2.53	0.61
1:A:323:U:C5	1:A:324:G:C6	2.88	0.61
1:A:429:U:OP2	4:D:31:CYS:HB3	2.00	0.61
1:A:583:A:C8	1:A:583:A:O5'	2.54	0.61
1:A:674:G:C2	1:A:675:A:C4	2.89	0.61
1:A:688:G:C2	1:A:700:G:C4	2.88	0.61
1:A:766:A:C4	1:A:814:A:C4	2.88	0.61
1:A:1005:A:N7	1:A:1006:G:C4	2.69	0.61
1:A:1191:A:H3'	1:A:1192:C:C6	2.35	0.61
13:M:106:ARG:HG3	13:M:112:ARG:HA	1.83	0.61
14:N:31:SER:HB3	14:N:45:LEU:HD21	1.82	0.61
1:A:141:G:C5	1:A:142:G:C8	2.89	0.61
1:A:202:G:H1	1:A:215:C:H42	1.48	0.61
1:A:291:U:H3'	1:A:305:G:H22	1.65	0.61
1:A:373:A:N1	1:A:391:G:H1'	2.16	0.61
1:A:406:G:C6	1:A:407:U:C4	2.88	0.61
1:A:575:G:C6	1:A:881:G:C5	2.89	0.61
1:A:595:A:C6	1:A:641:U:C6	2.88	0.61
1:A:615:G:C4	1:A:616:G:C8	2.88	0.61
1:A:1020:G:C6	1:A:1021:A:C5	2.89	0.61
1:A:1058:G:C5	1:A:1059:C:C5	2.89	0.61
1:A:1169:A:C4	1:A:1170:A:C8	2.89	0.61
1:A:1309:G:C2	1:A:1310:G:C4	2.89	0.61
1:A:1312:G:C8	1:A:1312:G:C5'	2.84	0.61
1:A:1369:C:H2'	1:A:1370:G:C8	2.35	0.61
1:A:1418:A:H2'	1:A:1419:G:O4'	2.00	0.61
3:C:12:GLY:HA2	3:C:15:LYS:HD2	1.81	0.61
4:D:101:VAL:HG21	4:D:117:VAL:HG21	1.81	0.61
5:E:34:ALA:O	5:E:62:ALA:HB2	2.01	0.61
16:P:15:PRO:HG2	16:P:17:TYR:CE1	2.35	0.61
1:A:116:A:C6	1:A:117:G:C6	2.89	0.61
1:A:141:G:C2	1:A:142:G:H1'	2.36	0.61
1:A:503:C:O2	1:A:510:A:H2	1.84	0.61
1:A:518:C:H5"	1:A:519:C:C6	2.35	0.61
1:A:669:G:C2	1:A:670:G:C4	2.88	0.61
1:A:1253:G:H4'	10:J:48:ARG:NH1	2.16	0.61
4:D:96:ARG:HH12	4:D:98:ASP:HB3	1.65	0.61
4:D:105:GLY:HA3	4:D:161:ALA:HB2	1.83	0.61
14:N:33:VAL:HA	14:N:41:TRP:CZ2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:15:G:C6	1:A:16:A:C5	2.89	0.61
1:A:71:A:H5'	1:A:71:A:H8	1.65	0.61
1:A:100:G:C2	1:A:101:A:C4	2.89	0.61
1:A:105:G:H2'	1:A:106:C:H6	1.64	0.61
1:A:118:U:O5'	1:A:118:U:H6	1.83	0.61
1:A:120:A:C2	1:A:122:G:C5	2.89	0.61
1:A:191:G:H8	1:A:191:G:H5"	1.64	0.61
1:A:199:A:C2	1:A:200:G:C4	2.88	0.61
1:A:382:A:C4	1:A:383:A:C8	2.89	0.61
1:A:632:U:C6	1:A:633:G:C4	2.89	0.61
1:A:807:A:C6	1:A:808:C:C4	2.89	0.61
1:A:895:G:H1	1:A:905:U:H1'	1.65	0.61
1:A:1003:G:C4	1:A:1005:A:OP1	2.54	0.61
1:A:1068:G:C2	1:A:1108:G:H1'	2.34	0.61
1:A:1074:G:C5	1:A:1075:U:C4	2.88	0.61
1:A:1275:A:C5	1:A:1276:G:C8	2.88	0.61
1:A:1299:A:OP2	1:A:1301:U:C4	2.53	0.61
1:A:1492:A:C2	1:A:1494:G:C8	2.89	0.61
2:B:56:LEU:HD13	2:B:216:VAL:HG13	1.83	0.61
4:D:94:GLU:HB3	4:D:103:ARG:HH12	1.65	0.61
22:W:132:ILE:H	22:W:132:ILE:HD13	1.65	0.61
1:A:15:G:C4	1:A:16:A:C8	2.89	0.61
1:A:127:G:C2	1:A:235:C:C2	2.89	0.61
1:A:206:C:C2	1:A:207:C:H1'	2.36	0.61
1:A:580:C:C4	1:A:581:G:C5	2.89	0.61
1:A:591:U:O5'	1:A:591:U:H6	1.84	0.61
1:A:595:A:H4'	1:A:596:A:H5'	1.82	0.61
1:A:713:G:C8	1:A:713:G:O5'	2.54	0.61
1:A:1014:A:C6	19:S:33:TRP:CZ2	2.88	0.61
1:A:1032:G:C5	1:A:1033:G:H1'	2.36	0.61
1:A:1111:A:C5'	2:B:129:THR:HG23	2.30	0.61
1:A:1114:C:C2	1:A:1187:G:N3	2.69	0.61
1:A:1131:G:H5'	9:I:4:GLN:HB2	1.82	0.61
1:A:1473:G:C6	1:A:1474:U:C6	2.89	0.61
3:C:112:ALA:HB1	3:C:199:VAL:O	2.00	0.61
1:A:73:C:C5	1:A:73:C:H5"	2.36	0.60
1:A:101:A:C6	1:A:102:G:C5	2.89	0.60
1:A:160:A:C5	1:A:161:A:C5	2.89	0.60
1:A:179:A:C6	1:A:180:U:C4	2.89	0.60
1:A:263:A:H2'	1:A:264:C:C6	2.37	0.60
1:A:295:C:C4	1:A:296:U:C4	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:362:G:H22	1:A:365:U:H5	1.49	0.60
1:A:390:U:H5"	16:P:28:ARG:HE	1.65	0.60
1:A:663:A:N1	1:A:743:A:C2	2.69	0.60
1:A:773:G:C2	1:A:774:G:H1'	2.34	0.60
1:A:842:U:H5'	1:A:846:G:N2	2.16	0.60
1:A:986:U:H3	1:A:1219:A:H61	1.46	0.60
1:A:1054:C:C2	1:A:1196:A:H2'	2.36	0.60
1:A:1083:U:C4	1:A:1084:G:C2	2.89	0.60
1:A:1161:C:H2'	1:A:1162:C:C5	2.36	0.60
1:A:1250:A:C5	1:A:1251:A:C5	2.89	0.60
1:A:1256:A:O4'	1:A:1258:G:H1'	2.01	0.60
1:A:1406:U:C4	1:A:1407:C:C6	2.89	0.60
1:A:1462:C:C5	1:A:1463:U:C5	2.89	0.60
1:A:1524:C:H3'	1:A:1524:C:C6	2.35	0.60
1:A:38:G:H1'	1:A:547:A:C4	2.36	0.60
1:A:80:A:N6	1:A:81:A:C4	2.69	0.60
1:A:604:G:H1	1:A:634:C:H42	1.49	0.60
1:A:683:G:C2	1:A:684:U:C2	2.88	0.60
1:A:777:A:C8	1:A:777:A:H3'	2.36	0.60
1:A:821:G:C5	1:A:822:U:C5	2.89	0.60
1:A:842:U:H5'	1:A:846:G:C2	2.36	0.60
1:A:953:G:C2	1:A:1229:A:C5	2.89	0.60
1:A:956:U:C4	1:A:957:U:C4	2.88	0.60
1:A:1032:G:C2	1:A:1033:G:N7	2.69	0.60
1:A:1061:G:C6	1:A:1197:A:C5	2.89	0.60
1:A:1103:C:H4'	2:B:96:LEU:HD22	1.84	0.60
1:A:1114:C:C6	1:A:1187:G:C2	2.89	0.60
1:A:1262:C:C5	1:A:1274:A:N3	2.69	0.60
1:A:1438:G:C2	1:A:1439:G:C5	2.90	0.60
1:A:1480:A:H3'	1:A:1481:U:C6	2.36	0.60
10:J:16:ARG:HE	10:J:16:ARG:CA	2.13	0.60
16:P:39:PHE:HA	16:P:50:THR:HG23	1.83	0.60
17:Q:22:VAL:HG12	17:Q:45:VAL:HB	1.83	0.60
1:A:142:G:C2	1:A:222:C:C6	2.90	0.60
1:A:251:G:C4	1:A:252:U:C5	2.90	0.60
1:A:257:G:C2	1:A:258:G:C4	2.88	0.60
1:A:565:U:C6	1:A:566:G:H2'	2.36	0.60
1:A:671:G:C4	1:A:736:C:C2	2.89	0.60
1:A:690:G:C6	1:A:691:G:C5	2.89	0.60
1:A:717:U:H1'	11:K:117:HIS:HB3	1.82	0.60
1:A:717:U:H1'	11:K:117:HIS:CD2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:727:G:C2	1:A:731:G:C4	2.90	0.60
1:A:755:G:C6	1:A:756:C:C5	2.90	0.60
1:A:801:U:H2'	1:A:802:A:C8	2.36	0.60
1:A:926:G:C6	1:A:1505:G:C6	2.89	0.60
1:A:959:A:N3	1:A:985:C:H1'	2.16	0.60
1:A:991:U:O2'	1:A:993:G:C8	2.54	0.60
1:A:1066:C:H3'	1:A:1067:A:C8	2.36	0.60
1:A:1080:A:C5'	5:E:20:VAL:HB	2.30	0.60
1:A:1094:G:OP2	1:A:1095:U:C6	2.55	0.60
1:A:1159:U:C5'	1:A:1181:G:H21	2.13	0.60
1:A:1356:G:H2'	1:A:1357:A:C8	2.36	0.60
1:A:1416:G:C2	1:A:1485:U:H1'	2.36	0.60
1:A:1428:A:C6	1:A:1473:G:C6	2.88	0.60
1:A:1495:U:C2	1:A:1496:C:C6	2.90	0.60
8:H:42:GLU:CG	8:H:100:ILE:HG21	2.31	0.60
8:H:105:THR:HG22	8:H:106:SER:H	1.66	0.60
17:Q:28:VAL:HG13	17:Q:39:ARG:HB2	1.83	0.60
1:A:21:G:H2'	1:A:22:G:C8	2.37	0.60
1:A:98:A:H8	1:A:98:A:O5'	1.85	0.60
1:A:141:G:N1	1:A:142:G:H1'	2.16	0.60
1:A:184:G:C6	1:A:194:C:C5	2.89	0.60
1:A:212:G:C4	1:A:214:C:C4	2.90	0.60
1:A:410:G:H1	1:A:430:A:H5'	1.66	0.60
1:A:514:C:H41	1:A:533:A:H2'	1.67	0.60
1:A:592:G:C3'	1:A:593:U:H6	2.14	0.60
1:A:615:G:C6	1:A:626:G:C6	2.89	0.60
1:A:674:G:C2	1:A:675:A:C5	2.89	0.60
1:A:738:C:H2'	1:A:739:C:C6	2.36	0.60
1:A:757:U:H4'	1:A:822:U:O2	2.01	0.60
1:A:776:G:H4'	1:A:777:A:C8	2.35	0.60
1:A:907:A:H2'	1:A:908:A:C8	2.36	0.60
1:A:908:A:C2	1:A:909:A:C5	2.89	0.60
1:A:953:G:C4	1:A:1229:A:C6	2.90	0.60
1:A:1009:U:O2	1:A:1021:A:C2	2.54	0.60
1:A:1010:U:C2	1:A:1020:G:C2	2.89	0.60
1:A:1108:G:C5	1:A:1109:C:C5	2.88	0.60
1:A:1146:A:C2	1:A:1147:C:C1'	2.84	0.60
1:A:1240:U:H3'	1:A:1241:G:N7	2.15	0.60
1:A:1315:U:C4	1:A:1316:G:C6	2.89	0.60
1:A:1333:A:H3'	1:A:1334:G:H8	1.66	0.60
1:A:1405:G:H1'	1:A:1519:A:C4'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:133:MET:O	3:C:137:VAL:HG23	2.01	0.60
5:E:106:ALA:HB1	5:E:111:ARG:HB2	1.83	0.60
6:F:4:TYR:CE2	6:F:71:ILE:HB	2.36	0.60
1:A:10:A:C2	1:A:11:G:C5	2.89	0.60
1:A:105:G:N2	1:A:380:G:H5'	2.15	0.60
1:A:117:G:C4	1:A:118:U:C6	2.90	0.60
1:A:127:G:C2	1:A:128:G:C8	2.89	0.60
1:A:218:U:C2	1:A:219:U:C2	2.90	0.60
1:A:223:A:N1	1:A:224:U:C2	2.70	0.60
1:A:270:A:C5	1:A:271:C:C5	2.90	0.60
1:A:327:A:C2'	1:A:329:A:C8	2.85	0.60
1:A:346:G:N2	1:A:347:G:C5	2.69	0.60
1:A:346:G:H5"	1:A:346:G:C2	2.37	0.60
1:A:515:G:C5	1:A:537:G:C2	2.90	0.60
1:A:645:G:C2	1:A:646:G:C8	2.90	0.60
1:A:761:G:N1	1:A:762:U:C2	2.70	0.60
1:A:909:A:H1'	1:A:1414:U:H4'	1.82	0.60
1:A:914:A:C8	1:A:914:A:H3'	2.36	0.60
1:A:942:G:H3'	1:A:943:U:C6	2.37	0.60
1:A:953:G:C5	1:A:1229:A:C6	2.89	0.60
1:A:1014:A:OP2	19:S:13:HIS:CD2	2.55	0.60
1:A:1258:G:C4	1:A:1259:C:C5	2.90	0.60
1:A:1310:G:C2	1:A:1311:A:C4	2.88	0.60
1:A:1379:G:C6	1:A:1380:U:C4	2.89	0.60
1:A:1423:G:C5	1:A:1424:U:C4	2.89	0.60
1:A:1501:C:C4	1:A:1504:G:N3	2.70	0.60
1:A:1522:U:O5'	1:A:1522:U:H6	1.83	0.60
17:Q:6:THR:HA	17:Q:61:ARG:HA	1.84	0.60
18:R:31:TYR:CG	18:R:44:THR:HG23	2.36	0.60
1:A:59:A:C2	1:A:354:G:C5	2.90	0.60
1:A:68:G:C1'	1:A:171:A:H1'	2.32	0.60
1:A:200:G:C2	1:A:218:U:O2	2.55	0.60
1:A:241:G:C6	1:A:242:G:C5	2.90	0.60
1:A:338:A:C5	1:A:339:C:C2	2.90	0.60
1:A:582:C:N3	1:A:760:G:C6	2.70	0.60
1:A:594:U:H3'	1:A:595:A:H8	1.65	0.60
1:A:595:A:C2	1:A:596:A:N6	2.68	0.60
1:A:602:A:C8	1:A:602:A:O5'	2.54	0.60
1:A:611:C:H3'	1:A:612:C:C6	2.37	0.60
1:A:687:A:N1	1:A:704:A:C6	2.70	0.60
1:A:749:A:H2'	1:A:750:C:C6	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:782:A:C8	1:A:783:C:C6	2.90	0.60
1:A:886:G:C6	1:A:887:G:C5	2.89	0.60
1:A:907:A:H2'	1:A:908:A:H8	1.67	0.60
1:A:935:A:C2	7:G:2:ARG:NH1	2.70	0.60
1:A:942:G:C4	1:A:943:U:H5	2.17	0.60
1:A:955:U:H3	1:A:1225:A:H2	1.48	0.60
1:A:994:A:C2	1:A:1216:A:H5"	2.37	0.60
1:A:1096:C:H3'	1:A:1096:C:H6	1.65	0.60
1:A:1345:U:H5'	1:A:1348:U:O2	2.01	0.60
1:A:1389:C:H2'	1:A:1390:U:O4'	2.02	0.60
1:A:1399:C:C2	1:A:1401:G:C2	2.89	0.60
1:A:1482:G:C8	1:A:1482:G:H3'	2.36	0.60
11:K:46:ALA:HB1	11:K:61:ALA:HB1	1.84	0.60
15:O:82:GLU:HA	15:O:88:ARG:HH21	1.67	0.60
1:A:32:A:H2'	1:A:33:A:C8	2.36	0.60
1:A:67:C:C2'	1:A:68:G:C8	2.84	0.60
1:A:134:G:C8	1:A:325:A:N7	2.70	0.60
1:A:191:G:C8	1:A:191:G:OP2	2.53	0.60
1:A:266:G:H1'	1:A:267:C:H3'	1.82	0.60
1:A:282:A:C4	1:A:283:U:C6	2.90	0.60
1:A:291:U:C2	1:A:310:G:C2	2.90	0.60
1:A:348:G:H3'	1:A:349:A:H8	1.67	0.60
1:A:475:C:H2'	1:A:476:U:H6	1.66	0.60
1:A:544:G:C6	1:A:545:C:C4	2.90	0.60
1:A:583:A:C4	1:A:584:G:C8	2.90	0.60
1:A:605:U:P	1:A:605:U:H6	2.24	0.60
1:A:616:G:C2	1:A:617:G:C8	2.89	0.60
1:A:720:C:C2	1:A:733:G:H2'	2.36	0.60
1:A:1131:G:C6	1:A:1132:C:C5	2.90	0.60
1:A:1435:G:C5	1:A:1436:U:C5	2.89	0.60
3:C:180:ASP:H	3:C:205:GLU:HA	1.65	0.60
1:A:28:A:C6	1:A:29:U:C4	2.89	0.60
1:A:71:A:C8	1:A:100:G:C6	2.89	0.60
1:A:104:G:C5	1:A:105:G:N7	2.69	0.60
1:A:257:G:H2'	1:A:258:G:C8	2.36	0.60
1:A:266:G:H4'	1:A:267:C:H6	1.67	0.60
1:A:369:G:C6	1:A:370:C:C4	2.90	0.60
1:A:592:G:C4	1:A:648:A:C2	2.89	0.60
1:A:695:A:H61	1:A:797:C:C4'	2.15	0.60
1:A:749:A:C6	1:A:750:C:N4	2.69	0.60
1:A:1014:A:H5"	19:S:13:HIS:CD2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1057:G:O4'	3:C:194:VAL:HG11	2.02	0.60
1:A:1096:C:C4	1:A:1097:C:C5	2.89	0.60
1:A:1117:A:N3	1:A:1180:A:H1'	2.17	0.60
1:A:1139:G:C2	1:A:1143:G:N1	2.70	0.60
2:B:93:HIS:CD2	2:B:94:ARG:H	2.20	0.60
3:C:174:LEU:O	3:C:175:HIS:CD2	2.55	0.60
8:H:38:VAL:CG1	8:H:111:THR:HB	2.32	0.60
10:J:7:ARG:HA	10:J:75:ASP:HA	1.83	0.60
17:Q:8:GLN:HE22	17:Q:57:VAL:C	2.10	0.60
17:Q:43:LEU:HD23	17:Q:44:HIS:O	2.02	0.60
20:T:34:VAL:HG22	20:T:49:ALA:C	2.27	0.60
1:A:68:G:N1	1:A:102:G:C2	2.70	0.60
1:A:78:A:C2	1:A:79:G:C2	2.89	0.60
1:A:91:U:C6	1:A:92:U:H1'	2.37	0.60
1:A:198:G:C6	1:A:199:A:C6	2.89	0.60
1:A:269:C:H2'	1:A:270:A:C8	2.36	0.60
1:A:271:C:C4	1:A:272:C:C5	2.89	0.60
1:A:329:A:C6	1:A:332:G:C4	2.90	0.60
1:A:379:C:H2'	1:A:380:G:C8	2.37	0.60
1:A:439:U:C5	4:D:119:HIS:NE2	2.70	0.60
1:A:509:A:OP2	4:D:47:LEU:HA	2.02	0.60
1:A:695:A:C2	1:A:787:A:C4'	2.85	0.60
1:A:705:G:H22	11:K:30:ILE:HD13	1.64	0.60
1:A:759:A:N7	1:A:760:G:C8	2.70	0.60
1:A:779:C:H2'	11:K:121:ARG:HH21	1.67	0.60
1:A:949:A:C2	1:A:950:U:C2	2.90	0.60
1:A:1117:A:C2	1:A:1184:G:C2	2.90	0.60
1:A:1162:C:C2	1:A:1163:A:C8	2.90	0.60
1:A:1223:C:H3'	1:A:1224:U:C2	2.36	0.60
1:A:1268:G:C2	1:A:1269:A:C4	2.90	0.60
1:A:1306:A:C8	1:A:1306:A:O5'	2.55	0.60
1:A:1353:G:C2	1:A:1370:G:C2	2.90	0.60
2:B:20:ARG:HD3	2:B:37:VAL:HA	1.83	0.60
8:H:34:ALA:HB1	8:H:109:VAL:HB	1.84	0.60
8:H:89:ASP:HA	8:H:121:GLY:HA2	1.82	0.60
10:J:35:GLN:HE22	10:J:78:GLU:HB3	1.66	0.60
11:K:41:LEU:HD22	11:K:76:TYR:CD2	2.37	0.60
1:A:79:G:C5	1:A:80:A:C5	2.89	0.60
1:A:105:G:N2	1:A:380:G:C5'	2.65	0.60
1:A:165:G:N1	1:A:166:U:C2	2.70	0.60
1:A:193:C:H4'	20:T:55:PRO:CA	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:253:A:H2	1:A:275:G:H1'	1.64	0.60
1:A:254:G:P	1:A:266:G:H3'	2.42	0.60
1:A:684:U:H3	1:A:706:A:H61	1.48	0.60
1:A:904:U:OP2	1:A:905:U:C5	2.55	0.60
1:A:1010:U:H3	1:A:1019:A:H61	1.49	0.60
1:A:1043:G:C5	1:A:1044:A:C5	2.90	0.60
1:A:1057:G:C8	1:A:1204:A:C2	2.90	0.60
1:A:1090:U:C5'	1:A:1170:A:C2	2.84	0.60
1:A:1238:A:C4'	1:A:1336:C:H41	2.15	0.60
1:A:1296:C:C5'	13:M:12:LYS:HA	2.32	0.60
1:A:1327:C:C4	1:A:1328:C:C5	2.89	0.60
1:A:1455:G:H5"	1:A:1455:G:C8	2.37	0.60
1:A:1501:C:H6	1:A:1504:G:HO2'	1.49	0.60
1:A:1514:G:N1	1:A:1515:G:C8	2.70	0.60
3:C:113:LYS:HA	3:C:184:ASN:CG	2.27	0.60
1:A:57:G:C6	1:A:356:A:C2	2.90	0.59
1:A:66:A:N1	1:A:104:G:C6	2.70	0.59
1:A:68:G:O4'	1:A:171:A:H1'	2.03	0.59
1:A:130:A:H2	1:A:232:G:H22	1.50	0.59
1:A:141:G:N1	1:A:223:A:C5	2.69	0.59
1:A:247:G:C5	1:A:278:G:C2	2.90	0.59
1:A:370:C:C2	1:A:371:A:C8	2.90	0.59
1:A:410:G:H1	1:A:430:A:H3'	1.66	0.59
1:A:520:A:N6	1:A:521:G:C4	2.70	0.59
1:A:773:G:C6	1:A:807:A:C6	2.90	0.59
1:A:856:C:H2'	1:A:857:C:C6	2.37	0.59
1:A:857:C:C5	1:A:871:U:O4	2.54	0.59
1:A:861:G:H2'	1:A:862:C:O4'	2.01	0.59
1:A:905:U:C2	1:A:906:A:C4	2.89	0.59
1:A:915:A:C6	1:A:916:U:C6	2.90	0.59
1:A:1086:U:C6	1:A:1086:U:H5"	2.37	0.59
1:A:1098:C:H5"	2:B:73:ARG:HH22	1.66	0.59
1:A:1142:G:C6	1:A:1143:G:H1'	2.36	0.59
1:A:1306:A:C2	1:A:1307:U:H1'	2.35	0.59
1:A:1312:G:C6	1:A:1313:U:C5	2.90	0.59
1:A:1439:G:C8	1:A:1439:G:O5'	2.55	0.59
3:C:83:VAL:HG21	3:C:102:ILE:HD11	1.83	0.59
10:J:5:ARG:HD2	10:J:78:GLU:H	1.67	0.59
1:A:35:G:C4	1:A:550:G:C2	2.90	0.59
1:A:53:A:C6	1:A:54:C:C6	2.89	0.59
1:A:53:A:C8	1:A:53:A:H3'	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:199:A:N1	1:A:200:G:C5	2.70	0.59
1:A:201:G:H2'	1:A:202:G:C8	2.37	0.59
1:A:240:G:N1	1:A:287:U:C2	2.70	0.59
1:A:266:G:C5	1:A:269:C:N4	2.68	0.59
1:A:392:C:O2'	1:A:483:C:H2'	2.02	0.59
1:A:1095:U:H6	1:A:1096:C:OP2	1.84	0.59
1:A:1117:A:C2	1:A:1180:A:H1'	2.37	0.59
1:A:1164:G:C5	1:A:1165:U:C5	2.90	0.59
1:A:1191:A:C2	1:A:1192:C:C4	2.90	0.59
1:A:1224:U:H2'	19:S:77:ARG:HH22	1.66	0.59
1:A:1279:G:C8	1:A:1281:C:C5	2.90	0.59
1:A:1306:A:H2'	1:A:1307:U:C5'	2.32	0.59
1:A:1308:U:C6	13:M:97:ARG:HG3	2.37	0.59
1:A:1390:U:H2'	1:A:1391:U:C1'	2.31	0.59
1:A:1416:G:C6	1:A:1417:G:C4	2.90	0.59
1:A:1429:A:C2	1:A:1430:A:C8	2.90	0.59
1:A:1488:G:O2'	1:A:1489:G:H5'	2.02	0.59
1:A:1499:A:C4	1:A:1500:A:C8	2.90	0.59
1:A:46:G:C2	1:A:396:C:C2	2.90	0.59
1:A:66:A:H2'	1:A:67:C:C6	2.37	0.59
1:A:128:G:C2	1:A:234:C:C6	2.90	0.59
1:A:133:U:C6	1:A:230:G:N2	2.70	0.59
1:A:139:A:C2	1:A:225:C:C2	2.90	0.59
1:A:155:A:C2	1:A:167:A:H1'	2.37	0.59
1:A:208:U:C4	1:A:210:C:H1'	2.37	0.59
1:A:329:A:C5	1:A:332:G:C5	2.90	0.59
1:A:371:A:H1'	1:A:391:G:N2	2.17	0.59
1:A:595:A:C5	1:A:641:U:C6	2.89	0.59
1:A:621:A:C4	1:A:622:A:C8	2.90	0.59
1:A:815:A:OP2	1:A:816:A:C8	2.55	0.59
1:A:1023:U:C2	1:A:1024:G:C8	2.89	0.59
1:A:1049:U:C6	14:N:1:ALA:HB1	2.37	0.59
1:A:1097:C:C4	1:A:1098:C:C4	2.90	0.59
1:A:1148:U:N3	1:A:1149:C:C2	2.71	0.59
1:A:1288:A:N1	1:A:1289:A:C5	2.70	0.59
1:A:1405:G:N1	1:A:1406:U:C5	2.70	0.59
1:A:1407:C:H3'	1:A:1408:A:C8	2.38	0.59
1:A:1433:A:N6	1:A:1468:A:C8	2.70	0.59
10:J:19:ASP:HB3	10:J:72:ARG:HH22	1.67	0.59
11:K:115:ILE:HB	18:R:69:TYR:CE1	2.36	0.59
1:A:11:G:N1	1:A:12:U:C2	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:101:A:C4	1:A:102:G:C8	2.91	0.59
1:A:113:G:C4	1:A:114:U:C6	2.90	0.59
1:A:146:G:C6	1:A:147:G:C8	2.90	0.59
1:A:457:G:N2	1:A:476:U:H1'	2.18	0.59
1:A:524:G:H3'	1:A:525:C:C6	2.37	0.59
1:A:570:G:O5'	1:A:570:G:C8	2.55	0.59
1:A:654:G:H3'	1:A:655:A:H8	1.66	0.59
1:A:749:A:C2	15:O:21:THR:O	2.55	0.59
1:A:1033:G:C6	1:A:1034:G:C5	2.90	0.59
1:A:1055:A:C6	1:A:1206:G:C6	2.90	0.59
1:A:1068:G:C5	1:A:1108:G:C2	2.91	0.59
1:A:1242:G:O4'	1:A:1303:C:H4'	2.02	0.59
1:A:1262:C:N4	1:A:1274:A:H1'	2.17	0.59
1:A:1279:G:H8	1:A:1281:C:H5	1.50	0.59
1:A:1333:A:C5	1:A:1334:G:C4	2.90	0.59
1:A:1368:A:C5	1:A:1369:C:C5	2.91	0.59
15:O:81:ILE:CD1	15:O:88:ARG:HA	2.32	0.59
17:Q:59:GLU:C	17:Q:60:ILE:HG23	2.27	0.59
20:T:34:VAL:HA	20:T:49:ALA:HB3	1.83	0.59
20:T:57:VAL:HG21	20:T:75:LYS:HB2	1.83	0.59
1:A:35:G:C6	1:A:550:G:C6	2.91	0.59
1:A:64:G:C5	1:A:99:C:N3	2.71	0.59
1:A:82:G:OP1	1:A:91:U:H5'	2.02	0.59
1:A:102:G:C2	1:A:103:U:C2	2.91	0.59
1:A:173:U:H5'	1:A:199:A:H5'	1.83	0.59
1:A:251:G:N2	1:A:253:A:C8	2.70	0.59
1:A:282:A:C5	1:A:283:U:C5	2.90	0.59
1:A:369:G:C6	1:A:370:C:C5	2.91	0.59
1:A:438:U:O4	1:A:494:G:H3'	2.02	0.59
1:A:454:G:C2	1:A:455:G:N9	2.71	0.59
1:A:460:A:H1'	1:A:472:U:O2	2.02	0.59
1:A:465:A:C4	1:A:466:A:C8	2.91	0.59
1:A:509:A:OP1	4:D:50:TYR:HB2	2.03	0.59
1:A:577:G:C8	1:A:577:G:O5'	2.55	0.59
1:A:581:G:H1	1:A:759:A:P	2.25	0.59
1:A:666:G:H4'	1:A:731:G:H22	1.67	0.59
1:A:751:U:C4	1:A:752:G:C2	2.91	0.59
1:A:849:G:C8	1:A:849:G:H5"	2.38	0.59
1:A:912:C:H5"	12:L:90:PRO:HB3	1.83	0.59
1:A:1097:C:H1'	1:A:1170:A:C1'	2.33	0.59
1:A:1206:G:C6	1:A:1207:G:C4	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1258:G:C5	1:A:1259:C:C5	2.91	0.59
1:A:1424:U:H6	1:A:1424:U:O5'	1.85	0.59
1:A:1514:G:C2	1:A:1515:G:C8	2.91	0.59
7:G:30:MET:HE1	7:G:35:LYS:HG2	1.84	0.59
11:K:127:ARG:HE	21:U:34:ARG:HH12	1.50	0.59
17:Q:44:HIS:CE1	17:Q:70:LYS:HZ1	2.20	0.59
1:A:68:G:C6	1:A:102:G:N1	2.70	0.59
1:A:70:U:C6	1:A:94:G:C2'	2.86	0.59
1:A:72:A:H62	1:A:98:A:H2	1.51	0.59
1:A:134:G:C5	1:A:325:A:N6	2.71	0.59
1:A:141:G:C2	1:A:223:A:C2	2.91	0.59
1:A:157:U:C2	1:A:165:G:N1	2.70	0.59
1:A:195:A:C5	1:A:196:A:C6	2.90	0.59
1:A:318:G:H2'	1:A:1468:A:H4'	1.85	0.59
1:A:348:G:H2'	1:A:349:A:C8	2.37	0.59
1:A:385:C:C2	1:A:386:C:C6	2.91	0.59
1:A:411:A:C5	1:A:429:U:C5	2.91	0.59
1:A:640:A:H1'	8:H:106:SER:HB3	1.84	0.59
1:A:687:A:C6	1:A:701:U:C4'	2.85	0.59
1:A:777:A:C2	11:K:120:CYS:SG	2.86	0.59
1:A:795:C:OP2	1:A:796:C:C5	2.55	0.59
1:A:860:A:C5	1:A:861:G:C4	2.91	0.59
1:A:1005:A:H2'	1:A:1006:G:O4'	2.02	0.59
1:A:1008:U:C4	1:A:1022:A:C2	2.91	0.59
1:A:1057:G:C6	1:A:1204:A:C4	2.91	0.59
1:A:1097:C:C2	1:A:1098:C:C6	2.90	0.59
1:A:1144:G:C8	1:A:1144:G:OP2	2.56	0.59
1:A:1244:G:C4	1:A:1294:G:C2	2.89	0.59
1:A:1302:C:H3'	1:A:1303:C:C5'	2.32	0.59
1:A:1303:C:H2'	1:A:1304:G:H5'	1.83	0.59
1:A:1483:A:H3'	1:A:1484:C:C6	2.37	0.59
10:J:68:ARG:HB3	10:J:70:HIS:CE1	2.36	0.59
1:A:39:G:C4	1:A:40:C:C6	2.90	0.59
1:A:90:C:O2	1:A:91:U:C5	2.55	0.59
1:A:130:A:H61	1:A:234:C:H6	1.51	0.59
1:A:237:G:H2'	1:A:238:A:O4'	2.02	0.59
1:A:468:A:OP2	1:A:471:U:C4	2.56	0.59
1:A:516:U:C4	1:A:517:G:C8	2.91	0.59
1:A:524:G:C2	1:A:525:C:C2	2.90	0.59
1:A:712:A:H2'	1:A:713:G:H8	1.67	0.59
1:A:728:A:C6	1:A:729:A:C6	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:846:G:N1	1:A:847:G:C5	2.71	0.59
1:A:851:G:C2	1:A:852:G:C5	2.90	0.59
1:A:939:G:C5	1:A:940:C:C4	2.91	0.59
1:A:1074:G:N3	1:A:1102:A:C2	2.71	0.59
1:A:1135:U:H3'	1:A:1137:C:N3	2.16	0.59
1:A:1143:G:C6	1:A:1144:G:C5	2.90	0.59
1:A:54:C:O2	1:A:358:U:C2	2.55	0.59
1:A:226:G:C4	1:A:227:G:C8	2.91	0.59
1:A:441:A:C6	1:A:442:G:C5	2.91	0.59
1:A:521:G:H21	1:A:536:C:C5'	2.16	0.59
1:A:537:G:O6	1:A:538:G:C6	2.55	0.59
1:A:587:G:C8	1:A:755:G:C2	2.90	0.59
1:A:591:U:O5'	1:A:591:U:C6	2.56	0.59
1:A:738:C:C4	1:A:739:C:C4	2.91	0.59
1:A:1021:A:N1	1:A:1022:A:C8	2.70	0.59
1:A:1042:A:C6	1:A:1043:G:O6	2.55	0.59
1:A:1074:G:N7	1:A:1075:U:C4	2.71	0.59
1:A:1252:A:C6	1:A:1253:G:C8	2.91	0.59
1:A:1275:A:C8	1:A:1275:A:H3'	2.36	0.59
1:A:1306:A:H61	1:A:1331:G:C1'	2.16	0.59
1:A:1350:A:C2	7:G:33:GLY:HA3	2.36	0.59
1:A:1356:G:C4	1:A:1357:A:C8	2.90	0.59
1:A:1483:A:C6	1:A:1484:C:H1'	2.37	0.59
1:A:1527:U:OP2	21:U:41:THR:HG22	2.01	0.59
2:B:204:ASP:HA	2:B:209:VAL:HG21	1.83	0.59
10:J:12:ALA:HB1	10:J:17:LEU:HB3	1.84	0.59
22:W:43:ILE:HB	22:W:78:ARG:HH11	1.68	0.59
1:A:146:G:N1	1:A:177:G:C5	2.71	0.59
1:A:155:A:C6	1:A:156:C:C4	2.91	0.59
1:A:203:G:H1	1:A:206:C:H41	1.51	0.59
1:A:226:G:C2	1:A:227:G:C4	2.91	0.59
1:A:254:G:C4	1:A:255:G:C8	2.90	0.59
1:A:323:U:C4	1:A:324:G:C4	2.90	0.59
1:A:504:C:C2	1:A:542:G:C2	2.91	0.59
1:A:570:G:H5"	1:A:820:U:H5'	1.84	0.59
1:A:676:A:C2	1:A:715:A:C2	2.91	0.59
1:A:800:G:C8	1:A:800:G:O5'	2.56	0.59
1:A:811:C:H4'	1:A:901:A:H61	1.67	0.59
1:A:860:A:N6	1:A:861:G:C2	2.71	0.59
1:A:924:C:C2	1:A:925:G:C8	2.91	0.59
1:A:963:G:H21	10:J:56:HIS:CD2	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1064:G:C5	1:A:1066:C:C4	2.91	0.59
1:A:1068:G:N7	1:A:1094:G:C8	2.70	0.59
1:A:1232:U:H5'	9:I:127:SER:HA	1.84	0.59
1:A:1236:A:C8	1:A:1236:A:H5"	2.38	0.59
1:A:1244:G:C2	1:A:1245:C:C2	2.91	0.59
1:A:1298:U:H5	7:G:112:ASP:N	2.01	0.59
1:A:1301:U:H2'	1:A:1303:C:C6	2.38	0.59
1:A:1365:G:C5	1:A:1366:C:C4	2.91	0.59
4:D:18:LEU:HD23	4:D:63:ILE:HG12	1.85	0.59
11:K:62:ALA:CB	11:K:91:GLY:HA3	2.33	0.59
15:O:25:GLU:HA	15:O:80:LEU:HD13	1.84	0.59
22:W:191:SER:H	22:W:196:ASP:H	1.51	0.59
22:W:205:LEU:HB2	22:W:260:HIS:CE1	2.38	0.59
1:A:146:G:C6	1:A:177:G:C6	2.91	0.59
1:A:161:A:H2'	1:A:162:A:H5'	1.85	0.59
1:A:185:U:C2	1:A:186:C:C6	2.91	0.59
1:A:318:G:N2	1:A:1433:A:C2	2.71	0.59
1:A:354:G:C6	1:A:355:C:C4	2.91	0.59
1:A:410:G:H1'	1:A:433:G:N1	2.18	0.59
1:A:439:U:C5	1:A:440:C:C6	2.91	0.59
1:A:479:U:H6	1:A:479:U:O5'	1.86	0.59
1:A:522:C:O4'	1:A:536:C:H4'	2.02	0.59
1:A:580:C:H2'	1:A:581:G:O4'	2.02	0.59
1:A:648:A:N1	1:A:649:A:C5	2.71	0.59
1:A:748:G:N2	15:O:21:THR:HG21	2.18	0.59
1:A:865:A:C5	1:A:866:C:C5	2.90	0.59
1:A:866:C:O5'	1:A:866:C:H6	1.85	0.59
1:A:925:G:H1'	1:A:1502:A:H1'	1.85	0.59
1:A:1034:G:C6	1:A:1035:A:C6	2.90	0.59
1:A:1133:G:N3	1:A:1142:G:C2	2.71	0.59
1:A:1225:A:H2'	1:A:1226:C:C5	2.38	0.59
1:A:1258:G:C2	1:A:1259:C:C2	2.91	0.59
1:A:1259:C:C4	1:A:1260:G:C5	2.91	0.59
1:A:1266:G:H2'	1:A:1268:G:N7	2.17	0.59
1:A:1296:C:H2'	1:A:1297:G:O4'	2.03	0.59
1:A:1343:G:C5	1:A:1344:C:C5	2.90	0.59
1:A:1357:A:C5	1:A:1358:U:N3	2.71	0.59
1:A:1406:U:H1'	1:A:1518:A:C4'	2.33	0.59
1:A:1428:A:C2	1:A:1473:G:C4	2.91	0.59
5:E:52:ALA:HB1	5:E:57:ALA:HB1	1.85	0.59
15:O:41:HIS:NE2	15:O:45:HIS:CE1	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:188:C:C2	1:A:189:A:H1'	2.38	0.58
1:A:272:C:C2	1:A:273:U:C6	2.91	0.58
1:A:300:A:C4	1:A:301:G:H1'	2.38	0.58
1:A:332:G:C6	1:A:333:U:C5	2.91	0.58
1:A:420:U:H1'	1:A:424:G:C2	2.38	0.58
1:A:483:C:C4	1:A:484:G:C6	2.91	0.58
1:A:705:G:N7	1:A:706:A:C8	2.71	0.58
1:A:760:G:C8	1:A:760:G:O5'	2.55	0.58
1:A:788:U:C6	1:A:789:U:C5	2.90	0.58
1:A:846:G:H2'	1:A:847:G:C8	2.38	0.58
1:A:879:C:H2'	1:A:880:C:H6	1.68	0.58
1:A:923:A:C2	1:A:924:C:C6	2.91	0.58
1:A:934:C:C4	1:A:1345:U:C6	2.91	0.58
1:A:952:U:H3	1:A:1229:A:H61	1.51	0.58
1:A:980:C:C5	1:A:981:U:N3	2.71	0.58
1:A:1032:G:C4	1:A:1033:G:C8	2.91	0.58
1:A:1165:U:H3'	1:A:1166:G:H8	1.68	0.58
1:A:1185:G:C5	1:A:1186:G:C8	2.90	0.58
1:A:1197:A:C8	1:A:1197:A:H5'	2.38	0.58
1:A:1228:C:H2'	1:A:1229:A:C8	2.37	0.58
1:A:1434:A:C6	1:A:1435:G:C6	2.91	0.58
10:J:28:THR:HB	10:J:86:ALA:HB2	1.85	0.58
1:A:10:A:C2	1:A:25:C:N3	2.71	0.58
1:A:26:A:H61	1:A:558:G:C2'	2.16	0.58
1:A:50:A:C2	1:A:52:C:C4	2.91	0.58
1:A:64:G:C2	1:A:69:G:C6	2.90	0.58
1:A:111:G:H22	1:A:330:C:N4	2.01	0.58
1:A:119:A:C8	1:A:240:G:N7	2.71	0.58
1:A:204:G:O4'	1:A:465:A:C2	2.56	0.58
1:A:238:A:C5	1:A:239:U:C5	2.90	0.58
1:A:271:C:H2'	1:A:272:C:H6	1.68	0.58
1:A:404:G:N3	1:A:498:A:C2	2.71	0.58
1:A:457:G:H21	1:A:476:U:H1'	1.68	0.58
1:A:514:C:H2'	1:A:515:G:C8	2.38	0.58
1:A:655:A:C4	1:A:656:G:C8	2.91	0.58
1:A:714:G:C2	1:A:715:A:C4	2.90	0.58
1:A:792:A:C8	1:A:794:A:C8	2.90	0.58
1:A:894:G:C5	1:A:895:G:N7	2.71	0.58
1:A:941:G:N2	1:A:942:G:H1'	2.18	0.58
1:A:959:A:C6	1:A:1222:G:H4'	2.38	0.58
1:A:978:A:C6	1:A:1318:A:C6	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1130:A:C1'	1:A:1146:A:C2	2.86	0.58
1:A:1169:A:H2'	1:A:1170:A:O4'	2.03	0.58
1:A:1206:G:H4'	3:C:191:THR:C	2.28	0.58
1:A:1249:C:H42	1:A:1287:A:H8	1.47	0.58
1:A:1395:C:H1'	1:A:1399:C:C5	2.38	0.58
1:A:1406:U:C4	1:A:1407:C:C5	2.90	0.58
1:A:1480:A:C6	1:A:1481:U:C4	2.91	0.58
3:C:185:THR:HB	3:C:198:LYS:HA	1.84	0.58
7:G:12:LEU:H	7:G:27:ASN:HD21	1.49	0.58
1:A:3:A:H5'	1:A:614:C:C5'	2.33	0.58
1:A:90:C:C2	1:A:91:U:H5	2.20	0.58
1:A:105:G:C2	1:A:380:G:H5"	2.37	0.58
1:A:115:G:C2	1:A:289:G:C4	2.92	0.58
1:A:151:A:C2	1:A:152:A:C1'	2.84	0.58
1:A:205:A:C5	1:A:206:C:C4	2.91	0.58
1:A:294:U:C2	1:A:304:U:O2	2.56	0.58
1:A:393:A:H5'	1:A:484:G:C8	2.37	0.58
1:A:577:G:C6	1:A:765:G:H1'	2.39	0.58
1:A:602:A:C6	1:A:603:U:N3	2.71	0.58
1:A:627:G:C4	1:A:628:G:N7	2.71	0.58
1:A:655:A:N6	1:A:752:G:H22	2.01	0.58
1:A:688:G:C5	1:A:700:G:C2	2.91	0.58
1:A:791:G:C6	1:A:792:A:N7	2.71	0.58
1:A:1125:U:H2'	1:A:1126:U:H2'	1.86	0.58
1:A:1266:G:N2	1:A:1268:G:H3'	2.18	0.58
1:A:1293:C:C6	1:A:1293:C:H3'	2.38	0.58
1:A:1367:C:C4	1:A:1368:A:N7	2.70	0.58
1:A:1392:G:H1'	1:A:1503:A:P	2.43	0.58
2:B:27:LYS:H	2:B:28:PRO:CD	2.15	0.58
14:N:52:ARG:NH2	19:S:13:HIS:CE1	2.70	0.58
15:O:44:GLU:O	15:O:45:HIS:CG	2.55	0.58
1:A:46:G:C4'	1:A:48:C:H41	2.15	0.58
1:A:91:U:C5	1:A:92:U:H1'	2.37	0.58
1:A:161:A:C4	1:A:162:A:C8	2.92	0.58
1:A:227:G:C6	1:A:228:A:C5	2.91	0.58
1:A:282:A:N1	1:A:283:U:C2	2.71	0.58
1:A:383:A:N7	1:A:384:G:H1'	2.18	0.58
1:A:476:U:C2	1:A:477:C:C6	2.92	0.58
1:A:570:G:C8	1:A:873:A:C8	2.91	0.58
1:A:865:A:C6	1:A:866:C:C4	2.91	0.58
1:A:917:G:C2	1:A:918:A:C4	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:945:G:C4	1:A:1337:G:H1'	2.38	0.58
1:A:960:U:C2'	1:A:1223:C:H4'	2.33	0.58
1:A:983:A:H5'	14:N:8:ARG:HH22	1.68	0.58
1:A:1084:G:H2'	1:A:1085:U:C5	2.39	0.58
1:A:1213:A:C8	1:A:1215:G:C5	2.91	0.58
1:A:1238:A:H2'	1:A:1241:G:H1'	1.85	0.58
1:A:1264:U:C2	1:A:1272:G:N1	2.71	0.58
1:A:1373:G:O4'	7:G:34:LYS:HA	2.03	0.58
1:A:1375:A:H4'	7:G:28:ILE:HA	1.86	0.58
8:H:29:SER:H	8:H:32:LYS:HB2	1.69	0.58
11:K:51:PHE:CD1	11:K:55:ARG:HB3	2.38	0.58
16:P:16:PHE:HA	16:P:40:ASN:HA	1.85	0.58
22:W:38:GLU:H	22:W:83:PRO:HD2	1.68	0.58
1:A:38:G:H4'	1:A:547:A:C6	2.38	0.58
1:A:207:C:H2'	1:A:208:U:C5	2.38	0.58
1:A:227:G:C5	1:A:228:A:C8	2.91	0.58
1:A:262:A:C2	1:A:263:A:C5	2.91	0.58
1:A:369:G:C5	1:A:370:C:C5	2.90	0.58
1:A:435:A:C8	1:A:435:A:OP2	2.56	0.58
1:A:512:U:H3	1:A:539:A:N6	2.01	0.58
1:A:691:G:H1	11:K:53:GLY:HA2	1.69	0.58
1:A:711:G:H2'	1:A:712:A:H8	1.69	0.58
1:A:720:C:C6	1:A:733:G:C6	2.91	0.58
1:A:779:C:C4	1:A:801:U:OP2	2.57	0.58
1:A:856:C:H2'	1:A:857:C:O4'	2.04	0.58
1:A:903:G:H3'	1:A:904:U:C6	2.39	0.58
1:A:1053:G:C4	1:A:1199:U:C4	2.91	0.58
1:A:1053:G:C8	1:A:1053:G:H3'	2.38	0.58
1:A:1055:A:C6	1:A:1056:U:C2	2.92	0.58
1:A:1124:G:C2	1:A:1127:G:N2	2.71	0.58
1:A:1154:G:C8	1:A:1154:G:H5"	2.38	0.58
1:A:1197:A:C2	1:A:1198:G:C4	2.91	0.58
1:A:1239:A:C2	1:A:1241:G:C6	2.90	0.58
1:A:1296:C:C4	1:A:1297:G:C2	2.92	0.58
1:A:1373:G:C4'	7:G:34:LYS:HA	2.33	0.58
3:C:145:ALA:HB2	3:C:201:ILE:CG2	2.33	0.58
4:D:115:GLN:HE22	4:D:119:HIS:CD2	2.20	0.58
5:E:79:THR:HG23	5:E:97:PRO:CB	2.33	0.58
7:G:30:MET:HE1	7:G:35:LYS:CG	2.33	0.58
11:K:62:ALA:HB2	11:K:91:GLY:HA3	1.85	0.58
20:T:38:ILE:HA	20:T:46:ALA:HB2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:33:A:C2	1:A:552:U:C2	2.91	0.58
1:A:53:A:C2	1:A:359:G:C4	2.92	0.58
1:A:61:G:C8	20:T:5:SER:HB3	2.38	0.58
1:A:153:C:H2'	1:A:154:U:H5'	1.86	0.58
1:A:255:G:C2	1:A:272:C:O2	2.57	0.58
1:A:394:G:C4	1:A:395:C:C6	2.91	0.58
1:A:756:C:C4	1:A:757:U:C4	2.92	0.58
1:A:780:A:C2	1:A:803:G:N1	2.71	0.58
1:A:868:C:H3'	1:A:869:G:H8	1.69	0.58
1:A:941:G:N1	1:A:1343:G:C6	2.71	0.58
1:A:947:G:H1'	1:A:1332:A:H62	1.67	0.58
1:A:1006:G:C6	1:A:1007:U:C5	2.92	0.58
1:A:1056:U:C4	1:A:1200:C:C2	2.91	0.58
1:A:1059:C:N3	1:A:1060:U:C5	2.72	0.58
1:A:1062:U:H3'	1:A:1062:U:C6	2.38	0.58
1:A:1130:A:C5	1:A:1146:A:C6	2.91	0.58
1:A:1170:A:H5"	2:B:138:ARG:CZ	2.33	0.58
1:A:1203:C:H4'	14:N:66:THR:HG22	1.85	0.58
1:A:1275:A:H8	1:A:1275:A:O5'	1.85	0.58
1:A:1516:G:C2	1:A:1520:C:C2	2.91	0.58
4:D:100:VAL:HG11	4:D:136:VAL:HG11	1.85	0.58
11:K:30:ILE:HA	11:K:45:THR:HA	1.86	0.58
17:Q:22:VAL:HB	17:Q:45:VAL:HG11	1.85	0.58
1:A:185:U:H3'	1:A:186:C:C5	2.37	0.58
1:A:198:G:C6	1:A:220:G:C4	2.91	0.58
1:A:200:G:N1	1:A:218:U:C2	2.72	0.58
1:A:203:G:H2'	1:A:203:G:C5	2.38	0.58
1:A:451:A:OP2	1:A:452:A:C5	2.57	0.58
1:A:602:A:C6	1:A:637:C:C4	2.92	0.58
1:A:615:G:N3	1:A:626:G:C2	2.71	0.58
1:A:681:A:H2'	1:A:682:G:C8	2.39	0.58
1:A:831:A:C5	1:A:832:G:C8	2.91	0.58
1:A:836:G:C2	1:A:837:U:C2	2.92	0.58
1:A:869:G:H4'	1:A:872:A:C8	2.38	0.58
1:A:922:G:C6	1:A:923:A:C6	2.92	0.58
1:A:924:C:H1'	1:A:1399:C:C6	2.38	0.58
1:A:1082:A:H2'	1:A:1083:U:C6	2.39	0.58
1:A:1266:G:N2	1:A:1269:A:H8	1.99	0.58
1:A:1287:A:H2'	1:A:1288:A:C8	2.39	0.58
1:A:1377:A:OP1	7:G:94:ARG:HA	2.04	0.58
1:A:1379:G:H2'	1:A:1380:U:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1428:A:C5	1:A:1473:G:C2	2.92	0.58
2:B:16:GLY:HA3	2:B:40:ILE:HG12	1.85	0.58
4:D:99:ASN:HA	4:D:102:TYR:CZ	2.38	0.58
12:L:82:ARG:HH11	12:L:100:ALA:HB2	1.69	0.58
17:Q:10:ARG:HB3	17:Q:57:VAL:HA	1.84	0.58
1:A:35:G:C2	1:A:36:C:C2	2.91	0.58
1:A:104:G:O4'	1:A:172:A:C2	2.57	0.58
1:A:109:A:C5	1:A:326:G:C6	2.91	0.58
1:A:119:A:H4'	1:A:120:A:C4'	2.34	0.58
1:A:119:A:C5	1:A:240:G:C8	2.91	0.58
1:A:364:A:C2	1:A:365:U:N3	2.72	0.58
1:A:410:G:N1	1:A:430:A:H5'	2.19	0.58
1:A:447:G:O5'	1:A:447:G:C8	2.57	0.58
1:A:468:A:C2	1:A:470:C:N4	2.72	0.58
1:A:469:C:C6	1:A:470:C:C5	2.91	0.58
1:A:649:A:N1	1:A:650:G:C4	2.72	0.58
1:A:650:G:C8	1:A:650:G:C5'	2.83	0.58
1:A:686:U:C4	1:A:703:G:H1'	2.39	0.58
1:A:700:G:C4	1:A:701:U:C5	2.91	0.58
1:A:729:A:H2'	1:A:730:G:C8	2.39	0.58
1:A:904:U:OP2	1:A:905:U:H5	1.87	0.58
1:A:934:C:C5	1:A:1344:C:H2'	2.39	0.58
1:A:1144:G:C6	1:A:1145:A:C5	2.91	0.58
1:A:1263:C:C4	1:A:1264:U:C4	2.92	0.58
1:A:1279:G:C8	1:A:1281:C:H5	2.22	0.58
1:A:1289:A:N6	9:I:71:ILE:HD11	2.18	0.58
1:A:1500:A:N1	1:A:1501:C:C4	2.71	0.58
1:A:1510:C:C2	1:A:1526:G:C2	2.91	0.58
2:B:40:ILE:HD13	2:B:200:PRO:HB2	1.86	0.58
5:E:12:GLU:HA	5:E:38:VAL:HA	1.85	0.58
6:F:1:MET:HA	6:F:67:PRO:HA	1.86	0.58
6:F:11:HIS:CD2	6:F:14:GLN:HB2	2.38	0.58
7:G:45:ALA:HB1	7:G:123:LEU:HD12	1.86	0.58
1:A:61:G:C8	20:T:5:SER:CB	2.86	0.58
1:A:230:G:C5	1:A:231:U:C5	2.92	0.58
1:A:301:G:H2'	1:A:302:G:O4'	2.04	0.58
1:A:320:A:H1'	1:A:1435:G:H1'	1.86	0.58
1:A:329:A:H8	1:A:329:A:H5"	1.69	0.58
1:A:381:C:C5	1:A:382:A:C5	2.92	0.58
1:A:409:U:C2	1:A:410:G:C8	2.92	0.58
1:A:648:A:C2	1:A:649:A:C4	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:656:G:N2	15:O:22:GLY:HA3	2.18	0.58
1:A:763:G:C2	1:A:764:C:C2	2.92	0.58
1:A:880:C:OP2	12:L:2:THR:HG21	2.04	0.58
1:A:978:A:H4'	1:A:1322:C:C6	2.39	0.58
1:A:1046:A:C5	1:A:1047:G:C8	2.90	0.58
1:A:1075:U:H4'	2:B:170:ILE:HG23	1.86	0.58
1:A:1091:U:O2	1:A:1095:U:C2	2.57	0.58
1:A:1213:A:C5	1:A:1215:G:C4	2.91	0.58
1:A:1246:A:C4	1:A:1292:G:C2	2.91	0.58
1:A:1343:G:H2'	1:A:1344:C:C6	2.39	0.58
2:B:19:THR:HG21	2:B:189:ASN:HD21	1.68	0.58
2:B:204:ASP:CA	2:B:209:VAL:HG21	2.34	0.58
4:D:97:LEU:HA	4:D:136:VAL:CG2	2.33	0.58
17:Q:23:ALA:HB1	17:Q:25:GLU:CG	2.34	0.58
20:T:46:ALA:HB1	20:T:82:ILE:HA	1.86	0.58
1:A:57:G:N1	1:A:58:C:C2	2.71	0.58
1:A:272:C:C4	1:A:273:U:C4	2.92	0.58
1:A:280:C:H42	17:Q:38:LYS:H	1.51	0.58
1:A:313:A:C5	1:A:314:C:C5	2.92	0.58
1:A:410:G:H2'	1:A:429:U:C4	2.38	0.58
1:A:442:G:C5	1:A:443:C:C5	2.92	0.58
1:A:661:G:C6	1:A:662:U:C2	2.92	0.58
1:A:668:G:C6	1:A:669:G:C5	2.92	0.58
1:A:678:U:O2	1:A:713:G:C2	2.57	0.58
1:A:748:G:C6	1:A:749:A:C4	2.92	0.58
1:A:762:U:H2'	1:A:763:G:H8	1.68	0.58
1:A:1034:G:C6	1:A:1035:A:C5	2.92	0.58
1:A:1256:A:C4	1:A:1278:G:C2	2.92	0.58
1:A:1263:C:C5	1:A:1264:U:C5	2.92	0.58
1:A:1419:G:C2	1:A:1420:U:C6	2.92	0.58
4:D:107:GLY:HA3	4:D:113:ALA:HA	1.84	0.58
20:T:21:ALA:HA	20:T:24:ARG:HE	1.69	0.58
22:W:177:MET:HB3	22:W:187:VAL:HG21	1.86	0.58
1:A:35:G:C4	1:A:36:C:C5	2.92	0.57
1:A:64:G:C8	1:A:99:C:C5	2.91	0.57
1:A:70:U:C5	1:A:96:U:OP2	2.57	0.57
1:A:121:U:C5	1:A:122:G:H8	2.19	0.57
1:A:142:G:N2	1:A:222:C:C6	2.72	0.57
1:A:196:A:C8	1:A:196:A:H3'	2.39	0.57
1:A:253:A:C6	1:A:274:A:C2	2.92	0.57
1:A:254:G:OP1	1:A:266:G:H3'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:258:G:C6	1:A:259:G:C5	2.92	0.57
1:A:282:A:H3'	1:A:283:U:C6	2.39	0.57
1:A:297:G:N2	1:A:299:G:C8	2.72	0.57
1:A:303:A:C4	1:A:304:U:C6	2.92	0.57
1:A:341:C:C2	1:A:342:C:C5	2.92	0.57
1:A:439:U:H2'	1:A:440:C:H5'	1.86	0.57
1:A:541:G:N3	4:D:41:GLY:HA3	2.19	0.57
1:A:632:U:C6	1:A:633:G:C5	2.92	0.57
1:A:689:C:H2'	1:A:690:G:H5'	1.86	0.57
1:A:695:A:C2	1:A:696:A:C5	2.92	0.57
1:A:700:G:C2	1:A:701:U:C2	2.92	0.57
1:A:715:A:C2	1:A:716:A:C5	2.92	0.57
1:A:729:A:H2'	1:A:730:G:O4'	2.04	0.57
1:A:828:U:C4	1:A:858:G:N3	2.72	0.57
1:A:846:G:C2	1:A:847:G:C4	2.92	0.57
1:A:951:G:C6	1:A:952:U:C4	2.92	0.57
1:A:957:U:H3'	1:A:959:A:OP2	2.04	0.57
1:A:958:A:H1'	1:A:986:U:H5'	1.86	0.57
1:A:980:C:H3'	1:A:981:U:C6	2.39	0.57
1:A:1031:C:H1'	1:A:1032:G:H21	1.68	0.57
1:A:1062:U:C5	1:A:1062:U:OP2	2.57	0.57
1:A:1142:G:H5'	1:A:1143:G:OP2	2.01	0.57
1:A:1375:A:C2	1:A:1376:U:C2	2.92	0.57
1:A:1438:G:C2	1:A:1439:G:N7	2.72	0.57
1:A:1440:U:H2'	1:A:1441:A:C8	2.39	0.57
8:H:103:VAL:HG11	8:H:116:ARG:NH2	2.19	0.57
10:J:12:ALA:O	10:J:70:HIS:CD2	2.57	0.57
13:M:3:ILE:HD11	13:M:33:LEU:HD12	1.85	0.57
17:Q:66:LEU:HD11	17:Q:73:THR:HA	1.86	0.57
20:T:5:SER:HA	20:T:7:LYS:H	1.69	0.57
1:A:64:G:C6	1:A:67:C:N4	2.72	0.57
1:A:95:C:C2	1:A:96:U:C5	2.92	0.57
1:A:98:A:H2'	1:A:99:C:O4'	2.04	0.57
1:A:303:A:C2	1:A:304:U:N1	2.72	0.57
1:A:398:U:H2'	1:A:399:G:C8	2.39	0.57
1:A:404:G:N7	4:D:1:ALA:HA	2.19	0.57
1:A:466:A:N1	1:A:468:A:C5	2.72	0.57
1:A:509:A:C5	1:A:510:A:N1	2.72	0.57
1:A:801:U:H2'	1:A:802:A:H8	1.68	0.57
1:A:822:U:C4	1:A:823:C:C4	2.92	0.57
1:A:960:U:H3	1:A:1225:A:H1'	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1053:G:H5”	1:A:1200:C:C5	2.39	0.57
1:A:1289:A:H61	9:I:71:ILE:CD1	2.17	0.57
1:A:1356:G:C6	1:A:1357:A:C6	2.93	0.57
1:A:1376:U:H5’	7:G:101:ARG:HE	1.68	0.57
1:A:1419:G:C6	1:A:1420:U:C4	2.92	0.57
1:A:1438:G:N3	1:A:1464:U:H1’	2.19	0.57
1:A:1440:U:C6	1:A:1440:U:H3’	2.39	0.57
1:A:1494:G:C6	1:A:1495:U:C5	2.92	0.57
2:B:70:GLY:HA2	2:B:79:VAL:HG21	1.86	0.57
3:C:17:TRP:HB3	14:N:93:PRO:HA	1.85	0.57
3:C:128:MET:H	3:C:131:ARG:HE	1.50	0.57
3:C:189:HIS:CE1	3:C:194:VAL:CG2	2.87	0.57
4:D:150:LYS:HZ2	4:D:154:VAL:HG12	1.69	0.57
6:F:15:SER:HB3	6:F:58:HIS:CB	2.35	0.57
13:M:32:ILE:O	13:M:55:LEU:HD13	2.04	0.57
1:A:64:G:N3	1:A:67:C:C5	2.73	0.57
1:A:94:G:H4’	1:A:95:C:O5’	2.00	0.57
1:A:434:U:C2	1:A:435:A:C8	2.92	0.57
1:A:484:G:H21	1:A:485:U:H4’	1.69	0.57
1:A:562:U:H4’	1:A:563:A:C2	2.40	0.57
1:A:580:C:H1’	15:O:56:LEU:HD22	1.86	0.57
1:A:685:G:N1	1:A:686:U:C4	2.72	0.57
1:A:695:A:H2’	1:A:696:A:H8	1.68	0.57
1:A:786:G:H3’	1:A:787:A:C8	2.39	0.57
1:A:937:A:H1’	1:A:1379:G:N1	2.19	0.57
1:A:1128:C:H2’	1:A:1129:C:C5	2.40	0.57
1:A:1242:G:C4	1:A:1243:C:C6	2.91	0.57
1:A:1251:A:H5’	9:I:69:GLY:H	1.69	0.57
1:A:1273:C:C6	1:A:1273:C:H3’	2.40	0.57
1:A:1349:A:C5	1:A:1350:A:H1’	2.39	0.57
1:A:1370:G:H3’	9:I:110:VAL:HB	1.86	0.57
2:B:85:SER:HB3	2:B:88:GLN:HE21	1.69	0.57
4:D:8:LEU:HD21	4:D:28:ASP:HA	1.86	0.57
4:D:53:GLN:HB3	4:D:202:LEU:HD13	1.85	0.57
7:G:49:LEU:HD13	7:G:124:SER:HA	1.85	0.57
15:O:45:HIS:CB	15:O:47:LYS:H	2.17	0.57
17:Q:11:VAL:HG12	17:Q:21:VAL:C	2.30	0.57
17:Q:27:PHE:HA	17:Q:38:LYS:HZ2	1.69	0.57
1:A:49:U:O4	1:A:361:G:C4	2.56	0.57
1:A:78:A:N7	1:A:79:G:C6	2.72	0.57
1:A:177:G:H3’	1:A:177:G:C4	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:377:G:C6	1:A:378:G:C5	2.93	0.57
1:A:647:C:C2	1:A:648:A:C8	2.92	0.57
1:A:669:G:C6	1:A:670:G:C6	2.92	0.57
1:A:715:A:H2'	1:A:716:A:C8	2.38	0.57
1:A:938:A:H1'	1:A:1377:A:O4'	2.05	0.57
1:A:994:A:H61	1:A:1047:G:C1'	2.17	0.57
1:A:1033:G:C6	1:A:1034:G:C6	2.92	0.57
1:A:1080:A:H5"	5:E:20:VAL:HB	1.86	0.57
1:A:1146:A:C5	1:A:1147:C:C6	2.93	0.57
1:A:1234:C:H4'	1:A:1364:U:H1'	1.85	0.57
1:A:1281:C:N4	10:J:9:ARG:HH12	2.01	0.57
1:A:1300:G:C8	1:A:1333:A:OP1	2.58	0.57
1:A:1375:A:H5'	7:G:28:ILE:HA	1.84	0.57
1:A:1433:A:C8	1:A:1468:A:C4	2.91	0.57
1:A:1466:C:H3'	1:A:1467:C:H6	1.67	0.57
13:M:28:ARG:CZ	13:M:32:ILE:HD11	2.34	0.57
1:A:59:A:C2	1:A:354:G:C8	2.92	0.57
1:A:105:G:H21	1:A:380:G:C5'	2.17	0.57
1:A:223:A:C8	1:A:223:A:O5'	2.57	0.57
1:A:240:G:N1	1:A:241:G:C4	2.72	0.57
1:A:258:G:C4	1:A:259:G:C8	2.92	0.57
1:A:405:U:H4'	1:A:498:A:C4	2.40	0.57
1:A:424:G:C4	1:A:425:G:C8	2.92	0.57
1:A:446:G:C2	1:A:447:G:H1'	2.40	0.57
1:A:591:U:C6	1:A:591:U:H3'	2.40	0.57
1:A:597:G:H21	8:H:83:ARG:HH12	1.53	0.57
1:A:603:U:H3'	1:A:603:U:C6	2.38	0.57
1:A:655:A:C6	1:A:656:G:C5	2.92	0.57
1:A:696:A:C2	1:A:786:G:N3	2.73	0.57
1:A:833:G:C4	1:A:854:U:C2	2.93	0.57
1:A:954:G:C6	1:A:955:U:C4	2.93	0.57
1:A:1074:G:H21	2:B:97:GLY:HA3	1.69	0.57
1:A:1089:G:C5	1:A:1090:U:C6	2.92	0.57
1:A:1154:G:C2	1:A:1155:A:C8	2.92	0.57
1:A:1185:G:C6	1:A:1186:G:C5	2.93	0.57
1:A:1194:U:H3'	1:A:1195:C:H5	1.69	0.57
1:A:1373:G:H4'	7:G:35:LYS:H	1.70	0.57
1:A:1391:U:H2'	1:A:1392:G:N7	2.20	0.57
1:A:1442:G:C6	1:A:1461:G:C2	2.92	0.57
6:F:35:LYS:O	6:F:64:VAL:HA	2.04	0.57
11:K:33:ILE:HD12	11:K:70:ALA:HA	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:34:THR:HA	12:L:76:HIS:CE1	2.40	0.57
1:A:19:A:C4	1:A:20:U:C6	2.92	0.57
1:A:191:G:H5"	1:A:191:G:C8	2.39	0.57
1:A:251:G:H2'	1:A:269:C:OP1	2.04	0.57
1:A:253:A:H61	1:A:273:U:H3	1.52	0.57
1:A:499:A:C5	1:A:546:A:C5	2.93	0.57
1:A:581:G:H2'	1:A:582:C:C6	2.39	0.57
1:A:849:G:C2	1:A:850:U:C1'	2.88	0.57
1:A:858:G:H22	1:A:869:G:C2'	2.17	0.57
1:A:898:G:N2	1:A:900:A:H3'	2.20	0.57
1:A:925:G:H5'	1:A:1502:A:N1	2.20	0.57
1:A:939:G:C2	1:A:1375:A:C2	2.93	0.57
1:A:941:G:H21	9:I:122:ARG:HH12	1.51	0.57
1:A:976:G:C8	1:A:1362:A:C5	2.91	0.57
1:A:1084:G:H5'	1:A:1102:A:H5"	1.87	0.57
1:A:1084:G:C5	1:A:1085:U:C4	2.92	0.57
1:A:1148:U:C4	1:A:1149:C:N3	2.73	0.57
1:A:1175:G:C6	1:A:1176:A:C5	2.92	0.57
1:A:1256:A:H61	1:A:1277:C:H2'	1.70	0.57
1:A:1353:G:C6	1:A:1354:U:C5	2.93	0.57
1:A:1360:A:C5	1:A:1361:G:C5	2.93	0.57
1:A:1507:A:C8	1:A:1531:A:C2	2.93	0.57
8:H:70:VAL:HG23	8:H:71:VAL:H	1.70	0.57
10:J:42:LEU:HD11	10:J:73:LEU:HD23	1.86	0.57
13:M:24:VAL:CG1	13:M:59:VAL:HG21	2.35	0.57
1:A:9:G:C2	1:A:26:A:C4	2.92	0.57
1:A:70:U:C6	1:A:94:G:O2'	2.56	0.57
1:A:104:G:C4	1:A:105:G:C8	2.93	0.57
1:A:127:G:H4'	17:Q:3:LYS:N	2.20	0.57
1:A:218:U:C5	1:A:219:U:C4	2.93	0.57
1:A:261:U:H3	1:A:264:C:P	2.27	0.57
1:A:300:A:H2'	1:A:564:C:N3	2.20	0.57
1:A:327:A:C5	1:A:329:A:C5	2.92	0.57
1:A:369:G:C2	1:A:393:A:N3	2.72	0.57
1:A:450:G:C8	1:A:481:G:C6	2.92	0.57
1:A:521:G:H21	1:A:536:C:C4'	2.17	0.57
1:A:570:G:C5	1:A:873:A:C4	2.92	0.57
1:A:579:A:C2	1:A:580:C:C2	2.92	0.57
1:A:657:U:H4'	15:O:27:GLN:CB	2.35	0.57
1:A:671:G:C2	1:A:736:C:C6	2.92	0.57
1:A:851:G:N1	1:A:852:G:C6	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:875:U:C4	1:A:876:C:C6	2.93	0.57
1:A:894:G:C4	1:A:895:G:C8	2.92	0.57
1:A:1021:A:C6	1:A:1022:A:C8	2.91	0.57
1:A:1057:G:H1'	3:C:194:VAL:HG11	1.85	0.57
1:A:1089:G:N2	1:A:1170:A:H1'	2.19	0.57
1:A:1127:G:O4'	1:A:1280:A:C5	2.56	0.57
1:A:1193:G:C8	1:A:1193:G:C3'	2.88	0.57
1:A:1221:G:C2	1:A:1222:G:C4	2.92	0.57
1:A:1304:G:H2'	1:A:1305:G:C1'	2.35	0.57
1:A:1500:A:C6	1:A:1501:C:C4	2.92	0.57
2:B:95:TRP:CZ3	2:B:171:ALA:HA	2.40	0.57
5:E:106:ALA:HB1	5:E:111:ARG:CD	2.34	0.57
1:A:3:A:C2	1:A:627:G:H2'	2.39	0.57
1:A:72:A:C5	1:A:73:C:C5	2.92	0.57
1:A:144:G:C6	1:A:179:A:N6	2.73	0.57
1:A:196:A:C8	1:A:196:A:C3'	2.88	0.57
1:A:403:C:N4	1:A:547:A:C5'	2.66	0.57
1:A:455:G:C8	1:A:455:G:O5'	2.58	0.57
1:A:701:U:C5	1:A:702:A:C6	2.92	0.57
1:A:714:G:C6	1:A:715:A:C6	2.93	0.57
1:A:761:G:C6	1:A:762:U:N3	2.72	0.57
1:A:804:U:H3'	1:A:805:C:C6	2.40	0.57
1:A:839:C:C6	1:A:839:C:O5'	2.57	0.57
1:A:869:G:C8	1:A:869:G:O5'	2.57	0.57
1:A:1118:U:H1'	1:A:1179:A:C4	2.40	0.57
1:A:1176:A:H3'	1:A:1177:G:H8	1.70	0.57
1:A:1269:A:H1'	1:A:1312:G:N2	2.20	0.57
1:A:1366:C:C2	1:A:1367:C:C6	2.93	0.57
1:A:1371:G:C5	1:A:1372:U:C4	2.93	0.57
1:A:1414:U:H1'	1:A:1487:G:H22	1.70	0.57
1:A:1511:G:N1	1:A:1512:U:C2	2.73	0.57
1:A:1513:A:C2	1:A:1514:G:C5	2.92	0.57
3:C:4:VAL:HG13	3:C:8:GLY:HA3	1.85	0.57
3:C:194:VAL:HG12	3:C:195:ILE:N	2.19	0.57
4:D:97:LEU:HD13	4:D:124:VAL:CG1	2.35	0.57
13:M:4:ALA:HB3	13:M:59:VAL:HG13	1.87	0.57
17:Q:44:HIS:CE1	17:Q:70:LYS:NZ	2.73	0.57
1:A:19:A:H1'	1:A:864:A:H1'	1.86	0.57
1:A:74:A:N6	1:A:94:G:C6	2.73	0.57
1:A:321:A:C2	1:A:333:U:C2	2.92	0.57
1:A:452:A:C2	1:A:453:G:H1'	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:459:A:H3'	1:A:460:A:C8	2.39	0.57
1:A:474:G:N7	1:A:475:C:C5	2.73	0.57
1:A:580:C:H3'	1:A:581:G:H8	1.69	0.57
1:A:585:G:C5	1:A:586:C:C5	2.92	0.57
1:A:630:A:H3'	1:A:631:C:O2	2.04	0.57
1:A:645:G:C6	1:A:646:G:N7	2.72	0.57
1:A:774:G:H3'	1:A:775:G:C8	2.39	0.57
1:A:956:U:O5'	1:A:956:U:H6	1.88	0.57
1:A:1040:U:H2'	1:A:1041:G:C8	2.39	0.57
1:A:1045:C:N3	1:A:1046:A:C8	2.73	0.57
1:A:1066:C:C6	1:A:1066:C:C5'	2.83	0.57
1:A:1068:G:C5	1:A:1069:C:C5	2.93	0.57
1:A:1264:U:H1'	1:A:1272:G:C2	2.40	0.57
1:A:1327:C:C2	1:A:1328:C:C6	2.92	0.57
1:A:1479:C:H2'	1:A:1480:A:H8	1.67	0.57
1:A:1501:C:C5	1:A:1504:G:H1'	2.40	0.57
3:C:2:GLN:HE21	3:C:3:LYS:HB3	1.70	0.57
3:C:122:GLN:C	3:C:127:VAL:HG22	2.29	0.57
5:E:54:GLU:CD	5:E:55:VAL:H	2.13	0.57
13:M:2:ARG:NH1	13:M:6:ILE:HG22	2.19	0.57
15:O:14:PHE:CE2	15:O:83:ARG:HB3	2.40	0.57
18:R:21:ASP:HA	18:R:57:ALA:CB	2.35	0.57
1:A:12:U:H4'	1:A:526:C:C4'	2.35	0.57
1:A:98:A:N7	1:A:99:C:C5	2.73	0.57
1:A:141:G:H3'	1:A:142:G:C8	2.40	0.57
1:A:217:C:H4'	1:A:463:U:C5	2.40	0.57
1:A:291:U:H3	1:A:309:A:H61	1.53	0.57
1:A:292:G:C6	1:A:309:A:C6	2.93	0.57
1:A:410:G:H2'	1:A:429:U:C5	2.40	0.57
1:A:541:G:C4'	4:D:39:GLN:HE21	2.17	0.57
1:A:867:G:C2	1:A:868:C:C2	2.92	0.57
1:A:941:G:C2	1:A:942:G:N9	2.73	0.57
1:A:1012:A:C5	14:N:49:THR:O	2.58	0.57
1:A:1057:G:C6	1:A:1058:G:C4	2.93	0.57
1:A:1058:G:C5	1:A:1059:C:C6	2.93	0.57
1:A:1072:G:C5	1:A:1073:U:C4	2.93	0.57
1:A:1128:C:O2'	1:A:1148:U:C4	2.57	0.57
1:A:1157:A:C8	1:A:1181:G:O6	2.58	0.57
1:A:1239:A:H62	1:A:1299:A:H61	1.53	0.57
1:A:1352:C:C2	1:A:1371:G:C2	2.93	0.57
1:A:1451:U:C6	1:A:1453:G:N7	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:12:LYS:HA	9:I:109:GLN:HA	1.87	0.57
1:A:98:A:C8	1:A:99:C:C6	2.93	0.56
1:A:120:A:C2	1:A:122:G:C6	2.92	0.56
1:A:153:C:C5	1:A:154:U:C6	2.94	0.56
1:A:168:G:C8	1:A:168:G:H3'	2.39	0.56
1:A:247:G:C8	1:A:247:G:H3'	2.39	0.56
1:A:262:A:C2	1:A:263:A:C4	2.93	0.56
1:A:531:U:C5	1:A:535:A:N6	2.73	0.56
1:A:539:A:C6	1:A:540:G:C4	2.93	0.56
1:A:613:C:C2	1:A:628:G:C2	2.93	0.56
1:A:761:G:C4	1:A:762:U:C6	2.93	0.56
1:A:773:G:H3'	1:A:773:G:C8	2.40	0.56
1:A:865:A:C2	1:A:918:A:H4'	2.40	0.56
1:A:916:U:C6	1:A:916:U:O5'	2.58	0.56
1:A:949:A:H1'	1:A:1364:U:C5	2.39	0.56
1:A:954:G:C8	1:A:954:G:O5'	2.58	0.56
1:A:1035:A:C8	1:A:1035:A:H3'	2.40	0.56
1:A:1060:U:OP2	3:C:5:HIS:CE1	2.58	0.56
1:A:1096:C:C5	1:A:1097:C:C5	2.92	0.56
1:A:1300:G:C6	1:A:1335:U:C5	2.92	0.56
1:A:1306:A:C2	1:A:1307:U:C1'	2.87	0.56
1:A:1381:U:C5	7:G:78:ARG:O	2.58	0.56
3:C:18:ASN:HB3	3:C:55:VAL:HA	1.87	0.56
8:H:1:SER:H3	8:H:8:ASP:HB2	1.70	0.56
11:K:47:GLY:HA2	11:K:56:LYS:HB3	1.86	0.56
12:L:79:ILE:HB	12:L:96:THR:HG23	1.87	0.56
15:O:78:THR:HA	15:O:81:ILE:HD11	1.85	0.56
20:T:57:VAL:O	20:T:61:ALA:HB3	2.04	0.56
1:A:32:A:P	1:A:398:U:H1'	2.45	0.56
1:A:52:C:H3'	1:A:52:C:H6	1.68	0.56
1:A:105:G:N2	1:A:106:C:C4	2.73	0.56
1:A:159:G:H5'	1:A:159:G:H8	1.70	0.56
1:A:214:C:C4	1:A:215:C:C4	2.93	0.56
1:A:312:C:H2'	1:A:313:A:H8	1.70	0.56
1:A:346:G:N2	1:A:347:G:C6	2.73	0.56
1:A:404:G:N3	1:A:498:A:H2	2.03	0.56
1:A:405:U:C4	4:D:4:LEU:HG	2.39	0.56
1:A:526:C:C4	1:A:527:G:H1'	2.40	0.56
1:A:705:G:N1	11:K:43:TRP:CE2	2.72	0.56
1:A:803:G:C6	1:A:804:U:C4	2.93	0.56
1:A:872:A:H1'	1:A:873:A:C2'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:890:G:C8	1:A:904:U:OP1	2.59	0.56
1:A:1056:U:H3	1:A:1204:A:N6	2.02	0.56
1:A:1088:G:C2	1:A:1098:C:O2	2.58	0.56
1:A:1094:G:O5'	1:A:1095:U:C5	2.58	0.56
1:A:1125:U:C4	1:A:1127:G:C4	2.93	0.56
1:A:1166:G:H2'	1:A:1170:A:H61	1.70	0.56
1:A:1188:A:C8	1:A:1188:A:OP2	2.58	0.56
1:A:1207:G:C5	1:A:1208:C:C5	2.93	0.56
1:A:1268:G:C4	1:A:1269:A:C8	2.93	0.56
1:A:1348:U:C4	1:A:1349:A:N7	2.74	0.56
1:A:1382:C:H2'	1:A:1383:C:C6	2.39	0.56
1:A:1394:A:H5'	1:A:1395:C:C6	2.40	0.56
1:A:1420:U:H3'	1:A:1421:G:C8	2.40	0.56
1:A:1434:A:C4	1:A:1435:G:C8	2.92	0.56
1:A:1484:C:H2'	1:A:1485:U:O4'	2.05	0.56
9:I:51:LEU:HB3	9:I:55:ASP:HA	1.86	0.56
1:A:37:U:C5	12:L:123:ALA:N	2.73	0.56
1:A:42:G:C5	1:A:43:C:C5	2.94	0.56
1:A:42:G:H21	1:A:622:A:H1'	1.68	0.56
1:A:68:G:N2	1:A:152:A:H2'	2.21	0.56
1:A:78:A:H2'	1:A:79:G:C1'	2.35	0.56
1:A:81:A:OP2	1:A:83:C:C6	2.59	0.56
1:A:101:A:C5	1:A:102:G:C5	2.93	0.56
1:A:155:A:C2	1:A:167:A:N3	2.73	0.56
1:A:181:A:HO2'	1:A:194:C:H5	1.52	0.56
1:A:209:U:H5"	1:A:210:C:C5	2.41	0.56
1:A:237:G:C6	1:A:238:A:C5	2.93	0.56
1:A:252:U:H5"	1:A:252:U:C6	2.38	0.56
1:A:300:A:H1'	1:A:565:U:H3	1.71	0.56
1:A:317:U:C4	1:A:337:G:N2	2.73	0.56
1:A:346:G:N2	1:A:347:G:C4	2.73	0.56
1:A:411:A:OP2	1:A:429:U:H6	1.87	0.56
1:A:425:G:C6	1:A:426:U:C4	2.93	0.56
1:A:439:U:C6	1:A:440:C:C6	2.93	0.56
1:A:464:U:H2'	1:A:466:A:OP2	2.06	0.56
1:A:500:G:C8	1:A:500:G:H5"	2.41	0.56
1:A:500:G:H5"	1:A:500:G:H8	1.70	0.56
1:A:527:G:C6	1:A:528:C:C5	2.93	0.56
1:A:547:A:N3	1:A:548:G:H1'	2.20	0.56
1:A:567:G:C5	1:A:568:G:N7	2.73	0.56
1:A:577:G:N2	1:A:578:C:H1'	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:592:G:C5	1:A:593:U:C5	2.93	0.56
1:A:599:C:C5	8:H:87:ARG:HG2	2.40	0.56
1:A:631:C:H4'	1:A:632:U:C6	2.41	0.56
1:A:654:G:C6	1:A:753:A:C8	2.93	0.56
1:A:668:G:C2	1:A:669:G:C4	2.94	0.56
1:A:687:A:H5'	11:K:68:ARG:HH12	1.69	0.56
1:A:714:G:H2'	1:A:715:A:C8	2.38	0.56
1:A:863:U:H2'	1:A:865:A:N7	2.20	0.56
1:A:865:A:C2	1:A:866:C:C2	2.94	0.56
1:A:908:A:H2'	1:A:909:A:C8	2.40	0.56
1:A:941:G:N3	1:A:1343:G:C2	2.73	0.56
1:A:1020:G:C6	1:A:1021:A:N7	2.73	0.56
1:A:1022:A:H5'	1:A:1022:A:N9	2.20	0.56
1:A:1032:G:C2	1:A:1033:G:C8	2.94	0.56
1:A:1095:U:C4	1:A:1096:C:N3	2.73	0.56
1:A:1126:U:C2	1:A:1280:A:H3'	2.41	0.56
1:A:1127:G:C6	1:A:1128:C:C4	2.94	0.56
1:A:1165:U:H2'	1:A:1166:G:O4'	2.06	0.56
1:A:1195:C:C6	1:A:1195:C:O5'	2.59	0.56
1:A:1202:U:C5	1:A:1203:C:C4	2.93	0.56
1:A:1215:G:C5	1:A:1216:A:C8	2.93	0.56
1:A:1228:C:H2'	1:A:1229:A:H8	1.71	0.56
1:A:1239:A:H1'	1:A:1241:G:N7	2.20	0.56
1:A:1256:A:C2	1:A:1258:G:C6	2.93	0.56
1:A:1299:A:OP2	1:A:1301:U:C5	2.57	0.56
1:A:1305:G:HO2'	1:A:1306:A:H8	1.53	0.56
1:A:1307:U:H5"	13:M:99:GLN:NE2	2.19	0.56
1:A:1315:U:C2	1:A:1316:G:C4	2.93	0.56
1:A:1319:A:H4'	1:A:1320:C:OP1	2.05	0.56
1:A:1473:G:C5	1:A:1474:U:C5	2.93	0.56
3:C:125:ARG:HH21	3:C:127:VAL:HG11	1.70	0.56
4:D:170:LEU:HA	4:D:182:LYS:H	1.68	0.56
5:E:88:HIS:CE1	5:E:137:ARG:CD	2.89	0.56
9:I:51:LEU:HD23	9:I:86:LEU:HD21	1.87	0.56
10:J:68:ARG:HH21	10:J:70:HIS:HD1	1.53	0.56
11:K:51:PHE:HB3	11:K:56:LYS:N	2.21	0.56
15:O:38:LEU:HD12	15:O:41:HIS:CD2	2.39	0.56
22:W:80:VAL:HB	22:W:99:ALA:HB3	1.87	0.56
1:A:94:G:H5"	1:A:95:C:C6	2.40	0.56
1:A:293:G:C6	1:A:294:U:C5	2.94	0.56
1:A:478:A:N3	1:A:479:U:C6	2.72	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:496:A:N1	1:A:497:G:C6	2.73	0.56
1:A:533:A:C2	1:A:535:A:H8	2.22	0.56
1:A:536:C:C5	1:A:537:G:N7	2.74	0.56
1:A:582:C:C2	1:A:760:G:N1	2.73	0.56
1:A:633:G:C8	1:A:634:C:C5	2.93	0.56
1:A:712:A:N1	1:A:713:G:C6	2.74	0.56
1:A:829:G:C5	1:A:830:G:C8	2.94	0.56
1:A:877:G:H21	8:H:3:GLN:HG3	1.70	0.56
1:A:903:G:C5	1:A:904:U:C5	2.94	0.56
1:A:914:A:H5"	1:A:914:A:H8	1.70	0.56
1:A:978:A:C5	1:A:1319:A:C2	2.92	0.56
1:A:1159:U:H5'	1:A:1182:G:H1'	1.87	0.56
1:A:1179:A:H5"	9:I:98:ARG:HA	1.88	0.56
1:A:1211:U:H1'	1:A:1213:A:C2	2.39	0.56
1:A:1237:C:C5'	1:A:1303:C:O2	2.53	0.56
1:A:1266:G:C2	1:A:1270:G:C5	2.93	0.56
1:A:1346:A:C2	1:A:1347:G:N2	2.74	0.56
1:A:1352:C:C4	1:A:1371:G:C6	2.94	0.56
1:A:1381:U:H2'	7:G:80:GLY:H	1.68	0.56
1:A:1406:U:C6	1:A:1406:U:C5'	2.88	0.56
1:A:1418:A:C6	1:A:1419:G:C4	2.93	0.56
4:D:100:VAL:HB	4:D:136:VAL:HG21	1.88	0.56
5:E:45:VAL:HG13	5:E:73:VAL:HG21	1.87	0.56
6:F:21:MET:HE3	6:F:84:VAL:HB	1.88	0.56
11:K:41:LEU:HD22	11:K:76:TYR:CE2	2.40	0.56
22:W:217:GLY:HA3	22:W:235:LEU:C	2.31	0.56
1:A:39:G:C5	1:A:404:G:C2	2.94	0.56
1:A:50:A:C2	1:A:361:G:N3	2.74	0.56
1:A:177:G:H5'	20:T:60:GLN:HE22	1.69	0.56
1:A:323:U:O4	1:A:327:A:C8	2.59	0.56
1:A:404:G:O6	4:D:1:ALA:HB2	2.04	0.56
1:A:590:U:C2	1:A:650:G:C2	2.93	0.56
1:A:639:G:H3'	1:A:640:A:C8	2.40	0.56
1:A:649:A:C8	1:A:649:A:H3'	2.40	0.56
1:A:670:G:N2	1:A:737:C:C2	2.73	0.56
1:A:767:A:H2'	1:A:768:A:C8	2.41	0.56
1:A:956:U:N3	1:A:1225:A:C2	2.74	0.56
1:A:994:A:C6	1:A:995:C:C5	2.93	0.56
1:A:1012:A:C2	1:A:1018:G:C4	2.93	0.56
1:A:1013:G:N2	1:A:1015:G:C8	2.74	0.56
1:A:1059:C:P	3:C:1:GLY:H1	2.28	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1147:C:H2'	1:A:1148:U:C6	2.41	0.56
1:A:1173:U:H2'	1:A:1174:G:C8	2.40	0.56
1:A:1244:G:N1	1:A:1294:G:C4	2.73	0.56
1:A:1251:A:O3'	1:A:1370:G:H4'	2.06	0.56
1:A:1306:A:C8	1:A:1332:A:N1	2.74	0.56
1:A:1306:A:N3	13:M:107:THR:HG21	2.19	0.56
1:A:1410:A:C5	1:A:1411:C:C5	2.93	0.56
1:A:1426:G:N2	1:A:1475:G:H1'	2.21	0.56
1:A:1493:A:C6	22:W:66:ILE:HB	2.41	0.56
9:I:117:LEU:C	9:I:119:LYS:H	2.12	0.56
22:W:51:HIS:CE1	22:W:63:ARG:HE	2.23	0.56
1:A:35:G:C4	1:A:36:C:C6	2.93	0.56
1:A:70:U:H3	1:A:98:A:H61	1.52	0.56
1:A:119:A:C6	1:A:288:A:C4	2.94	0.56
1:A:155:A:C5	1:A:156:C:C5	2.93	0.56
1:A:168:G:N1	1:A:169:C:C4	2.74	0.56
1:A:384:G:C5	1:A:385:C:C4	2.93	0.56
1:A:404:G:H2'	1:A:498:A:N1	2.20	0.56
1:A:452:A:C4	16:P:70:ARG:CZ	2.89	0.56
1:A:593:U:H2'	1:A:594:U:C5	2.40	0.56
1:A:594:U:C5	1:A:595:A:N6	2.73	0.56
1:A:629:A:C8	1:A:629:A:OP2	2.58	0.56
1:A:712:A:N3	1:A:713:G:C8	2.73	0.56
1:A:727:G:H22	1:A:729:A:H3'	1.71	0.56
1:A:840:C:C2'	1:A:843:U:H3	2.19	0.56
1:A:894:G:C2	1:A:895:G:C4	2.93	0.56
1:A:927:G:C2	1:A:928:G:C4	2.93	0.56
1:A:960:U:O2	1:A:1225:A:C5	2.59	0.56
1:A:1000:A:C6	1:A:1001:C:C2	2.94	0.56
1:A:1053:G:C5'	1:A:1200:C:C5	2.89	0.56
1:A:1120:C:C6	1:A:1154:G:C2	2.94	0.56
1:A:1263:C:C2	1:A:1264:U:C6	2.93	0.56
1:A:1399:C:C4	1:A:1502:A:N3	2.74	0.56
1:A:1503:A:H3'	1:A:1504:G:H5'	1.87	0.56
1:A:1527:U:C6	21:U:41:THR:HB	2.40	0.56
4:D:79:ALA:HA	4:D:85:THR:HG23	1.88	0.56
7:G:129:ASN:HA	7:G:134:VAL:HG21	1.87	0.56
22:W:79:VAL:HG12	22:W:100:VAL:HA	1.87	0.56
1:A:136:C:C2	1:A:137:U:C6	2.94	0.56
1:A:208:U:C2	1:A:209:U:C4	2.94	0.56
1:A:209:U:H2'	1:A:210:C:H5'	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:301:G:N1	1:A:302:G:C4	2.73	0.56
1:A:324:G:N2	1:A:327:A:C8	2.74	0.56
1:A:369:G:C2	1:A:370:C:C6	2.93	0.56
1:A:412:A:C2	4:D:30:LYS:HA	2.41	0.56
1:A:425:G:N7	1:A:426:U:C5	2.74	0.56
1:A:462:G:OP1	1:A:462:G:C8	2.59	0.56
1:A:577:G:O4'	1:A:816:A:H2'	2.05	0.56
1:A:588:G:O6	1:A:753:A:H2'	2.06	0.56
1:A:644:U:H2'	1:A:645:G:C8	2.41	0.56
1:A:675:A:C4	1:A:676:A:C8	2.94	0.56
1:A:720:C:C5	1:A:733:G:C6	2.94	0.56
1:A:740:U:H4'	15:O:41:HIS:CG	2.41	0.56
1:A:751:U:C5	1:A:752:G:N1	2.74	0.56
1:A:753:A:H5"	15:O:68:TYR:CE1	2.41	0.56
1:A:845:A:H3'	1:A:846:G:C8	2.41	0.56
1:A:905:U:H3'	1:A:906:A:C8	2.41	0.56
1:A:1010:U:C5	14:N:19:TYR:O	2.58	0.56
1:A:1012:A:C2	1:A:1013:G:C5	2.94	0.56
1:A:1056:U:H3	1:A:1204:A:H61	1.51	0.56
1:A:1100:C:H5"	1:A:1101:A:H4'	1.88	0.56
1:A:1183:U:C2'	2:B:131:LYS:HB3	2.35	0.56
1:A:1256:A:C1'	1:A:1258:G:C4	2.89	0.56
1:A:1276:G:C2	1:A:1277:C:C2	2.93	0.56
1:A:1310:G:C5	1:A:1311:A:N7	2.74	0.56
1:A:1333:A:C5	1:A:1334:G:C5	2.93	0.56
1:A:1442:G:C2	1:A:1443:C:C5	2.94	0.56
1:A:1521:C:H3'	1:A:1521:C:C6	2.41	0.56
3:C:116:ALA:HB2	3:C:184:ASN:HD21	1.70	0.56
5:E:61:LYS:HA	5:E:64:GLU:CD	2.31	0.56
5:E:80:LEU:HD13	5:E:84:VAL:HG22	1.87	0.56
7:G:68:VAL:HA	7:G:134:VAL:HA	1.88	0.56
18:R:28:LEU:HD22	18:R:58:ILE:HG13	1.87	0.56
1:A:66:A:N3	1:A:67:C:C5	2.73	0.56
1:A:106:C:C6	1:A:106:C:O5'	2.59	0.56
1:A:111:G:N2	1:A:330:C:H41	2.03	0.56
1:A:118:U:H3'	1:A:288:A:N6	2.20	0.56
1:A:119:A:C6	1:A:288:A:N3	2.74	0.56
1:A:165:G:N2	1:A:166:U:H1'	2.20	0.56
1:A:202:G:O2'	1:A:468:A:C8	2.58	0.56
1:A:238:A:H2	1:A:239:U:H1'	1.71	0.56
1:A:294:U:O2	1:A:304:U:H1'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:339:C:C4	1:A:340:U:C4	2.93	0.56
1:A:424:G:C2	1:A:425:G:C4	2.94	0.56
1:A:457:G:C2	1:A:458:U:C6	2.93	0.56
1:A:582:C:C4	1:A:583:A:N7	2.74	0.56
1:A:657:U:H4'	15:O:27:GLN:CG	2.36	0.56
1:A:681:A:C6	1:A:710:G:C6	2.94	0.56
1:A:686:U:O4	1:A:703:G:H1'	2.06	0.56
1:A:787:A:H2'	1:A:795:C:H42	1.71	0.56
1:A:941:G:C2	1:A:942:G:C4	2.93	0.56
1:A:960:U:C4	1:A:1223:C:OP1	2.59	0.56
1:A:975:A:C8	1:A:1358:U:O4'	2.58	0.56
1:A:1118:U:H5'	9:I:105:ARG:CZ	2.35	0.56
1:A:1134:G:N3	1:A:1135:U:H1'	2.20	0.56
1:A:1197:A:H5'	3:C:163:ARG:HH22	1.71	0.56
1:A:1212:U:H5"	1:A:1213:A:C5	2.41	0.56
1:A:1261:A:C5	1:A:1275:A:C8	2.93	0.56
1:A:1278:G:H4'	1:A:1279:G:C4	2.40	0.56
1:A:1333:A:C8	1:A:1333:A:O5'	2.58	0.56
1:A:1379:G:H2'	1:A:1380:U:H6	1.71	0.56
1:A:1468:A:C8	1:A:1468:A:O5'	2.58	0.56
2:B:66:ILE:HD11	2:B:220:VAL:HG21	1.86	0.56
10:J:8:ILE:HG13	10:J:75:ASP:H	1.69	0.56
17:Q:52:CYS:HG	17:Q:74:LEU:HB3	1.70	0.56
22:W:44:VAL:HG21	22:W:73:LEU:HD11	1.86	0.56
22:W:146:VAL:CG2	22:W:287:PHE:CZ	2.88	0.56
1:A:21:G:C1'	1:A:914:A:H61	2.18	0.56
1:A:165:G:C2	1:A:166:U:H1'	2.40	0.56
1:A:186:C:O2	1:A:192:A:C2	2.58	0.56
1:A:234:C:H4'	17:Q:65:PRO:HD3	1.88	0.56
1:A:262:A:H2	1:A:263:A:C4	2.24	0.56
1:A:422:C:H4'	1:A:423:G:C4	2.41	0.56
1:A:468:A:H5"	1:A:470:C:N4	2.21	0.56
1:A:689:C:C4	1:A:690:G:C8	2.94	0.56
1:A:692:U:H1'	1:A:695:A:N7	2.20	0.56
1:A:750:C:C2	15:O:21:THR:O	2.58	0.56
1:A:817:C:H42	1:A:1529:G:H1	1.53	0.56
1:A:897:C:C6	1:A:897:C:O5'	2.59	0.56
1:A:1215:G:C6	1:A:1216:A:C4	2.93	0.56
1:A:1222:G:H5'	19:S:77:ARG:HA	1.87	0.56
1:A:1367:C:C4	1:A:1368:A:C8	2.94	0.56
1:A:1375:A:C8	1:A:1376:U:C5	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1415:G:H21	1:A:1486:G:H1'	1.71	0.56
5:E:151:MET:C	5:E:153:ALA:H	2.12	0.56
8:H:34:ALA:HA	8:H:37:ASN:HD22	1.70	0.56
20:T:50:PHE:CB	20:T:82:ILE:HD13	2.35	0.56
1:A:27:G:H2'	1:A:28:A:C8	2.41	0.56
1:A:33:A:C2	1:A:552:U:N3	2.74	0.56
1:A:473:U:H3'	1:A:473:U:H6	1.71	0.56
1:A:502:A:C5	1:A:503:C:C5	2.93	0.56
1:A:512:U:H2'	1:A:513:C:C6	2.41	0.56
1:A:556:C:H3'	1:A:556:C:H6	1.70	0.56
1:A:675:A:N1	1:A:716:A:C2	2.74	0.56
1:A:727:G:C4	1:A:731:G:C2	2.93	0.56
1:A:755:G:C8	1:A:755:G:O5'	2.58	0.56
1:A:858:G:C6	1:A:869:G:H3'	2.41	0.56
1:A:924:C:H2'	1:A:1502:A:C2	2.41	0.56
1:A:933:G:N1	1:A:1385:G:C6	2.74	0.56
1:A:1007:U:O2	1:A:1007:U:H2'	2.06	0.56
1:A:1130:A:C6	1:A:1146:A:C5	2.94	0.56
1:A:1202:U:C5	10:J:55:PRO:HG3	2.40	0.56
1:A:1231:G:C6	1:A:1232:U:N3	2.74	0.56
1:A:1347:G:C2	1:A:1373:G:H2'	2.41	0.56
1:A:1353:G:C5	1:A:1354:U:C5	2.94	0.56
1:A:1368:A:C2	1:A:1369:C:N1	2.74	0.56
1:A:1513:A:H1'	1:A:1523:G:C2	2.41	0.56
1:A:1525:G:C2	1:A:1526:G:C8	2.93	0.56
9:I:29:ILE:HD12	9:I:38:PHE:CE2	2.41	0.56
11:K:20:ALA:HA	11:K:33:ILE:HG12	1.88	0.56
13:M:18:LEU:HB2	13:M:29:SER:CB	2.36	0.56
1:A:37:U:H4'	1:A:500:G:C4'	2.36	0.55
1:A:47:C:OP2	1:A:366:A:C8	2.59	0.55
1:A:74:A:C2	1:A:97:G:C6	2.95	0.55
1:A:146:G:C5	1:A:147:G:C8	2.93	0.55
1:A:151:A:C5	1:A:152:A:C8	2.94	0.55
1:A:204:G:H3'	1:A:204:G:C8	2.42	0.55
1:A:216:U:H4'	1:A:464:U:C4'	2.36	0.55
1:A:241:G:C4	1:A:242:G:C8	2.94	0.55
1:A:254:G:H22	1:A:273:U:H1'	1.70	0.55
1:A:273:U:C4	1:A:274:A:C5	2.94	0.55
1:A:274:A:N3	1:A:275:G:C4	2.74	0.55
1:A:301:G:C4	1:A:302:G:C8	2.94	0.55
1:A:456:A:C8	1:A:456:A:OP2	2.59	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:603:U:O5'	1:A:603:U:C6	2.59	0.55
1:A:617:G:C6	1:A:618:C:C5	2.94	0.55
1:A:645:G:N1	1:A:646:G:C8	2.74	0.55
1:A:719:C:OP1	1:A:721:G:C8	2.60	0.55
1:A:1074:G:C6	1:A:1075:U:N3	2.74	0.55
1:A:1222:G:H5"	19:S:77:ARG:HB3	1.87	0.55
1:A:1262:C:N4	1:A:1263:C:C2	2.74	0.55
1:A:1289:A:H61	9:I:71:ILE:HD11	1.71	0.55
1:A:1299:A:H2'	1:A:1301:U:C6	2.40	0.55
1:A:1333:A:C4	1:A:1334:G:C8	2.93	0.55
1:A:1412:C:H2'	1:A:1413:A:C8	2.40	0.55
2:B:16:GLY:HA3	2:B:40:ILE:CG1	2.35	0.55
19:S:30:LEU:O	19:S:49:ALA:HB3	2.06	0.55
1:A:22:G:H1'	1:A:914:A:C6	2.41	0.55
1:A:46:G:H3'	1:A:366:A:H62	1.70	0.55
1:A:73:C:H5'	1:A:74:A:C8	2.41	0.55
1:A:111:G:C5'	16:P:27:ALA:H	2.19	0.55
1:A:140:U:H3'	1:A:140:U:C6	2.41	0.55
1:A:179:A:H3'	1:A:180:U:C6	2.41	0.55
1:A:371:A:C8	1:A:371:A:H3'	2.41	0.55
1:A:511:C:O2	4:D:41:GLY:HA2	2.06	0.55
1:A:531:U:H5"	1:A:532:A:C2	2.41	0.55
1:A:603:U:N3	1:A:604:G:C5	2.74	0.55
1:A:616:G:O2'	1:A:617:G:H5'	2.06	0.55
1:A:657:U:H2'	1:A:658:C:C6	2.42	0.55
1:A:692:U:H4'	1:A:797:C:H5'	1.88	0.55
1:A:751:U:H5	1:A:752:G:N1	2.04	0.55
1:A:788:U:H2'	1:A:789:U:C6	2.41	0.55
1:A:807:A:C5	1:A:808:C:C5	2.94	0.55
1:A:890:G:C5	1:A:905:U:OP2	2.59	0.55
1:A:959:A:O2'	1:A:961:U:H5'	2.05	0.55
1:A:987:G:N2	1:A:988:G:H1'	2.21	0.55
1:A:1005:A:C8	1:A:1006:G:C4	2.93	0.55
1:A:1014:A:H2'	1:A:1015:G:C1'	2.36	0.55
1:A:1088:G:H1	1:A:1097:C:H42	1.54	0.55
1:A:1090:U:C4'	1:A:1170:A:C2	2.90	0.55
1:A:1133:G:C2	1:A:1142:G:C2	2.94	0.55
1:A:1164:G:C2	1:A:1165:U:C2	2.94	0.55
1:A:1254:A:C2	1:A:1255:G:C4	2.95	0.55
1:A:1360:A:H3'	1:A:1361:G:C8	2.41	0.55
1:A:1431:A:H2'	1:A:1468:A:H61	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1482:G:H2'	1:A:1483:A:C8	2.41	0.55
2:B:43:GLU:HA	2:B:46:VAL:HG23	1.86	0.55
4:D:115:GLN:NE2	4:D:119:HIS:CD2	2.74	0.55
9:I:29:ILE:HD12	9:I:38:PHE:CZ	2.40	0.55
17:Q:46:HIS:CB	17:Q:74:LEU:H	2.20	0.55
1:A:45:G:H2'	1:A:46:G:C8	2.41	0.55
1:A:130:A:OP1	17:Q:64:ARG:HD2	2.07	0.55
1:A:209:U:C4	1:A:211:G:N1	2.74	0.55
1:A:296:U:H2'	1:A:297:G:C8	2.41	0.55
1:A:357:G:C2	1:A:358:U:C6	2.94	0.55
1:A:360:G:H2'	1:A:361:G:C4	2.42	0.55
1:A:440:C:H3'	1:A:441:A:C8	2.41	0.55
1:A:556:C:C5	1:A:557:G:N7	2.75	0.55
1:A:620:C:H5"	1:A:621:A:OP2	2.05	0.55
1:A:661:G:O6	1:A:744:C:C4	2.59	0.55
1:A:691:G:H22	1:A:695:A:H5"	1.70	0.55
1:A:779:C:H2'	1:A:780:A:H8	1.67	0.55
1:A:965:U:H4'	1:A:968:A:H1'	1.89	0.55
1:A:977:A:H5"	1:A:980:C:H41	1.69	0.55
1:A:987:G:C6	1:A:988:G:C5	2.94	0.55
1:A:1015:G:H5"	14:N:51:PRO:HA	1.89	0.55
1:A:1033:G:C2'	1:A:1034:G:C5'	2.85	0.55
1:A:1057:G:C2	1:A:1204:A:H1'	2.41	0.55
1:A:1088:G:N2	1:A:1098:C:C2	2.74	0.55
1:A:1219:A:C6	1:A:1220:G:C5	2.95	0.55
1:A:1401:G:C6	1:A:1402:C:C2	2.94	0.55
2:B:193:ASP:H	2:B:195:VAL:HG23	1.71	0.55
3:C:58:ARG:HA	3:C:63:ILE:HA	1.88	0.55
3:C:63:ILE:CG2	3:C:90:VAL:HG12	2.36	0.55
4:D:169:TRP:CD2	4:D:185:PRO:HA	2.41	0.55
1:A:3:A:C8	1:A:3:A:C3'	2.89	0.55
1:A:19:A:C2	1:A:917:G:N7	2.74	0.55
1:A:122:G:H22	1:A:239:U:C2'	2.19	0.55
1:A:254:G:C6	1:A:255:G:C5	2.94	0.55
1:A:274:A:H1'	1:A:275:G:C8	2.41	0.55
1:A:378:G:C2	1:A:386:C:C2	2.95	0.55
1:A:533:A:C4	1:A:536:C:C4	2.94	0.55
1:A:582:C:N3	1:A:760:G:C5	2.75	0.55
1:A:592:G:C2	1:A:648:A:C4	2.94	0.55
1:A:602:A:C6	1:A:603:U:C4	2.94	0.55
1:A:644:U:C2	1:A:645:G:C8	2.93	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:688:G:C2	1:A:689:C:C6	2.94	0.55
1:A:781:A:H3'	1:A:782:A:C8	2.41	0.55
1:A:864:A:C2	1:A:917:G:N3	2.75	0.55
1:A:914:A:C8	1:A:914:A:H5"	2.42	0.55
1:A:952:U:O2	1:A:969:A:C2	2.59	0.55
1:A:955:U:C2	1:A:956:U:C6	2.95	0.55
1:A:998:C:H42	1:A:1042:A:N6	2.04	0.55
1:A:1012:A:C4	1:A:1018:G:C2	2.94	0.55
1:A:1021:A:C8	1:A:1021:A:O5'	2.60	0.55
1:A:1131:G:N2	1:A:1144:G:H4'	2.21	0.55
1:A:1185:G:C2	1:A:1186:G:C4	2.95	0.55
1:A:1231:G:H4'	9:I:129:ARG:H	1.70	0.55
1:A:1301:U:OP2	1:A:1303:C:C5	2.59	0.55
1:A:1358:U:H3'	14:N:74:ARG:HG3	1.88	0.55
1:A:1406:U:H5"	1:A:1407:C:H5	1.70	0.55
1:A:1407:C:N3	1:A:1495:U:C2	2.74	0.55
1:A:1410:A:C6	1:A:1411:C:C4	2.94	0.55
4:D:161:ALA:HB1	4:D:172:VAL:HG23	1.88	0.55
7:G:64:ALA:O	7:G:68:VAL:HG23	2.07	0.55
11:K:19:VAL:HG11	11:K:21:HIS:CE1	2.40	0.55
18:R:30:ASN:HB2	18:R:31:TYR:CE1	2.41	0.55
1:A:116:A:C5	1:A:117:G:C5	2.94	0.55
1:A:240:G:C6	1:A:287:U:C2	2.94	0.55
1:A:255:G:N1	1:A:272:C:C2	2.75	0.55
1:A:415:A:H3'	1:A:416:G:C8	2.41	0.55
1:A:427:U:O5'	1:A:427:U:C6	2.59	0.55
1:A:640:A:C2	1:A:642:A:N6	2.75	0.55
1:A:684:U:O2	11:K:40:ALA:HB3	2.07	0.55
1:A:727:G:H2'	1:A:729:A:OP2	2.07	0.55
1:A:988:G:C2	1:A:1218:C:C2	2.94	0.55
1:A:1008:U:C5	14:N:17:ASP:OD1	2.59	0.55
1:A:1099:G:C5	1:A:1100:C:O4'	2.60	0.55
1:A:1133:G:C4	1:A:1142:G:C2	2.93	0.55
1:A:1209:C:H2'	1:A:1210:C:H6	1.71	0.55
1:A:1269:A:C8	1:A:1270:G:H1'	2.42	0.55
1:A:1289:A:H61	9:I:71:ILE:CG1	2.19	0.55
1:A:1483:A:C4	1:A:1484:C:H1'	2.40	0.55
1:A:1500:A:C4	1:A:1501:C:C5	2.95	0.55
1:A:1518:A:C4	1:A:1519:A:C8	2.94	0.55
2:B:27:LYS:H	2:B:28:PRO:HD2	1.72	0.55
4:D:8:LEU:HD11	4:D:28:ASP:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:20:GLN:HE22	10:J:93:ALA:CB	2.19	0.55
11:K:28:ASN:HB2	11:K:46:ALA:HB3	1.89	0.55
13:M:22:TYR:CD1	13:M:23:GLY:N	2.74	0.55
17:Q:61:ARG:CZ	17:Q:63:CYS:HB3	2.36	0.55
1:A:25:C:H5"	1:A:524:G:H2'	1.88	0.55
1:A:100:G:C6	1:A:101:A:C5	2.94	0.55
1:A:134:G:H1'	1:A:326:G:O6	2.06	0.55
1:A:241:G:C5	1:A:242:G:C8	2.95	0.55
1:A:283:U:C6	1:A:283:U:O5'	2.59	0.55
1:A:604:G:H3'	1:A:605:U:C5	2.41	0.55
1:A:604:G:C5	1:A:605:U:C4	2.95	0.55
1:A:715:A:C2	1:A:716:A:C6	2.95	0.55
1:A:1044:A:C8	1:A:1044:A:H5"	2.41	0.55
1:A:1146:A:H2	9:I:19:PHE:CE1	2.25	0.55
1:A:1197:A:C6	1:A:1198:G:C5	2.94	0.55
1:A:1366:C:N3	1:A:1367:C:C4	2.75	0.55
1:A:1380:U:C6	7:G:2:ARG:HA	2.42	0.55
1:A:1460:C:H3'	1:A:1461:G:C8	2.41	0.55
1:A:1513:A:C4	1:A:1514:G:C8	2.94	0.55
3:C:4:VAL:HG13	3:C:8:GLY:CA	2.37	0.55
3:C:106:ARG:HE	3:C:110:LEU:HB3	1.71	0.55
15:O:23:SER:H	15:O:27:GLN:HE21	1.54	0.55
1:A:27:G:C4	1:A:28:A:C8	2.95	0.55
1:A:28:A:N1	1:A:29:U:C2	2.75	0.55
1:A:32:A:C2	1:A:33:A:C4	2.94	0.55
1:A:57:G:H3'	1:A:58:C:H6	1.70	0.55
1:A:78:A:O5'	1:A:78:A:C8	2.58	0.55
1:A:181:A:C1'	1:A:194:C:C5	2.90	0.55
1:A:195:A:H1'	1:A:223:A:H5'	1.87	0.55
1:A:272:C:N3	1:A:273:U:C4	2.75	0.55
1:A:302:G:H4'	12:L:14:LYS:HA	1.88	0.55
1:A:418:C:H2'	1:A:419:C:C6	2.42	0.55
1:A:430:A:H5"	1:A:430:A:H8	1.72	0.55
1:A:458:U:C2	1:A:459:A:N7	2.74	0.55
1:A:461:A:C5	1:A:463:U:OP2	2.59	0.55
1:A:482:A:C5	1:A:483:C:C2	2.94	0.55
1:A:499:A:C4	1:A:547:A:C6	2.94	0.55
1:A:594:U:C6	1:A:646:G:C2	2.95	0.55
1:A:597:G:C2	1:A:598:U:C1'	2.90	0.55
1:A:608:A:C5	1:A:609:A:C8	2.95	0.55
1:A:610:U:H5	1:A:627:G:N7	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:688:G:C5’	11:K:48:GLY:HA2	2.36	0.55
1:A:724:G:C4	1:A:725:G:C8	2.94	0.55
1:A:738:C:C2	1:A:739:C:C6	2.95	0.55
1:A:836:G:N1	1:A:837:U:C2	2.75	0.55
1:A:920:U:H2’	1:A:921:U:C6	2.42	0.55
1:A:931:C:C4	1:A:932:C:C5	2.94	0.55
1:A:980:C:C6	1:A:981:U:C4	2.94	0.55
1:A:1039:G:H2’	1:A:1040:U:C6	2.42	0.55
1:A:1160:G:C6	1:A:1161:C:N3	2.74	0.55
1:A:1238:A:H5”	7:G:109:LYS:HZ3	1.71	0.55
1:A:1283:U:O5’	1:A:1283:U:H6	1.90	0.55
1:A:1296:C:O2’	1:A:1302:C:C4	2.59	0.55
1:A:1309:G:C2	1:A:1329:A:C4	2.95	0.55
1:A:1355:G:N2	1:A:1368:A:C4	2.75	0.55
1:A:1438:G:N2	1:A:1439:G:C4	2.75	0.55
1:A:1457:G:C5’	20:T:29:THR:HB	2.37	0.55
1:A:1513:A:C2	1:A:1523:G:C6	2.95	0.55
2:B:19:THR:HG23	2:B:38:HIS:HD2	1.72	0.55
4:D:9:LYS:HA	4:D:12:ARG:NH2	2.22	0.55
8:H:42:GLU:CD	8:H:100:ILE:HG21	2.31	0.55
11:K:46:ALA:HB1	11:K:61:ALA:CB	2.37	0.55
1:A:15:G:N3	5:E:23:THR:HG21	2.22	0.55
1:A:41:G:C2	1:A:402:G:C2	2.95	0.55
1:A:131:A:H1’	1:A:232:G:N2	2.22	0.55
1:A:142:G:H2’	1:A:196:A:H2	1.72	0.55
1:A:145:G:N1	1:A:146:G:C4	2.75	0.55
1:A:150:U:C4	1:A:170:U:C4	2.95	0.55
1:A:157:U:H1’	1:A:165:G:C2	2.42	0.55
1:A:194:C:H4’	20:T:59:ARG:HB2	1.89	0.55
1:A:204:G:N7	1:A:205:A:C8	2.75	0.55
1:A:251:G:C6	1:A:252:U:C5	2.94	0.55
1:A:253:A:C1’	1:A:275:G:H21	2.19	0.55
1:A:431:A:C4	1:A:432:A:C8	2.95	0.55
1:A:440:C:H42	1:A:496:A:H62	1.54	0.55
1:A:444:G:C6	1:A:445:G:C5	2.95	0.55
1:A:453:G:C6	1:A:454:G:C4	2.95	0.55
1:A:462:G:H1’	1:A:471:U:O2	2.07	0.55
1:A:554:A:H2’	1:A:555:U:C5	2.42	0.55
1:A:672:U:H4’	6:F:86:ARG:HH21	1.72	0.55
1:A:699:C:H2’	1:A:700:G:H8	1.72	0.55
1:A:703:G:C3’	1:A:704:A:H5’	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:934:C:C2	1:A:1344:C:C4	2.95	0.55
1:A:1001:C:H2'	1:A:1002:G:C8	2.42	0.55
1:A:1038:C:H2'	1:A:1039:G:C8	2.42	0.55
1:A:1055:A:H2	3:C:193:GLY:HA2	1.72	0.55
1:A:1068:G:C6	1:A:1108:G:C6	2.95	0.55
1:A:1083:U:H5"	1:A:1086:U:C4	2.42	0.55
1:A:1131:G:H1	1:A:1144:G:H1'	1.72	0.55
1:A:1164:G:N1	1:A:1173:U:C2	2.74	0.55
1:A:1219:A:C2	1:A:1220:G:C4	2.95	0.55
1:A:1288:A:C2	1:A:1289:A:C4	2.95	0.55
1:A:1296:C:H4'	13:M:12:LYS:HA	1.88	0.55
1:A:1309:G:H5"	13:M:76:ILE:HG13	1.89	0.55
1:A:1365:G:N1	1:A:1366:C:C2	2.75	0.55
1:A:1403:C:H1'	1:A:1500:A:N1	2.21	0.55
2:B:40:ILE:HD12	2:B:41:ASN:O	2.07	0.55
6:F:11:HIS:CD2	6:F:11:HIS:N	2.74	0.55
6:F:49:TYR:CD1	18:R:68:PRO:HA	2.41	0.55
1:A:11:G:N1	1:A:24:U:H1'	2.22	0.55
1:A:113:G:C5	1:A:114:U:C5	2.94	0.55
1:A:115:G:C4	1:A:313:A:C2	2.95	0.55
1:A:185:U:N3	1:A:186:C:C5	2.75	0.55
1:A:217:C:H5'	1:A:463:U:C5	2.41	0.55
1:A:373:A:C8	1:A:482:A:C2	2.95	0.55
1:A:420:U:O2	1:A:424:G:C6	2.60	0.55
1:A:569:C:C6	1:A:574:A:H2'	2.42	0.55
1:A:683:G:H3'	1:A:684:U:C5	2.42	0.55
1:A:683:G:C5	1:A:684:U:C4	2.95	0.55
1:A:840:C:O5'	1:A:840:C:C6	2.60	0.55
1:A:860:A:C8	1:A:860:A:O5'	2.59	0.55
1:A:922:G:C5	1:A:923:A:C5	2.95	0.55
1:A:987:G:N2	1:A:1219:A:C4	2.75	0.55
1:A:1068:G:C6	1:A:1069:C:C4	2.95	0.55
1:A:1097:C:H2'	1:A:1098:C:C6	2.41	0.55
1:A:1179:A:H5"	9:I:98:ARG:HG3	1.88	0.55
1:A:1207:G:C6	1:A:1208:C:C4	2.95	0.55
1:A:1256:A:C5	1:A:1258:G:C2	2.95	0.55
1:A:1303:C:C4	1:A:1304:G:C4	2.95	0.55
1:A:1385:G:C6	1:A:1386:G:C5	2.94	0.55
1:A:1420:U:C2	1:A:1481:U:O2	2.59	0.55
1:A:1447:A:H61	20:T:19:HIS:CE1	2.24	0.55
2:B:75:ALA:C	2:B:79:VAL:HG22	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:9:ARG:HE	10:J:42:LEU:CD1	2.20	0.55
1:A:76:G:N1	1:A:95:C:C4	2.74	0.55
1:A:79:G:C2	1:A:80:A:C4	2.94	0.55
1:A:131:A:C2	1:A:132:C:N3	2.75	0.55
1:A:144:G:C6	1:A:179:A:C6	2.95	0.55
1:A:173:U:H5'	1:A:173:U:C6	2.42	0.55
1:A:292:G:C4	1:A:309:A:C2	2.95	0.55
1:A:322:C:H2'	1:A:323:U:C6	2.42	0.55
1:A:562:U:H4'	1:A:563:A:C5	2.41	0.55
1:A:642:A:C6	1:A:643:C:C4	2.95	0.55
1:A:652:U:H2'	1:A:752:G:N3	2.21	0.55
1:A:760:G:C5	1:A:761:G:N9	2.75	0.55
1:A:815:A:C2	1:A:1529:G:C2	2.95	0.55
1:A:815:A:H61	1:A:1529:G:H2'	1.72	0.55
1:A:852:G:C6	1:A:853:C:C4	2.95	0.55
1:A:898:G:C2	1:A:902:G:C5	2.94	0.55
1:A:961:U:H2'	1:A:962:C:C6	2.42	0.55
1:A:980:C:N3	14:N:60:ARG:HD3	2.22	0.55
1:A:1008:U:C6	1:A:1022:A:C2	2.95	0.55
1:A:1057:G:C5	1:A:1058:G:C4	2.95	0.55
1:A:1131:G:C2	1:A:1144:G:O2'	2.57	0.55
1:A:1152:A:C6	1:A:1153:G:C5	2.95	0.55
1:A:1176:A:C8	1:A:1176:A:O5'	2.60	0.55
1:A:1206:G:C4	1:A:1207:G:C8	2.95	0.55
1:A:1222:G:C2	1:A:1223:C:C5	2.95	0.55
1:A:1234:C:C2	1:A:1235:U:C6	2.95	0.55
1:A:1239:A:C8	1:A:1241:G:N3	2.75	0.55
1:A:1241:G:C6	1:A:1241:G:OP2	2.60	0.55
1:A:1282:C:O5'	1:A:1282:C:C6	2.60	0.55
1:A:1304:G:H1'	1:A:1334:G:N1	2.22	0.55
1:A:1379:G:C6	1:A:1380:U:C5	2.95	0.55
1:A:1410:A:C2	1:A:1491:G:N2	2.75	0.55
1:A:1515:G:N1	1:A:1516:G:C8	2.75	0.55
1:A:1517:G:C2	1:A:1518:A:C4	2.94	0.55
2:B:14:HIS:HB2	2:B:17:HIS:CE1	2.41	0.55
3:C:63:ILE:HD12	3:C:94:ALA:HB1	1.89	0.55
5:E:155:LYS:HD3	5:E:158:LYS:HZ2	1.72	0.55
13:M:79:LEU:HA	13:M:82:LEU:HD12	1.89	0.55
1:A:42:G:C2	1:A:401:C:C2	2.94	0.54
1:A:84:U:H2'	1:A:87:C:C2	2.42	0.54
1:A:98:A:C2	1:A:99:C:H1'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:103:U:C1’	1:A:151:A:C2	2.89	0.54
1:A:116:A:H61	1:A:313:A:C2’	2.21	0.54
1:A:133:U:C4’	1:A:325:A:H1’	2.36	0.54
1:A:161:A:C6	1:A:162:A:C4	2.95	0.54
1:A:171:A:C6	1:A:172:A:C6	2.95	0.54
1:A:179:A:C5	1:A:180:U:C5	2.94	0.54
1:A:179:A:C4	1:A:180:U:C6	2.95	0.54
1:A:181:A:H3’	1:A:181:A:OP2	2.07	0.54
1:A:425:G:C5	1:A:426:U:C4	2.95	0.54
1:A:523:A:H1’	1:A:527:G:N1	2.22	0.54
1:A:622:A:H3’	1:A:623:C:C6	2.42	0.54
1:A:659:U:C2	1:A:747:A:C6	2.95	0.54
1:A:772:U:H2’	1:A:773:G:C8	2.42	0.54
1:A:860:A:O5’	1:A:860:A:H8	1.90	0.54
1:A:894:G:C2	1:A:895:G:C5	2.95	0.54
1:A:928:G:H2’	1:A:929:G:C8	2.42	0.54
1:A:981:U:C4	1:A:982:U:C2	2.95	0.54
1:A:1194:U:H3’	1:A:1195:C:C5	2.43	0.54
1:A:1297:G:H5’	1:A:1299:A:N7	2.22	0.54
1:A:1338:G:H8	22:W:298:LYS:HZ2	1.55	0.54
1:A:1368:A:N3	1:A:1369:C:C6	2.75	0.54
1:A:1382:C:H1’	7:G:78:ARG:HB2	1.89	0.54
1:A:1433:A:C8	1:A:1433:A:O5’	2.60	0.54
8:H:27:PRO:HA	8:H:57:GLU:H	1.72	0.54
10:J:7:ARG:HD3	10:J:73:LEU:HD21	1.88	0.54
10:J:15:HIS:CE1	10:J:16:ARG:NE	2.75	0.54
1:A:18:C:H4’	1:A:1078:U:C6	2.42	0.54
1:A:181:A:H2’	1:A:194:C:C6	2.41	0.54
1:A:217:C:H2’	1:A:218:U:O4’	2.07	0.54
1:A:321:A:C8	1:A:328:C:C6	2.95	0.54
1:A:406:G:H2’	1:A:407:U:C6	2.42	0.54
1:A:441:A:H1’	1:A:497:G:C2	2.42	0.54
1:A:575:G:C6	1:A:821:G:C8	2.95	0.54
1:A:577:G:C4	1:A:578:C:C6	2.96	0.54
1:A:599:C:H41	8:H:87:ARG:CD	2.19	0.54
1:A:646:G:C8	1:A:646:G:O5’	2.60	0.54
1:A:764:C:O2’	15:O:49:HIS:CE1	2.60	0.54
1:A:845:A:H3’	1:A:846:G:H8	1.70	0.54
1:A:979:C:H41	1:A:1360:A:N6	2.04	0.54
1:A:1097:C:H1’	1:A:1170:A:H1’	1.90	0.54
1:A:1269:A:N7	1:A:1270:G:H1’	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1313:U:O2	1:A:1325:C:C2	2.59	0.54
1:A:1371:G:H5'	9:I:70:GLY:H	1.71	0.54
4:D:8:LEU:HD11	4:D:28:ASP:C	2.31	0.54
4:D:97:LEU:HA	4:D:136:VAL:HG23	1.90	0.54
6:F:4:TYR:CD2	6:F:71:ILE:HD13	2.42	0.54
10:J:37:ARG:HG2	10:J:40:ILE:HD11	1.88	0.54
15:O:16:ARG:HE	15:O:25:GLU:CD	2.15	0.54
17:Q:14:ASP:HA	17:Q:20:ILE:HD11	1.89	0.54
22:W:306:THR:HA	22:W:313:ARG:HD3	1.89	0.54
1:A:50:A:C2	1:A:361:G:H1'	2.42	0.54
1:A:56:U:C6	1:A:56:U:O5'	2.59	0.54
1:A:191:G:H2'	1:A:192:A:H8	1.72	0.54
1:A:195:A:C4	1:A:196:A:C2	2.96	0.54
1:A:267:C:OP1	17:Q:68:LYS:HA	2.07	0.54
1:A:318:G:N1	1:A:319:G:C4	2.75	0.54
1:A:411:A:C4	1:A:429:U:C5	2.96	0.54
1:A:457:G:C4	1:A:476:U:O2	2.60	0.54
1:A:579:A:H61	1:A:762:U:H3	1.54	0.54
1:A:628:G:H3'	1:A:629:A:C8	2.42	0.54
1:A:771:G:C5	1:A:772:U:C2	2.95	0.54
1:A:781:A:H1'	1:A:1523:G:C1'	2.37	0.54
1:A:781:A:H3'	1:A:782:A:H8	1.71	0.54
1:A:784:A:C6	1:A:799:G:C5	2.96	0.54
1:A:809:G:C6	1:A:810:C:C4	2.95	0.54
1:A:850:U:C6	1:A:850:U:O5'	2.60	0.54
1:A:895:G:C5	1:A:896:C:C6	2.95	0.54
1:A:897:C:H1'	1:A:903:G:N2	2.23	0.54
1:A:941:G:C6	1:A:1343:G:C6	2.95	0.54
1:A:953:G:C5	1:A:1229:A:N6	2.74	0.54
1:A:1026:G:C2	1:A:1027:C:C5	2.96	0.54
1:A:1032:G:C5	1:A:1033:G:C1'	2.90	0.54
1:A:1041:G:C6	1:A:1042:A:C6	2.95	0.54
1:A:1148:U:H1'	9:I:17:ARG:CZ	2.36	0.54
1:A:1181:G:C4	1:A:1182:G:C2	2.95	0.54
1:A:1186:G:C2	1:A:1187:G:C8	2.96	0.54
1:A:1237:C:C6	1:A:1336:C:N4	2.75	0.54
1:A:1348:U:C5	1:A:1373:G:N2	2.76	0.54
1:A:1420:U:C5	1:A:1420:U:OP2	2.61	0.54
1:A:1433:A:C6	1:A:1434:A:C5	2.95	0.54
1:A:1499:A:C2	1:A:1500:A:C4	2.95	0.54
18:R:44:THR:HG21	18:R:46:THR:HG22	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:53:MET:HA	20:T:56:ILE:HB	1.89	0.54
1:A:2:A:H61	1:A:626:G:N2	2.04	0.54
1:A:49:U:H1'	1:A:362:G:H1'	1.90	0.54
1:A:55:A:C5	1:A:56:U:C5	2.96	0.54
1:A:79:G:C5	1:A:80:A:C6	2.95	0.54
1:A:128:G:N3	1:A:128:G:H2'	2.22	0.54
1:A:194:C:H4'	20:T:59:ARG:CA	2.37	0.54
1:A:297:G:C4	1:A:299:G:OP2	2.61	0.54
1:A:318:G:H21	1:A:1468:A:H1'	1.72	0.54
1:A:378:G:C2	1:A:379:C:C2	2.95	0.54
1:A:445:G:C5	1:A:446:G:C8	2.96	0.54
1:A:569:C:C1'	1:A:574:A:H2'	2.37	0.54
1:A:772:U:H3'	1:A:772:U:C6	2.43	0.54
1:A:824:G:H21	8:H:1:SER:C	2.16	0.54
1:A:846:G:N1	1:A:847:G:C6	2.75	0.54
1:A:905:U:C5	1:A:906:A:C5	2.95	0.54
1:A:1157:A:C4	1:A:1181:G:C6	2.95	0.54
1:A:1307:U:C6	1:A:1307:U:O5'	2.61	0.54
1:A:1319:A:N7	1:A:1323:G:C4	2.75	0.54
1:A:1344:C:C5'	9:I:121:ARG:HB3	2.38	0.54
1:A:1374:A:H4'	7:G:30:MET:HE3	1.89	0.54
1:A:1380:U:C5	7:G:1:PRO:C	2.85	0.54
1:A:1437:A:C2	1:A:1465:A:C4	2.94	0.54
1:A:1462:C:C6	1:A:1463:U:C5	2.95	0.54
15:O:11:VAL:O	15:O:15:GLY:HA3	2.07	0.54
17:Q:57:VAL:HB	17:Q:78:VAL:O	2.08	0.54
17:Q:60:ILE:HG22	17:Q:74:LEU:HA	1.90	0.54
17:Q:66:LEU:HD12	17:Q:70:LYS:O	2.07	0.54
18:R:31:TYR:CD2	18:R:44:THR:HG23	2.42	0.54
1:A:3:A:H5'	1:A:614:C:H4'	1.89	0.54
1:A:32:A:C4'	1:A:48:C:H42	2.21	0.54
1:A:66:A:C4	1:A:104:G:C2	2.96	0.54
1:A:81:A:OP2	1:A:83:C:C5	2.60	0.54
1:A:147:G:C8	1:A:147:G:O5'	2.60	0.54
1:A:184:G:C6	1:A:194:C:N4	2.76	0.54
1:A:207:C:H2'	1:A:208:U:C4	2.43	0.54
1:A:258:G:C5	1:A:259:G:C8	2.95	0.54
1:A:282:A:C6	1:A:283:U:C4	2.95	0.54
1:A:301:G:C8	1:A:301:G:H3'	2.43	0.54
1:A:303:A:C5	1:A:304:U:C5	2.95	0.54
1:A:369:G:N1	1:A:370:C:C2	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:449:G:C6	1:A:486:U:C2	2.95	0.54
1:A:453:G:O6	1:A:480:U:C5	2.61	0.54
1:A:539:A:C6	1:A:540:G:C5	2.95	0.54
1:A:594:U:C4	1:A:595:A:N6	2.76	0.54
1:A:596:A:C6	1:A:645:G:C2	2.95	0.54
1:A:597:G:C4	1:A:598:U:C6	2.95	0.54
1:A:675:A:C6	1:A:676:A:C5	2.94	0.54
1:A:783:C:H2'	1:A:784:A:C8	2.43	0.54
1:A:804:U:C6	1:A:805:C:C4	2.95	0.54
1:A:843:U:C2'	1:A:846:G:H21	2.20	0.54
1:A:858:G:H1	1:A:869:G:H2'	1.73	0.54
1:A:1009:U:C2	14:N:20:PHE:O	2.61	0.54
1:A:1032:G:N3	1:A:1033:G:C8	2.75	0.54
1:A:1102:A:C6	1:A:1103:C:C4	2.96	0.54
1:A:1107:C:O2	1:A:1191:A:H1'	2.07	0.54
1:A:1118:U:H2'	1:A:1119:C:C6	2.43	0.54
1:A:1133:G:N1	1:A:1142:G:C6	2.75	0.54
1:A:1186:G:C8	1:A:1186:G:O5'	2.61	0.54
1:A:1198:G:N1	1:A:1199:U:C2	2.76	0.54
1:A:1289:A:H61	9:I:71:ILE:HG12	1.72	0.54
1:A:1304:G:C5	1:A:1305:G:C5	2.96	0.54
1:A:1384:C:H2'	1:A:1385:G:C8	2.43	0.54
1:A:1423:G:N1	1:A:1478:U:C2	2.75	0.54
6:F:43:GLY:HA2	6:F:58:HIS:CD2	2.43	0.54
11:K:32:THR:HG22	11:K:34:THR:HG23	1.89	0.54
11:K:55:ARG:H	11:K:55:ARG:HD3	1.72	0.54
13:M:24:VAL:HG11	13:M:59:VAL:HG21	1.90	0.54
13:M:84:CYS:SG	19:S:65:MET:HE3	2.47	0.54
1:A:2:A:C8	1:A:614:C:H4'	2.42	0.54
1:A:23:C:OP1	12:L:17:LYS:HA	2.08	0.54
1:A:69:G:N2	1:A:70:U:C2	2.76	0.54
1:A:111:G:H1	1:A:330:C:H5	1.55	0.54
1:A:130:A:C8	1:A:264:C:C1'	2.90	0.54
1:A:247:G:C4	1:A:278:G:C2	2.96	0.54
1:A:254:G:H5'	17:Q:44:HIS:CE1	2.42	0.54
1:A:321:A:C8	1:A:321:A:H3'	2.41	0.54
1:A:355:C:H2'	1:A:356:A:C8	2.43	0.54
1:A:438:U:H5	1:A:494:G:OP2	1.91	0.54
1:A:452:A:C6	1:A:453:G:N3	2.76	0.54
1:A:455:G:N1	1:A:456:A:C8	2.75	0.54
1:A:573:A:N1	1:A:915:A:C2	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:594:U:C5	1:A:646:G:N1	2.76	0.54
1:A:729:A:H61	15:O:49:HIS:CG	2.26	0.54
1:A:864:A:C5	1:A:865:A:C5	2.95	0.54
1:A:928:G:N1	1:A:929:G:C6	2.76	0.54
1:A:954:G:C5	1:A:955:U:C5	2.95	0.54
1:A:960:U:O2	1:A:1225:A:C4	2.61	0.54
1:A:1017:U:O4	14:N:15:LEU:HD21	2.07	0.54
1:A:1036:A:N7	1:A:1037:C:C4	2.76	0.54
1:A:1070:U:C5	1:A:1085:U:C4	2.95	0.54
1:A:1088:G:N2	1:A:1098:C:H1'	2.23	0.54
1:A:1248:A:H2	9:I:71:ILE:HD11	1.73	0.54
1:A:1275:A:C8	1:A:1275:A:C3'	2.91	0.54
1:A:1360:A:H3'	1:A:1361:G:H8	1.73	0.54
1:A:1394:A:C6	1:A:1501:C:H4'	2.43	0.54
1:A:1416:G:H2'	1:A:1417:G:H5'	1.89	0.54
1:A:1502:A:C4	1:A:1504:G:C6	2.96	0.54
4:D:116:LEU:CD2	4:D:153:ARG:HH21	2.21	0.54
10:J:8:ILE:HB	10:J:98:VAL:HG13	1.89	0.54
1:A:71:A:H61	1:A:99:C:H1'	1.72	0.54
1:A:160:A:H2'	1:A:161:A:C8	2.42	0.54
1:A:177:G:H2'	1:A:178:C:C5'	2.38	0.54
1:A:221:C:C6	1:A:221:C:O5'	2.60	0.54
1:A:223:A:C5	1:A:224:U:C5	2.96	0.54
1:A:238:A:C6	1:A:239:U:C4	2.95	0.54
1:A:340:U:O5'	1:A:340:U:H6	1.90	0.54
1:A:361:G:H3'	1:A:362:G:C8	2.43	0.54
1:A:370:C:C6	1:A:370:C:O5'	2.60	0.54
1:A:441:A:C4	1:A:497:G:C6	2.96	0.54
1:A:577:G:C2	1:A:578:C:C2	2.96	0.54
1:A:612:C:C5	1:A:613:C:C4	2.96	0.54
1:A:641:U:C5	1:A:641:U:OP2	2.60	0.54
1:A:663:A:C6	1:A:743:A:C2	2.95	0.54
1:A:755:G:C6	1:A:756:C:C4	2.96	0.54
1:A:766:A:C5	1:A:814:A:C4	2.96	0.54
1:A:946:A:O2'	1:A:1333:A:H2'	2.08	0.54
1:A:1054:C:C6	1:A:1196:A:C4	2.95	0.54
1:A:1140:C:O2'	1:A:1141:C:C5	2.60	0.54
1:A:1152:A:C2	1:A:1153:G:C4	2.96	0.54
1:A:1175:G:C8	1:A:1175:G:O5'	2.61	0.54
1:A:1256:A:C5	1:A:1278:G:N3	2.76	0.54
1:A:1299:A:C5	1:A:1301:U:H1'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1309:G:C2	1:A:1329:A:N3	2.76	0.54
1:A:1385:G:C2	1:A:1386:G:C4	2.95	0.54
1:A:1408:A:C2	1:A:1409:C:C2	2.95	0.54
1:A:1433:A:C8	1:A:1468:A:C2	2.96	0.54
1:A:1434:A:C6	1:A:1435:G:C5	2.95	0.54
1:A:1434:A:C2	1:A:1435:G:H1'	2.43	0.54
1:A:1458:G:H2'	1:A:1459:G:O4'	2.08	0.54
4:D:115:GLN:HG3	4:D:153:ARG:HH22	1.71	0.54
5:E:88:HIS:CE1	5:E:137:ARG:HD2	2.43	0.54
5:E:96:GLN:CD	5:E:123:LEU:HD12	2.32	0.54
7:G:49:LEU:HB2	7:G:52:ARG:HH21	1.73	0.54
20:T:38:ILE:HD13	20:T:81:GLN:HB3	1.88	0.54
20:T:38:ILE:CA	20:T:86:ALA:HB2	2.37	0.54
20:T:59:ARG:CD	20:T:60:GLN:HE21	2.20	0.54
1:A:21:G:C8	1:A:21:G:O5'	2.61	0.54
1:A:91:U:OP2	1:A:92:U:C5	2.60	0.54
1:A:115:G:N2	1:A:313:A:H1'	2.23	0.54
1:A:131:A:C4	1:A:232:G:C2	2.96	0.54
1:A:141:G:H3'	1:A:142:G:H8	1.73	0.54
1:A:142:G:N3	1:A:222:C:C2	2.76	0.54
1:A:160:A:C6	1:A:346:G:C6	2.95	0.54
1:A:190:A:OP2	1:A:191:G:C4	2.61	0.54
1:A:217:C:C5'	1:A:463:U:H5	2.21	0.54
1:A:252:U:H2'	1:A:275:G:N2	2.22	0.54
1:A:300:A:OP2	1:A:301:G:C5	2.61	0.54
1:A:349:A:C2	1:A:350:G:C5	2.96	0.54
1:A:381:C:C4	1:A:382:A:C2	2.95	0.54
1:A:433:G:C5	1:A:434:U:C6	2.96	0.54
1:A:439:U:H2'	1:A:440:C:C5'	2.38	0.54
1:A:502:A:C6	1:A:503:C:C4	2.96	0.54
1:A:617:G:C8	1:A:617:G:O5'	2.61	0.54
1:A:621:A:C6	1:A:622:A:C6	2.95	0.54
1:A:639:G:C6	1:A:640:A:N7	2.76	0.54
1:A:639:G:C6	1:A:640:A:C5	2.96	0.54
1:A:675:A:N1	1:A:676:A:C4	2.75	0.54
1:A:696:A:H2	1:A:786:G:N3	2.06	0.54
1:A:707:U:H5"	11:K:21:HIS:HB3	1.89	0.54
1:A:823:C:H2'	1:A:824:G:C8	2.43	0.54
1:A:824:G:N2	8:H:1:SER:HA	2.23	0.54
1:A:830:G:H5'	2:B:24:PRO:HA	1.90	0.54
1:A:864:A:H3'	1:A:865:A:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:864:A:N3	1:A:865:A:C4	2.76	0.54
1:A:923:A:C2	1:A:1395:C:N3	2.76	0.54
1:A:925:G:H22	1:A:1391:U:H2'	1.73	0.54
1:A:931:C:C4	1:A:932:C:C4	2.96	0.54
1:A:935:A:H2	1:A:1382:C:N4	2.06	0.54
1:A:1055:A:N6	1:A:1206:G:C6	2.76	0.54
1:A:1092:A:C2	1:A:1093:A:C5	2.96	0.54
1:A:1100:C:C4	2:B:72:LYS:HE2	2.43	0.54
1:A:1117:A:H3'	1:A:1118:U:C5	2.43	0.54
1:A:1140:C:O2	1:A:1141:C:C6	2.61	0.54
1:A:1142:G:C6	1:A:1143:G:N3	2.75	0.54
1:A:1158:C:H4'	2:B:130:LYS:C	2.33	0.54
1:A:1216:A:H2'	1:A:1217:C:C6	2.43	0.54
1:A:1277:C:O2'	1:A:1279:G:C8	2.61	0.54
1:A:1300:G:C2	1:A:1334:G:C2	2.95	0.54
1:A:1306:A:C8	1:A:1332:A:C6	2.95	0.54
1:A:1348:U:C2	1:A:1349:A:C8	2.96	0.54
1:A:1408:A:H2'	1:A:1409:C:C6	2.42	0.54
1:A:1419:G:C8	1:A:1419:G:C5'	2.89	0.54
2:B:107:ARG:CZ	2:B:107:ARG:HA	2.38	0.54
7:G:11:ILE:HG23	7:G:27:ASN:ND2	2.23	0.54
13:M:3:ILE:HG13	13:M:18:LEU:HD21	1.90	0.54
22:W:64:CYS:HA	22:W:95:GLY:H	1.73	0.54
22:W:162:ILE:HG23	22:W:190:VAL:O	2.08	0.54
1:A:44:A:C2	1:A:399:G:H1'	2.43	0.54
1:A:73:C:C4	1:A:74:A:C8	2.96	0.54
1:A:84:U:C2	1:A:87:C:O2	2.61	0.54
1:A:165:G:C2	1:A:166:U:C2	2.96	0.54
1:A:272:C:C2	1:A:273:U:C5	2.96	0.54
1:A:322:C:C4	1:A:323:U:O4	2.61	0.54
1:A:377:G:H5"	16:P:24:SER:CA	2.38	0.54
1:A:452:A:C4	1:A:453:G:H1'	2.43	0.54
1:A:462:G:C2	1:A:463:U:N3	2.72	0.54
1:A:475:C:C5	1:A:476:U:C5	2.96	0.54
1:A:610:U:C6	1:A:610:U:C3'	2.91	0.54
1:A:613:C:O2	1:A:628:G:C2	2.61	0.54
1:A:621:A:C6	1:A:622:A:C5	2.95	0.54
1:A:686:U:C4	1:A:687:A:N6	2.76	0.54
1:A:720:C:C6	1:A:733:G:C5	2.96	0.54
1:A:761:G:C5	1:A:762:U:C5	2.95	0.54
1:A:803:G:N7	1:A:804:U:C5	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:808:C:C2	1:A:809:G:C8	2.95	0.54
1:A:943:U:C2	1:A:1341:U:N3	2.75	0.54
1:A:1000:A:C6	1:A:1041:G:C6	2.95	0.54
1:A:1000:A:C5	1:A:1001:C:C6	2.95	0.54
1:A:1084:G:OP1	1:A:1086:U:H5"	2.08	0.54
1:A:1103:C:N3	1:A:1104:G:C5	2.76	0.54
1:A:1108:G:C5	1:A:1109:C:C4	2.95	0.54
1:A:1117:A:C6	1:A:1184:G:C6	2.96	0.54
1:A:1126:U:H3	10:J:9:ARG:HH21	1.56	0.54
1:A:1219:A:C5	1:A:1220:G:C5	2.95	0.54
1:A:1252:A:O2'	1:A:1369:C:H4'	2.08	0.54
1:A:1304:G:H1'	1:A:1334:G:N2	2.23	0.54
1:A:1380:U:O2	1:A:1382:C:N4	2.41	0.54
1:A:1459:G:C5	1:A:1460:C:C5	2.96	0.54
1:A:1461:G:N2	1:A:1462:C:H1'	2.23	0.54
1:A:1473:G:C5	1:A:1474:U:C6	2.96	0.54
5:E:114:LEU:CD2	5:E:119:VAL:HG23	2.38	0.54
6:F:67:PRO:C	6:F:69:GLU:H	2.15	0.54
17:Q:45:VAL:HA	17:Q:72:TRP:O	2.08	0.54
22:W:128:ILE:HD11	22:W:148:CYS:SG	2.48	0.54
1:A:27:G:C5	1:A:557:G:C2	2.96	0.54
1:A:62:U:H4'	1:A:384:G:H22	1.72	0.54
1:A:75:G:C8	1:A:75:G:H3'	2.43	0.54
1:A:94:G:N2	1:A:96:U:C2	2.76	0.54
1:A:187:G:C2	1:A:191:G:C6	2.96	0.54
1:A:191:G:C6	1:A:192:A:C5	2.96	0.54
1:A:232:G:C6	1:A:233:C:C5	2.95	0.54
1:A:297:G:N2	1:A:299:G:H3'	2.23	0.54
1:A:451:A:C2	1:A:480:U:H5	2.26	0.54
1:A:513:C:H2'	1:A:514:C:C6	2.43	0.54
1:A:587:G:H22	1:A:754:C:H5'	1.73	0.54
1:A:597:G:H3'	1:A:598:U:C6	2.43	0.54
1:A:697:U:H6	1:A:786:G:HO2'	1.56	0.54
1:A:751:U:C5	1:A:752:G:C2	2.95	0.54
1:A:782:A:H5'	1:A:1514:G:H2'	1.90	0.54
1:A:821:G:C8	1:A:821:G:H3'	2.43	0.54
1:A:857:C:OP2	1:A:871:U:C5	2.60	0.54
1:A:895:G:N1	1:A:896:C:C2	2.75	0.54
1:A:943:U:H2'	1:A:943:U:O2	2.07	0.54
1:A:1053:G:H5"	1:A:1200:C:C4	2.43	0.54
1:A:1091:U:C2	1:A:1095:U:C2	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1100:C:H4'	1:A:1102:A:H4'	1.89	0.54
1:A:1125:U:C6	1:A:1127:G:C5	2.95	0.54
1:A:1142:G:H5"	1:A:1142:G:H8	1.71	0.54
1:A:1179:A:H5"	9:I:98:ARG:CB	2.37	0.54
1:A:1301:U:H2'	1:A:1303:C:C5	2.43	0.54
1:A:1355:G:C2	1:A:1356:G:C5	2.96	0.54
1:A:1397:C:H5"	5:E:28:ARG:HH12	1.72	0.54
1:A:1407:C:H3'	1:A:1408:A:H8	1.72	0.54
1:A:1408:A:N3	1:A:1494:G:C6	2.75	0.54
1:A:1434:A:H3'	1:A:1435:G:H8	1.72	0.54
1:A:1495:U:C6	1:A:1495:U:O5'	2.61	0.54
1:A:1510:C:O5'	1:A:1510:C:C6	2.61	0.54
2:B:125:PHE:O	2:B:130:LYS:HA	2.08	0.54
3:C:189:HIS:CE1	3:C:194:VAL:HG22	2.43	0.54
10:J:15:HIS:HA	10:J:18:ILE:HG22	1.90	0.54
12:L:15:VAL:HG12	12:L:17:LYS:HZ2	1.73	0.54
14:N:81:ILE:O	14:N:85:GLU:HB2	2.08	0.54
16:P:18:GLN:HA	16:P:38:PHE:HA	1.89	0.54
22:W:41:GLU:HB3	22:W:78:ARG:HH21	1.73	0.54
22:W:293:TYR:HB2	22:W:312:ILE:HG13	1.89	0.54
1:A:27:G:C6	1:A:28:A:C6	2.96	0.53
1:A:27:G:C8	1:A:27:G:H3'	2.43	0.53
1:A:52:C:C4	1:A:53:A:C8	2.96	0.53
1:A:275:G:C6	1:A:276:G:C4	2.96	0.53
1:A:439:U:C5	1:A:440:C:C4	2.96	0.53
1:A:474:G:C6	1:A:475:C:N3	2.76	0.53
1:A:528:C:H41	12:L:45:ASN:CG	2.16	0.53
1:A:643:C:C5	1:A:644:U:C5	2.96	0.53
1:A:668:G:H2'	1:A:669:G:C8	2.44	0.53
1:A:697:U:C4	1:A:698:G:C8	2.95	0.53
1:A:739:C:C4	1:A:740:U:C6	2.96	0.53
1:A:787:A:C6	1:A:793:U:OP1	2.61	0.53
1:A:849:G:C8	1:A:849:G:C5'	2.90	0.53
1:A:922:G:H2'	1:A:923:A:C8	2.43	0.53
1:A:953:G:C3'	1:A:954:G:H8	2.21	0.53
1:A:989:U:H4'	1:A:1016:A:C2	2.44	0.53
1:A:1004:A:C2	1:A:1033:G:O6	2.60	0.53
1:A:1020:G:H3'	1:A:1021:A:H8	1.72	0.53
1:A:1043:G:C5	1:A:1044:A:C6	2.96	0.53
1:A:1070:U:C4	1:A:1085:U:C5	2.95	0.53
1:A:1181:G:N2	1:A:1182:G:H21	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1261:A:C8	1:A:1262:C:O4'	2.62	0.53
1:A:1287:A:C5	1:A:1288:A:C5	2.96	0.53
1:A:1357:A:C4	1:A:1358:U:C2	2.95	0.53
1:A:1375:A:C5	1:A:1376:U:C4	2.96	0.53
1:A:1433:A:C8	1:A:1468:A:C5	2.95	0.53
1:A:1462:C:C3'	1:A:1463:U:H6	2.19	0.53
1:A:1530:G:C8	1:A:1531:A:H3'	2.43	0.53
2:B:71:THR:HA	2:B:167:HIS:CG	2.43	0.53
3:C:56:ILE:CG2	3:C:63:ILE:HD11	2.39	0.53
4:D:169:TRP:HA	4:D:183:ARG:HE	1.74	0.53
8:H:38:VAL:HG11	8:H:111:THR:CA	2.37	0.53
10:J:36:VAL:HG23	10:J:76:ILE:HG22	1.89	0.53
12:L:2:THR:HG22	12:L:5:GLN:H	1.72	0.53
15:O:41:HIS:CE1	15:O:45:HIS:HE1	2.26	0.53
1:A:15:G:C5	1:A:16:A:N7	2.77	0.53
1:A:59:A:N1	1:A:331:G:C4	2.76	0.53
1:A:122:G:C8	1:A:122:G:O5'	2.61	0.53
1:A:138:G:N2	1:A:226:G:C8	2.76	0.53
1:A:143:A:H4'	1:A:196:A:C6	2.43	0.53
1:A:148:G:H1'	1:A:1447:A:H1'	1.89	0.53
1:A:162:A:H4'	1:A:349:A:H5'	1.88	0.53
1:A:201:G:H2'	1:A:202:G:N9	2.24	0.53
1:A:211:G:H3'	1:A:212:G:O4'	2.09	0.53
1:A:245:U:C2	1:A:284:C:C2	2.96	0.53
1:A:319:G:H21	1:A:1434:A:H1'	1.73	0.53
1:A:326:G:H5"	1:A:327:A:OP2	2.08	0.53
1:A:347:G:C5	1:A:348:G:H1'	2.43	0.53
1:A:413:G:H5'	4:D:31:CYS:SG	2.48	0.53
1:A:461:A:C8	1:A:467:U:OP1	2.62	0.53
1:A:522:C:H3'	1:A:523:A:C8	2.43	0.53
1:A:560:A:H5'	1:A:566:G:N2	2.23	0.53
1:A:634:C:C5	1:A:634:C:OP2	2.61	0.53
1:A:745:G:H4'	1:A:851:G:C2	2.44	0.53
1:A:770:C:H2'	1:A:771:G:H8	1.73	0.53
1:A:777:A:N1	11:K:120:CYS:HA	2.23	0.53
1:A:857:C:C5	1:A:858:G:N7	2.77	0.53
1:A:951:G:N1	1:A:1231:G:C5	2.77	0.53
1:A:1019:A:C8	1:A:1019:A:H3'	2.42	0.53
1:A:1020:G:C2	1:A:1021:A:C4	2.96	0.53
1:A:1053:G:O4'	1:A:1056:U:C5	2.61	0.53
1:A:1067:A:H2'	1:A:1093:A:H4'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1083:U:C5'	1:A:1086:U:C4	2.92	0.53
1:A:1167:A:H2'	1:A:1169:A:N6	2.24	0.53
1:A:1289:A:C5	1:A:1290:G:O4'	2.61	0.53
1:A:1296:C:C6	1:A:1297:G:C5	2.97	0.53
1:A:1302:C:C3'	1:A:1303:C:C5'	2.86	0.53
1:A:1326:U:H2'	1:A:1327:C:C6	2.43	0.53
1:A:1346:A:C5	7:G:9:ARG:HG2	2.43	0.53
1:A:1410:A:C2	1:A:1491:G:C2	2.97	0.53
1:A:1488:G:N2	1:A:1489:G:H1'	2.23	0.53
2:B:65:LYS:HD2	2:B:89:PHE:HB2	1.90	0.53
3:C:189:HIS:CE1	3:C:194:VAL:CG1	2.91	0.53
4:D:117:VAL:CG2	4:D:132:ALA:HB2	2.37	0.53
13:M:9:PRO:HB3	13:M:18:LEU:HG	1.89	0.53
13:M:18:LEU:C	13:M:21:ILE:H	2.17	0.53
1:A:22:G:C4	1:A:23:C:C5	2.96	0.53
1:A:39:G:C6	1:A:40:C:C4	2.96	0.53
1:A:86:G:H1'	1:A:87:C:C6	2.43	0.53
1:A:107:G:H1'	1:A:379:C:C5'	2.39	0.53
1:A:160:A:H2	1:A:347:G:C2	2.26	0.53
1:A:185:U:C6	1:A:185:U:O5'	2.62	0.53
1:A:209:U:H5"	1:A:210:C:H5	1.71	0.53
1:A:291:U:C2	1:A:292:G:C8	2.96	0.53
1:A:313:A:N1	1:A:314:C:C2	2.76	0.53
1:A:396:C:O5'	1:A:396:C:C6	2.62	0.53
1:A:409:U:H1'	1:A:434:U:O2	2.09	0.53
1:A:450:G:C4	1:A:481:G:C2	2.96	0.53
1:A:506:G:H3'	1:A:507:C:C5	2.43	0.53
1:A:537:G:N1	1:A:538:G:C4	2.77	0.53
1:A:584:G:C6	1:A:585:G:C5	2.96	0.53
1:A:679:C:C2	1:A:712:A:N1	2.77	0.53
1:A:711:G:H2'	1:A:712:A:C8	2.43	0.53
1:A:838:G:O5'	1:A:838:G:C8	2.61	0.53
1:A:867:G:H2'	1:A:868:C:O4'	2.07	0.53
1:A:892:A:C6	1:A:907:A:C8	2.97	0.53
1:A:900:A:C6	1:A:901:A:C6	2.96	0.53
1:A:938:A:O2'	1:A:1377:A:H5'	2.08	0.53
1:A:963:G:C5	1:A:973:G:C6	2.97	0.53
1:A:1049:U:H4'	1:A:1050:G:H5'	1.89	0.53
1:A:1058:G:N7	1:A:1059:C:C5	2.77	0.53
1:A:1177:G:H3'	1:A:1178:G:C8	2.44	0.53
1:A:1178:G:H2'	1:A:1180:A:OP2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1181:G:O2'	1:A:1182:G:C4	2.59	0.53
1:A:1199:U:C6	1:A:1199:U:OP2	2.61	0.53
1:A:1238:A:C5'	7:G:109:LYS:HZ3	2.21	0.53
1:A:1246:A:C6	1:A:1292:G:C6	2.95	0.53
1:A:1282:C:N3	1:A:1283:U:C4	2.76	0.53
1:A:1299:A:H62	1:A:1302:C:H41	1.55	0.53
1:A:1396:A:H5'	1:A:1398:A:H5'	1.90	0.53
1:A:1415:G:N2	1:A:1416:G:C4	2.76	0.53
1:A:1480:A:H3'	1:A:1481:U:C5	2.43	0.53
1:A:1503:A:P	1:A:1503:A:H8	2.32	0.53
1:A:1525:G:N1	1:A:1526:G:C5	2.77	0.53
1:A:1526:G:C2	1:A:1527:U:C6	2.96	0.53
2:B:186:VAL:HA	2:B:190:SER:HB2	1.90	0.53
4:D:89:LEU:HA	4:D:92:LEU:HD12	1.90	0.53
5:E:119:VAL:O	5:E:120:HIS:CD2	2.61	0.53
5:E:158:LYS:CE	8:H:70:VAL:HG12	2.39	0.53
22:W:51:HIS:HB3	22:W:64:CYS:O	2.08	0.53
1:A:31:G:H4'	1:A:45:G:O2'	2.08	0.53
1:A:129:A:C2	1:A:130:A:C2	2.96	0.53
1:A:241:G:C2	1:A:242:G:C4	2.96	0.53
1:A:251:G:N1	1:A:266:G:C6	2.76	0.53
1:A:261:U:C6	1:A:263:A:OP2	2.61	0.53
1:A:272:C:O5'	1:A:272:C:C6	2.61	0.53
1:A:293:G:C5	1:A:294:U:C5	2.97	0.53
1:A:299:G:C5	1:A:300:A:N7	2.77	0.53
1:A:301:G:C5	1:A:302:G:C8	2.96	0.53
1:A:365:U:O5'	1:A:365:U:H6	1.92	0.53
1:A:431:A:H5"	1:A:432:A:P	2.48	0.53
1:A:484:G:C2	1:A:486:U:C6	2.95	0.53
1:A:507:C:H3'	1:A:508:U:H5"	1.89	0.53
1:A:548:G:C6	1:A:549:C:C2	2.96	0.53
1:A:596:A:C2	1:A:645:G:C2	2.96	0.53
1:A:625:U:H1'	16:P:48:GLU:HG2	1.90	0.53
1:A:675:A:C2	1:A:676:A:C4	2.96	0.53
1:A:675:A:H4'	18:R:71:ASP:HB3	1.90	0.53
1:A:714:G:C8	1:A:714:G:OP2	2.61	0.53
1:A:858:G:N1	1:A:869:G:H3'	2.24	0.53
1:A:862:C:C1'	1:A:874:G:H5"	2.32	0.53
1:A:920:U:O5'	1:A:920:U:H6	1.91	0.53
1:A:951:G:C2	1:A:952:U:C2	2.96	0.53
1:A:982:U:H5	14:N:70:HIS:HE2	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:996:A:C2	1:A:997:U:C2	2.96	0.53
1:A:1074:G:C6	1:A:1102:A:C6	2.96	0.53
1:A:1081:A:C8	1:A:1081:A:H5"	2.43	0.53
1:A:1102:A:C6	1:A:1103:C:N4	2.76	0.53
1:A:1148:U:O4'	9:I:17:ARG:HG2	2.08	0.53
1:A:1157:A:C2	1:A:1181:G:C5	2.97	0.53
1:A:1250:A:H61	1:A:1354:U:H4'	1.73	0.53
1:A:1285:A:H61	1:A:1355:G:C4'	2.22	0.53
1:A:1309:G:N1	1:A:1329:A:C4	2.76	0.53
1:A:1377:A:H61	7:G:9:ARG:NE	2.05	0.53
1:A:1419:G:C5	1:A:1420:U:C5	2.96	0.53
1:A:1428:A:C6	1:A:1473:G:C5	2.97	0.53
2:B:185:ILE:CD1	2:B:209:VAL:HG22	2.39	0.53
3:C:11:LEU:HD11	10:J:65:TYR:CD1	2.43	0.53
3:C:143:LEU:C	3:C:145:ALA:H	2.16	0.53
8:H:6:ILE:HB	8:H:76:ARG:HH12	1.74	0.53
8:H:36:ALA:O	8:H:45:ILE:HD11	2.08	0.53
1:A:27:G:C4	1:A:557:G:C2	2.96	0.53
1:A:77:A:H2'	1:A:78:A:C5	2.44	0.53
1:A:139:A:C5	1:A:140:U:C5	2.97	0.53
1:A:187:G:H4'	1:A:190:A:H61	1.74	0.53
1:A:229:U:C2	1:A:230:G:C8	2.96	0.53
1:A:270:A:C2	1:A:271:C:C2	2.97	0.53
1:A:300:A:H2'	1:A:564:C:C4	2.43	0.53
1:A:323:U:C4	1:A:324:G:C5	2.97	0.53
1:A:433:G:N7	1:A:434:U:C5	2.77	0.53
1:A:442:G:C6	1:A:443:C:C4	2.96	0.53
1:A:459:A:C6	1:A:460:A:C8	2.96	0.53
1:A:464:U:C2	1:A:468:A:C2	2.96	0.53
1:A:500:G:C6	1:A:501:C:C4	2.96	0.53
1:A:577:G:H5'	1:A:816:A:C5	2.42	0.53
1:A:579:A:H1'	1:A:763:G:N2	2.24	0.53
1:A:584:G:C8	1:A:584:G:O5'	2.61	0.53
1:A:656:G:H2'	1:A:657:U:O4'	2.08	0.53
1:A:694:A:C5	1:A:695:A:C8	2.97	0.53
1:A:824:G:N2	1:A:877:G:C4	2.77	0.53
1:A:829:G:H5"	1:A:829:G:C8	2.44	0.53
1:A:881:G:C6	1:A:882:C:C6	2.96	0.53
1:A:949:A:C4	1:A:1233:G:C2	2.97	0.53
1:A:993:G:H5'	1:A:995:C:H41	1.73	0.53
1:A:994:A:C5	1:A:995:C:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1006:G:O6	1:A:1007:U:C4	2.61	0.53
1:A:1009:U:C2	1:A:1021:A:N1	2.77	0.53
1:A:1009:U:H5"	14:N:21:ALA:HA	1.90	0.53
1:A:1010:U:C4	14:N:19:TYR:O	2.62	0.53
1:A:1024:G:C2	1:A:1025:U:C5	2.96	0.53
1:A:1055:A:N6	1:A:1056:U:C2	2.77	0.53
1:A:1130:A:H4'	9:I:19:PHE:CD2	2.44	0.53
1:A:1160:G:O6	1:A:1181:G:C6	2.61	0.53
1:A:1252:A:C8	1:A:1252:A:H3'	2.44	0.53
1:A:1287:A:H61	1:A:1371:G:C4'	2.22	0.53
1:A:1300:G:C5	1:A:1335:U:C4	2.96	0.53
1:A:1380:U:H3'	7:G:2:ARG:HB3	1.90	0.53
1:A:1408:A:H1'	1:A:1494:G:N2	2.24	0.53
1:A:1469:C:H2'	1:A:1470:U:H5'	1.91	0.53
1:A:1491:G:N2	1:A:1492:A:C2	2.76	0.53
1:A:1527:U:C5	21:U:41:THR:CB	2.92	0.53
3:C:22:PHE:CG	10:J:12:ALA:HA	2.44	0.53
3:C:189:HIS:HE1	3:C:194:VAL:CG2	2.22	0.53
12:L:92:VAL:HG11	12:L:95:HIS:HE1	1.73	0.53
13:M:22:TYR:CB	13:M:69:ARG:HH21	2.22	0.53
1:A:2:A:H2'	1:A:614:C:H4'	1.90	0.53
1:A:32:A:H4'	1:A:48:C:N4	2.21	0.53
1:A:74:A:C2	1:A:97:G:C4	2.97	0.53
1:A:148:G:C8	1:A:148:G:O5'	2.62	0.53
1:A:296:U:N3	1:A:297:G:C5	2.77	0.53
1:A:340:U:C2	1:A:350:G:C2	2.97	0.53
1:A:365:U:O5'	1:A:365:U:C6	2.61	0.53
1:A:382:A:C5	1:A:383:A:C5	2.96	0.53
1:A:469:C:C5	1:A:470:C:C5	2.96	0.53
1:A:508:U:OP1	1:A:508:U:C6	2.62	0.53
1:A:539:A:N6	1:A:540:G:C6	2.76	0.53
1:A:544:G:C2	1:A:545:C:C2	2.96	0.53
1:A:550:G:C2	1:A:551:U:C6	2.97	0.53
1:A:559:A:H1'	1:A:561:U:C2'	2.38	0.53
1:A:587:G:N2	1:A:753:A:H1'	2.24	0.53
1:A:649:A:C6	1:A:650:G:N7	2.76	0.53
1:A:665:A:N3	1:A:732:C:H2'	2.23	0.53
1:A:737:C:C4	1:A:738:C:C4	2.96	0.53
1:A:755:G:H21	8:H:3:GLN:NE2	2.04	0.53
1:A:877:G:H21	8:H:3:GLN:CG	2.21	0.53
1:A:903:G:H21	1:A:904:U:H1'	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:987:G:C6	1:A:1219:A:C6	2.96	0.53
1:A:1193:G:O6	1:A:1194:U:C5	2.62	0.53
1:A:1240:U:OP1	1:A:1240:U:C4	2.62	0.53
1:A:1244:G:C5	1:A:1294:G:C2	2.96	0.53
1:A:1307:U:C5	1:A:1307:U:OP2	2.62	0.53
1:A:1329:A:C6	1:A:1330:U:C6	2.97	0.53
1:A:1365:G:C6	1:A:1366:C:C2	2.96	0.53
1:A:1454:G:H2'	1:A:1455:G:O4'	2.09	0.53
2:B:23:ASN:ND2	2:B:26:MET:HE3	2.24	0.53
2:B:68:PHE:HB2	2:B:83:ALA:HB1	1.89	0.53
2:B:80:LYS:HG3	2:B:90:PHE:CZ	2.44	0.53
3:C:176:THR:HG22	3:C:178:ARG:HH12	1.73	0.53
4:D:102:TYR:CZ	4:D:110:ARG:NH2	2.76	0.53
5:E:38:VAL:HG23	5:E:70:MET:SD	2.48	0.53
5:E:109:ALA:HB3	5:E:110:MET:CE	2.38	0.53
9:I:18:VAL:HG13	9:I:64:ILE:HG22	1.91	0.53
22:W:195:GLN:CG	22:W:226:ALA:HB2	2.39	0.53
1:A:72:A:C6	1:A:73:C:C4	2.97	0.53
1:A:80:A:C2	1:A:90:C:O2	2.62	0.53
1:A:93:U:C6	1:A:93:U:H3'	2.43	0.53
1:A:216:U:H5"	1:A:464:U:H4'	1.91	0.53
1:A:250:A:O4'	1:A:252:U:C6	2.61	0.53
1:A:252:U:O2	1:A:275:G:C2	2.61	0.53
1:A:428:G:C6	1:A:430:A:C6	2.97	0.53
1:A:465:A:C5	1:A:466:A:N7	2.77	0.53
1:A:516:U:O4	1:A:533:A:C8	2.62	0.53
1:A:600:A:H1'	1:A:639:G:C2	2.44	0.53
1:A:622:A:C5	1:A:623:C:C6	2.97	0.53
1:A:652:U:H3'	1:A:752:G:N1	2.24	0.53
1:A:659:U:C2	1:A:660:C:C6	2.96	0.53
1:A:666:G:OP2	1:A:726:C:H1'	2.08	0.53
1:A:773:G:C5	1:A:774:G:C8	2.96	0.53
1:A:788:U:C5	1:A:789:U:C4	2.97	0.53
1:A:899:C:N3	1:A:900:A:C5	2.76	0.53
1:A:901:A:C8	1:A:902:G:H1'	2.44	0.53
1:A:982:U:H5'	1:A:983:A:C8	2.44	0.53
1:A:1004:A:H2'	1:A:1036:A:N3	2.23	0.53
1:A:1083:U:H2'	1:A:1084:G:O4'	2.08	0.53
1:A:1091:U:H1'	1:A:1171:A:H5"	1.90	0.53
1:A:1276:G:N2	1:A:1283:U:H1'	2.24	0.53
1:A:1345:U:C2	1:A:1377:A:C6	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1355:G:H2'	1:A:1355:G:N3	2.23	0.53
1:A:1406:U:C2'	1:A:1407:C:H5'	2.39	0.53
1:A:1428:A:C4	1:A:1429:A:C8	2.97	0.53
1:A:1433:A:C3'	1:A:1434:A:H8	2.21	0.53
1:A:1460:C:C4	1:A:1461:G:C6	2.97	0.53
1:A:1532:U:C4	1:A:1534:A:C4	2.96	0.53
2:B:83:ALA:HB2	2:B:213:LEU:HD21	1.91	0.53
8:H:116:ARG:HH12	8:H:121:GLY:HA2	1.73	0.53
13:M:2:ARG:HE	13:M:56:ARG:HD3	1.74	0.53
17:Q:66:LEU:HB2	17:Q:70:LYS:HB3	1.91	0.53
1:A:11:G:H21	1:A:525:C:H4'	1.74	0.53
1:A:45:G:C2	1:A:46:G:C8	2.97	0.53
1:A:64:G:C5	1:A:99:C:C2	2.96	0.53
1:A:74:A:C6	1:A:75:G:C5	2.96	0.53
1:A:171:A:C2	1:A:172:A:C2	2.96	0.53
1:A:234:C:C6	1:A:234:C:O5'	2.62	0.53
1:A:260:G:H2'	1:A:261:U:C5	2.44	0.53
1:A:357:G:H1'	1:A:368:U:C2	2.43	0.53
1:A:367:U:O2	1:A:394:G:H1'	2.08	0.53
1:A:384:G:C4	1:A:385:C:C6	2.96	0.53
1:A:419:C:H5"	1:A:513:C:C1'	2.39	0.53
1:A:502:A:H5'	12:L:114:SER:HB3	1.91	0.53
1:A:505:G:C8	1:A:535:A:H1'	2.43	0.53
1:A:555:U:H2'	1:A:556:C:C4	2.43	0.53
1:A:583:A:C2	1:A:759:A:C8	2.97	0.53
1:A:595:A:C8	1:A:641:U:O4	2.62	0.53
1:A:617:G:H4'	16:P:45:GLU:N	2.23	0.53
1:A:640:A:C6	1:A:641:U:O2	2.62	0.53
1:A:650:G:C2	1:A:651:C:C6	2.97	0.53
1:A:654:G:C5	1:A:753:A:N7	2.77	0.53
1:A:768:A:H2'	1:A:1513:A:H4'	1.90	0.53
1:A:786:G:C2	1:A:797:C:H1'	2.43	0.53
1:A:795:C:OP2	1:A:795:C:C5	2.61	0.53
1:A:865:A:C4	1:A:866:C:C5	2.96	0.53
1:A:928:G:H21	1:A:1533:C:N4	2.07	0.53
1:A:938:A:H5'	7:G:75:LYS:HZ1	1.73	0.53
1:A:1006:G:C5	1:A:1024:G:N2	2.77	0.53
1:A:1047:G:C2	1:A:1213:A:C2	2.97	0.53
1:A:1058:G:C4	1:A:1059:C:C6	2.97	0.53
1:A:1107:C:H2'	1:A:1108:G:H5'	1.91	0.53
1:A:1120:C:C4	1:A:1121:U:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1175:G:C2	1:A:1176:A:C4	2.97	0.53
1:A:1202:U:C5	1:A:1203:C:C5	2.97	0.53
1:A:1210:C:C5	1:A:1211:U:C4	2.96	0.53
1:A:1304:G:C6	1:A:1305:G:N1	2.76	0.53
1:A:1326:U:H6	1:A:1326:U:O5'	1.91	0.53
1:A:1353:G:C6	1:A:1354:U:C4	2.97	0.53
1:A:1355:G:H1'	1:A:1368:A:H2	1.73	0.53
1:A:1407:C:C5	1:A:1408:A:N7	2.77	0.53
1:A:1468:A:H2'	1:A:1469:C:C6	2.44	0.53
1:A:1521:C:N3	1:A:1522:U:C6	2.77	0.53
2:B:202:ASN:O	2:B:208:ALA:HB3	2.08	0.53
7:G:49:LEU:HB3	7:G:60:ALA:HB1	1.91	0.53
12:L:36:VAL:HG21	12:L:73:LEU:O	2.08	0.53
13:M:65:GLU:HA	13:M:69:ARG:CZ	2.39	0.53
22:W:235:LEU:HB2	22:W:271:ARG:HH21	1.74	0.53
1:A:38:G:C6	1:A:397:A:N6	2.77	0.53
1:A:42:G:C6	1:A:43:C:C5	2.96	0.53
1:A:57:G:N1	1:A:356:A:C2	2.76	0.53
1:A:59:A:C2	1:A:331:G:C4	2.97	0.53
1:A:65:A:H2'	1:A:381:C:C4	2.44	0.53
1:A:81:A:C8	1:A:83:C:N3	2.77	0.53
1:A:106:C:C6	1:A:380:G:OP1	2.62	0.53
1:A:113:G:C2	1:A:315:A:N3	2.76	0.53
1:A:123:U:H2'	1:A:124:C:C6	2.44	0.53
1:A:223:A:C6	1:A:224:U:C4	2.97	0.53
1:A:254:G:C5'	17:Q:44:HIS:HE1	2.22	0.53
1:A:341:C:N3	1:A:342:C:C5	2.77	0.53
1:A:369:G:C6	1:A:393:A:C2	2.97	0.53
1:A:390:U:H2'	1:A:391:G:C8	2.44	0.53
1:A:424:G:H2'	1:A:425:G:O4'	2.09	0.53
1:A:433:G:C5	1:A:434:U:C5	2.97	0.53
1:A:462:G:C2	1:A:471:U:C6	2.97	0.53
1:A:688:G:C4	1:A:700:G:C2	2.97	0.53
1:A:718:A:C2	21:U:22:CYS:HB2	2.44	0.53
1:A:767:A:H2'	1:A:768:A:O4'	2.09	0.53
1:A:775:G:O2'	1:A:776:G:H5'	2.08	0.53
1:A:780:A:H2'	1:A:800:G:C2	2.44	0.53
1:A:934:C:C4	1:A:1344:C:C2	2.97	0.53
1:A:976:G:H8	1:A:1361:G:C6	2.27	0.53
1:A:1049:U:C4	1:A:1202:U:H4'	2.44	0.53
1:A:1053:G:O6	1:A:1199:U:H2'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1191:A:H3'	1:A:1192:C:H6	1.74	0.53
1:A:1228:C:C6	1:A:1228:C:H5"	2.43	0.53
1:A:1263:C:C4	1:A:1264:U:C5	2.97	0.53
1:A:1274:A:C8	1:A:1274:A:H3'	2.44	0.53
1:A:1343:G:C6	1:A:1344:C:N3	2.77	0.53
1:A:1380:U:O2'	1:A:1381:U:C5	2.59	0.53
1:A:1441:A:H8	1:A:1441:A:C5'	2.21	0.53
1:A:1497:G:H1'	1:A:1518:A:C2	2.43	0.53
2:B:23:ASN:O	2:B:30:ILE:HD11	2.09	0.53
2:B:72:LYS:H	2:B:167:HIS:CE1	2.27	0.53
4:D:87:GLU:CD	4:D:87:GLU:H	2.17	0.53
6:F:47:LEU:HD22	18:R:65:SER:O	2.09	0.53
10:J:18:ILE:HG23	10:J:19:ASP:N	2.24	0.53
14:N:1:ALA:H1	14:N:66:THR:HG22	1.74	0.53
17:Q:63:CYS:SG	17:Q:66:LEU:HD11	2.49	0.53
1:A:19:A:C5	1:A:20:U:C5	2.96	0.53
1:A:133:U:O5'	1:A:133:U:C6	2.61	0.53
1:A:187:G:C2	1:A:191:G:O6	2.61	0.53
1:A:200:G:N2	1:A:218:U:H1'	2.24	0.53
1:A:216:U:H4'	1:A:464:U:O2'	2.09	0.53
1:A:319:G:H5'	1:A:1468:A:H5'	1.91	0.53
1:A:428:G:H4'	1:A:429:U:OP1	2.09	0.53
1:A:439:U:C2'	1:A:440:C:H5'	2.38	0.53
1:A:627:G:C2	1:A:628:G:C4	2.97	0.53
1:A:655:A:C2	1:A:754:C:N4	2.77	0.53
1:A:728:A:H2'	1:A:729:A:O4'	2.09	0.53
1:A:729:A:C6	1:A:730:G:C5	2.97	0.53
1:A:775:G:N2	1:A:776:G:C2	2.77	0.53
1:A:816:A:OP2	1:A:1527:U:H4'	2.09	0.53
1:A:838:G:C5	1:A:839:C:C5	2.96	0.53
1:A:875:U:H3'	1:A:875:U:C6	2.43	0.53
1:A:927:G:N1	1:A:928:G:C6	2.77	0.53
1:A:939:G:H1'	1:A:1376:U:H1'	1.90	0.53
1:A:949:A:C2	1:A:971:G:C6	2.97	0.53
1:A:976:G:C8	1:A:1361:G:C5	2.96	0.53
1:A:1008:U:C6	1:A:1008:U:H5'	2.44	0.53
1:A:1144:G:N1	1:A:1145:A:C4	2.77	0.53
1:A:1166:G:C2	1:A:1171:A:N6	2.77	0.53
1:A:1238:A:H61	1:A:1241:G:H21	1.57	0.53
1:A:1250:A:C8	1:A:1250:A:H3'	2.43	0.53
1:A:1296:C:C5	1:A:1297:G:C2	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1306:A:C5	1:A:1307:U:C6	2.96	0.53
1:A:1342:C:C2	1:A:1343:G:C8	2.97	0.53
1:A:1363:A:C8	1:A:1365:G:C2	2.97	0.53
1:A:1373:G:H3'	7:G:12:LEU:HD12	1.91	0.53
1:A:1394:A:H5'	1:A:1395:C:C5	2.45	0.53
1:A:1416:G:C2	1:A:1417:G:O4'	2.62	0.53
1:A:1523:G:C5	1:A:1524:C:C5	2.97	0.53
2:B:41:ASN:HD22	2:B:44:LYS:HB2	1.74	0.53
2:B:185:ILE:CD1	2:B:209:VAL:HA	2.39	0.53
4:D:115:GLN:CG	4:D:153:ARG:HH22	2.22	0.53
6:F:75:GLU:HB3	6:F:86:ARG:HH12	1.74	0.53
10:J:18:ILE:HD12	10:J:70:HIS:HB2	1.90	0.53
15:O:14:PHE:CD2	15:O:29:ALA:HB2	2.44	0.53
1:A:27:G:C5	1:A:28:A:N7	2.77	0.52
1:A:39:G:H1'	1:A:498:A:C4	2.44	0.52
1:A:46:G:H4'	1:A:48:C:C5	2.44	0.52
1:A:64:G:C5	1:A:67:C:N4	2.76	0.52
1:A:80:A:C2	1:A:81:A:O3'	2.61	0.52
1:A:146:G:C8	1:A:146:G:H5"	2.44	0.52
1:A:173:U:H1'	1:A:197:A:C6	2.43	0.52
1:A:195:A:N3	1:A:196:A:C2	2.77	0.52
1:A:327:A:C4	1:A:329:A:C4	2.97	0.52
1:A:432:A:C6	1:A:433:G:C4	2.96	0.52
1:A:464:U:H2'	1:A:466:A:N7	2.24	0.52
1:A:570:G:C6	1:A:571:U:C4	2.97	0.52
1:A:582:C:C5	1:A:760:G:O6	2.62	0.52
1:A:646:G:C5	1:A:647:C:C6	2.96	0.52
1:A:701:U:OP2	1:A:702:A:C5	2.63	0.52
1:A:774:G:C2	1:A:775:G:C8	2.96	0.52
1:A:822:U:C5	1:A:823:C:C5	2.97	0.52
1:A:824:G:H21	8:H:2:MET:N	2.07	0.52
1:A:955:U:N3	1:A:956:U:C5	2.77	0.52
1:A:1008:U:C2	1:A:1009:U:C6	2.97	0.52
1:A:1033:G:C4	1:A:1034:G:C8	2.97	0.52
1:A:1069:C:N4	1:A:1094:G:C2	2.77	0.52
1:A:1095:U:H6	1:A:1095:U:H3'	1.74	0.52
1:A:1161:C:H3'	1:A:1161:C:C6	2.45	0.52
1:A:1175:G:N3	1:A:1176:A:C8	2.77	0.52
1:A:1231:G:H2'	1:A:1232:U:C6	2.44	0.52
1:A:1234:C:C1'	1:A:1364:U:C5	2.92	0.52
1:A:1287:A:C2	1:A:1353:G:H1'	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1307:U:C2	1:A:1308:U:C6	2.97	0.52
1:A:1326:U:C2	1:A:1327:C:C6	2.97	0.52
1:A:1343:G:H2'	1:A:1344:C:O4'	2.08	0.52
1:A:1363:A:N9	1:A:1365:G:C6	2.77	0.52
1:A:1532:U:H3'	1:A:1534:A:OP2	2.09	0.52
22:W:203:GLU:HA	22:W:206:THR:HG23	1.91	0.52
22:W:207:GLY:H	22:W:261:GLY:C	2.17	0.52
22:W:294:LEU:HA	22:W:312:ILE:HD11	1.91	0.52
1:A:36:C:O2'	1:A:501:C:H5"	2.09	0.52
1:A:58:C:C6	20:T:2:ASN:N	2.77	0.52
1:A:65:A:H3'	1:A:381:C:C5	2.43	0.52
1:A:105:G:C8	1:A:105:G:O5'	2.62	0.52
1:A:107:G:H2'	1:A:108:G:C4'	2.39	0.52
1:A:259:G:C4	1:A:260:G:C8	2.97	0.52
1:A:428:G:C8	1:A:430:A:C4	2.98	0.52
1:A:511:C:O2	1:A:512:U:C6	2.62	0.52
1:A:592:G:C2'	1:A:593:U:H6	2.22	0.52
1:A:656:G:C5	1:A:657:U:C5	2.97	0.52
1:A:763:G:H3'	1:A:764:C:C6	2.43	0.52
1:A:843:U:C6	1:A:847:G:H1'	2.44	0.52
1:A:894:G:N1	1:A:895:G:C6	2.77	0.52
1:A:946:A:C2	1:A:947:G:C4	2.96	0.52
1:A:1000:A:N6	1:A:1040:U:H3	2.06	0.52
1:A:1014:A:C2	19:S:33:TRP:NE1	2.77	0.52
1:A:1349:A:C5	1:A:1374:A:C8	2.98	0.52
1:A:1389:C:N3	1:A:1390:U:C2	2.77	0.52
1:A:1473:G:C6	1:A:1474:U:C5	2.97	0.52
1:A:1494:G:C2	1:A:1494:G:H2'	2.44	0.52
1:A:1524:C:C4	1:A:1525:G:N7	2.77	0.52
5:E:98:ALA:CB	5:E:123:LEU:HD11	2.39	0.52
5:E:109:ALA:HB3	5:E:110:MET:HE3	1.91	0.52
10:J:65:TYR:HB3	14:N:95:LEU:HD11	1.90	0.52
22:W:310:CYS:HB3	22:W:313:ARG:HB3	1.91	0.52
1:A:41:G:N1	1:A:42:G:C5	2.78	0.52
1:A:78:A:C6	1:A:79:G:N1	2.78	0.52
1:A:139:A:C6	1:A:140:U:C4	2.97	0.52
1:A:223:A:C6	1:A:224:U:N3	2.77	0.52
1:A:338:A:C2	1:A:339:C:H1'	2.44	0.52
1:A:341:C:N3	1:A:349:A:C2	2.78	0.52
1:A:344:A:H5"	1:A:345:C:C6	2.44	0.52
1:A:454:G:C5	1:A:455:G:C8	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:474:G:C8	1:A:475:C:C5	2.97	0.52
1:A:477:C:C2	1:A:478:A:C8	2.98	0.52
1:A:627:G:C8	1:A:627:G:O5'	2.62	0.52
1:A:668:G:N1	1:A:739:C:C2	2.77	0.52
1:A:701:U:H5"	1:A:703:G:H5'	1.92	0.52
1:A:710:G:N1	1:A:711:G:C5	2.78	0.52
1:A:789:U:O2	1:A:792:A:H2'	2.10	0.52
1:A:951:G:N2	1:A:969:A:C4	2.77	0.52
1:A:956:U:C5	1:A:957:U:C4	2.97	0.52
1:A:975:A:C2	1:A:1365:G:N2	2.77	0.52
1:A:1048:G:H5'	14:N:3:GLN:HB3	1.91	0.52
1:A:1058:G:C6	1:A:1059:C:N3	2.78	0.52
1:A:1067:A:C8	1:A:1093:A:O2'	2.63	0.52
1:A:1168:U:C5	1:A:1169:A:N9	2.78	0.52
1:A:1191:A:H4'	3:C:175:HIS:CE1	2.45	0.52
1:A:1227:A:H3'	1:A:1228:C:H5"	1.92	0.52
1:A:1327:C:C4	1:A:1328:C:C4	2.98	0.52
2:B:65:LYS:HB2	2:B:149:GLY:HA2	1.90	0.52
3:C:137:VAL:HG13	3:C:148:ILE:HG12	1.91	0.52
10:J:12:ALA:HB1	10:J:17:LEU:CB	2.39	0.52
10:J:18:ILE:HG22	10:J:70:HIS:CD2	2.44	0.52
12:L:53:ARG:HA	12:L:63:THR:HA	1.91	0.52
1:A:46:G:H4'	1:A:48:C:N4	2.24	0.52
1:A:60:A:H62	1:A:378:G:H1'	1.73	0.52
1:A:76:G:H3'	1:A:77:A:H8	1.72	0.52
1:A:116:A:C6	1:A:117:G:C5	2.98	0.52
1:A:122:G:C5	1:A:122:G:OP2	2.62	0.52
1:A:203:G:C4	1:A:214:C:N4	2.76	0.52
1:A:236:A:C6	1:A:237:G:C5	2.98	0.52
1:A:313:A:C5	1:A:314:C:C6	2.97	0.52
1:A:451:A:N3	1:A:480:U:C5	2.77	0.52
1:A:595:A:C5	1:A:641:U:C5	2.97	0.52
1:A:597:G:H3'	1:A:598:U:H6	1.75	0.52
1:A:611:C:C6	1:A:612:C:C5	2.98	0.52
1:A:615:G:C2	1:A:616:G:N9	2.77	0.52
1:A:626:G:C2	1:A:627:G:C5	2.98	0.52
1:A:679:C:H1'	1:A:712:A:H2	1.72	0.52
1:A:686:U:C6	1:A:703:G:C2	2.97	0.52
1:A:705:G:C5	1:A:706:A:C8	2.97	0.52
1:A:708:C:OP1	11:K:21:HIS:CE1	2.63	0.52
1:A:748:G:O6	1:A:749:A:C2	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:830:G:N1	1:A:831:A:C5	2.77	0.52
1:A:880:C:C2	1:A:881:G:C8	2.97	0.52
1:A:959:A:C6	1:A:1222:G:C4'	2.92	0.52
1:A:1008:U:C5	14:N:17:ASP:CG	2.87	0.52
1:A:1031:C:OP1	1:A:1032:G:C2	2.62	0.52
1:A:1129:C:C5	1:A:1139:G:O2'	2.62	0.52
1:A:1198:G:C2	1:A:1199:U:C2	2.97	0.52
1:A:1213:A:H2'	1:A:1215:G:C8	2.44	0.52
1:A:1255:G:C5	1:A:1279:G:C5	2.98	0.52
1:A:1266:G:N3	1:A:1270:G:C6	2.78	0.52
1:A:1304:G:C5	1:A:1305:G:C6	2.97	0.52
1:A:1323:G:N2	1:A:1324:A:H1'	2.25	0.52
1:A:1357:A:C2	1:A:1363:A:C6	2.98	0.52
1:A:1462:C:C5	1:A:1463:U:C4	2.97	0.52
1:A:1508:A:C2	1:A:1509:C:C6	2.98	0.52
3:C:111:ASP:HB3	3:C:114:LEU:H	1.74	0.52
14:N:20:PHE:CE2	14:N:50:LEU:HD13	2.45	0.52
14:N:33:VAL:HG12	14:N:41:TRP:CH2	2.44	0.52
15:O:24:THR:OG1	15:O:69:LEU:HD21	2.10	0.52
15:O:44:GLU:C	15:O:45:HIS:CD2	2.88	0.52
1:A:46:G:H2'	1:A:365:U:H2'	1.90	0.52
1:A:79:G:C4	1:A:80:A:C5	2.97	0.52
1:A:116:A:P	1:A:116:A:H3'	2.49	0.52
1:A:132:C:H3'	1:A:132:C:C6	2.45	0.52
1:A:145:G:C2	1:A:178:C:N3	2.78	0.52
1:A:208:U:H5	1:A:210:C:C2	2.28	0.52
1:A:222:C:C6	1:A:222:C:O5'	2.63	0.52
1:A:273:U:C6	1:A:273:U:OP2	2.62	0.52
1:A:288:A:C8	1:A:288:A:O5'	2.63	0.52
1:A:347:G:C8	1:A:348:G:C8	2.98	0.52
1:A:410:G:C2	1:A:431:A:OP2	2.63	0.52
1:A:424:G:C5	1:A:425:G:C5	2.97	0.52
1:A:513:C:C2	1:A:539:A:C2	2.97	0.52
1:A:598:U:C6	1:A:598:U:O5'	2.62	0.52
1:A:644:U:N3	1:A:645:G:C5	2.78	0.52
1:A:724:G:C6	1:A:725:G:C5	2.98	0.52
1:A:751:U:C5	1:A:752:G:C6	2.89	0.52
1:A:771:G:H1'	1:A:809:G:N2	2.24	0.52
1:A:786:G:C2	1:A:787:A:C1'	2.92	0.52
1:A:813:U:N3	1:A:814:A:C8	2.76	0.52
1:A:857:C:C2	1:A:858:G:C8	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:878:A:C5	1:A:879:C:C5	2.98	0.52
1:A:927:G:OP2	1:A:1503:A:C8	2.62	0.52
1:A:940:C:H2'	1:A:941:G:C8	2.44	0.52
1:A:947:G:O4'	1:A:1333:A:H1'	2.10	0.52
1:A:1029:U:H1'	1:A:1033:G:N1	2.25	0.52
1:A:1095:U:C4	1:A:1096:C:C2	2.97	0.52
1:A:1104:G:C5	1:A:1105:A:C5	2.98	0.52
1:A:1182:G:H4'	1:A:1183:U:H5'	1.92	0.52
1:A:1256:A:H1'	1:A:1258:G:C5	2.44	0.52
1:A:1256:A:H4'	1:A:1257:A:N6	2.25	0.52
1:A:1305:G:H3'	1:A:1331:G:N2	2.25	0.52
1:A:1309:G:C4	1:A:1310:G:C8	2.98	0.52
1:A:1313:U:C2	1:A:1325:C:C2	2.98	0.52
1:A:1434:A:C6	1:A:1435:G:C4	2.98	0.52
1:A:1503:A:H3'	1:A:1504:G:C5'	2.39	0.52
3:C:183:TYR:HA	3:C:200:TRP:HA	1.91	0.52
6:F:75:GLU:HG2	6:F:89:VAL:HG22	1.91	0.52
6:F:76:THR:HB	6:F:80:PHE:CZ	2.45	0.52
11:K:28:ASN:C	11:K:46:ALA:HB3	2.34	0.52
13:M:82:LEU:HD21	19:S:64:GLU:H	1.74	0.52
17:Q:66:LEU:HD12	17:Q:70:LYS:CA	2.39	0.52
18:R:20:ILE:O	18:R:28:LEU:HD23	2.09	0.52
20:T:57:VAL:HG23	20:T:58:ASP:H	1.74	0.52
22:W:205:LEU:HB2	22:W:260:HIS:HE1	1.74	0.52
1:A:11:G:C6	1:A:24:U:C2	2.97	0.52
1:A:16:A:C2	1:A:920:U:O2	2.63	0.52
1:A:33:A:C5'	1:A:364:A:H1'	2.40	0.52
1:A:104:G:C6	1:A:105:G:C6	2.98	0.52
1:A:107:G:C8	1:A:108:G:H1'	2.44	0.52
1:A:130:A:C8	17:Q:64:ARG:HB3	2.45	0.52
1:A:189:A:C5	1:A:190:A:N7	2.78	0.52
1:A:199:A:C2	1:A:219:U:O2	2.63	0.52
1:A:240:G:C8	1:A:240:G:C3'	2.88	0.52
1:A:246:A:C2	1:A:279:A:C8	2.97	0.52
1:A:294:U:O5'	1:A:294:U:C6	2.63	0.52
1:A:317:U:C5	1:A:337:G:N2	2.77	0.52
1:A:338:A:N1	1:A:351:G:O6	2.41	0.52
1:A:365:U:C6	1:A:365:U:H3'	2.44	0.52
1:A:527:G:C2	1:A:528:C:C6	2.97	0.52
1:A:563:A:H5'	1:A:566:G:N2	2.25	0.52
1:A:596:A:C6	1:A:597:G:C5	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:604:G:H1	1:A:634:C:N4	2.08	0.52
1:A:654:G:C2	1:A:655:A:C1'	2.92	0.52
1:A:666:G:H5"	1:A:732:C:O2	2.10	0.52
1:A:671:G:N3	1:A:736:C:C2	2.78	0.52
1:A:702:A:H3'	1:A:703:G:C5'	2.40	0.52
1:A:829:G:C5'	1:A:829:G:H8	2.22	0.52
1:A:861:G:C6	1:A:862:C:C4	2.97	0.52
1:A:867:G:C4	1:A:868:C:C6	2.98	0.52
1:A:941:G:H2'	1:A:942:G:O4'	2.10	0.52
1:A:962:C:C2	1:A:1201:A:C4	2.98	0.52
1:A:1070:U:C2	1:A:1071:C:C5	2.97	0.52
1:A:1116:U:H1'	1:A:1185:G:N2	2.25	0.52
1:A:1144:G:C2	1:A:1145:A:H1'	2.45	0.52
1:A:1144:G:OP2	1:A:1144:G:H8	1.92	0.52
1:A:1159:U:C5	1:A:1162:C:N4	2.77	0.52
1:A:1255:G:C6	1:A:1279:G:C4	2.97	0.52
1:A:1257:A:H3'	1:A:1258:G:C5'	2.40	0.52
1:A:1289:A:H5'	1:A:1290:G:OP2	2.09	0.52
1:A:1430:A:C2	1:A:1471:U:C6	2.98	0.52
1:A:1450:U:H2'	1:A:1453:G:H1	1.74	0.52
1:A:1476:A:C5	1:A:1477:U:C4	2.97	0.52
11:K:45:THR:HB	11:K:48:GLY:HA3	1.91	0.52
13:M:18:LEU:HA	13:M:21:ILE:HG13	1.92	0.52
20:T:82:ILE:O	20:T:86:ALA:HB3	2.09	0.52
1:A:116:A:C5	1:A:117:G:N7	2.78	0.52
1:A:120:A:H61	1:A:239:U:C3'	2.22	0.52
1:A:138:G:C1'	1:A:226:G:N2	2.73	0.52
1:A:144:G:H1	1:A:178:C:N4	2.07	0.52
1:A:150:U:C5	1:A:170:U:C5	2.98	0.52
1:A:161:A:H2'	1:A:162:A:C5'	2.40	0.52
1:A:162:A:H3'	1:A:163:C:C4'	2.40	0.52
1:A:183:C:C4	1:A:223:A:H2	2.27	0.52
1:A:243:A:H1'	1:A:245:U:H3'	1.91	0.52
1:A:253:A:N6	1:A:273:U:H3	2.08	0.52
1:A:342:C:H3'	1:A:343:U:H6	1.71	0.52
1:A:451:A:C2	1:A:480:U:C5	2.97	0.52
1:A:455:G:N1	1:A:478:A:C2	2.78	0.52
1:A:665:A:C8	1:A:733:G:C2	2.98	0.52
1:A:677:U:O5'	1:A:677:U:H6	1.93	0.52
1:A:713:G:C6	1:A:714:G:C6	2.97	0.52
1:A:750:C:O5'	1:A:750:C:H6	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:761:G:C5	1:A:762:U:C6	2.98	0.52
1:A:771:G:C5	1:A:809:G:N1	2.78	0.52
1:A:792:A:O3'	22:W:135:GLU:HG3	2.09	0.52
1:A:821:G:C4	1:A:822:U:C6	2.98	0.52
1:A:925:G:C2	1:A:1392:G:C5	2.97	0.52
1:A:946:A:N1	1:A:947:G:C5	2.78	0.52
1:A:947:G:C6	1:A:948:C:C4	2.98	0.52
1:A:979:C:N4	1:A:1318:A:H61	2.08	0.52
1:A:987:G:C2	1:A:1219:A:C4	2.97	0.52
1:A:1095:U:C6	1:A:1095:U:C3'	2.90	0.52
1:A:1178:G:N2	1:A:1181:G:C8	2.78	0.52
1:A:1206:G:H3'	1:A:1207:G:H8	1.75	0.52
1:A:1250:A:C2	1:A:1353:G:N2	2.78	0.52
1:A:1306:A:C2	1:A:1332:A:O4'	2.63	0.52
1:A:1345:U:C2	1:A:1375:A:N1	2.78	0.52
1:A:1380:U:H3'	7:G:2:ARG:CB	2.39	0.52
1:A:1393:U:C4'	1:A:1502:A:H5"	2.40	0.52
1:A:1399:C:H2'	1:A:1502:A:N1	2.24	0.52
1:A:1401:G:OP2	1:A:1402:C:C5	2.63	0.52
1:A:1504:G:C3'	1:A:1505:G:H5'	2.40	0.52
3:C:35:ASP:CG	3:C:39:ARG:HE	2.17	0.52
5:E:96:GLN:O	5:E:122:VAL:HG13	2.10	0.52
6:F:77:THR:HA	6:F:80:PHE:CD2	2.45	0.52
1:A:19:A:C2	1:A:20:U:C1'	2.93	0.52
1:A:20:U:C2	1:A:21:G:C8	2.97	0.52
1:A:30:U:H2'	1:A:32:A:C8	2.45	0.52
1:A:44:A:C4	1:A:399:G:C2	2.97	0.52
1:A:101:A:H3'	1:A:102:G:H8	1.75	0.52
1:A:157:U:H1'	1:A:165:G:N2	2.25	0.52
1:A:160:A:C4	1:A:346:G:O6	2.62	0.52
1:A:232:G:C5	1:A:233:C:C5	2.98	0.52
1:A:360:G:C8	1:A:360:G:OP2	2.63	0.52
1:A:493:A:C8	1:A:494:G:N7	2.78	0.52
1:A:560:A:C2	5:E:92:ARG:HG3	2.44	0.52
1:A:560:A:H5'	1:A:566:G:H22	1.75	0.52
1:A:564:C:C5	1:A:565:U:C5	2.98	0.52
1:A:579:A:C4	1:A:580:C:C6	2.98	0.52
1:A:582:C:C5	1:A:582:C:OP2	2.63	0.52
1:A:587:G:H21	1:A:753:A:H1'	1.75	0.52
1:A:642:A:C5	1:A:643:C:C5	2.98	0.52
1:A:664:G:N3	1:A:726:C:H4'	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:684:U:C4	1:A:685:G:C6	2.98	0.52
1:A:696:A:C8	1:A:696:A:O5'	2.63	0.52
1:A:794:A:C8	1:A:794:A:H5"	2.44	0.52
1:A:842:U:O4'	1:A:846:G:C5	2.63	0.52
1:A:864:A:C4	1:A:865:A:C5	2.97	0.52
1:A:905:U:C4	1:A:906:A:C6	2.98	0.52
1:A:1070:U:H5	1:A:1094:G:H1	1.57	0.52
1:A:1084:G:H2'	1:A:1085:U:C6	2.45	0.52
1:A:1100:C:C5	2:B:72:LYS:HE2	2.45	0.52
1:A:1356:G:C4	1:A:1357:A:N7	2.78	0.52
1:A:1375:A:C5'	7:G:28:ILE:HA	2.40	0.52
1:A:1428:A:H61	1:A:1472:U:H3	1.56	0.52
1:A:1463:U:H2'	1:A:1464:U:C6	2.45	0.52
1:A:1464:U:O5'	1:A:1464:U:C6	2.62	0.52
1:A:1494:G:C8	1:A:1494:G:H3'	2.45	0.52
1:A:1526:G:N2	1:A:1527:U:H1'	2.25	0.52
2:B:29:PHE:CD2	2:B:187:ASP:HA	2.44	0.52
6:F:4:TYR:CE2	6:F:66:ALA:HB3	2.45	0.52
16:P:52:LEU:HD22	16:P:74:LEU:C	2.35	0.52
1:A:70:U:O4	1:A:96:U:H2'	2.09	0.52
1:A:140:U:H3	1:A:223:A:H61	1.57	0.52
1:A:144:G:C6	1:A:145:G:C8	2.98	0.52
1:A:180:U:C5	1:A:195:A:OP2	2.63	0.52
1:A:187:G:H4'	1:A:190:A:N6	2.24	0.52
1:A:244:U:N3	1:A:894:G:H1'	2.25	0.52
1:A:270:A:C5	1:A:271:C:C4	2.98	0.52
1:A:301:G:C5	1:A:302:G:N7	2.78	0.52
1:A:303:A:C8	1:A:303:A:O5'	2.63	0.52
1:A:373:A:O2'	1:A:481:G:C2	2.60	0.52
1:A:426:U:O5'	1:A:426:U:H6	1.93	0.52
1:A:452:A:H5"	1:A:452:A:C8	2.43	0.52
1:A:454:G:H1	1:A:478:A:H2	1.56	0.52
1:A:456:A:C2	1:A:457:G:N7	2.78	0.52
1:A:524:G:C5	1:A:525:C:C4	2.98	0.52
1:A:668:G:C4	1:A:669:G:C8	2.97	0.52
1:A:669:G:C5	1:A:670:G:N7	2.78	0.52
1:A:704:A:C5	1:A:705:G:C4	2.98	0.52
1:A:759:A:C8	1:A:759:A:H3'	2.45	0.52
1:A:975:A:C4	1:A:1363:A:N6	2.78	0.52
1:A:978:A:H2'	1:A:979:C:C6	2.44	0.52
1:A:1008:U:C6	1:A:1008:U:C5'	2.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1072:G:C6	1:A:1073:U:N3	2.78	0.52
1:A:1074:G:C2	1:A:1102:A:C2	2.98	0.52
1:A:1237:C:H2'	1:A:1336:C:C5	2.44	0.52
1:A:1241:G:C8	1:A:1241:G:O5'	2.63	0.52
1:A:1500:A:C6	1:A:1501:C:C5	2.98	0.52
2:B:29:PHE:HA	2:B:38:HIS:HE1	1.74	0.52
2:B:129:THR:O	2:B:129:THR:HG22	2.09	0.52
2:B:149:GLY:H	2:B:152:ASP:N	2.01	0.52
3:C:111:ASP:CB	3:C:114:LEU:H	2.23	0.52
5:E:9:GLU:HB3	5:E:11:GLN:H	1.75	0.52
12:L:83:GLY:C	12:L:95:HIS:H	2.17	0.52
16:P:52:LEU:HB2	16:P:74:LEU:HB3	1.91	0.52
1:A:44:A:C6	1:A:45:G:C5	2.98	0.52
1:A:71:A:N6	1:A:98:A:C2	2.77	0.52
1:A:95:C:C4	1:A:96:U:C5	2.98	0.52
1:A:115:G:N1	1:A:313:A:C4	2.78	0.52
1:A:115:G:C6	1:A:289:G:C6	2.97	0.52
1:A:128:G:C8	1:A:128:G:O5'	2.63	0.52
1:A:253:A:H4'	17:Q:68:LYS:CE	2.40	0.52
1:A:271:C:N3	1:A:272:C:C5	2.78	0.52
1:A:291:U:H3	1:A:309:A:N6	2.08	0.52
1:A:294:U:H3	1:A:303:A:H2	1.56	0.52
1:A:297:G:N1	1:A:301:G:C6	2.78	0.52
1:A:300:A:H1'	1:A:565:U:N3	2.25	0.52
1:A:361:G:C8	1:A:362:G:N7	2.78	0.52
1:A:376:G:H1'	16:P:28:ARG:H	1.75	0.52
1:A:405:U:H5'	1:A:498:A:C6	2.45	0.52
1:A:420:U:C2	1:A:424:G:C6	2.97	0.52
1:A:538:G:N1	1:A:539:A:C5	2.77	0.52
1:A:621:A:C5	1:A:622:A:N7	2.78	0.52
1:A:626:G:C6	1:A:627:G:C5	2.98	0.52
1:A:630:A:C8	1:A:631:C:N3	2.78	0.52
1:A:651:C:N3	1:A:652:U:C4	2.77	0.52
1:A:688:G:H2'	1:A:689:C:O4'	2.10	0.52
1:A:722:G:C8	18:R:48:ALA:HB1	2.45	0.52
1:A:794:A:N6	1:A:795:C:C2	2.78	0.52
1:A:808:C:H3'	1:A:808:C:C6	2.44	0.52
1:A:838:G:N1	1:A:849:G:C8	2.78	0.52
1:A:847:G:C6	1:A:848:C:C2	2.98	0.52
1:A:857:C:C2'	1:A:858:G:H5'	2.41	0.52
1:A:866:C:O5'	1:A:866:C:C6	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:905:U:H2'	1:A:906:A:C8	2.45	0.52
1:A:925:G:H4'	1:A:1502:A:C5	2.45	0.52
1:A:935:A:C2	1:A:936:C:N1	2.78	0.52
1:A:945:G:N1	1:A:1337:G:C2	2.78	0.52
1:A:957:U:H4'	19:S:78:THR:C	2.35	0.52
1:A:963:G:O6	1:A:964:A:C2	2.63	0.52
1:A:1000:A:H61	1:A:1040:U:H3	1.58	0.52
1:A:1014:A:H1'	19:S:33:TRP:CG	2.45	0.52
1:A:1163:A:C2	1:A:1164:G:C5	2.98	0.52
1:A:1165:U:H2'	1:A:1166:G:C8	2.45	0.52
1:A:1263:C:N4	1:A:1273:C:H42	2.08	0.52
1:A:1282:C:H2'	1:A:1283:U:C6	2.45	0.52
1:A:1300:G:C2	1:A:1335:U:C2	2.98	0.52
1:A:1321:U:H2'	1:A:1322:C:H2'	1.91	0.52
1:A:1390:U:C4	1:A:1391:U:N3	2.76	0.52
1:A:1432:G:C2	1:A:1467:C:C5	2.98	0.52
1:A:1502:A:C8	1:A:1505:G:N1	2.75	0.52
4:D:96:ARG:HH22	4:D:98:ASP:HB2	1.74	0.52
5:E:106:ALA:HB1	5:E:111:ARG:CB	2.40	0.52
8:H:65:PHE:CD2	8:H:66:GLN:HB2	2.44	0.52
8:H:89:ASP:C	8:H:91:LEU:H	2.16	0.52
10:J:52:LEU:HD13	14:N:80:ARG:HD3	1.92	0.52
10:J:55:PRO:HA	14:N:80:ARG:HH22	1.74	0.52
11:K:30:ILE:HG22	11:K:45:THR:HG23	1.91	0.52
11:K:58:THR:O	11:K:61:ALA:HB3	2.09	0.52
17:Q:44:HIS:HE1	17:Q:70:LYS:NZ	2.08	0.52
1:A:28:A:C8	1:A:28:A:O5'	2.63	0.51
1:A:65:A:H4'	1:A:66:A:H5'	1.92	0.51
1:A:68:G:H8	1:A:68:G:O5'	1.93	0.51
1:A:189:A:C4	1:A:190:A:C8	2.97	0.51
1:A:217:C:C4	1:A:218:U:C5	2.97	0.51
1:A:253:A:C4	1:A:254:G:C8	2.97	0.51
1:A:262:A:H4'	20:T:69:ASN:C	2.36	0.51
1:A:362:G:C4	1:A:364:A:OP2	2.63	0.51
1:A:366:A:H1'	1:A:395:C:O2	2.09	0.51
1:A:381:C:N4	1:A:382:A:C2	2.78	0.51
1:A:436:C:H2'	1:A:437:U:C6	2.44	0.51
1:A:444:G:C6	1:A:491:G:C5	2.98	0.51
1:A:454:G:C2	1:A:455:G:C4	2.98	0.51
1:A:597:G:N2	1:A:598:U:H1'	2.25	0.51
1:A:601:G:C6	1:A:602:A:C8	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:648:A:N1	1:A:649:A:C6	2.78	0.51
1:A:649:A:C6	1:A:650:G:C8	2.98	0.51
1:A:740:U:H4'	15:O:41:HIS:CD2	2.45	0.51
1:A:749:A:H2'	1:A:750:C:O4'	2.10	0.51
1:A:778:G:H21	11:K:121:ARG:CG	2.22	0.51
1:A:838:G:C2	1:A:839:C:C2	2.98	0.51
1:A:861:G:H2'	1:A:862:C:C6	2.45	0.51
1:A:895:G:H2'	1:A:896:C:O4'	2.09	0.51
1:A:895:G:N2	1:A:896:C:H1'	2.25	0.51
1:A:903:G:C8	1:A:903:G:O5'	2.64	0.51
1:A:905:U:C5	1:A:906:A:N7	2.78	0.51
1:A:949:A:N3	1:A:971:G:C6	2.78	0.51
1:A:951:G:N2	1:A:969:A:C5	2.78	0.51
1:A:953:G:C4	1:A:1229:A:N1	2.78	0.51
1:A:1010:U:C2	1:A:1020:G:N3	2.77	0.51
1:A:1010:U:C6	1:A:1020:G:C2	2.98	0.51
1:A:1117:A:N3	1:A:1184:G:C2	2.78	0.51
1:A:1117:A:C2	1:A:1180:A:N3	2.78	0.51
1:A:1170:A:N6	1:A:1171:A:C2	2.78	0.51
1:A:1241:G:C2	1:A:1242:G:N7	2.78	0.51
1:A:1304:G:C2	1:A:1305:G:N3	2.78	0.51
1:A:1375:A:H5"	7:G:28:ILE:HG12	1.91	0.51
1:A:1419:G:H2'	1:A:1420:U:H6	1.75	0.51
1:A:1438:G:C2	1:A:1439:G:C8	2.98	0.51
1:A:1486:G:C2	1:A:1487:G:C5	2.99	0.51
1:A:1510:C:H1'	1:A:1526:G:N2	2.25	0.51
2:B:29:PHE:HA	2:B:38:HIS:CE1	2.45	0.51
2:B:67:LEU:HD22	2:B:91:VAL:HG13	1.91	0.51
3:C:106:ARG:HH21	3:C:110:LEU:C	2.18	0.51
4:D:144:ILE:CD1	4:D:154:VAL:HG11	2.40	0.51
5:E:43:GLY:HA2	5:E:72:ASN:HA	1.92	0.51
7:G:36:SER:HA	9:I:42:THR:HG21	1.92	0.51
7:G:71:THR:H	7:G:141:HIS:CE1	2.27	0.51
12:L:33:CYS:O	12:L:76:HIS:CG	2.63	0.51
12:L:85:ARG:HA	12:L:92:VAL:HB	1.92	0.51
15:O:41:HIS:NE2	15:O:45:HIS:HE1	2.07	0.51
1:A:2:A:C5	1:A:614:C:O2'	2.62	0.51
1:A:43:C:H4'	1:A:623:C:O4'	2.08	0.51
1:A:58:C:H2'	1:A:59:A:C8	2.43	0.51
1:A:119:A:C5	1:A:288:A:C6	2.98	0.51
1:A:169:C:C5	1:A:170:U:C5	2.97	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:198:G:N2	1:A:220:G:H1'	2.25	0.51
1:A:223:A:C5	1:A:224:U:C6	2.99	0.51
1:A:343:U:C4	1:A:345:C:N3	2.79	0.51
1:A:376:G:H21	16:P:27:ALA:HB1	1.74	0.51
1:A:381:C:C5	1:A:382:A:C2	2.98	0.51
1:A:382:A:C6	1:A:383:A:C5	2.98	0.51
1:A:453:G:N1	1:A:454:G:C2	2.78	0.51
1:A:507:C:C5	1:A:508:U:C2	2.98	0.51
1:A:510:A:H1'	1:A:542:G:H21	1.75	0.51
1:A:596:A:C6	1:A:645:G:N1	2.78	0.51
1:A:667:G:C6	1:A:740:U:O2	2.63	0.51
1:A:679:C:C4	1:A:680:C:C5	2.98	0.51
1:A:729:A:C4	1:A:730:G:C8	2.98	0.51
1:A:745:G:C5'	1:A:852:G:H1'	2.39	0.51
1:A:749:A:C2	1:A:750:C:N3	2.78	0.51
1:A:795:C:C4	1:A:796:C:C2	2.98	0.51
1:A:898:G:C4	1:A:900:A:OP2	2.62	0.51
1:A:950:U:O5'	1:A:950:U:H6	1.93	0.51
1:A:1047:G:H21	1:A:1215:G:C4'	2.23	0.51
1:A:1053:G:N1	1:A:1058:G:C6	2.78	0.51
1:A:1138:G:C6	1:A:1140:C:O2	2.64	0.51
1:A:1428:A:N1	1:A:1429:A:C4	2.78	0.51
1:A:1442:G:O6	1:A:1461:G:C2	2.63	0.51
1:A:1478:U:H2'	1:A:1479:C:C5	2.45	0.51
1:A:1500:A:H5"	1:A:1508:A:C5'	2.40	0.51
1:A:1503:A:C6	1:A:1532:U:H1'	2.44	0.51
3:C:90:VAL:HB	3:C:100:ILE:HD11	1.92	0.51
4:D:131:ILE:HG13	4:D:134:TYR:HB2	1.92	0.51
5:E:46:GLY:HA3	5:E:69:ASN:O	2.10	0.51
7:G:13:PRO:HB3	7:G:23:ALA:HB2	1.92	0.51
7:G:107:ALA:HA	7:G:110:ARG:HH21	1.75	0.51
9:I:5:TYR:CD1	9:I:20:ILE:O	2.63	0.51
10:J:18:ILE:CG2	10:J:70:HIS:CD2	2.93	0.51
11:K:46:ALA:HB1	11:K:61:ALA:C	2.35	0.51
20:T:57:VAL:HG21	20:T:75:LYS:CB	2.41	0.51
1:A:22:G:H1'	1:A:914:A:C5	2.45	0.51
1:A:338:A:C6	1:A:339:C:C2	2.99	0.51
1:A:363:A:H5"	12:L:30:ARG:CG	2.41	0.51
1:A:430:A:OP1	4:D:8:LEU:HB3	2.10	0.51
1:A:482:A:C6	1:A:483:C:O2	2.63	0.51
1:A:499:A:C4	1:A:546:A:C6	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:521:G:N1	1:A:522:C:C4	2.79	0.51
1:A:595:A:H2	1:A:643:C:N4	2.09	0.51
1:A:616:G:H21	16:P:48:GLU:HG2	1.72	0.51
1:A:616:G:C2	1:A:625:U:C2	2.98	0.51
1:A:621:A:C5	1:A:622:A:C5	2.98	0.51
1:A:652:U:H3'	1:A:752:G:C6	2.45	0.51
1:A:763:G:H3'	1:A:764:C:H6	1.75	0.51
1:A:771:G:C4	1:A:809:G:N2	2.78	0.51
1:A:896:C:C2	1:A:897:C:C5	2.98	0.51
1:A:940:C:H3'	1:A:940:C:C6	2.44	0.51
1:A:958:A:C6	1:A:959:A:N1	2.79	0.51
1:A:996:A:N3	1:A:997:U:C6	2.79	0.51
1:A:1061:G:OP2	3:C:3:LYS:HA	2.09	0.51
1:A:1113:C:H3'	1:A:1114:C:C5	2.45	0.51
1:A:1118:U:C6	1:A:1118:U:O5'	2.64	0.51
1:A:1194:U:C2	1:A:1195:C:C4	2.99	0.51
1:A:1316:G:N2	1:A:1319:A:C8	2.78	0.51
1:A:1357:A:C6	1:A:1363:A:C2	2.99	0.51
1:A:1381:U:O4	7:G:77:ARG:HB2	2.10	0.51
1:A:1390:U:C2	1:A:1391:U:O2	2.64	0.51
1:A:1457:G:H5"	20:T:29:THR:CB	2.38	0.51
4:D:197:HIS:CE1	5:E:100:GLU:HB2	2.46	0.51
5:E:34:ALA:HB3	5:E:58:ALA:C	2.36	0.51
12:L:26:CYS:SG	12:L:58:ASN:CG	2.93	0.51
12:L:65:TYR:H	12:L:95:HIS:CG	2.28	0.51
20:T:4:LYS:CG	20:T:5:SER:H	2.23	0.51
1:A:33:A:H1'	12:L:27:PRO:HB2	1.90	0.51
1:A:177:G:C2'	1:A:178:C:H5'	2.41	0.51
1:A:205:A:H3'	1:A:206:C:C6	2.45	0.51
1:A:379:C:H3'	1:A:380:G:H8	1.74	0.51
1:A:380:G:N2	1:A:384:G:C5	2.79	0.51
1:A:433:G:H3'	1:A:434:U:H6	1.74	0.51
1:A:464:U:C2'	1:A:466:A:N7	2.73	0.51
1:A:474:G:H2'	1:A:475:C:O4'	2.10	0.51
1:A:502:A:C8	1:A:502:A:H3'	2.46	0.51
1:A:513:C:C4	1:A:514:C:C4	2.98	0.51
1:A:633:G:H2'	1:A:634:C:H6	1.74	0.51
1:A:640:A:N3	8:H:106:SER:HA	2.25	0.51
1:A:654:G:C6	1:A:655:A:C4	2.98	0.51
1:A:687:A:C5'	11:K:68:ARG:HH12	2.23	0.51
1:A:787:A:C2'	1:A:795:C:H42	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:824:G:H21	8:H:1:SER:CA	2.24	0.51
1:A:829:G:C8	1:A:829:G:C5'	2.93	0.51
1:A:839:C:C5	1:A:839:C:OP2	2.63	0.51
1:A:942:G:N3	1:A:943:U:C6	2.79	0.51
1:A:959:A:C5	1:A:1222:G:H4'	2.46	0.51
1:A:998:C:H42	1:A:1042:A:H61	1.57	0.51
1:A:998:C:N4	1:A:1042:A:H61	2.09	0.51
1:A:1004:A:C2'	1:A:1036:A:C2	2.93	0.51
1:A:1008:U:C2	1:A:1009:U:C5	2.98	0.51
1:A:1014:A:H2'	1:A:1015:G:N9	2.26	0.51
1:A:1053:G:H21	1:A:1056:U:H3'	1.76	0.51
1:A:1083:U:C6	1:A:1084:G:C5	2.99	0.51
1:A:1127:G:C5	1:A:1128:C:C5	2.97	0.51
1:A:1176:A:C5	1:A:1177:G:C6	2.99	0.51
1:A:1255:G:C2	1:A:1279:G:O6	2.62	0.51
1:A:1266:G:H2'	1:A:1266:G:N3	2.25	0.51
1:A:1268:G:C6	1:A:1269:A:C5	2.99	0.51
1:A:1308:U:OP2	13:M:97:ARG:HB2	2.11	0.51
1:A:1309:G:OP2	13:M:97:ARG:HG2	2.11	0.51
1:A:1312:G:N1	1:A:1313:U:C6	2.79	0.51
1:A:1359:C:OP2	14:N:74:ARG:HG3	2.10	0.51
1:A:1500:A:C5'	1:A:1508:A:OP1	2.59	0.51
3:C:36:PHE:HA	3:C:39:ARG:HB2	1.92	0.51
9:I:29:ILE:CD1	9:I:38:PHE:CE2	2.93	0.51
10:J:22:THR:HG23	10:J:74:VAL:HG22	1.92	0.51
1:A:74:A:H61	1:A:96:U:H3	1.58	0.51
1:A:102:G:C5	1:A:103:U:C4	2.98	0.51
1:A:116:A:N6	1:A:117:G:C6	2.79	0.51
1:A:151:A:N6	1:A:171:A:C5	2.78	0.51
1:A:253:A:H2'	1:A:254:G:O4'	2.10	0.51
1:A:296:U:C2	1:A:297:G:C8	2.99	0.51
1:A:389:A:N3	16:P:27:ALA:HB1	2.25	0.51
1:A:406:G:C5	1:A:495:A:H5"	2.45	0.51
1:A:590:U:H3	1:A:649:A:H61	1.59	0.51
1:A:616:G:H2'	1:A:617:G:C8	2.42	0.51
1:A:634:C:C4	1:A:635:A:N7	2.78	0.51
1:A:667:G:N2	15:O:41:HIS:CE1	2.76	0.51
1:A:673:A:C2	1:A:734:G:C2	2.99	0.51
1:A:710:G:C2	1:A:711:G:C4	2.98	0.51
1:A:761:G:C2	1:A:762:U:C2	2.98	0.51
1:A:812:G:H3'	1:A:904:U:H4'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:926:G:C5	1:A:1505:G:C5	2.99	0.51
1:A:939:G:C6	1:A:940:C:C4	2.98	0.51
1:A:942:G:C2	1:A:1342:C:N3	2.79	0.51
1:A:942:G:N1	1:A:1341:U:C4	2.78	0.51
1:A:978:A:N6	1:A:1319:A:C6	2.79	0.51
1:A:1057:G:H5'	3:C:154:GLY:HA3	1.93	0.51
1:A:1089:G:H5"	1:A:1089:G:C8	2.46	0.51
1:A:1134:G:N2	1:A:1141:C:C2	2.79	0.51
1:A:1143:G:C6	1:A:1144:G:N7	2.78	0.51
1:A:1144:G:H22	1:A:1147:C:N4	2.08	0.51
1:A:1151:A:H5'	10:J:42:LEU:O	2.11	0.51
1:A:1197:A:N1	1:A:1198:G:C4	2.79	0.51
1:A:1295:U:C2	1:A:1296:C:C5	2.98	0.51
1:A:1298:U:C5	7:G:118:ARG:NH2	2.79	0.51
1:A:1314:C:C5	19:S:5:LYS:HA	2.46	0.51
1:A:1356:G:N2	1:A:1367:C:H1'	2.26	0.51
1:A:1406:U:H2'	1:A:1407:C:C5'	2.41	0.51
1:A:1421:G:H1'	1:A:1480:A:H2	1.75	0.51
1:A:1522:U:C6	1:A:1522:U:H3'	2.45	0.51
2:B:8:MET:HE2	2:B:53:LEU:HD12	1.93	0.51
3:C:22:PHE:HA	10:J:13:PHE:CD2	2.45	0.51
9:I:38:PHE:HA	9:I:41:GLU:HB2	1.90	0.51
10:J:11:LYS:HA	10:J:70:HIS:O	2.11	0.51
15:O:73:ASP:HB2	15:O:76:ARG:H	1.75	0.51
16:P:16:PHE:CE1	16:P:38:PHE:CD2	2.98	0.51
17:Q:21:VAL:HA	17:Q:44:HIS:HA	1.92	0.51
17:Q:59:GLU:HG2	17:Q:60:ILE:H	1.74	0.51
18:R:44:THR:HG21	18:R:46:THR:CG2	2.41	0.51
1:A:91:U:C4	1:A:92:U:O2	2.64	0.51
1:A:134:G:C8	1:A:134:G:H3'	2.45	0.51
1:A:165:G:C5	1:A:166:U:C5	2.99	0.51
1:A:180:U:O5'	1:A:180:U:H6	1.92	0.51
1:A:185:U:C2	1:A:186:C:H6	2.28	0.51
1:A:197:A:C2	1:A:198:G:C4	2.98	0.51
1:A:252:U:C2	1:A:253:A:N7	2.78	0.51
1:A:254:G:C5'	17:Q:44:HIS:CE1	2.93	0.51
1:A:377:G:OP1	16:P:3:THR:HG21	2.11	0.51
1:A:409:U:C5'	4:D:23:GLY:HA3	2.40	0.51
1:A:447:G:C5	1:A:485:U:C6	2.98	0.51
1:A:459:A:N1	1:A:460:A:C8	2.79	0.51
1:A:464:U:C6	1:A:466:A:OP2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:500:G:C2	1:A:546:A:C2	2.99	0.51
1:A:534:U:C2	1:A:535:A:C2	2.98	0.51
1:A:563:A:C4	1:A:567:G:C8	2.99	0.51
1:A:596:A:N6	1:A:644:U:H3	2.09	0.51
1:A:596:A:C6	1:A:597:G:C6	2.99	0.51
1:A:599:C:O2	1:A:640:A:C2	2.63	0.51
1:A:685:G:C6	1:A:686:U:H5	2.26	0.51
1:A:707:U:H2'	1:A:708:C:C6	2.46	0.51
1:A:773:G:C6	1:A:774:G:C8	2.98	0.51
1:A:807:A:C5	1:A:808:C:C4	2.98	0.51
1:A:810:C:H1'	1:A:899:C:H41	1.75	0.51
1:A:815:A:H62	1:A:1508:A:H2	1.58	0.51
1:A:864:A:C2	1:A:865:A:C2	2.99	0.51
1:A:865:A:C2	1:A:918:A:C4'	2.93	0.51
1:A:923:A:C6	1:A:924:C:C4	2.99	0.51
1:A:928:G:N2	1:A:929:G:C4	2.79	0.51
1:A:937:A:C2	1:A:1379:G:O6	2.64	0.51
1:A:945:G:H1'	1:A:1338:G:C2	2.46	0.51
1:A:1029:U:H1'	1:A:1033:G:H1	1.76	0.51
1:A:1060:U:C6	3:C:2:GLN:O	2.63	0.51
1:A:1083:U:O2'	1:A:1101:A:C8	2.63	0.51
1:A:1139:G:N2	1:A:1141:C:C4	2.78	0.51
1:A:1239:A:H1'	1:A:1241:G:C8	2.46	0.51
1:A:1241:G:N1	1:A:1242:G:C6	2.79	0.51
1:A:1242:G:C6	1:A:1243:C:C4	2.99	0.51
1:A:1291:U:H5'	9:I:41:GLU:HG2	1.93	0.51
1:A:1314:C:N3	1:A:1315:U:C5	2.78	0.51
1:A:1367:C:H5"	9:I:115:VAL:HG12	1.91	0.51
1:A:1391:U:C5	1:A:1393:U:O4	2.64	0.51
1:A:1449:C:C5	1:A:1450:U:C6	2.99	0.51
1:A:1473:G:C8	1:A:1473:G:O5'	2.64	0.51
14:N:28:ALA:C	14:N:30:ILE:H	2.18	0.51
15:O:17:ASP:HB2	15:O:20:ASP:HA	1.92	0.51
1:A:13:U:O4	1:A:21:G:C4	2.64	0.51
1:A:39:G:N1	1:A:404:G:H1'	2.26	0.51
1:A:51:A:N6	1:A:314:C:H1'	2.25	0.51
1:A:52:C:C6	1:A:52:C:H3'	2.45	0.51
1:A:160:A:H2'	1:A:161:A:O4'	2.11	0.51
1:A:246:A:C4	1:A:279:A:C6	2.98	0.51
1:A:435:A:C2	1:A:436:C:C6	2.99	0.51
1:A:448:A:C4	1:A:487:A:C2	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:475:C:H3'	1:A:476:U:C6	2.46	0.51
1:A:601:G:C2	1:A:638:U:N3	2.77	0.51
1:A:642:A:C4	1:A:643:C:C6	2.99	0.51
1:A:655:A:H2'	1:A:656:G:O4'	2.11	0.51
1:A:771:G:C8	1:A:772:U:C6	2.98	0.51
1:A:776:G:H21	1:A:779:C:N4	2.08	0.51
1:A:858:G:H1	1:A:869:G:C2'	2.23	0.51
1:A:859:G:C2	1:A:860:A:C4	2.99	0.51
1:A:867:G:C5	1:A:868:C:C4	2.98	0.51
1:A:917:G:C8	1:A:917:G:O5'	2.63	0.51
1:A:953:G:C6	1:A:1229:A:N6	2.79	0.51
1:A:959:A:H5"	1:A:960:U:OP2	2.11	0.51
1:A:1006:G:C5	1:A:1007:U:C6	2.99	0.51
1:A:1051:C:H2'	1:A:1052:U:C6	2.46	0.51
1:A:1067:A:H5"	1:A:1093:A:H5"	1.93	0.51
1:A:1089:G:C6	1:A:1090:U:C2	2.98	0.51
1:A:1126:U:O2	1:A:1280:A:H5'	2.11	0.51
1:A:1128:C:C5	1:A:1139:G:O2'	2.63	0.51
1:A:1170:A:C5	1:A:1171:A:N9	2.79	0.51
1:A:1239:A:C5	1:A:1298:U:O4	2.64	0.51
1:A:1267:C:N3	1:A:1327:C:H5'	2.25	0.51
1:A:1289:A:C6	1:A:1290:G:O4'	2.64	0.51
1:A:1328:C:C2	1:A:1329:A:C8	2.99	0.51
1:A:1392:G:H21	1:A:1502:A:C1'	2.24	0.51
1:A:1409:C:N3	1:A:1410:A:C5	2.79	0.51
2:B:51:GLU:HG3	2:B:197:PHE:CE1	2.46	0.51
2:B:82:ALA:HB3	2:B:214:GLY:HA2	1.93	0.51
3:C:18:ASN:CB	14:N:91:GLU:HA	2.40	0.51
4:D:104:MET:HE2	4:D:170:LEU:HD13	1.92	0.51
5:E:79:THR:HA	5:E:122:VAL:HG23	1.92	0.51
6:F:4:TYR:CB	6:F:71:ILE:HD13	2.40	0.51
17:Q:52:CYS:SG	17:Q:74:LEU:HB3	2.51	0.51
19:S:65:MET:HA	19:S:65:MET:HE2	1.93	0.51
1:A:107:G:H5"	1:A:134:G:H21	1.75	0.51
1:A:108:G:H4'	1:A:110:C:C2	2.45	0.51
1:A:109:A:N7	1:A:326:G:C5	2.78	0.51
1:A:117:G:C8	1:A:118:U:C5	2.99	0.51
1:A:140:U:H2'	1:A:141:G:C8	2.46	0.51
1:A:145:G:C8	1:A:145:G:H3'	2.46	0.51
1:A:170:U:O5'	1:A:170:U:H6	1.94	0.51
1:A:190:A:C8	1:A:190:A:O5'	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:236:A:H5"	17:Q:41:THR:HG21	1.93	0.51
1:A:325:A:N6	1:A:326:G:C2	2.79	0.51
1:A:344:A:H5"	1:A:345:C:H6	1.76	0.51
1:A:360:G:H2'	1:A:361:G:C5	2.45	0.51
1:A:381:C:C4	1:A:382:A:N3	2.79	0.51
1:A:405:U:C6	4:D:4:LEU:HD21	2.46	0.51
1:A:408:A:C4	1:A:435:A:C2	2.99	0.51
1:A:409:U:N3	1:A:410:G:C5	2.79	0.51
1:A:428:G:H4'	1:A:429:U:H4'	1.91	0.51
1:A:438:U:O4	1:A:495:A:C8	2.64	0.51
1:A:473:U:H2'	1:A:474:G:N9	2.25	0.51
1:A:537:G:C6	1:A:538:G:C6	2.99	0.51
1:A:579:A:C5	1:A:763:G:C6	2.98	0.51
1:A:656:G:C4	1:A:657:U:C6	2.99	0.51
1:A:815:A:C2	1:A:1528:U:C4'	2.94	0.51
1:A:824:G:H2'	1:A:825:A:C8	2.46	0.51
1:A:830:G:C2	1:A:831:A:C4	2.99	0.51
1:A:851:G:H5"	1:A:851:G:H8	1.74	0.51
1:A:927:G:N2	1:A:1391:U:H1'	2.26	0.51
1:A:1042:A:H3'	1:A:1042:A:C8	2.46	0.51
1:A:1126:U:H3'	1:A:1127:G:H8	1.75	0.51
1:A:1133:G:H1'	1:A:1142:G:N2	2.26	0.51
1:A:1159:U:OP2	1:A:1184:G:H5"	2.10	0.51
1:A:1206:G:C8	1:A:1206:G:O5'	2.63	0.51
1:A:1207:G:C6	1:A:1208:C:C5	2.99	0.51
1:A:1210:C:H2'	1:A:1213:A:H1'	1.93	0.51
1:A:1256:A:N6	1:A:1277:C:C2	2.79	0.51
1:A:1287:A:C4	1:A:1288:A:C5	2.98	0.51
1:A:1332:A:C4	1:A:1333:A:C8	2.99	0.51
1:A:1346:A:O4'	1:A:1348:U:C5	2.64	0.51
1:A:1349:A:N1	1:A:1374:A:H1'	2.26	0.51
1:A:1360:A:C8	14:N:57:SER:HA	2.46	0.51
1:A:1374:A:C6	1:A:1375:A:C6	2.99	0.51
1:A:1423:G:C6	1:A:1424:U:N3	2.79	0.51
1:A:1445:U:O4	1:A:1455:G:H5'	2.11	0.51
1:A:1458:G:C6	1:A:1459:G:C5	2.99	0.51
1:A:1473:G:C2	1:A:1474:U:C1'	2.93	0.51
1:A:1483:A:C8	1:A:1484:C:C5	2.99	0.51
2:B:56:LEU:HB3	2:B:220:VAL:HG22	1.93	0.51
12:L:98:ARG:NH2	12:L:107:LYS:H	2.09	0.51
17:Q:11:VAL:HG11	17:Q:52:CYS:SG	2.51	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:44:THR:CG2	18:R:46:THR:HG22	2.41	0.51
22:W:62:HIS:HE1	22:W:94:LYS:O	1.93	0.51
1:A:29:U:O5'	1:A:29:U:C6	2.63	0.51
1:A:254:G:C2	1:A:255:G:C4	2.99	0.51
1:A:257:G:N2	1:A:270:A:C4	2.79	0.51
1:A:378:G:C5	1:A:379:C:C5	2.99	0.51
1:A:430:A:N6	1:A:431:A:C5	2.79	0.51
1:A:519:C:H5'	22:W:68:ARG:HH21	1.75	0.51
1:A:570:G:C4	1:A:873:A:C5	2.98	0.51
1:A:599:C:N3	1:A:600:A:C8	2.79	0.51
1:A:615:G:H1'	1:A:626:G:N2	2.26	0.51
1:A:626:G:H1'	16:P:47:GLU:CA	2.41	0.51
1:A:649:A:C8	1:A:649:A:C3'	2.94	0.51
1:A:653:U:P	1:A:750:C:H41	2.33	0.51
1:A:656:G:N2	1:A:657:U:H1'	2.26	0.51
1:A:691:G:C2	1:A:696:A:OP2	2.64	0.51
1:A:769:G:H2'	1:A:770:C:O4'	2.11	0.51
1:A:803:G:C5	1:A:804:U:C5	2.98	0.51
1:A:838:G:N2	1:A:839:C:H1'	2.25	0.51
1:A:840:C:C1'	1:A:843:U:H3	2.22	0.51
1:A:904:U:C2	1:A:905:U:C6	2.99	0.51
1:A:924:C:O2	1:A:1399:C:C5	2.64	0.51
1:A:929:G:C2	1:A:1389:C:O2	2.64	0.51
1:A:1013:G:N2	1:A:1017:U:H1'	2.26	0.51
1:A:1018:G:C8	1:A:1018:G:H3'	2.45	0.51
1:A:1163:A:H1'	1:A:1174:G:C2	2.46	0.51
1:A:1196:A:H3'	1:A:1197:A:H5"	1.93	0.51
1:A:1310:G:C6	1:A:1311:A:N7	2.79	0.51
1:A:1342:C:H1'	9:I:125:GLN:CD	2.36	0.51
1:A:1349:A:OP2	1:A:1350:A:C8	2.64	0.51
1:A:1357:A:N1	1:A:1363:A:C6	2.79	0.51
1:A:1416:G:C2	1:A:1417:G:C1'	2.94	0.51
1:A:1420:U:C6	1:A:1420:U:O5'	2.64	0.51
1:A:1421:G:N2	1:A:1480:A:C6	2.78	0.51
1:A:1467:C:H2'	1:A:1468:A:C8	2.46	0.51
1:A:1509:C:N3	1:A:1510:C:C5	2.79	0.51
1:A:1518:A:H2'	1:A:1519:A:O4'	2.11	0.51
1:A:1521:C:C4	1:A:1522:U:C5	2.98	0.51
4:D:201:GLU:HB2	5:E:106:ALA:HB3	1.92	0.51
8:H:40:LYS:HA	8:H:45:ILE:HG13	1.93	0.51
12:L:8:ARG:HD2	12:L:9:LYS:HZ3	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:47:C:H4'	1:A:48:C:C6	2.46	0.51
1:A:70:U:H1'	1:A:100:G:O6	2.10	0.51
1:A:128:G:N2	1:A:234:C:C6	2.79	0.51
1:A:129:A:C2	1:A:131:A:N7	2.79	0.51
1:A:132:C:H5'	1:A:262:A:C1'	2.41	0.51
1:A:146:G:C2	1:A:177:G:C8	2.99	0.51
1:A:195:A:C2	1:A:223:A:C1'	2.94	0.51
1:A:226:G:C2	1:A:227:G:N9	2.79	0.51
1:A:246:A:C2	1:A:282:A:C4	2.98	0.51
1:A:265:G:C3'	1:A:266:G:H5'	2.40	0.51
1:A:323:U:C6	1:A:324:G:C8	2.99	0.51
1:A:349:A:C2	1:A:350:G:C4	2.99	0.51
1:A:413:G:C8	1:A:426:U:OP2	2.64	0.51
1:A:553:A:C1'	12:L:27:PRO:HA	2.40	0.51
1:A:560:A:C8	5:E:127:TYR:CD2	2.99	0.51
1:A:592:G:C6	1:A:593:U:C4	2.98	0.51
1:A:592:G:N1	1:A:593:U:C2	2.78	0.51
1:A:698:G:H3'	1:A:699:C:H6	1.76	0.51
1:A:750:C:N3	1:A:751:U:C4	2.79	0.51
1:A:781:A:OP1	1:A:1523:G:H5'	2.11	0.51
1:A:809:G:C5	1:A:810:C:C6	2.98	0.51
1:A:832:G:C6	1:A:833:G:C8	2.99	0.51
1:A:880:C:P	12:L:2:THR:HG21	2.51	0.51
1:A:901:A:H3'	1:A:902:G:O4'	2.11	0.51
1:A:917:G:N1	1:A:918:A:C4	2.79	0.51
1:A:945:G:C6	1:A:1337:G:C4	2.99	0.51
1:A:1091:U:C2	1:A:1093:A:P	3.05	0.51
1:A:1124:G:H2'	1:A:1125:U:OP2	2.11	0.51
1:A:1181:G:N3	1:A:1184:G:H4'	2.26	0.51
1:A:1184:G:N1	1:A:1185:G:C4	2.78	0.51
1:A:1245:C:C2	1:A:1246:A:C8	2.99	0.51
1:A:1266:G:C2	1:A:1268:G:H3'	2.46	0.51
1:A:1309:G:C6	1:A:1329:A:C6	2.98	0.51
1:A:1330:U:H4'	13:M:22:TYR:CE2	2.46	0.51
1:A:1370:G:H5"	9:I:109:GLN:NE2	2.26	0.51
1:A:1473:G:C2	1:A:1474:U:H1'	2.45	0.51
1:A:1514:G:H1	1:A:1521:C:H42	1.58	0.51
1:A:1523:G:N1	1:A:1524:C:C2	2.79	0.51
2:B:27:LYS:HG2	2:B:30:ILE:HD12	1.93	0.51
7:G:11:ILE:HG21	7:G:20:GLU:OE2	2.10	0.51
20:T:64:GLY:C	20:T:65:LEU:HD13	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:19:A:C6	1:A:20:U:C4	2.99	0.50
1:A:119:A:C6	1:A:288:A:C2	2.99	0.50
1:A:143:A:H5'	1:A:144:G:C5'	2.38	0.50
1:A:197:A:C2	1:A:198:G:H1'	2.46	0.50
1:A:236:A:C2	1:A:237:G:C4	2.99	0.50
1:A:241:G:C5	1:A:242:G:N7	2.79	0.50
1:A:297:G:H2'	1:A:299:G:N7	2.26	0.50
1:A:301:G:O6	1:A:302:G:C6	2.64	0.50
1:A:349:A:C2	1:A:350:G:C6	2.99	0.50
1:A:352:C:C2	1:A:355:C:N4	2.78	0.50
1:A:414:A:H2'	1:A:415:A:C8	2.46	0.50
1:A:461:A:H3'	1:A:462:G:C5'	2.40	0.50
1:A:521:G:C6	1:A:522:C:C4	2.98	0.50
1:A:538:G:C2	1:A:539:A:C4	2.99	0.50
1:A:551:U:H1'	12:L:82:ARG:HE	1.75	0.50
1:A:587:G:O2'	1:A:588:G:H5'	2.11	0.50
1:A:592:G:C6	1:A:648:A:C5	2.99	0.50
1:A:613:C:C5	1:A:614:C:C5	2.99	0.50
1:A:632:U:O4	1:A:633:G:C2	2.64	0.50
1:A:666:G:C4	1:A:741:G:C2	2.99	0.50
1:A:683:G:N1	1:A:708:C:C2	2.78	0.50
1:A:771:G:C2	1:A:809:G:N3	2.79	0.50
1:A:778:G:C6	1:A:805:C:H1'	2.46	0.50
1:A:824:G:N1	1:A:877:G:C6	2.79	0.50
1:A:860:A:H3'	1:A:861:G:C8	2.46	0.50
1:A:877:G:H2'	1:A:878:A:C8	2.47	0.50
1:A:915:A:C5	1:A:916:U:C6	2.99	0.50
1:A:952:U:H3	1:A:1229:A:N6	2.08	0.50
1:A:959:A:C2	1:A:1221:G:N3	2.79	0.50
1:A:1010:U:C4	1:A:1011:C:C5	2.99	0.50
1:A:1025:U:N3	1:A:1031:C:C2	2.79	0.50
1:A:1089:G:N2	1:A:1170:A:C2'	2.74	0.50
1:A:1104:G:H3'	1:A:1105:A:H8	1.76	0.50
1:A:1166:G:H2'	1:A:1170:A:N6	2.25	0.50
1:A:1174:G:P	1:A:1182:G:C8	3.04	0.50
1:A:1256:A:N3	1:A:1258:G:C6	2.79	0.50
1:A:1295:U:C4	1:A:1296:C:N4	2.79	0.50
1:A:1301:U:OP2	1:A:1304:G:C5	2.64	0.50
1:A:1350:A:N1	1:A:1373:G:C2	2.80	0.50
1:A:1374:A:H2'	1:A:1375:A:H8	1.76	0.50
1:A:1433:A:C5	1:A:1468:A:C4	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1527:U:N3	1:A:1528:U:C5	2.79	0.50
2:B:49:PHE:CE1	2:B:200:PRO:HD2	2.46	0.50
3:C:3:LYS:HD3	3:C:5:HIS:CD2	2.46	0.50
6:F:38:ARG:NH2	6:F:61:LEU:HD23	2.26	0.50
8:H:93:LYS:HZ1	8:H:103:VAL:CG1	2.23	0.50
13:M:13:HIS:CD2	13:M:41:ASP:HA	2.46	0.50
1:A:57:G:C4	1:A:58:C:C6	3.00	0.50
1:A:75:G:C6	1:A:76:G:O6	2.65	0.50
1:A:83:C:H3'	1:A:83:C:H6	1.74	0.50
1:A:123:U:C5	1:A:124:C:C5	2.98	0.50
1:A:192:A:H2'	20:T:54:GLN:CD	2.36	0.50
1:A:195:A:C2	1:A:196:A:C2	2.99	0.50
1:A:243:A:O4'	1:A:245:U:H5"	2.11	0.50
1:A:294:U:C4	1:A:295:C:C5	2.99	0.50
1:A:300:A:H3'	1:A:301:G:O4'	2.11	0.50
1:A:301:G:C5	1:A:302:G:C5	2.99	0.50
1:A:363:A:C6	12:L:27:PRO:HD2	2.46	0.50
1:A:409:U:C2	1:A:410:G:N7	2.79	0.50
1:A:431:A:H3'	1:A:432:A:H8	1.75	0.50
1:A:479:U:O2	1:A:480:U:C6	2.64	0.50
1:A:532:A:H3'	1:A:533:A:H5'	1.93	0.50
1:A:544:G:C5	1:A:545:C:C5	2.99	0.50
1:A:561:U:H1'	12:L:16:ALA:HB3	1.94	0.50
1:A:579:A:N6	1:A:762:U:H3	2.08	0.50
1:A:635:A:C6	1:A:636:U:C4	2.99	0.50
1:A:654:G:C6	1:A:655:A:C5	2.99	0.50
1:A:686:U:C5	1:A:703:G:H1'	2.47	0.50
1:A:710:G:C6	1:A:711:G:C5	2.99	0.50
1:A:846:G:H2'	1:A:847:G:H8	1.76	0.50
1:A:846:G:C6	1:A:847:G:C6	2.99	0.50
1:A:858:G:H3'	1:A:858:G:C4	2.47	0.50
1:A:909:A:O5'	1:A:909:A:H8	1.95	0.50
1:A:946:A:H1'	1:A:1334:G:H4'	1.92	0.50
1:A:976:G:N2	1:A:1363:A:C6	2.79	0.50
1:A:996:A:C1'	1:A:1046:A:H4'	2.31	0.50
1:A:1053:G:H2'	1:A:1199:U:H5	1.75	0.50
1:A:1055:A:C8	1:A:1055:A:O5'	2.64	0.50
1:A:1125:U:O2	1:A:1126:U:H2'	2.11	0.50
1:A:1134:G:C2	1:A:1141:C:N3	2.80	0.50
1:A:1141:C:N3	1:A:1142:G:C5	2.79	0.50
1:A:1246:A:H1'	1:A:1292:G:N2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1250:A:C4	1:A:1287:A:C5	2.99	0.50
1:A:1258:G:C8	1:A:1258:G:O5'	2.64	0.50
1:A:1317:C:C6	1:A:1318:A:C5	2.99	0.50
1:A:1332:A:N3	1:A:1332:A:C5'	2.73	0.50
1:A:1376:U:H2'	1:A:1377:A:C8	2.47	0.50
1:A:1385:G:C4	1:A:1386:G:C8	2.99	0.50
1:A:1499:A:H1'	1:A:1520:C:OP1	2.11	0.50
2:B:19:THR:CG2	2:B:38:HIS:CD2	2.94	0.50
2:B:95:TRP:CD2	2:B:99:MET:HG2	2.46	0.50
3:C:31:ASN:O	3:C:35:ASP:HB2	2.11	0.50
3:C:132:ALA:CA	3:C:135:ARG:HH21	2.24	0.50
15:O:69:LEU:HD12	15:O:80:LEU:CD2	2.41	0.50
20:T:38:ILE:O	20:T:86:ALA:HB2	2.11	0.50
1:A:19:A:C2	1:A:20:U:N1	2.78	0.50
1:A:50:A:C6	1:A:361:G:O4'	2.65	0.50
1:A:117:G:H2'	1:A:118:U:O4'	2.10	0.50
1:A:118:U:O5'	1:A:118:U:C6	2.64	0.50
1:A:122:G:OP2	1:A:123:U:C5	2.65	0.50
1:A:125:U:O5'	1:A:125:U:H6	1.95	0.50
1:A:142:G:C2	1:A:143:A:C8	2.99	0.50
1:A:160:A:C5	1:A:161:A:C6	3.00	0.50
1:A:198:G:C5	1:A:220:G:C2	3.00	0.50
1:A:201:G:N2	1:A:469:C:C4	2.79	0.50
1:A:212:G:C2'	1:A:214:C:C5	2.93	0.50
1:A:216:U:O5'	1:A:216:U:H6	1.94	0.50
1:A:232:G:C6	1:A:233:C:C4	2.99	0.50
1:A:336:A:N1	1:A:337:G:H1'	2.26	0.50
1:A:392:C:C2	1:A:393:A:C8	2.99	0.50
1:A:450:G:O6	1:A:481:G:C1'	2.60	0.50
1:A:457:G:C2	1:A:458:U:C5	3.00	0.50
1:A:557:G:C5	1:A:558:G:C6	2.99	0.50
1:A:564:C:H2'	1:A:565:U:O4'	2.10	0.50
1:A:674:G:H4'	6:F:49:TYR:OH	2.12	0.50
1:A:704:A:C6	1:A:705:G:C5	2.99	0.50
1:A:747:A:C6	1:A:748:G:C6	3.00	0.50
1:A:781:A:OP2	1:A:800:G:N1	2.45	0.50
1:A:786:G:C2	1:A:787:A:H1'	2.45	0.50
1:A:829:G:N1	1:A:830:G:C4	2.80	0.50
1:A:925:G:N2	1:A:1392:G:C8	2.80	0.50
1:A:939:G:H2'	1:A:940:C:C6	2.46	0.50
1:A:994:A:C6	1:A:995:C:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1041:G:C6	1:A:1042:A:N1	2.80	0.50
1:A:1062:U:O2	1:A:1195:C:N3	2.44	0.50
1:A:1067:A:C4	1:A:1108:G:N2	2.78	0.50
1:A:1138:G:C5	1:A:1140:C:O2	2.65	0.50
1:A:1206:G:N1	1:A:1207:G:C4	2.78	0.50
1:A:1210:C:O4'	1:A:1214:C:C4	2.65	0.50
1:A:1271:A:N1	1:A:1272:G:C5	2.79	0.50
1:A:1371:G:C2	1:A:1372:U:C2	2.99	0.50
1:A:1392:G:C6	1:A:1393:U:N3	2.78	0.50
1:A:1416:G:C5	1:A:1417:G:C8	3.00	0.50
1:A:1424:U:H2'	1:A:1425:U:C6	2.46	0.50
1:A:1496:C:N3	1:A:1497:G:C5	2.79	0.50
1:A:1501:C:H3'	1:A:1504:G:N7	2.26	0.50
2:B:8:MET:SD	2:B:49:PHE:HB2	2.51	0.50
9:I:17:ARG:HB3	9:I:19:PHE:CZ	2.47	0.50
11:K:31:VAL:HG11	11:K:99:LEU:HD21	1.92	0.50
12:L:47:ALA:HB3	12:L:49:ARG:HH21	1.75	0.50
14:N:15:LEU:HD11	14:N:19:TYR:CE2	2.46	0.50
16:P:39:PHE:CE2	16:P:41:PRO:HD3	2.47	0.50
17:Q:24:ILE:HG23	17:Q:60:ILE:HD11	1.93	0.50
17:Q:43:LEU:CD2	17:Q:71:SER:H	2.24	0.50
1:A:39:G:N2	1:A:404:G:H1'	2.26	0.50
1:A:93:U:C6	1:A:94:G:OP2	2.65	0.50
1:A:112:G:C2	1:A:330:C:C4	3.00	0.50
1:A:139:A:C4	1:A:140:U:C6	2.99	0.50
1:A:142:G:H2'	1:A:196:A:C2	2.46	0.50
1:A:164:G:C2	1:A:165:G:N9	2.80	0.50
1:A:192:A:C8	1:A:192:A:OP2	2.65	0.50
1:A:200:G:H2'	1:A:200:G:N3	2.26	0.50
1:A:202:G:N2	1:A:466:A:H61	2.09	0.50
1:A:208:U:C2	1:A:209:U:C5	2.99	0.50
1:A:304:U:O5'	1:A:304:U:H6	1.94	0.50
1:A:427:U:H5'	4:D:37:PRO:HA	1.93	0.50
1:A:433:G:H3'	1:A:434:U:C6	2.47	0.50
1:A:469:C:C6	1:A:470:C:C6	2.99	0.50
1:A:575:G:N1	1:A:881:G:C4	2.80	0.50
1:A:581:G:H2'	1:A:582:C:C5	2.47	0.50
1:A:664:G:H4'	1:A:725:G:H1'	1.93	0.50
1:A:715:A:O4'	1:A:777:A:C2	2.65	0.50
1:A:809:G:C4	1:A:810:C:C6	3.00	0.50
1:A:815:A:C2	1:A:1529:G:C4	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:847:G:N2	1:A:848:C:H1'	2.25	0.50
1:A:864:A:H5'	5:E:89:THR:HB	1.93	0.50
1:A:914:A:N1	1:A:915:A:C8	2.80	0.50
1:A:923:A:H1'	1:A:1398:A:H2'	1.92	0.50
1:A:925:G:C1'	1:A:1502:A:H1'	2.41	0.50
1:A:976:G:C5	1:A:1362:A:C4	2.99	0.50
1:A:986:U:H4'	19:S:54:ARG:HD3	1.93	0.50
1:A:987:G:N3	1:A:1219:A:C2	2.80	0.50
1:A:1010:U:C5	14:N:20:PHE:HA	2.45	0.50
1:A:1019:A:N1	1:A:1020:G:C8	2.79	0.50
1:A:1037:C:H2'	1:A:1038:C:C6	2.46	0.50
1:A:1120:C:C4	1:A:1154:G:C4	2.99	0.50
1:A:1142:G:N1	1:A:1143:G:H1'	2.27	0.50
1:A:1170:A:O5'	1:A:1170:A:H8	1.94	0.50
1:A:1204:A:C4	1:A:1205:U:C6	3.00	0.50
1:A:1262:C:H5	1:A:1274:A:C2	2.26	0.50
1:A:1295:U:N3	1:A:1296:C:C4	2.80	0.50
1:A:1313:U:H5	19:S:4:LEU:H	1.60	0.50
1:A:1316:G:C4	1:A:1318:A:OP2	2.64	0.50
1:A:1328:C:C5	13:M:26:LYS:NZ	2.80	0.50
1:A:1353:G:H5"	1:A:1353:G:C8	2.46	0.50
1:A:1358:U:H5"	14:N:74:ARG:N	2.25	0.50
1:A:1377:A:H4'	7:G:94:ARG:HH12	1.77	0.50
1:A:1509:C:C2	1:A:1510:C:C5	2.99	0.50
1:A:1530:G:C6	1:A:1531:A:C6	2.99	0.50
13:M:28:ARG:HE	13:M:62:PHE:HB2	1.77	0.50
17:Q:59:GLU:HB3	17:Q:76:ARG:H	1.77	0.50
22:W:157:ILE:HB	22:W:187:VAL:HG22	1.93	0.50
1:A:3:A:C5'	1:A:614:C:C5'	2.90	0.50
1:A:105:G:H21	1:A:380:G:H5'	1.74	0.50
1:A:114:U:C6	1:A:114:U:O5'	2.65	0.50
1:A:218:U:H2'	1:A:219:U:C6	2.47	0.50
1:A:227:G:C4	1:A:228:A:C8	2.99	0.50
1:A:264:C:H4'	17:Q:64:ARG:HH12	1.75	0.50
1:A:438:U:N3	1:A:494:G:C8	2.79	0.50
1:A:454:G:C6	1:A:455:G:C5	2.99	0.50
1:A:572:A:H2	1:A:917:G:N3	2.09	0.50
1:A:600:A:N1	1:A:601:G:C4	2.79	0.50
1:A:613:C:H2'	1:A:614:C:O4'	2.12	0.50
1:A:633:G:C8	1:A:633:G:H3'	2.45	0.50
1:A:677:U:C4	1:A:678:U:C4	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:678:U:H1'	1:A:713:G:H22	1.76	0.50
1:A:682:G:N1	1:A:709:U:C2	2.79	0.50
1:A:832:G:O6	1:A:833:G:C8	2.65	0.50
1:A:902:G:H2'	1:A:903:G:C8	2.45	0.50
1:A:902:G:N1	1:A:903:G:C5	2.80	0.50
1:A:938:A:C5'	7:G:75:LYS:HZ1	2.25	0.50
1:A:941:G:N1	1:A:942:G:C5	2.80	0.50
1:A:950:U:H1'	1:A:971:G:C4	2.47	0.50
1:A:963:G:C8	1:A:963:G:O5'	2.64	0.50
1:A:1010:U:C6	1:A:1010:U:O5'	2.64	0.50
1:A:1095:U:C6	1:A:1095:U:H3'	2.46	0.50
1:A:1220:G:H1'	19:S:51:HIS:CD2	2.47	0.50
1:A:1239:A:N7	1:A:1241:G:C2	2.79	0.50
1:A:1281:C:H3'	1:A:1282:C:H5	1.77	0.50
1:A:1288:A:C8	1:A:1288:A:C3'	2.94	0.50
1:A:1290:G:O2'	9:I:41:GLU:HB3	2.12	0.50
1:A:1392:G:C4'	1:A:1532:U:H5'	2.40	0.50
1:A:1407:C:C2	1:A:1495:U:O2	2.65	0.50
1:A:1428:A:N1	1:A:1473:G:C5	2.80	0.50
1:A:1434:A:H2'	1:A:1435:G:O4'	2.11	0.50
1:A:1474:U:C5	1:A:1474:U:OP2	2.64	0.50
2:B:38:HIS:CG	2:B:188:THR:CG2	2.95	0.50
2:B:80:LYS:HG3	2:B:90:PHE:CE2	2.47	0.50
11:K:23:HIS:CD2	11:K:30:ILE:HG23	2.46	0.50
11:K:81:LEU:HG	11:K:104:PHE:CD2	2.46	0.50
13:M:73:SER:HA	13:M:76:ILE:HD12	1.92	0.50
19:S:33:TRP:CD2	19:S:56:HIS:HE1	2.29	0.50
1:A:22:G:H1'	1:A:914:A:C4	2.47	0.50
1:A:82:G:P	1:A:91:U:H5'	2.52	0.50
1:A:94:G:C4	1:A:96:U:C4	3.00	0.50
1:A:199:A:C2	1:A:200:G:N9	2.80	0.50
1:A:208:U:C5	1:A:210:C:C1'	2.95	0.50
1:A:257:G:C6	1:A:258:G:C6	2.99	0.50
1:A:272:C:H2'	1:A:273:U:O4'	2.11	0.50
1:A:303:A:C6	1:A:304:U:C4	2.99	0.50
1:A:322:C:N3	1:A:323:U:C4	2.79	0.50
1:A:367:U:OP1	1:A:395:C:H1'	2.11	0.50
1:A:387:U:O5'	1:A:387:U:H6	1.95	0.50
1:A:407:U:O2	1:A:436:C:H1'	2.12	0.50
1:A:411:A:C2	1:A:429:U:C4	2.99	0.50
1:A:439:U:C6	1:A:440:C:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:595:A:N7	1:A:641:U:C5	2.80	0.50
1:A:599:C:H5	8:H:87:ARG:HG2	1.74	0.50
1:A:705:G:C8	1:A:705:G:H3'	2.46	0.50
1:A:752:G:H1'	1:A:754:C:N4	2.27	0.50
1:A:788:U:C5	1:A:788:U:OP2	2.65	0.50
1:A:868:C:C1'	1:A:873:A:C4	2.94	0.50
1:A:894:G:C6	1:A:895:G:C5	3.00	0.50
1:A:903:G:H3'	1:A:904:U:H6	1.74	0.50
1:A:936:C:H3'	1:A:937:A:H8	1.76	0.50
1:A:975:A:C5'	1:A:1359:C:O2	2.59	0.50
1:A:1072:G:H21	2:B:105:THR:CG2	2.20	0.50
1:A:1087:G:N1	1:A:1099:G:H1'	2.27	0.50
1:A:1097:C:O2'	1:A:1169:A:H1'	2.12	0.50
1:A:1127:G:N2	1:A:1128:C:C2	2.79	0.50
1:A:1143:G:N1	1:A:1144:G:C5	2.79	0.50
1:A:1143:G:C2	1:A:1144:G:C4	2.99	0.50
1:A:1150:A:N3	10:J:41:PRO:HG2	2.27	0.50
1:A:1172:C:H2'	1:A:1173:U:O4'	2.11	0.50
1:A:1202:U:H1'	14:N:81:ILE:HD13	1.93	0.50
1:A:1239:A:C4	1:A:1241:G:C6	2.99	0.50
1:A:1309:G:H5"	13:M:76:ILE:HG12	1.92	0.50
1:A:1419:G:C6	1:A:1482:G:N3	2.80	0.50
4:D:18:LEU:HA	4:D:63:ILE:HA	1.94	0.50
5:E:93:VAL:HG11	5:E:139:THR:HG22	1.94	0.50
6:F:55:HIS:CD2	6:F:56:LYS:H	2.30	0.50
8:H:96:ALA:HB1	8:H:113:ARG:HH12	1.77	0.50
10:J:83:THR:O	10:J:86:ALA:HB3	2.12	0.50
11:K:20:ALA:HB2	11:K:81:LEU:HD13	1.92	0.50
15:O:33:ALA:O	15:O:37:HIS:CE1	2.65	0.50
1:A:27:G:C5	1:A:28:A:C5	3.00	0.50
1:A:59:A:H5'	1:A:388:G:H2'	1.94	0.50
1:A:100:G:C4	1:A:101:A:C8	3.00	0.50
1:A:107:G:H3'	1:A:108:G:O4'	2.12	0.50
1:A:138:G:C1'	1:A:226:G:C2	2.94	0.50
1:A:148:G:N3	1:A:1446:A:C2	2.80	0.50
1:A:160:A:H4'	1:A:344:A:C2	2.47	0.50
1:A:193:C:H1'	20:T:58:ASP:OD1	2.11	0.50
1:A:195:A:N3	1:A:222:C:H2'	2.27	0.50
1:A:237:G:H4'	17:Q:26:ARG:CZ	2.42	0.50
1:A:340:U:H2'	1:A:341:C:C6	2.47	0.50
1:A:441:A:C4	1:A:497:G:O6	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:444:G:C5	1:A:445:G:C8	2.99	0.50
1:A:461:A:H3'	1:A:462:G:H5"	1.93	0.50
1:A:489:C:OP1	4:D:128:VAL:HG21	2.12	0.50
1:A:570:G:H5'	1:A:820:U:H4'	1.94	0.50
1:A:622:A:C8	1:A:623:C:C5	3.00	0.50
1:A:628:G:C4	1:A:629:A:C8	3.00	0.50
1:A:747:A:C6	1:A:748:G:C5	2.99	0.50
1:A:925:G:O4'	1:A:1502:A:H1'	2.11	0.50
1:A:938:A:N1	1:A:939:G:C4	2.80	0.50
1:A:966:G:H2'	1:A:967:C:H5'	1.94	0.50
1:A:1098:C:C4'	1:A:1168:U:C5	2.92	0.50
1:A:1104:G:C6	1:A:1105:A:C5	2.99	0.50
1:A:1232:U:OP1	9:I:125:GLN:HB2	2.12	0.50
1:A:1266:G:N3	1:A:1266:G:C2'	2.69	0.50
1:A:1294:G:C4	1:A:1295:U:C6	3.00	0.50
1:A:1327:C:C6	1:A:1327:C:H3'	2.47	0.50
1:A:1349:A:C2	1:A:1374:A:C4	2.99	0.50
1:A:1371:G:C5	1:A:1372:U:C5	3.00	0.50
1:A:1375:A:C4'	7:G:28:ILE:HA	2.40	0.50
1:A:1419:G:H3'	1:A:1420:U:H5	1.73	0.50
8:H:2:MET:C	8:H:3:GLN:HG2	2.37	0.50
18:R:30:ASN:HB2	18:R:31:TYR:CZ	2.47	0.50
1:A:37:U:H4'	1:A:500:G:C3'	2.42	0.50
1:A:57:G:H3'	1:A:58:C:C6	2.46	0.50
1:A:92:U:H2'	1:A:93:U:C6	2.47	0.50
1:A:133:U:C2	1:A:230:G:N3	2.80	0.50
1:A:144:G:N1	1:A:179:A:C6	2.80	0.50
1:A:154:U:H1'	1:A:168:G:C2	2.47	0.50
1:A:168:G:C6	1:A:169:C:C4	2.99	0.50
1:A:184:G:H2'	1:A:185:U:H6	1.76	0.50
1:A:198:G:H5"	1:A:198:G:H8	1.72	0.50
1:A:255:G:C5	1:A:256:U:C6	3.00	0.50
1:A:259:G:C2	1:A:268:U:C2	3.00	0.50
1:A:272:C:H3'	1:A:273:U:C5	2.46	0.50
1:A:354:G:C2	1:A:355:C:N1	2.80	0.50
1:A:419:C:H1'	4:D:39:GLN:OE1	2.11	0.50
1:A:461:A:C8	1:A:466:A:H5'	2.47	0.50
1:A:570:G:C5'	1:A:820:U:H4'	2.42	0.50
1:A:590:U:C4	1:A:650:G:C6	3.00	0.50
1:A:592:G:N1	1:A:648:A:C4	2.80	0.50
1:A:605:U:C2	1:A:606:G:N2	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:608:A:C4	1:A:609:A:C8	3.00	0.50
1:A:669:G:C4	1:A:670:G:C8	3.00	0.50
1:A:673:A:N1	1:A:674:G:C2	2.80	0.50
1:A:682:G:C8	1:A:682:G:O5'	2.64	0.50
1:A:748:G:C5	1:A:749:A:C8	3.00	0.50
1:A:768:A:H4'	1:A:1524:C:H1'	1.94	0.50
1:A:838:G:C6	1:A:839:C:C4	3.00	0.50
1:A:1008:U:C4	14:N:17:ASP:O	2.65	0.50
1:A:1053:G:C6	1:A:1199:U:H2'	2.47	0.50
1:A:1093:A:H2'	1:A:1095:U:O5'	2.12	0.50
1:A:1132:C:C6	1:A:1132:C:H5"	2.47	0.50
1:A:1158:C:C3'	1:A:1158:C:O2	2.60	0.50
1:A:1256:A:H1'	1:A:1258:G:C8	2.47	0.50
1:A:1262:C:C4	1:A:1274:A:N3	2.80	0.50
1:A:1264:U:C2	1:A:1272:G:C6	3.00	0.50
1:A:1306:A:C1'	1:A:1332:A:C5	2.93	0.50
1:A:1319:A:C5	1:A:1323:G:C4	3.00	0.50
1:A:1440:U:C2'	1:A:1441:A:C8	2.95	0.50
1:A:1442:G:C2	1:A:1443:C:H5	2.29	0.50
1:A:1466:C:H3'	1:A:1467:C:C5	2.47	0.50
1:A:1499:A:H3'	1:A:1505:G:OP1	2.12	0.50
1:A:1511:G:C6	1:A:1512:U:C4	2.99	0.50
1:A:1530:G:H1'	1:A:1531:A:H3'	1.94	0.50
2:B:49:PHE:HA	2:B:52:ALA:HB3	1.94	0.50
2:B:67:LEU:HD11	2:B:150:ILE:CB	2.42	0.50
3:C:56:ILE:HG21	3:C:58:ARG:NH2	2.27	0.50
4:D:150:LYS:HZ1	4:D:155:LYS:HA	1.77	0.50
6:F:29:ILE:HD12	6:F:66:ALA:HB2	1.94	0.50
6:F:49:TYR:CE2	6:F:51:ILE:HG13	2.46	0.50
9:I:20:ILE:HD12	9:I:60:LEU:HD13	1.92	0.50
13:M:10:ASP:CB	13:M:11:HIS:CD2	2.95	0.50
17:Q:67:SER:HB2	17:Q:70:LYS:HD2	1.94	0.50
22:W:126:ILE:HG21	22:W:148:CYS:SG	2.51	0.50
1:A:6:G:N1	5:E:102:THR:HG21	2.27	0.50
1:A:39:G:C6	1:A:404:G:C2	3.00	0.50
1:A:73:C:N4	1:A:74:A:C5	2.80	0.50
1:A:103:U:H1'	1:A:151:A:H2	1.75	0.50
1:A:119:A:C4	1:A:240:G:C8	2.99	0.50
1:A:145:G:C6	1:A:146:G:N7	2.80	0.50
1:A:192:A:N1	1:A:193:C:C5	2.80	0.50
1:A:299:G:O2'	1:A:300:A:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:409:U:H5"	4:D:24:VAL:H	1.77	0.50
1:A:414:A:H2'	1:A:415:A:O4'	2.11	0.50
1:A:427:U:H2'	1:A:428:G:C8	2.46	0.50
1:A:453:G:C6	1:A:454:G:C2	3.00	0.50
1:A:615:G:C2	1:A:626:G:C4	3.00	0.50
1:A:655:A:C2	1:A:656:G:C4	3.00	0.50
1:A:737:C:C4	1:A:738:C:C5	3.00	0.50
1:A:815:A:N1	1:A:1529:G:C4	2.80	0.50
1:A:839:C:H2'	1:A:840:C:C5	2.46	0.50
1:A:1071:C:C5	1:A:1071:C:OP2	2.65	0.50
1:A:1102:A:C5	1:A:1103:C:C4	2.99	0.50
1:A:1115:U:C1'	1:A:1186:G:N2	2.75	0.50
1:A:1202:U:C6	10:J:55:PRO:HG3	2.47	0.50
1:A:1250:A:H4'	9:I:69:GLY:C	2.37	0.50
1:A:1296:C:O2	1:A:1296:C:C2'	2.56	0.50
1:A:1369:C:C6	1:A:1369:C:OP2	2.65	0.50
1:A:1392:G:C5	1:A:1393:U:C4	3.00	0.50
1:A:1392:G:N1	1:A:1393:U:C2	2.80	0.50
1:A:1394:A:H3'	1:A:1401:G:H21	1.76	0.50
1:A:1447:A:H3'	1:A:1448:C:C5'	2.41	0.50
1:A:1469:C:H2'	1:A:1470:U:C5'	2.41	0.50
2:B:14:HIS:CD2	2:B:16:GLY:H	2.28	0.50
3:C:140:ALA:O	3:C:145:ALA:HB3	2.11	0.50
6:F:49:TYR:CE1	18:R:68:PRO:HA	2.46	0.50
9:I:51:LEU:CD2	9:I:60:LEU:HD21	2.42	0.50
9:I:51:LEU:HD22	9:I:60:LEU:HD21	1.94	0.50
13:M:106:ARG:O	13:M:110:GLY:C	2.54	0.50
17:Q:45:VAL:HG13	17:Q:52:CYS:SG	2.52	0.50
22:W:50:MET:O	22:W:66:ILE:HD11	2.12	0.50
22:W:181:ARG:CZ	22:W:187:VAL:HB	2.42	0.50
1:A:22:G:C4	1:A:23:C:C6	3.00	0.49
1:A:45:G:H4'	1:A:307:C:H1'	1.93	0.49
1:A:45:G:C6	1:A:46:G:C5	3.00	0.49
1:A:46:G:C5	1:A:366:A:C6	3.00	0.49
1:A:56:U:C4	1:A:352:C:N4	2.80	0.49
1:A:98:A:C6	1:A:99:C:N3	2.80	0.49
1:A:127:G:N1	1:A:128:G:C8	2.80	0.49
1:A:153:C:N4	1:A:154:U:C2	2.80	0.49
1:A:184:G:C6	1:A:194:C:C4	3.00	0.49
1:A:184:G:C5	1:A:185:U:C5	3.00	0.49
1:A:297:G:C2	1:A:301:G:N1	2.79	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:363:A:C6	1:A:364:A:C6	3.00	0.49
1:A:397:A:H5"	1:A:398:U:C5	2.47	0.49
1:A:432:A:C5	1:A:433:G:C5	2.99	0.49
1:A:446:G:C6	1:A:447:G:C8	3.00	0.49
1:A:461:A:N6	1:A:463:U:H5'	2.27	0.49
1:A:533:A:H2	1:A:535:A:H3'	1.78	0.49
1:A:541:G:H1'	4:D:40:HIS:HB2	1.94	0.49
1:A:595:A:N6	1:A:641:U:H2'	2.27	0.49
1:A:612:C:C6	1:A:613:C:C5	3.00	0.49
1:A:672:U:H4'	6:F:86:ARG:HE	1.77	0.49
1:A:692:U:H3	11:K:54:SER:N	2.10	0.49
1:A:716:A:H2'	1:A:717:U:C6	2.47	0.49
1:A:718:A:H3'	1:A:719:C:C5	2.46	0.49
1:A:840:C:O2	1:A:843:U:C2	2.65	0.49
1:A:858:G:N1	1:A:869:G:H2'	2.27	0.49
1:A:860:A:C6	1:A:861:G:C4	3.00	0.49
1:A:914:A:C6	1:A:915:A:C8	3.00	0.49
1:A:945:G:H2'	1:A:945:G:N3	2.26	0.49
1:A:976:G:H5"	14:N:60:ARG:NH2	2.24	0.49
1:A:1000:A:C2	1:A:1001:C:H1'	2.46	0.49
1:A:1004:A:C5'	1:A:1024:G:N2	2.74	0.49
1:A:1013:G:C2	1:A:1017:U:O2	2.65	0.49
1:A:1042:A:C2	1:A:1043:G:N1	2.80	0.49
1:A:1117:A:C5	1:A:1156:G:N2	2.79	0.49
1:A:1128:C:C2'	1:A:1129:C:C6	2.95	0.49
1:A:1129:C:OP2	1:A:1139:G:H2'	2.11	0.49
1:A:1142:G:C8	1:A:1142:G:C5'	2.93	0.49
1:A:1174:G:P	1:A:1182:G:H8	2.35	0.49
1:A:1204:A:C2	1:A:1205:U:H1'	2.47	0.49
1:A:1225:A:H1'	19:S:79:TYR:HB3	1.94	0.49
1:A:1256:A:N6	1:A:1277:C:H2'	2.26	0.49
1:A:1264:U:C4	1:A:1265:C:C5	3.00	0.49
1:A:1343:G:N1	1:A:1344:C:C2	2.80	0.49
1:A:1346:A:N1	1:A:1374:A:C5'	2.74	0.49
1:A:1426:G:C2	1:A:1475:G:C4	2.99	0.49
1:A:1444:U:C4	1:A:1459:G:C6	3.00	0.49
2:B:65:LYS:CB	2:B:149:GLY:HA2	2.43	0.49
6:F:3:HIS:CE1	6:F:37:HIS:NE2	2.80	0.49
6:F:9:MET:HG2	6:F:59:TYR:CZ	2.47	0.49
6:F:11:HIS:CD2	6:F:11:HIS:H	2.30	0.49
7:G:79:VAL:HG21	7:G:84:TYR:CZ	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:18:ILE:HG21	10:J:70:HIS:CG	2.47	0.49
13:M:59:VAL:C	13:M:61:LYS:H	2.20	0.49
1:A:26:A:H61	1:A:558:G:H2'	1.77	0.49
1:A:37:U:H1'	1:A:548:G:C2	2.46	0.49
1:A:61:G:C8	20:T:5:SER:HB2	2.48	0.49
1:A:64:G:C2	1:A:69:G:N1	2.80	0.49
1:A:160:A:C2	1:A:161:A:H1'	2.48	0.49
1:A:203:G:N3	1:A:215:C:C2	2.80	0.49
1:A:246:A:C4	1:A:282:A:C6	3.01	0.49
1:A:254:G:C5	1:A:255:G:N7	2.80	0.49
1:A:296:U:O2	1:A:302:G:C2	2.65	0.49
1:A:369:G:H8	1:A:388:G:H22	1.60	0.49
1:A:376:G:H2'	1:A:377:G:C8	2.47	0.49
1:A:382:A:C4	1:A:383:A:N7	2.80	0.49
1:A:514:C:C2	1:A:538:G:N2	2.79	0.49
1:A:536:C:C4	1:A:537:G:N7	2.80	0.49
1:A:555:U:O5'	1:A:555:U:C6	2.65	0.49
1:A:579:A:C4	1:A:763:G:C2	3.00	0.49
1:A:633:G:O6	1:A:634:C:C4	2.65	0.49
1:A:693:G:C5	1:A:694:A:C5	3.00	0.49
1:A:840:C:C6	1:A:847:G:N2	2.80	0.49
1:A:861:G:C2	1:A:862:C:C2	3.00	0.49
1:A:867:G:C8	1:A:867:G:H3'	2.48	0.49
1:A:923:A:C2	1:A:924:C:C2	3.01	0.49
1:A:923:A:C2	1:A:1395:C:O2	2.64	0.49
1:A:976:G:C8	1:A:1359:C:O2'	2.65	0.49
1:A:1067:A:O5'	1:A:1093:A:H4'	2.11	0.49
1:A:1086:U:C5'	1:A:1087:G:C8	2.95	0.49
1:A:1133:G:C2	1:A:1134:G:N9	2.79	0.49
1:A:1133:G:C2	1:A:1142:G:C6	3.00	0.49
1:A:1134:G:N1	1:A:1135:U:C2	2.80	0.49
1:A:1158:C:O2	1:A:1181:G:N1	2.44	0.49
1:A:1197:A:C2	1:A:1198:G:N9	2.80	0.49
1:A:1252:A:N1	1:A:1355:G:H4'	2.27	0.49
1:A:1277:C:H1'	1:A:1282:C:H1'	1.93	0.49
1:A:1309:G:N2	1:A:1310:G:C4	2.80	0.49
1:A:1374:A:O3'	7:G:27:ASN:HB3	2.12	0.49
1:A:1394:A:H3'	1:A:1395:C:C5'	2.41	0.49
1:A:1442:G:N2	1:A:1443:C:C5	2.81	0.49
1:A:1451:U:H5"	1:A:1452:C:OP2	2.12	0.49
1:A:1513:A:C4	1:A:1523:G:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1522:U:O5'	1:A:1522:U:C6	2.64	0.49
2:B:21:TYR:CG	2:B:22:TRP:N	2.81	0.49
2:B:27:LYS:HA	2:B:30:ILE:HG13	1.94	0.49
2:B:45:THR:HG23	2:B:49:PHE:CE2	2.48	0.49
6:F:10:VAL:HB	6:F:58:HIS:HB3	1.94	0.49
10:J:15:HIS:CE1	10:J:16:ARG:CD	2.95	0.49
11:K:117:HIS:CE1	18:R:69:TYR:OH	2.65	0.49
20:T:66:ILE:C	20:T:67:HIS:CG	2.90	0.49
1:A:27:G:C6	1:A:557:G:C5	3.01	0.49
1:A:74:A:C4	1:A:75:G:C8	3.01	0.49
1:A:106:C:C2	20:T:9:ARG:HD3	2.47	0.49
1:A:122:G:N1	1:A:123:U:C2	2.79	0.49
1:A:128:G:N3	1:A:234:C:C2	2.79	0.49
1:A:194:C:H4'	20:T:59:ARG:CB	2.41	0.49
1:A:197:A:H2	1:A:220:G:N3	2.09	0.49
1:A:251:G:C4	1:A:266:G:N7	2.81	0.49
1:A:255:G:N1	1:A:256:U:C2	2.80	0.49
1:A:288:A:N3	1:A:288:A:H2'	2.27	0.49
1:A:295:C:C2	1:A:303:A:N3	2.80	0.49
1:A:426:U:C6	1:A:426:U:O5'	2.65	0.49
1:A:454:G:N3	1:A:455:G:C8	2.79	0.49
1:A:459:A:C2	1:A:460:A:C8	3.00	0.49
1:A:473:U:H3'	1:A:473:U:C6	2.48	0.49
1:A:496:A:C6	1:A:497:G:O6	2.65	0.49
1:A:536:C:C6	1:A:536:C:C3'	2.94	0.49
1:A:539:A:C5	1:A:540:G:C5	2.99	0.49
1:A:567:G:C6	1:A:568:G:N7	2.80	0.49
1:A:596:A:N1	1:A:645:G:C2	2.80	0.49
1:A:611:C:H3'	1:A:612:C:H6	1.77	0.49
1:A:660:C:O2	1:A:746:A:C2	2.65	0.49
1:A:684:U:O5'	1:A:684:U:C6	2.66	0.49
1:A:714:G:H1'	1:A:777:A:C1'	2.42	0.49
1:A:770:C:O4'	1:A:900:A:C2	2.65	0.49
1:A:807:A:C6	1:A:808:C:N3	2.80	0.49
1:A:813:U:H5'	1:A:904:U:H5"	1.94	0.49
1:A:886:G:C6	1:A:887:G:N7	2.80	0.49
1:A:889:A:C2	1:A:907:A:C5'	2.94	0.49
1:A:893:C:C4	1:A:894:G:C5	3.01	0.49
1:A:938:A:C2	1:A:939:G:C1'	2.95	0.49
1:A:958:A:C2	1:A:959:A:C2	3.00	0.49
1:A:1055:A:C8	1:A:1206:G:C2	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1086:U:H3'	1:A:1087:G:C5'	2.40	0.49
1:A:1118:U:C2	1:A:1156:G:N2	2.81	0.49
1:A:1129:C:N3	1:A:1144:G:C6	2.80	0.49
1:A:1143:G:C2	1:A:1144:G:N9	2.81	0.49
1:A:1170:A:H5"	2:B:138:ARG:NE	2.27	0.49
1:A:1186:G:O5'	1:A:1186:G:H8	1.96	0.49
1:A:1229:A:C6	1:A:1230:C:C4	3.00	0.49
1:A:1237:C:H2'	1:A:1335:U:H4'	1.93	0.49
1:A:1239:A:N9	1:A:1241:G:C4	2.80	0.49
1:A:1245:C:H2'	1:A:1246:A:H8	1.77	0.49
1:A:1250:A:C8	1:A:1250:A:C3'	2.95	0.49
1:A:1256:A:C4'	1:A:1258:G:H1'	2.41	0.49
1:A:1307:U:C4	1:A:1308:U:C4	3.00	0.49
1:A:1393:U:O4'	1:A:1502:A:H5"	2.13	0.49
1:A:1435:G:C6	1:A:1436:U:C4	2.99	0.49
1:A:1453:G:C2	1:A:1454:G:C8	3.01	0.49
1:A:1476:A:C6	1:A:1477:U:C4	3.01	0.49
6:F:47:LEU:HD12	6:F:51:ILE:H	1.76	0.49
6:F:66:ALA:HB1	6:F:70:VAL:HG23	1.95	0.49
9:I:38:PHE:CZ	9:I:75:ALA:HA	2.47	0.49
10:J:37:ARG:HB3	10:J:75:ASP:HB3	1.94	0.49
12:L:2:THR:CG2	12:L:4:ASN:HB3	2.42	0.49
17:Q:22:VAL:HG11	17:Q:60:ILE:HG21	1.93	0.49
22:W:170:MET:HE3	22:W:174:ASN:HD21	1.76	0.49
1:A:31:G:H21	1:A:46:G:H5"	1.77	0.49
1:A:107:G:H8	20:T:9:ARG:NH1	2.10	0.49
1:A:178:C:C6	1:A:178:C:C3'	2.95	0.49
1:A:216:U:H4'	1:A:464:U:H4'	1.94	0.49
1:A:217:C:H1'	1:A:469:C:N4	2.25	0.49
1:A:223:A:C6	1:A:224:U:C2	3.00	0.49
1:A:260:G:C2	1:A:261:U:C4	3.01	0.49
1:A:369:G:N2	1:A:370:C:H1'	2.27	0.49
1:A:414:A:H8	1:A:428:G:H22	1.60	0.49
1:A:439:U:O4	1:A:495:A:C2	2.65	0.49
1:A:538:G:N2	1:A:539:A:C4	2.80	0.49
1:A:579:A:C2	1:A:580:C:N1	2.80	0.49
1:A:598:U:N3	1:A:599:C:C5	2.80	0.49
1:A:600:A:C4	1:A:639:G:C6	3.00	0.49
1:A:602:A:C8	1:A:602:A:OP2	2.65	0.49
1:A:667:G:C2	1:A:668:G:C8	3.00	0.49
1:A:667:G:C2	1:A:740:U:H1'	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:707:U:C4	1:A:708:C:C4	3.00	0.49
1:A:730:G:OP2	1:A:731:G:C8	2.65	0.49
1:A:794:A:H5"	1:A:794:A:H8	1.76	0.49
1:A:838:G:H22	2:B:34:ARG:NH1	2.08	0.49
1:A:849:G:C6	1:A:850:U:C4	3.01	0.49
1:A:963:G:H1'	10:J:56:HIS:CE1	2.48	0.49
1:A:969:A:N7	1:A:1231:G:H1'	2.28	0.49
1:A:1000:A:C2	1:A:1041:G:C2	3.01	0.49
1:A:1032:G:N7	1:A:1033:G:H1'	2.28	0.49
1:A:1033:G:N1	1:A:1034:G:C5	2.80	0.49
1:A:1047:G:N2	1:A:1048:G:C4	2.80	0.49
1:A:1053:G:C2'	1:A:1054:C:OP2	2.60	0.49
1:A:1074:G:O5'	1:A:1074:G:H8	1.95	0.49
1:A:1127:G:C2	1:A:1128:C:C6	3.00	0.49
1:A:1134:G:N1	1:A:1141:C:C4	2.80	0.49
1:A:1236:A:C8	1:A:1236:A:C5'	2.95	0.49
1:A:1240:U:P	7:G:115:MET:H	2.35	0.49
1:A:1251:A:OP1	9:I:68:GLY:HA2	2.12	0.49
1:A:1262:C:C2'	1:A:1263:C:H5'	2.43	0.49
1:A:1392:G:H1'	1:A:1502:A:O3'	2.12	0.49
1:A:1392:G:C6	1:A:1393:U:C4	3.00	0.49
1:A:1403:C:H2'	1:A:1404:C:H6	1.78	0.49
1:A:1428:A:C2	1:A:1429:A:C4	2.99	0.49
1:A:1461:G:C6	1:A:1462:C:C4	3.00	0.49
4:D:8:LEU:HD12	4:D:26:ALA:O	2.12	0.49
5:E:79:THR:HA	5:E:122:VAL:CG2	2.43	0.49
5:E:81:GLN:H	5:E:146:MET:CG	2.24	0.49
6:F:10:VAL:HG13	6:F:84:VAL:HA	1.94	0.49
6:F:15:SER:HB3	6:F:58:HIS:HB2	1.93	0.49
7:G:49:LEU:HD12	7:G:52:ARG:HB2	1.94	0.49
8:H:73:SER:HB2	8:H:129:ALA:HB3	1.93	0.49
10:J:27:GLU:HG3	10:J:31:ARG:HE	1.77	0.49
17:Q:11:VAL:CG1	17:Q:58:VAL:HG11	2.36	0.49
17:Q:19:SER:O	17:Q:44:HIS:CG	2.65	0.49
1:A:70:U:C4	1:A:94:G:H1'	2.47	0.49
1:A:108:G:C2	1:A:109:A:N1	2.80	0.49
1:A:123:U:N3	1:A:239:U:O2	2.46	0.49
1:A:136:C:C4	1:A:228:A:N1	2.81	0.49
1:A:158:G:N2	1:A:159:G:C1'	2.75	0.49
1:A:186:C:C2	1:A:192:A:N1	2.80	0.49
1:A:196:A:N3	1:A:222:C:H1'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:208:U:H2'	1:A:209:U:C6	2.47	0.49
1:A:254:G:N1	1:A:255:G:C5	2.80	0.49
1:A:405:U:H3	1:A:499:A:H62	1.59	0.49
1:A:412:A:N7	4:D:32:LYS:HG3	2.27	0.49
1:A:516:U:N3	1:A:517:G:C8	2.81	0.49
1:A:537:G:C5	1:A:538:G:C8	3.01	0.49
1:A:554:A:H2'	1:A:555:U:C6	2.48	0.49
1:A:599:C:O2	1:A:599:C:H2'	2.11	0.49
1:A:612:C:H3'	1:A:613:C:C6	2.47	0.49
1:A:616:G:H21	16:P:48:GLU:CD	2.19	0.49
1:A:649:A:C6	1:A:650:G:C5	3.01	0.49
1:A:655:A:H2	1:A:754:C:C4	2.28	0.49
1:A:683:G:H3'	1:A:684:U:C6	2.47	0.49
1:A:731:G:C6	1:A:732:C:C6	3.01	0.49
1:A:737:C:C2	1:A:738:C:C6	3.00	0.49
1:A:778:G:C5	1:A:779:C:C5	3.01	0.49
1:A:788:U:C2	1:A:795:C:N4	2.80	0.49
1:A:836:G:C6	1:A:837:U:C2	3.00	0.49
1:A:838:G:N2	1:A:849:G:H1'	2.27	0.49
1:A:864:A:C8	1:A:864:A:O5'	2.66	0.49
1:A:869:G:OP1	1:A:871:U:C5	2.66	0.49
1:A:923:A:H1'	1:A:1398:A:C2'	2.42	0.49
1:A:923:A:N3	1:A:924:C:C6	2.81	0.49
1:A:925:G:H4'	1:A:1502:A:C4	2.47	0.49
1:A:941:G:C2	1:A:1343:G:C4	3.00	0.49
1:A:942:G:C5	1:A:943:U:C5	3.00	0.49
1:A:974:A:C4	14:N:70:HIS:CB	2.95	0.49
1:A:978:A:H3'	1:A:979:C:C6	2.48	0.49
1:A:1005:A:H4'	1:A:1036:A:C1'	2.43	0.49
1:A:1042:A:H2'	1:A:1043:G:N9	2.27	0.49
1:A:1072:G:N1	1:A:1073:U:C2	2.80	0.49
1:A:1114:C:C2	1:A:1187:G:C4	3.00	0.49
1:A:1117:A:H2	1:A:1180:A:N3	2.09	0.49
1:A:1133:G:N2	1:A:1134:G:H1'	2.28	0.49
1:A:1152:A:C5	1:A:1153:G:C5	3.01	0.49
1:A:1168:U:O4	1:A:1169:A:C2	2.65	0.49
1:A:1288:A:O5'	1:A:1288:A:H8	1.93	0.49
1:A:1348:U:H4'	9:I:120:ALA:O	2.12	0.49
1:A:1366:C:C4	1:A:1367:C:C5	3.00	0.49
1:A:1426:G:C4	1:A:1475:G:C2	3.01	0.49
1:A:1439:G:H1	1:A:1463:U:H1'	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1473:G:H3'	1:A:1474:U:C6	2.47	0.49
1:A:1477:U:C4	1:A:1478:U:C5	3.00	0.49
2:B:67:LEU:HD22	2:B:91:VAL:HG22	1.94	0.49
3:C:137:VAL:HB	3:C:167:TYR:CE2	2.47	0.49
5:E:59:ILE:O	5:E:62:ALA:HB3	2.12	0.49
7:G:11:ILE:HG23	7:G:27:ASN:HD21	1.78	0.49
7:G:36:SER:HA	9:I:42:THR:CG2	2.43	0.49
12:L:9:LYS:H	12:L:9:LYS:HD2	1.77	0.49
16:P:75:ILE:HG23	16:P:81:ALA:HB3	1.95	0.49
17:Q:11:VAL:CG2	17:Q:53:GLY:H	2.23	0.49
22:W:143:ARG:HA	22:W:332:ILE:HD11	1.94	0.49
1:A:23:C:C2	1:A:24:U:C6	3.00	0.49
1:A:51:A:C2	1:A:116:A:C4	3.01	0.49
1:A:66:A:H2	1:A:103:U:H3	1.59	0.49
1:A:130:A:C8	1:A:130:A:O5'	2.65	0.49
1:A:144:G:N1	1:A:145:G:C4	2.81	0.49
1:A:156:C:C4	1:A:157:U:C5	3.00	0.49
1:A:159:G:C2	1:A:161:A:OP2	2.65	0.49
1:A:258:G:C8	1:A:258:G:O5'	2.65	0.49
1:A:434:U:C6	1:A:434:U:O5'	2.66	0.49
1:A:439:U:C4	1:A:440:C:C2	3.01	0.49
1:A:533:A:C2	1:A:536:C:C5	3.01	0.49
1:A:577:G:C5	1:A:578:C:C5	3.01	0.49
1:A:594:U:C6	1:A:594:U:O5'	2.66	0.49
1:A:597:G:N2	8:H:83:ARG:HH12	2.08	0.49
1:A:639:G:H3'	1:A:640:A:H8	1.78	0.49
1:A:642:A:H1'	8:H:108:GLY:H	1.77	0.49
1:A:691:G:N7	11:K:56:LYS:HE2	2.27	0.49
1:A:748:G:H1	15:O:21:THR:HB	1.77	0.49
1:A:749:A:C6	1:A:750:C:C4	3.00	0.49
1:A:751:U:H5'	15:O:17:ASP:CG	2.38	0.49
1:A:760:G:N1	1:A:761:G:H1'	2.28	0.49
1:A:846:G:N2	1:A:847:G:C4	2.81	0.49
1:A:850:U:C2	1:A:851:G:C8	3.00	0.49
1:A:857:C:C2	1:A:858:G:H8	2.30	0.49
1:A:878:A:O4'	8:H:3:GLN:HB2	2.12	0.49
1:A:892:A:C6	1:A:893:C:C5	3.00	0.49
1:A:935:A:H2'	1:A:936:C:H6	1.76	0.49
1:A:1075:U:N3	1:A:1076:U:C2	2.80	0.49
1:A:1091:U:H3'	1:A:1093:A:OP2	2.13	0.49
1:A:1098:C:O2	1:A:1098:C:H2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1120:C:C6	1:A:1120:C:H3'	2.48	0.49
1:A:1146:A:H3'	1:A:1147:C:C6	2.47	0.49
1:A:1161:C:C6	1:A:1161:C:C3'	2.94	0.49
1:A:1228:C:C6	1:A:1228:C:C3'	2.95	0.49
1:A:1231:G:C5'	9:I:129:ARG:H	2.26	0.49
1:A:1406:U:O4	1:A:1496:C:C2	2.65	0.49
1:A:1432:G:C2	1:A:1467:C:C4	3.01	0.49
1:A:1495:U:C5	1:A:1495:U:OP2	2.65	0.49
1:A:1503:A:C5	1:A:1532:U:O4'	2.66	0.49
1:A:1528:U:C6	21:U:42:THR:CA	2.93	0.49
1:A:1532:U:C6	1:A:1534:A:N3	2.81	0.49
4:D:129:VAL:HG12	4:D:134:TYR:CG	2.48	0.49
13:M:104:ASN:HA	13:M:106:ARG:HG2	1.93	0.49
16:P:74:LEU:HD23	16:P:77:GLU:OE1	2.11	0.49
22:W:296:LEU:HB3	22:W:311:ALA:HB1	1.93	0.49
22:W:312:ILE:H	22:W:312:ILE:HD12	1.76	0.49
1:A:11:G:C6	1:A:12:U:N3	2.81	0.49
1:A:22:G:N3	1:A:23:C:C6	2.81	0.49
1:A:36:C:N4	1:A:37:U:C4	2.81	0.49
1:A:141:G:C8	1:A:141:G:C4'	2.95	0.49
1:A:192:A:C6	1:A:193:C:C5	3.01	0.49
1:A:213:G:C8	1:A:214:C:C6	3.01	0.49
1:A:242:G:C2	1:A:285:C:C2	3.01	0.49
1:A:257:G:H2'	1:A:258:G:H8	1.75	0.49
1:A:301:G:H4'	1:A:564:C:N3	2.27	0.49
1:A:323:U:O4	1:A:324:G:C2	2.66	0.49
1:A:330:C:H42	1:A:354:G:H1'	1.77	0.49
1:A:377:G:C2	1:A:378:G:C4	3.00	0.49
1:A:404:G:H4'	1:A:439:U:H3	1.78	0.49
1:A:409:U:C2	1:A:410:G:C5	3.01	0.49
1:A:413:G:H4'	1:A:428:G:N2	2.28	0.49
1:A:441:A:C8	1:A:441:A:OP2	2.65	0.49
1:A:454:G:H22	1:A:479:U:C1'	2.25	0.49
1:A:475:C:H3'	1:A:476:U:C5	2.47	0.49
1:A:528:C:C6	1:A:528:C:C5'	2.92	0.49
1:A:553:A:H1'	12:L:27:PRO:HA	1.95	0.49
1:A:560:A:C8	1:A:566:G:N3	2.81	0.49
1:A:615:G:C6	1:A:616:G:C5	3.00	0.49
1:A:669:G:H2'	1:A:670:G:O4'	2.13	0.49
1:A:690:G:H2'	1:A:691:G:O4'	2.12	0.49
1:A:693:G:O6	1:A:694:A:C6	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:719:C:OP1	1:A:720:C:C4	2.65	0.49
1:A:740:U:C4'	15:O:41:HIS:CE1	2.96	0.49
1:A:838:G:N3	1:A:839:C:C6	2.81	0.49
1:A:947:G:H4'	1:A:1332:A:N7	2.28	0.49
1:A:1042:A:H2'	1:A:1043:G:C8	2.47	0.49
1:A:1066:C:N4	1:A:1067:A:C2	2.80	0.49
1:A:1116:U:C2	1:A:1185:G:C2	3.01	0.49
1:A:1129:C:H2'	1:A:1139:G:N7	2.28	0.49
1:A:1140:C:N3	1:A:1141:C:C5	2.81	0.49
1:A:1179:A:C2	1:A:1180:A:N9	2.80	0.49
1:A:1204:A:C4	1:A:1205:U:H6	2.29	0.49
1:A:1228:C:H6	1:A:1228:C:H5'	1.76	0.49
1:A:1263:C:H42	1:A:1273:C:H42	1.61	0.49
1:A:1269:A:C8	1:A:1270:G:C1'	2.96	0.49
1:A:1288:A:H3'	1:A:1288:A:H8	1.72	0.49
1:A:1294:G:C5	1:A:1295:U:C6	3.00	0.49
1:A:1299:A:H2'	1:A:1299:A:N3	2.28	0.49
1:A:1306:A:N7	1:A:1332:A:C2	2.81	0.49
1:A:1352:C:H2'	1:A:1353:G:C1'	2.43	0.49
1:A:1383:C:C2	1:A:1384:C:C6	3.00	0.49
1:A:1431:A:C2	1:A:1468:A:OP2	2.66	0.49
1:A:1439:G:C6	1:A:1440:U:N1	2.81	0.49
1:A:1494:G:N1	1:A:1495:U:C6	2.81	0.49
2:B:23:ASN:HB2	2:B:188:THR:HB	1.93	0.49
3:C:22:PHE:N	10:J:94:ALA:HB1	2.26	0.49
3:C:36:PHE:CG	3:C:39:ARG:HD2	2.47	0.49
3:C:181:ILE:HG23	3:C:200:TRP:CD1	2.47	0.49
4:D:98:ASP:HA	4:D:132:ALA:HB1	1.95	0.49
5:E:137:ARG:HB2	5:E:137:ARG:HH11	1.78	0.49
9:I:20:ILE:HG23	9:I:60:LEU:HD13	1.95	0.49
1:A:45:G:N2	1:A:398:U:C4	2.81	0.49
1:A:101:A:C5	1:A:102:G:N7	2.81	0.49
1:A:189:A:C5	1:A:190:A:C8	3.01	0.49
1:A:191:G:C6	1:A:192:A:C6	3.01	0.49
1:A:217:C:C2	1:A:218:U:C6	3.01	0.49
1:A:232:G:H2'	1:A:232:G:N3	2.27	0.49
1:A:251:G:C2	1:A:253:A:C8	3.01	0.49
1:A:302:G:C5	1:A:303:A:N7	2.80	0.49
1:A:360:G:H2'	1:A:361:G:C8	2.48	0.49
1:A:374:A:H4'	1:A:452:A:N6	2.28	0.49
1:A:376:G:C6	1:A:377:G:C6	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:419:C:H2'	1:A:420:U:C6	2.47	0.49
1:A:459:A:N6	1:A:472:U:H3	2.09	0.49
1:A:522:C:C1'	1:A:536:C:H4'	2.42	0.49
1:A:727:G:N2	1:A:729:A:C8	2.80	0.49
1:A:739:C:C6	1:A:739:C:H3'	2.48	0.49
1:A:780:A:C8	1:A:780:A:C5'	2.96	0.49
1:A:781:A:C2	1:A:802:A:C2	3.01	0.49
1:A:821:G:C6	1:A:880:C:N3	2.81	0.49
1:A:864:A:C5	1:A:865:A:C6	3.00	0.49
1:A:890:G:C2	1:A:906:A:N7	2.81	0.49
1:A:895:G:N7	1:A:896:C:C5	2.81	0.49
1:A:905:U:C6	1:A:906:A:N7	2.80	0.49
1:A:921:U:C6	1:A:921:U:H3'	2.48	0.49
1:A:937:A:C2'	1:A:1378:C:H42	2.26	0.49
1:A:993:G:C2	1:A:1046:A:C4	3.01	0.49
1:A:1014:A:C2	1:A:1015:G:C2	3.01	0.49
1:A:1068:G:N1	1:A:1108:G:C4	2.80	0.49
1:A:1075:U:C4	1:A:1076:U:C6	3.01	0.49
1:A:1084:G:C8	1:A:1085:U:C5	3.01	0.49
1:A:1129:C:H2'	1:A:1139:G:C5	2.48	0.49
1:A:1133:G:N1	1:A:1134:G:C5	2.81	0.49
1:A:1158:C:C4	1:A:1160:G:C4	3.01	0.49
1:A:1237:C:H3'	1:A:1336:C:H41	1.78	0.49
1:A:1409:C:O2'	1:A:1410:A:H5'	2.12	0.49
1:A:1435:G:H2'	1:A:1436:U:O4'	2.11	0.49
1:A:1438:G:C2	1:A:1464:U:H1'	2.48	0.49
1:A:1469:C:C5	1:A:1470:U:C6	3.00	0.49
1:A:1501:C:C5	1:A:1504:G:C1'	2.96	0.49
6:F:28:ALA:O	6:F:32:ALA:HB3	2.11	0.49
7:G:8:GLN:N	7:G:8:GLN:HE21	2.10	0.49
10:J:84:VAL:HA	10:J:87:LEU:HD12	1.93	0.49
12:L:7:VAL:HG13	17:Q:30:HIS:CD2	2.47	0.49
15:O:14:PHE:HA	15:O:83:ARG:HD2	1.95	0.49
1:A:2:A:N6	1:A:3:A:C2	2.81	0.49
1:A:39:G:C2	1:A:40:C:H1'	2.48	0.49
1:A:78:A:N6	1:A:90:C:C4	2.81	0.49
1:A:140:U:C4	1:A:141:G:N7	2.81	0.49
1:A:161:A:C2'	1:A:162:A:H5'	2.42	0.49
1:A:171:A:C6	1:A:172:A:N1	2.81	0.49
1:A:182:A:OP2	1:A:193:C:H5	1.96	0.49
1:A:262:A:H4'	20:T:69:ASN:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:266:G:O4'	1:A:268:U:C5	2.66	0.49
1:A:348:G:H2'	1:A:349:A:O4'	2.12	0.49
1:A:373:A:N7	1:A:482:A:C2	2.81	0.49
1:A:374:A:C5	1:A:375:U:C5	3.01	0.49
1:A:475:C:C2'	1:A:476:U:H6	2.26	0.49
1:A:542:G:C2	1:A:543:U:C6	3.00	0.49
1:A:573:A:H3'	1:A:573:A:C8	2.48	0.49
1:A:577:G:C6	1:A:578:C:C4	3.00	0.49
1:A:684:U:O5'	1:A:684:U:H6	1.96	0.49
1:A:722:G:N1	1:A:724:G:C6	2.81	0.49
1:A:727:G:C4	1:A:731:G:N1	2.81	0.49
1:A:838:G:C5	1:A:849:G:C5	3.00	0.49
1:A:856:C:C2	1:A:857:C:C6	3.00	0.49
1:A:1004:A:H5"	1:A:1024:G:N2	2.27	0.49
1:A:1039:G:C5	1:A:1040:U:C4	3.01	0.49
1:A:1054:C:C5	1:A:1196:A:C4	3.00	0.49
1:A:1056:U:C6	1:A:1056:U:C5'	2.93	0.49
1:A:1064:G:C4	1:A:1066:C:C4	3.00	0.49
1:A:1086:U:H5"	1:A:1086:U:H6	1.78	0.49
1:A:1126:U:H3'	1:A:1127:G:C8	2.48	0.49
1:A:1128:C:O2	1:A:1145:A:C2	2.66	0.49
1:A:1144:G:N3	1:A:1145:A:H1'	2.27	0.49
1:A:1170:A:C6	1:A:1171:A:N3	2.80	0.49
1:A:1224:U:C2'	19:S:77:ARG:HH22	2.25	0.49
1:A:1288:A:N6	1:A:1289:A:N6	2.60	0.49
1:A:1310:G:N1	1:A:1311:A:C5	2.80	0.49
1:A:1343:G:C4	1:A:1344:C:C6	3.00	0.49
1:A:1364:U:H3'	1:A:1365:G:C5'	2.43	0.49
1:A:1371:G:N7	9:I:110:VAL:HG11	2.28	0.49
2:B:47:PRO:O	2:B:51:GLU:HG2	2.13	0.49
3:C:139:ASN:HA	3:C:142:ARG:HB2	1.95	0.49
7:G:45:ALA:CB	7:G:119:LEU:HB3	2.42	0.49
11:K:62:ALA:CB	11:K:91:GLY:CA	2.91	0.49
12:L:25:ALA:H	12:L:29:LYS:HZ1	1.59	0.49
15:O:29:ALA:HA	15:O:84:LEU:HD21	1.95	0.49
20:T:82:ILE:C	20:T:86:ALA:HB3	2.38	0.49
1:A:19:A:C4	1:A:917:G:C6	3.01	0.49
1:A:39:G:C4	1:A:498:A:C2	3.01	0.49
1:A:64:G:N2	1:A:69:G:C5	2.80	0.49
1:A:76:G:C2	1:A:77:A:C5	3.01	0.49
1:A:107:G:C5'	1:A:134:G:H21	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:119:A:H4'	1:A:120:A:O5'	2.12	0.49
1:A:144:G:N7	1:A:196:A:C8	2.81	0.49
1:A:161:A:C5	1:A:162:A:N7	2.81	0.49
1:A:165:G:C5	1:A:166:U:C6	3.01	0.49
1:A:165:G:C4	1:A:166:U:C6	3.01	0.49
1:A:215:C:N3	1:A:216:U:C2	2.81	0.49
1:A:216:U:C5'	1:A:464:U:O3'	2.60	0.49
1:A:251:G:C6	1:A:252:U:C4	3.00	0.49
1:A:275:G:N2	1:A:276:G:H1'	2.28	0.49
1:A:347:G:C5'	1:A:347:G:H8	2.26	0.49
1:A:410:G:C5	1:A:429:U:O2'	2.66	0.49
1:A:500:G:C8	1:A:500:G:C5'	2.95	0.49
1:A:592:G:C5	1:A:648:A:N1	2.81	0.49
1:A:615:G:C4	1:A:626:G:C2	3.01	0.49
1:A:651:C:C6	1:A:651:C:O5'	2.66	0.49
1:A:745:G:C4'	1:A:851:G:H21	2.26	0.49
1:A:761:G:C6	1:A:762:U:C2	3.01	0.49
1:A:818:G:C2	1:A:820:U:C5	3.01	0.49
1:A:903:G:C2	1:A:904:U:N1	2.81	0.49
1:A:919:A:N1	1:A:920:U:C4	2.81	0.49
1:A:929:G:C6	1:A:930:C:C5	3.01	0.49
1:A:938:A:C6	1:A:939:G:C5	3.01	0.49
1:A:979:C:H2'	1:A:980:C:H5'	1.94	0.49
1:A:987:G:C2	1:A:1219:A:C2	3.00	0.49
1:A:1011:C:C5	14:N:50:LEU:CD2	2.95	0.49
1:A:1048:G:H1'	1:A:1215:G:H4'	1.94	0.49
1:A:1073:U:C2	1:A:1074:G:N7	2.81	0.49
1:A:1090:U:H2'	1:A:1091:U:C5	2.46	0.49
1:A:1143:G:N2	1:A:1144:G:H1'	2.28	0.49
1:A:1158:C:H5'	1:A:1184:G:OP2	2.12	0.49
1:A:1162:C:C4	1:A:1175:G:C5	3.01	0.49
1:A:1179:A:H2'	1:A:1180:A:O4'	2.13	0.49
1:A:1198:G:N7	1:A:1199:U:C5	2.81	0.49
1:A:1200:C:H1'	1:A:1204:A:N6	2.27	0.49
1:A:1242:G:N3	1:A:1302:C:C6	2.81	0.49
1:A:1269:A:H4'	1:A:1326:U:H5'	1.94	0.49
1:A:1305:G:N2	1:A:1331:G:H2'	2.28	0.49
1:A:1338:G:H2'	1:A:1339:A:O4'	2.12	0.49
1:A:1343:G:C4	1:A:1344:C:C5	3.00	0.49
1:A:1349:A:N3	1:A:1374:A:C4	2.80	0.49
1:A:1415:G:C2	1:A:1416:G:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:20:THR:HG23	3:C:57:GLU:HG2	1.94	0.49
6:F:52:ASN:H	18:R:73:HIS:CB	2.26	0.49
8:H:63:LYS:H	8:H:70:VAL:HG11	1.78	0.49
10:J:28:THR:HB	10:J:86:ALA:CB	2.43	0.49
17:Q:20:ILE:HD12	17:Q:50:ASN:CG	2.38	0.49
1:A:11:G:N2	1:A:12:U:H1'	2.27	0.48
1:A:39:G:C6	1:A:404:G:N3	2.81	0.48
1:A:44:A:N1	1:A:45:G:C4	2.81	0.48
1:A:64:G:H1'	1:A:67:C:OP2	2.13	0.48
1:A:67:C:H2'	1:A:68:G:N7	2.28	0.48
1:A:68:G:C8	1:A:69:G:H1'	2.48	0.48
1:A:79:G:C2'	1:A:80:A:C8	2.93	0.48
1:A:107:G:H2'	1:A:108:G:H4'	1.94	0.48
1:A:208:U:C5	1:A:210:C:C2	3.01	0.48
1:A:255:G:C2	1:A:256:U:H1'	2.48	0.48
1:A:256:U:H2'	1:A:257:G:C8	2.47	0.48
1:A:312:C:C2	1:A:313:A:C8	3.01	0.48
1:A:324:G:H2'	1:A:326:G:N7	2.28	0.48
1:A:327:A:C5	1:A:329:A:C6	3.01	0.48
1:A:379:C:H2'	1:A:380:G:O4'	2.12	0.48
1:A:470:C:C5	1:A:471:U:H5	2.31	0.48
1:A:539:A:C4	1:A:540:G:C8	3.00	0.48
1:A:563:A:N3	1:A:563:A:H2'	2.28	0.48
1:A:654:G:C3'	1:A:655:A:H8	2.26	0.48
1:A:680:C:C6	1:A:680:C:H3'	2.48	0.48
1:A:719:C:H3'	1:A:719:C:C6	2.48	0.48
1:A:771:G:H1'	1:A:809:G:H22	1.78	0.48
1:A:780:A:N6	1:A:800:G:H3'	2.27	0.48
1:A:809:G:C2	1:A:810:C:C1'	2.95	0.48
1:A:830:G:C4'	2:B:24:PRO:HA	2.43	0.48
1:A:866:C:C5	1:A:866:C:OP2	2.66	0.48
1:A:888:G:H2'	1:A:908:A:N6	2.28	0.48
1:A:923:A:C5	1:A:924:C:C5	3.01	0.48
1:A:940:C:C2	1:A:941:G:C8	3.00	0.48
1:A:947:G:H5'	13:M:111:PRO:HB3	1.93	0.48
1:A:1201:A:H4'	1:A:1202:U:O5'	2.13	0.48
1:A:1216:A:H5"	14:N:4:SER:HB3	1.94	0.48
1:A:1277:C:C1'	1:A:1282:C:H1'	2.43	0.48
1:A:1294:G:C6	1:A:1295:U:C5	3.00	0.48
1:A:1296:C:H3'	1:A:1297:G:C8	2.48	0.48
1:A:1345:U:O2	1:A:1377:A:C6	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1356:G:N2	1:A:1367:C:C2	2.81	0.48
1:A:1379:G:H3'	7:G:5:VAL:HG11	1.94	0.48
1:A:1428:A:C5	1:A:1473:G:N1	2.81	0.48
1:A:1433:A:C4	1:A:1434:A:C8	3.01	0.48
1:A:1434:A:C8	1:A:1434:A:O5'	2.66	0.48
1:A:1438:G:N3	1:A:1439:G:C8	2.82	0.48
1:A:1439:G:C2	1:A:1463:U:H1'	2.48	0.48
1:A:1500:A:H5"	1:A:1508:A:OP1	2.12	0.48
1:A:1502:A:C8	1:A:1504:G:C4	3.01	0.48
5:E:36:THR:O	5:E:47:PHE:HA	2.13	0.48
8:H:40:LYS:HZ3	8:H:47:ASP:HB2	1.77	0.48
10:J:19:ASP:CB	10:J:72:ARG:HH22	2.25	0.48
13:M:9:PRO:CG	13:M:18:LEU:HD11	2.43	0.48
16:P:22:ALA:HB1	16:P:31:ARG:O	2.13	0.48
17:Q:64:ARG:HE	17:Q:66:LEU:HA	1.78	0.48
1:A:47:C:H5"	1:A:48:C:C5	2.47	0.48
1:A:124:C:H2'	1:A:125:U:C5	2.47	0.48
1:A:147:G:H21	1:A:1447:A:C2'	2.26	0.48
1:A:257:G:C8	1:A:257:G:O5'	2.66	0.48
1:A:271:C:C2	1:A:272:C:C6	3.00	0.48
1:A:425:G:C6	1:A:426:U:N3	2.81	0.48
1:A:464:U:O2	1:A:466:A:C8	2.66	0.48
1:A:522:C:H1'	1:A:536:C:H4'	1.94	0.48
1:A:557:G:C6	1:A:558:G:N1	2.81	0.48
1:A:558:G:C8	1:A:559:A:N3	2.81	0.48
1:A:563:A:OP1	12:L:13:ARG:HA	2.13	0.48
1:A:580:C:N4	1:A:581:G:C6	2.81	0.48
1:A:594:U:N3	1:A:595:A:C6	2.81	0.48
1:A:670:G:C8	1:A:670:G:H3'	2.48	0.48
1:A:677:U:C6	1:A:677:U:O5'	2.66	0.48
1:A:678:U:O2	1:A:679:C:C6	2.66	0.48
1:A:687:A:N1	1:A:700:G:O2'	2.45	0.48
1:A:697:U:C6	1:A:697:U:O5'	2.66	0.48
1:A:789:U:C2	1:A:791:G:OP2	2.67	0.48
1:A:849:G:C6	1:A:850:U:C2	3.01	0.48
1:A:872:A:H1'	1:A:873:A:H3'	1.95	0.48
1:A:1159:U:OP2	1:A:1184:G:C5'	2.61	0.48
1:A:1181:G:O2'	1:A:1182:G:C5	2.66	0.48
1:A:1187:G:C8	1:A:1187:G:P	3.06	0.48
1:A:1229:A:N1	1:A:1230:C:C2	2.81	0.48
1:A:1303:C:H2'	1:A:1304:G:C5'	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1346:A:C8	1:A:1348:U:N3	2.81	0.48
1:A:1394:A:C5'	1:A:1395:C:C6	2.96	0.48
1:A:1419:G:N1	1:A:1420:U:C6	2.81	0.48
1:A:1423:G:C5	1:A:1424:U:C5	3.01	0.48
1:A:1484:C:H3'	1:A:1485:U:C5	2.48	0.48
3:C:19:SER:H	14:N:91:GLU:C	2.21	0.48
3:C:32:LEU:HA	3:C:35:ASP:HB3	1.95	0.48
4:D:53:GLN:CB	4:D:202:LEU:HD13	2.43	0.48
7:G:45:ALA:CB	7:G:123:LEU:HD12	2.43	0.48
14:N:15:LEU:HG	14:N:19:TYR:CD2	2.47	0.48
20:T:38:ILE:HG21	20:T:81:GLN:HB3	1.94	0.48
1:A:3:A:C5'	1:A:614:C:H5'	2.43	0.48
1:A:50:A:H1'	1:A:52:C:N1	2.28	0.48
1:A:51:A:N1	1:A:116:A:C4	2.81	0.48
1:A:115:G:C2	1:A:289:G:C5	3.01	0.48
1:A:117:G:N7	1:A:118:U:C4	2.82	0.48
1:A:117:G:H3'	1:A:118:U:C6	2.48	0.48
1:A:126:G:H5'	1:A:633:G:N2	2.29	0.48
1:A:144:G:C8	1:A:144:G:H3'	2.49	0.48
1:A:162:A:H4'	1:A:348:G:O3'	2.13	0.48
1:A:189:A:H2'	1:A:190:A:H5'	1.94	0.48
1:A:230:G:C4	1:A:231:U:C6	3.01	0.48
1:A:246:A:C6	1:A:282:A:N7	2.80	0.48
1:A:266:G:C4	1:A:268:U:H5	2.31	0.48
1:A:297:G:N2	1:A:300:A:OP2	2.46	0.48
1:A:299:G:C2	1:A:300:A:C4	3.01	0.48
1:A:303:A:H2'	1:A:304:U:O4'	2.13	0.48
1:A:319:G:H4'	1:A:1468:A:H5'	1.94	0.48
1:A:329:A:N7	1:A:332:G:C6	2.81	0.48
1:A:356:A:C2	1:A:368:U:H1'	2.48	0.48
1:A:391:G:H2'	1:A:392:C:C6	2.48	0.48
1:A:470:C:C6	1:A:470:C:H3'	2.49	0.48
1:A:568:G:C8	1:A:568:G:C5'	2.96	0.48
1:A:577:G:C2	1:A:578:C:N1	2.82	0.48
1:A:606:G:N7	1:A:631:C:C6	2.81	0.48
1:A:606:G:H5"	1:A:607:A:H5'	1.95	0.48
1:A:613:C:C2	1:A:614:C:N1	2.81	0.48
1:A:617:G:O4'	16:P:48:GLU:HG3	2.12	0.48
1:A:652:U:C2'	1:A:752:G:C2	2.92	0.48
1:A:656:G:C4	1:A:657:U:C5	3.00	0.48
1:A:716:A:C2	1:A:717:U:N3	2.80	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:717:U:C6	1:A:717:U:OP2	2.66	0.48
1:A:740:U:H4'	15:O:41:HIS:CE1	2.48	0.48
1:A:766:A:C6	1:A:767:A:C4	3.00	0.48
1:A:773:G:N2	1:A:774:G:H1'	2.29	0.48
1:A:792:A:H5'	1:A:793:U:C6	2.49	0.48
1:A:862:C:C4	1:A:863:U:C4	3.00	0.48
1:A:877:G:C2	1:A:878:A:C5	3.01	0.48
1:A:928:G:C2	1:A:929:G:C4	3.00	0.48
1:A:960:U:N3	1:A:1225:A:H1'	2.28	0.48
1:A:1010:U:N1	1:A:1020:G:C2	2.82	0.48
1:A:1052:U:O2	1:A:1207:G:C2	2.66	0.48
1:A:1074:G:H3'	1:A:1075:U:C6	2.49	0.48
1:A:1118:U:O5'	1:A:1118:U:H6	1.95	0.48
1:A:1123:U:O2	1:A:1124:G:H1'	2.12	0.48
1:A:1127:G:H1'	1:A:1280:A:N6	2.27	0.48
1:A:1129:C:C2	1:A:1139:G:C5	3.01	0.48
1:A:1153:G:N1	1:A:1154:G:C8	2.82	0.48
1:A:1239:A:C1'	1:A:1241:G:C8	2.96	0.48
1:A:1253:G:N3	1:A:1253:G:H2'	2.28	0.48
1:A:1272:G:C6	1:A:1273:C:C4	3.01	0.48
1:A:1277:C:O2'	1:A:1282:C:C5	2.66	0.48
1:A:1288:A:C6	1:A:1289:A:C6	3.00	0.48
1:A:1303:C:C6	1:A:1303:C:O5'	2.65	0.48
1:A:1433:A:C6	1:A:1468:A:C1'	2.96	0.48
1:A:1466:C:C5	1:A:1467:C:C4	3.01	0.48
2:B:23:ASN:HB3	2:B:30:ILE:HG13	1.95	0.48
2:B:31:PHE:CD1	2:B:38:HIS:CE1	3.01	0.48
2:B:165:ALA:O	2:B:172:ILE:HD12	2.13	0.48
3:C:49:ALA:HB1	3:C:75:VAL:HA	1.95	0.48
4:D:25:ARG:HD2	4:D:29:THR:HB	1.94	0.48
5:E:42:ASN:HA	5:E:73:VAL:HB	1.96	0.48
6:F:3:HIS:CG	6:F:4:TYR:N	2.81	0.48
11:K:43:TRP:CE3	11:K:44:ALA:HA	2.48	0.48
13:M:18:LEU:HD13	13:M:29:SER:HB3	1.94	0.48
15:O:78:THR:HA	15:O:81:ILE:CD1	2.43	0.48
17:Q:20:ILE:O	17:Q:44:HIS:HA	2.12	0.48
22:W:161:LYS:H	22:W:192:SER:H	1.61	0.48
1:A:11:G:N2	1:A:24:U:H1'	2.28	0.48
1:A:21:G:N2	1:A:22:G:C6	2.82	0.48
1:A:25:C:H5"	1:A:524:G:C2'	2.43	0.48
1:A:39:G:C5	1:A:40:C:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:59:A:C4	1:A:331:G:C2	3.01	0.48
1:A:74:A:C2	1:A:75:G:C5	3.02	0.48
1:A:77:A:N6	1:A:90:C:C6	2.81	0.48
1:A:78:A:C5	1:A:79:G:C6	3.01	0.48
1:A:107:G:O6	20:T:6:ALA:HA	2.13	0.48
1:A:109:A:C6	1:A:327:A:C5	3.01	0.48
1:A:114:U:H1'	1:A:353:A:N3	2.28	0.48
1:A:116:A:C5	1:A:117:G:C8	3.02	0.48
1:A:160:A:N1	1:A:346:G:C6	2.81	0.48
1:A:222:C:H42	1:A:223:A:H62	1.61	0.48
1:A:245:U:O2	1:A:284:C:C6	2.66	0.48
1:A:298:A:N3	1:A:299:G:H1'	2.29	0.48
1:A:445:G:C6	1:A:446:G:C8	3.02	0.48
1:A:446:G:C6	1:A:447:G:C4	3.02	0.48
1:A:453:G:H4'	16:P:73:ALA:HB2	1.94	0.48
1:A:455:G:C6	1:A:478:A:C2	3.01	0.48
1:A:473:U:C6	1:A:474:G:N7	2.81	0.48
1:A:560:A:C8	1:A:566:G:C4	3.01	0.48
1:A:579:A:N1	1:A:763:G:C5	2.82	0.48
1:A:581:G:H1'	1:A:761:G:H22	1.78	0.48
1:A:602:A:C8	1:A:602:A:H3'	2.48	0.48
1:A:622:A:H3'	1:A:623:C:H6	1.79	0.48
1:A:643:C:C4	1:A:644:U:C4	3.01	0.48
1:A:678:U:H1'	1:A:713:G:N2	2.28	0.48
1:A:794:A:H2'	1:A:795:C:H5'	1.95	0.48
1:A:874:G:C2	1:A:875:U:C6	3.01	0.48
1:A:932:C:H5"	7:G:2:ARG:HB2	1.96	0.48
1:A:933:G:C5	1:A:935:A:C4	3.01	0.48
1:A:999:C:H3'	1:A:999:C:C6	2.47	0.48
1:A:1003:G:C6	1:A:1005:A:OP1	2.66	0.48
1:A:1008:U:O2	1:A:1009:U:C6	2.66	0.48
1:A:1090:U:H5'	1:A:1170:A:N1	2.27	0.48
1:A:1118:U:C6	1:A:1119:C:C5	3.01	0.48
1:A:1134:G:C2	1:A:1135:U:O2	2.66	0.48
1:A:1165:U:C4	1:A:1166:G:C5	3.02	0.48
1:A:1183:U:H2'	2:B:131:LYS:HD3	1.94	0.48
1:A:1237:C:H5'	1:A:1303:C:H2'	1.95	0.48
1:A:1244:G:C6	1:A:1245:C:C5	3.02	0.48
1:A:1256:A:C4	1:A:1258:G:C2	3.01	0.48
1:A:1279:G:C8	1:A:1282:C:C4	3.02	0.48
1:A:1300:G:H1'	1:A:1303:C:N4	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1306:A:C4	1:A:1332:A:N3	2.81	0.48
1:A:1315:U:H1'	1:A:1323:G:N2	2.28	0.48
1:A:1327:C:C5	1:A:1328:C:C5	3.02	0.48
1:A:1402:C:C5	1:A:1403:C:C6	3.02	0.48
1:A:1410:A:N1	1:A:1491:G:C2	2.82	0.48
1:A:1416:G:C2	1:A:1417:G:H1'	2.49	0.48
1:A:1430:A:N3	1:A:1471:U:C2	2.82	0.48
2:B:103:TRP:HA	2:B:106:VAL:HB	1.95	0.48
3:C:119:ILE:HG12	3:C:133:MET:HA	1.96	0.48
6:F:34:GLY:HA2	6:F:65:GLU:O	2.13	0.48
16:P:25:ARG:HA	16:P:25:ARG:NE	2.28	0.48
1:A:52:C:C4	1:A:53:A:N7	2.81	0.48
1:A:66:A:C6	1:A:104:G:C6	3.01	0.48
1:A:106:C:N4	20:T:9:ARG:HA	2.27	0.48
1:A:107:G:C8	20:T:9:ARG:NH1	2.82	0.48
1:A:192:A:C2	1:A:193:C:C6	3.02	0.48
1:A:206:C:C6	1:A:206:C:O5'	2.66	0.48
1:A:217:C:C4'	1:A:463:U:C5	2.97	0.48
1:A:342:C:C4	1:A:343:U:N3	2.82	0.48
1:A:370:C:N3	1:A:371:A:C8	2.82	0.48
1:A:413:G:C4	1:A:426:U:OP1	2.67	0.48
1:A:419:C:C4	1:A:420:U:C4	3.01	0.48
1:A:437:U:N3	1:A:438:U:C5	2.81	0.48
1:A:465:A:C6	1:A:466:A:N6	2.82	0.48
1:A:512:U:C2	1:A:513:C:C5	3.02	0.48
1:A:577:G:N2	1:A:729:A:C2	2.81	0.48
1:A:617:G:C2	1:A:618:C:C6	3.02	0.48
1:A:623:C:C6	1:A:623:C:O5'	2.67	0.48
1:A:661:G:C2	1:A:662:U:H1'	2.48	0.48
1:A:667:G:N1	1:A:668:G:C5	2.81	0.48
1:A:759:A:C6	1:A:760:G:H1'	2.48	0.48
1:A:790:A:C5	1:A:791:G:C5	3.02	0.48
1:A:822:U:C4	1:A:823:C:C5	3.02	0.48
1:A:947:G:C5	1:A:948:C:C5	3.02	0.48
1:A:1004:A:H1'	1:A:1031:C:O2'	2.14	0.48
1:A:1007:U:O2	1:A:1023:U:H1'	2.13	0.48
1:A:1087:G:C6	1:A:1099:G:N3	2.82	0.48
1:A:1165:U:N3	1:A:1166:G:C4	2.82	0.48
1:A:1184:G:OP2	2:B:131:LYS:HG2	2.13	0.48
1:A:1187:G:C8	1:A:1187:G:OP2	2.66	0.48
1:A:1207:G:N1	1:A:1208:C:C2	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1223:C:H5	1:A:1322:C:H41	1.59	0.48
1:A:1228:C:O3'	13:M:114:PRO:HA	2.13	0.48
1:A:1252:A:C2	1:A:1355:G:H4'	2.47	0.48
1:A:1266:G:C4	1:A:1270:G:C6	3.02	0.48
1:A:1311:A:C2	1:A:1312:G:C8	3.00	0.48
1:A:1345:U:C4'	1:A:1375:A:H61	2.27	0.48
1:A:1371:G:H2'	1:A:1372:U:C6	2.49	0.48
1:A:1496:C:C2	1:A:1497:G:C5	3.01	0.48
1:A:1502:A:C5	1:A:1504:G:C2	3.01	0.48
1:A:1517:G:C6	1:A:1518:A:C5	3.01	0.48
2:B:63:LYS:HZ3	2:B:224:ARG:HB3	1.78	0.48
3:C:57:GLU:CD	10:J:94:ALA:HA	2.37	0.48
7:G:68:VAL:HG13	7:G:133:ALA:HB1	1.96	0.48
10:J:18:ILE:HD11	10:J:72:ARG:HG2	1.96	0.48
11:K:52:ARG:HA	11:K:56:LYS:CD	2.43	0.48
22:W:47:ARG:HG3	22:W:49:GLY:H	1.78	0.48
1:A:19:A:N1	1:A:20:U:C2	2.81	0.48
1:A:19:A:N3	1:A:917:G:C6	2.82	0.48
1:A:22:G:N2	1:A:23:C:H1'	2.28	0.48
1:A:24:U:O2	1:A:25:C:C6	2.67	0.48
1:A:111:G:C5'	16:P:26:ASN:HA	2.44	0.48
1:A:192:A:C6	1:A:193:C:N4	2.81	0.48
1:A:218:U:H4'	1:A:470:C:O4'	2.14	0.48
1:A:223:A:C4	1:A:224:U:C6	3.01	0.48
1:A:234:C:C2	1:A:235:C:C5	3.01	0.48
1:A:253:A:C6	1:A:254:G:C5	3.01	0.48
1:A:257:G:C6	1:A:258:G:C5	3.01	0.48
1:A:465:A:C2	1:A:466:A:C5	3.02	0.48
1:A:478:A:C2	1:A:479:U:N3	2.81	0.48
1:A:538:G:C8	1:A:538:G:O5'	2.65	0.48
1:A:554:A:C6	1:A:555:U:C4	3.01	0.48
1:A:584:G:C2	1:A:585:G:C4	3.02	0.48
1:A:585:G:C4	1:A:586:C:C6	3.02	0.48
1:A:585:G:H2'	1:A:586:C:O4'	2.14	0.48
1:A:653:U:H2'	1:A:654:G:C8	2.48	0.48
1:A:660:C:C2	1:A:746:A:N1	2.82	0.48
1:A:681:A:C5	1:A:710:G:N1	2.82	0.48
1:A:765:G:C5	1:A:812:G:C2	3.01	0.48
1:A:796:C:H3'	1:A:796:C:C6	2.49	0.48
1:A:830:G:N1	1:A:857:C:C2	2.81	0.48
1:A:927:G:H2'	1:A:928:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:988:G:C6	1:A:989:U:C5	3.01	0.48
1:A:1010:U:C2	1:A:1011:C:C6	3.01	0.48
1:A:1092:A:C4	1:A:1093:A:C4	3.02	0.48
1:A:1102:A:H2'	1:A:1103:C:C6	2.48	0.48
1:A:1115:U:N1	1:A:1186:G:N2	2.61	0.48
1:A:1142:G:C4	1:A:1143:G:C1'	2.96	0.48
1:A:1187:G:N2	1:A:1188:A:C8	2.82	0.48
1:A:1192:C:C4	1:A:1193:G:H1'	2.48	0.48
1:A:1250:A:C6	1:A:1251:A:C6	3.02	0.48
1:A:1315:U:C2	1:A:1323:G:N2	2.81	0.48
1:A:1447:A:OP2	1:A:1448:C:C6	2.66	0.48
1:A:1480:A:C6	1:A:1481:U:C5	3.02	0.48
1:A:1481:U:C5	1:A:1481:U:OP2	2.67	0.48
2:B:95:TRP:CE3	2:B:171:ALA:HA	2.49	0.48
2:B:162:VAL:CG2	2:B:184:ALA:HB2	2.44	0.48
3:C:9:ILE:HD12	14:N:97:LYS:HG2	1.95	0.48
5:E:77:ASN:HB2	5:E:79:THR:HB	1.96	0.48
5:E:114:LEU:HD22	5:E:119:VAL:HG23	1.94	0.48
7:G:115:MET:HB3	7:G:119:LEU:HD23	1.95	0.48
13:M:76:ILE:HG23	13:M:90:HIS:CE1	2.49	0.48
22:W:47:ARG:H	22:W:254:ARG:HG3	1.77	0.48
1:A:11:G:C6	1:A:12:U:C4	3.02	0.48
1:A:37:U:H4'	1:A:500:G:O3'	2.14	0.48
1:A:37:U:OP2	12:L:122:LYS:HA	2.14	0.48
1:A:39:G:C2	1:A:40:C:N1	2.81	0.48
1:A:52:C:C6	1:A:52:C:C3'	2.96	0.48
1:A:71:A:C5	1:A:72:A:N7	2.81	0.48
1:A:130:A:N7	1:A:264:C:H1'	2.28	0.48
1:A:186:C:C5	1:A:186:C:OP2	2.67	0.48
1:A:199:A:C8	1:A:199:A:H3'	2.49	0.48
1:A:208:U:H3	1:A:212:G:N2	2.11	0.48
1:A:215:C:C4	1:A:216:U:N3	2.81	0.48
1:A:257:G:C6	1:A:270:A:C6	3.01	0.48
1:A:282:A:C2	1:A:283:U:C6	3.00	0.48
1:A:321:A:H62	1:A:328:C:H1'	1.79	0.48
1:A:425:G:C5	1:A:426:U:C6	3.01	0.48
1:A:439:U:OP1	1:A:492:C:C5	2.66	0.48
1:A:454:G:N2	1:A:455:G:H1'	2.29	0.48
1:A:475:C:C6	1:A:476:U:H5	2.32	0.48
1:A:490:C:H2'	1:A:491:G:H8	1.78	0.48
1:A:502:A:C6	1:A:503:C:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:570:G:C2	1:A:571:U:C2	3.02	0.48
1:A:587:G:N1	1:A:755:G:C8	2.82	0.48
1:A:656:G:H21	1:A:657:U:H1'	1.79	0.48
1:A:693:G:H3'	1:A:694:A:H8	1.77	0.48
1:A:694:A:C6	1:A:695:A:C5	3.01	0.48
1:A:751:U:HO2'	15:O:24:THR:H	1.61	0.48
1:A:774:G:N3	1:A:775:G:C8	2.82	0.48
1:A:850:U:C5	1:A:850:U:OP2	2.67	0.48
1:A:922:G:C6	1:A:923:A:C5	3.02	0.48
1:A:927:G:C4	1:A:928:G:C8	3.02	0.48
1:A:933:G:C6	1:A:1385:G:C6	3.02	0.48
1:A:958:A:H61	19:S:55:GLN:HE22	1.60	0.48
1:A:995:C:H2'	1:A:996:A:H5'	1.95	0.48
1:A:1012:A:C2	1:A:1013:G:C4	3.01	0.48
1:A:1101:A:H1'	1:A:1102:A:O4'	2.14	0.48
1:A:1104:G:H3'	1:A:1105:A:C8	2.48	0.48
1:A:1121:U:H2'	1:A:1122:U:O4'	2.13	0.48
1:A:1164:G:H2'	1:A:1165:U:O4'	2.13	0.48
1:A:1222:G:H5"	1:A:1223:C:OP2	2.14	0.48
1:A:1239:A:C2	7:G:113:LYS:CB	2.96	0.48
1:A:1251:A:C2	1:A:1369:C:O2'	2.66	0.48
1:A:1261:A:C5	1:A:1262:C:C6	3.01	0.48
1:A:1270:G:N1	1:A:1271:A:C5	2.82	0.48
1:A:1283:U:H2'	1:A:1284:C:C5	2.49	0.48
1:A:1297:G:H1'	7:G:113:LYS:HB3	1.96	0.48
1:A:1316:G:C2	1:A:1319:A:C8	3.01	0.48
1:A:1332:A:C6	1:A:1333:A:C6	3.01	0.48
1:A:1356:G:C2	1:A:1357:A:C5	3.01	0.48
1:A:1367:C:H2'	1:A:1368:A:O4'	2.13	0.48
1:A:1418:A:C6	1:A:1483:A:C6	3.01	0.48
1:A:1445:U:O4	1:A:1455:G:C5'	2.62	0.48
1:A:1457:G:H4'	20:T:29:THR:HB	1.95	0.48
1:A:1486:G:H2'	1:A:1487:G:C8	2.48	0.48
2:B:94:ARG:HG2	2:B:167:HIS:CE1	2.49	0.48
3:C:62:SER:HA	3:C:97:PRO:HD2	1.96	0.48
6:F:29:ILE:HG21	6:F:64:VAL:CG1	2.43	0.48
10:J:20:GLN:HE22	10:J:93:ALA:HB1	1.79	0.48
12:L:34:THR:H	12:L:54:VAL:HA	1.78	0.48
12:L:77:SER:HB3	12:L:79:ILE:HG23	1.95	0.48
1:A:14:U:N3	1:A:16:A:H3'	2.29	0.48
1:A:42:G:N2	1:A:622:A:H1'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:61:G:H4'	1:A:386:C:O2'	2.14	0.48
1:A:70:U:C6	1:A:94:G:H1'	2.49	0.48
1:A:90:C:C2'	1:A:92:U:C4	2.95	0.48
1:A:166:U:C2	1:A:167:A:C8	3.01	0.48
1:A:197:A:C2	1:A:198:G:N9	2.82	0.48
1:A:202:G:H1	1:A:215:C:N4	2.11	0.48
1:A:203:G:H4'	1:A:465:A:N1	2.29	0.48
1:A:292:G:OP2	1:A:293:G:C4	2.67	0.48
1:A:294:U:C2	1:A:295:C:C6	3.02	0.48
1:A:329:A:C8	1:A:329:A:H5"	2.49	0.48
1:A:367:U:C2	1:A:394:G:C4	3.02	0.48
1:A:402:G:H5'	4:D:70:GLN:HG2	1.96	0.48
1:A:411:A:C5	1:A:429:U:C6	3.01	0.48
1:A:431:A:C5	1:A:432:A:C5	3.02	0.48
1:A:455:G:C6	1:A:456:A:C5	3.02	0.48
1:A:500:G:N1	1:A:546:A:C2	2.82	0.48
1:A:514:C:H41	1:A:533:A:C2'	2.26	0.48
1:A:563:A:H4'	1:A:564:C:H5	1.78	0.48
1:A:583:A:H1'	1:A:759:A:N6	2.29	0.48
1:A:593:U:C6	1:A:593:U:OP2	2.67	0.48
1:A:639:G:C8	1:A:639:G:C5'	2.97	0.48
1:A:642:A:C1'	8:H:108:GLY:H	2.26	0.48
1:A:676:A:C2	1:A:715:A:H2	2.32	0.48
1:A:722:G:C2	1:A:724:G:C5	3.02	0.48
1:A:728:A:C8	15:O:53:ARG:HG2	2.48	0.48
1:A:770:C:N3	1:A:771:G:N7	2.61	0.48
1:A:791:G:C8	1:A:791:G:H3'	2.48	0.48
1:A:850:U:O5'	1:A:850:U:H6	1.97	0.48
1:A:858:G:C2	1:A:870:U:OP2	2.67	0.48
1:A:886:G:C5	1:A:887:G:C8	3.02	0.48
1:A:904:U:C2	1:A:905:U:N1	2.81	0.48
1:A:955:U:C6	1:A:955:U:O5'	2.66	0.48
1:A:959:A:C8	1:A:959:A:C3'	2.97	0.48
1:A:1053:G:N7	1:A:1199:U:H3'	2.29	0.48
1:A:1062:U:C2'	1:A:1194:U:H3	2.26	0.48
1:A:1099:G:H3'	1:A:1100:C:C6	2.49	0.48
1:A:1145:A:C2'	1:A:1145:A:N3	2.75	0.48
1:A:1148:U:C5	1:A:1149:C:C4	3.02	0.48
1:A:1171:A:N1	1:A:1172:C:C2	2.82	0.48
1:A:1176:A:N6	1:A:1182:G:H1	2.12	0.48
1:A:1179:A:C2	1:A:1180:A:H1'	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1186:G:C2'	1:A:1187:G:H8	2.20	0.48
1:A:1246:A:C6	1:A:1247:U:C4	3.01	0.48
1:A:1267:C:N4	1:A:1268:G:C2	2.82	0.48
1:A:1306:A:C6	1:A:1307:U:C6	3.01	0.48
1:A:1342:C:H2'	1:A:1343:G:C8	2.47	0.48
1:A:1355:G:N3	1:A:1355:G:C2'	2.75	0.48
1:A:1409:C:O5'	1:A:1409:C:H6	1.95	0.48
1:A:1421:G:H1'	1:A:1480:A:N1	2.28	0.48
1:A:1443:C:N3	1:A:1460:C:O2	2.47	0.48
1:A:1447:A:OP1	1:A:1449:C:C5	2.66	0.48
1:A:1460:C:C4	1:A:1461:G:C5	3.01	0.48
1:A:1480:A:C5	1:A:1481:U:C6	3.02	0.48
1:A:1484:C:H3'	1:A:1485:U:C6	2.48	0.48
2:B:56:LEU:CD1	2:B:216:VAL:HG22	2.43	0.48
2:B:94:ARG:HG3	2:B:95:TRP:H	1.79	0.48
4:D:125:ASN:ND2	4:D:141:VAL:H	2.12	0.48
6:F:52:ASN:N	18:R:73:HIS:HB3	2.24	0.48
12:L:29:LYS:HE3	12:L:94:TYR:CE2	2.49	0.48
15:O:24:THR:HG1	15:O:69:LEU:HD21	1.79	0.48
17:Q:45:VAL:HG22	17:Q:46:HIS:N	2.29	0.48
20:T:38:ILE:HA	20:T:46:ALA:CB	2.42	0.48
1:A:98:A:H8	1:A:98:A:P	2.36	0.48
1:A:116:A:H2'	1:A:117:G:O4'	2.14	0.48
1:A:126:G:C5'	1:A:633:G:H22	2.27	0.48
1:A:147:G:H2'	1:A:1447:A:O2'	2.13	0.48
1:A:180:U:C5	1:A:180:U:OP2	2.67	0.48
1:A:219:U:H2'	1:A:220:G:C8	2.48	0.48
1:A:251:G:C6	1:A:266:G:C6	3.02	0.48
1:A:268:U:C5	1:A:269:C:N4	2.81	0.48
1:A:363:A:C3'	1:A:364:A:C8	2.97	0.48
1:A:379:C:C4	1:A:380:G:C5	3.02	0.48
1:A:411:A:N7	4:D:31:CYS:SG	2.83	0.48
1:A:411:A:C6	1:A:429:U:C6	3.02	0.48
1:A:429:U:O2	1:A:430:A:C8	2.66	0.48
1:A:447:G:N7	1:A:485:U:C4	2.82	0.48
1:A:498:A:OP2	1:A:498:A:C8	2.67	0.48
1:A:539:A:H2	4:D:40:HIS:HE2	1.59	0.48
1:A:562:U:H4'	1:A:563:A:N3	2.28	0.48
1:A:570:G:C6	1:A:873:A:N3	2.81	0.48
1:A:606:G:C4	1:A:606:G:O5'	2.66	0.48
1:A:683:G:C6	1:A:684:U:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:688:G:N1	1:A:700:G:C5	2.82	0.48
1:A:715:A:C1'	1:A:777:A:C2	2.97	0.48
1:A:730:G:N7	1:A:731:G:H1'	2.28	0.48
1:A:745:G:H4'	1:A:851:G:N2	2.29	0.48
1:A:860:A:OP2	1:A:869:G:N2	2.47	0.48
1:A:868:C:N4	1:A:869:G:C6	2.82	0.48
1:A:902:G:C2	1:A:903:G:C8	3.01	0.48
1:A:959:A:O3'	1:A:960:U:H4'	2.13	0.48
1:A:961:U:P	1:A:1223:C:H1'	2.53	0.48
1:A:977:A:C5'	1:A:981:U:O2	2.62	0.48
1:A:995:C:C6	1:A:995:C:O5'	2.66	0.48
1:A:1009:U:C6	1:A:1009:U:OP2	2.67	0.48
1:A:1059:C:C2'	1:A:1060:U:H6	2.27	0.48
1:A:1251:A:O2'	1:A:1252:A:C8	2.62	0.48
1:A:1268:G:C2	1:A:1269:A:N3	2.82	0.48
1:A:1299:A:H62	1:A:1302:C:N4	2.12	0.48
1:A:1343:G:H4'	9:I:123:ARG:HG3	1.95	0.48
1:A:1443:C:C4	1:A:1443:C:OP2	2.67	0.48
1:A:1494:G:O6	1:A:1495:U:C5	2.67	0.48
1:A:1515:G:C8	1:A:1515:G:C3'	2.92	0.48
4:D:19:PHE:CD1	4:D:110:ARG:NH2	2.82	0.48
10:J:10:LEU:HD21	10:J:25:ILE:HD12	1.95	0.48
1:A:34:C:O2	1:A:551:U:C2	2.67	0.48
1:A:39:G:C2	1:A:498:A:H2	2.30	0.48
1:A:59:A:C8	1:A:354:G:C2	3.02	0.48
1:A:98:A:C8	1:A:98:A:O5'	2.64	0.48
1:A:146:G:C8	1:A:146:G:C5'	2.97	0.48
1:A:152:A:C5	1:A:153:C:H1'	2.49	0.48
1:A:153:C:C4	1:A:154:U:C6	3.01	0.48
1:A:181:A:O4'	1:A:182:A:C8	2.67	0.48
1:A:191:G:C8	1:A:191:G:H3'	2.48	0.48
1:A:216:U:H3'	1:A:216:U:C6	2.49	0.48
1:A:244:U:C4	1:A:894:G:N3	2.82	0.48
1:A:249:U:C2	1:A:250:A:H2	2.32	0.48
1:A:269:C:C6	1:A:269:C:H3'	2.49	0.48
1:A:297:G:C2	1:A:299:G:C8	3.02	0.48
1:A:440:C:H3'	1:A:441:A:H8	1.79	0.48
1:A:457:G:N2	1:A:476:U:C1'	2.77	0.48
1:A:534:U:C5	1:A:534:U:OP1	2.67	0.48
1:A:568:G:C2	1:A:883:C:C6	3.01	0.48
1:A:620:C:H3'	1:A:621:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:626:G:C5	1:A:627:G:N7	2.82	0.48
1:A:673:A:C6	1:A:674:G:N1	2.82	0.48
1:A:675:A:H5'	18:R:71:ASP:C	2.38	0.48
1:A:709:U:H3'	1:A:709:U:C6	2.49	0.48
1:A:719:C:H2'	18:R:38:ILE:O	2.13	0.48
1:A:809:G:C2	1:A:810:C:H1'	2.48	0.48
1:A:924:C:C6	1:A:1399:C:OP2	2.67	0.48
1:A:941:G:N3	1:A:942:G:C8	2.82	0.48
1:A:976:G:C8	1:A:1361:G:C6	3.01	0.48
1:A:978:A:C6	1:A:1318:A:C5	3.02	0.48
1:A:996:A:H2	1:A:1045:C:O2'	1.97	0.48
1:A:1044:A:C5'	1:A:1044:A:H8	2.27	0.48
1:A:1058:G:N1	1:A:1059:C:C2	2.82	0.48
1:A:1083:U:H3	1:A:1102:A:N6	2.12	0.48
1:A:1126:U:C6	10:J:73:LEU:HD21	2.49	0.48
1:A:1139:G:N2	1:A:1143:G:N1	2.61	0.48
1:A:1198:G:H1'	10:J:57:VAL:HG21	1.95	0.48
1:A:1249:C:H4'	9:I:37:TYR:HD2	1.79	0.48
1:A:1260:G:H4'	1:A:1284:C:H5'	1.95	0.48
1:A:1329:A:C5	1:A:1330:U:C6	3.02	0.48
1:A:1378:C:N4	1:A:1379:G:C5	2.82	0.48
1:A:1394:A:N1	1:A:1501:C:H4'	2.28	0.48
1:A:1461:G:H2'	1:A:1462:C:O4'	2.14	0.48
1:A:1464:U:H6	1:A:1464:U:P	2.37	0.48
1:A:1501:C:H6	1:A:1504:G:O2'	1.97	0.48
1:A:1516:G:C8	1:A:1516:G:H3'	2.49	0.48
8:H:48:PHE:CD2	8:H:58:LEU:HD13	2.49	0.48
9:I:11:ARG:HD3	9:I:76:GLY:HA3	1.95	0.48
10:J:12:ALA:HB3	10:J:18:ILE:N	2.29	0.48
10:J:51:VAL:HB	14:N:84:ARG:HB2	1.96	0.48
12:L:72:ASN:CG	12:L:79:ILE:HG22	2.39	0.48
13:M:9:PRO:HD2	13:M:44:ILE:HG12	1.95	0.48
16:P:47:GLU:HA	16:P:51:ARG:HH22	1.78	0.48
19:S:57:VAL:HG11	19:S:75:PRO:HD2	1.95	0.48
20:T:50:PHE:HB2	20:T:82:ILE:HD13	1.95	0.48
1:A:14:U:O2	1:A:16:A:C5	2.67	0.47
1:A:41:G:C2	1:A:42:G:C4	3.02	0.47
1:A:106:C:C4	20:T:9:ARG:HD2	2.48	0.47
1:A:129:A:H5"	17:Q:63:CYS:HA	1.96	0.47
1:A:155:A:C8	1:A:155:A:H3'	2.48	0.47
1:A:160:A:N1	1:A:347:G:N3	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:238:A:N1	1:A:239:U:C2	2.81	0.47
1:A:250:A:C8	1:A:252:U:C4	3.02	0.47
1:A:255:G:H4'	17:Q:18:LYS:HB3	1.96	0.47
1:A:257:G:N1	1:A:258:G:C5	2.82	0.47
1:A:269:C:H2'	1:A:270:A:H8	1.78	0.47
1:A:367:U:C6	1:A:394:G:C2	3.02	0.47
1:A:405:U:H5"	1:A:495:A:C2	2.49	0.47
1:A:446:G:N1	1:A:447:G:H1'	2.29	0.47
1:A:461:A:H2'	1:A:467:U:H5'	1.96	0.47
1:A:547:A:OP2	4:D:1:ALA:HB3	2.14	0.47
1:A:602:A:H8	1:A:602:A:P	2.37	0.47
1:A:626:G:H1'	16:P:47:GLU:CB	2.42	0.47
1:A:641:U:H5"	8:H:107:LYS:HD2	1.95	0.47
1:A:645:G:C6	1:A:646:G:C8	3.02	0.47
1:A:655:A:C2	1:A:656:G:C1'	2.96	0.47
1:A:655:A:H3'	1:A:656:G:H8	1.78	0.47
1:A:669:G:C5	1:A:670:G:C5	3.02	0.47
1:A:687:A:N3	1:A:688:G:H1'	2.29	0.47
1:A:858:G:C8	1:A:858:G:O5'	2.67	0.47
1:A:889:A:H1'	1:A:891:U:C4	2.49	0.47
1:A:895:G:C6	1:A:896:C:N3	2.82	0.47
1:A:897:C:C6	1:A:903:G:N2	2.82	0.47
1:A:925:G:C8	1:A:925:G:O5'	2.67	0.47
1:A:988:G:H21	1:A:1016:A:H1'	1.79	0.47
1:A:1052:U:C3'	1:A:1200:C:H41	2.27	0.47
1:A:1062:U:O2	1:A:1194:U:C4	2.67	0.47
1:A:1072:G:C6	1:A:1104:G:C6	3.01	0.47
1:A:1075:U:O2	1:A:1101:A:C6	2.67	0.47
1:A:1089:G:C2	1:A:1097:C:C2	3.02	0.47
1:A:1126:U:C6	10:J:102:LEU:O	2.67	0.47
1:A:1135:U:H2'	1:A:1136:C:O2	2.14	0.47
1:A:1159:U:C5'	1:A:1182:G:H1'	2.44	0.47
1:A:1163:A:C2	1:A:1174:G:C6	3.01	0.47
1:A:1163:A:N3	1:A:1174:G:C5	2.81	0.47
1:A:1256:A:N7	1:A:1279:G:C6	2.81	0.47
1:A:1306:A:C5	1:A:1307:U:C5	3.02	0.47
1:A:1377:A:H61	7:G:9:ARG:CZ	2.27	0.47
1:A:1391:U:O5'	1:A:1391:U:C6	2.67	0.47
1:A:1425:U:H6	1:A:1425:U:O5'	1.97	0.47
1:A:1481:U:H2'	1:A:1482:G:H5'	1.95	0.47
1:A:1500:A:C4	1:A:1501:C:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1501:C:H5	1:A:1504:G:HO2'	1.58	0.47
6:F:76:THR:HB	6:F:80:PHE:CE1	2.49	0.47
7:G:137:ARG:HG3	7:G:141:HIS:CE1	2.49	0.47
10:J:10:LEU:H	10:J:72:ARG:HB2	1.79	0.47
10:J:18:ILE:CD1	10:J:70:HIS:HB2	2.42	0.47
14:N:97:LYS:HA	14:N:100:TRP:C	2.39	0.47
17:Q:46:HIS:HB3	17:Q:74:LEU:HD22	1.95	0.47
19:S:49:ALA:HB1	19:S:56:HIS:HB3	1.96	0.47
1:A:9:G:C2	1:A:10:A:H1'	2.49	0.47
1:A:104:G:C2	1:A:105:G:C8	3.02	0.47
1:A:123:U:C2	1:A:239:U:O2	2.67	0.47
1:A:144:G:C2	1:A:179:A:C5	3.02	0.47
1:A:200:G:C6	1:A:218:U:N3	2.82	0.47
1:A:302:G:C2	1:A:303:A:C1'	2.97	0.47
1:A:313:A:C8	1:A:313:A:O5'	2.67	0.47
1:A:321:A:H61	1:A:332:G:H1	1.62	0.47
1:A:338:A:OP2	1:A:339:C:C5	2.67	0.47
1:A:347:G:O5'	1:A:347:G:H8	1.97	0.47
1:A:411:A:N6	1:A:428:G:H1'	2.19	0.47
1:A:489:C:H2'	1:A:490:C:C6	2.49	0.47
1:A:521:G:H1'	1:A:536:C:O2'	2.13	0.47
1:A:533:A:C6	1:A:536:C:N1	2.82	0.47
1:A:536:C:C6	1:A:536:C:H3'	2.49	0.47
1:A:588:G:N2	1:A:653:U:C4	2.81	0.47
1:A:590:U:H3	1:A:649:A:N6	2.11	0.47
1:A:606:G:H3'	1:A:606:G:C8	2.49	0.47
1:A:614:C:H1'	1:A:627:G:N2	2.29	0.47
1:A:655:A:H2'	1:A:656:G:C8	2.48	0.47
1:A:692:U:O4	11:K:54:SER:HA	2.14	0.47
1:A:714:G:N2	11:K:119:GLY:HA3	2.29	0.47
1:A:728:A:H2'	1:A:729:A:C8	2.49	0.47
1:A:736:C:H4'	6:F:90:MET:HA	1.96	0.47
1:A:771:G:N3	1:A:809:G:C2	2.82	0.47
1:A:822:U:H6	1:A:822:U:O5'	1.97	0.47
1:A:866:C:OP2	1:A:867:G:C5	2.66	0.47
1:A:910:C:C4	1:A:911:U:C4	3.02	0.47
1:A:937:A:N1	1:A:1345:U:O4	2.47	0.47
1:A:959:A:N6	19:S:77:ARG:HA	2.27	0.47
1:A:1015:G:N1	1:A:1016:A:C4	2.82	0.47
1:A:1044:A:H5"	1:A:1044:A:H8	1.79	0.47
1:A:1049:U:H3'	14:N:2:LYS:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1058:G:C5	1:A:1059:C:C4	3.01	0.47
1:A:1112:C:C5'	2:B:128:LEU:HB3	2.44	0.47
1:A:1133:G:N2	1:A:1134:G:C4	2.82	0.47
1:A:1161:C:C4	1:A:1175:G:O6	2.68	0.47
1:A:1171:A:C6	1:A:1172:C:N3	2.82	0.47
1:A:1172:C:C4	1:A:1173:U:C5	3.01	0.47
1:A:1188:A:O5'	14:N:99:SER:HA	2.13	0.47
1:A:1191:A:H2'	1:A:1192:C:C6	2.49	0.47
1:A:1300:G:N2	1:A:1334:G:N2	2.62	0.47
1:A:1330:U:C4	1:A:1331:G:C4	3.03	0.47
1:A:1368:A:N3	10:J:48:ARG:NH2	2.62	0.47
3:C:106:ARG:HE	3:C:110:LEU:CB	2.27	0.47
6:F:3:HIS:CE1	6:F:37:HIS:CE1	3.02	0.47
6:F:36:ILE:HD12	6:F:62:MET:SD	2.54	0.47
6:F:75:GLU:HG3	6:F:89:VAL:HG22	1.96	0.47
8:H:105:THR:CG2	8:H:106:SER:H	2.23	0.47
10:J:7:ARG:O	10:J:100:ILE:HA	2.13	0.47
13:M:9:PRO:O	13:M:17:ALA:HB3	2.14	0.47
14:N:69:PRO:HG2	14:N:70:HIS:CG	2.49	0.47
14:N:75:LYS:HB2	14:N:76:PHE:CE2	2.49	0.47
16:P:52:LEU:HD23	16:P:54:LEU:HG	1.95	0.47
19:S:75:PRO:C	19:S:76:THR:CG2	2.87	0.47
22:W:131:ALA:HB3	22:W:218:VAL:HB	1.95	0.47
1:A:57:G:O6	1:A:58:C:C4	2.66	0.47
1:A:74:A:C5	1:A:75:G:N7	2.82	0.47
1:A:86:G:H1'	1:A:87:C:C5	2.49	0.47
1:A:104:G:H5'	1:A:172:A:N1	2.29	0.47
1:A:123:U:H5"	1:A:311:C:O2	2.15	0.47
1:A:148:G:C2	1:A:175:C:O2	2.67	0.47
1:A:152:A:N6	1:A:170:U:C2	2.82	0.47
1:A:160:A:N1	1:A:346:G:C2	2.83	0.47
1:A:182:A:H2'	1:A:184:G:O6	2.14	0.47
1:A:251:G:C6	1:A:266:G:O6	2.66	0.47
1:A:269:C:C6	1:A:269:C:O5'	2.67	0.47
1:A:274:A:H1'	1:A:275:G:C1'	2.44	0.47
1:A:275:G:C2	1:A:276:G:C1'	2.97	0.47
1:A:321:A:H62	1:A:328:C:C1'	2.27	0.47
1:A:341:C:N3	1:A:348:G:N2	2.62	0.47
1:A:426:U:H5"	4:D:36:ALA:O	2.15	0.47
1:A:469:C:H2'	1:A:470:C:C5'	2.43	0.47
1:A:478:A:C2	1:A:479:U:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:526:C:N3	1:A:527:G:H1'	2.28	0.47
1:A:588:G:C6	1:A:753:A:C8	3.01	0.47
1:A:595:A:C4	1:A:641:U:C2	3.01	0.47
1:A:595:A:C4'	1:A:596:A:H5'	2.43	0.47
1:A:601:G:C8	1:A:601:G:O5'	2.67	0.47
1:A:611:C:C5	1:A:612:C:C4	3.03	0.47
1:A:673:A:O2'	18:R:63:TYR:CD1	2.66	0.47
1:A:685:G:N1	1:A:686:U:C5	2.82	0.47
1:A:686:U:C6	1:A:703:G:N1	2.82	0.47
1:A:707:U:H1'	11:K:40:ALA:HB2	1.96	0.47
1:A:721:G:H4'	1:A:722:G:H5"	1.97	0.47
1:A:782:A:H4'	1:A:1515:G:H5'	1.95	0.47
1:A:838:G:C2	1:A:849:G:N9	2.82	0.47
1:A:867:G:C8	1:A:867:G:C3'	2.97	0.47
1:A:996:A:C2	1:A:1045:C:H2'	2.49	0.47
1:A:1035:A:H2'	1:A:1036:A:C5'	2.45	0.47
1:A:1061:G:C6	1:A:1062:U:C2	3.02	0.47
1:A:1088:G:C2	1:A:1089:G:C4	3.02	0.47
1:A:1130:A:C6	1:A:1144:G:O2'	2.67	0.47
1:A:1242:G:OP2	1:A:1242:G:C8	2.68	0.47
1:A:1244:G:C5	1:A:1294:G:N1	2.81	0.47
1:A:1256:A:C2'	1:A:1278:G:C6	2.96	0.47
1:A:1288:A:C5	1:A:1289:A:N7	2.82	0.47
1:A:1304:G:C2	1:A:1334:G:O6	2.67	0.47
1:A:1310:G:C2	1:A:1311:A:C5	3.02	0.47
1:A:1311:A:C8	1:A:1311:A:H3'	2.49	0.47
1:A:1368:A:C6	1:A:1369:C:C5	3.03	0.47
1:A:1369:C:O2	1:A:1369:C:C2'	2.58	0.47
1:A:1395:C:O2	1:A:1399:C:C5	2.68	0.47
1:A:1459:G:H3'	1:A:1460:C:C6	2.49	0.47
1:A:1499:A:H1'	1:A:1520:C:O5'	2.14	0.47
1:A:1515:G:N2	1:A:1521:C:H1'	2.28	0.47
2:B:65:LYS:HB3	2:B:89:PHE:H	1.78	0.47
5:E:79:THR:HG1	5:E:98:ALA:H	1.62	0.47
6:F:37:HIS:CD2	6:F:37:HIS:N	2.82	0.47
10:J:10:LEU:HD22	10:J:22:THR:HA	1.95	0.47
13:M:11:HIS:H	13:M:43:LYS:CB	2.26	0.47
15:O:4:THR:HA	15:O:7:THR:HG23	1.97	0.47
17:Q:11:VAL:HG21	17:Q:53:GLY:N	2.24	0.47
18:R:38:ILE:HG21	18:R:55:ALA:HB1	1.96	0.47
19:S:50:VAL:HG23	19:S:52:ASN:HD21	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:205:LEU:HD13	22:W:258:PHE:CE2	2.49	0.47
1:A:6:G:C6	5:E:102:THR:HG21	2.49	0.47
1:A:8:A:H5'	5:E:110:MET:HG3	1.96	0.47
1:A:32:A:C5'	1:A:398:U:H1'	2.44	0.47
1:A:71:A:P	1:A:71:A:H3'	2.53	0.47
1:A:79:G:C6	1:A:80:A:C5	3.02	0.47
1:A:120:A:N6	1:A:239:U:H3'	2.23	0.47
1:A:124:C:C2	1:A:238:A:H2	2.32	0.47
1:A:133:U:C5	1:A:230:G:N2	2.82	0.47
1:A:137:U:O2	1:A:137:U:H2'	2.12	0.47
1:A:144:G:C6	1:A:145:G:C5	3.03	0.47
1:A:217:C:C4'	1:A:463:U:H5	2.27	0.47
1:A:419:C:H2'	1:A:420:U:O4'	2.14	0.47
1:A:539:A:C5	1:A:540:G:C8	3.02	0.47
1:A:574:A:C4	1:A:574:A:OP2	2.68	0.47
1:A:575:G:C2	1:A:881:G:C4	3.03	0.47
1:A:696:A:H2'	1:A:697:U:H6	1.80	0.47
1:A:716:A:C5	1:A:717:U:C4	3.02	0.47
1:A:724:G:C2	1:A:725:G:C4	3.02	0.47
1:A:765:G:C2	1:A:812:G:H1'	2.49	0.47
1:A:785:G:H3'	1:A:786:G:C8	2.49	0.47
1:A:796:C:C6	1:A:796:C:C3'	2.98	0.47
1:A:852:G:C6	1:A:853:C:N3	2.83	0.47
1:A:879:C:C2	1:A:880:C:C6	3.02	0.47
1:A:895:G:C5	1:A:896:C:C5	3.02	0.47
1:A:1043:G:C8	1:A:1044:A:N7	2.82	0.47
1:A:1053:G:C2	1:A:1057:G:OP2	2.68	0.47
1:A:1068:G:C6	1:A:1069:C:C6	3.02	0.47
1:A:1107:C:H2'	1:A:1108:G:C5'	2.45	0.47
1:A:1127:G:N1	1:A:1128:C:C5	2.82	0.47
1:A:1144:G:C5	1:A:1145:A:H1'	2.49	0.47
1:A:1145:A:H2'	1:A:1146:A:OP2	2.12	0.47
1:A:1163:A:C4	1:A:1174:G:C6	3.01	0.47
1:A:1176:A:C5	1:A:1177:G:C5	3.02	0.47
1:A:1181:G:C1'	1:A:1184:G:H4'	2.45	0.47
1:A:1210:C:H3'	1:A:1211:U:H6	1.78	0.47
1:A:1283:U:H2'	1:A:1284:C:H6	1.77	0.47
1:A:1310:G:H2'	1:A:1311:A:O4'	2.15	0.47
1:A:1346:A:O4'	1:A:1348:U:C6	2.68	0.47
1:A:1368:A:C4	1:A:1369:C:C6	3.03	0.47
1:A:1423:G:C6	1:A:1478:U:N3	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1441:A:C5	1:A:1442:G:N7	2.82	0.47
1:A:1518:A:C2	1:A:1519:A:C8	3.03	0.47
5:E:17:VAL:HG12	5:E:34:ALA:HB2	1.96	0.47
6:F:34:GLY:HA3	6:F:66:ALA:HA	1.96	0.47
6:F:77:THR:HG22	6:F:80:PHE:CD2	2.49	0.47
9:I:25:GLY:HA3	9:I:57:VAL:H	1.79	0.47
11:K:59:PRO:O	11:K:62:ALA:HB3	2.14	0.47
14:N:72:PHE:HA	14:N:79:SER:HA	1.96	0.47
15:O:70:LYS:HA	15:O:77:TYR:CB	2.45	0.47
1:A:98:A:C8	1:A:99:C:C5	3.02	0.47
1:A:98:A:N1	1:A:99:C:C2	2.83	0.47
1:A:104:G:C4'	1:A:172:A:C2	2.97	0.47
1:A:109:A:C2	1:A:327:A:N1	2.82	0.47
1:A:158:G:C8	1:A:164:G:N1	2.83	0.47
1:A:162:A:N7	1:A:163:C:H1'	2.30	0.47
1:A:174:A:C6	1:A:175:C:C5	3.03	0.47
1:A:180:U:C4	1:A:181:A:N6	2.82	0.47
1:A:230:G:C6	1:A:231:U:C4	3.01	0.47
1:A:258:G:C2	1:A:269:C:O2	2.68	0.47
1:A:273:U:C4	1:A:274:A:C6	3.02	0.47
1:A:322:C:H42	1:A:327:A:H2'	1.79	0.47
1:A:408:A:N3	1:A:409:U:C6	2.82	0.47
1:A:441:A:C2	1:A:442:G:C4	3.03	0.47
1:A:475:C:C6	1:A:476:U:C5	3.02	0.47
1:A:514:C:C6	1:A:514:C:O5'	2.67	0.47
1:A:537:G:C8	1:A:537:G:H3'	2.49	0.47
1:A:602:A:C5	1:A:603:U:C4	3.03	0.47
1:A:628:G:C6	1:A:629:A:C4	3.03	0.47
1:A:633:G:N7	1:A:634:C:C5	2.83	0.47
1:A:646:G:C5	1:A:647:C:C5	3.02	0.47
1:A:782:A:C5'	1:A:1514:G:H2'	2.43	0.47
1:A:923:A:C8	1:A:923:A:O5'	2.67	0.47
1:A:1000:A:N7	1:A:1001:C:C5	2.82	0.47
1:A:1006:G:N2	1:A:1024:G:H1'	2.29	0.47
1:A:1010:U:C2	1:A:1020:G:C4	3.02	0.47
1:A:1011:C:N3	1:A:1019:A:C6	2.83	0.47
1:A:1042:A:C6	1:A:1043:G:C6	3.02	0.47
1:A:1052:U:C2	1:A:1207:G:C2	3.02	0.47
1:A:1094:G:OP2	1:A:1095:U:C4	2.67	0.47
1:A:1157:A:N6	1:A:1178:G:H1'	2.28	0.47
1:A:1157:A:N7	1:A:1180:A:C6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1176:A:N6	1:A:1177:G:C6	2.83	0.47
1:A:1208:C:H2'	1:A:1209:C:H6	1.79	0.47
1:A:1246:A:C5	1:A:1247:U:C4	3.01	0.47
1:A:1256:A:N7	1:A:1279:G:O6	2.47	0.47
1:A:1277:C:H4'	1:A:1281:C:H2'	1.96	0.47
1:A:1296:C:C5	1:A:1297:G:C6	3.01	0.47
1:A:1332:A:C5	1:A:1333:A:N7	2.83	0.47
1:A:1343:G:H21	1:A:1349:A:H4'	1.79	0.47
1:A:1356:G:H2'	1:A:1357:A:O4'	2.14	0.47
1:A:1379:G:C6	1:A:1380:U:O4	2.68	0.47
1:A:1499:A:H1'	1:A:1520:C:P	2.55	0.47
1:A:1525:G:N7	21:U:38:GLU:CD	2.72	0.47
2:B:64:GLY:C	2:B:153:MET:SD	2.97	0.47
3:C:56:ILE:HG23	3:C:63:ILE:HD11	1.94	0.47
4:D:101:VAL:HG11	4:D:113:ALA:O	2.13	0.47
4:D:122:ILE:HD13	4:D:144:ILE:HA	1.96	0.47
5:E:93:VAL:HG12	5:E:94:PHE:N	2.29	0.47
6:F:47:LEU:CD1	6:F:51:ILE:HG22	2.44	0.47
7:G:49:LEU:HD22	7:G:123:LEU:HB3	1.96	0.47
7:G:94:ARG:HH21	7:G:98:LEU:HD11	1.79	0.47
15:O:50:HIS:H	15:O:50:HIS:CD2	2.32	0.47
20:T:58:ASP:OD1	20:T:75:LYS:HD2	2.15	0.47
22:W:108:THR:HG1	22:W:116:VAL:N	2.12	0.47
22:W:224:LEU:HD13	22:W:233:GLU:HG3	1.96	0.47
1:A:49:U:N3	1:A:362:G:C2	2.83	0.47
1:A:101:A:H3'	1:A:102:G:C8	2.50	0.47
1:A:248:C:C6	1:A:248:C:H3'	2.50	0.47
1:A:254:G:C6	1:A:255:G:N7	2.83	0.47
1:A:295:C:H2'	1:A:296:U:O4'	2.15	0.47
1:A:314:C:H2'	1:A:315:A:O5'	2.15	0.47
1:A:321:A:C2	1:A:322:C:H1'	2.50	0.47
1:A:327:A:C6	1:A:329:A:C2	3.02	0.47
1:A:403:C:C4	1:A:404:G:C8	3.02	0.47
1:A:431:A:H3'	1:A:432:A:C8	2.49	0.47
1:A:517:G:C2'	1:A:530:G:H4'	2.42	0.47
1:A:527:G:C8	1:A:527:G:H3'	2.49	0.47
1:A:532:A:C4'	1:A:533:A:OP2	2.62	0.47
1:A:559:A:C8	12:L:17:LYS:HE3	2.49	0.47
1:A:581:G:O5'	1:A:581:G:C8	2.68	0.47
1:A:600:A:C5	1:A:601:G:N7	2.83	0.47
1:A:608:A:H3'	1:A:609:A:H8	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:612:C:C4	1:A:613:C:C4	3.02	0.47
1:A:619:U:H2'	1:A:620:C:C6	2.50	0.47
1:A:626:G:N3	1:A:627:G:C8	2.83	0.47
1:A:632:U:C5	1:A:633:G:C6	3.01	0.47
1:A:666:G:C2	1:A:741:G:C4	3.02	0.47
1:A:668:G:H1'	15:O:45:HIS:NE2	2.30	0.47
1:A:691:G:N1	11:K:53:GLY:HA2	2.29	0.47
1:A:705:G:N2	11:K:30:ILE:HD13	2.28	0.47
1:A:720:C:H3'	1:A:720:C:OP2	2.14	0.47
1:A:728:A:C2	1:A:763:G:N2	2.83	0.47
1:A:743:A:C2	1:A:744:C:O2	2.68	0.47
1:A:784:A:H2'	1:A:785:G:C8	2.49	0.47
1:A:857:C:C6	1:A:858:G:H8	2.31	0.47
1:A:859:G:C6	1:A:860:A:C5	3.03	0.47
1:A:878:A:C6	1:A:879:C:C4	3.03	0.47
1:A:1004:A:C4	1:A:1036:A:H2	2.33	0.47
1:A:1010:U:N3	1:A:1011:C:C5	2.82	0.47
1:A:1025:U:C2	1:A:1031:C:C2	3.02	0.47
1:A:1051:C:OP1	1:A:1201:A:C8	2.68	0.47
1:A:1125:U:H2'	1:A:1127:G:N7	2.30	0.47
1:A:1129:C:C4	1:A:1144:G:C6	3.02	0.47
1:A:1197:A:N1	1:A:1198:G:C5	2.83	0.47
1:A:1223:C:C5	1:A:1322:C:N4	2.83	0.47
1:A:1298:U:C6	7:G:110:ARG:O	2.67	0.47
1:A:1346:A:C8	1:A:1348:U:C2	3.02	0.47
1:A:1378:C:C4	1:A:1379:G:C5	3.03	0.47
1:A:1381:U:C6	7:G:79:VAL:HA	2.49	0.47
1:A:1406:U:C2	1:A:1518:A:H1'	2.48	0.47
1:A:1451:U:H2'	1:A:1453:G:N7	2.29	0.47
1:A:1457:G:H2'	1:A:1458:G:O4'	2.14	0.47
1:A:1480:A:C2	1:A:1481:U:C1'	2.98	0.47
1:A:1523:G:C6	1:A:1524:C:N3	2.83	0.47
10:J:44:THR:HG23	10:J:70:HIS:HA	1.95	0.47
11:K:52:ARG:HA	11:K:56:LYS:HD3	1.97	0.47
12:L:30:ARG:HB2	12:L:57:THR:CG2	2.44	0.47
17:Q:45:VAL:CG2	17:Q:60:ILE:HG22	2.42	0.47
17:Q:46:HIS:CE1	17:Q:70:LYS:HD3	2.50	0.47
1:A:7:A:O5'	5:E:123:LEU:HD13	2.14	0.47
1:A:10:A:N3	1:A:11:G:C8	2.83	0.47
1:A:25:C:H5"	1:A:524:G:O2'	2.15	0.47
1:A:31:G:C2	1:A:48:C:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:37:U:H3'	12:L:123:ALA:CB	2.44	0.47
1:A:37:U:H3'	12:L:123:ALA:HB3	1.96	0.47
1:A:51:A:C6	1:A:353:A:N1	2.83	0.47
1:A:53:A:C6	1:A:359:G:C6	3.03	0.47
1:A:55:A:H61	1:A:368:U:H3	1.62	0.47
1:A:55:A:C2	1:A:56:U:C6	3.02	0.47
1:A:57:G:N7	1:A:58:C:C5	2.82	0.47
1:A:69:G:C5	1:A:70:U:C4	3.03	0.47
1:A:69:G:C4	1:A:70:U:C6	3.03	0.47
1:A:69:G:N1	1:A:70:U:C4	2.83	0.47
1:A:92:U:N3	1:A:93:U:C2	2.82	0.47
1:A:101:A:C6	1:A:102:G:C6	3.02	0.47
1:A:115:G:C2	1:A:313:A:N3	2.83	0.47
1:A:123:U:C2	1:A:124:C:C6	3.02	0.47
1:A:158:G:N9	1:A:164:G:C2	2.82	0.47
1:A:162:A:C1'	1:A:348:G:H4'	2.45	0.47
1:A:180:U:C6	1:A:180:U:O5'	2.66	0.47
1:A:187:G:H1'	1:A:191:G:N1	2.30	0.47
1:A:214:C:C5	1:A:215:C:N4	2.83	0.47
1:A:311:C:C4	1:A:312:C:C5	3.02	0.47
1:A:340:U:C2	1:A:350:G:N2	2.83	0.47
1:A:340:U:O2	1:A:350:G:C2	2.67	0.47
1:A:362:G:N2	1:A:365:U:H5	2.12	0.47
1:A:369:G:C4	1:A:370:C:C6	3.03	0.47
1:A:378:G:C5	1:A:379:C:C4	3.03	0.47
1:A:405:U:C5'	1:A:498:A:C6	2.97	0.47
1:A:407:U:H5"	4:D:111:ALA:HB1	1.95	0.47
1:A:425:G:H2'	1:A:426:U:O4'	2.14	0.47
1:A:430:A:C6	1:A:431:A:C8	3.02	0.47
1:A:448:A:H3'	1:A:449:G:H8	1.79	0.47
1:A:449:G:C8	1:A:449:G:O5'	2.68	0.47
1:A:461:A:H2'	1:A:467:U:C5'	2.44	0.47
1:A:474:G:N1	1:A:475:C:C2	2.83	0.47
1:A:475:C:C4	1:A:476:U:C5	3.02	0.47
1:A:476:U:O2	1:A:477:C:C6	2.68	0.47
1:A:491:G:C6	1:A:492:C:N4	2.83	0.47
1:A:493:A:H3'	1:A:494:G:C8	2.50	0.47
1:A:551:U:C1'	12:L:82:ARG:HH21	2.27	0.47
1:A:557:G:H2'	1:A:558:G:C4	2.49	0.47
1:A:593:U:C5	1:A:593:U:OP2	2.67	0.47
1:A:600:A:C6	1:A:601:G:N7	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:613:C:H1'	1:A:628:G:N2	2.29	0.47
1:A:633:G:C4	1:A:634:C:C6	3.03	0.47
1:A:640:A:C8	1:A:640:A:O5'	2.68	0.47
1:A:654:G:C8	1:A:654:G:O5'	2.67	0.47
1:A:674:G:H3'	18:R:73:HIS:CE1	2.49	0.47
1:A:686:U:C2	11:K:43:TRP:NE1	2.70	0.47
1:A:704:A:C5	1:A:705:G:N7	2.83	0.47
1:A:706:A:C5'	11:K:23:HIS:CD2	2.96	0.47
1:A:712:A:H2'	1:A:713:G:C8	2.49	0.47
1:A:727:G:N2	1:A:731:G:H1'	2.30	0.47
1:A:779:C:H3'	1:A:780:A:N7	2.29	0.47
1:A:780:A:C2'	1:A:800:G:H1	2.26	0.47
1:A:812:G:OP1	1:A:903:G:N3	2.47	0.47
1:A:813:U:C5	1:A:816:A:N1	2.83	0.47
1:A:825:A:N1	1:A:876:C:C2	2.82	0.47
1:A:831:A:H2'	1:A:832:G:O4'	2.14	0.47
1:A:865:A:N3	1:A:918:A:H4'	2.30	0.47
1:A:879:C:H5"	12:L:4:ASN:HD22	1.78	0.47
1:A:899:C:C2	1:A:900:A:C8	3.03	0.47
1:A:925:G:C4	1:A:1392:G:C2	3.03	0.47
1:A:935:A:H2'	1:A:936:C:O4'	2.13	0.47
1:A:940:C:C4'	1:A:1375:A:H1'	2.45	0.47
1:A:941:G:H21	9:I:122:ARG:NH1	2.12	0.47
1:A:1012:A:N7	14:N:50:LEU:HD23	2.29	0.47
1:A:1013:G:C2	1:A:1015:G:C8	3.02	0.47
1:A:1067:A:C8	1:A:1067:A:O5'	2.68	0.47
1:A:1088:G:N1	1:A:1089:G:C6	2.82	0.47
1:A:1106:G:H5"	3:C:171:ARG:HH11	1.77	0.47
1:A:1113:C:H2'	1:A:1114:C:H6	1.80	0.47
1:A:1158:C:H4'	2:B:130:LYS:O	2.14	0.47
1:A:1170:A:H2'	1:A:1171:A:O4'	2.15	0.47
1:A:1179:A:C2	1:A:1180:A:C4	3.03	0.47
1:A:1203:C:H5'	14:N:1:ALA:HA	1.97	0.47
1:A:1206:G:H5'	3:C:190:THR:O	2.15	0.47
1:A:1206:G:H1'	3:C:192:TYR:O	2.15	0.47
1:A:1220:G:H1'	19:S:51:HIS:HD2	1.79	0.47
1:A:1244:G:C4	1:A:1245:C:C6	3.03	0.47
1:A:1251:A:H2	1:A:1369:C:HO2'	1.60	0.47
1:A:1268:G:N3	1:A:1269:A:C4	2.83	0.47
1:A:1273:C:N4	1:A:1274:A:C5	2.82	0.47
1:A:1288:A:C4	1:A:1289:A:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1306:A:C6	1:A:1307:U:C5	3.03	0.47
1:A:1310:G:C5	1:A:1311:A:C8	3.03	0.47
1:A:1332:A:H1'	13:M:107:THR:CG2	2.45	0.47
1:A:1349:A:C4	1:A:1374:A:C8	3.03	0.47
1:A:1370:G:N3	1:A:1370:G:C2'	2.74	0.47
1:A:1375:A:H2'	1:A:1376:U:O4'	2.15	0.47
1:A:1392:G:C8	1:A:1392:G:P	3.08	0.47
1:A:1408:A:N3	1:A:1409:C:C6	2.83	0.47
1:A:1409:C:C2	1:A:1410:A:C8	3.02	0.47
1:A:1410:A:C2	1:A:1411:C:N1	2.83	0.47
1:A:1413:A:C2	1:A:1488:G:N3	2.82	0.47
1:A:1421:G:C8	1:A:1421:G:O5'	2.68	0.47
1:A:1426:G:C2	1:A:1427:C:C2	3.02	0.47
1:A:1447:A:H3'	1:A:1448:C:H5'	1.96	0.47
1:A:1462:C:H2'	1:A:1463:U:O4'	2.14	0.47
1:A:1494:G:H4'	22:W:47:ARG:HG2	1.96	0.47
1:A:1514:G:C8	1:A:1514:G:H3'	2.50	0.47
1:A:1527:U:C5	21:U:41:THR:OG1	2.64	0.47
3:C:35:ASP:HA	3:C:58:ARG:HH22	1.80	0.47
3:C:35:ASP:OD1	3:C:56:ILE:HB	2.14	0.47
3:C:91:ALA:HB2	3:C:98:ALA:H	1.79	0.47
3:C:128:MET:H	3:C:131:ARG:NE	2.12	0.47
4:D:162:GLU:HA	4:D:172:VAL:HG21	1.96	0.47
5:E:15:ILE:H	5:E:36:THR:HA	1.79	0.47
5:E:79:THR:HG1	5:E:121:ASN:C	2.22	0.47
6:F:4:TYR:CG	6:F:71:ILE:CD1	2.98	0.47
7:G:93:VAL:O	7:G:97:ALA:HB2	2.15	0.47
9:I:12:LYS:O	9:I:69:GLY:CA	2.63	0.47
9:I:27:ILE:H	9:I:62:LEU:HD21	1.79	0.47
10:J:37:ARG:HE	10:J:75:ASP:CG	2.22	0.47
11:K:27:ASN:O	11:K:56:LYS:HG3	2.14	0.47
13:M:55:LEU:HA	13:M:58:GLU:HB3	1.97	0.47
15:O:23:SER:O	15:O:27:GLN:HG3	2.15	0.47
15:O:51:SER:O	15:O:55:LEU:HB2	2.15	0.47
16:P:78:VAL:HG12	16:P:80:LYS:HA	1.96	0.47
17:Q:11:VAL:HA	17:Q:21:VAL:O	2.15	0.47
1:A:12:U:H4'	1:A:526:C:C5'	2.45	0.47
1:A:32:A:C8	1:A:398:U:H4'	2.49	0.47
1:A:72:A:C2	1:A:73:C:C6	3.03	0.47
1:A:78:A:N7	1:A:79:G:C5	2.83	0.47
1:A:79:G:C4	1:A:80:A:N7	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:97:G:O6	1:A:98:A:C2	2.68	0.47
1:A:119:A:C8	1:A:119:A:OP2	2.68	0.47
1:A:130:A:N1	1:A:233:C:O2	2.48	0.47
1:A:138:G:C4	1:A:226:G:C2	3.02	0.47
1:A:175:C:C6	1:A:175:C:O5'	2.68	0.47
1:A:181:A:O2'	1:A:193:C:C4	2.68	0.47
1:A:203:G:C2	1:A:204:G:N7	2.83	0.47
1:A:238:A:H2'	1:A:239:U:C6	2.50	0.47
1:A:246:A:N6	1:A:281:G:H1'	2.30	0.47
1:A:256:U:C6	1:A:256:U:H3'	2.49	0.47
1:A:345:C:H4'	1:A:346:G:C6	2.49	0.47
1:A:357:G:C6	1:A:358:U:C5	3.03	0.47
1:A:373:A:H2'	1:A:374:A:O4'	2.15	0.47
1:A:408:A:H4'	4:D:22:SER:O	2.14	0.47
1:A:445:G:N1	1:A:446:G:C4	2.83	0.47
1:A:463:U:C6	1:A:464:U:C6	3.03	0.47
1:A:577:G:C8	1:A:816:A:N3	2.83	0.47
1:A:579:A:C2	1:A:763:G:C5	3.03	0.47
1:A:584:G:N2	1:A:880:C:H5'	2.30	0.47
1:A:607:A:C4	1:A:608:A:C8	3.03	0.47
1:A:627:G:C6	1:A:628:G:C5	3.03	0.47
1:A:712:A:C8	1:A:712:A:O5'	2.68	0.47
1:A:727:G:H1'	1:A:731:G:N2	2.29	0.47
1:A:748:G:C6	1:A:749:A:C2	3.03	0.47
1:A:751:U:C5	1:A:752:G:C5	3.03	0.47
1:A:879:C:C4	1:A:880:C:C5	3.02	0.47
1:A:902:G:C6	1:A:903:G:C5	3.03	0.47
1:A:977:A:H3'	1:A:977:A:C8	2.48	0.47
1:A:994:A:C5	1:A:995:C:C6	3.02	0.47
1:A:1007:U:O2	1:A:1023:U:C2	2.67	0.47
1:A:1044:A:C8	1:A:1044:A:C5'	2.97	0.47
1:A:1074:G:C2	1:A:1102:A:C4	3.02	0.47
1:A:1098:C:C2	1:A:1099:G:C8	3.03	0.47
1:A:1160:G:C6	1:A:1181:G:O6	2.68	0.47
1:A:1236:A:C3'	1:A:1304:G:H4'	2.45	0.47
1:A:1301:U:C6	1:A:1303:C:C4	3.03	0.47
1:A:1372:U:H5"	9:I:71:ILE:HB	1.97	0.47
1:A:1382:C:C6	1:A:1383:C:H5	2.32	0.47
1:A:1494:G:C8	1:A:1494:G:C3'	2.98	0.47
2:B:91:VAL:HG12	2:B:147:LEU:C	2.40	0.47
8:H:34:ALA:O	8:H:38:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:41:GLU:O	8:H:42:GLU:HG2	2.15	0.47
11:K:21:HIS:CD2	11:K:86:LYS:NZ	2.83	0.47
13:M:100:ARG:HD3	13:M:102:LYS:HB3	1.97	0.47
15:O:70:LYS:HA	15:O:77:TYR:CG	2.50	0.47
17:Q:20:ILE:H	17:Q:50:ASN:ND2	2.13	0.47
19:S:13:HIS:CD2	19:S:14:LEU:N	2.83	0.47
1:A:21:G:C2'	1:A:914:A:H61	2.28	0.47
1:A:57:G:O6	1:A:356:A:C6	2.68	0.47
1:A:57:G:C8	1:A:57:G:O5'	2.67	0.47
1:A:69:G:C6	1:A:70:U:O4	2.67	0.47
1:A:94:G:N2	1:A:98:A:C6	2.83	0.47
1:A:104:G:N3	1:A:105:G:C8	2.83	0.47
1:A:115:G:N2	1:A:289:G:C4	2.83	0.47
1:A:154:U:C2	1:A:155:A:C8	3.03	0.47
1:A:243:A:H61	1:A:246:A:N6	2.12	0.47
1:A:253:A:H4'	17:Q:68:LYS:HE2	1.97	0.47
1:A:260:G:C2	1:A:267:C:N3	2.83	0.47
1:A:348:G:C3'	1:A:349:A:H8	2.27	0.47
1:A:401:C:H1'	1:A:622:A:H1'	1.95	0.47
1:A:450:G:C8	1:A:450:G:H3'	2.50	0.47
1:A:451:A:C8	1:A:480:U:H3'	2.50	0.47
1:A:453:G:O6	1:A:454:G:C6	2.67	0.47
1:A:460:A:C2	1:A:462:G:H8	2.33	0.47
1:A:538:G:C4	1:A:539:A:C8	3.03	0.47
1:A:593:U:H2'	1:A:594:U:C6	2.49	0.47
1:A:615:G:N1	1:A:616:G:C4	2.83	0.47
1:A:628:G:C5	1:A:629:A:N7	2.83	0.47
1:A:632:U:C4	1:A:633:G:C2	3.03	0.47
1:A:641:U:C6	1:A:641:U:O5'	2.68	0.47
1:A:685:G:C2	1:A:706:A:N6	2.82	0.47
1:A:786:G:H3'	1:A:787:A:H8	1.77	0.47
1:A:790:A:H2'	1:A:791:G:O4'	2.14	0.47
1:A:818:G:C2	1:A:820:U:C4	3.03	0.47
1:A:847:G:C2	1:A:848:C:C1'	2.93	0.47
1:A:938:A:N1	1:A:1345:U:C4	2.82	0.47
1:A:993:G:H2'	1:A:993:G:N3	2.30	0.47
1:A:996:A:C4	1:A:1046:A:H4'	2.49	0.47
1:A:1002:G:C2	1:A:1003:G:C4	3.03	0.47
1:A:1004:A:C8	1:A:1005:A:N9	2.83	0.47
1:A:1068:G:C2	1:A:1069:C:C6	3.03	0.47
1:A:1081:A:H5'	5:E:22:LYS:HG3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1083:U:C5	1:A:1084:G:N1	2.83	0.47
1:A:1088:G:N3	1:A:1089:G:C8	2.83	0.47
1:A:1099:G:P	1:A:1100:C:C5	3.08	0.47
1:A:1212:U:C5'	1:A:1213:A:C5	2.98	0.47
1:A:1225:A:C2	1:A:1226:C:N3	2.83	0.47
1:A:1244:G:O6	1:A:1294:G:C6	2.68	0.47
1:A:1273:C:C6	1:A:1273:C:C3'	2.96	0.47
1:A:1300:G:C4	1:A:1335:U:C4	3.03	0.47
1:A:1333:A:C4	1:A:1334:G:N9	2.82	0.47
1:A:1352:C:H2'	1:A:1353:G:O4'	2.14	0.47
1:A:1453:G:H3'	1:A:1453:G:N3	2.30	0.47
1:A:1481:U:C4	1:A:1482:G:C5	3.02	0.47
1:A:1527:U:H5"	21:U:44:ARG:HD3	1.97	0.47
3:C:116:ALA:HB3	3:C:184:ASN:HD21	1.80	0.47
6:F:52:ASN:H	18:R:73:HIS:CG	2.33	0.47
7:G:69:ARG:HA	7:G:99:ALA:HB2	1.97	0.47
9:I:6:TYR:OH	9:I:17:ARG:HA	2.15	0.47
16:P:4:ILE:HA	16:P:21:VAL:HA	1.97	0.47
20:T:34:VAL:HG22	20:T:49:ALA:O	2.15	0.47
20:T:37:ALA:HB1	20:T:45:ALA:C	2.39	0.47
1:A:11:G:N7	1:A:12:U:C5	2.82	0.47
1:A:31:G:C2	1:A:48:C:C6	3.03	0.47
1:A:36:C:C5	12:L:122:LYS:HG3	2.50	0.47
1:A:55:A:N6	1:A:368:U:H3	2.13	0.47
1:A:59:A:N3	1:A:354:G:C4	2.82	0.47
1:A:64:G:N1	1:A:67:C:N4	2.62	0.47
1:A:64:G:N7	1:A:99:C:H3'	2.30	0.47
1:A:121:U:H3'	1:A:122:G:C8	2.50	0.47
1:A:143:A:H2'	1:A:143:A:N3	2.29	0.47
1:A:155:A:C2	1:A:156:C:N1	2.83	0.47
1:A:158:G:H1'	1:A:164:G:C2	2.50	0.47
1:A:179:A:C2'	1:A:180:U:H5'	2.44	0.47
1:A:197:A:O2'	1:A:221:C:H1'	2.15	0.47
1:A:295:C:C2	1:A:296:U:C6	3.04	0.47
1:A:347:G:C6	1:A:348:G:C4	3.03	0.47
1:A:411:A:N1	1:A:429:U:C2	2.83	0.47
1:A:440:C:C6	1:A:440:C:O5'	2.68	0.47
1:A:444:G:C2	1:A:491:G:C4	3.03	0.47
1:A:453:G:C6	1:A:454:G:C6	3.03	0.47
1:A:483:C:C6	1:A:484:G:H2'	2.50	0.47
1:A:515:G:C6	1:A:537:G:N1	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:540:G:N3	4:D:40:HIS:CD2	2.82	0.47
1:A:581:G:N2	1:A:759:A:OP2	2.47	0.47
1:A:585:G:H21	1:A:879:C:H4'	1.80	0.47
1:A:597:G:H21	8:H:83:ARG:HH22	1.61	0.47
1:A:641:U:H4'	1:A:642:A:C8	2.50	0.47
1:A:645:G:C8	1:A:645:G:H3'	2.50	0.47
1:A:651:C:C2	1:A:652:U:C6	3.03	0.47
1:A:750:C:C4	1:A:751:U:O4	2.68	0.47
1:A:760:G:H5"	1:A:761:G:OP2	2.15	0.47
1:A:811:C:N3	1:A:813:U:C5	2.83	0.47
1:A:822:U:H3'	1:A:823:C:C6	2.50	0.47
1:A:825:A:H1'	8:H:1:SER:O	2.15	0.47
1:A:878:A:C4	1:A:879:C:C6	3.03	0.47
1:A:941:G:C5	1:A:942:G:C8	3.03	0.47
1:A:971:G:N1	1:A:1364:U:C6	2.83	0.47
1:A:993:G:C5'	1:A:995:C:H41	2.28	0.47
1:A:1004:A:C1'	1:A:1032:G:OP2	2.62	0.47
1:A:1070:U:O4	1:A:1085:U:C5	2.68	0.47
1:A:1073:U:H2'	1:A:1074:G:O4'	2.15	0.47
1:A:1119:C:O2	1:A:1155:A:C4	2.67	0.47
1:A:1130:A:H1'	9:I:3:ASN:HA	1.96	0.47
1:A:1149:C:C2'	1:A:1150:A:C8	2.96	0.47
1:A:1181:G:C4	1:A:1184:G:H4'	2.49	0.47
1:A:1266:G:N1	1:A:1269:A:OP2	2.48	0.47
1:A:1268:G:H21	1:A:1326:U:H1'	1.79	0.47
1:A:1272:G:C6	1:A:1273:C:C6	3.03	0.47
1:A:1276:G:C5	1:A:1277:C:C5	3.03	0.47
1:A:1291:U:C5'	9:I:41:GLU:HG2	2.45	0.47
1:A:1292:G:C2	1:A:1293:C:C2	3.03	0.47
1:A:1305:G:C2	1:A:1332:A:OP2	2.67	0.47
1:A:1333:A:C5	1:A:1334:G:C8	3.02	0.47
1:A:1347:G:H1'	1:A:1373:G:N1	2.30	0.47
1:A:1355:G:C2	1:A:1356:G:C8	3.03	0.47
1:A:1356:G:C1'	10:J:48:ARG:HH21	2.28	0.47
1:A:1413:A:C2	1:A:1488:G:C2	3.03	0.47
1:A:1421:G:N2	1:A:1422:G:N9	2.62	0.47
1:A:1423:G:C6	1:A:1478:U:C2	3.02	0.47
1:A:1461:G:H21	1:A:1462:C:H1'	1.80	0.47
1:A:1500:A:OP2	1:A:1504:G:H3'	2.15	0.47
2:B:88:GLN:HG2	2:B:217:ALA:HA	1.97	0.47
3:C:5:HIS:HB3	3:C:6:PRO:HD2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:115:VAL:HG11	3:C:148:ILE:HD11	1.96	0.47
4:D:66:VAL:HG22	4:D:70:GLN:HB2	1.97	0.47
5:E:73:VAL:HG12	5:E:74:ALA:H	1.80	0.47
5:E:94:PHE:O	5:E:124:ALA:HB1	2.14	0.47
9:I:17:ARG:H	9:I:65:THR:HB	1.80	0.47
10:J:29:ALA:HA	10:J:33:GLY:HA3	1.97	0.47
18:R:55:ALA:HA	18:R:58:ILE:HD12	1.95	0.47
19:S:39:ILE:HD11	19:S:73:PHE:HB2	1.97	0.47
19:S:65:MET:SD	19:S:68:HIS:CD2	3.08	0.47
1:A:2:A:N6	1:A:626:G:N2	2.63	0.46
1:A:56:U:O4	1:A:352:C:N4	2.48	0.46
1:A:60:A:C3’	20:T:4:LYS:HA	2.45	0.46
1:A:86:G:H4’	1:A:87:C:O4’	2.15	0.46
1:A:128:G:C2	1:A:129:A:C8	3.03	0.46
1:A:151:A:C5	1:A:171:A:N6	2.83	0.46
1:A:165:G:C6	1:A:166:U:C4	3.03	0.46
1:A:165:G:H2’	1:A:166:U:O4’	2.14	0.46
1:A:186:C:H5”	20:T:76:ALA:HA	1.96	0.46
1:A:197:A:C2	1:A:198:G:C1’	2.98	0.46
1:A:257:G:C4	1:A:270:A:N1	2.83	0.46
1:A:337:G:H4’	1:A:1469:C:O2’	2.15	0.46
1:A:337:G:O4’	1:A:1469:C:H4’	2.14	0.46
1:A:444:G:N1	1:A:445:G:C4	2.83	0.46
1:A:494:G:C4	1:A:496:A:C8	3.04	0.46
1:A:509:A:H5”	4:D:51:GLY:HA2	1.97	0.46
1:A:513:C:H2’	1:A:514:C:H6	1.78	0.46
1:A:579:A:C4	1:A:763:G:N1	2.83	0.46
1:A:600:A:N3	1:A:639:G:C4	2.83	0.46
1:A:663:A:H2	1:A:742:G:H22	1.61	0.46
1:A:686:U:C5	1:A:703:G:N3	2.84	0.46
1:A:717:U:H1’	11:K:117:HIS:CG	2.50	0.46
1:A:811:C:C5	1:A:812:G:C2	3.03	0.46
1:A:816:A:C8	1:A:816:A:H5”	2.51	0.46
1:A:838:G:C4	1:A:839:C:C6	3.03	0.46
1:A:878:A:H1’	8:H:3:GLN:CG	2.45	0.46
1:A:878:A:H1’	8:H:3:GLN:HG3	1.97	0.46
1:A:894:G:H2’	1:A:895:G:O4’	2.15	0.46
1:A:899:C:N3	1:A:900:A:C4	2.83	0.46
1:A:954:G:C6	1:A:955:U:C5	3.04	0.46
1:A:994:A:N6	1:A:1047:G:H1’	2.26	0.46
1:A:1049:U:C5	1:A:1202:U:H4’	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1087:G:C2	1:A:1088:G:C8	3.04	0.46
1:A:1091:U:O2	1:A:1094:G:OP2	2.32	0.46
1:A:1263:C:C6	1:A:1263:C:H3'	2.50	0.46
1:A:1263:C:H2'	1:A:1264:U:O4'	2.14	0.46
1:A:1268:G:C2	1:A:1269:A:C2	3.02	0.46
1:A:1326:U:H2'	1:A:1327:C:H6	1.80	0.46
1:A:1344:C:H4'	9:I:121:ARG:HB3	1.97	0.46
1:A:1369:C:H2'	1:A:1369:C:O2	2.15	0.46
1:A:1380:U:H2'	7:G:2:ARG:HG2	1.97	0.46
1:A:1488:G:C2	1:A:1489:G:C4	3.03	0.46
2:B:161:PHE:CE1	2:B:185:ILE:HD11	2.50	0.46
3:C:59:PRO:HD2	3:C:62:SER:O	2.16	0.46
5:E:11:GLN:HB2	5:E:116:VAL:HA	1.96	0.46
6:F:34:GLY:CA	6:F:66:ALA:HA	2.45	0.46
7:G:49:LEU:HA	7:G:52:ARG:HE	1.79	0.46
14:N:81:ILE:HG13	14:N:82:LYS:H	1.80	0.46
16:P:15:PRO:CG	16:P:17:TYR:CE1	2.98	0.46
17:Q:60:ILE:HA	17:Q:73:THR:O	2.15	0.46
1:A:11:G:C6	1:A:24:U:O2	2.68	0.46
1:A:23:C:C5	1:A:23:C:OP2	2.69	0.46
1:A:63:C:H2'	1:A:66:A:N7	2.30	0.46
1:A:70:U:H3	1:A:98:A:N6	2.14	0.46
1:A:73:C:C3'	1:A:74:A:C5'	2.92	0.46
1:A:166:U:H3'	1:A:167:A:H8	1.79	0.46
1:A:184:G:C4	1:A:185:U:C5	3.03	0.46
1:A:217:C:C4	1:A:218:U:C4	3.03	0.46
1:A:255:G:C2	1:A:272:C:C2	3.03	0.46
1:A:363:A:H5'	12:L:29:LYS:C	2.40	0.46
1:A:368:U:H3'	1:A:369:G:H5'	1.97	0.46
1:A:373:A:H1'	1:A:481:G:N2	2.30	0.46
1:A:374:A:C5	1:A:375:U:C6	3.03	0.46
1:A:414:A:OP2	1:A:428:G:C6	2.67	0.46
1:A:415:A:C4	1:A:416:G:C8	3.03	0.46
1:A:471:U:C6	1:A:471:U:OP2	2.69	0.46
1:A:502:A:N6	1:A:544:G:C6	2.83	0.46
1:A:527:G:C2	1:A:528:C:N1	2.83	0.46
1:A:563:A:C5	1:A:567:G:C4	3.03	0.46
1:A:589:U:H2'	1:A:590:U:C5	2.50	0.46
1:A:599:C:C6	1:A:599:C:H3'	2.50	0.46
1:A:661:G:H3'	1:A:662:U:C6	2.51	0.46
1:A:663:A:N1	1:A:664:G:C6	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:674:G:C5'	6:F:51:ILE:HD11	2.45	0.46
1:A:695:A:C2'	1:A:696:A:H8	2.26	0.46
1:A:701:U:C6	1:A:702:A:C2	3.03	0.46
1:A:705:G:O6	11:K:43:TRP:NE1	2.49	0.46
1:A:749:A:C5	1:A:750:C:C4	3.03	0.46
1:A:905:U:H2'	1:A:905:U:O2	2.15	0.46
1:A:918:A:C2	1:A:919:A:C4	3.03	0.46
1:A:925:G:N1	1:A:1392:G:C6	2.83	0.46
1:A:933:G:C6	1:A:935:A:C4	3.03	0.46
1:A:937:A:H1'	1:A:1379:G:H1	1.79	0.46
1:A:946:A:O2'	1:A:1333:A:C2'	2.64	0.46
1:A:1013:G:H22	1:A:1015:G:H3'	1.81	0.46
1:A:1055:A:N3	3:C:155:ARG:HD3	2.30	0.46
1:A:1114:C:C5	1:A:1114:C:OP2	2.68	0.46
1:A:1130:A:C8	1:A:1131:G:C8	3.03	0.46
1:A:1144:G:N7	1:A:1145:A:C8	2.83	0.46
1:A:1200:C:O2	1:A:1205:U:C2	2.68	0.46
1:A:1227:A:C6	1:A:1228:C:C2	3.04	0.46
1:A:1258:G:N3	1:A:1259:C:C6	2.84	0.46
1:A:1275:A:C6	1:A:1276:G:C4	3.04	0.46
1:A:1287:A:C6	1:A:1288:A:N1	2.83	0.46
1:A:1379:G:C2	1:A:1380:U:C2	3.03	0.46
1:A:1385:G:H2'	1:A:1386:G:O4'	2.14	0.46
1:A:1448:C:H1'	20:T:23:ARG:HH12	1.80	0.46
1:A:1454:G:H5"	1:A:1454:G:H8	1.80	0.46
1:A:1457:G:C6	1:A:1458:G:C5	3.03	0.46
1:A:1460:C:H3'	1:A:1461:G:H8	1.80	0.46
1:A:1521:C:C2	1:A:1522:U:C6	3.04	0.46
3:C:19:SER:HB2	14:N:92:ILE:C	2.40	0.46
3:C:36:PHE:CZ	14:N:91:GLU:HB2	2.50	0.46
4:D:127:ARG:O	4:D:134:TYR:CD1	2.68	0.46
5:E:20:VAL:O	5:E:30:PHE:HA	2.16	0.46
5:E:104:ILE:HG21	5:E:120:HIS:HB3	1.97	0.46
5:E:158:LYS:HE3	8:H:70:VAL:HG12	1.97	0.46
6:F:29:ILE:HD12	6:F:64:VAL:HG21	1.97	0.46
6:F:37:HIS:CE1	6:F:65:GLU:OE1	2.68	0.46
8:H:38:VAL:HB	8:H:102:VAL:HG11	1.96	0.46
9:I:89:TYR:HB2	9:I:93:LEU:CD1	2.45	0.46
10:J:21:ALA:CB	10:J:96:VAL:HG11	2.44	0.46
11:K:99:LEU:O	11:K:104:PHE:CD1	2.68	0.46
15:O:61:GLN:OE1	15:O:65:LEU:HD11	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:18:LYS:H	17:Q:50:ASN:CG	2.23	0.46
1:A:39:G:N1	1:A:40:C:C2	2.83	0.46
1:A:65:A:C2	1:A:199:A:N3	2.83	0.46
1:A:66:A:C2	1:A:67:C:N3	2.82	0.46
1:A:111:G:H5'	16:P:26:ASN:HA	1.97	0.46
1:A:125:U:H2'	1:A:126:G:O4'	2.15	0.46
1:A:138:G:H2'	1:A:139:A:C5'	2.45	0.46
1:A:144:G:N7	1:A:196:A:N7	2.63	0.46
1:A:145:G:C8	1:A:145:G:C3'	2.99	0.46
1:A:160:A:N1	1:A:161:A:C2	2.84	0.46
1:A:162:A:H4'	1:A:348:G:O2'	2.16	0.46
1:A:179:A:H3'	1:A:180:U:H6	1.81	0.46
1:A:213:G:N7	1:A:214:C:C6	2.84	0.46
1:A:257:G:C2	1:A:270:A:C5	3.03	0.46
1:A:258:G:C2	1:A:259:G:C1'	2.97	0.46
1:A:293:G:N2	1:A:306:A:C2	2.79	0.46
1:A:300:A:C8	1:A:301:G:C1'	2.98	0.46
1:A:362:G:N2	1:A:364:A:H3'	2.31	0.46
1:A:466:A:C2	1:A:468:A:C5	3.03	0.46
1:A:545:C:H2'	1:A:549:C:H5"	1.97	0.46
1:A:660:C:C6	1:A:660:C:H3'	2.49	0.46
1:A:676:A:C4	1:A:677:U:C5	3.03	0.46
1:A:682:G:H2'	1:A:683:G:H8	1.79	0.46
1:A:688:G:C8	1:A:700:G:N2	2.83	0.46
1:A:701:U:C6	1:A:702:A:N1	2.83	0.46
1:A:814:A:C6	1:A:816:A:H1'	2.50	0.46
1:A:819:A:C8	1:A:819:A:P	3.09	0.46
1:A:830:G:C6	1:A:857:C:N3	2.83	0.46
1:A:879:C:P	12:L:2:THR:HG23	2.55	0.46
1:A:895:G:C6	1:A:896:C:C4	3.04	0.46
1:A:969:A:C6	1:A:1230:C:O2	2.68	0.46
1:A:971:G:C6	1:A:1364:U:C6	3.03	0.46
1:A:981:U:O2'	14:N:70:HIS:CE1	2.68	0.46
1:A:1006:G:C6	1:A:1024:G:N2	2.83	0.46
1:A:1013:G:C2	1:A:1017:U:C2	3.03	0.46
1:A:1048:G:H1'	1:A:1215:G:H5"	1.98	0.46
1:A:1088:G:C8	1:A:1088:G:O5'	2.69	0.46
1:A:1101:A:C1'	1:A:1102:A:O4'	2.63	0.46
1:A:1115:U:C2	1:A:1186:G:N2	2.83	0.46
1:A:1169:A:N6	1:A:1170:A:C6	2.82	0.46
1:A:1238:A:C2	1:A:1242:G:O4'	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1287:A:H61	1:A:1371:G:C1’	2.28	0.46
1:A:1288:A:C2	1:A:1352:C:O2	2.69	0.46
1:A:1356:G:C2	1:A:1367:C:O2	2.68	0.46
1:A:1356:G:H1’	10:J:48:ARG:HH21	1.80	0.46
1:A:1397:C:C5’	5:E:28:ARG:HH12	2.29	0.46
1:A:1421:G:N2	1:A:1422:G:H1’	2.29	0.46
1:A:1484:C:H2’	1:A:1485:U:C6	2.50	0.46
1:A:1522:U:N3	1:A:1523:G:C8	2.83	0.46
8:H:100:ILE:HD12	8:H:102:VAL:HG12	1.97	0.46
10:J:21:ALA:HB2	10:J:96:VAL:HG11	1.98	0.46
11:K:46:ALA:C	11:K:48:GLY:H	2.21	0.46
13:M:22:TYR:CE1	13:M:69:ARG:HG3	2.51	0.46
15:O:14:PHE:HA	15:O:83:ARG:CD	2.45	0.46
15:O:41:HIS:O	15:O:44:GLU:HG3	2.15	0.46
15:O:78:THR:O	15:O:81:ILE:HG12	2.15	0.46
22:W:42:GLY:O	22:W:78:ARG:HA	2.16	0.46
1:A:35:G:C6	1:A:36:C:N4	2.84	0.46
1:A:46:G:C6	1:A:366:A:C2	3.04	0.46
1:A:72:A:N6	1:A:98:A:C2	2.84	0.46
1:A:138:G:C2	1:A:226:G:C4	3.03	0.46
1:A:160:A:C2	1:A:347:G:C2	3.03	0.46
1:A:174:A:C2	1:A:175:C:C6	3.04	0.46
1:A:199:A:C6	1:A:200:G:N7	2.84	0.46
1:A:200:G:C6	1:A:201:G:C5	3.04	0.46
1:A:230:G:C5	1:A:231:U:C6	3.04	0.46
1:A:253:A:C5	1:A:254:G:C5	3.03	0.46
1:A:259:G:C2	1:A:260:G:C4	3.03	0.46
1:A:275:G:C4’	17:Q:17:GLU:HB3	2.45	0.46
1:A:287:U:C4	1:A:288:A:N7	2.84	0.46
1:A:293:G:C2	1:A:294:U:C6	3.03	0.46
1:A:299:G:C6	1:A:300:A:C6	3.03	0.46
1:A:323:U:C4	1:A:324:G:C6	3.03	0.46
1:A:325:A:C8	1:A:326:G:C8	3.03	0.46
1:A:342:C:C2	1:A:343:U:C6	3.04	0.46
1:A:357:G:C8	1:A:357:G:H3’	2.49	0.46
1:A:378:G:H2’	1:A:379:C:C6	2.50	0.46
1:A:392:C:H1’	1:A:483:C:C2’	2.46	0.46
1:A:409:U:H3’	1:A:410:G:C8	2.49	0.46
1:A:415:A:C6	1:A:416:G:C4	3.04	0.46
1:A:453:G:N1	1:A:480:U:C2	2.83	0.46
1:A:522:C:H5’	1:A:537:G:OP1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:600:A:C2	1:A:639:G:C5	3.04	0.46
1:A:604:G:C8	1:A:605:U:C5	3.04	0.46
1:A:674:G:N1	1:A:675:A:C6	2.84	0.46
1:A:689:C:C5	1:A:689:C:OP2	2.69	0.46
1:A:696:A:N1	1:A:697:U:C4	2.83	0.46
1:A:737:C:P	6:F:91:ARG:HG2	2.56	0.46
1:A:751:U:H5	1:A:752:G:C5	2.33	0.46
1:A:830:G:C2	1:A:857:C:O2	2.68	0.46
1:A:837:U:H2'	1:A:838:G:H8	1.80	0.46
1:A:864:A:C4	1:A:865:A:C4	3.03	0.46
1:A:887:G:N1	1:A:911:U:C2	2.84	0.46
1:A:893:C:O5'	1:A:893:C:C6	2.68	0.46
1:A:933:G:N7	7:G:2:ARG:HD2	2.31	0.46
1:A:938:A:H4'	7:G:75:LYS:NZ	2.30	0.46
1:A:1010:U:H3	1:A:1019:A:N6	2.13	0.46
1:A:1090:U:H4'	1:A:1171:A:H1'	1.97	0.46
1:A:1114:C:H1'	14:N:99:SER:HB2	1.96	0.46
1:A:1141:C:OP2	1:A:1143:G:C6	2.68	0.46
1:A:1241:G:N2	1:A:1242:G:C4	2.84	0.46
1:A:1260:G:C2	1:A:1276:G:O6	2.68	0.46
1:A:1270:G:H4'	1:A:1313:U:O2'	2.14	0.46
1:A:1332:A:N7	1:A:1333:A:C8	2.84	0.46
1:A:1349:A:C6	1:A:1374:A:C8	3.03	0.46
1:A:1365:G:C2	1:A:1366:C:H1'	2.50	0.46
1:A:1367:C:C6	1:A:1367:C:H3'	2.50	0.46
1:A:1379:G:C5	1:A:1380:U:C5	3.03	0.46
1:A:1379:G:N2	1:A:1380:U:H1'	2.30	0.46
1:A:1437:A:C8	1:A:1437:A:H3'	2.50	0.46
1:A:1457:G:H5"	20:T:29:THR:CG2	2.45	0.46
1:A:1460:C:C2	1:A:1461:G:N9	2.84	0.46
1:A:1469:C:C5	1:A:1470:U:N1	2.83	0.46
1:A:1479:C:C2'	1:A:1480:A:C8	2.98	0.46
1:A:1499:A:C6	1:A:1500:A:C5	3.04	0.46
3:C:39:ARG:HG2	3:C:54:ILE:HD12	1.98	0.46
3:C:87:ARG:HA	3:C:98:ALA:CB	2.46	0.46
4:D:100:VAL:O	4:D:100:VAL:HG12	2.13	0.46
5:E:9:GLU:HG3	5:E:115:GLU:O	2.15	0.46
5:E:39:GLY:HA2	5:E:70:MET:HE1	1.96	0.46
9:I:20:ILE:HD11	9:I:82:ILE:HG12	1.98	0.46
11:K:44:ALA:HB1	11:K:68:ARG:NE	2.30	0.46
11:K:45:THR:H	11:K:68:ARG:NH2	2.12	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:45:HIS:CE1	15:O:48:ASP:OD1	2.69	0.46
20:T:42:ASP:C	20:T:86:ALA:HB1	2.40	0.46
21:U:40:PRO:C	21:U:41:THR:HG23	2.40	0.46
1:A:18:C:N3	1:A:918:A:C2	2.83	0.46
1:A:39:G:C2	1:A:404:G:H1'	2.50	0.46
1:A:40:C:C6	1:A:40:C:H5"	2.50	0.46
1:A:63:C:H42	20:T:8:LYS:HE3	1.80	0.46
1:A:66:A:OP1	1:A:381:C:C5	2.68	0.46
1:A:69:G:H2'	1:A:69:G:N3	2.30	0.46
1:A:74:A:N6	1:A:96:U:H3	2.13	0.46
1:A:75:G:H2'	1:A:76:G:N7	2.31	0.46
1:A:80:A:C4	1:A:81:A:H1'	2.49	0.46
1:A:82:G:OP1	1:A:90:C:H1'	2.15	0.46
1:A:100:G:H2'	1:A:101:A:H8	1.81	0.46
1:A:128:G:O2'	1:A:129:A:H5'	2.15	0.46
1:A:181:A:C2'	1:A:194:C:C6	2.99	0.46
1:A:203:G:H1	1:A:206:C:N4	2.12	0.46
1:A:246:A:C6	1:A:282:A:C5	3.03	0.46
1:A:258:G:C5	1:A:259:G:N7	2.84	0.46
1:A:312:C:O2	1:A:313:A:C8	2.68	0.46
1:A:399:G:C2	1:A:400:C:C6	3.03	0.46
1:A:453:G:N1	1:A:480:U:C4	2.83	0.46
1:A:457:G:C2	1:A:458:U:C4	3.04	0.46
1:A:525:C:C4	1:A:526:C:C5	3.03	0.46
1:A:568:G:C6	1:A:883:C:C4	3.03	0.46
1:A:572:A:N3	1:A:917:G:H1'	2.29	0.46
1:A:577:G:N1	1:A:578:C:C2	2.83	0.46
1:A:582:C:C4	1:A:760:G:C6	3.04	0.46
1:A:607:A:C6	1:A:608:A:C5	3.04	0.46
1:A:609:A:C8	1:A:609:A:O5'	2.69	0.46
1:A:646:G:N1	1:A:647:C:C2	2.84	0.46
1:A:675:A:C5	1:A:676:A:C8	3.04	0.46
1:A:686:U:O2	11:K:43:TRP:CZ2	2.68	0.46
1:A:698:G:C6	1:A:699:C:C4	3.03	0.46
1:A:701:U:OP1	1:A:703:G:H5'	2.14	0.46
1:A:719:C:H3'	1:A:719:C:H6	1.81	0.46
1:A:745:G:C2	1:A:746:A:C4	3.03	0.46
1:A:765:G:C4	1:A:812:G:C2	3.03	0.46
1:A:771:G:N7	1:A:772:U:C5	2.83	0.46
1:A:777:A:N7	1:A:778:G:C8	2.83	0.46
1:A:797:C:C2	1:A:798:U:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:814:A:C2	1:A:1526:G:O2'	2.67	0.46
1:A:832:G:C8	1:A:832:G:C3'	2.99	0.46
1:A:846:G:C2	1:A:847:G:C5	3.03	0.46
1:A:852:G:C5	1:A:853:C:C5	3.03	0.46
1:A:898:G:H22	1:A:900:A:H3'	1.80	0.46
1:A:925:G:C2	1:A:927:G:C4	3.04	0.46
1:A:932:C:C5	7:G:2:ARG:NE	2.84	0.46
1:A:938:A:H4'	7:G:75:LYS:HZ2	1.80	0.46
1:A:939:G:C4	1:A:940:C:C6	3.04	0.46
1:A:975:A:H5'	1:A:1363:A:N6	2.31	0.46
1:A:996:A:N3	1:A:1046:A:H5'	2.30	0.46
1:A:1027:C:C4	1:A:1028:C:C4	3.03	0.46
1:A:1052:U:H3'	1:A:1200:C:C5	2.51	0.46
1:A:1063:C:O5'	1:A:1063:C:H6	1.99	0.46
1:A:1084:G:C5'	1:A:1102:A:C5'	2.94	0.46
1:A:1127:G:N2	1:A:1128:C:H1'	2.30	0.46
1:A:1153:G:H3'	1:A:1153:G:C8	2.50	0.46
1:A:1220:G:H21	19:S:53:GLY:CA	2.26	0.46
1:A:1257:A:H3'	1:A:1258:G:H5'	1.96	0.46
1:A:1274:A:C8	1:A:1274:A:O5'	2.69	0.46
1:A:1355:G:H21	10:J:48:ARG:NH2	2.10	0.46
1:A:1364:U:C3'	1:A:1365:G:H5'	2.45	0.46
1:A:1374:A:C5	1:A:1375:A:N7	2.84	0.46
1:A:1439:G:C6	1:A:1463:U:O2	2.69	0.46
1:A:1469:C:C6	1:A:1469:C:H3'	2.51	0.46
1:A:1526:G:OP2	21:U:37:TYR:O	2.33	0.46
2:B:11:ALA:HA	2:B:14:HIS:HE1	1.77	0.46
2:B:99:MET:HA	2:B:102:ASN:HB3	1.98	0.46
3:C:38:VAL:HG11	3:C:90:VAL:HA	1.97	0.46
4:D:97:LEU:HD13	4:D:124:VAL:HG13	1.98	0.46
4:D:195:ASN:H	4:D:198:LEU:HB3	1.81	0.46
5:E:38:VAL:HG22	5:E:46:GLY:C	2.41	0.46
5:E:73:VAL:HG21	5:E:117:ALA:HB2	1.97	0.46
9:I:47:VAL:HB	9:I:82:ILE:HD12	1.98	0.46
11:K:28:ASN:HD22	11:K:45:THR:CG2	2.28	0.46
17:Q:28:VAL:CG1	17:Q:39:ARG:HB2	2.45	0.46
22:W:132:ILE:H	22:W:132:ILE:CD1	2.27	0.46
1:A:22:G:H21	1:A:913:A:H1'	1.81	0.46
1:A:36:C:H41	12:L:122:LYS:HE2	1.81	0.46
1:A:41:G:C2	1:A:402:G:N3	2.84	0.46
1:A:71:A:C5	1:A:100:G:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:80:A:OP2	1:A:81:A:H8	1.95	0.46
1:A:112:G:N1	1:A:113:G:C8	2.84	0.46
1:A:161:A:N1	1:A:162:A:C4	2.84	0.46
1:A:163:C:OP2	1:A:349:A:H5"	2.15	0.46
1:A:179:A:C6	1:A:180:U:N3	2.83	0.46
1:A:191:G:C4	1:A:192:A:C8	3.03	0.46
1:A:219:U:C6	1:A:219:U:H3'	2.49	0.46
1:A:303:A:H5"	12:L:14:LYS:HE3	1.98	0.46
1:A:335:C:H1'	1:A:1434:A:O4'	2.16	0.46
1:A:381:C:H3'	1:A:382:A:C8	2.50	0.46
1:A:410:G:C8	1:A:410:G:O5'	2.69	0.46
1:A:514:C:H2'	1:A:515:G:H8	1.80	0.46
1:A:521:G:H1	1:A:528:C:H42	1.63	0.46
1:A:544:G:N1	1:A:545:C:C2	2.83	0.46
1:A:559:A:H5"	5:E:127:TYR:CE1	2.50	0.46
1:A:575:G:C5	1:A:821:G:C8	3.04	0.46
1:A:596:A:C2	1:A:645:G:N3	2.84	0.46
1:A:600:A:C6	1:A:639:G:C6	3.04	0.46
1:A:667:G:N1	1:A:668:G:C6	2.83	0.46
1:A:668:G:O4'	15:O:45:HIS:CG	2.68	0.46
1:A:672:U:C4'	6:F:86:ARG:HH21	2.29	0.46
1:A:675:A:H2'	1:A:676:A:O4'	2.15	0.46
1:A:782:A:C8	1:A:783:C:C5	3.04	0.46
1:A:815:A:N7	1:A:1509:C:O2	2.49	0.46
1:A:856:C:C5	1:A:871:U:O4	2.69	0.46
1:A:867:G:H2'	1:A:868:C:C6	2.50	0.46
1:A:883:C:C5	1:A:883:C:OP2	2.69	0.46
1:A:1003:G:C2	1:A:1005:A:OP1	2.69	0.46
1:A:1004:A:C8	1:A:1005:A:C8	3.01	0.46
1:A:1009:U:O2	1:A:1009:U:H2'	2.14	0.46
1:A:1020:G:C6	14:N:19:TYR:O	2.68	0.46
1:A:1092:A:C8	1:A:1093:A:H1'	2.51	0.46
1:A:1125:U:H3'	1:A:1127:G:C6	2.50	0.46
1:A:1136:C:H5"	1:A:1137:C:OP2	2.16	0.46
1:A:1171:A:H2'	1:A:1172:C:O4'	2.16	0.46
1:A:1215:G:C6	1:A:1216:A:C5	3.04	0.46
1:A:1238:A:C2	1:A:1241:G:N3	2.83	0.46
1:A:1263:C:H42	1:A:1273:C:N4	2.14	0.46
1:A:1267:C:C4	1:A:1268:G:C4	3.04	0.46
1:A:1287:A:H8	1:A:1287:A:H5"	1.81	0.46
1:A:1303:C:H3'	1:A:1304:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1305:G:N2	1:A:1306:A:N7	2.63	0.46
1:A:1348:U:H4'	9:I:121:ARG:HB2	1.98	0.46
1:A:1374:A:H2'	1:A:1375:A:C8	2.51	0.46
1:A:1374:A:N6	1:A:1375:A:C6	2.84	0.46
1:A:1376:U:H5"	7:G:97:ALA:C	2.41	0.46
1:A:1392:G:H21	1:A:1502:A:H1'	1.80	0.46
1:A:1421:G:H1	1:A:1479:C:N4	2.13	0.46
1:A:1463:U:C2	1:A:1464:U:C5	3.03	0.46
2:B:31:PHE:HB2	2:B:38:HIS:HA	1.97	0.46
2:B:69:VAL:HA	2:B:91:VAL:HG23	1.98	0.46
4:D:98:ASP:CA	4:D:132:ALA:HB1	2.46	0.46
6:F:42:TRP:CZ2	6:F:61:LEU:HD22	2.51	0.46
8:H:9:MET:HA	8:H:26:MET:SD	2.56	0.46
8:H:33:VAL:HG22	8:H:48:PHE:CE2	2.50	0.46
8:H:33:VAL:HG21	8:H:50:VAL:HG21	1.98	0.46
8:H:63:LYS:HB2	8:H:70:VAL:HG11	1.98	0.46
10:J:28:THR:HG21	10:J:86:ALA:HA	1.97	0.46
11:K:30:ILE:CG2	11:K:45:THR:HG23	2.45	0.46
11:K:96:ILE:HA	11:K:99:LEU:HD12	1.97	0.46
15:O:68:TYR:CE1	15:O:71:ARG:NH1	2.84	0.46
22:W:48:PHE:HB3	22:W:51:HIS:HB2	1.98	0.46
22:W:312:ILE:HD12	22:W:312:ILE:N	2.30	0.46
1:A:123:U:C4'	1:A:290:C:H1'	2.45	0.46
1:A:159:G:N3	1:A:163:C:C2	2.83	0.46
1:A:181:A:C4'	1:A:182:A:O5'	2.63	0.46
1:A:218:U:C4	1:A:219:U:N3	2.84	0.46
1:A:240:G:C2	1:A:287:U:O2	2.69	0.46
1:A:277:C:H2'	1:A:278:G:H8	1.81	0.46
1:A:350:G:N2	1:A:351:G:O6	2.48	0.46
1:A:368:U:C3'	1:A:369:G:H5'	2.46	0.46
1:A:372:C:H4'	1:A:373:A:OP1	2.16	0.46
1:A:427:U:H3'	1:A:428:G:C8	2.50	0.46
1:A:450:G:OP2	1:A:451:A:H3'	2.16	0.46
1:A:455:G:N2	1:A:478:A:H2'	2.31	0.46
1:A:474:G:H2'	1:A:475:C:C6	2.50	0.46
1:A:614:C:H6	4:D:80:ARG:HH22	1.63	0.46
1:A:742:G:C2	1:A:743:A:C4	3.03	0.46
1:A:747:A:C2	1:A:748:G:C4	3.03	0.46
1:A:766:A:C8	1:A:814:A:C6	3.04	0.46
1:A:910:C:H5"	12:L:93:ARG:HH22	1.80	0.46
1:A:923:A:C2	1:A:1395:C:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:932:C:H2'	1:A:933:G:C8	2.50	0.46
1:A:1025:U:O3'	1:A:1026:G:C8	2.69	0.46
1:A:1028:C:C4	1:A:1029:U:C4	3.04	0.46
1:A:1048:G:C6	1:A:1210:C:N4	2.83	0.46
1:A:1064:G:N9	1:A:1066:C:C6	2.84	0.46
1:A:1075:U:H4'	2:B:170:ILE:CG2	2.45	0.46
1:A:1087:G:N1	1:A:1088:G:C5	2.84	0.46
1:A:1151:A:H4'	10:J:71:LEU:O	2.16	0.46
1:A:1152:A:C6	1:A:1153:G:C6	3.03	0.46
1:A:1248:A:C2	1:A:1290:G:H1'	2.51	0.46
1:A:1261:A:H2'	1:A:1262:C:H5'	1.97	0.46
1:A:1262:C:N4	1:A:1263:C:H1'	2.30	0.46
1:A:1304:G:H1'	1:A:1334:G:H1	1.80	0.46
1:A:1378:C:N4	1:A:1379:G:C6	2.83	0.46
1:A:1495:U:N3	1:A:1496:C:C4	2.84	0.46
1:A:1500:A:H5"	1:A:1508:A:P	2.56	0.46
5:E:88:HIS:ND1	5:E:134:ASN:HA	2.30	0.46
6:F:29:ILE:CD1	6:F:66:ALA:HB2	2.46	0.46
8:H:93:LYS:HG2	8:H:116:ARG:HG2	1.97	0.46
8:H:104:SER:HA	8:H:108:GLY:O	2.16	0.46
8:H:113:ARG:HA	8:H:113:ARG:NE	2.31	0.46
9:I:124:PRO:C	9:I:125:GLN:HG2	2.40	0.46
10:J:11:LYS:O	10:J:96:VAL:HG13	2.16	0.46
11:K:21:HIS:ND1	11:K:34:THR:HG21	2.30	0.46
11:K:33:ILE:CB	11:K:73:VAL:HG11	2.36	0.46
14:N:70:HIS:C	14:N:72:PHE:H	2.22	0.46
1:A:9:G:C2	1:A:10:A:N9	2.84	0.46
1:A:9:G:C6	1:A:26:A:C6	3.04	0.46
1:A:22:G:H2'	1:A:913:A:C2	2.51	0.46
1:A:64:G:O5'	1:A:64:G:H8	1.98	0.46
1:A:72:A:C2	1:A:73:C:C5	3.04	0.46
1:A:113:G:C4'	1:A:354:G:H4'	2.45	0.46
1:A:119:A:H2'	1:A:240:G:N7	2.31	0.46
1:A:157:U:O2	1:A:165:G:C2	2.69	0.46
1:A:160:A:C4'	1:A:344:A:C5	2.98	0.46
1:A:238:A:C4	1:A:239:U:C6	3.03	0.46
1:A:264:C:C5	1:A:264:C:OP2	2.68	0.46
1:A:279:A:H5"	1:A:281:G:O4'	2.16	0.46
1:A:320:A:C2'	1:A:328:C:H41	2.29	0.46
1:A:329:A:C8	1:A:329:A:C5'	2.99	0.46
1:A:409:U:O2	1:A:409:U:H2'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:454:G:C2	1:A:455:G:C8	3.03	0.46
1:A:474:G:N7	1:A:475:C:C4	2.84	0.46
1:A:513:C:C4	1:A:514:C:C5	3.04	0.46
1:A:528:C:H41	12:L:45:ASN:ND2	2.14	0.46
1:A:604:G:C6	1:A:605:U:N3	2.84	0.46
1:A:632:U:C5	1:A:633:G:C4	3.03	0.46
1:A:640:A:C5	1:A:641:U:N3	2.83	0.46
1:A:642:A:C8	8:H:107:LYS:HA	2.51	0.46
1:A:712:A:C2'	1:A:713:G:H8	2.28	0.46
1:A:765:G:C6	1:A:812:G:C4	3.03	0.46
1:A:780:A:C2	1:A:803:G:C6	3.04	0.46
1:A:878:A:C5	1:A:879:C:C4	3.04	0.46
1:A:879:C:H2'	1:A:880:C:C6	2.50	0.46
1:A:914:A:H8	1:A:914:A:C5'	2.28	0.46
1:A:962:C:H1'	1:A:1201:A:C5	2.50	0.46
1:A:1053:G:H2'	1:A:1054:C:OP2	2.15	0.46
1:A:1058:G:C2	1:A:1059:C:C2	3.03	0.46
1:A:1070:U:C6	1:A:1070:U:H5"	2.51	0.46
1:A:1143:G:H2'	1:A:1144:G:O4'	2.16	0.46
1:A:1165:U:C5	1:A:1166:G:C6	3.04	0.46
1:A:1184:G:C6	1:A:1185:G:C4	3.04	0.46
1:A:1201:A:H5"	1:A:1203:C:OP2	2.16	0.46
1:A:1238:A:N7	1:A:1303:C:H1'	2.30	0.46
1:A:1257:A:OP1	1:A:1257:A:C2	2.69	0.46
1:A:1261:A:C5	1:A:1275:A:C4	3.04	0.46
1:A:1261:A:N6	1:A:1262:C:C2	2.84	0.46
1:A:1277:C:H1'	1:A:1282:C:O2	2.15	0.46
1:A:1291:U:H4'	9:I:41:GLU:HG2	1.98	0.46
1:A:1344:C:H1'	1:A:1349:A:H4'	1.98	0.46
1:A:1346:A:C5	1:A:1374:A:C8	3.03	0.46
4:D:106:PHE:CD1	4:D:174:ALA:HB1	2.50	0.46
11:K:120:CYS:HB3	21:U:32:ARG:HH12	1.80	0.46
12:L:29:LYS:HG3	12:L:56:LEU:HD13	1.97	0.46
13:M:10:ASP:HA	13:M:44:ILE:HG23	1.97	0.46
13:M:22:TYR:HB3	13:M:69:ARG:HH21	1.81	0.46
1:A:9:G:C4	1:A:26:A:C2	3.04	0.46
1:A:32:A:H5"	1:A:398:U:O4'	2.15	0.46
1:A:35:G:C2	1:A:550:G:C4	3.04	0.46
1:A:57:G:C5	1:A:58:C:C6	3.04	0.46
1:A:61:G:C2	1:A:107:G:O6	2.69	0.46
1:A:72:A:H2'	1:A:73:C:H6	1.76	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:158:G:N2	1:A:159:G:H1'	2.31	0.46
1:A:200:G:N1	1:A:201:G:C5	2.84	0.46
1:A:205:A:H3'	1:A:206:C:H5	1.78	0.46
1:A:237:G:O6	1:A:238:A:C6	2.69	0.46
1:A:320:A:H2'	1:A:328:C:H41	1.80	0.46
1:A:397:A:H4'	1:A:398:U:C4	2.51	0.46
1:A:424:G:N1	1:A:425:G:C4	2.83	0.46
1:A:461:A:C8	1:A:466:A:C5'	2.98	0.46
1:A:468:A:N6	1:A:469:C:H41	2.14	0.46
1:A:595:A:H5"	1:A:596:A:H5'	1.97	0.46
1:A:596:A:N1	1:A:597:G:C4	2.83	0.46
1:A:616:G:H4'	16:P:46:LYS:HD3	1.97	0.46
1:A:628:G:H3'	1:A:629:A:N7	2.30	0.46
1:A:639:G:C5	1:A:640:A:N7	2.84	0.46
1:A:722:G:C6	1:A:724:G:C4	3.04	0.46
1:A:739:C:H5	6:F:2:ARG:HH22	1.63	0.46
1:A:775:G:C2	1:A:776:G:C6	3.03	0.46
1:A:788:U:H1'	1:A:795:C:N3	2.31	0.46
1:A:858:G:C2	1:A:859:G:OP2	2.69	0.46
1:A:865:A:C6	1:A:866:C:N4	2.84	0.46
1:A:895:G:N1	1:A:905:U:H1'	2.29	0.46
1:A:907:A:C8	1:A:907:A:C4'	2.99	0.46
1:A:923:A:H2'	1:A:924:C:C6	2.46	0.46
1:A:1042:A:C2	1:A:1043:G:C6	3.04	0.46
1:A:1082:A:C4	1:A:1083:U:C5	3.04	0.46
1:A:1091:U:H1'	1:A:1095:U:O2	2.16	0.46
1:A:1098:C:O2'	1:A:1167:A:C5	2.69	0.46
1:A:1130:A:N7	1:A:1131:G:C4	2.84	0.46
1:A:1157:A:C5	1:A:1180:A:C6	3.04	0.46
1:A:1204:A:H2	3:C:189:HIS:CE1	2.33	0.46
1:A:1266:G:H1'	1:A:1270:G:N2	2.30	0.46
1:A:1333:A:C5	1:A:1334:G:N9	2.84	0.46
1:A:1438:G:C4	1:A:1464:U:O2	2.69	0.46
1:A:1514:G:N2	1:A:1522:U:H1'	2.31	0.46
3:C:63:ILE:CD1	3:C:94:ALA:HB2	2.44	0.46
3:C:200:TRP:O	3:C:201:ILE:HD13	2.16	0.46
5:E:21:SER:HA	5:E:30:PHE:HA	1.96	0.46
11:K:41:LEU:HB2	11:K:73:VAL:HG12	1.98	0.46
13:M:104:ASN:C	13:M:106:ARG:H	2.23	0.46
15:O:44:GLU:O	15:O:45:HIS:CB	2.64	0.46
16:P:16:PHE:CE1	16:P:38:PHE:CE2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:39:ARG:CZ	17:Q:39:ARG:HA	2.45	0.46
18:R:20:ILE:HG21	18:R:50:TYR:CE1	2.51	0.46
22:W:62:HIS:CE1	22:W:94:LYS:O	2.68	0.46
1:A:45:G:N1	1:A:46:G:C5	2.84	0.46
1:A:46:G:O2'	1:A:365:U:H2'	2.16	0.46
1:A:57:G:C6	1:A:356:A:C6	3.04	0.46
1:A:57:G:N2	1:A:58:C:H1'	2.31	0.46
1:A:97:G:C5	1:A:98:A:C4	3.04	0.46
1:A:117:G:C5	1:A:118:U:C4	3.04	0.46
1:A:118:U:C2	1:A:288:A:N1	2.84	0.46
1:A:144:G:C5	1:A:145:G:C8	3.03	0.46
1:A:178:C:N4	1:A:196:A:P	2.89	0.46
1:A:205:A:C5	1:A:206:C:C5	3.04	0.46
1:A:214:C:H2'	1:A:215:C:H6	1.80	0.46
1:A:234:C:C4'	17:Q:65:PRO:HD3	2.46	0.46
1:A:246:A:C2	1:A:279:A:N7	2.84	0.46
1:A:248:C:H1'	1:A:277:C:O2	2.16	0.46
1:A:262:A:H2'	1:A:263:A:O4'	2.16	0.46
1:A:299:G:C2'	1:A:300:A:H5'	2.46	0.46
1:A:311:C:H2'	1:A:312:C:O4'	2.16	0.46
1:A:319:G:N2	1:A:335:C:C2	2.84	0.46
1:A:337:G:C2	1:A:338:A:C6	3.04	0.46
1:A:342:C:N3	1:A:348:G:N2	2.64	0.46
1:A:410:G:O5'	1:A:410:G:H8	1.99	0.46
1:A:425:G:C2	1:A:426:U:C2	3.04	0.46
1:A:448:A:H2'	1:A:449:G:H5'	1.98	0.46
1:A:449:G:N2	1:A:450:G:C2	2.84	0.46
1:A:455:G:N3	1:A:478:A:C2	2.84	0.46
1:A:466:A:N3	1:A:467:U:N3	2.64	0.46
1:A:688:G:N2	1:A:700:G:C1'	2.79	0.46
1:A:780:A:H3'	1:A:800:G:C6	2.51	0.46
1:A:794:A:C5	1:A:795:C:C6	3.03	0.46
1:A:799:G:C5	1:A:800:G:C8	3.03	0.46
1:A:836:G:C4	1:A:837:U:C6	3.04	0.46
1:A:905:U:C2	1:A:906:A:C5	3.03	0.46
1:A:909:A:H3'	1:A:910:C:H6	1.81	0.46
1:A:946:A:C2'	1:A:947:G:C8	2.96	0.46
1:A:1020:G:C8	1:A:1020:G:C5'	2.98	0.46
1:A:1063:C:O5'	1:A:1063:C:C6	2.69	0.46
1:A:1092:A:C2	1:A:1093:A:C4	3.04	0.46
1:A:1136:C:C4	1:A:1138:G:O6	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1173:U:H2'	1:A:1174:G:H8	1.81	0.46
1:A:1231:G:H4'	9:I:129:ARG:N	2.30	0.46
1:A:1292:G:C6	1:A:1293:C:C4	3.04	0.46
1:A:1479:C:C2'	1:A:1480:A:H8	2.27	0.46
1:A:1496:C:H6	1:A:1496:C:O5'	1.99	0.46
1:A:1500:A:C2	1:A:1501:C:C4	3.04	0.46
2:B:84:LEU:HA	2:B:90:PHE:CE1	2.50	0.46
4:D:116:LEU:HG	4:D:153:ARG:HH21	1.80	0.46
9:I:12:LYS:O	9:I:69:GLY:HA2	2.16	0.46
14:N:33:VAL:HG23	14:N:33:VAL:O	2.16	0.46
17:Q:22:VAL:O	17:Q:22:VAL:HG13	2.16	0.46
1:A:17:U:C2	1:A:919:A:C2	3.05	0.45
1:A:112:G:C2	1:A:113:G:C8	3.04	0.45
1:A:138:G:N2	1:A:139:A:C4	2.85	0.45
1:A:145:G:N2	1:A:178:C:C2	2.84	0.45
1:A:161:A:H2	1:A:347:G:H2'	1.81	0.45
1:A:254:G:N2	1:A:255:G:C4	2.84	0.45
1:A:254:G:H4'	17:Q:44:HIS:CE1	2.52	0.45
1:A:263:A:O2'	1:A:264:C:H5'	2.16	0.45
1:A:325:A:N7	1:A:326:G:C5	2.84	0.45
1:A:342:C:C2	1:A:343:U:N1	2.84	0.45
1:A:343:U:N3	1:A:345:C:C2	2.84	0.45
1:A:363:A:OP1	1:A:363:A:C8	2.69	0.45
1:A:367:U:C2	1:A:369:G:C8	3.03	0.45
1:A:408:A:C2	1:A:409:U:C5	3.04	0.45
1:A:409:U:C6	1:A:409:U:OP2	2.69	0.45
1:A:419:C:H5"	1:A:513:C:H1'	1.98	0.45
1:A:428:G:C1'	1:A:430:A:C8	2.99	0.45
1:A:469:C:H3'	1:A:470:C:C5	2.51	0.45
1:A:474:G:H3'	1:A:475:C:C6	2.51	0.45
1:A:506:G:C8	1:A:506:G:O5'	2.68	0.45
1:A:548:G:C6	1:A:549:C:N3	2.85	0.45
1:A:564:C:C5	1:A:565:U:O4	2.68	0.45
1:A:633:G:C5	1:A:634:C:C4	3.04	0.45
1:A:650:G:N1	1:A:651:C:C5	2.85	0.45
1:A:653:U:O2'	1:A:654:G:H5'	2.17	0.45
1:A:678:U:O2'	1:A:777:A:H2'	2.16	0.45
1:A:692:U:H1'	1:A:695:A:H62	1.80	0.45
1:A:727:G:C6	1:A:731:G:C5	3.04	0.45
1:A:756:C:C4	1:A:757:U:C5	3.04	0.45
1:A:808:C:H2'	1:A:809:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:809:G:N3	1:A:809:G:H2'	2.30	0.45
1:A:842:U:O4'	1:A:846:G:C6	2.69	0.45
1:A:892:A:OP2	1:A:906:A:C2	2.69	0.45
1:A:895:G:C8	1:A:895:G:H3'	2.50	0.45
1:A:961:U:H2'	1:A:962:C:C5	2.51	0.45
1:A:974:A:C2	1:A:977:A:C2	3.03	0.45
1:A:989:U:C4'	1:A:1016:A:C2	3.00	0.45
1:A:1013:G:N2	1:A:1015:G:H3'	2.31	0.45
1:A:1028:C:C5	1:A:1029:U:C5	3.04	0.45
1:A:1048:G:H1'	1:A:1215:G:C5'	2.46	0.45
1:A:1085:U:O4'	1:A:1094:G:C2	2.69	0.45
1:A:1148:U:H5'	9:I:6:TYR:OH	2.16	0.45
1:A:1152:A:H2'	1:A:1153:G:C8	2.50	0.45
1:A:1171:A:C2	1:A:1172:C:C2	3.04	0.45
1:A:1176:A:C3'	1:A:1177:G:H8	2.29	0.45
1:A:1219:A:H3'	1:A:1220:G:H8	1.81	0.45
1:A:1238:A:N1	1:A:1241:G:N3	2.64	0.45
1:A:1247:U:H6	1:A:1247:U:O5'	1.99	0.45
1:A:1304:G:C2'	1:A:1333:A:H61	2.29	0.45
1:A:1356:G:N2	1:A:1357:A:C2	2.85	0.45
1:A:1375:A:N7	1:A:1376:U:C4	2.84	0.45
1:A:1383:C:C6	7:G:78:ARG:NH2	2.84	0.45
1:A:1392:G:N3	1:A:1502:A:H4'	2.31	0.45
1:A:1399:C:H2'	1:A:1502:A:C2	2.50	0.45
1:A:1441:A:C8	1:A:1441:A:C3'	2.99	0.45
1:A:1524:C:C2	1:A:1525:G:C8	3.04	0.45
2:B:121:GLN:C	2:B:123:GLY:H	2.23	0.45
4:D:194:ILE:HG22	4:D:198:LEU:HD12	1.97	0.45
6:F:37:HIS:CE1	6:F:98:GLU:OE2	2.69	0.45
6:F:62:MET:HG2	6:F:64:VAL:HG13	1.97	0.45
7:G:67:ASN:O	7:G:134:VAL:HG23	2.15	0.45
8:H:38:VAL:HG12	8:H:42:GLU:HG3	1.97	0.45
8:H:105:THR:H	8:H:110:MET:HE1	1.82	0.45
9:I:97:LEU:N	9:I:100:ALA:HB2	2.31	0.45
11:K:18:GLY:HA2	11:K:36:ARG:N	2.31	0.45
15:O:73:ASP:CB	15:O:76:ARG:H	2.28	0.45
17:Q:59:GLU:C	17:Q:60:ILE:CG2	2.89	0.45
18:R:62:ARG:HB3	18:R:69:TYR:HB2	1.98	0.45
22:W:214:GLY:O	22:W:273:PHE:CD1	2.69	0.45
1:A:57:G:C2	1:A:356:A:C2	3.03	0.45
1:A:59:A:C2	1:A:354:G:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:135:C:H2'	1:A:136:C:H6	1.82	0.45
1:A:137:U:H1'	1:A:227:G:N2	2.31	0.45
1:A:139:A:C2	1:A:140:U:N1	2.84	0.45
1:A:175:C:O2	1:A:175:C:H2'	2.16	0.45
1:A:184:G:C6	1:A:194:C:H5	2.33	0.45
1:A:206:C:C4	1:A:207:C:N3	2.85	0.45
1:A:215:C:H2'	1:A:216:U:O4'	2.17	0.45
1:A:216:U:O5'	1:A:216:U:C6	2.69	0.45
1:A:230:G:C2	1:A:231:U:H1'	2.51	0.45
1:A:433:G:C4	1:A:434:U:C6	3.04	0.45
1:A:450:G:N2	1:A:483:C:N3	2.64	0.45
1:A:462:G:N3	1:A:471:U:H1'	2.31	0.45
1:A:519:C:C6	1:A:529:G:N2	2.84	0.45
1:A:596:A:C4	1:A:645:G:N2	2.84	0.45
1:A:596:A:H2'	1:A:597:G:C8	2.51	0.45
1:A:617:G:N1	1:A:618:C:C5	2.84	0.45
1:A:626:G:C4	1:A:627:G:N7	2.83	0.45
1:A:676:A:C2	1:A:677:U:N3	2.84	0.45
1:A:678:U:H3	1:A:712:A:H61	1.63	0.45
1:A:686:U:O2	11:K:43:TRP:HZ2	1.99	0.45
1:A:779:C:H4'	11:K:123:PRO:HD3	1.97	0.45
1:A:822:U:H3	1:A:878:A:N6	2.14	0.45
1:A:837:U:H2'	1:A:838:G:C8	2.51	0.45
1:A:865:A:N3	1:A:866:C:C6	2.84	0.45
1:A:932:C:H42	1:A:1384:C:H42	1.64	0.45
1:A:935:A:C2	1:A:936:C:H1'	2.51	0.45
1:A:975:A:H5"	1:A:1359:C:O2	2.16	0.45
1:A:987:G:N1	1:A:988:G:C4	2.84	0.45
1:A:1005:A:C6	1:A:1025:U:H4'	2.52	0.45
1:A:1007:U:H2'	1:A:1008:U:H5"	1.98	0.45
1:A:1017:U:C4	1:A:1018:G:N7	2.85	0.45
1:A:1030:U:H2'	1:A:1032:G:C8	2.52	0.45
1:A:1043:G:C8	1:A:1043:G:OP2	2.69	0.45
1:A:1074:G:H4'	2:B:102:ASN:N	2.31	0.45
1:A:1096:C:O2'	1:A:1170:A:H4'	2.16	0.45
1:A:1107:C:H3'	1:A:1107:C:C6	2.51	0.45
1:A:1114:C:OP2	1:A:1114:C:C4	2.68	0.45
1:A:1175:G:C6	1:A:1176:A:C6	3.05	0.45
1:A:1206:G:C5	1:A:1207:G:N7	2.84	0.45
1:A:1220:G:N1	1:A:1221:G:C5	2.84	0.45
1:A:1234:C:H1'	1:A:1364:U:C4	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1242:G:C6	1:A:1243:C:C5	3.05	0.45
1:A:1244:G:N1	1:A:1245:C:C2	2.84	0.45
1:A:1254:A:C2	1:A:1284:C:C2	3.04	0.45
1:A:1268:G:N3	1:A:1326:U:O2'	2.49	0.45
1:A:1381:U:H2'	7:G:80:GLY:N	2.30	0.45
1:A:1420:U:H3	1:A:1480:A:H61	1.64	0.45
1:A:1426:G:N2	1:A:1427:C:C2	2.84	0.45
1:A:1433:A:C6	1:A:1468:A:H1'	2.50	0.45
1:A:1449:C:C5	1:A:1450:U:C5	3.03	0.45
2:B:126:ASP:CA	2:B:130:LYS:HB2	2.44	0.45
3:C:116:ALA:HB2	3:C:199:VAL:HB	1.99	0.45
11:K:14:GLN:HB3	11:K:76:TYR:HA	1.98	0.45
11:K:41:LEU:C	11:K:73:VAL:HG12	2.41	0.45
12:L:52:CYS:SG	12:L:66:ILE:HD11	2.55	0.45
13:M:22:TYR:CZ	13:M:69:ARG:HG3	2.51	0.45
13:M:84:CYS:HB3	19:S:65:MET:SD	2.55	0.45
16:P:17:TYR:CE1	16:P:70:ARG:CZ	2.99	0.45
16:P:21:VAL:HB	16:P:34:GLU:HG2	1.97	0.45
17:Q:46:HIS:HB2	17:Q:74:LEU:H	1.81	0.45
22:W:44:VAL:HB	22:W:75:THR:HA	1.98	0.45
22:W:140:ILE:HG21	22:W:215:GLN:HE21	1.81	0.45
1:A:41:G:C2	1:A:42:G:C5	3.03	0.45
1:A:49:U:C6	1:A:49:U:H3'	2.51	0.45
1:A:59:A:OP2	20:T:3:ILE:HG13	2.15	0.45
1:A:93:U:C2	1:A:95:C:N4	2.84	0.45
1:A:112:G:N3	1:A:112:G:H2'	2.31	0.45
1:A:119:A:C6	1:A:240:G:C8	3.04	0.45
1:A:155:A:C4	1:A:167:A:N3	2.84	0.45
1:A:178:C:C2	1:A:179:A:C8	3.05	0.45
1:A:186:C:H4'	20:T:75:LYS:C	2.41	0.45
1:A:194:C:C5'	20:T:59:ARG:HB2	2.47	0.45
1:A:201:G:C5	1:A:202:G:C6	3.04	0.45
1:A:208:U:C5	1:A:210:C:C6	3.05	0.45
1:A:218:U:H3'	1:A:219:U:C5	2.52	0.45
1:A:254:G:C2	1:A:273:U:C2	3.04	0.45
1:A:308:C:H2'	1:A:309:A:C8	2.52	0.45
1:A:323:U:H3'	1:A:324:G:H8	1.82	0.45
1:A:359:G:C6	1:A:360:G:H1'	2.51	0.45
1:A:373:A:C6	1:A:391:G:H1'	2.51	0.45
1:A:410:G:O6	1:A:430:A:H5'	2.16	0.45
1:A:442:G:N2	1:A:443:C:H1'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:445:G:C6	1:A:446:G:C5	3.04	0.45
1:A:445:G:C6	1:A:446:G:N7	2.84	0.45
1:A:448:A:C8	1:A:448:A:H5"	2.50	0.45
1:A:453:G:N1	1:A:480:U:N3	2.64	0.45
1:A:465:A:N3	1:A:466:A:C8	2.85	0.45
1:A:501:C:H2'	1:A:502:A:C8	2.51	0.45
1:A:503:C:H42	1:A:542:G:H1	1.63	0.45
1:A:512:U:C2	1:A:540:G:N2	2.85	0.45
1:A:521:G:C2	1:A:522:C:C2	3.05	0.45
1:A:525:C:H2'	1:A:526:C:C6	2.52	0.45
1:A:597:G:C8	1:A:598:U:C5	3.05	0.45
1:A:603:U:H2'	1:A:604:G:N9	2.32	0.45
1:A:626:G:N1	1:A:627:G:C5	2.84	0.45
1:A:633:G:H8	1:A:633:G:O5'	2.00	0.45
1:A:655:A:C8	1:A:655:A:O5'	2.69	0.45
1:A:713:G:N2	1:A:714:G:C2	2.84	0.45
1:A:795:C:OP2	1:A:796:C:C4	2.69	0.45
1:A:836:G:C4	1:A:851:G:C2	3.04	0.45
1:A:840:C:C2	1:A:842:U:OP2	2.70	0.45
1:A:910:C:O2	1:A:1489:G:H5"	2.16	0.45
1:A:927:G:H2'	1:A:928:G:O4'	2.16	0.45
1:A:938:A:H1'	1:A:1377:A:C4'	2.47	0.45
1:A:988:G:N2	1:A:1218:C:H1'	2.31	0.45
1:A:1005:A:H5"	1:A:1006:G:OP2	2.16	0.45
1:A:1014:A:H1'	19:S:33:TRP:HB2	1.98	0.45
1:A:1251:A:N3	1:A:1370:G:H1'	2.31	0.45
1:A:1275:A:C2	1:A:1276:G:H1'	2.52	0.45
1:A:1281:C:C4	10:J:9:ARG:NH2	2.84	0.45
1:A:1288:A:H1'	1:A:1353:G:O4'	2.15	0.45
1:A:1291:U:C4'	9:I:41:GLU:HG2	2.47	0.45
1:A:1304:G:C4	1:A:1305:G:C4	3.04	0.45
1:A:1336:C:H4'	1:A:1337:G:H5'	1.98	0.45
1:A:1437:A:C2	1:A:1465:A:C5	3.04	0.45
1:A:1488:G:C8	1:A:1488:G:OP2	2.69	0.45
1:A:1497:G:C6	1:A:1498:U:C4	3.03	0.45
2:B:61:SER:HA	2:B:225:SER:CA	2.47	0.45
2:B:125:PHE:O	2:B:125:PHE:CD2	2.69	0.45
2:B:185:ILE:HA	2:B:199:ILE:HB	1.99	0.45
6:F:6:ILE:CG1	6:F:64:VAL:HG22	2.46	0.45
7:G:68:VAL:HG21	7:G:103:ILE:HG12	1.98	0.45
9:I:17:ARG:HE	9:I:65:THR:HG21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:66:VAL:CG1	9:I:78:ILE:HD11	2.45	0.45
13:M:1:ALA:O	13:M:8:ILE:HA	2.16	0.45
13:M:5:GLY:HA3	13:M:21:ILE:O	2.16	0.45
13:M:79:LEU:HD21	13:M:86:ARG:HE	1.82	0.45
22:W:48:PHE:CG	22:W:53:ASP:HB2	2.51	0.45
1:A:51:A:N1	1:A:116:A:C5	2.84	0.45
1:A:66:A:N1	1:A:67:C:C4	2.84	0.45
1:A:78:A:H2'	1:A:79:G:N9	2.30	0.45
1:A:117:G:C8	1:A:117:G:O5'	2.70	0.45
1:A:127:G:N2	1:A:235:C:C2	2.85	0.45
1:A:144:G:C8	1:A:144:G:C3'	2.99	0.45
1:A:158:G:C2	1:A:164:G:C8	3.05	0.45
1:A:191:G:C2	1:A:192:A:C4	3.05	0.45
1:A:246:A:C5	1:A:279:A:C4	3.04	0.45
1:A:258:G:H3'	1:A:259:G:H8	1.81	0.45
1:A:337:G:C6	1:A:338:A:N6	2.84	0.45
1:A:389:A:N3	1:A:389:A:H2'	2.31	0.45
1:A:404:G:C6	1:A:405:U:C4	3.05	0.45
1:A:406:G:N2	1:A:437:U:C2	2.84	0.45
1:A:409:U:H5"	4:D:24:VAL:N	2.31	0.45
1:A:446:G:C2	1:A:447:G:C1'	2.99	0.45
1:A:500:G:H22	1:A:549:C:C4'	2.30	0.45
1:A:556:C:H3'	1:A:556:C:C6	2.50	0.45
1:A:565:U:P	1:A:566:G:H3'	2.56	0.45
1:A:595:A:O4'	1:A:596:A:C8	2.70	0.45
1:A:602:A:C4	1:A:637:C:N3	2.84	0.45
1:A:605:U:C6	1:A:605:U:OP2	2.70	0.45
1:A:628:G:H22	1:A:629:A:H1'	1.81	0.45
1:A:651:C:H3'	1:A:652:U:H6	1.82	0.45
1:A:660:C:C2	1:A:746:A:C2	3.04	0.45
1:A:746:A:N1	1:A:747:A:C8	2.85	0.45
1:A:760:G:C2	1:A:761:G:H1'	2.52	0.45
1:A:770:C:C2	1:A:771:G:N7	2.84	0.45
1:A:794:A:H3'	1:A:795:C:C6	2.51	0.45
1:A:826:C:N3	1:A:827:U:C5	2.84	0.45
1:A:851:G:H2'	1:A:852:G:C8	2.52	0.45
1:A:859:G:O6	1:A:870:U:C5	2.69	0.45
1:A:863:U:O2	1:A:867:G:C2	2.69	0.45
1:A:868:C:H3'	1:A:869:G:C8	2.51	0.45
1:A:941:G:H2'	1:A:942:G:H8	1.81	0.45
1:A:959:A:H8	1:A:959:A:H3'	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:961:U:C1'	1:A:984:C:H1'	2.46	0.45
1:A:1009:U:C6	14:N:21:ALA:HA	2.52	0.45
1:A:1035:A:C6	1:A:1036:A:O4'	2.69	0.45
1:A:1053:G:H21	1:A:1056:U:H2'	1.81	0.45
1:A:1082:A:C6	1:A:1083:U:C4	3.05	0.45
1:A:1150:A:H1'	1:A:1280:A:N6	2.32	0.45
1:A:1168:U:H5	1:A:1169:A:H1'	1.81	0.45
1:A:1234:C:O4'	1:A:1364:U:C6	2.69	0.45
1:A:1261:A:N7	1:A:1275:A:C4	2.84	0.45
1:A:1405:G:H21	1:A:1518:A:C2'	2.30	0.45
1:A:1461:G:C2	1:A:1462:C:N1	2.84	0.45
1:A:1501:C:C4	1:A:1504:G:C2	3.05	0.45
1:A:1510:C:C2	1:A:1526:G:N1	2.85	0.45
1:A:1510:C:C1'	1:A:1526:G:N2	2.80	0.45
2:B:169:HIS:CG	2:B:170:ILE:N	2.84	0.45
4:D:101:VAL:HB	4:D:113:ALA:HB1	1.98	0.45
5:E:41:GLY:HA3	5:E:44:ARG:CZ	2.47	0.45
6:F:12:PRO:HA	6:F:44:ARG:HG2	1.98	0.45
6:F:42:TRP:CH2	6:F:61:LEU:HB2	2.51	0.45
11:K:43:TRP:CE3	11:K:43:TRP:C	2.94	0.45
11:K:46:ALA:C	11:K:49:SER:H	2.25	0.45
15:O:10:ILE:HG22	15:O:26:VAL:HA	1.97	0.45
17:Q:19:SER:HB3	17:Q:44:HIS:CE1	2.52	0.45
1:A:38:G:C4'	1:A:547:A:C6	3.00	0.45
1:A:77:A:C4	1:A:78:A:N6	2.85	0.45
1:A:121:U:H3'	1:A:122:G:N7	2.31	0.45
1:A:130:A:C6	1:A:233:C:O2'	2.69	0.45
1:A:178:C:H2'	1:A:179:A:O4'	2.16	0.45
1:A:188:C:C5	1:A:189:A:C5	3.05	0.45
1:A:191:G:N1	1:A:192:A:C5	2.85	0.45
1:A:193:C:O2	1:A:194:C:C6	2.69	0.45
1:A:208:U:C5	1:A:210:C:N1	2.85	0.45
1:A:226:G:H22	1:A:227:G:N2	2.15	0.45
1:A:254:G:H4'	17:Q:19:SER:HB3	1.98	0.45
1:A:270:A:C4	1:A:271:C:C6	3.04	0.45
1:A:282:A:C8	1:A:282:A:O5'	2.70	0.45
1:A:297:G:C2'	1:A:297:G:N3	2.74	0.45
1:A:302:G:O6	1:A:303:A:C6	2.70	0.45
1:A:303:A:C2	1:A:304:U:H1'	2.52	0.45
1:A:323:U:O4	1:A:327:A:H8	1.99	0.45
1:A:324:G:C5	1:A:326:G:P	3.10	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:347:G:N3	1:A:348:G:H1’	2.32	0.45
1:A:367:U:C5’	1:A:394:G:H21	2.30	0.45
1:A:411:A:C8	1:A:411:A:C3’	2.98	0.45
1:A:420:U:H5’	4:D:43:ARG:HH22	1.81	0.45
1:A:494:G:C2	1:A:496:A:C8	3.05	0.45
1:A:499:A:H1’	1:A:500:G:C4	2.52	0.45
1:A:515:G:C6	1:A:537:G:C6	3.04	0.45
1:A:559:A:C4’	1:A:560:A:H3’	2.46	0.45
1:A:567:G:C8	1:A:567:G:H3’	2.50	0.45
1:A:569:C:H1’	1:A:574:A:H2’	1.97	0.45
1:A:640:A:C5	1:A:641:U:C2	3.03	0.45
1:A:671:G:C2	1:A:672:U:O4’	2.70	0.45
1:A:676:A:C8	1:A:676:A:O5’	2.69	0.45
1:A:678:U:C2	1:A:679:C:C6	3.04	0.45
1:A:681:A:C6	1:A:710:G:C5	3.04	0.45
1:A:690:G:H1’	1:A:698:G:C2	2.51	0.45
1:A:734:G:H2’	1:A:735:C:C6	2.52	0.45
1:A:737:C:H2’	1:A:738:C:O4’	2.16	0.45
1:A:825:A:C6	1:A:826:C:C5	3.05	0.45
1:A:887:G:C2	1:A:1489:G:OP1	2.69	0.45
1:A:914:A:C8	1:A:914:A:C5’	2.99	0.45
1:A:928:G:H21	1:A:1533:C:H42	1.64	0.45
1:A:946:A:H1’	1:A:1334:G:C4’	2.45	0.45
1:A:976:G:C4	1:A:1362:A:C5	3.04	0.45
1:A:1007:U:O2	1:A:1007:U:C2’	2.61	0.45
1:A:1021:A:C2	1:A:1022:A:C1’	2.99	0.45
1:A:1042:A:C5	1:A:1043:G:C6	3.04	0.45
1:A:1053:G:C8	1:A:1053:G:C3’	2.99	0.45
1:A:1059:C:C2	1:A:1060:U:C5	3.04	0.45
1:A:1061:G:C5	1:A:1197:A:C6	3.04	0.45
1:A:1125:U:H4’	10:J:7:ARG:HE	1.80	0.45
1:A:1145:A:N3	1:A:1145:A:H2’	2.32	0.45
1:A:1166:G:C2’	1:A:1170:A:N6	2.74	0.45
1:A:1169:A:H2’	1:A:1170:A:C5’	2.47	0.45
1:A:1238:A:C2	1:A:1242:G:C8	3.05	0.45
1:A:1253:G:H1’	1:A:1355:G:O2’	2.17	0.45
1:A:1275:A:C5	1:A:1276:G:N7	2.85	0.45
1:A:1279:G:C1’	1:A:1281:C:H41	2.30	0.45
1:A:1330:U:OP2	13:M:25:GLY:HA3	2.16	0.45
1:A:1349:A:C6	1:A:1350:A:H1’	2.51	0.45
1:A:1376:U:C5’	7:G:97:ALA:HB1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1434:A:C5	1:A:1435:G:C4	3.04	0.45
1:A:1466:C:C3'	1:A:1467:C:H6	2.29	0.45
1:A:1483:A:H2'	1:A:1484:C:O4'	2.17	0.45
1:A:1511:G:C4	1:A:1525:G:C2	3.04	0.45
2:B:23:ASN:HD21	2:B:26:MET:HE3	1.80	0.45
3:C:63:ILE:HG21	3:C:90:VAL:CG1	2.46	0.45
5:E:38:VAL:HG23	5:E:67:ARG:NH1	2.31	0.45
7:G:50:ALA:HA	7:G:60:ALA:HB2	1.99	0.45
11:K:45:THR:CG2	11:K:46:ALA:H	2.14	0.45
14:N:80:ARG:CZ	14:N:81:ILE:HG23	2.46	0.45
1:A:10:A:H2	1:A:25:C:C2	2.29	0.45
1:A:62:U:H2'	1:A:63:C:C6	2.52	0.45
1:A:111:G:H4'	16:P:27:ALA:H	1.82	0.45
1:A:181:A:O2'	1:A:194:C:C5	2.69	0.45
1:A:186:C:N4	1:A:187:G:C6	2.85	0.45
1:A:249:U:C6	1:A:249:U:C3'	3.00	0.45
1:A:250:A:N1	1:A:275:G:C6	2.84	0.45
1:A:257:G:C4	1:A:270:A:C2	3.05	0.45
1:A:296:U:C2	1:A:302:G:N1	2.85	0.45
1:A:460:A:N3	1:A:472:U:H1'	2.32	0.45
1:A:468:A:C4	1:A:470:C:N4	2.84	0.45
1:A:499:A:C6	1:A:547:A:C5	3.05	0.45
1:A:541:G:C1'	4:D:40:HIS:HB2	2.46	0.45
1:A:553:A:C6	1:A:554:A:C4	3.05	0.45
1:A:556:C:C6	1:A:556:C:O5'	2.70	0.45
1:A:587:G:C8	1:A:755:G:N1	2.84	0.45
1:A:602:A:N6	1:A:636:U:H3	2.15	0.45
1:A:665:A:H61	1:A:721:G:H1	1.64	0.45
1:A:667:G:H21	15:O:45:HIS:CE1	2.34	0.45
1:A:683:G:N2	1:A:708:C:H1'	2.32	0.45
1:A:729:A:H2'	1:A:730:G:H8	1.81	0.45
1:A:738:C:H6	1:A:738:C:O5'	2.00	0.45
1:A:774:G:N3	1:A:806:C:C2	2.84	0.45
1:A:774:G:C4	1:A:775:G:C8	3.05	0.45
1:A:777:A:C2	11:K:120:CYS:HA	2.52	0.45
1:A:814:A:O5'	1:A:1511:G:H4'	2.17	0.45
1:A:909:A:C1'	1:A:1414:U:H4'	2.46	0.45
1:A:913:A:N3	1:A:914:A:C1'	2.79	0.45
1:A:940:C:C4	1:A:941:G:N7	2.85	0.45
1:A:1014:A:C6	1:A:1015:G:C6	3.05	0.45
1:A:1027:C:O5'	1:A:1027:C:C6	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1075:U:C4	1:A:1076:U:C5	3.05	0.45
1:A:1150:A:H8	1:A:1150:A:O5'	2.00	0.45
1:A:1167:A:H1'	1:A:1168:U:N3	2.32	0.45
1:A:1172:C:C6	1:A:1172:C:H3'	2.52	0.45
1:A:1219:A:HO2'	19:S:33:TRP:CD1	2.35	0.45
1:A:1225:A:N3	1:A:1225:A:C2'	2.80	0.45
1:A:1230:C:C2'	1:A:1231:G:C8	2.95	0.45
1:A:1239:A:H62	1:A:1299:A:N6	2.15	0.45
1:A:1244:G:C4	1:A:1294:G:N2	2.85	0.45
1:A:1273:C:H2'	1:A:1274:A:O4'	2.17	0.45
1:A:1296:C:C5	1:A:1297:G:N1	2.84	0.45
1:A:1310:G:C6	1:A:1311:A:C5	3.05	0.45
1:A:1316:G:N2	1:A:1318:A:C8	2.85	0.45
1:A:1333:A:O5'	1:A:1333:A:H8	2.00	0.45
1:A:1390:U:H2'	1:A:1391:U:C2	2.51	0.45
1:A:1409:C:C5	1:A:1409:C:OP2	2.70	0.45
1:A:1421:G:N2	1:A:1480:A:C4	2.85	0.45
1:A:1433:A:C5	1:A:1468:A:N9	2.85	0.45
1:A:1480:A:H3'	1:A:1481:U:H6	1.81	0.45
3:C:86:LEU:HD12	3:C:100:ILE:HG21	1.99	0.45
3:C:112:ALA:N	3:C:201:ILE:HG12	2.31	0.45
3:C:127:VAL:HG23	3:C:128:MET:O	2.16	0.45
3:C:176:THR:HG22	3:C:178:ARG:NH1	2.32	0.45
4:D:107:GLY:HA3	4:D:113:ALA:CA	2.46	0.45
11:K:46:ALA:CB	11:K:61:ALA:C	2.90	0.45
12:L:109:ARG:HH21	12:L:111:GLN:HB3	1.82	0.45
1:A:31:G:N3	1:A:46:G:H5"	2.31	0.45
1:A:62:U:H5"	1:A:385:C:H2'	1.98	0.45
1:A:113:G:C4	1:A:315:A:C2	3.05	0.45
1:A:129:A:H1'	1:A:130:A:C6	2.52	0.45
1:A:132:C:P	1:A:262:A:H1'	2.57	0.45
1:A:146:G:N1	1:A:147:G:C8	2.84	0.45
1:A:348:G:H3'	1:A:349:A:C8	2.49	0.45
1:A:365:U:H6	1:A:365:U:H3'	1.80	0.45
1:A:374:A:C2	1:A:375:U:C1'	2.99	0.45
1:A:428:G:C5'	4:D:9:LYS:HB2	2.47	0.45
1:A:441:A:H1'	1:A:497:G:N1	2.31	0.45
1:A:462:G:C4	1:A:464:U:O4	2.70	0.45
1:A:509:A:H5"	4:D:51:GLY:CA	2.47	0.45
1:A:512:U:H5'	1:A:534:U:O5'	2.17	0.45
1:A:522:C:C4	1:A:523:A:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:541:G:H1'	4:D:40:HIS:CB	2.47	0.45
1:A:617:G:H5'	16:P:45:GLU:HB2	1.99	0.45
1:A:675:A:OP1	18:R:70:THR:HA	2.15	0.45
1:A:688:G:C6	1:A:689:C:C4	3.04	0.45
1:A:688:G:H21	1:A:689:C:H1'	1.78	0.45
1:A:826:C:C6	1:A:826:C:O5'	2.70	0.45
1:A:859:G:C5	1:A:860:A:N7	2.85	0.45
1:A:869:G:H4'	1:A:872:A:N9	2.32	0.45
1:A:901:A:N7	1:A:902:G:H1'	2.32	0.45
1:A:902:G:C8	1:A:902:G:H3'	2.52	0.45
1:A:903:G:N2	1:A:904:U:C2	2.84	0.45
1:A:909:A:H3'	1:A:910:C:C6	2.52	0.45
1:A:954:G:C2	1:A:955:U:C6	3.04	0.45
1:A:954:G:N2	1:A:955:U:H1'	2.31	0.45
1:A:957:U:H4'	19:S:78:THR:HG22	1.99	0.45
1:A:977:A:H5"	1:A:981:U:O2	2.17	0.45
1:A:1003:G:C5	1:A:1005:A:OP1	2.70	0.45
1:A:1004:A:C4'	1:A:1032:G:OP2	2.65	0.45
1:A:1006:G:C8	1:A:1006:G:H3'	2.51	0.45
1:A:1042:A:C4	1:A:1043:G:C5	3.05	0.45
1:A:1073:U:N3	1:A:1074:G:C5	2.85	0.45
1:A:1118:U:H5"	9:I:80:HIS:CD2	2.51	0.45
1:A:1133:G:C2	1:A:1142:G:N1	2.84	0.45
1:A:1171:A:C6	1:A:1172:C:C4	3.05	0.45
1:A:1246:A:H2'	1:A:1246:A:N3	2.32	0.45
1:A:1270:G:H5'	1:A:1314:C:H5'	1.99	0.45
1:A:1305:G:H2'	1:A:1306:A:N7	2.32	0.45
1:A:1309:G:C6	1:A:1310:G:C6	3.05	0.45
1:A:1311:A:C6	1:A:1312:G:N7	2.85	0.45
1:A:1347:G:N2	1:A:1373:G:H2'	2.32	0.45
1:A:1366:C:C4	1:A:1367:C:N4	2.85	0.45
1:A:1502:A:N7	1:A:1504:G:C2	2.84	0.45
3:C:115:VAL:HG12	3:C:119:ILE:CD1	2.46	0.45
4:D:125:ASN:H	4:D:140:ASP:CG	2.25	0.45
7:G:137:ARG:HE	7:G:138:GLU:HG3	1.80	0.45
8:H:79:ARG:HH12	12:L:3:VAL:H	1.65	0.45
11:K:115:ILE:O	11:K:117:HIS:CE1	2.69	0.45
22:W:81:TRP:HA	22:W:97:VAL:HA	1.99	0.45
1:A:23:C:C4	1:A:24:U:C5	3.04	0.45
1:A:87:C:H2'	1:A:88:U:O4'	2.17	0.45
1:A:100:G:C5	1:A:101:A:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:131:A:C2	1:A:132:C:C4	3.05	0.45
1:A:131:A:C2	1:A:232:G:C5	3.05	0.45
1:A:146:G:N2	1:A:177:G:C8	2.85	0.45
1:A:152:A:C6	1:A:170:U:O2	2.70	0.45
1:A:243:A:C2	1:A:246:A:OP2	2.69	0.45
1:A:261:U:H2'	1:A:262:A:H3'	1.99	0.45
1:A:272:C:C2'	1:A:273:U:C6	2.98	0.45
1:A:356:A:H4'	1:A:367:U:H6	1.82	0.45
1:A:358:U:C6	1:A:358:U:H3'	2.52	0.45
1:A:377:G:H5"	16:P:24:SER:HA	1.98	0.45
1:A:381:C:H5	1:A:382:A:C6	2.34	0.45
1:A:395:C:C6	1:A:395:C:O5'	2.70	0.45
1:A:454:G:C6	1:A:455:G:N7	2.84	0.45
1:A:462:G:N2	1:A:471:U:C6	2.85	0.45
1:A:473:U:C6	1:A:474:G:C8	3.05	0.45
1:A:515:G:C8	1:A:515:G:O5'	2.70	0.45
1:A:578:C:C6	1:A:578:C:OP2	2.69	0.45
1:A:583:A:C4	1:A:759:A:N7	2.84	0.45
1:A:614:C:O2	1:A:627:G:C2	2.69	0.45
1:A:619:U:H3'	1:A:619:U:C6	2.52	0.45
1:A:642:A:C2	8:H:105:THR:O	2.69	0.45
1:A:668:G:C5	1:A:669:G:N7	2.85	0.45
1:A:685:G:H4'	11:K:41:LEU:C	2.41	0.45
1:A:738:C:N3	1:A:739:C:C4	2.85	0.45
1:A:771:G:C5	1:A:772:U:N1	2.85	0.45
1:A:784:A:H2'	1:A:785:G:N7	2.32	0.45
1:A:861:G:O6	1:A:869:G:C2	2.70	0.45
1:A:865:A:C8	1:A:865:A:C3'	3.00	0.45
1:A:893:C:H2'	1:A:894:G:H5'	1.99	0.45
1:A:1033:G:N7	1:A:1036:A:N1	2.65	0.45
1:A:1044:A:N7	1:A:1045:C:H1'	2.31	0.45
1:A:1068:G:C8	1:A:1094:G:C8	3.04	0.45
1:A:1072:G:C6	1:A:1073:U:C4	3.05	0.45
1:A:1120:C:C2	1:A:1154:G:N3	2.85	0.45
1:A:1133:G:C4	1:A:1142:G:N1	2.85	0.45
1:A:1159:U:C2	1:A:1182:G:C4	3.05	0.45
1:A:1165:U:C2	1:A:1166:G:C4	3.05	0.45
1:A:1166:G:N1	1:A:1169:A:OP2	2.49	0.45
1:A:1213:A:N7	1:A:1215:G:C5	2.85	0.45
1:A:1231:G:H3'	1:A:1232:U:H6	1.73	0.45
1:A:1261:A:C8	1:A:1275:A:N3	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1265:C:O2	1:A:1271:A:C2	2.70	0.45
1:A:1269:A:H2'	1:A:1313:U:O2'	2.16	0.45
1:A:1309:G:C6	1:A:1329:A:C2	3.04	0.45
1:A:1345:U:C4	1:A:1377:A:C2	3.05	0.45
1:A:1390:U:H2'	1:A:1391:U:H1'	1.98	0.45
1:A:1391:U:C2'	1:A:1392:G:C8	2.99	0.45
1:A:1480:A:N7	1:A:1481:U:C5	2.85	0.45
2:B:19:THR:CG2	2:B:189:ASN:HD21	2.28	0.45
3:C:187:GLU:HB2	3:C:195:ILE:O	2.17	0.45
4:D:8:LEU:HD22	4:D:12:ARG:HH12	1.82	0.45
4:D:94:GLU:HG2	4:D:103:ARG:HH22	1.82	0.45
5:E:50:GLY:HA3	5:E:61:LYS:C	2.42	0.45
9:I:16:ALA:HA	9:I:66:VAL:HA	1.99	0.45
9:I:51:LEU:HA	9:I:86:LEU:HD21	1.98	0.45
9:I:94:ARG:O	9:I:98:ARG:HB3	2.17	0.45
15:O:41:HIS:CD2	15:O:42:PHE:N	2.85	0.45
1:A:39:G:C6	1:A:404:G:C4	3.05	0.45
1:A:46:G:C2'	1:A:365:U:H2'	2.46	0.45
1:A:49:U:C5	1:A:361:G:H1'	2.51	0.45
1:A:115:G:C6	1:A:313:A:C6	3.05	0.45
1:A:115:G:N3	1:A:289:G:C8	2.85	0.45
1:A:116:A:C8	1:A:116:A:OP2	2.70	0.45
1:A:132:C:C6	1:A:132:C:C3'	3.00	0.45
1:A:141:G:N1	1:A:223:A:C6	2.84	0.45
1:A:158:G:C2	1:A:159:G:C8	3.05	0.45
1:A:200:G:C6	1:A:201:G:N7	2.85	0.45
1:A:223:A:N6	1:A:224:U:C4	2.85	0.45
1:A:226:G:N2	1:A:227:G:C2	2.85	0.45
1:A:251:G:C5	1:A:252:U:H5	2.32	0.45
1:A:264:C:H3'	1:A:265:G:C8	2.51	0.45
1:A:282:A:C2	1:A:283:U:N1	2.85	0.45
1:A:337:G:C4	1:A:338:A:N7	2.85	0.45
1:A:367:U:C2	1:A:394:G:N3	2.85	0.45
1:A:374:A:H5"	1:A:480:U:O2	2.17	0.45
1:A:380:G:H2'	1:A:382:A:N7	2.31	0.45
1:A:397:A:O3'	1:A:398:U:C6	2.70	0.45
1:A:465:A:C2	1:A:466:A:N9	2.85	0.45
1:A:496:A:C6	1:A:497:G:C6	3.05	0.45
1:A:522:C:H1'	1:A:536:C:C5'	2.46	0.45
1:A:540:G:C2	1:A:541:G:C4	3.05	0.45
1:A:558:G:C8	1:A:558:G:P	3.10	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:601:G:C2	1:A:638:U:C2	3.04	0.45
1:A:602:A:C6	1:A:637:C:N4	2.84	0.45
1:A:604:G:C8	1:A:604:G:OP2	2.70	0.45
1:A:604:G:C3'	1:A:605:U:C6	2.94	0.45
1:A:663:A:C2	1:A:664:G:C5	3.05	0.45
1:A:675:A:C2	1:A:676:A:N9	2.85	0.45
1:A:677:U:C5	1:A:678:U:C4	3.05	0.45
1:A:704:A:N7	1:A:705:G:N7	2.65	0.45
1:A:760:G:C5	1:A:761:G:C8	3.04	0.45
1:A:766:A:H2	1:A:1525:G:N3	2.15	0.45
1:A:795:C:N3	1:A:796:C:C2	2.84	0.45
1:A:803:G:C5	1:A:804:U:C4	3.05	0.45
1:A:836:G:C5	1:A:851:G:N1	2.85	0.45
1:A:860:A:C4	1:A:861:G:C1'	3.00	0.45
1:A:877:G:C8	1:A:877:G:H3'	2.52	0.45
1:A:975:A:C5	1:A:1357:A:N3	2.85	0.45
1:A:1043:G:C2'	1:A:1044:A:C8	2.98	0.45
1:A:1057:G:N7	1:A:1058:G:C5	2.85	0.45
1:A:1068:G:C5	1:A:1108:G:N3	2.85	0.45
1:A:1089:G:N2	1:A:1090:U:H1'	2.31	0.45
1:A:1116:U:C2	1:A:1185:G:N1	2.84	0.45
1:A:1116:U:O5'	1:A:1116:U:H6	1.99	0.45
1:A:1150:A:H8	1:A:1150:A:P	2.40	0.45
1:A:1172:C:C4	1:A:1173:U:C4	3.04	0.45
1:A:1176:A:C2	1:A:1177:G:C4	3.05	0.45
1:A:1242:G:C2'	1:A:1302:C:H2'	2.47	0.45
1:A:1254:A:N1	1:A:1255:G:C5	2.85	0.45
1:A:1259:C:H2'	1:A:1260:G:O4'	2.17	0.45
1:A:1317:C:C4	1:A:1318:A:C2	3.05	0.45
1:A:1350:A:OP2	9:I:122:ARG:HG2	2.16	0.45
1:A:1381:U:N3	7:G:79:VAL:HG22	2.31	0.45
1:A:1401:G:H2'	1:A:1402:C:O4'	2.17	0.45
1:A:1404:C:C6	1:A:1404:C:O5'	2.70	0.45
1:A:1423:G:C2	1:A:1424:U:C2	3.05	0.45
1:A:1479:C:C6	1:A:1479:C:O5'	2.70	0.45
2:B:53:LEU:HA	2:B:56:LEU:HD12	1.98	0.45
2:B:68:PHE:N	2:B:90:PHE:HA	2.28	0.45
8:H:76:ARG:CB	8:H:76:ARG:HH11	2.29	0.45
11:K:51:PHE:HB3	11:K:56:LYS:CA	2.47	0.45
13:M:23:GLY:CA	13:M:64:VAL:HA	2.46	0.45
13:M:112:ARG:HD3	13:M:113:LYS:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:67:SER:CB	17:Q:70:LYS:HD2	2.47	0.45
1:A:44:A:C6	1:A:399:G:C6	3.05	0.45
1:A:49:U:H1'	1:A:362:G:C1'	2.47	0.45
1:A:53:A:C2	1:A:54:C:C1'	2.99	0.45
1:A:109:A:C8	1:A:326:G:C4	3.05	0.45
1:A:136:C:N3	1:A:137:U:C6	2.85	0.45
1:A:203:G:C3'	1:A:203:G:C8	3.00	0.45
1:A:243:A:H4'	1:A:244:U:H5"	1.97	0.45
1:A:356:A:H2	1:A:368:U:O2	1.98	0.45
1:A:413:G:H4'	1:A:428:G:C2	2.51	0.45
1:A:413:G:N2	4:D:12:ARG:CZ	2.80	0.45
1:A:421:U:C4	1:A:423:G:O6	2.70	0.45
1:A:450:G:C6	1:A:481:G:C4	3.05	0.45
1:A:451:A:N9	1:A:480:U:H2'	2.31	0.45
1:A:452:A:H8	1:A:452:A:C5'	2.27	0.45
1:A:455:G:C6	1:A:478:A:N1	2.85	0.45
1:A:457:G:C8	1:A:457:G:H5"	2.52	0.45
1:A:457:G:N1	1:A:458:U:C4	2.85	0.45
1:A:468:A:H5"	1:A:468:A:N3	2.32	0.45
1:A:469:C:N4	1:A:470:C:C2	2.85	0.45
1:A:498:A:OP2	1:A:498:A:H8	2.00	0.45
1:A:553:A:C5	1:A:554:A:C8	3.05	0.45
1:A:567:G:C5	1:A:568:G:C8	3.05	0.45
1:A:592:G:H2'	1:A:593:U:H6	1.81	0.45
1:A:613:C:C2	1:A:628:G:N2	2.84	0.45
1:A:665:A:C5	1:A:733:G:C5	3.05	0.45
1:A:814:A:C6	1:A:816:A:C1'	3.00	0.45
1:A:827:U:H1'	1:A:874:G:H21	1.81	0.45
1:A:893:C:N4	1:A:894:G:C6	2.85	0.45
1:A:942:G:N3	1:A:942:G:H2'	2.32	0.45
1:A:948:C:C5	13:M:104:ASN:ND2	2.85	0.45
1:A:959:A:C8	1:A:959:A:H3'	2.52	0.45
1:A:1004:A:H8	1:A:1005:A:N9	2.15	0.45
1:A:1014:A:C4	1:A:1015:G:C5	3.04	0.45
1:A:1053:G:H21	1:A:1056:U:C2'	2.30	0.45
1:A:1055:A:H2	3:C:193:GLY:CA	2.30	0.45
1:A:1057:G:H5"	3:C:154:GLY:HA3	1.99	0.45
1:A:1085:U:H1'	1:A:1094:G:C6	2.52	0.45
1:A:1107:C:C2'	1:A:1108:G:H5'	2.46	0.45
1:A:1134:G:N2	1:A:1141:C:H1'	2.32	0.45
1:A:1152:A:OP1	10:J:18:ILE:HG21	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1160:G:C2	1:A:1161:C:C2	3.05	0.45
1:A:1166:G:H21	1:A:1170:A:H62	1.65	0.45
1:A:1222:G:C8	1:A:1322:C:N4	2.85	0.45
1:A:1239:A:N9	1:A:1241:G:C5	2.85	0.45
1:A:1264:U:H2'	1:A:1265:C:O4'	2.17	0.45
1:A:1290:G:C2	1:A:1291:U:H1'	2.51	0.45
1:A:1355:G:N1	1:A:1356:G:C6	2.85	0.45
1:A:1434:A:H3'	1:A:1435:G:C8	2.49	0.45
1:A:1443:C:N3	1:A:1460:C:C2	2.85	0.45
1:A:1461:G:C6	1:A:1462:C:C5	3.05	0.45
2:B:21:TYR:CE2	2:B:22:TRP:C	2.95	0.45
2:B:65:LYS:H	2:B:153:MET:HB2	1.81	0.45
2:B:148:GLY:HA2	2:B:152:ASP:OD1	2.17	0.45
3:C:64:ARG:HA	3:C:99:GLN:HB2	1.99	0.45
8:H:85:TYR:HB3	8:H:91:LEU:HD21	1.98	0.45
11:K:27:ASN:O	11:K:56:LYS:HB2	2.17	0.45
12:L:30:ARG:HD3	12:L:57:THR:HG21	1.99	0.45
22:W:220:LYS:HD3	22:W:271:ARG:HB3	1.98	0.45
1:A:19:A:C1'	1:A:864:A:H1'	2.46	0.44
1:A:49:U:C5	1:A:361:G:C2	3.05	0.44
1:A:56:U:C2	1:A:57:G:C8	3.06	0.44
1:A:57:G:C6	1:A:58:C:N3	2.85	0.44
1:A:68:G:H3'	1:A:69:G:O4'	2.17	0.44
1:A:145:G:N1	1:A:146:G:C5	2.85	0.44
1:A:146:G:C2	1:A:177:G:N7	2.85	0.44
1:A:151:A:C6	1:A:152:A:N9	2.85	0.44
1:A:161:A:H1'	1:A:347:G:N2	2.32	0.44
1:A:266:G:C6	1:A:269:C:N4	2.71	0.44
1:A:313:A:C6	1:A:314:C:C5	3.05	0.44
1:A:319:G:C5'	1:A:1468:A:H5'	2.47	0.44
1:A:321:A:C6	1:A:322:C:N1	2.85	0.44
1:A:347:G:C8	1:A:347:G:C5'	2.99	0.44
1:A:354:G:C2	1:A:355:C:C2	3.05	0.44
1:A:362:G:H2'	1:A:364:A:OP2	2.17	0.44
1:A:371:A:H5'	1:A:483:C:H4'	1.99	0.44
1:A:373:A:H4'	1:A:480:U:H4'	1.99	0.44
1:A:391:G:H3'	16:P:12:LYS:HD2	1.99	0.44
1:A:500:G:H8	1:A:500:G:C5'	2.30	0.44
1:A:500:G:N1	1:A:501:C:C2	2.86	0.44
1:A:529:G:C5	12:L:45:ASN:HA	2.53	0.44
1:A:529:G:H5"	1:A:535:A:N7	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:537:G:C4	1:A:538:G:C8	3.05	0.44
1:A:543:U:C5'	4:D:13:ARG:HH21	2.30	0.44
1:A:609:A:C5	1:A:630:A:H2	2.35	0.44
1:A:613:C:C2	1:A:614:C:C6	3.05	0.44
1:A:628:G:N2	1:A:629:A:H1'	2.32	0.44
1:A:668:G:H5'	15:O:48:ASP:HA	1.99	0.44
1:A:696:A:OP1	11:K:52:ARG:HB3	2.17	0.44
1:A:698:G:H3'	1:A:699:C:C6	2.51	0.44
1:A:725:G:C4'	18:R:52:ARG:HH12	2.30	0.44
1:A:728:A:C4	15:O:53:ARG:HD3	2.52	0.44
1:A:741:G:C2	1:A:742:G:C4	3.05	0.44
1:A:765:G:C8	1:A:765:G:O5'	2.71	0.44
1:A:786:G:C2	1:A:797:C:C2	3.05	0.44
1:A:796:C:C4	1:A:797:C:C5	3.05	0.44
1:A:836:G:C5	1:A:837:U:C6	3.05	0.44
1:A:860:A:C5	1:A:861:G:N9	2.85	0.44
1:A:954:G:C4	1:A:955:U:C6	3.06	0.44
1:A:960:U:C2	1:A:1225:A:C4	3.05	0.44
1:A:1053:G:H3'	1:A:1199:U:OP2	2.18	0.44
1:A:1114:C:H4'	14:N:100:TRP:CZ2	2.52	0.44
1:A:1119:C:H1'	1:A:1155:A:C2	2.52	0.44
1:A:1125:U:C4'	10:J:7:ARG:HE	2.31	0.44
1:A:1127:G:H4'	1:A:1280:A:C2	2.51	0.44
1:A:1144:G:O6	1:A:1145:A:C6	2.70	0.44
1:A:1179:A:C8	1:A:1179:A:O5'	2.69	0.44
1:A:1183:U:C6	2:B:131:LYS:HD3	2.52	0.44
1:A:1213:A:C5	1:A:1215:G:H1'	2.51	0.44
1:A:1225:A:H2'	1:A:1226:C:C6	2.51	0.44
1:A:1254:A:N1	1:A:1255:G:C6	2.84	0.44
1:A:1277:C:O4'	1:A:1282:C:H1'	2.17	0.44
1:A:1300:G:C4	1:A:1334:G:C5	3.04	0.44
1:A:1302:C:H3'	1:A:1303:C:H5'	1.99	0.44
1:A:1304:G:N7	1:A:1305:G:C5	2.85	0.44
1:A:1305:G:H2'	1:A:1306:A:C8	2.52	0.44
1:A:1307:U:C4	1:A:1308:U:C5	3.05	0.44
1:A:1308:U:H5'	13:M:108:ARG:HH21	1.82	0.44
1:A:1392:G:C2	1:A:1393:U:C2	3.05	0.44
1:A:1514:G:N2	1:A:1515:G:C8	2.85	0.44
1:A:1521:C:C6	1:A:1521:C:C3'	3.01	0.44
1:A:1529:G:N3	1:A:1529:G:H5"	2.32	0.44
4:D:32:LYS:HB3	4:D:33:ILE:H	1.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:105:GLY:CA	4:D:161:ALA:HB2	2.45	0.44
4:D:167:PRO:CB	4:D:170:LEU:HG	2.47	0.44
6:F:3:HIS:O	6:F:4:TYR:CD1	2.69	0.44
9:I:50:PRO:HD3	9:I:79:ARG:HG3	1.98	0.44
12:L:33:CYS:HA	12:L:54:VAL:HA	1.98	0.44
12:L:82:ARG:NH1	12:L:100:ALA:HB2	2.31	0.44
16:P:14:ARG:HB2	16:P:42:ILE:HD12	1.99	0.44
17:Q:28:VAL:HG22	17:Q:39:ARG:HB2	2.00	0.44
17:Q:60:ILE:HG13	17:Q:72:TRP:CZ3	2.51	0.44
18:R:70:THR:O	18:R:71:ASP:HB2	2.17	0.44
1:A:68:G:C6	1:A:102:G:C2	3.05	0.44
1:A:80:A:N3	1:A:91:U:C2	2.85	0.44
1:A:80:A:N1	1:A:90:C:O2	2.50	0.44
1:A:91:U:C5	1:A:92:U:O2	2.70	0.44
1:A:112:G:H22	1:A:315:A:H2	1.64	0.44
1:A:123:U:H2'	1:A:124:C:O4'	2.17	0.44
1:A:127:G:C6	1:A:128:G:N7	2.85	0.44
1:A:138:G:N9	1:A:226:G:C2	2.86	0.44
1:A:161:A:C2	1:A:162:A:C1'	3.00	0.44
1:A:179:A:H3'	1:A:180:U:C5	2.53	0.44
1:A:200:G:N2	1:A:469:C:H1'	2.32	0.44
1:A:200:G:N2	1:A:469:C:O2	2.50	0.44
1:A:245:U:O2'	1:A:246:A:H5'	2.17	0.44
1:A:321:A:C8	1:A:328:C:N1	2.85	0.44
1:A:348:G:C2	1:A:349:A:C4	3.05	0.44
1:A:405:U:O2	1:A:498:A:H2'	2.18	0.44
1:A:410:G:N1	1:A:429:U:H1'	2.33	0.44
1:A:450:G:OP2	1:A:451:A:H5"	2.17	0.44
1:A:462:G:O6	1:A:467:U:OP2	2.35	0.44
1:A:473:U:N3	1:A:474:G:C6	2.85	0.44
1:A:488:C:C4	1:A:489:C:C5	3.05	0.44
1:A:499:A:C6	1:A:546:A:C4	3.05	0.44
1:A:503:C:O2	1:A:510:A:C2	2.69	0.44
1:A:538:G:C2	1:A:539:A:C5	3.05	0.44
1:A:562:U:H5"	1:A:563:A:C4	2.53	0.44
1:A:578:C:C2	1:A:579:A:C8	3.05	0.44
1:A:591:U:H2'	1:A:592:G:H8	1.82	0.44
1:A:640:A:H2	1:A:642:A:N6	2.14	0.44
1:A:665:A:C8	1:A:725:G:C2	3.06	0.44
1:A:669:G:C8	1:A:669:G:H3'	2.52	0.44
1:A:692:U:C1'	1:A:695:A:H62	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:730:G:C2'	1:A:814:A:H61	2.30	0.44
1:A:751:U:OP2	1:A:752:G:N7	2.50	0.44
1:A:757:U:H5"	1:A:822:U:O2	2.17	0.44
1:A:782:A:OP2	1:A:783:C:H5	2.00	0.44
1:A:822:U:H3'	1:A:823:C:H6	1.82	0.44
1:A:827:U:H1'	1:A:874:G:N2	2.33	0.44
1:A:917:G:O6	1:A:918:A:C6	2.70	0.44
1:A:1005:A:C2	1:A:1026:G:N7	2.85	0.44
1:A:1005:A:OP2	1:A:1006:G:N7	2.51	0.44
1:A:1060:U:C2	1:A:1198:G:C2	3.04	0.44
1:A:1061:G:C5	1:A:1197:A:C2	3.05	0.44
1:A:1128:C:O2'	1:A:1147:C:N3	2.50	0.44
1:A:1163:A:C2	1:A:1174:G:N7	2.84	0.44
1:A:1163:A:N1	1:A:1164:G:C5	2.85	0.44
1:A:1203:C:C4	1:A:1204:A:C8	3.05	0.44
1:A:1236:A:C2	1:A:1334:G:O2'	2.64	0.44
1:A:1261:A:H1'	1:A:1275:A:C2	2.52	0.44
1:A:1366:C:H4'	10:J:62:ARG:HH12	1.81	0.44
1:A:1371:G:C4	1:A:1372:U:C5	3.05	0.44
1:A:1399:C:C5	1:A:1502:A:C2	3.05	0.44
1:A:1400:C:H3'	1:A:1401:G:C5'	2.46	0.44
1:A:1523:G:P	11:K:127:ARG:HB2	2.57	0.44
1:A:1525:G:C6	1:A:1526:G:C5	3.06	0.44
2:B:49:PHE:HE1	2:B:199:ILE:HG23	1.79	0.44
2:B:162:VAL:HG21	2:B:165:ALA:CA	2.45	0.44
3:C:140:ALA:HB3	3:C:148:ILE:HG21	1.99	0.44
4:D:101:VAL:HG22	4:D:122:ILE:HG21	1.99	0.44
6:F:10:VAL:HG11	6:F:18:VAL:CG2	2.47	0.44
8:H:85:TYR:HA	8:H:91:LEU:HD23	1.99	0.44
11:K:24:ALA:HA	11:K:29:THR:HG23	1.98	0.44
11:K:31:VAL:O	11:K:43:TRP:HA	2.18	0.44
14:N:32:ASP:CG	14:N:33:VAL:H	2.25	0.44
19:S:47:THR:HG21	19:S:60:PHE:CE2	2.50	0.44
20:T:49:ALA:HA	20:T:52:GLU:HB2	1.98	0.44
20:T:78:LEU:HD13	20:T:81:GLN:OE1	2.18	0.44
1:A:35:G:C5	1:A:36:C:C4	3.05	0.44
1:A:37:U:N3	1:A:38:G:C5	2.85	0.44
1:A:42:G:C2	1:A:43:C:C6	3.05	0.44
1:A:59:A:C8	20:T:2:ASN:O	2.71	0.44
1:A:134:G:C8	1:A:134:G:O5'	2.71	0.44
1:A:139:A:C2	1:A:225:C:N1	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:158:G:N2	1:A:164:G:C1’	2.81	0.44
1:A:200:G:C5	1:A:201:G:N7	2.85	0.44
1:A:201:G:N7	1:A:212:G:H5”	2.32	0.44
1:A:266:G:C1’	1:A:267:C:H3’	2.48	0.44
1:A:279:A:H1’	1:A:281:G:C6	2.53	0.44
1:A:284:C:C2	1:A:285:C:C6	3.05	0.44
1:A:347:G:C6	1:A:348:G:N3	2.85	0.44
1:A:380:G:H22	1:A:383:A:P	2.41	0.44
1:A:381:C:C5	1:A:382:A:C6	3.05	0.44
1:A:390:U:H2’	1:A:391:G:N9	2.33	0.44
1:A:409:U:O2	1:A:409:U:C2’	2.64	0.44
1:A:442:G:C4	1:A:443:C:C6	3.05	0.44
1:A:457:G:N2	1:A:476:U:N1	2.66	0.44
1:A:460:A:C4	1:A:472:U:C2	3.06	0.44
1:A:493:A:H8	1:A:493:A:O5’	1.99	0.44
1:A:525:C:C2	1:A:526:C:C6	3.05	0.44
1:A:632:U:OP2	1:A:633:G:O6	2.36	0.44
1:A:664:G:N2	1:A:741:G:H22	2.14	0.44
1:A:689:C:C6	1:A:689:C:OP2	2.70	0.44
1:A:696:A:N6	1:A:797:C:H4’	2.32	0.44
1:A:780:A:H5”	11:K:124:LYS:H	1.82	0.44
1:A:783:C:C6	1:A:783:C:H3’	2.52	0.44
1:A:794:A:N7	1:A:795:C:C5	2.86	0.44
1:A:807:A:C4	1:A:808:C:C6	3.05	0.44
1:A:836:G:C6	1:A:837:U:N3	2.85	0.44
1:A:862:C:H2’	1:A:863:U:C6	2.52	0.44
1:A:938:A:C2	1:A:1345:U:N3	2.82	0.44
1:A:996:A:C2	1:A:1045:C:O2’	2.70	0.44
1:A:1033:G:C2	1:A:1034:G:C4	3.05	0.44
1:A:1097:C:O2	1:A:1169:A:H2	2.00	0.44
1:A:1110:A:N7	1:A:1111:A:C4	2.84	0.44
1:A:1118:U:H2’	1:A:1119:C:O4’	2.18	0.44
1:A:1125:U:O2	10:J:42:LEU:HD21	2.18	0.44
1:A:1133:G:N2	1:A:1134:G:C1’	2.80	0.44
1:A:1136:C:C2	1:A:1138:G:O6	2.71	0.44
1:A:1206:G:C5’	3:C:191:THR:HA	2.48	0.44
1:A:1245:C:C6	1:A:1245:C:O5’	2.71	0.44
1:A:1271:A:C2	1:A:1272:G:C5	3.05	0.44
1:A:1300:G:N1	1:A:1334:G:H2’	2.32	0.44
1:A:1401:G:C8	1:A:1401:G:O5’	2.71	0.44
1:A:1440:U:O3’	1:A:1441:A:C8	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1466:C:H2'	1:A:1467:C:O4'	2.18	0.44
1:A:1474:U:C2	1:A:1475:G:C8	3.05	0.44
1:A:1530:G:H1'	1:A:1531:A:O5'	2.17	0.44
2:B:68:PHE:CE2	2:B:83:ALA:HA	2.51	0.44
2:B:80:LYS:N	2:B:83:ALA:HB3	2.32	0.44
3:C:22:PHE:CD2	10:J:96:VAL:HA	2.53	0.44
5:E:19:ARG:C	5:E:19:ARG:HE	2.25	0.44
7:G:98:LEU:HD22	7:G:101:ARG:HH22	1.82	0.44
8:H:76:ARG:NE	8:H:78:SER:H	2.15	0.44
8:H:93:LYS:HE2	8:H:112:ASP:OD2	2.17	0.44
9:I:38:PHE:HB3	9:I:71:ILE:HG22	1.98	0.44
11:K:29:THR:O	11:K:46:ALA:HB2	2.18	0.44
13:M:19:THR:HG22	13:M:26:LYS:HA	1.99	0.44
13:M:36:ALA:HB2	13:M:55:LEU:HD11	2.00	0.44
16:P:54:LEU:H	16:P:54:LEU:HD12	1.82	0.44
18:R:62:ARG:HB3	18:R:69:TYR:CB	2.47	0.44
1:A:27:G:H2'	1:A:28:A:H8	1.83	0.44
1:A:36:C:O3'	12:L:120:ARG:HB3	2.17	0.44
1:A:57:G:C6	1:A:58:C:C5	3.05	0.44
1:A:66:A:N1	1:A:67:C:N4	2.65	0.44
1:A:70:U:N3	1:A:94:G:N3	2.64	0.44
1:A:131:A:N3	1:A:131:A:C2'	2.77	0.44
1:A:141:G:C8	1:A:141:G:C3'	3.01	0.44
1:A:164:G:C2	1:A:165:G:C8	3.06	0.44
1:A:218:U:C6	1:A:219:U:C4	3.05	0.44
1:A:238:A:C2	1:A:239:U:N1	2.84	0.44
1:A:250:A:H5'	1:A:252:U:O5'	2.16	0.44
1:A:265:G:H4'	17:Q:66:LEU:C	2.43	0.44
1:A:302:G:C6	1:A:303:A:C4	3.05	0.44
1:A:320:A:H3'	1:A:328:C:H41	1.82	0.44
1:A:325:A:N7	1:A:326:G:C8	2.86	0.44
1:A:329:A:C4	1:A:332:G:C8	3.05	0.44
1:A:341:C:H2'	1:A:342:C:H6	1.81	0.44
1:A:352:C:C6	1:A:355:C:N4	2.81	0.44
1:A:354:G:H2'	1:A:354:G:N3	2.32	0.44
1:A:402:G:H5'	4:D:70:GLN:CG	2.48	0.44
1:A:416:G:C5	1:A:417:G:N7	2.85	0.44
1:A:449:G:OP1	1:A:451:A:H2'	2.18	0.44
1:A:565:U:H5	1:A:566:G:O2'	1.99	0.44
1:A:570:G:C5'	1:A:820:U:C4'	2.95	0.44
1:A:677:U:H3	1:A:714:G:N2	2.14	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:695:A:C2’	1:A:696:A:C8	3.00	0.44
1:A:715:A:H5”	1:A:805:C:O2’	2.17	0.44
1:A:831:A:N1	1:A:832:G:C4	2.84	0.44
1:A:858:G:N1	1:A:869:G:C2’	2.81	0.44
1:A:858:G:C2	1:A:869:G:H2’	2.52	0.44
1:A:866:C:C4	1:A:873:A:C2	3.05	0.44
1:A:867:G:N3	1:A:873:A:C2	2.85	0.44
1:A:872:A:C6	1:A:874:G:C8	3.06	0.44
1:A:886:G:N1	1:A:887:G:C4	2.86	0.44
1:A:896:C:C2’	1:A:897:C:H6	2.20	0.44
1:A:917:G:C4	1:A:918:A:C8	3.05	0.44
1:A:923:A:N3	1:A:924:C:C5	2.86	0.44
1:A:941:G:C6	1:A:942:G:N7	2.85	0.44
1:A:942:G:C5	1:A:943:U:H5	2.35	0.44
1:A:994:A:C2	1:A:995:C:C6	3.05	0.44
1:A:1004:A:H2’	1:A:1036:A:C2	2.52	0.44
1:A:1020:G:C2	1:A:1021:A:C8	3.06	0.44
1:A:1067:A:O2’	1:A:1094:G:H3’	2.18	0.44
1:A:1087:G:N1	1:A:1088:G:C6	2.85	0.44
1:A:1097:C:O2	1:A:1169:A:C2	2.71	0.44
1:A:1112:C:N4	3:C:177:LEU:H	2.15	0.44
1:A:1120:C:C4	1:A:1121:U:C6	3.05	0.44
1:A:1136:C:C2	1:A:1138:G:C6	3.06	0.44
1:A:1142:G:H2’	1:A:1142:G:N3	2.31	0.44
1:A:1164:G:C2	1:A:1173:U:O2	2.71	0.44
1:A:1248:A:C2	9:I:71:ILE:HD11	2.51	0.44
1:A:1379:G:C2	1:A:1380:U:C6	3.05	0.44
1:A:1482:G:C2’	1:A:1483:A:C8	3.00	0.44
2:B:98:GLY:CA	2:B:170:ILE:HG21	2.48	0.44
3:C:25:THR:HA	3:C:28:PHE:HB2	1.98	0.44
5:E:99:SER:HB2	5:E:102:THR:HG23	1.98	0.44
5:E:158:LYS:HE2	8:H:70:VAL:HG12	1.99	0.44
7:G:42:VAL:O	7:G:45:ALA:HB3	2.17	0.44
9:I:18:VAL:HG22	9:I:64:ILE:HG22	1.99	0.44
10:J:36:VAL:HA	10:J:76:ILE:HA	1.99	0.44
13:M:88:LEU:HA	13:M:91:ARG:HG2	1.99	0.44
15:O:14:PHE:CE2	15:O:83:ARG:CB	2.99	0.44
15:O:31:LEU:HB3	15:O:62:ARG:HD3	2.00	0.44
20:T:34:VAL:HG13	20:T:50:PHE:N	2.32	0.44
22:W:146:VAL:CG1	22:W:283:ILE:HA	2.48	0.44
22:W:233:GLU:HB2	22:W:271:ARG:HH22	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2:A:N7	1:A:3:A:C4	2.85	0.44
1:A:11:G:H8	1:A:11:G:O5'	2.00	0.44
1:A:49:U:O4	1:A:362:G:C4	2.70	0.44
1:A:61:G:C6	1:A:62:U:C2	3.05	0.44
1:A:119:A:OP2	1:A:287:U:O4	2.36	0.44
1:A:161:A:H1'	1:A:347:G:H21	1.83	0.44
1:A:188:C:C2	1:A:189:A:C1'	3.00	0.44
1:A:217:C:H2'	1:A:218:U:C6	2.53	0.44
1:A:230:G:C2	1:A:231:U:C1'	3.01	0.44
1:A:297:G:H2'	1:A:297:G:N3	2.33	0.44
1:A:310:G:C5	1:A:311:C:C6	3.06	0.44
1:A:312:C:O5'	1:A:312:C:C6	2.70	0.44
1:A:335:C:C2	1:A:336:A:C8	3.05	0.44
1:A:337:G:C4	1:A:338:A:C8	3.05	0.44
1:A:402:G:C2	1:A:403:C:C5	3.06	0.44
1:A:409:U:H3'	1:A:410:G:H8	1.82	0.44
1:A:454:G:N1	1:A:455:G:C5	2.85	0.44
1:A:455:G:H22	1:A:456:A:H1'	1.82	0.44
1:A:499:A:C6	1:A:546:A:C8	3.05	0.44
1:A:507:C:C3'	1:A:508:U:H5"	2.46	0.44
1:A:529:G:H5'	1:A:535:A:C8	2.52	0.44
1:A:543:U:H2'	1:A:544:G:C8	2.52	0.44
1:A:558:G:C8	1:A:558:G:O5'	2.70	0.44
1:A:577:G:H5'	1:A:816:A:N7	2.32	0.44
1:A:603:U:N3	1:A:604:G:C6	2.85	0.44
1:A:611:C:H3'	1:A:612:C:C5	2.52	0.44
1:A:627:G:O5'	1:A:627:G:H8	2.01	0.44
1:A:655:A:C2	1:A:754:C:N3	2.85	0.44
1:A:668:G:O6	1:A:669:G:C6	2.71	0.44
1:A:685:G:C2	1:A:706:A:C6	3.05	0.44
1:A:686:U:O4	1:A:687:A:N6	2.51	0.44
1:A:697:U:C2	1:A:785:G:N2	2.79	0.44
1:A:700:G:H2'	1:A:701:U:O4'	2.17	0.44
1:A:794:A:C8	1:A:795:C:C5	3.05	0.44
1:A:824:G:H21	8:H:1:SER:HA	1.80	0.44
1:A:865:A:C4	1:A:866:C:C6	3.06	0.44
1:A:878:A:H5'	8:H:80:PRO:HD2	1.99	0.44
1:A:879:C:C6	1:A:879:C:H3'	2.52	0.44
1:A:888:G:H22	1:A:908:A:H3'	1.81	0.44
1:A:903:G:C4	1:A:904:U:C5	3.06	0.44
1:A:905:U:H3'	1:A:906:A:H8	1.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:925:G:N1	1:A:1391:U:O2	2.50	0.44
1:A:934:C:C2'	1:A:1344:C:C5	3.01	0.44
1:A:947:G:N7	1:A:948:C:C5	2.86	0.44
1:A:984:C:H2'	1:A:985:C:C5	2.51	0.44
1:A:985:C:C4	1:A:986:U:C4	3.06	0.44
1:A:987:G:N1	1:A:1219:A:C6	2.85	0.44
1:A:1097:C:H2'	1:A:1098:C:O4'	2.17	0.44
1:A:1134:G:C2	1:A:1135:U:C2	3.05	0.44
1:A:1198:G:C5	1:A:1199:U:C4	3.04	0.44
1:A:1209:C:H2'	1:A:1210:C:C5	2.53	0.44
1:A:1221:G:H5'	19:S:52:ASN:HA	1.98	0.44
1:A:1227:A:N3	1:A:1227:A:H5"	2.33	0.44
1:A:1246:A:C2	1:A:1247:U:H1'	2.52	0.44
1:A:1261:A:C2	1:A:1275:A:N7	2.86	0.44
1:A:1300:G:C5	1:A:1334:G:N7	2.86	0.44
1:A:1368:A:C6	1:A:1369:C:C4	3.05	0.44
1:A:1392:G:P	1:A:1392:G:H8	2.39	0.44
1:A:1433:A:N7	1:A:1468:A:C5	2.84	0.44
1:A:1522:U:OP1	11:K:127:ARG:C	2.60	0.44
2:B:22:TRP:CD1	2:B:30:ILE:HG23	2.53	0.44
2:B:67:LEU:HA	2:B:67:LEU:HD23	1.72	0.44
3:C:22:PHE:H	10:J:94:ALA:CB	2.29	0.44
4:D:12:ARG:HG3	4:D:34:GLU:H	1.82	0.44
4:D:104:MET:CE	4:D:170:LEU:HD13	2.47	0.44
5:E:48:GLY:N	5:E:66:ALA:HB2	2.32	0.44
8:H:48:PHE:CD2	8:H:58:LEU:CD1	3.01	0.44
11:K:41:LEU:HB3	11:K:76:TYR:CD2	2.52	0.44
12:L:13:ARG:HH11	12:L:13:ARG:CG	2.30	0.44
12:L:25:ALA:H	12:L:29:LYS:NZ	2.16	0.44
13:M:11:HIS:ND1	13:M:43:LYS:HB3	2.33	0.44
13:M:68:LEU:HD12	13:M:71:GLU:OE1	2.18	0.44
16:P:16:PHE:CD2	16:P:40:ASN:CG	2.95	0.44
17:Q:58:VAL:HG22	17:Q:74:LEU:HB2	1.98	0.44
19:S:77:ARG:HG3	19:S:79:TYR:CE2	2.52	0.44
1:A:21:G:H4'	1:A:573:A:N1	2.33	0.44
1:A:35:G:C5	1:A:550:G:C2	3.06	0.44
1:A:50:A:O3'	1:A:52:C:H5'	2.18	0.44
1:A:59:A:C2	1:A:354:G:N7	2.86	0.44
1:A:144:G:N1	1:A:145:G:C5	2.85	0.44
1:A:160:A:H4'	1:A:344:A:C4	2.53	0.44
1:A:160:A:C2	1:A:161:A:N3	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:193:C:O2	1:A:194:C:H6	1.99	0.44
1:A:203:G:C5	1:A:212:G:C6	3.06	0.44
1:A:251:G:C2	1:A:253:A:N7	2.86	0.44
1:A:286:C:H2'	1:A:287:U:H6	1.83	0.44
1:A:292:G:C8	1:A:293:G:H1'	2.52	0.44
1:A:309:A:C5	1:A:310:G:C8	3.05	0.44
1:A:323:U:H3'	1:A:324:G:C8	2.53	0.44
1:A:324:G:C4	1:A:326:G:OP2	2.70	0.44
1:A:404:G:N2	1:A:405:U:H1'	2.32	0.44
1:A:440:C:C5	1:A:441:A:N7	2.85	0.44
1:A:460:A:C4	1:A:472:U:O2	2.71	0.44
1:A:502:A:N1	1:A:544:G:C4	2.86	0.44
1:A:567:G:C4	1:A:568:G:C8	3.06	0.44
1:A:574:A:H1'	1:A:882:C:O2	2.18	0.44
1:A:581:G:N7	1:A:758:C:C5	2.86	0.44
1:A:585:G:C5	1:A:586:C:C4	3.05	0.44
1:A:592:G:N2	1:A:593:U:H1'	2.32	0.44
1:A:602:A:H61	1:A:636:U:H3	1.66	0.44
1:A:615:G:N1	1:A:616:G:C5	2.86	0.44
1:A:627:G:N1	1:A:628:G:C5	2.85	0.44
1:A:628:G:C6	1:A:629:A:N7	2.85	0.44
1:A:628:G:N2	1:A:629:A:C1'	2.81	0.44
1:A:679:C:O2	1:A:712:A:C2	2.70	0.44
1:A:687:A:C5	1:A:701:U:H4'	2.53	0.44
1:A:721:G:N3	1:A:722:G:N2	2.66	0.44
1:A:771:G:N7	1:A:772:U:C6	2.86	0.44
1:A:780:A:H8	11:K:121:ARG:NH2	2.16	0.44
1:A:821:G:N1	1:A:822:U:C2	2.86	0.44
1:A:868:C:C5	1:A:869:G:N7	2.86	0.44
1:A:874:G:N3	1:A:874:G:H2'	2.32	0.44
1:A:898:G:N2	1:A:902:G:C4	2.85	0.44
1:A:917:G:C5	1:A:918:A:C5	3.05	0.44
1:A:941:G:H21	1:A:942:G:H1'	1.82	0.44
1:A:998:C:H2'	1:A:999:C:H6	1.83	0.44
1:A:1018:G:C6	1:A:1019:A:C8	3.04	0.44
1:A:1032:G:N1	1:A:1033:G:C5	2.86	0.44
1:A:1060:U:C4	1:A:1198:G:N1	2.86	0.44
1:A:1066:C:C4	1:A:1067:A:N1	2.86	0.44
1:A:1099:G:N3	1:A:1100:C:H5'	2.33	0.44
1:A:1117:A:C4'	9:I:106:ASP:HA	2.48	0.44
1:A:1165:U:O5'	1:A:1165:U:H6	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1205:U:H2'	1:A:1206:G:H8	1.78	0.44
1:A:1213:A:N7	1:A:1215:G:C4	2.86	0.44
1:A:1262:C:O5'	1:A:1262:C:H6	2.00	0.44
1:A:1270:G:C5'	1:A:1314:C:H5'	2.47	0.44
1:A:1309:G:C2	1:A:1310:G:C5	3.06	0.44
1:A:1333:A:OP2	1:A:1334:G:O6	2.36	0.44
1:A:1390:U:C2	1:A:1391:U:C2	3.06	0.44
1:A:1399:C:C6	1:A:1502:A:C2	3.06	0.44
1:A:1429:A:H2	1:A:1471:U:H3	1.59	0.44
1:A:1483:A:C4	1:A:1484:C:C1'	3.00	0.44
2:B:89:PHE:CG	2:B:152:ASP:OD2	2.71	0.44
3:C:19:SER:HB3	3:C:21:TRP:CE2	2.52	0.44
3:C:57:GLU:HB3	3:C:59:PRO:HD3	1.99	0.44
5:E:85:LYS:HZ1	5:E:92:ARG:HA	1.82	0.44
5:E:85:LYS:HZ3	5:E:93:VAL:H	1.65	0.44
12:L:25:ALA:C	12:L:29:LYS:HZ3	2.25	0.44
13:M:1:ALA:HB3	13:M:3:ILE:HG23	2.00	0.44
14:N:98:ALA:H	14:N:100:TRP:CD1	2.35	0.44
15:O:63:ARG:HA	15:O:87:ARG:HH22	1.82	0.44
15:O:68:TYR:CD1	15:O:71:ARG:NH1	2.86	0.44
19:S:5:LYS:HD3	19:S:7:GLY:H	1.83	0.44
1:A:31:G:H1'	1:A:46:G:H5'	1.99	0.44
1:A:36:C:C6	1:A:36:C:H3'	2.52	0.44
1:A:49:U:C6	1:A:49:U:C3'	2.99	0.44
1:A:61:G:N2	1:A:379:C:H4'	2.33	0.44
1:A:86:G:C4	1:A:87:C:C5	3.06	0.44
1:A:130:A:N6	1:A:234:C:O4'	2.50	0.44
1:A:131:A:C2	1:A:232:G:C4	3.05	0.44
1:A:135:C:H3'	1:A:135:C:H6	1.82	0.44
1:A:180:U:C6	1:A:180:U:C3'	2.98	0.44
1:A:205:A:C4	1:A:206:C:C6	3.06	0.44
1:A:214:C:H2'	1:A:215:C:C6	2.52	0.44
1:A:226:G:N2	1:A:227:G:C4	2.86	0.44
1:A:254:G:H8	1:A:254:G:O5'	1.99	0.44
1:A:371:A:N3	1:A:391:G:N3	2.66	0.44
1:A:411:A:C6	1:A:429:U:C2	3.06	0.44
1:A:465:A:C4	1:A:466:A:N7	2.86	0.44
1:A:521:G:C2	1:A:529:G:H1'	2.53	0.44
1:A:562:U:C5'	1:A:563:A:C5	3.00	0.44
1:A:580:C:C5	1:A:581:G:N7	2.86	0.44
1:A:592:G:C2	1:A:593:U:H1'	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:646:G:N2	1:A:647:C:H1'	2.33	0.44
1:A:688:G:H5'	11:K:48:GLY:HA2	1.99	0.44
1:A:737:C:H5'	6:F:89:VAL:HG23	2.00	0.44
1:A:815:A:C4	1:A:1527:U:O2'	2.67	0.44
1:A:824:G:N1	1:A:825:A:C5	2.85	0.44
1:A:850:U:C2'	1:A:851:G:O5'	2.66	0.44
1:A:888:G:N2	1:A:908:A:C5	2.85	0.44
1:A:910:C:C4	1:A:911:U:C5	3.05	0.44
1:A:913:A:C6	12:L:19:ASN:HB3	2.53	0.44
1:A:931:C:H42	1:A:1386:G:H1	1.66	0.44
1:A:933:G:OP2	7:G:2:ARG:CG	2.66	0.44
1:A:1020:G:C4	1:A:1021:A:C8	3.05	0.44
1:A:1083:U:C6	1:A:1084:G:C4	3.05	0.44
1:A:1120:C:C6	1:A:1154:G:N2	2.85	0.44
1:A:1123:U:O2	1:A:1123:U:H2'	2.16	0.44
1:A:1138:G:C6	1:A:1140:C:C2	3.05	0.44
1:A:1146:A:H3'	1:A:1147:C:H6	1.82	0.44
1:A:1147:C:H6	1:A:1147:C:O5'	2.00	0.44
1:A:1148:U:H2'	1:A:1149:C:O4'	2.18	0.44
1:A:1225:A:C2	1:A:1226:C:C4	3.06	0.44
1:A:1239:A:C2	7:G:113:LYS:HB2	2.53	0.44
1:A:1239:A:N3	1:A:1241:G:C6	2.85	0.44
1:A:1249:C:H2'	9:I:70:GLY:C	2.43	0.44
1:A:1265:C:H2'	1:A:1266:G:C8	2.53	0.44
1:A:1272:G:C8	1:A:1272:G:H3'	2.53	0.44
1:A:1324:A:C8	1:A:1324:A:O5'	2.71	0.44
1:A:1350:A:C6	1:A:1351:U:C2	3.05	0.44
1:A:1394:A:H2'	1:A:1501:C:O2	2.17	0.44
1:A:1405:G:C1'	1:A:1519:A:H4'	2.46	0.44
1:A:1428:A:C8	1:A:1428:A:O5'	2.71	0.44
1:A:1432:G:N2	1:A:1467:C:C6	2.86	0.44
1:A:1457:G:C5'	20:T:33:LYS:HZ1	2.31	0.44
1:A:1457:G:H2'	1:A:1458:G:C8	2.53	0.44
1:A:1488:G:C2	1:A:1489:G:H1'	2.52	0.44
4:D:194:ILE:C	4:D:194:ILE:HD12	2.43	0.44
5:E:78:GLY:HA2	5:E:119:VAL:HG11	1.99	0.44
6:F:15:SER:HA	6:F:18:VAL:HG23	2.00	0.44
8:H:39:LEU:CD2	8:H:100:ILE:HD11	2.45	0.44
13:M:9:PRO:HG2	13:M:44:ILE:HG21	1.99	0.44
13:M:52:ILE:HA	13:M:55:LEU:HD12	2.00	0.44
16:P:69:ASP:HA	16:P:72:ALA:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:22:VAL:HG21	17:Q:60:ILE:CG2	2.45	0.44
18:R:63:TYR:CE1	18:R:69:TYR:CD2	3.05	0.44
22:W:149:GLU:HB2	22:W:286:GLY:HA2	2.00	0.44
22:W:293:TYR:O	22:W:311:ALA:HB3	2.18	0.44
1:A:36:C:H2'	1:A:501:C:H5'	2.00	0.44
1:A:68:G:C6	1:A:69:G:H1'	2.53	0.44
1:A:76:G:H5'	1:A:77:A:P	2.58	0.44
1:A:102:G:C4	1:A:103:U:C6	3.06	0.44
1:A:115:G:H2'	1:A:289:G:C8	2.53	0.44
1:A:122:G:C2	1:A:123:U:C1'	3.00	0.44
1:A:145:G:N1	1:A:178:C:C4	2.86	0.44
1:A:158:G:C4	1:A:164:G:C4	3.06	0.44
1:A:166:U:C6	1:A:166:U:H5"	2.53	0.44
1:A:292:G:C2	1:A:309:A:C4	3.05	0.44
1:A:323:U:O4	1:A:324:G:N1	2.51	0.44
1:A:341:C:O5'	1:A:341:C:H6	2.00	0.44
1:A:369:G:N1	1:A:393:A:C2	2.86	0.44
1:A:371:A:N1	1:A:372:C:C5	2.86	0.44
1:A:402:G:N1	1:A:403:C:C4	2.86	0.44
1:A:410:G:N1	1:A:431:A:OP2	2.50	0.44
1:A:411:A:C4	1:A:429:U:C4	3.06	0.44
1:A:474:G:H3'	1:A:475:C:H6	1.83	0.44
1:A:517:G:H2'	1:A:530:G:C4'	2.44	0.44
1:A:558:G:C8	1:A:559:A:C4	3.06	0.44
1:A:563:A:C6	1:A:567:G:C4	3.06	0.44
1:A:569:C:C6	1:A:574:A:C2'	2.99	0.44
1:A:583:A:N3	1:A:759:A:C5	2.85	0.44
1:A:606:G:C8	1:A:607:A:H5'	2.53	0.44
1:A:648:A:C8	1:A:648:A:O5'	2.71	0.44
1:A:685:G:C2	1:A:686:U:C5	3.06	0.44
1:A:690:G:C6	11:K:52:ARG:NE	2.83	0.44
1:A:764:C:O3'	15:O:49:HIS:HE1	2.01	0.44
1:A:771:G:C6	1:A:809:G:N1	2.86	0.44
1:A:780:A:H8	11:K:121:ARG:HH21	1.64	0.44
1:A:807:A:H2'	1:A:808:C:O4'	2.18	0.44
1:A:824:G:N3	8:H:2:MET:HB3	2.33	0.44
1:A:838:G:H2'	1:A:839:C:H6	1.83	0.44
1:A:856:C:OP2	1:A:871:U:C2	2.71	0.44
1:A:861:G:H8	1:A:861:G:O5'	2.01	0.44
1:A:872:A:H1'	1:A:873:A:C3'	2.48	0.44
1:A:894:G:C5	1:A:895:G:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:925:G:C2	1:A:1392:G:C4	3.06	0.44
1:A:932:C:C4	7:G:2:ARG:CZ	3.01	0.44
1:A:946:A:H2	1:A:1333:A:H2	1.65	0.44
1:A:970:C:H3'	1:A:971:G:H5"	1.99	0.44
1:A:1004:A:H4'	1:A:1032:G:OP2	2.18	0.44
1:A:1018:G:C6	1:A:1019:A:N7	2.86	0.44
1:A:1024:G:H2'	1:A:1024:G:N3	2.32	0.44
1:A:1047:G:C2	1:A:1213:A:H2	2.36	0.44
1:A:1048:G:H4'	14:N:2:LYS:CB	2.47	0.44
1:A:1067:A:N3	1:A:1068:G:H1'	2.33	0.44
1:A:1083:U:O2'	1:A:1101:A:H8	2.01	0.44
1:A:1104:G:C2	1:A:1105:A:C4	3.05	0.44
1:A:1125:U:H3'	1:A:1127:G:O6	2.18	0.44
1:A:1143:G:C5	1:A:1144:G:N7	2.86	0.44
1:A:1148:U:H5'	9:I:6:TYR:CZ	2.53	0.44
1:A:1168:U:C5	1:A:1169:A:C1'	3.00	0.44
1:A:1181:G:O2'	1:A:1182:G:C8	2.71	0.44
1:A:1202:U:OP1	10:J:56:HIS:HE1	2.01	0.44
1:A:1213:A:N1	1:A:1215:G:H1'	2.33	0.44
1:A:1238:A:H3'	1:A:1298:U:C2	2.53	0.44
1:A:1248:A:C4	1:A:1249:C:C6	3.06	0.44
1:A:1285:A:H61	1:A:1355:G:C5'	2.31	0.44
1:A:1345:U:H5"	1:A:1348:U:H1'	2.00	0.44
1:A:1348:U:N3	1:A:1349:A:C8	2.86	0.44
1:A:1394:A:C3'	1:A:1395:C:H5'	2.40	0.44
1:A:1408:A:H1'	1:A:1494:G:N1	2.31	0.44
1:A:1413:A:C6	1:A:1488:G:C2	3.05	0.44
1:A:1440:U:O2	1:A:1462:C:C2	2.71	0.44
2:B:167:HIS:C	2:B:169:HIS:H	2.23	0.44
6:F:37:HIS:CE1	6:F:98:GLU:CD	2.96	0.44
11:K:30:ILE:HD13	11:K:43:TRP:HE3	1.78	0.44
12:L:116:TYR:HB3	12:L:117:GLY:H	1.65	0.44
13:M:15:VAL:HG22	13:M:40:GLU:HB3	2.00	0.44
15:O:41:HIS:CD2	15:O:41:HIS:C	2.94	0.44
18:R:32:ILE:HG21	18:R:58:ILE:CG2	2.45	0.44
22:W:157:ILE:HD11	22:W:185:TYR:HB2	2.00	0.44
1:A:14:U:C6	1:A:16:A:OP2	2.71	0.44
1:A:19:A:OP1	5:E:134:ASN:HB2	2.18	0.44
1:A:36:C:N3	1:A:37:U:C6	2.85	0.44
1:A:39:G:H22	1:A:404:G:H1'	1.82	0.44
1:A:47:C:C5	1:A:366:A:OP1	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:106:C:N3	20:T:9:ARG:HB2	2.33	0.44
1:A:115:G:N1	1:A:313:A:C5	2.86	0.44
1:A:144:G:C2	1:A:179:A:C6	3.06	0.44
1:A:160:A:H4'	1:A:344:A:N1	2.33	0.44
1:A:203:G:H1'	1:A:465:A:N6	2.30	0.44
1:A:223:A:C2	1:A:224:U:C2	3.06	0.44
1:A:253:A:C1'	1:A:276:G:H4'	2.48	0.44
1:A:310:G:C6	1:A:311:C:C5	3.06	0.44
1:A:317:U:C6	1:A:317:U:O5'	2.71	0.44
1:A:335:C:H2'	1:A:336:A:O4'	2.18	0.44
1:A:380:G:N2	1:A:384:G:C4	2.86	0.44
1:A:399:G:H2'	1:A:399:G:N3	2.32	0.44
1:A:404:G:C2'	1:A:498:A:N1	2.81	0.44
1:A:410:G:C2	1:A:429:U:O2	2.71	0.44
1:A:415:A:C5	1:A:416:G:C4	3.06	0.44
1:A:439:U:C1'	4:D:119:HIS:HA	2.48	0.44
1:A:481:G:H21	1:A:482:A:H62	1.66	0.44
1:A:539:A:C8	1:A:539:A:O5'	2.71	0.44
1:A:582:C:N4	1:A:583:A:C5	2.85	0.44
1:A:612:C:C5	1:A:613:C:N4	2.85	0.44
1:A:614:C:C2	1:A:615:G:C8	3.06	0.44
1:A:656:G:N2	1:A:657:U:C2	2.86	0.44
1:A:663:A:H5"	18:R:49:LYS:HD2	2.00	0.44
1:A:674:G:H2'	1:A:675:A:C8	2.52	0.44
1:A:706:A:N6	1:A:707:U:N3	2.66	0.44
1:A:723:U:O4	1:A:832:G:C2	2.71	0.44
1:A:728:A:C5	1:A:729:A:C6	3.06	0.44
1:A:738:C:H2'	1:A:739:C:O4'	2.17	0.44
1:A:742:G:C5	1:A:743:A:C8	3.06	0.44
1:A:774:G:H3'	1:A:775:G:H8	1.81	0.44
1:A:775:G:C8	1:A:775:G:OP2	2.71	0.44
1:A:783:C:C6	1:A:783:C:C3'	3.01	0.44
1:A:865:A:H2'	1:A:866:C:C5'	2.48	0.44
1:A:892:A:N6	1:A:907:A:C8	2.86	0.44
1:A:946:A:N1	1:A:1236:A:C6	2.86	0.44
1:A:947:G:N1	1:A:1235:U:C2	2.86	0.44
1:A:949:A:H61	1:A:1232:U:H3	1.66	0.44
1:A:1062:U:H3'	1:A:1062:U:H6	1.82	0.44
1:A:1082:A:C8	1:A:1082:A:O5'	2.71	0.44
1:A:1089:G:H2'	1:A:1169:A:N1	2.33	0.44
1:A:1093:A:C8	1:A:1093:A:H3'	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1106:G:C6	1:A:1107:C:C4	3.06	0.44
1:A:1109:C:H3'	1:A:1110:A:C8	2.53	0.44
1:A:1123:U:O2	1:A:1150:A:N1	2.51	0.44
1:A:1126:U:O2	1:A:1280:A:H3'	2.18	0.44
1:A:1128:C:N3	1:A:1129:C:C4	2.86	0.44
1:A:1129:C:N3	1:A:1144:G:C2	2.86	0.44
1:A:1142:G:C5	1:A:1143:G:C1'	2.97	0.44
1:A:1148:U:C2	1:A:1149:C:C2	3.06	0.44
1:A:1153:G:N2	1:A:1154:G:H1'	2.33	0.44
1:A:1160:G:H5'	2:B:134:LEU:CB	2.46	0.44
1:A:1162:C:C2	1:A:1175:G:N3	2.86	0.44
1:A:1177:G:C6	1:A:1178:G:N2	2.86	0.44
1:A:1255:G:C6	1:A:1279:G:C6	3.06	0.44
1:A:1268:G:N1	1:A:1269:A:C2	2.86	0.44
1:A:1279:G:C8	1:A:1282:C:N4	2.86	0.44
1:A:1294:G:C2	1:A:1295:U:H1'	2.53	0.44
1:A:1319:A:C8	1:A:1319:A:C3'	3.00	0.44
1:A:1358:U:OP2	1:A:1358:U:C6	2.71	0.44
1:A:1375:A:H4'	7:G:28:ILE:HG23	1.99	0.44
1:A:1404:C:O4'	1:A:1499:A:C2	2.71	0.44
1:A:1405:G:C4	1:A:1519:A:O2'	2.70	0.44
1:A:1421:G:C2	1:A:1422:G:N9	2.86	0.44
1:A:1449:C:H2'	1:A:1450:U:C5'	2.48	0.44
1:A:1469:C:H6	1:A:1469:C:H3'	1.83	0.44
2:B:169:HIS:CE1	2:B:173:LYS:HG3	2.53	0.44
3:C:39:ARG:HG2	3:C:39:ARG:HH11	1.83	0.44
8:H:38:VAL:O	8:H:42:GLU:HG2	2.18	0.44
11:K:42:GLY:N	11:K:73:VAL:HG12	2.32	0.44
16:P:34:GLU:CD	16:P:60:TRP:HE1	2.26	0.44
20:T:23:ARG:HB2	20:T:65:LEU:HD12	2.00	0.44
1:A:28:A:C6	1:A:29:U:C5	3.06	0.43
1:A:47:C:H4'	1:A:48:C:H6	1.83	0.43
1:A:66:A:N3	1:A:104:G:C4	2.84	0.43
1:A:74:A:C6	1:A:75:G:C6	3.05	0.43
1:A:83:C:C6	1:A:83:C:C3'	2.92	0.43
1:A:109:A:H5'	1:A:110:C:H5'	2.00	0.43
1:A:113:G:C2	1:A:315:A:C4	3.05	0.43
1:A:116:A:C8	1:A:116:A:O5'	2.71	0.43
1:A:132:C:H5'	1:A:262:A:H1'	2.00	0.43
1:A:203:G:C8	1:A:203:G:H3'	2.53	0.43
1:A:297:G:N3	1:A:301:G:N1	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:298:A:H2'	1:A:299:G:O4'	2.18	0.43
1:A:323:U:C5	1:A:324:G:N7	2.85	0.43
1:A:369:G:C5	1:A:393:A:C2	3.06	0.43
1:A:397:A:H5"	1:A:398:U:O4	2.17	0.43
1:A:448:A:C8	1:A:448:A:C5'	3.01	0.43
1:A:453:G:C2	1:A:454:G:N3	2.86	0.43
1:A:499:A:H1'	1:A:500:G:N9	2.33	0.43
1:A:538:G:OP1	12:L:109:ARG:HA	2.17	0.43
1:A:569:C:N1	1:A:574:A:H2'	2.33	0.43
1:A:655:A:C1'	1:A:755:G:H5'	2.44	0.43
1:A:712:A:H2	1:A:713:G:C4	2.36	0.43
1:A:741:G:C6	1:A:742:G:C5	3.06	0.43
1:A:756:C:N4	1:A:757:U:C4	2.86	0.43
1:A:801:U:C2	1:A:802:A:C8	3.06	0.43
1:A:832:G:N2	1:A:832:G:H2'	2.33	0.43
1:A:840:C:O2	1:A:847:G:C2	2.70	0.43
1:A:849:G:C6	1:A:850:U:C6	3.05	0.43
1:A:857:C:H2'	1:A:858:G:H5'	1.99	0.43
1:A:875:U:C6	1:A:875:U:C3'	3.01	0.43
1:A:877:G:H4'	8:H:4:ASP:HB2	1.99	0.43
1:A:917:G:H2'	1:A:918:A:O4'	2.17	0.43
1:A:928:G:C2	1:A:1390:U:O2	2.71	0.43
1:A:941:G:C2	1:A:1343:G:C6	3.06	0.43
1:A:946:A:H2	1:A:1333:A:C2	2.36	0.43
1:A:997:U:N3	1:A:998:C:C4	2.85	0.43
1:A:1053:G:H21	1:A:1056:U:C3'	2.30	0.43
1:A:1063:C:H3'	1:A:1064:G:H3'	2.00	0.43
1:A:1063:C:H5	1:A:1190:G:C8	2.35	0.43
1:A:1072:G:H2'	1:A:1073:U:O4'	2.18	0.43
1:A:1074:G:C2	1:A:1075:U:C2	3.06	0.43
1:A:1091:U:C2	1:A:1093:A:OP2	2.71	0.43
1:A:1115:U:C6	1:A:1115:U:H3'	2.53	0.43
1:A:1139:G:N2	1:A:1143:G:C2	2.86	0.43
1:A:1171:A:C6	1:A:1172:C:C2	3.06	0.43
1:A:1179:A:H5"	9:I:98:ARG:CG	2.47	0.43
1:A:1231:G:C4'	9:I:129:ARG:H	2.31	0.43
1:A:1245:C:C4	1:A:1246:A:N7	2.86	0.43
1:A:1248:A:C6	1:A:1290:G:C4	3.06	0.43
1:A:1309:G:C2	1:A:1310:G:N9	2.86	0.43
1:A:1355:G:H21	1:A:1356:G:H1'	1.83	0.43
1:A:1406:U:C2	1:A:1407:C:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1432:G:N2	1:A:1467:C:H3'	2.33	0.43
1:A:1497:G:H2'	1:A:1498:U:C5	2.53	0.43
1:A:1501:C:C5	1:A:1504:G:C4	3.05	0.43
1:A:1502:A:OP2	1:A:1504:G:C8	2.71	0.43
1:A:1526:G:C8	1:A:1526:G:OP2	2.71	0.43
1:A:1532:U:OP2	1:A:1532:U:H6	2.01	0.43
2:B:91:VAL:HG21	2:B:95:TRP:HE1	1.83	0.43
2:B:165:ALA:HB2	2:B:184:ALA:HB2	1.99	0.43
4:D:43:ARG:O	4:D:44:LYS:HB2	2.18	0.43
5:E:56:PRO:HA	5:E:59:ILE:HG12	2.00	0.43
5:E:70:MET:HA	5:E:70:MET:HE3	2.00	0.43
5:E:151:MET:SD	5:E:153:ALA:HB3	2.58	0.43
8:H:38:VAL:HG11	8:H:111:THR:CB	2.47	0.43
9:I:18:VAL:HG11	9:I:82:ILE:CA	2.41	0.43
9:I:35:GLU:H	9:I:37:TYR:HE1	1.62	0.43
15:O:14:PHE:CZ	15:O:84:LEU:HD23	2.53	0.43
15:O:81:ILE:HD12	15:O:88:ARG:HA	1.99	0.43
17:Q:22:VAL:CG2	17:Q:60:ILE:HG21	2.46	0.43
17:Q:38:LYS:HZ2	17:Q:38:LYS:HA	1.81	0.43
18:R:49:LYS:HA	18:R:52:ARG:HE	1.83	0.43
19:S:27:LYS:HG3	19:S:28:LYS:H	1.83	0.43
20:T:61:ALA:HB1	20:T:66:ILE:O	2.18	0.43
1:A:6:G:C8	5:E:123:LEU:CD1	3.02	0.43
1:A:11:G:C8	1:A:11:G:O5'	2.71	0.43
1:A:16:A:O4'	5:E:21:SER:HB2	2.18	0.43
1:A:39:G:C8	1:A:404:G:N2	2.86	0.43
1:A:47:C:OP2	1:A:366:A:N7	2.51	0.43
1:A:63:C:H1'	1:A:380:G:O3'	2.18	0.43
1:A:101:A:N6	1:A:102:G:C6	2.86	0.43
1:A:134:G:N7	1:A:325:A:C6	2.86	0.43
1:A:144:G:C6	1:A:178:C:N4	2.86	0.43
1:A:147:G:H1'	1:A:1448:C:P	2.58	0.43
1:A:217:C:C1'	1:A:469:C:H42	2.25	0.43
1:A:231:U:O2	1:A:232:G:C8	2.71	0.43
1:A:234:C:O2'	1:A:235:C:H5'	2.19	0.43
1:A:247:G:C8	1:A:247:G:C3'	2.98	0.43
1:A:247:G:C6	1:A:278:G:C6	3.06	0.43
1:A:261:U:N3	1:A:263:A:H3'	2.33	0.43
1:A:263:A:C2	1:A:264:C:C6	3.06	0.43
1:A:316:C:C5	1:A:351:G:C2	3.06	0.43
1:A:320:A:C1'	1:A:1434:A:H2	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:363:A:H3'	1:A:364:A:H8	1.82	0.43
1:A:442:G:H1	1:A:492:C:H42	1.65	0.43
1:A:464:U:O2'	1:A:466:A:N7	2.50	0.43
1:A:519:C:H5"	1:A:519:C:H6	1.84	0.43
1:A:549:C:N3	1:A:550:G:C8	2.86	0.43
1:A:588:G:C5	1:A:589:U:C5	3.06	0.43
1:A:612:C:H3'	1:A:613:C:H6	1.84	0.43
1:A:615:G:C2	1:A:626:G:N3	2.86	0.43
1:A:642:A:C2	8:H:123:GLU:OE1	2.71	0.43
1:A:665:A:C6	1:A:733:G:N7	2.86	0.43
1:A:668:G:H4'	15:O:45:HIS:HB3	2.00	0.43
1:A:690:G:O6	1:A:691:G:C5	2.71	0.43
1:A:711:G:N1	1:A:712:A:C4	2.86	0.43
1:A:714:G:H21	11:K:119:GLY:HA3	1.83	0.43
1:A:751:U:C5	1:A:752:G:C4	3.06	0.43
1:A:766:A:N6	1:A:767:A:C2	2.85	0.43
1:A:773:G:C8	1:A:773:G:C3'	3.02	0.43
1:A:838:G:N2	2:B:34:ARG:HH12	2.09	0.43
1:A:877:G:C2	8:H:2:MET:HB3	2.53	0.43
1:A:902:G:C6	1:A:903:G:N7	2.86	0.43
1:A:925:G:C4	1:A:1392:G:N1	2.86	0.43
1:A:935:A:H2'	1:A:936:C:C6	2.53	0.43
1:A:956:U:O5'	1:A:956:U:C6	2.70	0.43
1:A:962:C:C2	1:A:1201:A:C2	3.06	0.43
1:A:1004:A:H1'	1:A:1032:G:OP2	2.18	0.43
1:A:1009:U:O2	1:A:1009:U:C2'	2.62	0.43
1:A:1043:G:C6	1:A:1044:A:N1	2.86	0.43
1:A:1043:G:O6	1:A:1044:A:C6	2.71	0.43
1:A:1109:C:H2'	1:A:1110:A:C4	2.54	0.43
1:A:1118:U:C5	1:A:1119:C:C5	3.06	0.43
1:A:1185:G:C6	1:A:1186:G:C4	3.06	0.43
1:A:1187:G:OP2	1:A:1187:G:N7	2.51	0.43
1:A:1203:C:C4	1:A:1204:A:N7	2.86	0.43
1:A:1218:C:H2'	1:A:1219:A:H8	1.80	0.43
1:A:1240:U:OP1	1:A:1240:U:C2	2.71	0.43
1:A:1244:G:H2'	1:A:1245:C:O4'	2.18	0.43
1:A:1292:G:C6	1:A:1293:C:C5	3.06	0.43
1:A:1298:U:H6	7:G:110:ARG:O	2.01	0.43
1:A:1300:G:N2	1:A:1335:U:C2	2.86	0.43
1:A:1323:G:N2	1:A:1324:A:C1'	2.82	0.43
1:A:1367:C:C2	1:A:1368:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1405:G:C8	1:A:1405:G:H3'	2.52	0.43
1:A:1410:A:C4	1:A:1411:C:C6	3.06	0.43
1:A:1422:G:C2	1:A:1423:G:N9	2.86	0.43
1:A:1434:A:N6	1:A:1435:G:C6	2.87	0.43
1:A:1461:G:C5	1:A:1462:C:C6	3.05	0.43
1:A:1468:A:O2'	1:A:1469:C:H5"	2.19	0.43
1:A:1525:G:C6	1:A:1526:G:N7	2.85	0.43
2:B:184:ALA:CB	2:B:195:VAL:HG21	2.48	0.43
2:B:185:ILE:HB	2:B:203:ASP:HA	2.00	0.43
3:C:59:PRO:HG2	3:C:99:GLN:HE22	1.82	0.43
3:C:91:ALA:HA	3:C:98:ALA:N	2.32	0.43
3:C:107:LYS:HG3	3:C:109:GLU:H	1.83	0.43
3:C:149:LYS:HA	3:C:168:ARG:HA	2.00	0.43
3:C:183:TYR:CD1	3:C:200:TRP:CD2	3.06	0.43
4:D:54:LEU:HD13	4:D:55:ARG:NE	2.33	0.43
4:D:129:VAL:CG1	4:D:134:TYR:CG	3.00	0.43
5:E:44:ARG:HG3	5:E:44:ARG:HH11	1.83	0.43
6:F:50:PRO:HA	6:F:55:HIS:HA	1.98	0.43
9:I:80:HIS:CE1	9:I:103:VAL:HG12	2.53	0.43
14:N:96:LYS:HE2	14:N:100:TRP:HE1	1.82	0.43
15:O:23:SER:N	15:O:27:GLN:HE21	2.17	0.43
17:Q:64:ARG:O	17:Q:71:SER:HA	2.17	0.43
20:T:60:GLN:O	20:T:65:LEU:HD22	2.18	0.43
22:W:235:LEU:CB	22:W:271:ARG:HH21	2.31	0.43
1:A:64:G:N1	1:A:67:C:C4	2.86	0.43
1:A:105:G:N2	1:A:380:G:H5"	2.33	0.43
1:A:117:G:O5'	1:A:117:G:H8	2.01	0.43
1:A:122:G:OP2	1:A:123:U:C6	2.71	0.43
1:A:126:G:C2	1:A:236:A:C2	3.06	0.43
1:A:128:G:N1	1:A:234:C:C4	2.86	0.43
1:A:138:G:H2'	1:A:139:A:H5'	2.01	0.43
1:A:152:A:OP2	1:A:153:C:N4	2.51	0.43
1:A:153:C:C5	1:A:154:U:C5	3.07	0.43
1:A:158:G:H21	1:A:164:G:H1'	1.83	0.43
1:A:181:A:N6	1:A:195:A:C8	2.87	0.43
1:A:187:G:C5'	20:T:79:THR:HG21	2.48	0.43
1:A:195:A:C2	1:A:223:A:O4'	2.70	0.43
1:A:207:C:C3'	1:A:208:U:C5	3.01	0.43
1:A:216:U:H5"	1:A:464:U:O3'	2.18	0.43
1:A:275:G:H3'	1:A:276:G:H8	1.82	0.43
1:A:275:G:H4'	17:Q:17:GLU:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:289:G:C2	1:A:312:C:O2	2.72	0.43
1:A:299:G:N2	1:A:300:A:H1'	2.33	0.43
1:A:319:G:C6	1:A:320:A:C4	3.06	0.43
1:A:373:A:C6	1:A:374:A:C5	3.06	0.43
1:A:378:G:N1	1:A:379:C:C2	2.85	0.43
1:A:383:A:C8	1:A:384:G:H1'	2.53	0.43
1:A:428:G:C2	1:A:430:A:N6	2.86	0.43
1:A:516:U:O5'	1:A:516:U:C6	2.71	0.43
1:A:548:G:N7	1:A:549:C:C5	2.86	0.43
1:A:608:A:H3'	1:A:609:A:C8	2.53	0.43
1:A:641:U:H3'	1:A:641:U:H6	1.82	0.43
1:A:645:G:C6	1:A:646:G:C5	3.06	0.43
1:A:771:G:C4	1:A:772:U:N1	2.86	0.43
1:A:851:G:C2	1:A:852:G:C4	3.06	0.43
1:A:868:C:O5'	1:A:868:C:H6	2.01	0.43
1:A:904:U:C6	1:A:904:U:OP2	2.72	0.43
1:A:938:A:C2	1:A:1345:U:O4	2.71	0.43
1:A:954:G:C6	13:M:102:LYS:HE3	2.53	0.43
1:A:987:G:C2	1:A:988:G:C4	3.06	0.43
1:A:1004:A:O4'	1:A:1025:U:C2	2.70	0.43
1:A:1040:U:C4	1:A:1041:G:O6	2.71	0.43
1:A:1055:A:C5	1:A:1206:G:C6	3.06	0.43
1:A:1058:G:H8	1:A:1058:G:O5'	2.01	0.43
1:A:1095:U:H2'	1:A:1096:C:O4'	2.18	0.43
1:A:1098:C:O5'	1:A:1098:C:H6	2.00	0.43
1:A:1180:A:C8	1:A:1180:A:O5'	2.71	0.43
1:A:1239:A:C5	1:A:1241:G:N1	2.86	0.43
1:A:1254:A:C2	1:A:1255:G:C5	3.06	0.43
1:A:1303:C:O5'	1:A:1303:C:H6	2.00	0.43
1:A:1306:A:C6	1:A:1331:G:O2'	2.67	0.43
1:A:1332:A:C8	1:A:1333:A:C8	3.06	0.43
1:A:1368:A:H1'	10:J:48:ARG:NH2	2.34	0.43
1:A:1406:U:H5"	1:A:1407:C:C5	2.51	0.43
1:A:1438:G:N2	1:A:1464:U:C1'	2.81	0.43
1:A:1522:U:C2	1:A:1523:G:C8	3.07	0.43
1:A:1526:G:N2	1:A:1527:U:C1'	2.82	0.43
2:B:56:LEU:HD11	2:B:183:PHE:CE2	2.52	0.43
4:D:126:GLY:HA3	4:D:134:TYR:CE2	2.53	0.43
5:E:52:ALA:HB1	5:E:57:ALA:CB	2.47	0.43
6:F:11:HIS:HB2	6:F:14:GLN:HB2	1.99	0.43
6:F:11:HIS:CG	6:F:14:GLN:HB2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:141:HIS:N	7:G:141:HIS:CD2	2.83	0.43
8:H:50:VAL:HG23	8:H:57:GLU:O	2.18	0.43
11:K:23:HIS:HD2	11:K:30:ILE:HG23	1.82	0.43
14:N:60:ARG:HE	14:N:70:HIS:CE1	2.36	0.43
19:S:33:TRP:HA	19:S:51:HIS:H	1.84	0.43
1:A:51:A:H61	1:A:314:C:H1'	1.82	0.43
1:A:87:C:C5	1:A:88:U:C4	3.06	0.43
1:A:128:G:N3	1:A:128:G:C2'	2.81	0.43
1:A:146:G:C4	1:A:147:G:C8	3.07	0.43
1:A:155:A:C4	1:A:156:C:C6	3.06	0.43
1:A:159:G:N3	1:A:161:A:OP2	2.50	0.43
1:A:173:U:C5'	1:A:173:U:C6	3.02	0.43
1:A:181:A:N1	1:A:195:A:C5	2.86	0.43
1:A:187:G:C5	1:A:189:A:OP1	2.71	0.43
1:A:292:G:H2'	1:A:292:G:N3	2.33	0.43
1:A:297:G:H1'	1:A:301:G:N2	2.34	0.43
1:A:303:A:N3	1:A:304:U:C6	2.87	0.43
1:A:318:G:C5	1:A:336:A:N1	2.87	0.43
1:A:430:A:H2'	1:A:431:A:C5'	2.48	0.43
1:A:445:G:C8	1:A:445:G:H3'	2.52	0.43
1:A:457:G:C2	1:A:476:U:H1'	2.54	0.43
1:A:494:G:C6	1:A:496:A:N7	2.85	0.43
1:A:514:C:H42	1:A:536:C:N4	2.16	0.43
1:A:522:C:H3'	1:A:523:A:H8	1.82	0.43
1:A:570:G:C5	1:A:571:U:C5	3.06	0.43
1:A:585:G:H2'	1:A:586:C:C6	2.52	0.43
1:A:606:G:H1'	1:A:632:U:C4	2.52	0.43
1:A:618:C:C4	1:A:620:C:OP1	2.72	0.43
1:A:654:G:N2	1:A:755:G:H5'	2.33	0.43
1:A:689:C:P	11:K:45:THR:HG21	2.59	0.43
1:A:701:U:C5	1:A:702:A:N1	2.86	0.43
1:A:773:G:O5'	1:A:773:G:H8	2.02	0.43
1:A:809:G:C8	1:A:809:G:O5'	2.71	0.43
1:A:832:G:C8	1:A:832:G:H3'	2.53	0.43
1:A:859:G:C5	1:A:860:A:C5	3.06	0.43
1:A:859:G:N1	1:A:860:A:C2	2.86	0.43
1:A:861:G:C5	1:A:862:C:C5	3.07	0.43
1:A:891:U:OP1	1:A:903:G:H5"	2.17	0.43
1:A:904:U:H2'	1:A:905:U:O4'	2.18	0.43
1:A:915:A:C2	1:A:916:U:H1'	2.54	0.43
1:A:964:A:C8	1:A:965:U:O4	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1037:C:C4	1:A:1038:C:N4	2.86	0.43
1:A:1054:C:H1'	1:A:1196:A:C8	2.54	0.43
1:A:1057:G:C5	1:A:1204:A:N3	2.86	0.43
1:A:1117:A:C5	1:A:1156:G:C2	3.06	0.43
1:A:1175:G:H3'	1:A:1176:A:H8	1.83	0.43
1:A:1190:G:H5'	3:C:175:HIS:NE2	2.33	0.43
1:A:1207:G:N2	1:A:1208:C:H1'	2.32	0.43
1:A:1300:G:N3	1:A:1334:G:C6	2.86	0.43
1:A:1305:G:O2'	1:A:1306:A:H8	2.01	0.43
1:A:1308:U:H2'	1:A:1309:G:H8	1.84	0.43
1:A:1458:G:N1	1:A:1459:G:C4	2.87	0.43
1:A:1472:U:O5'	1:A:1472:U:C6	2.72	0.43
1:A:1473:G:H3'	1:A:1474:U:C5	2.53	0.43
1:A:1508:A:C2	1:A:1509:C:N1	2.86	0.43
2:B:40:ILE:HD13	2:B:200:PRO:CB	2.48	0.43
2:B:187:ASP:C	2:B:189:ASN:H	2.25	0.43
3:C:28:PHE:CE1	10:J:13:PHE:CZ	3.05	0.43
3:C:115:VAL:HG21	3:C:201:ILE:HD11	2.00	0.43
5:E:113:VAL:HA	5:E:116:VAL:HG22	2.00	0.43
8:H:40:LYS:HD2	8:H:48:PHE:H	1.84	0.43
8:H:91:LEU:HD22	8:H:122:GLY:O	2.18	0.43
13:M:74:MET:SD	13:M:74:MET:C	3.02	0.43
15:O:2:LEU:HA	15:O:37:HIS:CE1	2.54	0.43
17:Q:22:VAL:CB	17:Q:60:ILE:HG21	2.49	0.43
17:Q:44:HIS:CE1	17:Q:68:LYS:O	2.71	0.43
17:Q:46:HIS:HB2	17:Q:73:THR:HA	2.00	0.43
1:A:27:G:C5	1:A:557:G:N1	2.87	0.43
1:A:51:A:H4'	1:A:52:C:O5'	2.18	0.43
1:A:95:C:N4	1:A:96:U:C4	2.87	0.43
1:A:96:U:H2'	1:A:98:A:N6	2.33	0.43
1:A:97:G:OP2	1:A:99:C:N4	2.51	0.43
1:A:115:G:H2'	1:A:289:G:H8	1.84	0.43
1:A:118:U:C5	1:A:288:A:N7	2.87	0.43
1:A:148:G:N3	1:A:1446:A:H2	2.16	0.43
1:A:200:G:C2	1:A:201:G:C8	3.07	0.43
1:A:208:U:H3	1:A:212:G:H21	1.66	0.43
1:A:264:C:C4	1:A:265:G:C5	3.06	0.43
1:A:272:C:C5	1:A:272:C:OP2	2.71	0.43
1:A:284:C:N3	1:A:285:C:C5	2.87	0.43
1:A:292:G:N7	1:A:293:G:H1'	2.33	0.43
1:A:313:A:C2	1:A:314:C:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:319:G:H4'	1:A:1467:C:O2'	2.19	0.43
1:A:350:G:C2	1:A:351:G:C6	3.07	0.43
1:A:359:G:C5	1:A:360:G:H1'	2.54	0.43
1:A:414:A:C6	1:A:431:A:C2	3.07	0.43
1:A:441:A:C5	1:A:442:G:N7	2.87	0.43
1:A:451:A:C5	1:A:480:U:C6	3.07	0.43
1:A:455:G:C8	1:A:455:G:OP2	2.71	0.43
1:A:457:G:C8	1:A:457:G:OP2	2.71	0.43
1:A:497:G:C2	1:A:498:A:C6	3.06	0.43
1:A:527:G:C2	1:A:528:C:C2	3.07	0.43
1:A:568:G:N3	1:A:883:C:C2	2.87	0.43
1:A:588:G:C6	1:A:589:U:C4	3.06	0.43
1:A:592:G:C4	1:A:593:U:C6	3.06	0.43
1:A:620:C:C5	1:A:621:A:C6	3.05	0.43
1:A:626:G:N1	1:A:627:G:C6	2.87	0.43
1:A:627:G:C6	1:A:628:G:O6	2.71	0.43
1:A:673:A:C2	1:A:674:G:N3	2.86	0.43
1:A:718:A:H3'	1:A:719:C:C6	2.53	0.43
1:A:729:A:C5	1:A:730:G:N7	2.86	0.43
1:A:745:G:H1'	1:A:836:G:O2'	2.19	0.43
1:A:751:U:O5'	1:A:751:U:H6	2.01	0.43
1:A:769:G:C4'	1:A:1513:A:H4'	2.48	0.43
1:A:775:G:H1	1:A:802:A:P	2.41	0.43
1:A:857:C:OP2	1:A:871:U:H5	2.00	0.43
1:A:868:C:H1'	1:A:873:A:N3	2.33	0.43
1:A:913:A:C5	12:L:19:ASN:HB3	2.53	0.43
1:A:923:A:N1	1:A:924:C:C4	2.86	0.43
1:A:987:G:H1'	19:S:51:HIS:NE2	2.33	0.43
1:A:991:U:C2	1:A:1212:U:H4'	2.53	0.43
1:A:992:U:C5	1:A:1043:G:H5"	2.53	0.43
1:A:993:G:C8	1:A:1212:U:H5'	2.53	0.43
1:A:1004:A:C8	1:A:1005:A:C1'	3.01	0.43
1:A:1009:U:OP2	1:A:1009:U:H6	2.01	0.43
1:A:1041:G:C5	1:A:1042:A:C6	3.07	0.43
1:A:1064:G:H4'	1:A:1065:U:H4'	2.00	0.43
1:A:1074:G:N1	1:A:1102:A:C6	2.86	0.43
1:A:1086:U:H5"	1:A:1087:G:C8	2.53	0.43
1:A:1089:G:C5	1:A:1090:U:C5	3.06	0.43
1:A:1116:U:O2	1:A:1117:A:C5	2.70	0.43
1:A:1120:C:N3	1:A:1154:G:C4	2.87	0.43
1:A:1134:G:H21	1:A:1141:C:H1'	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1176:A:C4	1:A:1177:G:C8	3.06	0.43
1:A:1192:C:H42	5:E:25:LYS:HE2	1.84	0.43
1:A:1213:A:C4	1:A:1215:G:C8	3.06	0.43
1:A:1221:G:C5	1:A:1222:G:N7	2.86	0.43
1:A:1246:A:C5	1:A:1247:U:C5	3.06	0.43
1:A:1255:G:H3'	1:A:1279:G:H1	1.82	0.43
1:A:1341:U:H2'	1:A:1342:C:O4'	2.18	0.43
1:A:1405:G:C6	1:A:1497:G:C6	3.07	0.43
1:A:1406:U:H3'	1:A:1407:C:H6	1.84	0.43
1:A:1480:A:C4	1:A:1481:U:C6	3.06	0.43
1:A:1507:A:C4	1:A:1531:A:H2	2.36	0.43
1:A:1515:G:C2	1:A:1521:C:N1	2.86	0.43
1:A:1517:G:H2'	1:A:1518:A:O4'	2.18	0.43
3:C:115:VAL:HG13	3:C:136:ALA:CB	2.45	0.43
5:E:17:VAL:HG11	5:E:55:VAL:HA	1.99	0.43
5:E:51:LYS:O	5:E:58:ALA:HA	2.18	0.43
5:E:67:ARG:NH1	5:E:70:MET:HE2	2.33	0.43
6:F:47:LEU:HD21	6:F:57:ALA:HB3	2.00	0.43
9:I:3:ASN:ND2	9:I:6:TYR:CD1	2.87	0.43
11:K:43:TRP:CE3	11:K:44:ALA:CA	3.01	0.43
13:M:6:ILE:HG23	13:M:65:GLU:HG3	2.00	0.43
15:O:22:GLY:HA2	15:O:27:GLN:HE21	1.83	0.43
17:Q:64:ARG:O	17:Q:64:ARG:HG3	2.19	0.43
1:A:22:G:N3	1:A:914:A:C8	2.87	0.43
1:A:41:G:N2	1:A:42:G:C4	2.86	0.43
1:A:116:A:H61	1:A:313:A:H2'	1.82	0.43
1:A:126:G:N1	1:A:127:G:C4	2.86	0.43
1:A:148:G:C6	1:A:175:C:N3	2.87	0.43
1:A:156:C:C4	1:A:157:U:C4	3.06	0.43
1:A:171:A:C5	1:A:172:A:C6	3.06	0.43
1:A:171:A:C5	1:A:172:A:C5	3.06	0.43
1:A:195:A:C5	1:A:196:A:N1	2.87	0.43
1:A:253:A:H1'	1:A:276:G:H4'	1.98	0.43
1:A:282:A:C2	1:A:283:U:H1'	2.53	0.43
1:A:318:G:C2	1:A:319:G:N9	2.86	0.43
1:A:319:G:H21	1:A:1434:A:C1'	2.32	0.43
1:A:321:A:C2	1:A:333:U:O2	2.71	0.43
1:A:371:A:C4'	1:A:483:C:H4'	2.49	0.43
1:A:412:A:C8	1:A:413:G:C5	3.07	0.43
1:A:413:G:O3'	1:A:428:G:C2	2.72	0.43
1:A:433:G:C6	1:A:434:U:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:439:U:H3'	1:A:440:C:C5	2.53	0.43
1:A:450:G:H1'	16:P:8:ARG:HH22	1.83	0.43
1:A:465:A:H2'	1:A:466:A:C8	2.53	0.43
1:A:475:C:C4	1:A:476:U:C4	3.07	0.43
1:A:503:C:O5'	1:A:503:C:C6	2.72	0.43
1:A:504:C:O2	1:A:542:G:C2	2.72	0.43
1:A:516:U:H2'	1:A:519:C:N3	2.34	0.43
1:A:538:G:C2	1:A:539:A:C8	3.06	0.43
1:A:550:G:N2	1:A:551:U:H1'	2.32	0.43
1:A:564:C:H41	12:L:13:ARG:HG3	1.84	0.43
1:A:579:A:N1	1:A:580:C:C2	2.87	0.43
1:A:582:C:N4	1:A:759:A:OP2	2.52	0.43
1:A:587:G:H22	1:A:754:C:C5'	2.32	0.43
1:A:651:C:H3'	1:A:652:U:C6	2.54	0.43
1:A:662:U:C5	1:A:662:U:OP2	2.72	0.43
1:A:689:C:H41	11:K:52:ARG:HD2	1.84	0.43
1:A:712:A:H3'	1:A:713:G:C8	2.54	0.43
1:A:720:C:C6	1:A:720:C:H3'	2.54	0.43
1:A:721:G:H5'	1:A:722:G:C4	2.54	0.43
1:A:722:G:C8	1:A:724:G:H1'	2.54	0.43
1:A:739:C:O5'	1:A:739:C:H6	2.01	0.43
1:A:752:G:H5'	15:O:76:ARG:HH22	1.83	0.43
1:A:770:C:O2'	1:A:899:C:N3	2.52	0.43
1:A:877:G:C8	1:A:877:G:C3'	3.02	0.43
1:A:918:A:C2	1:A:919:A:N9	2.87	0.43
1:A:927:G:C2	1:A:928:G:C5	3.07	0.43
1:A:941:G:H2'	1:A:942:G:C8	2.53	0.43
1:A:951:G:C2	1:A:952:U:N1	2.87	0.43
1:A:961:U:H2'	1:A:962:C:H6	1.82	0.43
1:A:979:C:H42	1:A:1318:A:H61	1.67	0.43
1:A:1034:G:O6	1:A:1035:A:C6	2.72	0.43
1:A:1073:U:N3	1:A:1074:G:N7	2.67	0.43
1:A:1089:G:H2'	1:A:1170:A:H2	1.81	0.43
1:A:1143:G:C5	1:A:1144:G:C8	3.06	0.43
1:A:1163:A:N3	1:A:1174:G:C6	2.87	0.43
1:A:1252:A:C8	1:A:1252:A:C3'	3.01	0.43
1:A:1276:G:C4	1:A:1277:C:C6	3.06	0.43
1:A:1281:C:H6	1:A:1282:C:H5	1.67	0.43
1:A:1294:G:C2	1:A:1295:U:C1'	3.02	0.43
1:A:1310:G:C2	1:A:1328:C:O2	2.71	0.43
1:A:1310:G:C8	1:A:1310:G:H3'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1310:G:H5”	13:M:75:SER:HB3	2.00	0.43
1:A:1346:A:H61	1:A:1374:A:H3’	1.84	0.43
1:A:1354:U:O2	1:A:1354:U:H2’	2.18	0.43
1:A:1405:G:C2	1:A:1406:U:C5	3.06	0.43
1:A:1408:A:C1’	1:A:1494:G:C2	2.96	0.43
1:A:1442:G:C6	1:A:1461:G:N2	2.86	0.43
1:A:1453:G:N2	1:A:1454:G:C8	2.87	0.43
1:A:1515:G:C5	1:A:1521:C:C4	3.07	0.43
2:B:68:PHE:CD2	2:B:89:PHE:O	2.72	0.43
3:C:122:GLN:HB2	3:C:132:ALA:HB1	2.01	0.43
4:D:150:LYS:NZ	4:D:154:VAL:HG12	2.31	0.43
4:D:197:HIS:CE1	5:E:104:ILE:CG2	3.01	0.43
5:E:36:THR:HG23	5:E:62:ALA:CB	2.49	0.43
9:I:46:VAL:HG21	9:I:75:ALA:HB1	2.01	0.43
10:J:42:LEU:HD21	10:J:73:LEU:CG	2.47	0.43
13:M:92:ARG:HB3	13:M:94:LEU:HG	2.01	0.43
19:S:13:HIS:CG	19:S:14:LEU:N	2.87	0.43
22:W:214:GLY:CA	22:W:220:LYS:HZ1	2.31	0.43
1:A:9:G:N2	1:A:26:A:C4	2.86	0.43
1:A:36:C:H41	12:L:122:LYS:CE	2.32	0.43
1:A:41:G:C6	1:A:402:G:N1	2.86	0.43
1:A:80:A:N1	1:A:81:A:H1’	2.34	0.43
1:A:137:U:O2	1:A:138:G:C8	2.71	0.43
1:A:152:A:OP2	1:A:153:C:C4	2.72	0.43
1:A:184:G:C4	1:A:224:U:C5’	2.99	0.43
1:A:193:C:H4’	20:T:55:PRO:N	2.34	0.43
1:A:227:G:C5	1:A:228:A:N7	2.86	0.43
1:A:257:G:N3	1:A:270:A:C2	2.86	0.43
1:A:271:C:H2’	1:A:272:C:C6	2.52	0.43
1:A:316:C:O2	1:A:316:C:C2’	2.64	0.43
1:A:321:A:N6	1:A:332:G:H1	2.17	0.43
1:A:324:G:N3	1:A:326:G:C8	2.86	0.43
1:A:405:U:O2’	1:A:498:A:H3’	2.17	0.43
1:A:410:G:H1’	1:A:433:G:N2	2.34	0.43
1:A:420:U:C2	1:A:422:C:N3	2.87	0.43
1:A:439:U:H1’	4:D:118:SER:O	2.19	0.43
1:A:452:A:H1’	16:P:39:PHE:CE2	2.54	0.43
1:A:453:G:C5’	16:P:73:ALA:HA	2.49	0.43
1:A:466:A:C6	1:A:468:A:N6	2.87	0.43
1:A:502:A:C5’	12:L:114:SER:HB3	2.49	0.43
1:A:504:C:C2	1:A:542:G:N2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:596:A:C2	1:A:597:G:N9	2.87	0.43
1:A:707:U:O2'	11:K:34:THR:HG22	2.18	0.43
1:A:717:U:C1'	11:K:117:HIS:HB3	2.47	0.43
1:A:738:C:H5"	6:F:68:GLN:HG2	2.01	0.43
1:A:780:A:C5'	11:K:124:LYS:H	2.31	0.43
1:A:829:G:H5"	1:A:829:G:H8	1.83	0.43
1:A:830:G:C6	1:A:831:A:C5	3.06	0.43
1:A:918:A:C4	1:A:919:A:C8	3.06	0.43
1:A:925:G:N1	1:A:1391:U:C2	2.86	0.43
1:A:933:G:H3'	1:A:935:A:N7	2.34	0.43
1:A:935:A:C4	1:A:936:C:C6	3.06	0.43
1:A:962:C:H42	1:A:973:G:H1	1.66	0.43
1:A:996:A:C8	1:A:996:A:OP2	2.71	0.43
1:A:1011:C:C2	1:A:1012:A:C8	3.06	0.43
1:A:1032:G:C2	1:A:1033:G:C5	3.07	0.43
1:A:1048:G:C2	1:A:1050:G:C8	3.06	0.43
1:A:1072:G:H2'	1:A:1073:U:C6	2.53	0.43
1:A:1083:U:H2'	1:A:1102:A:C8	2.54	0.43
1:A:1085:U:O3'	1:A:1086:U:H4'	2.18	0.43
1:A:1086:U:C5'	1:A:1087:G:N7	2.82	0.43
1:A:1095:U:O2	1:A:1171:A:C5'	2.66	0.43
1:A:1140:C:H1'	1:A:1141:C:H5'	1.99	0.43
1:A:1147:C:H4'	9:I:3:ASN:HD21	1.83	0.43
1:A:1157:A:C2'	2:B:127:LYS:HZ1	2.32	0.43
1:A:1158:C:O2	1:A:1158:C:H5"	2.19	0.43
1:A:1165:U:C3'	1:A:1166:G:H8	2.32	0.43
1:A:1185:G:C8	1:A:1185:G:H3'	2.54	0.43
1:A:1192:C:OP2	1:A:1193:G:C8	2.72	0.43
1:A:1345:U:O2	1:A:1375:A:N1	2.51	0.43
1:A:1358:U:H2'	14:N:74:ARG:CZ	2.49	0.43
1:A:1442:G:C6	1:A:1443:C:N4	2.86	0.43
1:A:1476:A:C5	1:A:1477:U:C5	3.06	0.43
1:A:1476:A:C2	1:A:1477:U:C2	3.06	0.43
1:A:1499:A:C6	1:A:1500:A:C6	3.07	0.43
2:B:129:THR:O	2:B:133:ALA:HB3	2.18	0.43
2:B:138:ARG:H	2:B:138:ARG:HD2	1.83	0.43
3:C:21:TRP:HA	3:C:57:GLU:OE1	2.19	0.43
5:E:104:ILE:HG23	5:E:104:ILE:O	2.19	0.43
6:F:61:LEU:HD21	18:R:23:LYS:HE3	2.00	0.43
8:H:100:ILE:HD12	8:H:102:VAL:CG1	2.48	0.43
10:J:19:ASP:CA	10:J:72:ARG:HH22	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:26:CYS:HB3	12:L:28:GLN:O	2.18	0.43
14:N:48:GLN:HB3	19:S:13:HIS:H	1.84	0.43
14:N:61:ASN:C	14:N:69:PRO:HA	2.44	0.43
14:N:98:ALA:H	14:N:100:TRP:HD1	1.65	0.43
22:W:146:VAL:HG11	22:W:332:ILE:HD13	1.99	0.43
1:A:14:U:C2'	1:A:16:A:N7	2.81	0.43
1:A:19:A:C5	1:A:20:U:C6	3.07	0.43
1:A:104:G:C8	1:A:104:G:O5'	2.72	0.43
1:A:108:G:O5'	1:A:109:A:C2	2.72	0.43
1:A:134:G:C8	1:A:325:A:C6	3.06	0.43
1:A:179:A:C2	1:A:180:U:C2	3.06	0.43
1:A:246:A:C8	1:A:279:A:C2	3.07	0.43
1:A:297:G:N2	1:A:300:A:C8	2.87	0.43
1:A:298:A:H3'	1:A:299:G:H8	1.81	0.43
1:A:361:G:C8	1:A:361:G:OP2	2.71	0.43
1:A:373:A:C6	1:A:374:A:C6	3.07	0.43
1:A:384:G:C6	1:A:385:C:N3	2.86	0.43
1:A:392:C:O2'	1:A:484:G:C8	2.71	0.43
1:A:394:G:C6	1:A:395:C:C4	3.07	0.43
1:A:402:G:H1'	1:A:620:C:H42	1.84	0.43
1:A:428:G:H5"	4:D:9:LYS:HB2	2.01	0.43
1:A:469:C:H3'	1:A:470:C:H6	1.79	0.43
1:A:500:G:N1	1:A:546:A:H2	2.17	0.43
1:A:515:G:C6	1:A:537:G:C2	3.07	0.43
1:A:580:C:C6	1:A:581:G:C8	3.06	0.43
1:A:591:U:H6	1:A:591:U:H3'	1.83	0.43
1:A:619:U:H4'	4:D:127:ARG:HB3	2.01	0.43
1:A:673:A:C6	1:A:674:G:C6	3.07	0.43
1:A:688:G:C2	1:A:689:C:N1	2.86	0.43
1:A:734:G:N2	1:A:735:C:C2	2.86	0.43
1:A:769:G:OP1	1:A:802:A:C2	2.71	0.43
1:A:833:G:C2	1:A:854:U:N1	2.87	0.43
1:A:903:G:N7	1:A:903:G:OP2	2.52	0.43
1:A:907:A:C5'	1:A:907:A:H8	2.32	0.43
1:A:924:C:C5	1:A:924:C:OP2	2.71	0.43
1:A:971:G:N1	1:A:1364:U:C5	2.87	0.43
1:A:1006:G:C2	1:A:1007:U:H1'	2.53	0.43
1:A:1018:G:O6	14:N:19:TYR:CE2	2.71	0.43
1:A:1053:G:C4	1:A:1056:U:O4	2.72	0.43
1:A:1066:C:C2	1:A:1068:G:H1'	2.53	0.43
1:A:1133:G:C2	1:A:1134:G:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1250:A:C5	1:A:1251:A:C4	3.07	0.43
1:A:1253:G:C8	1:A:1253:G:OP2	2.72	0.43
1:A:1267:C:C4	1:A:1268:G:C5	3.07	0.43
1:A:1268:G:C6	1:A:1269:A:C6	3.06	0.43
1:A:1306:A:N7	1:A:1306:A:OP2	2.52	0.43
1:A:1380:U:H2'	7:G:2:ARG:CZ	2.49	0.43
1:A:1396:A:C2	1:A:1398:A:H2	2.37	0.43
1:A:1454:G:C8	1:A:1454:G:H5"	2.54	0.43
1:A:1475:G:C2	1:A:1476:A:C8	3.07	0.43
1:A:1493:A:C4	22:W:66:ILE:HD12	2.54	0.43
1:A:1499:A:C2	1:A:1500:A:N9	2.86	0.43
2:B:16:GLY:C	2:B:18:GLN:H	2.27	0.43
2:B:23:ASN:HA	2:B:24:PRO:HD3	1.90	0.43
2:B:71:THR:HG23	2:B:167:HIS:CG	2.53	0.43
5:E:12:GLU:HG2	5:E:38:VAL:HB	2.01	0.43
5:E:17:VAL:HA	5:E:34:ALA:HB2	2.00	0.43
6:F:67:PRO:HD2	6:F:70:VAL:HG23	2.01	0.43
8:H:89:ASP:HA	8:H:91:LEU:HD12	2.01	0.43
9:I:51:LEU:CD2	9:I:86:LEU:HD11	2.49	0.43
11:K:14:GLN:HB3	11:K:76:TYR:CA	2.48	0.43
11:K:27:ASN:O	11:K:56:LYS:CG	2.67	0.43
13:M:15:VAL:HG12	13:M:33:LEU:CD1	2.45	0.43
13:M:84:CYS:SG	19:S:65:MET:SD	3.16	0.43
16:P:17:TYR:CZ	16:P:70:ARG:CZ	3.02	0.43
18:R:61:ALA:HB3	18:R:67:LEU:HD12	2.01	0.43
1:A:9:G:N1	1:A:10:A:C4	2.86	0.43
1:A:21:G:H2'	1:A:22:G:H8	1.83	0.43
1:A:36:C:H5"	12:L:120:ARG:O	2.19	0.43
1:A:39:G:C2	1:A:40:C:C2	3.07	0.43
1:A:60:A:C4'	1:A:387:U:H4'	2.49	0.43
1:A:75:G:C2	1:A:76:G:N7	2.87	0.43
1:A:76:G:H5"	1:A:77:A:N7	2.33	0.43
1:A:77:A:C2	1:A:93:U:H1'	2.53	0.43
1:A:167:A:C2	1:A:168:G:N7	2.86	0.43
1:A:202:G:O2'	1:A:203:G:H5'	2.19	0.43
1:A:216:U:N3	1:A:217:C:C4	2.87	0.43
1:A:242:G:C6	1:A:245:U:C4	3.07	0.43
1:A:282:A:C2	1:A:283:U:C1'	3.02	0.43
1:A:324:G:C2'	1:A:326:G:N7	2.82	0.43
1:A:338:A:N7	1:A:339:C:C4	2.86	0.43
1:A:343:U:N3	1:A:345:C:O2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:433:G:N2	1:A:434:U:H1'	2.33	0.43
1:A:451:A:C4	1:A:480:U:C6	3.05	0.43
1:A:461:A:C6	1:A:463:U:C5'	3.02	0.43
1:A:599:C:C2	1:A:640:A:N1	2.86	0.43
1:A:606:G:N2	1:A:633:G:C6	2.87	0.43
1:A:606:G:C5	1:A:606:G:OP2	2.71	0.43
1:A:610:U:O2'	1:A:611:C:C6	2.65	0.43
1:A:687:A:C6	1:A:704:A:N7	2.87	0.43
1:A:687:A:C2	1:A:700:G:N3	2.87	0.43
1:A:721:G:H1'	1:A:722:G:OP2	2.18	0.43
1:A:776:G:N2	1:A:801:U:H5"	2.33	0.43
1:A:821:G:C5	1:A:822:U:C6	3.07	0.43
1:A:865:A:H2'	1:A:866:C:H6	1.83	0.43
1:A:893:C:O4'	1:A:1416:G:H5"	2.19	0.43
1:A:924:C:C2'	1:A:1502:A:C2	3.01	0.43
1:A:925:G:C8	1:A:925:G:OP2	2.72	0.43
1:A:976:G:C2	1:A:1362:A:C8	3.07	0.43
1:A:1012:A:C2	1:A:1018:G:N3	2.86	0.43
1:A:1057:G:O4'	3:C:194:VAL:CG1	2.67	0.43
1:A:1068:G:C5	1:A:1069:C:C6	3.07	0.43
1:A:1072:G:C2	1:A:1104:G:N3	2.87	0.43
1:A:1127:G:N1	1:A:1128:C:C4	2.86	0.43
1:A:1146:A:C4	1:A:1147:C:C6	3.07	0.43
1:A:1156:G:N2	1:A:1179:A:C2	2.74	0.43
1:A:1238:A:N1	1:A:1242:G:C8	2.86	0.43
1:A:1295:U:C6	1:A:1295:U:OP2	2.72	0.43
1:A:1455:G:C8	1:A:1455:G:C5'	3.01	0.43
1:A:1476:A:N1	1:A:1477:U:C2	2.86	0.43
1:A:1489:G:O2'	1:A:1490:U:H5'	2.19	0.43
1:A:1516:G:N2	1:A:1520:C:H1'	2.33	0.43
2:B:163:ILE:HD12	2:B:209:VAL:HG11	2.00	0.43
3:C:18:ASN:CG	14:N:91:GLU:HG2	2.44	0.43
3:C:63:ILE:H	3:C:96:VAL:HB	1.84	0.43
3:C:91:ALA:N	3:C:98:ALA:HB2	2.33	0.43
3:C:110:LEU:HD22	3:C:203:LYS:HA	2.01	0.43
3:C:115:VAL:HG12	3:C:119:ILE:HD12	2.01	0.43
3:C:190:THR:C	3:C:192:TYR:H	2.27	0.43
8:H:79:ARG:NH1	12:L:3:VAL:H	2.17	0.43
9:I:51:LEU:HD21	9:I:86:LEU:HD11	2.01	0.43
10:J:12:ALA:CB	10:J:17:LEU:HB3	2.47	0.43
11:K:117:HIS:HE1	18:R:69:TYR:CZ	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:106:ARG:HB3	13:M:110:GLY:O	2.17	0.43
14:N:49:THR:HG22	19:S:16:LYS:HZ3	1.83	0.43
14:N:49:THR:HG22	19:S:16:LYS:NZ	2.34	0.43
14:N:63:CYS:HB3	14:N:68:ARG:H	1.83	0.43
17:Q:44:HIS:CG	17:Q:69:THR:OG1	2.72	0.43
22:W:65:ASN:O	22:W:97:VAL:HG23	2.19	0.43
1:A:5:U:O4	1:A:613:C:H4'	2.19	0.43
1:A:20:U:C6	1:A:20:U:O5'	2.72	0.43
1:A:49:U:O4	1:A:361:G:C5	2.72	0.43
1:A:77:A:N1	1:A:93:U:H1'	2.34	0.43
1:A:103:U:N3	1:A:104:G:C8	2.86	0.43
1:A:108:G:P	1:A:326:G:H1	2.42	0.43
1:A:111:G:H5'	16:P:27:ALA:H	1.83	0.43
1:A:142:G:H2'	1:A:142:G:N3	2.34	0.43
1:A:161:A:OP2	1:A:161:A:H8	2.02	0.43
1:A:297:G:H4'	1:A:557:G:C4'	2.49	0.43
1:A:339:C:N3	1:A:340:U:C4	2.87	0.43
1:A:448:A:C5	1:A:487:A:C4	3.06	0.43
1:A:459:A:C2	1:A:473:U:O2	2.72	0.43
1:A:558:G:C8	1:A:559:A:H2'	2.54	0.43
1:A:560:A:OP1	5:E:127:TYR:CE1	2.72	0.43
1:A:570:G:C6	1:A:873:A:C4	3.06	0.43
1:A:581:G:H2'	1:A:582:C:H6	1.79	0.43
1:A:609:A:C6	1:A:630:A:H2	2.37	0.43
1:A:689:C:OP1	11:K:45:THR:CG2	2.66	0.43
1:A:696:A:C4	1:A:697:U:C5	3.07	0.43
1:A:727:G:C6	1:A:731:G:C6	3.06	0.43
1:A:780:A:H2'	1:A:800:G:N1	2.34	0.43
1:A:821:G:N1	1:A:880:C:C2	2.86	0.43
1:A:851:G:C6	1:A:852:G:O6	2.72	0.43
1:A:931:C:C2	1:A:932:C:C6	3.06	0.43
1:A:936:C:O2	1:A:1380:U:O2	2.37	0.43
1:A:943:U:C5	1:A:943:U:OP2	2.72	0.43
1:A:967:C:H4'	9:I:126:PHE:CG	2.54	0.43
1:A:975:A:N3	1:A:975:A:H2'	2.33	0.43
1:A:995:C:C2'	1:A:996:A:H5'	2.49	0.43
1:A:1014:A:OP2	19:S:13:HIS:CG	2.72	0.43
1:A:1052:U:N3	1:A:1207:G:C6	2.84	0.43
1:A:1067:A:C2	1:A:1108:G:N3	2.86	0.43
1:A:1112:C:H5"	2:B:128:LEU:HB3	2.00	0.43
1:A:1119:C:C2	1:A:1155:A:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1126:U:C5	10:J:101:SER:OG	2.68	0.43
1:A:1204:A:C2	3:C:189:HIS:CE1	3.07	0.43
1:A:1221:G:N3	1:A:1222:G:C8	2.87	0.43
1:A:1229:A:C5	1:A:1230:C:C5	3.07	0.43
1:A:1239:A:C4	1:A:1298:U:O4	2.72	0.43
1:A:1251:A:C2	1:A:1353:G:N2	2.87	0.43
1:A:1292:G:N2	1:A:1293:C:C2	2.87	0.43
1:A:1309:G:N1	1:A:1310:G:C5	2.86	0.43
1:A:1309:G:C8	13:M:97:ARG:NE	2.84	0.43
1:A:1355:G:N3	1:A:1356:G:C8	2.87	0.43
1:A:1413:A:C2	1:A:1414:U:H1'	2.53	0.43
1:A:1418:A:C8	1:A:1418:A:H3'	2.53	0.43
2:B:13:VAL:HG21	2:B:211:LEU:CD1	2.49	0.43
2:B:70:GLY:HA2	2:B:79:VAL:CG2	2.49	0.43
2:B:90:PHE:HE2	2:B:92:ASN:HD22	1.63	0.43
2:B:202:ASN:CG	2:B:203:ASP:H	2.27	0.43
3:C:23:ALA:HB2	3:C:61:LYS:HZ1	1.84	0.43
4:D:198:LEU:HD13	4:D:198:LEU:C	2.44	0.43
5:E:23:THR:HG22	5:E:28:ARG:HB3	2.01	0.43
5:E:41:GLY:O	5:E:117:ALA:HA	2.19	0.43
8:H:19:ALA:HB3	8:H:21:LYS:HE3	2.00	0.43
8:H:91:LEU:CD2	8:H:122:GLY:O	2.66	0.43
9:I:117:LEU:HD23	9:I:117:LEU:HA	1.89	0.43
10:J:5:ARG:CD	10:J:78:GLU:H	2.32	0.43
22:W:48:PHE:CB	22:W:51:HIS:HB2	2.49	0.43
22:W:198:LEU:HD21	22:W:226:ALA:HB1	2.00	0.43
1:A:18:C:H4'	1:A:1078:U:C5	2.53	0.42
1:A:76:G:H5'	1:A:77:A:OP2	2.19	0.42
1:A:92:U:C4	1:A:93:U:C2	3.07	0.42
1:A:144:G:N1	1:A:179:A:C5	2.87	0.42
1:A:191:G:C2'	1:A:192:A:H8	2.32	0.42
1:A:203:G:N2	1:A:214:C:O2	2.52	0.42
1:A:277:C:H2'	1:A:278:G:C8	2.54	0.42
1:A:289:G:C5	1:A:290:C:C5	3.07	0.42
1:A:310:G:C6	1:A:311:C:C4	3.08	0.42
1:A:318:G:C2'	1:A:1468:A:H4'	2.48	0.42
1:A:342:C:C6	1:A:342:C:O5'	2.73	0.42
1:A:344:A:C5'	1:A:345:C:C6	3.03	0.42
1:A:356:A:H1'	1:A:369:G:OP2	2.20	0.42
1:A:392:C:H2'	1:A:393:A:C8	2.54	0.42
1:A:458:U:O2	1:A:475:C:O2	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:515:G:N1	1:A:537:G:C4	2.87	0.42
1:A:559:A:C8	12:L:17:LYS:CE	3.02	0.42
1:A:577:G:N1	1:A:765:G:H1'	2.34	0.42
1:A:602:A:C8	1:A:602:A:C3'	3.01	0.42
1:A:620:C:H3'	1:A:621:A:H8	1.83	0.42
1:A:626:G:H1'	16:P:47:GLU:C	2.44	0.42
1:A:648:A:C8	1:A:648:A:H3'	2.54	0.42
1:A:657:U:N3	1:A:658:C:C4	2.87	0.42
1:A:691:G:N2	1:A:692:U:H1'	2.34	0.42
1:A:737:C:OP2	6:F:91:ARG:CZ	2.66	0.42
1:A:756:C:C5	1:A:757:U:C5	3.07	0.42
1:A:803:G:H2'	1:A:804:U:O4'	2.19	0.42
1:A:809:G:N1	1:A:810:C:C2	2.87	0.42
1:A:839:C:H3'	1:A:840:C:C5	2.54	0.42
1:A:855:U:N3	1:A:856:C:C5	2.87	0.42
1:A:933:G:N2	1:A:1385:G:C4	2.87	0.42
1:A:978:A:H3'	1:A:979:C:H6	1.83	0.42
1:A:984:C:O2	1:A:1222:G:C2	2.72	0.42
1:A:1011:C:H2'	1:A:1012:A:C8	2.54	0.42
1:A:1015:G:O6	1:A:1016:A:C6	2.72	0.42
1:A:1028:C:C2	1:A:1029:U:H1'	2.54	0.42
1:A:1039:G:C2	1:A:1040:U:C2	3.07	0.42
1:A:1057:G:O2'	3:C:196:GLY:HA2	2.18	0.42
1:A:1063:C:C5	1:A:1190:G:C8	3.07	0.42
1:A:1159:U:H5	1:A:1163:A:C6	2.37	0.42
1:A:1166:G:H8	1:A:1166:G:P	2.42	0.42
1:A:1210:C:H3'	1:A:1211:U:C6	2.54	0.42
1:A:1213:A:C2	1:A:1215:G:H1'	2.54	0.42
1:A:1261:A:N1	1:A:1274:A:H2'	2.33	0.42
1:A:1269:A:C2	1:A:1313:U:H5'	2.53	0.42
1:A:1275:A:N1	1:A:1283:U:H5'	2.34	0.42
1:A:1301:U:N3	1:A:1303:C:C2	2.87	0.42
1:A:1302:C:C3'	1:A:1303:C:H5"	2.49	0.42
1:A:1306:A:H3'	1:A:1307:U:C6	2.54	0.42
1:A:1349:A:N7	1:A:1350:A:C4	2.87	0.42
1:A:1382:C:H2'	1:A:1383:C:H6	1.84	0.42
1:A:1396:A:H4'	1:A:1397:C:O5'	2.19	0.42
1:A:1408:A:C8	1:A:1408:A:OP2	2.72	0.42
1:A:1427:C:H2'	1:A:1428:A:H8	1.84	0.42
1:A:1474:U:C6	1:A:1474:U:OP2	2.72	0.42
1:A:1510:C:C2	1:A:1511:G:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1516:G:N2	1:A:1518:A:C8	2.87	0.42
2:B:70:GLY:N	2:B:91:VAL:O	2.52	0.42
2:B:125:PHE:HB2	2:B:133:ALA:CB	2.49	0.42
3:C:59:PRO:HB2	10:J:92:LEU:HD22	2.01	0.42
3:C:63:ILE:HG21	3:C:90:VAL:HG12	2.00	0.42
6:F:14:GLN:C	6:F:16:GLU:H	2.27	0.42
6:F:45:ARG:HB2	6:F:59:TYR:CD1	2.54	0.42
7:G:68:VAL:HA	7:G:134:VAL:CA	2.49	0.42
8:H:6:ILE:HG13	8:H:76:ARG:HH22	1.84	0.42
8:H:48:PHE:HA	8:H:60:LEU:HA	2.00	0.42
8:H:79:ARG:HH21	8:H:81:GLY:HA3	1.84	0.42
11:K:33:ILE:HG21	11:K:73:VAL:HG21	2.00	0.42
13:M:28:ARG:HG2	13:M:62:PHE:CD2	2.54	0.42
16:P:4:ILE:HG12	16:P:21:VAL:HG22	2.01	0.42
17:Q:50:ASN:HD22	17:Q:50:ASN:HA	1.61	0.42
19:S:44:ILE:CG1	19:S:61:VAL:HB	2.49	0.42
22:W:201:LEU:O	22:W:205:LEU:HG	2.19	0.42
1:A:72:A:H2'	1:A:73:C:H5"	2.02	0.42
1:A:78:A:N1	1:A:91:U:O4	2.52	0.42
1:A:94:G:C5'	1:A:95:C:H5"	2.49	0.42
1:A:169:C:H2'	1:A:170:U:O4'	2.19	0.42
1:A:200:G:C6	1:A:201:G:C6	3.07	0.42
1:A:202:G:N2	1:A:468:A:H62	2.17	0.42
1:A:217:C:O2	1:A:469:C:N3	2.52	0.42
1:A:246:A:H2	1:A:278:G:HO2'	1.64	0.42
1:A:253:A:HO2'	1:A:276:G:H5"	1.84	0.42
1:A:255:G:N7	1:A:256:U:C5	2.87	0.42
1:A:303:A:C2	1:A:304:U:C6	3.08	0.42
1:A:363:A:C2	12:L:27:PRO:HG2	2.53	0.42
1:A:380:G:N3	1:A:380:G:C2'	2.78	0.42
1:A:400:C:O2	1:A:400:C:H2'	2.19	0.42
1:A:403:C:C2'	1:A:404:G:H5'	2.49	0.42
1:A:449:G:N1	1:A:450:G:C6	2.87	0.42
1:A:505:G:H1'	1:A:535:A:C2	2.54	0.42
1:A:511:C:N3	1:A:512:U:C5	2.87	0.42
1:A:654:G:N1	1:A:655:A:C4	2.87	0.42
1:A:668:G:O2'	15:O:45:HIS:CD2	2.72	0.42
1:A:676:A:N3	1:A:677:U:C5	2.87	0.42
1:A:705:G:C8	1:A:705:G:C3'	3.01	0.42
1:A:708:C:C4	1:A:709:U:C5	3.07	0.42
1:A:717:U:OP2	1:A:717:U:H6	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:724:G:C5	1:A:725:G:N7	2.87	0.42
1:A:768:A:H8	1:A:768:A:O5'	2.03	0.42
1:A:771:G:C2	1:A:809:G:C2	3.07	0.42
1:A:773:G:N1	1:A:774:G:H1'	2.34	0.42
1:A:797:C:H2'	1:A:798:U:C6	2.54	0.42
1:A:829:G:H1'	2:B:25:LYS:HA	2.01	0.42
1:A:851:G:C6	1:A:852:G:C6	3.06	0.42
1:A:877:G:C6	1:A:878:A:N6	2.87	0.42
1:A:893:C:C4'	1:A:1416:G:H5"	2.49	0.42
1:A:915:A:N1	1:A:916:U:H1'	2.34	0.42
1:A:941:G:C8	1:A:941:G:H3'	2.54	0.42
1:A:1002:G:OP2	1:A:1032:G:H1'	2.19	0.42
1:A:1018:G:N3	1:A:1018:G:H2'	2.32	0.42
1:A:1031:C:C1'	1:A:1032:G:H21	2.32	0.42
1:A:1057:G:N7	1:A:1204:A:C2	2.87	0.42
1:A:1059:C:C4	1:A:1060:U:C4	3.07	0.42
1:A:1074:G:C6	1:A:1102:A:N1	2.87	0.42
1:A:1083:U:N3	1:A:1102:A:N6	2.67	0.42
1:A:1084:G:C5'	1:A:1102:A:H5"	2.49	0.42
1:A:1091:U:N3	1:A:1095:U:C4	2.88	0.42
1:A:1094:G:OP2	1:A:1095:U:C5	2.72	0.42
1:A:1104:G:N3	1:A:1104:G:H2'	2.33	0.42
1:A:1117:A:N6	1:A:1156:G:C6	2.87	0.42
1:A:1184:G:C6	1:A:1185:G:C8	3.07	0.42
1:A:1189:U:H1'	3:C:177:LEU:HD21	2.01	0.42
1:A:1250:A:C6	1:A:1251:A:C5	3.07	0.42
1:A:1349:A:C2	1:A:1374:A:H1'	2.54	0.42
1:A:1403:C:C6	1:A:1403:C:O5'	2.72	0.42
1:A:1452:C:H1'	1:A:1453:G:C2	2.54	0.42
1:A:1458:G:H2'	1:A:1459:G:C8	2.55	0.42
1:A:1459:G:C6	1:A:1460:C:C5	3.06	0.42
1:A:1473:G:N1	1:A:1474:U:H1'	2.34	0.42
1:A:1534:A:H2'	21:U:53:LYS:HB3	2.00	0.42
2:B:8:MET:O	2:B:46:VAL:HG22	2.19	0.42
3:C:3:LYS:O	3:C:5:HIS:CG	2.72	0.42
3:C:108:PRO:HB3	3:C:114:LEU:HD22	2.01	0.42
4:D:97:LEU:HD13	4:D:124:VAL:HG11	2.01	0.42
5:E:38:VAL:HG11	5:E:66:ALA:HB3	2.00	0.42
6:F:71:ILE:CD1	6:F:89:VAL:HG21	2.49	0.42
10:J:9:ARG:HA	10:J:72:ARG:O	2.18	0.42
10:J:18:ILE:HG21	10:J:70:HIS:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:27:ASN:O	11:K:56:LYS:CB	2.66	0.42
13:M:18:LEU:CB	13:M:29:SER:HB3	2.47	0.42
13:M:80:MET:N	13:M:80:MET:SD	2.92	0.42
17:Q:58:VAL:CG2	17:Q:74:LEU:HD12	2.48	0.42
20:T:23:ARG:HB2	20:T:65:LEU:CD1	2.49	0.42
22:W:107:LEU:CD2	22:W:211:ILE:HD13	2.49	0.42
1:A:3:A:C2	1:A:627:G:N3	2.88	0.42
1:A:19:A:H2	1:A:20:U:H1'	1.83	0.42
1:A:32:A:C5'	1:A:398:U:C1'	2.97	0.42
1:A:48:C:C4	1:A:365:U:O2	2.72	0.42
1:A:49:U:H3'	1:A:49:U:H6	1.84	0.42
1:A:59:A:H1'	1:A:354:G:N3	2.35	0.42
1:A:66:A:C2	1:A:67:C:C5	3.06	0.42
1:A:76:G:H5"	1:A:76:G:C4	2.54	0.42
1:A:92:U:O2	1:A:92:U:C2'	2.61	0.42
1:A:104:G:C2	1:A:105:G:C4	3.07	0.42
1:A:106:C:H3'	20:T:9:ARG:NH1	2.34	0.42
1:A:162:A:C4'	1:A:349:A:H5'	2.49	0.42
1:A:181:A:H3'	1:A:181:A:P	2.59	0.42
1:A:183:C:H2'	1:A:184:G:C8	2.54	0.42
1:A:214:C:N4	1:A:215:C:C4	2.87	0.42
1:A:215:C:H6	1:A:215:C:O5'	2.03	0.42
1:A:215:C:C6	1:A:215:C:O5'	2.72	0.42
1:A:243:A:C2	1:A:283:U:O4	2.73	0.42
1:A:260:G:C2'	1:A:261:U:C6	3.00	0.42
1:A:261:U:C2	1:A:263:A:H3'	2.54	0.42
1:A:271:C:C6	1:A:271:C:O5'	2.72	0.42
1:A:296:U:C4	1:A:297:G:N7	2.87	0.42
1:A:321:A:N1	1:A:333:U:C2	2.86	0.42
1:A:424:G:C2	1:A:425:G:H1'	2.54	0.42
1:A:424:G:O6	1:A:425:G:C6	2.72	0.42
1:A:450:G:H3'	1:A:451:A:H5"	2.00	0.42
1:A:450:G:OP2	1:A:451:A:C3'	2.68	0.42
1:A:452:A:N7	1:A:453:G:C4	2.87	0.42
1:A:499:A:N1	1:A:546:A:H1'	2.34	0.42
1:A:521:G:H21	1:A:536:C:H5"	1.84	0.42
1:A:538:G:N3	1:A:539:A:C8	2.88	0.42
1:A:556:C:C6	1:A:556:C:C3'	3.03	0.42
1:A:557:G:N1	1:A:558:G:C2	2.87	0.42
1:A:581:G:C5	1:A:758:C:C5	3.07	0.42
1:A:600:A:H1'	1:A:639:G:N2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:615:G:N2	1:A:626:G:C4	2.88	0.42
1:A:693:G:C6	1:A:795:C:O2	2.72	0.42
1:A:697:U:O4	1:A:798:U:H5'	2.20	0.42
1:A:708:C:C2	1:A:709:U:C6	3.07	0.42
1:A:762:U:O5'	1:A:762:U:H6	2.02	0.42
1:A:769:G:C2'	1:A:770:C:H5'	2.49	0.42
1:A:770:C:H1'	1:A:900:A:N1	2.35	0.42
1:A:838:G:N2	1:A:849:G:C1'	2.83	0.42
1:A:854:U:H3'	1:A:854:U:C6	2.54	0.42
1:A:857:C:N1	1:A:858:G:H8	2.17	0.42
1:A:886:G:H3'	1:A:886:G:C8	2.55	0.42
1:A:900:A:C2	1:A:901:A:C5	3.07	0.42
1:A:924:C:N3	1:A:925:G:C8	2.87	0.42
1:A:957:U:O4'	19:S:79:TYR:HA	2.19	0.42
1:A:958:A:N6	19:S:55:GLN:HE22	2.16	0.42
1:A:962:C:C6	1:A:962:C:O5'	2.71	0.42
1:A:976:G:N7	1:A:1361:G:C5	2.88	0.42
1:A:1024:G:N1	1:A:1025:U:C5	2.88	0.42
1:A:1039:G:O2'	1:A:1040:U:H5'	2.19	0.42
1:A:1048:G:H1'	1:A:1215:G:C4'	2.49	0.42
1:A:1067:A:H3'	1:A:1094:G:P	2.59	0.42
1:A:1086:U:H3'	1:A:1087:G:H5'	2.01	0.42
1:A:1091:U:H3	1:A:1094:G:P	2.43	0.42
1:A:1130:A:H2'	1:A:1131:G:O4'	2.19	0.42
1:A:1133:G:C2	1:A:1142:G:C4	3.07	0.42
1:A:1204:A:H2	3:C:189:HIS:HE1	1.67	0.42
1:A:1252:A:H1'	1:A:1369:C:O3'	2.18	0.42
1:A:1261:A:N7	1:A:1262:C:C1'	2.81	0.42
1:A:1268:G:C5	1:A:1269:A:C5	3.07	0.42
1:A:1309:G:N1	1:A:1310:G:C6	2.87	0.42
1:A:1354:U:H2'	1:A:1355:G:O4'	2.19	0.42
1:A:1376:U:O5'	7:G:97:ALA:HB1	2.18	0.42
1:A:1390:U:H2'	1:A:1391:U:N1	2.34	0.42
1:A:1418:A:C5	1:A:1419:G:C4	3.08	0.42
1:A:1419:G:O6	1:A:1482:G:C2	2.72	0.42
1:A:1431:A:C6	1:A:1432:G:C2	3.07	0.42
1:A:1433:A:N1	1:A:1434:A:C2	2.87	0.42
1:A:1444:U:C5	1:A:1444:U:OP2	2.73	0.42
1:A:1461:G:C2	1:A:1462:C:C2	3.08	0.42
1:A:1469:C:OP2	1:A:1470:U:C5	2.73	0.42
1:A:1480:A:C8	1:A:1481:U:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1501:C:C6	1:A:1504:G:O2'	2.63	0.42
1:A:1504:G:H4'	1:A:1505:G:C4	2.54	0.42
1:A:1523:G:C5	1:A:1524:C:C6	3.07	0.42
3:C:23:ALA:CB	3:C:61:LYS:HZ1	2.33	0.42
3:C:177:LEU:C	3:C:179:ALA:H	2.27	0.42
4:D:12:ARG:HB2	4:D:33:ILE:HA	2.01	0.42
4:D:115:GLN:HE22	4:D:119:HIS:CE1	2.36	0.42
4:D:198:LEU:HD13	4:D:198:LEU:O	2.19	0.42
5:E:9:GLU:CB	5:E:11:GLN:H	2.32	0.42
5:E:150:GLU:OE2	8:H:65:PHE:CD1	2.72	0.42
5:E:155:LYS:HB3	8:H:44:PHE:CE1	2.54	0.42
5:E:155:LYS:HE2	8:H:72:GLU:HG2	2.01	0.42
6:F:67:PRO:HD2	6:F:70:VAL:CG2	2.49	0.42
10:J:7:ARG:HD3	10:J:73:LEU:HD11	2.00	0.42
11:K:20:ALA:HB3	11:K:83:VAL:HG22	2.00	0.42
13:M:48:SER:HB2	13:M:51:GLN:HE21	1.85	0.42
13:M:95:PRO:HB2	13:M:98:GLY:HA2	2.01	0.42
17:Q:61:ARG:HG3	17:Q:73:THR:HB	2.00	0.42
17:Q:66:LEU:CD1	17:Q:73:THR:HA	2.49	0.42
18:R:31:TYR:O	18:R:39:VAL:HG22	2.19	0.42
20:T:60:GLN:HA	20:T:63:LYS:HB2	2.01	0.42
22:W:162:ILE:HG21	22:W:189:MET:HB3	2.00	0.42
22:W:217:GLY:C	22:W:219:GLY:H	2.28	0.42
1:A:27:G:C8	1:A:27:G:C3'	3.02	0.42
1:A:34:C:O2	1:A:34:C:H2'	2.20	0.42
1:A:46:G:C4	1:A:366:A:N7	2.87	0.42
1:A:60:A:H62	1:A:378:G:C1'	2.32	0.42
1:A:64:G:C8	1:A:99:C:C4	3.08	0.42
1:A:131:A:H1'	1:A:232:G:H21	1.81	0.42
1:A:193:C:O2'	20:T:55:PRO:HA	2.20	0.42
1:A:205:A:C6	1:A:206:C:C4	3.07	0.42
1:A:215:C:C5	1:A:216:U:C4	3.07	0.42
1:A:227:G:C6	1:A:228:A:N7	2.87	0.42
1:A:259:G:C6	1:A:260:G:C6	3.08	0.42
1:A:293:G:C6	1:A:294:U:C4	3.07	0.42
1:A:347:G:C4	1:A:348:G:C1'	3.02	0.42
1:A:403:C:N3	1:A:404:G:C8	2.88	0.42
1:A:417:G:C8	1:A:417:G:O5'	2.72	0.42
1:A:453:G:H8	1:A:453:G:OP2	2.03	0.42
1:A:454:G:H3'	1:A:455:G:H8	1.84	0.42
1:A:457:G:N3	1:A:458:U:C6	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:512:U:N3	1:A:513:C:C4	2.87	0.42
1:A:579:A:H2'	1:A:580:C:C6	2.54	0.42
1:A:582:C:C6	1:A:760:G:O6	2.72	0.42
1:A:607:A:C5	1:A:608:A:C8	3.07	0.42
1:A:633:G:C8	1:A:633:G:C3'	3.03	0.42
1:A:650:G:C2	1:A:651:C:C5	3.07	0.42
1:A:663:A:C6	1:A:743:A:N1	2.87	0.42
1:A:673:A:C6	1:A:734:G:C6	3.08	0.42
1:A:677:U:H3	1:A:714:G:H22	1.67	0.42
1:A:684:U:C5	1:A:684:U:OP2	2.73	0.42
1:A:738:C:C2	1:A:739:C:C5	3.08	0.42
1:A:742:G:N1	1:A:743:A:C4	2.87	0.42
1:A:758:C:H3'	1:A:758:C:C6	2.54	0.42
1:A:758:C:H2'	1:A:759:A:OP2	2.19	0.42
1:A:777:A:N3	11:K:120:CYS:SG	2.91	0.42
1:A:791:G:C5	1:A:792:A:N7	2.88	0.42
1:A:841:C:C4	1:A:843:U:C2	3.08	0.42
1:A:851:G:C8	1:A:851:G:C5'	3.03	0.42
1:A:888:G:C6	1:A:889:A:N6	2.87	0.42
1:A:897:C:C4	1:A:903:G:N1	2.87	0.42
1:A:925:G:C6	1:A:1391:U:O2	2.73	0.42
1:A:962:C:C2	1:A:963:G:C8	3.06	0.42
1:A:1002:G:O6	1:A:1033:G:OP1	2.37	0.42
1:A:1053:G:C5	1:A:1199:U:H2'	2.54	0.42
1:A:1055:A:N7	1:A:1206:G:N1	2.66	0.42
1:A:1061:G:C6	1:A:1062:U:N3	2.88	0.42
1:A:1114:C:N3	1:A:1186:G:N2	2.68	0.42
1:A:1146:A:N7	1:A:1147:C:C5	2.87	0.42
1:A:1163:A:C2	1:A:1164:G:C8	3.07	0.42
1:A:1239:A:C6	1:A:1241:G:N1	2.88	0.42
1:A:1350:A:C2	1:A:1373:G:C2	3.07	0.42
1:A:1376:U:C6	7:G:8:GLN:NE2	2.88	0.42
1:A:1380:U:C5	7:G:1:PRO:O	2.72	0.42
1:A:1380:U:H4'	1:A:1381:U:C2	2.54	0.42
1:A:1405:G:C2	1:A:1406:U:C6	3.07	0.42
1:A:1428:A:N1	1:A:1473:G:C4	2.87	0.42
2:B:92:ASN:HD21	2:B:145:ASN:HB3	1.83	0.42
2:B:126:ASP:HA	2:B:130:LYS:CB	2.48	0.42
3:C:21:TRP:O	3:C:21:TRP:CE3	2.72	0.42
3:C:22:PHE:CD1	10:J:12:ALA:HA	2.54	0.42
3:C:128:MET:HB2	3:C:131:ARG:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:62:ALA:O	5:E:66:ALA:N	2.52	0.42
6:F:2:ARG:NE	6:F:68:GLN:HE21	2.18	0.42
6:F:3:HIS:HE1	6:F:64:VAL:N	2.17	0.42
11:K:43:TRP:CZ3	11:K:44:ALA:HA	2.54	0.42
13:M:19:THR:HA	13:M:25:GLY:O	2.19	0.42
13:M:86:ARG:HH22	13:M:97:ARG:HH12	1.68	0.42
14:N:81:ILE:HD12	14:N:82:LYS:HE2	2.01	0.42
16:P:10:GLY:HA3	16:P:16:PHE:HB3	2.01	0.42
17:Q:23:ALA:HB1	17:Q:25:GLU:HG3	2.01	0.42
22:W:47:ARG:NH1	22:W:66:ILE:HD13	2.35	0.42
1:A:38:G:H1'	1:A:547:A:N3	2.34	0.42
1:A:66:A:N1	1:A:104:G:C5	2.87	0.42
1:A:162:A:H1'	1:A:348:G:H4'	2.01	0.42
1:A:202:G:H21	1:A:466:A:H61	1.65	0.42
1:A:204:G:C2	1:A:215:C:O2'	2.72	0.42
1:A:207:C:C3'	1:A:208:U:C6	3.02	0.42
1:A:226:G:N2	1:A:227:G:H1'	2.35	0.42
1:A:287:U:H2'	1:A:288:A:O4'	2.20	0.42
1:A:330:C:N3	1:A:354:G:C8	2.88	0.42
1:A:337:G:N1	1:A:338:A:C6	2.87	0.42
1:A:337:G:C4'	1:A:1469:C:H4'	2.49	0.42
1:A:362:G:C2	1:A:364:A:H3'	2.54	0.42
1:A:398:U:H2'	1:A:398:U:O2	2.18	0.42
1:A:455:G:N2	1:A:478:A:C2'	2.82	0.42
1:A:502:A:C6	1:A:544:G:C2	3.06	0.42
1:A:595:A:H4'	1:A:596:A:C5'	2.49	0.42
1:A:598:U:H6	1:A:598:U:O5'	2.01	0.42
1:A:604:G:N7	1:A:605:U:C4	2.87	0.42
1:A:626:G:N2	1:A:627:G:C4	2.88	0.42
1:A:640:A:N7	1:A:640:A:OP2	2.53	0.42
1:A:675:A:C8	1:A:675:A:H5"	2.54	0.42
1:A:677:U:H2'	11:K:120:CYS:HB2	2.01	0.42
1:A:695:A:N1	1:A:696:A:C5	2.87	0.42
1:A:708:C:C4	1:A:709:U:C4	3.08	0.42
1:A:723:U:H2'	1:A:854:U:O2	2.19	0.42
1:A:790:A:H2'	1:A:791:G:C8	2.55	0.42
1:A:894:G:C6	1:A:895:G:C6	3.07	0.42
1:A:910:C:C5	1:A:911:U:C5	3.07	0.42
1:A:936:C:C6	1:A:937:A:C8	3.08	0.42
1:A:958:A:C6	1:A:959:A:C6	3.07	0.42
1:A:976:G:N9	1:A:1362:A:C5	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:981:U:C6	1:A:982:U:H2'	2.54	0.42
1:A:1006:G:H22	1:A:1024:G:H1'	1.84	0.42
1:A:1041:G:N1	1:A:1042:A:C2	2.87	0.42
1:A:1068:G:C2	1:A:1069:C:N1	2.88	0.42
1:A:1108:G:O4'	1:A:1191:A:C8	2.73	0.42
1:A:1141:C:C2	1:A:1142:G:N7	2.86	0.42
1:A:1184:G:O6	1:A:1185:G:C5	2.73	0.42
1:A:1185:G:N2	1:A:1186:G:H1'	2.34	0.42
1:A:1196:A:OP1	1:A:1197:A:C5'	2.66	0.42
1:A:1232:U:C6	1:A:1232:U:H3'	2.54	0.42
1:A:1281:C:C6	1:A:1282:C:C5	3.08	0.42
1:A:1311:A:H61	1:A:1326:U:H3	1.68	0.42
1:A:1332:A:C6	1:A:1333:A:N7	2.87	0.42
1:A:1344:C:H5"	9:I:121:ARG:HB3	2.00	0.42
1:A:1377:A:OP1	7:G:94:ARG:CA	2.68	0.42
1:A:1408:A:N3	1:A:1409:C:C5	2.87	0.42
1:A:1414:U:O2	1:A:1414:U:H2'	2.19	0.42
1:A:1447:A:N6	20:T:19:HIS:CE1	2.87	0.42
1:A:1477:U:H2'	1:A:1478:U:O4'	2.20	0.42
1:A:1532:U:C6	1:A:1532:U:OP2	2.72	0.42
3:C:49:ALA:HA	3:C:74:ILE:CG2	2.50	0.42
3:C:112:ALA:CA	3:C:201:ILE:HG12	2.49	0.42
3:C:139:ASN:HA	3:C:142:ARG:CB	2.49	0.42
5:E:39:GLY:CA	5:E:45:VAL:HA	2.47	0.42
5:E:118:GLY:O	5:E:120:HIS:CE1	2.73	0.42
6:F:3:HIS:CE1	6:F:64:VAL:N	2.87	0.42
6:F:29:ILE:CD1	6:F:64:VAL:HG21	2.50	0.42
11:K:28:ASN:HB3	11:K:56:LYS:HE3	2.02	0.42
11:K:28:ASN:ND2	11:K:29:THR:H	2.17	0.42
16:P:16:PHE:CZ	16:P:38:PHE:CE2	3.06	0.42
20:T:78:LEU:O	20:T:82:ILE:HG23	2.19	0.42
22:W:146:VAL:HG21	22:W:287:PHE:CZ	2.54	0.42
1:A:13:U:C4	1:A:21:G:C2	3.07	0.42
1:A:22:G:C2	1:A:23:C:C6	3.07	0.42
1:A:53:A:N1	1:A:359:G:C4	2.88	0.42
1:A:59:A:N9	1:A:354:G:C2	2.88	0.42
1:A:81:A:H5'	1:A:83:C:OP2	2.19	0.42
1:A:133:U:C5'	1:A:325:A:H1'	2.49	0.42
1:A:146:G:O6	1:A:177:G:C6	2.72	0.42
1:A:180:U:C6	1:A:180:U:H3'	2.54	0.42
1:A:193:C:O2	20:T:58:ASP:CG	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:200:G:C2	1:A:218:U:C2	3.07	0.42
1:A:209:U:O4	1:A:213:G:C4	2.72	0.42
1:A:240:G:C6	1:A:241:G:C6	3.08	0.42
1:A:251:G:N2	1:A:266:G:C4	2.88	0.42
1:A:265:G:C2'	1:A:266:G:H5'	2.50	0.42
1:A:289:G:C4	1:A:290:C:C5	3.07	0.42
1:A:303:A:C4	1:A:304:U:C5	3.08	0.42
1:A:311:C:C2	1:A:312:C:C6	3.07	0.42
1:A:313:A:C6	1:A:314:C:C4	3.07	0.42
1:A:318:G:C6	1:A:319:G:C5	3.07	0.42
1:A:343:U:O2	1:A:345:C:H1'	2.19	0.42
1:A:370:C:H2'	1:A:371:A:H5'	2.01	0.42
1:A:373:A:H61	1:A:391:G:H1'	1.84	0.42
1:A:402:G:C2	1:A:403:C:C4	3.08	0.42
1:A:410:G:H8	1:A:410:G:P	2.42	0.42
1:A:416:G:C8	1:A:416:G:O5'	2.73	0.42
1:A:416:G:C8	1:A:416:G:H3'	2.55	0.42
1:A:448:A:N7	1:A:487:A:C5	2.86	0.42
1:A:453:G:H2'	1:A:454:G:O4'	2.20	0.42
1:A:502:A:H2'	1:A:503:C:O4'	2.20	0.42
1:A:521:G:C6	1:A:522:C:C5	3.07	0.42
1:A:591:U:C6	1:A:591:U:C3'	3.02	0.42
1:A:600:A:C5	1:A:639:G:C5	3.06	0.42
1:A:610:U:C4	1:A:627:G:N7	2.88	0.42
1:A:627:G:N2	1:A:628:G:C4	2.88	0.42
1:A:652:U:O2'	1:A:653:U:H3'	2.20	0.42
1:A:664:G:H5'	18:R:52:ARG:CZ	2.49	0.42
1:A:723:U:O2	1:A:833:G:H1'	2.20	0.42
1:A:745:G:H4'	1:A:851:G:N3	2.35	0.42
1:A:760:G:O6	1:A:761:G:C2	2.73	0.42
1:A:760:G:O6	1:A:761:G:C4	2.72	0.42
1:A:763:G:C6	1:A:764:C:C4	3.07	0.42
1:A:768:A:H2'	1:A:769:G:O4'	2.19	0.42
1:A:785:G:C6	1:A:798:U:N3	2.88	0.42
1:A:839:C:C2'	1:A:840:C:H5	2.33	0.42
1:A:851:G:C5	1:A:852:G:N7	2.88	0.42
1:A:912:C:C5	12:L:20:VAL:HG12	2.54	0.42
1:A:917:G:C2	1:A:918:A:H1'	2.55	0.42
1:A:923:A:O5'	1:A:923:A:H8	2.02	0.42
1:A:929:G:N1	1:A:1389:C:C2	2.87	0.42
1:A:939:G:O2'	1:A:1375:A:H2'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:961:U:C6	1:A:1222:G:N2	2.88	0.42
1:A:962:C:C2	1:A:1201:A:N3	2.88	0.42
1:A:976:G:C4	1:A:1362:A:C8	3.08	0.42
1:A:1006:G:H2'	1:A:1007:U:O4'	2.19	0.42
1:A:1022:A:C2	1:A:1023:U:C5	3.07	0.42
1:A:1066:C:H2'	1:A:1067:A:O4'	2.20	0.42
1:A:1070:U:H2'	1:A:1071:C:C6	2.54	0.42
1:A:1087:G:H2'	1:A:1087:G:N3	2.34	0.42
1:A:1087:G:N2	1:A:1099:G:H1'	2.34	0.42
1:A:1117:A:C6	1:A:1184:G:N1	2.87	0.42
1:A:1158:C:C5'	1:A:1184:G:OP2	2.68	0.42
1:A:1165:U:H3	1:A:1171:A:H61	1.68	0.42
1:A:1206:G:H1'	3:C:193:GLY:HA2	2.01	0.42
1:A:1266:G:C4	1:A:1270:G:N1	2.88	0.42
1:A:1287:A:C8	1:A:1287:A:C3'	3.02	0.42
1:A:1289:A:H2'	7:G:34:LYS:HE3	2.01	0.42
1:A:1310:G:C2	1:A:1328:C:C2	3.08	0.42
1:A:1321:U:H1'	19:S:76:THR:CB	2.49	0.42
1:A:1330:U:C6	1:A:1330:U:H3'	2.53	0.42
1:A:1366:C:N3	1:A:1367:C:C5	2.88	0.42
1:A:1406:U:H3	1:A:1517:G:H21	1.64	0.42
1:A:1460:C:C5	1:A:1460:C:OP2	2.73	0.42
2:B:67:LEU:CD2	2:B:91:VAL:HG13	2.50	0.42
3:C:32:LEU:HA	3:C:35:ASP:CB	2.49	0.42
4:D:199:ILE:CD1	4:D:202:LEU:HD23	2.49	0.42
5:E:88:HIS:CE1	5:E:137:ARG:HD3	2.53	0.42
6:F:15:SER:HB2	6:F:58:HIS:CD2	2.55	0.42
13:M:32:ILE:HD12	13:M:59:VAL:HB	2.01	0.42
15:O:81:ILE:HB	15:O:86:LEU:O	2.19	0.42
17:Q:45:VAL:CG2	17:Q:46:HIS:N	2.82	0.42
18:R:49:LYS:CA	18:R:52:ARG:HH21	2.31	0.42
19:S:38:THR:HB	19:S:40:PHE:CZ	2.55	0.42
1:A:43:C:C2	1:A:400:C:C2	3.07	0.42
1:A:68:G:N3	1:A:152:A:N3	2.68	0.42
1:A:97:G:N7	1:A:98:A:C4	2.88	0.42
1:A:117:G:C2	1:A:118:U:C2	3.08	0.42
1:A:126:G:P	1:A:633:G:H22	2.43	0.42
1:A:132:C:C6	1:A:132:C:O5'	2.73	0.42
1:A:182:A:OP2	1:A:193:C:C5	2.72	0.42
1:A:197:A:C6	1:A:221:C:O4'	2.72	0.42
1:A:217:C:C5'	1:A:463:U:C5	3.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:247:G:C2	1:A:278:G:H1'	2.54	0.42
1:A:253:A:C2	1:A:275:G:C1'	2.97	0.42
1:A:256:U:C6	1:A:256:U:O5'	2.73	0.42
1:A:266:G:H1'	1:A:268:U:OP2	2.20	0.42
1:A:321:A:H3'	1:A:321:A:H8	1.84	0.42
1:A:349:A:C6	1:A:350:G:C6	3.08	0.42
1:A:389:A:C6	1:A:390:U:H1'	2.54	0.42
1:A:420:U:H2'	1:A:422:C:C2	2.55	0.42
1:A:427:U:OP1	4:D:12:ARG:NH2	2.53	0.42
1:A:442:G:C2	1:A:443:C:C2	3.07	0.42
1:A:444:G:C6	1:A:445:G:C8	3.08	0.42
1:A:455:G:N2	1:A:456:A:H1'	2.34	0.42
1:A:464:U:HO2'	1:A:466:A:H62	1.67	0.42
1:A:475:C:C6	1:A:475:C:O5'	2.73	0.42
1:A:495:A:C6	4:D:119:HIS:HE1	2.35	0.42
1:A:501:C:N4	1:A:502:A:H62	2.18	0.42
1:A:518:C:C6	1:A:529:G:O6	2.73	0.42
1:A:565:U:C5	1:A:566:G:O2'	2.73	0.42
1:A:575:G:C5	1:A:881:G:C2	3.08	0.42
1:A:580:C:H2'	1:A:581:G:C8	2.54	0.42
1:A:594:U:C5	1:A:595:A:C6	3.07	0.42
1:A:603:U:C5	1:A:603:U:OP2	2.72	0.42
1:A:652:U:H5	1:A:752:G:H2'	1.82	0.42
1:A:659:U:N3	1:A:660:C:C6	2.88	0.42
1:A:674:G:N1	1:A:675:A:C5	2.88	0.42
1:A:773:G:C2	1:A:774:G:C1'	3.02	0.42
1:A:775:G:H2'	1:A:776:G:C8	2.53	0.42
1:A:786:G:C8	1:A:786:G:O5'	2.72	0.42
1:A:856:C:H2'	1:A:857:C:H6	1.82	0.42
1:A:905:U:N3	1:A:906:A:C5	2.88	0.42
1:A:977:A:C8	1:A:977:A:C3'	2.98	0.42
1:A:989:U:O4'	1:A:1016:A:C2	2.73	0.42
1:A:1024:G:N1	1:A:1025:U:C4	2.88	0.42
1:A:1061:G:N3	1:A:1061:G:H2'	2.34	0.42
1:A:1091:U:C5	1:A:1093:A:OP1	2.72	0.42
1:A:1129:C:O4'	1:A:1146:A:N6	2.53	0.42
1:A:1135:U:C2	1:A:1137:C:O2	2.72	0.42
1:A:1213:A:C8	1:A:1215:G:C6	3.06	0.42
1:A:1236:A:N3	1:A:1334:G:H1'	2.34	0.42
1:A:1248:A:H2'	1:A:1249:C:H6	1.85	0.42
1:A:1252:A:H1'	1:A:1369:C:H4'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1256:A:OP2	1:A:1256:A:C8	2.73	0.42
1:A:1272:G:C5	1:A:1273:C:C5	3.07	0.42
1:A:1294:G:N2	1:A:1295:U:H1'	2.34	0.42
1:A:1313:U:O2	1:A:1313:U:C2'	2.62	0.42
1:A:1370:G:C2	1:A:1371:G:N7	2.88	0.42
1:A:1382:C:H2'	7:G:78:ARG:HH21	1.85	0.42
1:A:1409:C:H2'	1:A:1410:A:C8	2.54	0.42
1:A:1500:A:C8	1:A:1500:A:OP2	2.73	0.42
2:B:45:THR:HA	2:B:200:PRO:HG2	2.02	0.42
2:B:103:TRP:CZ2	2:B:154:GLY:HA3	2.54	0.42
3:C:21:TRP:NE1	3:C:58:ARG:HH21	2.18	0.42
3:C:150:VAL:O	3:C:166:TRP:HB2	2.19	0.42
4:D:174:ALA:HA	4:D:178:GLU:O	2.19	0.42
4:D:197:HIS:CE1	5:E:104:ILE:HG22	2.54	0.42
10:J:10:LEU:HD23	10:J:21:ALA:O	2.20	0.42
10:J:52:LEU:HB2	14:N:80:ARG:HD3	2.02	0.42
12:L:30:ARG:CB	12:L:57:THR:HG22	2.49	0.42
13:M:82:LEU:O	19:S:73:PHE:CZ	2.72	0.42
16:P:56:ARG:O	16:P:59:HIS:CD2	2.73	0.42
17:Q:28:VAL:HG13	17:Q:39:ARG:CB	2.49	0.42
19:S:68:HIS:HB3	19:S:72:GLU:HG2	2.01	0.42
22:W:161:LYS:H	22:W:192:SER:N	2.17	0.42
1:A:22:G:C4	1:A:914:A:C5	3.08	0.42
1:A:54:C:C6	1:A:54:C:C5'	2.92	0.42
1:A:66:A:C8	1:A:66:A:O5'	2.73	0.42
1:A:79:G:C2	1:A:80:A:C5	3.07	0.42
1:A:129:A:C5'	17:Q:63:CYS:HA	2.49	0.42
1:A:186:C:N3	1:A:187:G:C4	2.87	0.42
1:A:192:A:C8	1:A:192:A:H5"	2.54	0.42
1:A:246:A:C6	1:A:279:A:O4'	2.73	0.42
1:A:255:G:C6	1:A:256:U:N3	2.88	0.42
1:A:262:A:N3	1:A:263:A:C8	2.87	0.42
1:A:269:C:C6	1:A:270:A:N7	2.88	0.42
1:A:274:A:C2	1:A:275:G:C4	3.08	0.42
1:A:282:A:C5	1:A:283:U:C6	3.08	0.42
1:A:283:U:H2'	1:A:284:C:H5'	2.01	0.42
1:A:284:C:C6	1:A:284:C:O5'	2.72	0.42
1:A:294:U:N3	1:A:295:C:C5	2.88	0.42
1:A:297:G:H4'	1:A:557:G:H4'	2.01	0.42
1:A:299:G:N2	1:A:565:U:H3	2.18	0.42
1:A:320:A:O4'	1:A:1434:A:H2	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:323:U:C4	1:A:324:G:C2	3.08	0.42
1:A:350:G:N2	1:A:351:G:C6	2.88	0.42
1:A:363:A:H2'	1:A:364:A:C8	2.55	0.42
1:A:381:C:C5	1:A:382:A:N3	2.87	0.42
1:A:384:G:C4	1:A:385:C:C5	3.08	0.42
1:A:404:G:C2	1:A:405:U:C2	3.08	0.42
1:A:429:U:P	4:D:8:LEU:HD22	2.60	0.42
1:A:448:A:C8	1:A:448:A:C4'	3.03	0.42
1:A:516:U:H2'	1:A:519:C:C2	2.55	0.42
1:A:518:C:H5'	1:A:530:G:H21	1.85	0.42
1:A:520:A:OP2	12:L:47:ALA:HA	2.20	0.42
1:A:543:U:O5'	1:A:543:U:H6	2.03	0.42
1:A:565:U:C4	1:A:566:G:C4	3.07	0.42
1:A:570:G:H4'	1:A:820:U:H5'	2.02	0.42
1:A:588:G:N2	1:A:652:U:C2	2.87	0.42
1:A:600:A:H4'	8:H:120:LEU:HD23	2.02	0.42
1:A:603:U:H6	1:A:603:U:P	2.43	0.42
1:A:613:C:O2'	1:A:614:C:H5'	2.20	0.42
1:A:669:G:H2'	1:A:670:G:C8	2.55	0.42
1:A:675:A:C2	1:A:676:A:C1'	3.03	0.42
1:A:677:U:C5	1:A:678:U:C5	3.07	0.42
1:A:678:U:O2	1:A:678:U:H2'	2.20	0.42
1:A:685:G:H2'	1:A:686:U:O4'	2.20	0.42
1:A:730:G:H1'	1:A:765:G:H4'	2.01	0.42
1:A:781:A:O2'	1:A:1514:G:H1'	2.19	0.42
1:A:813:U:O4	1:A:816:A:C2	2.72	0.42
1:A:833:G:C2	1:A:834:U:N1	2.88	0.42
1:A:843:U:C2	1:A:846:G:N2	2.88	0.42
1:A:854:U:N3	1:A:855:U:C6	2.87	0.42
1:A:857:C:C6	1:A:858:G:N7	2.88	0.42
1:A:866:C:N4	1:A:873:A:C2	2.88	0.42
1:A:876:C:C6	1:A:876:C:H3'	2.55	0.42
1:A:925:G:C6	1:A:1391:U:C2	3.07	0.42
1:A:941:G:C2	1:A:1343:G:N1	2.88	0.42
1:A:944:G:H5'	1:A:1231:G:OP1	2.19	0.42
1:A:996:A:C2	1:A:997:U:N1	2.87	0.42
1:A:1102:A:C2	1:A:1103:C:N3	2.87	0.42
1:A:1103:C:N4	1:A:1104:G:O6	2.53	0.42
1:A:1114:C:O2	1:A:1187:G:H1'	2.19	0.42
1:A:1129:C:N3	1:A:1144:G:N1	2.68	0.42
1:A:1131:G:C8	1:A:1131:G:H3'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1132:C:C4	1:A:1133:G:N7	2.88	0.42
1:A:1143:G:N1	1:A:1144:G:C4	2.88	0.42
1:A:1158:C:H3'	1:A:1158:C:O2	2.20	0.42
1:A:1161:C:C6	1:A:1161:C:O5'	2.73	0.42
1:A:1174:G:C6	1:A:1175:G:C8	3.08	0.42
1:A:1242:G:N2	1:A:1243:C:H1'	2.34	0.42
1:A:1261:A:H61	1:A:1274:A:H2'	1.84	0.42
1:A:1266:G:C2'	1:A:1268:G:N7	2.81	0.42
1:A:1306:A:N6	1:A:1331:G:C2'	2.83	0.42
1:A:1354:U:C2	1:A:1355:G:C8	3.08	0.42
1:A:1357:A:C2	1:A:1363:A:N6	2.88	0.42
1:A:1372:U:C4	1:A:1373:G:C6	3.08	0.42
1:A:1426:G:C6	1:A:1475:G:C6	3.08	0.42
1:A:1433:A:N6	1:A:1434:A:C6	2.88	0.42
1:A:1447:A:H61	20:T:19:HIS:CD2	2.37	0.42
1:A:1504:G:H4'	1:A:1505:G:O4'	2.20	0.42
1:A:1510:C:N3	1:A:1526:G:C6	2.88	0.42
1:A:1511:G:C6	1:A:1512:U:C2	3.08	0.42
2:B:82:ALA:HB3	2:B:214:GLY:CA	2.50	0.42
3:C:137:VAL:HG22	3:C:148:ILE:HD11	2.02	0.42
4:D:12:ARG:HE	4:D:37:PRO:HB3	1.85	0.42
10:J:65:TYR:CE2	14:N:87:ALA:CB	3.03	0.42
11:K:46:ALA:HA	11:K:61:ALA:O	2.20	0.42
12:L:85:ARG:CZ	12:L:90:PRO:HA	2.49	0.42
15:O:38:LEU:CD1	15:O:41:HIS:CD2	3.02	0.42
18:R:63:TYR:CE1	18:R:69:TYR:CE2	3.07	0.42
20:T:46:ALA:CB	20:T:82:ILE:HA	2.48	0.42
22:W:191:SER:HB2	22:W:194:THR:HB	2.01	0.42
1:A:39:G:C4	1:A:498:A:N3	2.88	0.42
1:A:45:G:C6	1:A:46:G:N7	2.87	0.42
1:A:68:G:C8	1:A:69:G:C1'	3.02	0.42
1:A:94:G:H5"	1:A:95:C:H5"	2.02	0.42
1:A:131:A:H4'	1:A:263:A:H1'	2.00	0.42
1:A:150:U:O2	1:A:151:A:C8	2.73	0.42
1:A:158:G:H1'	1:A:164:G:N3	2.35	0.42
1:A:189:A:H2'	1:A:190:A:C5'	2.49	0.42
1:A:201:G:O2'	1:A:469:C:C6	2.66	0.42
1:A:226:G:C5	1:A:227:G:C8	3.08	0.42
1:A:234:C:H2'	1:A:235:C:H6	1.84	0.42
1:A:255:G:C6	1:A:272:C:N3	2.87	0.42
1:A:286:C:N3	1:A:287:U:C5	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:295:C:N3	1:A:296:U:C4	2.88	0.42
1:A:343:U:H1'	1:A:347:G:C2	2.54	0.42
1:A:376:G:C2	1:A:377:G:C4	3.08	0.42
1:A:392:C:H1'	1:A:483:C:H2'	2.01	0.42
1:A:411:A:C2	1:A:431:A:N6	2.87	0.42
1:A:441:A:C6	1:A:442:G:C6	3.08	0.42
1:A:450:G:H2'	1:A:481:G:N1	2.25	0.42
1:A:473:U:C5	1:A:474:G:N7	2.88	0.42
1:A:487:A:H3'	1:A:488:C:H6	1.85	0.42
1:A:502:A:C8	1:A:502:A:C3'	3.02	0.42
1:A:521:G:C2	1:A:522:C:C6	3.08	0.42
1:A:531:U:O4	1:A:534:U:C5	2.73	0.42
1:A:533:A:C6	1:A:536:C:C2	3.08	0.42
1:A:550:G:N3	1:A:550:G:H2'	2.35	0.42
1:A:577:G:H8	1:A:816:A:C2	2.32	0.42
1:A:580:C:C2	1:A:581:G:C8	3.08	0.42
1:A:601:G:O2'	1:A:602:A:H5'	2.20	0.42
1:A:634:C:C4	1:A:635:A:C8	3.07	0.42
1:A:643:C:C4	1:A:644:U:C5	3.08	0.42
1:A:644:U:C2	1:A:645:G:C5	3.07	0.42
1:A:657:U:C2	1:A:658:C:C5	3.08	0.42
1:A:727:G:N2	1:A:729:A:H3'	2.35	0.42
1:A:772:U:N3	1:A:773:G:C5	2.88	0.42
1:A:778:G:C4	1:A:779:C:C5	3.08	0.42
1:A:820:U:H5"	1:A:821:G:OP2	2.20	0.42
1:A:839:C:H2'	1:A:840:C:C6	2.55	0.42
1:A:865:A:H2'	1:A:866:C:O5'	2.20	0.42
1:A:876:C:H4'	8:H:14:ARG:HH12	1.84	0.42
1:A:898:G:C6	1:A:902:G:C6	3.08	0.42
1:A:947:G:H1'	1:A:1333:A:N3	2.34	0.42
1:A:947:G:C2	1:A:1235:U:O2	2.73	0.42
1:A:949:A:C2	1:A:971:G:O6	2.72	0.42
1:A:965:U:C6	1:A:965:U:O5'	2.72	0.42
1:A:990:C:N3	1:A:1216:A:C2	2.87	0.42
1:A:1001:C:C2	1:A:1002:G:N7	2.88	0.42
1:A:1019:A:N6	14:N:19:TYR:CG	2.79	0.42
1:A:1062:U:C6	1:A:1194:U:O4	2.73	0.42
1:A:1067:A:H8	1:A:1093:A:O2'	2.03	0.42
1:A:1090:U:O2'	1:A:1171:A:C4'	2.67	0.42
1:A:1143:G:N3	1:A:1144:G:C8	2.87	0.42
1:A:1186:G:C2	1:A:1187:G:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1219:A:N6	1:A:1220:G:C6	2.87	0.42
1:A:1236:A:H2'	1:A:1237:C:C1'	2.49	0.42
1:A:1250:A:H61	1:A:1354:U:C5'	2.33	0.42
1:A:1259:C:C4	1:A:1260:G:C4	3.08	0.42
1:A:1270:G:C2	1:A:1271:A:C4	3.08	0.42
1:A:1302:C:H2'	1:A:1303:C:H5"	2.02	0.42
1:A:1342:C:H4'	9:I:123:ARG:NH2	2.34	0.42
1:A:1350:A:N1	1:A:1351:U:C2	2.88	0.42
1:A:1449:C:C6	1:A:1450:U:C6	3.08	0.42
1:A:1450:U:C6	1:A:1450:U:O5'	2.73	0.42
1:A:1515:G:C5	1:A:1521:C:N3	2.88	0.42
2:B:90:PHE:CD1	2:B:90:PHE:N	2.88	0.42
2:B:182:VAL:O	2:B:195:VAL:HA	2.20	0.42
3:C:37:LYS:O	3:C:41:TYR:CD1	2.73	0.42
3:C:90:VAL:O	3:C:94:ALA:HB3	2.20	0.42
6:F:35:LYS:NZ	6:F:37:HIS:CG	2.88	0.42
8:H:37:ASN:HA	8:H:48:PHE:HE1	1.84	0.42
9:I:54:VAL:HG22	9:I:93:LEU:CD1	2.50	0.42
10:J:14:ASP:C	10:J:70:HIS:NE2	2.78	0.42
12:L:55:ARG:NH1	12:L:56:LEU:H	2.16	0.42
17:Q:45:VAL:CG1	17:Q:52:CYS:SG	3.08	0.42
18:R:39:VAL:HB	18:R:43:ILE:HB	2.02	0.42
22:W:110:PRO:HA	22:W:116:VAL:HB	2.02	0.42
1:A:3:A:C2	1:A:628:G:C8	3.08	0.42
1:A:9:G:C2	1:A:26:A:N3	2.88	0.42
1:A:20:U:O4'	1:A:572:A:C2	2.73	0.42
1:A:51:A:C5	1:A:353:A:N1	2.88	0.42
1:A:64:G:C4	1:A:99:C:N3	2.88	0.42
1:A:64:G:N2	1:A:69:G:C6	2.88	0.42
1:A:105:G:C2'	1:A:106:C:H6	2.31	0.42
1:A:164:G:C2	1:A:165:G:C4	3.07	0.42
1:A:167:A:C2	1:A:168:G:C4	3.08	0.42
1:A:190:A:C4	1:A:191:G:H1'	2.55	0.42
1:A:204:G:N3	1:A:465:A:C8	2.88	0.42
1:A:226:G:N1	1:A:227:G:C6	2.88	0.42
1:A:271:C:C6	1:A:271:C:H3'	2.54	0.42
1:A:297:G:N1	1:A:299:G:H5"	2.34	0.42
1:A:319:G:N1	1:A:335:C:C4	2.88	0.42
1:A:352:C:H1'	1:A:355:C:C5	2.55	0.42
1:A:364:A:C2	1:A:365:U:C4	3.07	0.42
1:A:392:C:H2'	1:A:393:A:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:415:A:C8	1:A:416:G:N7	2.88	0.42
1:A:456:A:H2	1:A:476:U:H3	1.64	0.42
1:A:465:A:N1	1:A:466:A:C6	2.88	0.42
1:A:482:A:N7	1:A:483:C:C4	2.88	0.42
1:A:499:A:C6	1:A:547:A:C4	3.08	0.42
1:A:533:A:C2	1:A:535:A:H3'	2.55	0.42
1:A:579:A:C6	1:A:763:G:C5	3.08	0.42
1:A:602:A:N6	1:A:603:U:C4	2.87	0.42
1:A:639:G:C6	1:A:640:A:C6	3.07	0.42
1:A:654:G:N2	1:A:655:A:H1'	2.34	0.42
1:A:743:A:C2	1:A:744:C:N3	2.88	0.42
1:A:747:A:N1	1:A:748:G:C2	2.87	0.42
1:A:809:G:N7	1:A:810:C:C5	2.88	0.42
1:A:817:C:N4	1:A:1529:G:H1	2.16	0.42
1:A:862:C:H1'	1:A:874:G:C5'	2.36	0.42
1:A:872:A:N7	1:A:874:G:C8	2.88	0.42
1:A:903:G:H3'	1:A:904:U:C5	2.55	0.42
1:A:925:G:H22	1:A:1391:U:C2'	2.33	0.42
1:A:938:A:C2	1:A:1345:U:C4	3.08	0.42
1:A:986:U:H3	1:A:1219:A:N6	2.14	0.42
1:A:1030:U:C2	1:A:1032:G:N7	2.88	0.42
1:A:1057:G:H3'	1:A:1058:G:N7	2.32	0.42
1:A:1169:A:N9	1:A:1170:A:C8	2.88	0.42
1:A:1219:A:H2	19:S:51:HIS:CD2	2.37	0.42
1:A:1240:U:OP2	7:G:114:SER:HA	2.20	0.42
1:A:1259:C:N4	1:A:1260:G:C6	2.87	0.42
1:A:1283:U:O5'	1:A:1283:U:C6	2.72	0.42
1:A:1309:G:C6	1:A:1329:A:N1	2.88	0.42
1:A:1356:G:N1	1:A:1357:A:C6	2.88	0.42
1:A:1399:C:H1'	1:A:1401:G:C5	2.54	0.42
1:A:1400:C:H2'	1:A:1401:G:H5'	2.01	0.42
1:A:1475:G:C2	1:A:1476:A:C4	3.08	0.42
1:A:1527:U:H3'	21:U:41:THR:O	2.19	0.42
3:C:22:PHE:CD1	3:C:23:ALA:O	2.72	0.42
3:C:58:ARG:HD3	3:C:96:VAL:HG21	2.01	0.42
3:C:63:ILE:H	3:C:96:VAL:C	2.28	0.42
4:D:110:ARG:H	4:D:110:ARG:HD2	1.85	0.42
5:E:132:PRO:HA	5:E:136:VAL:H	1.85	0.42
8:H:38:VAL:HG13	8:H:111:THR:HB	1.99	0.42
10:J:16:ARG:HH21	10:J:19:ASP:CG	2.28	0.42
11:K:20:ALA:HB3	11:K:83:VAL:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:7:THR:O	15:O:11:VAL:HG23	2.20	0.42
18:R:49:LYS:N	18:R:52:ARG:HH21	2.18	0.42
22:W:312:ILE:H	22:W:312:ILE:CD1	2.33	0.42
1:A:27:G:C2	1:A:28:A:C4	3.08	0.41
1:A:44:A:C2	1:A:45:G:N9	2.88	0.41
1:A:51:A:C5	1:A:353:A:C2	3.09	0.41
1:A:65:A:C3'	1:A:381:C:C5	3.03	0.41
1:A:66:A:N3	1:A:67:C:C6	2.88	0.41
1:A:81:A:N3	1:A:82:G:N7	2.67	0.41
1:A:115:G:C5	1:A:313:A:C2	3.08	0.41
1:A:124:C:O2	1:A:238:A:C2	2.73	0.41
1:A:126:G:N3	1:A:635:A:H5'	2.35	0.41
1:A:129:A:N3	1:A:130:A:C2	2.88	0.41
1:A:130:A:C5	1:A:264:C:H1'	2.55	0.41
1:A:139:A:C5	1:A:140:U:C6	3.08	0.41
1:A:151:A:N6	1:A:152:A:C4	2.87	0.41
1:A:158:G:C1'	1:A:164:G:C2	3.02	0.41
1:A:241:G:C8	1:A:241:G:H3'	2.54	0.41
1:A:282:A:H3'	1:A:283:U:H5	1.81	0.41
1:A:294:U:O2	1:A:294:U:H2'	2.19	0.41
1:A:314:C:C5	1:A:314:C:OP2	2.73	0.41
1:A:361:G:C8	1:A:361:G:O5'	2.73	0.41
1:A:366:A:C4'	1:A:367:U:OP1	2.67	0.41
1:A:378:G:C2	1:A:386:C:O2	2.73	0.41
1:A:405:U:C5'	1:A:495:A:C2	3.03	0.41
1:A:420:U:C2	1:A:422:C:C2	3.08	0.41
1:A:447:G:N7	1:A:485:U:C5	2.88	0.41
1:A:479:U:O2	1:A:480:U:C5	2.73	0.41
1:A:500:G:N2	1:A:549:C:C4'	2.83	0.41
1:A:506:G:N1	1:A:526:C:C2	2.88	0.41
1:A:515:G:C6	1:A:516:U:O4	2.73	0.41
1:A:525:C:N3	1:A:526:C:C4	2.87	0.41
1:A:575:G:N1	1:A:881:G:C5	2.88	0.41
1:A:595:A:C4'	1:A:596:A:C8	3.03	0.41
1:A:600:A:C4	1:A:639:G:C2	3.08	0.41
1:A:600:A:OP2	8:H:87:ARG:HA	2.19	0.41
1:A:601:G:OP1	8:H:88:LYS:HA	2.21	0.41
1:A:628:G:C6	1:A:629:A:C8	3.07	0.41
1:A:666:G:C2	1:A:667:G:C8	3.08	0.41
1:A:671:G:H3'	1:A:672:U:H6	1.85	0.41
1:A:679:C:C4	1:A:680:C:C4	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:697:U:H1'	1:A:786:G:O4'	2.19	0.41
1:A:698:G:C3'	1:A:699:C:H6	2.33	0.41
1:A:700:G:O2'	1:A:701:U:H5'	2.20	0.41
1:A:728:A:C1'	15:O:53:ARG:HE	2.33	0.41
1:A:740:U:C6	1:A:740:U:H3'	2.55	0.41
1:A:742:G:C6	1:A:743:A:C5	3.07	0.41
1:A:809:G:O5'	1:A:809:G:H8	2.02	0.41
1:A:815:A:C2	1:A:1529:G:C5	3.08	0.41
1:A:837:U:C6	1:A:837:U:H3'	2.54	0.41
1:A:840:C:H1'	1:A:847:G:N2	2.35	0.41
1:A:852:G:N7	1:A:853:C:C5	2.88	0.41
1:A:856:C:H3'	1:A:871:U:O4	2.20	0.41
1:A:949:A:C4	1:A:950:U:C6	3.08	0.41
1:A:953:G:C2	1:A:1229:A:C4	3.08	0.41
1:A:1055:A:O3'	1:A:1196:A:C8	2.72	0.41
1:A:1096:C:C4	1:A:1097:C:C4	3.08	0.41
1:A:1110:A:H2	2:B:136:ARG:HH21	1.68	0.41
1:A:1158:C:C2	1:A:1160:G:N7	2.87	0.41
1:A:1198:G:C5	1:A:1199:U:C6	3.05	0.41
1:A:1220:G:C2	1:A:1221:G:C8	3.08	0.41
1:A:1288:A:C2	1:A:1289:A:C5	3.08	0.41
1:A:1386:G:C2	1:A:1387:G:C8	3.08	0.41
1:A:1397:C:H3'	1:A:1397:C:C6	2.55	0.41
1:A:1400:C:H3'	1:A:1401:G:H5'	2.02	0.41
1:A:1401:G:N1	1:A:1402:C:C2	2.88	0.41
1:A:1409:C:H6	1:A:1409:C:P	2.43	0.41
1:A:1427:C:H2'	1:A:1428:A:C8	2.55	0.41
1:A:1447:A:H61	20:T:19:HIS:CG	2.38	0.41
1:A:1473:G:C2	1:A:1474:U:O4'	2.72	0.41
1:A:1511:G:N1	1:A:1525:G:C5	2.88	0.41
1:A:1513:A:N3	1:A:1514:G:C8	2.88	0.41
3:C:71:ARG:NE	3:C:74:ILE:HG21	2.34	0.41
4:D:169:TRP:CE2	4:D:185:PRO:HA	2.54	0.41
7:G:99:ALA:HA	7:G:102:TRP:CE3	2.55	0.41
8:H:42:GLU:CD	8:H:100:ILE:CG2	2.92	0.41
8:H:63:LYS:CB	8:H:70:VAL:CG1	2.98	0.41
8:H:91:LEU:HD13	8:H:116:ARG:HH12	1.85	0.41
12:L:33:CYS:O	12:L:76:HIS:HA	2.20	0.41
13:M:24:VAL:HG12	13:M:59:VAL:HG21	2.02	0.41
17:Q:20:ILE:H	17:Q:50:ASN:HD21	1.67	0.41
17:Q:61:ARG:CZ	17:Q:63:CYS:CB	2.97	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:22:VAL:C	19:S:25:GLY:H	2.28	0.41
19:S:40:PHE:HA	19:S:66:VAL:HG12	2.02	0.41
20:T:38:ILE:HD13	20:T:81:GLN:CD	2.45	0.41
22:W:206:THR:HG22	22:W:260:HIS:ND1	2.35	0.41
1:A:35:G:N7	12:L:122:LYS:HE2	2.34	0.41
1:A:46:G:C6	1:A:396:C:C4	3.08	0.41
1:A:53:A:C8	1:A:53:A:C3'	3.00	0.41
1:A:108:G:H5"	1:A:110:C:O4'	2.20	0.41
1:A:131:A:N1	1:A:232:G:C6	2.88	0.41
1:A:185:U:O2	1:A:193:C:C2	2.74	0.41
1:A:191:G:O6	1:A:192:A:N6	2.53	0.41
1:A:192:A:H5'	1:A:193:C:P	2.60	0.41
1:A:193:C:H1'	20:T:75:LYS:HZ2	1.85	0.41
1:A:238:A:C2	1:A:239:U:C1'	3.00	0.41
1:A:320:A:H4'	1:A:1435:G:N3	2.35	0.41
1:A:337:G:N2	1:A:338:A:C4	2.88	0.41
1:A:369:G:C2	1:A:370:C:N1	2.88	0.41
1:A:369:G:C6	1:A:393:A:N1	2.88	0.41
1:A:372:C:C5'	1:A:372:C:H6	2.34	0.41
1:A:398:U:H2'	1:A:399:G:H8	1.85	0.41
1:A:410:G:H1	1:A:430:A:C3'	2.31	0.41
1:A:428:G:C5	1:A:430:A:C6	3.09	0.41
1:A:451:A:H5"	1:A:481:G:O6	2.19	0.41
1:A:506:G:C2	1:A:507:C:C2	3.09	0.41
1:A:519:C:C4	1:A:520:A:C5	3.08	0.41
1:A:529:G:C6	1:A:530:G:N2	2.88	0.41
1:A:537:G:C2	1:A:538:G:C4	3.08	0.41
1:A:597:G:H21	8:H:83:ARG:NH1	2.19	0.41
1:A:605:U:N3	1:A:606:G:N2	2.68	0.41
1:A:618:C:C5	1:A:620:C:OP1	2.73	0.41
1:A:639:G:H5'	1:A:640:A:P	2.61	0.41
1:A:640:A:C8	1:A:640:A:OP2	2.72	0.41
1:A:665:A:C8	1:A:725:G:N2	2.88	0.41
1:A:685:G:H4'	11:K:41:LEU:N	2.34	0.41
1:A:706:A:N7	1:A:707:U:C4	2.88	0.41
1:A:794:A:C6	1:A:795:C:H1'	2.55	0.41
1:A:802:A:N7	1:A:803:G:C5	2.88	0.41
1:A:821:G:C8	1:A:821:G:C3'	3.03	0.41
1:A:874:G:N2	1:A:875:U:C1'	2.83	0.41
1:A:892:A:C6	1:A:907:A:N9	2.88	0.41
1:A:941:G:O5'	1:A:941:G:H8	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:942:G:C2	1:A:943:U:C5	3.07	0.41
1:A:987:G:C5	1:A:988:G:C8	3.07	0.41
1:A:998:C:C5	1:A:999:C:C5	3.08	0.41
1:A:1053:G:N1	1:A:1204:A:N6	2.68	0.41
1:A:1062:U:C6	1:A:1062:U:O5'	2.73	0.41
1:A:1168:U:C5	1:A:1169:A:H1'	2.55	0.41
1:A:1170:A:C4	1:A:1171:A:C1'	3.03	0.41
1:A:1191:A:OP2	1:A:1193:G:C2	2.73	0.41
1:A:1198:G:C6	1:A:1199:U:N3	2.88	0.41
1:A:1202:U:C6	1:A:1203:C:C5	3.07	0.41
1:A:1222:G:H3'	1:A:1322:C:H42	1.85	0.41
1:A:1229:A:H2'	1:A:1230:C:H6	1.86	0.41
1:A:1239:A:C2'	1:A:1298:U:H3	2.29	0.41
1:A:1249:C:O4'	9:I:37:TYR:HA	2.20	0.41
1:A:1260:G:C8	1:A:1260:G:H5"	2.56	0.41
1:A:1296:C:H5"	13:M:12:LYS:HA	2.01	0.41
1:A:1305:G:N2	1:A:1332:A:OP2	2.53	0.41
1:A:1332:A:H1'	13:M:107:THR:HG23	2.02	0.41
1:A:1355:G:N2	1:A:1367:C:N3	2.66	0.41
1:A:1371:G:H4'	9:I:70:GLY:H	1.85	0.41
1:A:1374:A:C2	1:A:1375:A:N9	2.88	0.41
1:A:1399:C:C2	1:A:1502:A:C2	3.07	0.41
1:A:1416:G:N1	1:A:1417:G:H1'	2.35	0.41
1:A:1472:U:C2'	1:A:1473:G:H8	2.31	0.41
1:A:1513:A:H1'	1:A:1523:G:N1	2.35	0.41
1:A:1514:G:H1	1:A:1521:C:N4	2.17	0.41
2:B:107:ARG:HH22	2:B:110:ILE:HD11	1.84	0.41
3:C:180:ASP:HB3	3:C:203:LYS:HZ1	1.85	0.41
4:D:74:TYR:CD2	4:D:93:LEU:HD23	2.55	0.41
5:E:45:VAL:HG22	5:E:73:VAL:HG22	2.03	0.41
5:E:153:ALA:HA	5:E:156:ARG:CZ	2.50	0.41
6:F:71:ILE:HD11	6:F:89:VAL:CG2	2.51	0.41
7:G:1:PRO:O	7:G:5:VAL:HG13	2.20	0.41
7:G:52:ARG:HH12	7:G:120:ALA:HB1	1.85	0.41
8:H:66:GLN:C	8:H:68:LYS:H	2.28	0.41
9:I:37:TYR:CD1	9:I:37:TYR:N	2.86	0.41
15:O:7:THR:CA	15:O:30:LEU:HD21	2.48	0.41
20:T:7:LYS:HD3	20:T:10:ALA:CB	2.50	0.41
20:T:46:ALA:HB1	20:T:82:ILE:HG22	2.01	0.41
20:T:57:VAL:HG23	20:T:58:ASP:N	2.35	0.41
1:A:20:U:C4	1:A:21:G:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:32:A:H5”	1:A:398:U:C1’	2.51	0.41
1:A:36:C:O4’	12:L:114:SER:HA	2.20	0.41
1:A:41:G:C6	1:A:402:G:C6	3.08	0.41
1:A:46:G:H2’	1:A:366:A:N7	2.35	0.41
1:A:116:A:O5’	1:A:116:A:H8	2.03	0.41
1:A:128:G:O2’	17:Q:62:GLU:HG3	2.21	0.41
1:A:146:G:N1	1:A:177:G:C4	2.89	0.41
1:A:147:G:N2	1:A:176:C:C6	2.89	0.41
1:A:169:C:C5	1:A:170:U:C4	3.08	0.41
1:A:177:G:H5”	20:T:63:LYS:HD3	2.02	0.41
1:A:341:C:H42	1:A:348:G:H1	1.69	0.41
1:A:342:C:C2	1:A:348:G:C2	3.08	0.41
1:A:380:G:H1’	1:A:384:G:N2	2.35	0.41
1:A:384:G:N1	1:A:385:C:C2	2.89	0.41
1:A:414:A:C2	1:A:415:A:C4	3.09	0.41
1:A:462:G:C6	1:A:468:A:OP2	2.73	0.41
1:A:496:A:N3	1:A:496:A:H5”	2.34	0.41
1:A:527:G:N2	1:A:528:C:C2	2.89	0.41
1:A:560:A:H4’	1:A:561:U:H3’	2.02	0.41
1:A:688:G:C5	1:A:700:G:N1	2.88	0.41
1:A:718:A:H2’	1:A:719:C:C6	2.55	0.41
1:A:724:G:OP1	1:A:833:G:H1’	2.19	0.41
1:A:780:A:H2’	1:A:800:G:H1	1.84	0.41
1:A:815:A:N6	1:A:1508:A:H2	2.18	0.41
1:A:822:U:C6	1:A:822:U:O5’	2.73	0.41
1:A:845:A:C3’	1:A:846:G:C8	3.03	0.41
1:A:945:G:N3	1:A:1337:G:H1’	2.35	0.41
1:A:978:A:C5	1:A:1318:A:C6	3.08	0.41
1:A:979:C:H5”	1:A:1221:G:N7	2.35	0.41
1:A:980:C:H2’	1:A:981:U:O4’	2.21	0.41
1:A:992:U:O4	1:A:1045:C:C4	2.73	0.41
1:A:1053:G:C4	1:A:1199:U:N3	2.88	0.41
1:A:1053:G:C6	1:A:1199:U:C2	3.08	0.41
1:A:1061:G:C5	1:A:1197:A:C5	3.08	0.41
1:A:1067:A:H1’	1:A:1068:G:N9	2.34	0.41
1:A:1095:U:P	1:A:1108:G:H1	2.43	0.41
1:A:1130:A:C5	1:A:1146:A:C5	3.08	0.41
1:A:1148:U:C2	9:I:17:ARG:NH1	2.88	0.41
1:A:1184:G:C2	1:A:1185:G:C1’	3.03	0.41
1:A:1185:G:C4	1:A:1186:G:C8	3.08	0.41
1:A:1221:G:C6	1:A:1222:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1231:G:C6	1:A:1232:U:C2	3.09	0.41
1:A:1242:G:H1'	1:A:1303:C:C4'	2.50	0.41
1:A:1249:C:H42	1:A:1287:A:H3'	1.85	0.41
1:A:1252:A:H1'	1:A:1369:C:O2'	2.19	0.41
1:A:1349:A:H1'	1:A:1374:A:C5	2.54	0.41
1:A:1379:G:C8	7:G:5:VAL:HG11	2.55	0.41
1:A:1392:G:C8	1:A:1392:G:O5'	2.73	0.41
1:A:1408:A:N3	1:A:1409:C:C4	2.88	0.41
1:A:1435:G:C5	1:A:1436:U:C4	3.08	0.41
1:A:1441:A:C4	1:A:1442:G:N7	2.89	0.41
1:A:1442:G:H22	1:A:1461:G:H1'	1.84	0.41
1:A:1480:A:C6	1:A:1481:U:C6	3.08	0.41
1:A:1485:U:O5'	1:A:1485:U:H6	2.03	0.41
1:A:1505:G:C8	1:A:1505:G:O5'	2.73	0.41
1:A:1527:U:OP2	21:U:41:THR:CG2	2.68	0.41
1:A:1530:G:C5	1:A:1531:A:C6	3.08	0.41
3:C:63:ILE:CG2	3:C:90:VAL:CG1	2.98	0.41
3:C:122:GLN:HA	3:C:125:ARG:CZ	2.50	0.41
3:C:142:ARG:HG2	3:C:143:LEU:HD22	2.02	0.41
4:D:8:LEU:HG	4:D:27:ILE:HA	2.03	0.41
4:D:18:LEU:HD23	4:D:63:ILE:CG1	2.50	0.41
4:D:18:LEU:HD22	4:D:62:ARG:HB2	2.02	0.41
4:D:77:GLU:HB2	4:D:92:LEU:HD13	2.02	0.41
4:D:79:ALA:CA	4:D:85:THR:HG23	2.49	0.41
4:D:105:GLY:HA3	4:D:158:LEU:HA	2.02	0.41
4:D:136:VAL:HG23	4:D:136:VAL:H	1.51	0.41
5:E:70:MET:HE3	5:E:70:MET:CA	2.49	0.41
6:F:2:ARG:O	6:F:4:TYR:CE2	2.74	0.41
9:I:41:GLU:HB3	9:I:71:ILE:HD12	2.02	0.41
13:M:15:VAL:CG1	13:M:30:LYS:HA	2.50	0.41
14:N:97:LYS:HA	14:N:100:TRP:O	2.20	0.41
17:Q:22:VAL:HG23	17:Q:58:VAL:HG12	2.02	0.41
18:R:32:ILE:CG2	18:R:58:ILE:HD13	2.48	0.41
19:S:35:ARG:HH22	19:S:76:THR:CG2	2.34	0.41
19:S:65:MET:HG3	19:S:73:PHE:CD2	2.56	0.41
22:W:39:PRO:HA	22:W:82:ARG:HG2	2.02	0.41
22:W:163:ASP:OD1	22:W:193:HIS:CE1	2.73	0.41
1:A:33:A:N3	1:A:33:A:H2'	2.34	0.41
1:A:39:G:H1'	1:A:497:G:H21	1.85	0.41
1:A:102:G:N2	1:A:103:U:C2	2.87	0.41
1:A:103:U:N3	1:A:104:G:N7	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:143:A:O4'	1:A:196:A:C2	2.74	0.41
1:A:150:U:C5	1:A:170:U:C4	3.09	0.41
1:A:173:U:H3'	1:A:174:A:C5'	2.50	0.41
1:A:234:C:O2	1:A:235:C:C6	2.73	0.41
1:A:238:A:C5	1:A:239:U:C4	3.08	0.41
1:A:241:G:C6	1:A:242:G:N7	2.88	0.41
1:A:272:C:H3'	1:A:273:U:C6	2.55	0.41
1:A:292:G:C4	1:A:293:G:H1'	2.55	0.41
1:A:301:G:N1	1:A:302:G:C5	2.88	0.41
1:A:373:A:N1	1:A:391:G:C1'	2.83	0.41
1:A:404:G:O6	1:A:405:U:C4	2.74	0.41
1:A:409:U:C6	1:A:409:U:P	3.13	0.41
1:A:430:A:C6	1:A:431:A:N9	2.89	0.41
1:A:447:G:H2'	1:A:487:A:N6	2.35	0.41
1:A:451:A:N7	1:A:480:U:H3'	2.35	0.41
1:A:499:A:C4'	1:A:547:A:H61	2.33	0.41
1:A:531:U:C5	1:A:534:U:H5	2.38	0.41
1:A:545:C:C2'	1:A:549:C:H5"	2.50	0.41
1:A:558:G:C2'	1:A:559:A:C2	3.00	0.41
1:A:559:A:N7	12:L:17:LYS:HG3	2.36	0.41
1:A:572:A:H2'	1:A:573:A:H62	1.86	0.41
1:A:659:U:N3	1:A:660:C:C5	2.88	0.41
1:A:693:G:H2'	1:A:694:A:O4'	2.19	0.41
1:A:695:A:C3'	1:A:696:A:H8	2.33	0.41
1:A:740:U:C5	6:F:2:ARG:NH2	2.89	0.41
1:A:747:A:N1	1:A:748:G:C5	2.89	0.41
1:A:766:A:C1'	1:A:814:A:C6	3.03	0.41
1:A:781:A:C3'	1:A:782:A:C5'	2.98	0.41
1:A:827:U:C4	1:A:870:U:O2	2.73	0.41
1:A:849:G:C8	1:A:849:G:C4'	3.04	0.41
1:A:918:A:C2	1:A:919:A:C8	3.09	0.41
1:A:923:A:H8	1:A:923:A:P	2.44	0.41
1:A:929:G:C2	1:A:930:C:C2	3.08	0.41
1:A:939:G:C5	1:A:940:C:C5	3.09	0.41
1:A:940:C:O2'	1:A:1374:A:C2	2.71	0.41
1:A:941:G:N2	1:A:942:G:C4	2.89	0.41
1:A:941:G:C2	1:A:1343:G:C5	3.08	0.41
1:A:988:G:H4'	1:A:1014:A:H61	1.85	0.41
1:A:1020:G:O6	14:N:19:TYR:HA	2.20	0.41
1:A:1048:G:H2'	1:A:1050:G:C8	2.55	0.41
1:A:1057:G:C5	1:A:1058:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1072:G:C6	1:A:1104:G:N1	2.88	0.41
1:A:1124:G:O2'	1:A:1125:U:C5	2.72	0.41
1:A:1174:G:OP2	1:A:1182:G:C8	2.74	0.41
1:A:1183:U:O2'	2:B:131:LYS:HB3	2.21	0.41
1:A:1185:G:H2'	1:A:1186:G:C8	2.55	0.41
1:A:1221:G:C6	1:A:1222:G:C6	3.08	0.41
1:A:1228:C:H41	13:M:102:LYS:HA	1.85	0.41
1:A:1273:C:N3	1:A:1274:A:C4	2.87	0.41
1:A:1285:A:N6	1:A:1355:G:C5'	2.83	0.41
1:A:1287:A:C8	1:A:1287:A:H3'	2.55	0.41
1:A:1307:U:H2'	1:A:1308:U:O4'	2.20	0.41
1:A:1313:U:C2	1:A:1314:C:C6	3.08	0.41
1:A:1353:G:C4	1:A:1354:U:C6	3.08	0.41
1:A:1413:A:N1	1:A:1488:G:C2	2.88	0.41
1:A:1468:A:C2	1:A:1469:C:N3	2.89	0.41
1:A:1472:U:C6	1:A:1472:U:H3'	2.55	0.41
1:A:1494:G:C1'	22:W:49:GLY:HA2	2.50	0.41
3:C:87:ARG:HG2	3:C:87:ARG:HH11	1.84	0.41
3:C:127:VAL:HA	3:C:131:ARG:CZ	2.51	0.41
3:C:141:MET:SD	3:C:170:GLY:HA3	2.60	0.41
5:E:9:GLU:C	5:E:40:ASP:HA	2.46	0.41
6:F:3:HIS:HA	6:F:65:GLU:HG3	2.01	0.41
10:J:28:THR:O	10:J:28:THR:HG22	2.19	0.41
11:K:12:ARG:HD3	11:K:39:ASN:HD22	1.85	0.41
13:M:9:PRO:CB	13:M:18:LEU:HD11	2.51	0.41
13:M:58:GLU:HA	13:M:61:LYS:HD2	2.01	0.41
15:O:69:LEU:HD12	15:O:80:LEU:HD22	2.02	0.41
16:P:6:LEU:HD12	16:P:17:TYR:HB2	2.02	0.41
17:Q:10:ARG:N	17:Q:22:VAL:HG23	2.35	0.41
17:Q:44:HIS:CD2	17:Q:68:LYS:NZ	2.88	0.41
20:T:5:SER:CA	20:T:7:LYS:H	2.30	0.41
1:A:4:U:O2	1:A:613:C:H1'	2.21	0.41
1:A:33:A:C2	1:A:34:C:N1	2.88	0.41
1:A:35:G:OP1	12:L:101:LEU:HD12	2.21	0.41
1:A:39:G:H1	1:A:404:G:H1'	1.84	0.41
1:A:100:G:C5	1:A:101:A:N7	2.88	0.41
1:A:104:G:C8	1:A:104:G:H3'	2.56	0.41
1:A:119:A:N6	1:A:240:G:N9	2.68	0.41
1:A:123:U:H5'	1:A:290:C:H1'	2.01	0.41
1:A:202:G:O6	1:A:212:G:C8	2.74	0.41
1:A:240:G:C4	1:A:241:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:241:G:N1	1:A:242:G:C4	2.88	0.41
1:A:253:A:C2	1:A:275:G:C2'	3.03	0.41
1:A:254:G:N2	1:A:273:U:C2	2.88	0.41
1:A:263:A:C6	1:A:264:C:C4	3.08	0.41
1:A:270:A:H2'	1:A:271:C:H6	1.84	0.41
1:A:303:A:C2	1:A:304:U:C1'	3.03	0.41
1:A:310:G:C5	1:A:311:C:C5	3.09	0.41
1:A:314:C:C6	1:A:314:C:O5'	2.74	0.41
1:A:342:C:H2'	1:A:342:C:O2	2.19	0.41
1:A:356:A:H4'	1:A:367:U:C6	2.54	0.41
1:A:362:G:C2	1:A:364:A:C8	3.08	0.41
1:A:371:A:C2	1:A:390:U:O2	2.74	0.41
1:A:373:A:H2'	1:A:374:A:C8	2.56	0.41
1:A:402:G:N2	1:A:403:C:C2	2.89	0.41
1:A:408:A:N3	1:A:408:A:H2'	2.35	0.41
1:A:439:U:H3'	1:A:440:C:C6	2.56	0.41
1:A:470:C:C6	1:A:470:C:C3'	3.00	0.41
1:A:512:U:H3'	1:A:534:U:H5'	2.01	0.41
1:A:530:G:C3'	1:A:531:U:H5'	2.50	0.41
1:A:537:G:C5	1:A:538:G:N7	2.89	0.41
1:A:559:A:C5'	1:A:560:A:H3'	2.51	0.41
1:A:627:G:N1	1:A:628:G:C6	2.88	0.41
1:A:640:A:C8	1:A:640:A:P	3.13	0.41
1:A:666:G:N2	1:A:667:G:C4	2.88	0.41
1:A:701:U:C5'	1:A:703:G:H5'	2.50	0.41
1:A:710:G:C6	1:A:711:G:N7	2.87	0.41
1:A:717:U:H1'	11:K:117:HIS:CB	2.48	0.41
1:A:796:C:C5	1:A:797:C:H5	2.38	0.41
1:A:804:U:H3'	1:A:805:C:C5	2.55	0.41
1:A:810:C:O3'	1:A:898:G:H4'	2.20	0.41
1:A:830:G:C5'	2:B:24:PRO:HA	2.50	0.41
1:A:832:G:C5	1:A:855:U:C4	3.08	0.41
1:A:836:G:C2	1:A:851:G:C4	3.09	0.41
1:A:843:U:H2'	1:A:847:G:H1'	2.01	0.41
1:A:845:A:C3'	1:A:846:G:H8	2.33	0.41
1:A:856:C:C4	1:A:857:C:C5	3.09	0.41
1:A:856:C:C6	1:A:871:U:O4	2.73	0.41
1:A:866:C:C4	1:A:873:A:H2	2.38	0.41
1:A:880:C:C6	12:L:5:GLN:OE1	2.73	0.41
1:A:888:G:H3'	1:A:889:A:C8	2.55	0.41
1:A:1002:G:C6	1:A:1003:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1019:A:N7	14:N:19:TYR:CZ	2.89	0.41
1:A:1048:G:H5'	14:N:3:GLN:CB	2.50	0.41
1:A:1062:U:O2	1:A:1195:C:C4	2.73	0.41
1:A:1084:G:C6	1:A:1085:U:C4	3.09	0.41
1:A:1086:U:H5'	1:A:1087:G:C8	2.54	0.41
1:A:1124:G:C5	1:A:1145:A:C2	3.08	0.41
1:A:1125:U:H3'	1:A:1127:G:C5	2.55	0.41
1:A:1133:G:H1	1:A:1141:C:H42	1.67	0.41
1:A:1147:C:C5	1:A:1147:C:OP2	2.73	0.41
1:A:1152:A:H2'	1:A:1153:G:O4'	2.21	0.41
1:A:1155:A:C2	1:A:1156:G:H1'	2.55	0.41
1:A:1177:G:H3'	1:A:1178:G:H8	1.84	0.41
1:A:1187:G:N3	1:A:1187:G:C2'	2.83	0.41
1:A:1194:U:N1	1:A:1195:C:C5	2.89	0.41
1:A:1228:C:C6	1:A:1228:C:C4'	3.02	0.41
1:A:1236:A:C5'	1:A:1236:A:H8	2.32	0.41
1:A:1261:A:C4	1:A:1275:A:C4	3.09	0.41
1:A:1264:U:O5'	1:A:1264:U:H6	2.04	0.41
1:A:1272:G:N1	1:A:1273:C:C2	2.89	0.41
1:A:1315:U:C2	1:A:1316:G:C5	3.08	0.41
1:A:1346:A:C2	7:G:10:LYS:O	2.74	0.41
1:A:1358:U:C6	14:N:74:ARG:NH1	2.89	0.41
1:A:1382:C:C6	1:A:1382:C:H3'	2.56	0.41
1:A:1421:G:C2	1:A:1480:A:N1	2.89	0.41
1:A:1425:U:H2'	1:A:1426:G:C8	2.56	0.41
1:A:1441:A:C8	1:A:1441:A:C4'	3.03	0.41
2:B:92:ASN:ND2	2:B:92:ASN:H	2.18	0.41
2:B:186:VAL:CG2	2:B:198:VAL:HG23	2.51	0.41
3:C:110:LEU:CD2	3:C:145:ALA:HA	2.51	0.41
5:E:48:GLY:HA3	5:E:65:LYS:C	2.46	0.41
5:E:83:PRO:N	5:E:97:PRO:HD3	2.35	0.41
6:F:10:VAL:O	6:F:57:ALA:HB1	2.21	0.41
6:F:21:MET:HB3	6:F:25:TYR:CE2	2.55	0.41
7:G:30:MET:HB3	7:G:30:MET:HE2	1.88	0.41
10:J:35:GLN:HB2	10:J:77:VAL:HB	2.02	0.41
13:M:32:ILE:HD13	13:M:58:GLU:CD	2.45	0.41
20:T:29:THR:HA	20:T:32:LYS:HG2	2.02	0.41
20:T:38:ILE:HD11	20:T:78:LEU:HD12	2.02	0.41
1:A:8:A:H5"	5:E:110:MET:SD	2.61	0.41
1:A:57:G:C3'	1:A:58:C:H6	2.32	0.41
1:A:61:G:C2	1:A:107:G:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:66:A:H2'	1:A:66:A:N3	2.36	0.41
1:A:69:G:C2	1:A:70:U:N1	2.88	0.41
1:A:70:U:H3'	1:A:94:G:C8	2.56	0.41
1:A:102:G:C2	1:A:103:U:N1	2.89	0.41
1:A:103:U:C1'	1:A:151:A:H2	2.31	0.41
1:A:116:A:C8	1:A:116:A:P	3.14	0.41
1:A:134:G:OP2	1:A:135:C:C5	2.74	0.41
1:A:146:G:C6	1:A:147:G:N7	2.89	0.41
1:A:158:G:C8	1:A:164:G:C2	3.08	0.41
1:A:184:G:N1	1:A:185:U:C2	2.89	0.41
1:A:203:G:C2	1:A:214:C:N3	2.88	0.41
1:A:226:G:N1	1:A:227:G:C5	2.88	0.41
1:A:241:G:N1	1:A:286:C:C2	2.89	0.41
1:A:256:U:O5'	1:A:256:U:H6	2.03	0.41
1:A:262:A:C2	1:A:263:A:C8	3.09	0.41
1:A:287:U:O2	1:A:288:A:C8	2.73	0.41
1:A:336:A:H3'	1:A:337:G:H8	1.86	0.41
1:A:358:U:C6	1:A:358:U:O5'	2.74	0.41
1:A:377:G:H4'	16:P:25:ARG:C	2.45	0.41
1:A:404:G:OP1	4:D:2:ARG:HG2	2.20	0.41
1:A:424:G:C5	1:A:425:G:N7	2.89	0.41
1:A:453:G:C2	1:A:480:U:C2	3.09	0.41
1:A:468:A:C8	1:A:469:C:C5	3.08	0.41
1:A:515:G:O6	1:A:537:G:C6	2.74	0.41
1:A:563:A:N3	1:A:567:G:C5	2.89	0.41
1:A:570:G:C2	1:A:873:A:N1	2.88	0.41
1:A:596:A:N6	1:A:645:G:C6	2.88	0.41
1:A:622:A:C8	1:A:622:A:O5'	2.73	0.41
1:A:622:A:H3'	1:A:623:C:C5	2.55	0.41
1:A:642:A:H2'	1:A:643:C:O4'	2.20	0.41
1:A:665:A:C5	1:A:725:G:N1	2.88	0.41
1:A:669:G:C5	1:A:670:G:C8	3.09	0.41
1:A:673:A:O2'	18:R:63:TYR:CG	2.73	0.41
1:A:727:G:H5'	1:A:741:G:H21	1.86	0.41
1:A:738:C:OP1	6:F:2:ARG:HD2	2.20	0.41
1:A:751:U:O4	1:A:752:G:N2	2.54	0.41
1:A:782:A:N7	1:A:783:C:C4	2.88	0.41
1:A:822:U:H3	1:A:878:A:H61	1.68	0.41
1:A:829:G:N1	1:A:858:G:H1'	2.36	0.41
1:A:836:G:N1	1:A:851:G:C6	2.89	0.41
1:A:895:G:N2	1:A:905:U:H1'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:899:C:H2'	1:A:900:A:O4'	2.21	0.41
1:A:915:A:C8	1:A:915:A:C3'	3.03	0.41
1:A:1005:A:N7	1:A:1025:U:H1'	2.35	0.41
1:A:1008:U:O4	1:A:1022:A:C6	2.73	0.41
1:A:1010:U:H5	14:N:20:PHE:HA	1.85	0.41
1:A:1049:U:C5	14:N:1:ALA:HB1	2.55	0.41
1:A:1049:U:C5	1:A:1202:U:O3'	2.74	0.41
1:A:1084:G:H5"	1:A:1099:G:N2	2.36	0.41
1:A:1088:G:C4	1:A:1089:G:C8	3.09	0.41
1:A:1089:G:O6	1:A:1090:U:C4	2.74	0.41
1:A:1093:A:C8	1:A:1093:A:C3'	3.03	0.41
1:A:1114:C:O2	1:A:1114:C:H2'	2.21	0.41
1:A:1127:G:N3	1:A:1127:G:H2'	2.35	0.41
1:A:1218:C:C2	1:A:1219:A:C8	3.09	0.41
1:A:1234:C:H4'	1:A:1364:U:C6	2.55	0.41
1:A:1239:A:C2'	1:A:1298:U:C4	2.99	0.41
1:A:1250:A:H4'	9:I:69:GLY:O	2.20	0.41
1:A:1283:U:H6	1:A:1283:U:P	2.43	0.41
1:A:1288:A:N1	1:A:1289:A:C6	2.88	0.41
1:A:1303:C:P	1:A:1304:G:N7	2.93	0.41
1:A:1356:G:C6	1:A:1357:A:N6	2.89	0.41
1:A:1376:U:H3'	7:G:8:GLN:HE22	1.85	0.41
1:A:1391:U:C6	1:A:1391:U:H3'	2.56	0.41
1:A:1424:U:C4	1:A:1425:U:C4	3.08	0.41
1:A:1441:A:C8	1:A:1442:G:N7	2.88	0.41
1:A:1516:G:C2	1:A:1518:A:P	3.14	0.41
1:A:1531:A:H2'	1:A:1532:U:H5	1.77	0.41
2:B:22:TRP:C	2:B:30:ILE:HG12	2.45	0.41
3:C:22:PHE:CD2	10:J:12:ALA:HA	2.56	0.41
3:C:86:LEU:O	3:C:90:VAL:HB	2.21	0.41
5:E:17:VAL:CG1	5:E:59:ILE:HG23	2.50	0.41
5:E:38:VAL:HG13	5:E:66:ALA:CB	2.51	0.41
5:E:45:VAL:HG11	5:E:113:VAL:O	2.20	0.41
5:E:155:LYS:HB3	8:H:44:PHE:CZ	2.56	0.41
6:F:25:TYR:N	6:F:25:TYR:CD1	2.88	0.41
8:H:103:VAL:HA	8:H:123:GLU:O	2.21	0.41
9:I:6:TYR:HH	9:I:17:ARG:HA	1.86	0.41
9:I:71:ILE:HD12	9:I:71:ILE:HG23	1.82	0.41
10:J:21:ALA:HA	10:J:24:GLU:CD	2.45	0.41
11:K:25:SER:N	11:K:29:THR:HA	2.36	0.41
11:K:27:ASN:O	11:K:56:LYS:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:15:VAL:HG12	13:M:33:LEU:CB	2.51	0.41
14:N:33:VAL:O	14:N:36:SER:N	2.54	0.41
14:N:61:ASN:HB3	14:N:72:PHE:CG	2.55	0.41
19:S:16:LYS:HA	19:S:19:GLU:CD	2.46	0.41
1:A:12:U:C5'	1:A:526:C:H4'	2.51	0.41
1:A:17:U:H1'	1:A:1080:A:N3	2.35	0.41
1:A:80:A:OP2	1:A:81:A:N7	2.54	0.41
1:A:97:G:OP2	1:A:98:A:N7	2.54	0.41
1:A:109:A:C6	1:A:326:G:C5	3.08	0.41
1:A:122:G:C6	1:A:122:G:OP2	2.73	0.41
1:A:129:A:C2	1:A:130:A:H2	2.38	0.41
1:A:129:A:H4'	17:Q:64:ARG:CA	2.50	0.41
1:A:141:G:C2	1:A:223:A:C4	3.08	0.41
1:A:180:U:C4	1:A:195:A:OP2	2.73	0.41
1:A:243:A:H1'	1:A:246:A:OP2	2.20	0.41
1:A:246:A:C6	1:A:282:A:C8	3.09	0.41
1:A:246:A:H4'	1:A:247:G:OP1	2.21	0.41
1:A:250:A:N6	1:A:274:A:C2	2.89	0.41
1:A:253:A:O2'	1:A:276:G:C5'	2.68	0.41
1:A:285:C:C6	1:A:285:C:H3'	2.55	0.41
1:A:419:C:C5'	4:D:40:HIS:CE1	3.02	0.41
1:A:439:U:C5	4:D:119:HIS:CD2	3.08	0.41
1:A:449:G:OP1	1:A:451:A:C2'	2.68	0.41
1:A:453:G:C5	1:A:480:U:C4	3.07	0.41
1:A:466:A:H5'	1:A:467:U:OP1	2.21	0.41
1:A:486:U:H5'	1:A:487:A:OP2	2.21	0.41
1:A:530:G:P	1:A:531:U:C2	3.13	0.41
1:A:553:A:H2'	1:A:554:A:H5'	2.02	0.41
1:A:590:U:N3	1:A:591:U:C4	2.89	0.41
1:A:613:C:C6	1:A:613:C:OP2	2.73	0.41
1:A:619:U:C4	1:A:621:A:N6	2.80	0.41
1:A:694:A:N6	1:A:695:A:C5	2.88	0.41
1:A:707:U:C4'	11:K:32:THR:HB	2.50	0.41
1:A:727:G:H5'	1:A:741:G:N2	2.36	0.41
1:A:737:C:H4'	6:F:71:ILE:HG13	2.03	0.41
1:A:747:A:N1	1:A:748:G:C6	2.89	0.41
1:A:770:C:C2	1:A:771:G:C8	3.08	0.41
1:A:770:C:OP2	1:A:803:G:H5'	2.20	0.41
1:A:788:U:H2'	1:A:789:U:O4'	2.21	0.41
1:A:803:G:C6	1:A:804:U:N3	2.88	0.41
1:A:822:U:H2'	1:A:823:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:832:G:C8	1:A:832:G:C4'	3.02	0.41
1:A:836:G:H3'	1:A:837:U:H6	1.86	0.41
1:A:865:A:N3	1:A:918:A:C4'	2.84	0.41
1:A:905:U:H2'	1:A:906:A:N9	2.35	0.41
1:A:905:U:C2'	1:A:906:A:C8	3.03	0.41
1:A:931:C:C5	1:A:932:C:C5	3.09	0.41
1:A:933:G:C2	1:A:935:A:C1'	3.04	0.41
1:A:937:A:O2'	7:G:77:ARG:HA	2.21	0.41
1:A:955:U:H2'	1:A:956:U:O4'	2.20	0.41
1:A:1009:U:H2'	1:A:1010:U:H6	1.86	0.41
1:A:1020:G:C3'	1:A:1021:A:H8	2.31	0.41
1:A:1034:G:H2'	1:A:1035:A:O4'	2.20	0.41
1:A:1056:U:C2'	1:A:1057:G:H5'	2.50	0.41
1:A:1089:G:H2'	1:A:1089:G:N3	2.35	0.41
1:A:1128:C:H4'	1:A:1148:U:C2	2.56	0.41
1:A:1129:C:H5'	9:I:17:ARG:NH1	2.36	0.41
1:A:1145:A:O2'	1:A:1146:A:C8	2.65	0.41
1:A:1174:G:OP1	1:A:1182:G:H8	2.03	0.41
1:A:1215:G:C5	1:A:1216:A:N9	2.89	0.41
1:A:1256:A:C2	1:A:1278:G:N2	2.88	0.41
1:A:1261:A:N7	1:A:1262:C:H1'	2.36	0.41
1:A:1314:C:N3	1:A:1315:U:C4	2.89	0.41
1:A:1335:U:H5"	1:A:1337:G:N2	2.34	0.41
1:A:1385:G:C2	1:A:1386:G:H1'	2.55	0.41
1:A:1476:A:C6	1:A:1477:U:N3	2.88	0.41
1:A:1483:A:C5	1:A:1484:C:C1'	3.01	0.41
1:A:1492:A:C6	1:A:1494:G:N7	2.89	0.41
1:A:1525:G:C2	1:A:1526:G:N9	2.89	0.41
2:B:64:GLY:H	2:B:224:ARG:HH12	1.69	0.41
2:B:185:ILE:HG23	2:B:199:ILE:CG2	2.46	0.41
3:C:23:ALA:O	10:J:13:PHE:CZ	2.74	0.41
5:E:108:GLY:C	5:E:110:MET:H	2.27	0.41
8:H:38:VAL:HB	8:H:102:VAL:CG1	2.51	0.41
8:H:38:VAL:HG21	8:H:102:VAL:HB	2.03	0.41
9:I:6:TYR:OH	9:I:8:THR:HA	2.20	0.41
10:J:66:GLU:HG3	14:N:96:LYS:HB3	2.01	0.41
11:K:21:HIS:CD2	11:K:84:MET:HB2	2.56	0.41
13:M:5:GLY:HA3	13:M:24:VAL:CG2	2.51	0.41
14:N:48:GLN:C	14:N:50:LEU:H	2.29	0.41
14:N:63:CYS:HA	14:N:72:PHE:CE2	2.56	0.41
15:O:66:LEU:HD13	15:O:87:ARG:CZ	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:79:ASN:HA	16:P:82:ALA:HB3	2.01	0.41
17:Q:46:HIS:O	17:Q:74:LEU:HD22	2.21	0.41
18:R:30:ASN:C	18:R:31:TYR:CD1	2.99	0.41
18:R:31:TYR:O	18:R:38:ILE:HA	2.21	0.41
19:S:67:GLY:H	19:S:68:HIS:CD2	2.39	0.41
20:T:42:ASP:O	20:T:46:ALA:CB	2.69	0.41
22:W:74:VAL:HG21	22:W:120:ALA:HA	2.02	0.41
1:A:24:U:H2'	1:A:25:C:C6	2.55	0.41
1:A:45:G:C2	1:A:398:U:N3	2.88	0.41
1:A:68:G:N3	1:A:152:A:C2	2.89	0.41
1:A:73:C:H2'	1:A:74:A:C5'	2.51	0.41
1:A:115:G:H21	1:A:289:G:H1'	1.86	0.41
1:A:138:G:N2	1:A:139:A:N9	2.69	0.41
1:A:187:G:C8	1:A:189:A:OP2	2.74	0.41
1:A:207:C:H2'	1:A:208:U:C6	2.55	0.41
1:A:240:G:C6	1:A:287:U:N3	2.88	0.41
1:A:253:A:O2'	1:A:276:G:H5"	2.20	0.41
1:A:287:U:H2'	1:A:288:A:H8	1.85	0.41
1:A:321:A:N1	1:A:322:C:H1'	2.36	0.41
1:A:349:A:N1	1:A:350:G:C6	2.89	0.41
1:A:380:G:N1	1:A:383:A:OP2	2.51	0.41
1:A:382:A:C5	1:A:383:A:N7	2.88	0.41
1:A:401:C:H2'	1:A:402:G:O4'	2.20	0.41
1:A:405:U:O4	1:A:546:A:C8	2.74	0.41
1:A:419:C:C2	1:A:420:U:C6	3.08	0.41
1:A:424:G:N2	1:A:425:G:H1'	2.36	0.41
1:A:428:G:O5'	4:D:9:LYS:HB2	2.21	0.41
1:A:444:G:N1	1:A:491:G:C5	2.89	0.41
1:A:453:G:N1	1:A:480:U:C5	2.89	0.41
1:A:455:G:N3	1:A:455:G:H2'	2.35	0.41
1:A:476:U:C2	1:A:477:C:C5	3.09	0.41
1:A:509:A:C2'	1:A:543:U:O2'	2.69	0.41
1:A:536:C:N4	1:A:537:G:O6	2.54	0.41
1:A:545:C:C2	4:D:3:TYR:OH	2.74	0.41
1:A:582:C:OP2	1:A:758:C:N3	2.54	0.41
1:A:607:A:H3'	1:A:608:A:H8	1.86	0.41
1:A:616:G:O2'	1:A:617:G:C5'	2.68	0.41
1:A:635:A:C6	1:A:636:U:N3	2.89	0.41
1:A:646:G:C8	1:A:646:G:H3'	2.56	0.41
1:A:646:G:H3'	1:A:647:C:H6	1.85	0.41
1:A:699:C:C5	1:A:699:C:OP2	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:706:A:C6	1:A:707:U:N3	2.88	0.41
1:A:750:C:O2	1:A:751:U:C6	2.74	0.41
1:A:812:G:H5"	1:A:903:G:C2'	2.49	0.41
1:A:838:G:N2	1:A:839:C:C2	2.88	0.41
1:A:858:G:N1	1:A:859:G:OP2	2.54	0.41
1:A:879:C:C2	1:A:880:C:C5	3.08	0.41
1:A:892:A:N6	1:A:893:C:C4	2.89	0.41
1:A:903:G:C2	1:A:904:U:C1'	3.03	0.41
1:A:932:C:H3'	7:G:2:ARG:HD3	2.02	0.41
1:A:947:G:C1'	1:A:1333:A:N3	2.84	0.41
1:A:949:A:C8	1:A:949:A:O5'	2.73	0.41
1:A:987:G:C8	1:A:987:G:H3'	2.55	0.41
1:A:994:A:N9	1:A:1216:A:H4'	2.36	0.41
1:A:1000:A:H3'	1:A:1001:C:H6	1.86	0.41
1:A:1114:C:O2	1:A:1114:C:C2'	2.68	0.41
1:A:1116:U:C2	1:A:1117:A:N7	2.89	0.41
1:A:1118:U:O4'	1:A:1179:A:H1'	2.21	0.41
1:A:1157:A:C8	1:A:1180:A:N1	2.89	0.41
1:A:1157:A:O3'	1:A:1184:G:C8	2.73	0.41
1:A:1161:C:O2	1:A:1176:A:N1	2.54	0.41
1:A:1205:U:H2'	1:A:1206:G:N7	2.35	0.41
1:A:1210:C:O2	1:A:1213:A:H1'	2.21	0.41
1:A:1212:U:C5'	1:A:1213:A:N7	2.84	0.41
1:A:1215:G:C2	1:A:1216:A:H1'	2.55	0.41
1:A:1240:U:C6	1:A:1240:U:OP1	2.74	0.41
1:A:1241:G:N2	1:A:1242:G:C5	2.88	0.41
1:A:1246:A:C2	1:A:1292:G:C5	3.08	0.41
1:A:1305:G:H5"	1:A:1305:G:H8	1.86	0.41
1:A:1338:G:N7	1:A:1339:A:C4	2.88	0.41
1:A:1352:C:C2	1:A:1353:G:C8	3.08	0.41
1:A:1439:G:C5	1:A:1440:U:N1	2.88	0.41
1:A:1450:U:H1'	1:A:1454:G:N1	2.36	0.41
1:A:1503:A:C1'	1:A:1531:A:H4'	2.50	0.41
1:A:1515:G:C2	1:A:1521:C:H1'	2.56	0.41
3:C:58:ARG:HB3	3:C:61:LYS:HA	2.02	0.41
3:C:59:PRO:HG2	3:C:99:GLN:NE2	2.36	0.41
4:D:102:TYR:CE2	4:D:110:ARG:CZ	3.04	0.41
6:F:67:PRO:C	6:F:69:GLU:N	2.77	0.41
11:K:41:LEU:HD13	11:K:76:TYR:HB2	2.03	0.41
13:M:5:GLY:C	13:M:21:ILE:CG2	2.94	0.41
19:S:65:MET:HE1	19:S:68:HIS:NE2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:57:VAL:O	20:T:61:ALA:CB	2.69	0.41
22:W:145:LEU:HD22	22:W:185:TYR:CD2	2.56	0.41
22:W:151:LEU:HB2	22:W:153:ILE:HG22	2.01	0.41
1:A:15:G:C6	1:A:1396:A:C2	3.08	0.41
1:A:18:C:H5"	5:E:133:ILE:HG21	2.02	0.41
1:A:77:A:N6	1:A:90:C:C5	2.88	0.41
1:A:78:A:C6	1:A:79:G:C6	3.08	0.41
1:A:95:C:C4	1:A:96:U:H5	2.38	0.41
1:A:99:C:O2	1:A:99:C:H2'	2.20	0.41
1:A:113:G:H2'	1:A:114:U:H6	1.86	0.41
1:A:115:G:N1	1:A:289:G:C6	2.89	0.41
1:A:119:A:N6	1:A:288:A:C4	2.89	0.41
1:A:133:U:C2	1:A:230:G:C2	3.09	0.41
1:A:138:G:C2	1:A:226:G:C5	3.09	0.41
1:A:138:G:C2'	1:A:139:A:H5'	2.51	0.41
1:A:149:A:C6	1:A:174:A:N1	2.89	0.41
1:A:161:A:C8	1:A:161:A:OP2	2.74	0.41
1:A:162:A:H3'	1:A:163:C:O4'	2.20	0.41
1:A:186:C:OP2	1:A:187:G:N7	2.54	0.41
1:A:187:G:C4	1:A:189:A:P	3.13	0.41
1:A:215:C:N4	1:A:216:U:N3	2.69	0.41
1:A:218:U:C2'	1:A:219:U:C6	3.04	0.41
1:A:255:G:H2'	1:A:256:U:O4'	2.21	0.41
1:A:287:U:C6	1:A:287:U:H3'	2.56	0.41
1:A:318:G:N1	1:A:319:G:C5	2.89	0.41
1:A:318:G:C6	1:A:336:A:C6	3.09	0.41
1:A:319:G:C6	1:A:320:A:C5	3.09	0.41
1:A:321:A:N6	1:A:328:C:H1'	2.36	0.41
1:A:322:C:N3	1:A:323:U:O4	2.54	0.41
1:A:336:A:C6	1:A:337:G:C4	3.09	0.41
1:A:344:A:C2	1:A:344:A:OP1	2.74	0.41
1:A:344:A:OP2	1:A:345:C:C5	2.73	0.41
1:A:396:C:H2'	1:A:396:C:O2	2.21	0.41
1:A:404:G:N7	4:D:1:ALA:CA	2.84	0.41
1:A:451:A:OP1	1:A:481:G:N1	2.54	0.41
1:A:455:G:C8	1:A:455:G:P	3.13	0.41
1:A:455:G:H22	1:A:478:A:C2'	2.33	0.41
1:A:472:U:O2	1:A:472:U:H2'	2.21	0.41
1:A:478:A:N3	1:A:479:U:C5	2.89	0.41
1:A:483:C:C5	1:A:484:G:O2'	2.73	0.41
1:A:508:U:OP1	1:A:508:U:H6	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:518:C:C5'	1:A:519:C:C6	3.03	0.41
1:A:538:G:O5'	1:A:538:G:H8	2.04	0.41
1:A:539:A:O5'	1:A:539:A:H8	2.04	0.41
1:A:558:G:N7	1:A:559:A:H2'	2.36	0.41
1:A:573:A:C8	1:A:573:A:C3'	3.03	0.41
1:A:577:G:C6	1:A:578:C:C5	3.09	0.41
1:A:584:G:H2'	1:A:585:G:O4'	2.21	0.41
1:A:594:U:C6	1:A:646:G:N2	2.89	0.41
1:A:597:G:C5	1:A:598:U:C6	3.09	0.41
1:A:602:A:H61	1:A:635:A:N6	2.18	0.41
1:A:603:U:H2'	1:A:604:G:O4'	2.21	0.41
1:A:608:A:C2'	1:A:609:A:H5'	2.51	0.41
1:A:618:C:N4	1:A:621:A:OP2	2.54	0.41
1:A:631:C:H4'	1:A:632:U:O4'	2.21	0.41
1:A:634:C:C6	1:A:634:C:O5'	2.73	0.41
1:A:639:G:N1	1:A:640:A:C5	2.89	0.41
1:A:641:U:C6	1:A:641:U:H3'	2.56	0.41
1:A:646:G:C6	1:A:647:C:C4	3.08	0.41
1:A:647:C:H2'	1:A:648:A:H8	1.86	0.41
1:A:654:G:OP2	1:A:655:A:N6	2.54	0.41
1:A:659:U:C4	1:A:660:C:C5	3.09	0.41
1:A:667:G:H2'	15:O:48:ASP:OD1	2.21	0.41
1:A:678:U:C2	1:A:679:C:C5	3.09	0.41
1:A:684:U:C5	1:A:685:G:C6	3.08	0.41
1:A:688:G:C8	1:A:688:G:C5'	2.87	0.41
1:A:696:A:N3	1:A:786:G:H2'	2.36	0.41
1:A:703:G:C2'	1:A:703:G:O5'	2.69	0.41
1:A:727:G:C5'	1:A:741:G:H21	2.34	0.41
1:A:751:U:O4	1:A:752:G:C2	2.74	0.41
1:A:763:G:N1	1:A:764:C:C2	2.89	0.41
1:A:764:C:H5'	15:O:52:ARG:CZ	2.50	0.41
1:A:765:G:C2'	1:A:765:G:N3	2.81	0.41
1:A:771:G:O4'	1:A:899:C:C4	2.74	0.41
1:A:814:A:H2'	1:A:816:A:O5'	2.20	0.41
1:A:832:G:C6	1:A:855:U:C2	3.09	0.41
1:A:880:C:OP2	1:A:880:C:C6	2.74	0.41
1:A:924:C:N3	1:A:925:G:N7	2.69	0.41
1:A:925:G:C6	1:A:1392:G:C6	3.08	0.41
1:A:938:A:H1'	1:A:1377:A:C1'	2.51	0.41
1:A:947:G:H1'	1:A:1333:A:C2	2.56	0.41
1:A:968:A:H4'	1:A:970:C:H1'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:993:G:N3	1:A:1046:A:C2	2.89	0.41
1:A:1007:U:C5	1:A:1007:U:OP2	2.73	0.41
1:A:1007:U:C2'	1:A:1008:U:H5"	2.51	0.41
1:A:1034:G:C5	1:A:1035:A:C4	3.09	0.41
1:A:1055:A:N1	1:A:1206:G:C8	2.88	0.41
1:A:1058:G:OP2	1:A:1059:C:H5	2.04	0.41
1:A:1067:A:C8	1:A:1067:A:OP2	2.74	0.41
1:A:1067:A:H5"	1:A:1093:A:C5'	2.51	0.41
1:A:1075:U:C6	1:A:1075:U:H3'	2.56	0.41
1:A:1082:A:C2	1:A:1083:U:C2	3.08	0.41
1:A:1086:U:H5'	1:A:1087:G:OP2	2.21	0.41
1:A:1089:G:H1'	1:A:1167:A:N7	2.36	0.41
1:A:1114:C:O3'	14:N:100:TRP:CH2	2.74	0.41
1:A:1121:U:C6	1:A:1121:U:H3'	2.56	0.41
1:A:1131:G:N1	1:A:1132:C:C4	2.89	0.41
1:A:1142:G:C5	1:A:1143:G:C4	3.08	0.41
1:A:1146:A:C8	1:A:1146:A:O5'	2.74	0.41
1:A:1161:C:N4	1:A:1175:G:O6	2.54	0.41
1:A:1162:C:N3	1:A:1175:G:C5	2.89	0.41
1:A:1192:C:H5'	3:C:174:LEU:HD21	2.03	0.41
1:A:1207:G:C4	1:A:1208:C:C6	3.09	0.41
1:A:1210:C:H2'	1:A:1213:A:C1'	2.51	0.41
1:A:1213:A:H2'	1:A:1215:G:N7	2.36	0.41
1:A:1228:C:C6	1:A:1228:C:H3'	2.55	0.41
1:A:1238:A:C6	1:A:1303:C:O4'	2.74	0.41
1:A:1256:A:O3'	1:A:1258:G:C8	2.74	0.41
1:A:1262:C:C6	1:A:1262:C:O5'	2.74	0.41
1:A:1281:C:H3'	1:A:1281:C:H6	1.86	0.41
1:A:1301:U:C4	1:A:1303:C:N3	2.88	0.41
1:A:1301:U:O2'	1:A:1303:C:H5'	2.21	0.41
1:A:1306:A:N3	1:A:1332:A:C4	2.89	0.41
1:A:1312:G:OP2	19:S:3:SER:HA	2.21	0.41
1:A:1333:A:C8	1:A:1334:G:C8	3.09	0.41
1:A:1333:A:N7	1:A:1334:G:C5	2.89	0.41
1:A:1334:G:H8	1:A:1334:G:O5'	2.04	0.41
1:A:1380:U:C2'	7:G:2:ARG:HG2	2.50	0.41
1:A:1406:U:H3'	1:A:1407:C:C6	2.56	0.41
1:A:1407:C:C5	1:A:1407:C:OP2	2.73	0.41
1:A:1433:A:C1'	1:A:1468:A:C2	3.04	0.41
1:A:1456:A:H3'	1:A:1457:G:H8	1.86	0.41
1:A:1459:G:C6	1:A:1460:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1470:U:C6	1:A:1470:U:H3'	2.56	0.41
1:A:1471:U:C4	1:A:1472:U:C5	3.08	0.41
1:A:1480:A:N6	1:A:1481:U:C4	2.88	0.41
1:A:1481:U:O4	1:A:1482:G:C6	2.73	0.41
1:A:1502:A:C3'	1:A:1503:A:C5'	2.91	0.41
2:B:17:HIS:HA	2:B:39:ILE:HA	2.03	0.41
2:B:22:TRP:CD2	2:B:36:LYS:NZ	2.89	0.41
3:C:17:TRP:HB3	3:C:19:SER:O	2.20	0.41
3:C:42:LEU:CD1	3:C:65:VAL:HG11	2.51	0.41
5:E:155:LYS:HG3	8:H:98:LEU:HG	2.03	0.41
6:F:71:ILE:HD11	6:F:89:VAL:HB	2.01	0.41
8:H:37:ASN:O	8:H:41:GLU:CD	2.64	0.41
8:H:104:SER:HB2	8:H:125:ILE:HD13	2.03	0.41
9:I:20:ILE:HD13	9:I:62:LEU:CB	2.51	0.41
9:I:66:VAL:HB	9:I:78:ILE:HG13	2.03	0.41
10:J:43:PRO:O	10:J:71:LEU:HB2	2.21	0.41
10:J:51:VAL:CG2	14:N:84:ARG:HB2	2.51	0.41
10:J:81:GLU:O	10:J:84:VAL:HB	2.21	0.41
11:K:30:ILE:CA	11:K:45:THR:HG23	2.50	0.41
11:K:33:ILE:HD13	11:K:104:PHE:CZ	2.55	0.41
11:K:100:ASN:HB3	21:U:11:PHE:CD2	2.56	0.41
12:L:8:ARG:HB2	12:L:9:LYS:HZ2	1.85	0.41
12:L:48:LEU:HD12	22:W:35:LEU:N	2.36	0.41
12:L:75:GLU:HG3	12:L:76:HIS:H	1.85	0.41
12:L:79:ILE:C	12:L:102:ASP:HB2	2.46	0.41
13:M:1:ALA:HB2	13:M:52:ILE:HB	2.03	0.41
13:M:18:LEU:HA	13:M:21:ILE:CG1	2.50	0.41
17:Q:45:VAL:O	17:Q:70:LYS:HG2	2.21	0.41
17:Q:47:ASP:O	17:Q:70:LYS:HE3	2.21	0.41
17:Q:60:ILE:HA	17:Q:74:LEU:CA	2.49	0.41
20:T:21:ALA:N	20:T:24:ARG:HH21	2.19	0.41
20:T:34:VAL:O	20:T:38:ILE:HG13	2.20	0.41
20:T:64:GLY:C	20:T:67:HIS:HE1	2.27	0.41
20:T:66:ILE:HG12	20:T:74:HIS:CE1	2.56	0.41
22:W:80:VAL:CB	22:W:99:ALA:HB3	2.51	0.41
22:W:110:PRO:HA	22:W:116:VAL:CG1	2.51	0.41
22:W:255:LEU:C	22:W:255:LEU:HD12	2.46	0.41
22:W:255:LEU:HD12	22:W:255:LEU:O	2.20	0.41
22:W:294:LEU:HD11	22:W:304:HIS:CE1	2.56	0.41
1:A:11:G:C6	1:A:12:U:C2	3.09	0.41
1:A:15:G:C8	1:A:1396:A:O2'	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:56:U:C5	1:A:352:C:N4	2.89	0.41
1:A:59:A:OP2	20:T:3:ILE:CG1	2.68	0.41
1:A:62:U:OP1	1:A:386:C:H5'	2.21	0.41
1:A:85:U:C4	1:A:86:G:C6	3.09	0.41
1:A:94:G:N2	1:A:98:A:N1	2.69	0.41
1:A:102:G:H3'	1:A:103:U:C6	2.56	0.41
1:A:112:G:N2	1:A:113:G:C1'	2.84	0.41
1:A:136:C:O2	1:A:137:U:H1'	2.20	0.41
1:A:144:G:C2	1:A:145:G:C4	3.09	0.41
1:A:162:A:O2'	1:A:348:G:H4'	2.21	0.41
1:A:164:G:C4	1:A:165:G:C8	3.09	0.41
1:A:166:U:O2	1:A:166:U:H2'	2.20	0.41
1:A:168:G:N1	1:A:169:C:C5	2.89	0.41
1:A:172:A:OP2	1:A:172:A:C8	2.74	0.41
1:A:178:C:C4	1:A:179:A:N7	2.89	0.41
1:A:181:A:H5'	1:A:182:A:H8	1.86	0.41
1:A:185:U:O2	20:T:75:LYS:NZ	2.53	0.41
1:A:195:A:H8	1:A:195:A:H3'	1.86	0.41
1:A:197:A:C2'	1:A:221:C:H1'	2.51	0.41
1:A:208:U:H6	1:A:210:C:C6	2.36	0.41
1:A:216:U:C6	1:A:216:U:C3'	3.04	0.41
1:A:270:A:C8	1:A:270:A:H3'	2.56	0.41
1:A:296:U:C2	1:A:302:G:N2	2.89	0.41
1:A:314:C:O2	1:A:353:A:C2	2.73	0.41
1:A:324:G:C8	1:A:326:G:OP2	2.74	0.41
1:A:342:C:C6	1:A:343:U:C5	3.09	0.41
1:A:370:C:C2'	1:A:371:A:H5'	2.51	0.41
1:A:384:G:C2	1:A:385:C:C2	3.09	0.41
1:A:403:C:H5'	4:D:133:SER:HB2	2.03	0.41
1:A:408:A:C2	1:A:435:A:H1'	2.56	0.41
1:A:413:G:C6	4:D:35:GLN:OE1	2.74	0.41
1:A:414:A:OP2	1:A:416:G:O6	2.39	0.41
1:A:420:U:H1'	1:A:424:G:N1	2.35	0.41
1:A:434:U:H2'	1:A:435:A:O4'	2.21	0.41
1:A:440:C:N4	1:A:496:A:N6	2.62	0.41
1:A:444:G:C4	1:A:491:G:C2	3.08	0.41
1:A:465:A:C6	1:A:466:A:C5	3.08	0.41
1:A:487:A:C2	1:A:488:C:H1'	2.56	0.41
1:A:529:G:C5'	1:A:535:A:N7	2.84	0.41
1:A:534:U:C6	1:A:535:A:C4	3.09	0.41
1:A:560:A:OP1	5:E:127:TYR:CZ	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:572:A:C2	1:A:917:G:N3	2.89	0.41
1:A:579:A:N3	1:A:763:G:C2	2.89	0.41
1:A:582:C:C4	1:A:583:A:C8	3.09	0.41
1:A:583:A:N6	1:A:584:G:C6	2.89	0.41
1:A:584:G:O6	1:A:585:G:C6	2.74	0.41
1:A:595:A:N9	1:A:641:U:C4	2.88	0.41
1:A:606:G:N3	1:A:632:U:O4	2.54	0.41
1:A:614:C:C2	1:A:627:G:N2	2.89	0.41
1:A:615:G:C4	1:A:626:G:N1	2.89	0.41
1:A:622:A:N7	1:A:623:C:C5	2.89	0.41
1:A:666:G:C2	1:A:667:G:N9	2.89	0.41
1:A:686:U:H5'	11:K:43:TRP:N	2.35	0.41
1:A:692:U:H5'	1:A:797:C:H5"	2.03	0.41
1:A:700:G:C4	1:A:701:U:C4	3.08	0.41
1:A:715:A:H1'	1:A:777:A:C2	2.56	0.41
1:A:727:G:N3	1:A:731:G:C2	2.88	0.41
1:A:730:G:C2	1:A:765:G:H5"	2.56	0.41
1:A:756:C:O3'	1:A:823:C:H1'	2.21	0.41
1:A:759:A:C8	1:A:759:A:C3'	3.04	0.41
1:A:761:G:H2'	1:A:762:U:O4'	2.21	0.41
1:A:785:G:C6	1:A:798:U:C4	3.09	0.41
1:A:794:A:N6	1:A:795:C:H1'	2.35	0.41
1:A:821:G:C2	1:A:822:U:C2	3.09	0.41
1:A:826:C:O2	1:A:875:U:C2	2.74	0.41
1:A:860:A:H3'	1:A:861:G:H8	1.85	0.41
1:A:908:A:C8	1:A:908:A:O5'	2.74	0.41
1:A:910:C:H4'	1:A:1413:A:O2'	2.21	0.41
1:A:937:A:H1'	1:A:1379:G:C2	2.56	0.41
1:A:945:G:H2'	1:A:946:A:H8	1.79	0.41
1:A:956:U:C4	1:A:957:U:C5	3.08	0.41
1:A:957:U:O2	1:A:959:A:C8	2.74	0.41
1:A:970:C:H5'	1:A:972:C:C6	2.56	0.41
1:A:1005:A:C8	1:A:1006:G:N9	2.89	0.41
1:A:1015:G:C4'	14:N:52:ARG:H	2.29	0.41
1:A:1073:U:H2'	1:A:1074:G:H8	1.80	0.41
1:A:1074:G:C8	1:A:1074:G:O5'	2.73	0.41
1:A:1208:C:C6	1:A:1208:C:O5'	2.74	0.41
1:A:1236:A:O2'	1:A:1334:G:N2	2.54	0.41
1:A:1244:G:H2'	1:A:1245:C:C6	2.56	0.41
1:A:1335:U:C5'	1:A:1337:G:N2	2.84	0.41
1:A:1409:C:H2'	1:A:1410:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1438:G:N2	1:A:1439:G:C6	2.89	0.41
1:A:1480:A:C8	1:A:1480:A:O5'	2.74	0.41
1:A:1504:G:C4'	1:A:1505:G:C4	3.04	0.41
1:A:1518:A:H2'	1:A:1518:A:N3	2.36	0.41
2:B:89:PHE:CE2	2:B:90:PHE:CE1	3.08	0.41
2:B:100:LEU:H	2:B:174:GLU:CD	2.29	0.41
3:C:22:PHE:CD1	10:J:13:PHE:N	2.89	0.41
5:E:11:GLN:HE22	5:E:115:GLU:HG3	1.86	0.41
7:G:94:ARG:O	7:G:95:ARG:C	2.64	0.41
8:H:48:PHE:HA	8:H:59:GLU:O	2.21	0.41
9:I:17:ARG:HB2	9:I:19:PHE:CE2	2.56	0.41
11:K:23:HIS:O	11:K:23:HIS:CG	2.74	0.41
11:K:114:PRO:HB3	18:R:71:ASP:OD2	2.21	0.41
19:S:38:THR:HA	19:S:69:LYS:HA	2.03	0.41
20:T:56:ILE:O	20:T:60:GLN:N	2.55	0.41
22:W:287:PHE:CZ	22:W:325:ARG:O	2.74	0.41
1:A:27:G:C2	1:A:557:G:C4	3.09	0.40
1:A:57:G:C6	1:A:58:C:C2	3.09	0.40
1:A:72:A:C4	1:A:73:C:H5	2.34	0.40
1:A:82:G:C5	1:A:83:C:H1'	2.56	0.40
1:A:98:A:H8	1:A:98:A:OP2	2.03	0.40
1:A:142:G:C8	1:A:142:G:OP2	2.74	0.40
1:A:153:C:C4	1:A:154:U:N1	2.89	0.40
1:A:175:C:O2	1:A:175:C:C2'	2.67	0.40
1:A:179:A:C8	1:A:180:U:C5	3.09	0.40
1:A:197:A:C5	1:A:221:C:O4'	2.75	0.40
1:A:203:G:N7	1:A:212:G:C6	2.89	0.40
1:A:220:G:N2	1:A:221:C:C6	2.89	0.40
1:A:225:C:O2	1:A:225:C:H2'	2.20	0.40
1:A:229:U:C6	1:A:229:U:O5'	2.74	0.40
1:A:240:G:C2	1:A:241:G:C4	3.08	0.40
1:A:240:G:N2	1:A:287:U:H1'	2.37	0.40
1:A:242:G:H2'	1:A:245:U:C5	2.56	0.40
1:A:246:A:N6	1:A:282:A:N7	2.69	0.40
1:A:257:G:C4	1:A:258:G:C8	3.09	0.40
1:A:258:G:O6	1:A:259:G:C6	2.75	0.40
1:A:276:G:C2'	1:A:276:G:N3	2.79	0.40
1:A:304:U:C6	1:A:304:U:O5'	2.73	0.40
1:A:329:A:N7	1:A:332:G:C5	2.89	0.40
1:A:341:C:H2'	1:A:342:C:C6	2.55	0.40
1:A:347:G:H2'	1:A:348:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:357:G:H1'	1:A:368:U:O2	2.20	0.40
1:A:442:G:C8	1:A:442:G:O5'	2.74	0.40
1:A:446:G:C2	1:A:489:C:N3	2.90	0.40
1:A:456:A:C2	1:A:477:C:N3	2.89	0.40
1:A:469:C:H2'	1:A:470:C:H5'	2.03	0.40
1:A:482:A:P	1:A:483:C:H41	2.43	0.40
1:A:537:G:C6	1:A:538:G:C4	3.09	0.40
1:A:538:G:C6	1:A:539:A:N7	2.89	0.40
1:A:550:G:N2	1:A:551:U:C1'	2.83	0.40
1:A:572:A:N1	1:A:864:A:C4	2.89	0.40
1:A:581:G:N2	1:A:582:C:C4	2.89	0.40
1:A:581:G:C2	1:A:761:G:O6	2.74	0.40
1:A:597:G:N7	1:A:598:U:C4	2.89	0.40
1:A:605:U:H6	1:A:605:U:OP2	2.04	0.40
1:A:606:G:H8	1:A:607:A:H5"	1.86	0.40
1:A:656:G:C8	1:A:656:G:OP2	2.74	0.40
1:A:665:A:N7	1:A:725:G:C2	2.89	0.40
1:A:676:A:N1	1:A:715:A:C2	2.90	0.40
1:A:684:U:C4	1:A:685:G:C5	3.10	0.40
1:A:693:G:C5	1:A:795:C:O2	2.74	0.40
1:A:705:G:H2'	1:A:706:A:H5'	2.02	0.40
1:A:736:C:C5	6:F:91:ARG:NH2	2.89	0.40
1:A:749:A:C4	1:A:750:C:C5	3.09	0.40
1:A:754:C:O2	1:A:754:C:H5"	2.21	0.40
1:A:758:C:C6	1:A:758:C:C3'	3.04	0.40
1:A:760:G:C6	1:A:761:G:N9	2.89	0.40
1:A:762:U:C6	1:A:762:U:O5'	2.73	0.40
1:A:804:U:H5	1:A:805:C:C4	2.36	0.40
1:A:808:C:C4	1:A:809:G:N7	2.90	0.40
1:A:819:A:C8	1:A:819:A:O5'	2.74	0.40
1:A:820:U:C5	1:A:872:A:OP1	2.75	0.40
1:A:858:G:N2	1:A:859:G:N7	2.68	0.40
1:A:917:G:H2'	1:A:918:A:C8	2.56	0.40
1:A:917:G:N2	1:A:918:A:H1'	2.36	0.40
1:A:962:C:O2	1:A:1201:A:C4	2.74	0.40
1:A:981:U:C2	1:A:982:U:C6	3.09	0.40
1:A:1084:G:H5"	1:A:1099:G:H22	1.85	0.40
1:A:1084:G:N9	1:A:1085:U:C5	2.89	0.40
1:A:1113:C:N3	1:A:1188:A:H1'	2.36	0.40
1:A:1132:C:C6	1:A:1132:C:C5'	3.04	0.40
1:A:1157:A:C2'	1:A:1180:A:C2	3.00	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1165:U:C2'	1:A:1166:G:C8	3.04	0.40
1:A:1169:A:C6	1:A:1170:A:C2	3.09	0.40
1:A:1204:A:C5	1:A:1205:U:C6	3.09	0.40
1:A:1219:A:H5'	14:N:53:ASP:OD1	2.20	0.40
1:A:1220:G:N2	19:S:53:GLY:HA2	2.30	0.40
1:A:1233:G:C2	1:A:1234:C:C6	3.09	0.40
1:A:1239:A:O2'	7:G:113:LYS:HA	2.21	0.40
1:A:1240:U:P	7:G:114:SER:HA	2.61	0.40
1:A:1250:A:C5	1:A:1287:A:C4	3.08	0.40
1:A:1260:G:N3	1:A:1260:G:H2'	2.36	0.40
1:A:1264:U:C6	1:A:1264:U:H3'	2.57	0.40
1:A:1270:G:C2	1:A:1271:A:N9	2.89	0.40
1:A:1289:A:C5'	1:A:1290:G:OP2	2.69	0.40
1:A:1300:G:C5	1:A:1334:G:C5	3.09	0.40
1:A:1309:G:C6	1:A:1310:G:C5	3.09	0.40
1:A:1313:U:N3	1:A:1314:C:C5	2.90	0.40
1:A:1353:G:N2	1:A:1354:U:H1'	2.37	0.40
1:A:1405:G:H22	1:A:1517:G:N2	2.19	0.40
1:A:1428:A:N6	1:A:1473:G:C6	2.89	0.40
1:A:1457:G:O2'	20:T:26:MET:HA	2.22	0.40
1:A:1460:C:N3	1:A:1461:G:C4	2.88	0.40
1:A:1467:C:H2'	1:A:1468:A:N7	2.36	0.40
1:A:1479:C:C2	1:A:1480:A:N7	2.89	0.40
1:A:1511:G:C2	1:A:1525:G:C2	3.10	0.40
1:A:1516:G:C6	1:A:1520:C:C5	3.08	0.40
2:B:71:THR:HB	2:B:75:ALA:HB3	2.02	0.40
2:B:163:ILE:CD1	2:B:209:VAL:HG11	2.52	0.40
3:C:150:VAL:HA	3:C:198:LYS:O	2.21	0.40
5:E:12:GLU:HB3	5:E:63:MET:HE3	2.04	0.40
6:F:35:LYS:HZ3	6:F:37:HIS:CG	2.39	0.40
9:I:47:VAL:HA	9:I:79:ARG:HA	2.02	0.40
10:J:42:LEU:CD2	10:J:73:LEU:HB2	2.51	0.40
11:K:24:ALA:HA	11:K:29:THR:HA	2.03	0.40
11:K:27:ASN:O	11:K:56:LYS:HE3	2.21	0.40
15:O:10:ILE:HG23	15:O:14:PHE:CD1	2.56	0.40
15:O:82:GLU:CA	15:O:88:ARG:HE	2.33	0.40
17:Q:11:VAL:HG23	17:Q:56:ASP:HB2	2.03	0.40
17:Q:45:VAL:HG13	17:Q:47:ASP:OD1	2.21	0.40
17:Q:46:HIS:CG	17:Q:66:LEU:HD13	2.55	0.40
1:A:8:A:N1	4:D:201:GLU:O	2.54	0.40
1:A:9:G:C2	1:A:10:A:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:9:G:C2	1:A:10:A:C1'	3.04	0.40
1:A:28:A:H1'	1:A:297:G:P	2.60	0.40
1:A:108:G:OP2	1:A:109:A:C2	2.75	0.40
1:A:126:G:H5'	1:A:633:G:H22	1.86	0.40
1:A:158:G:C2	1:A:164:G:N9	2.90	0.40
1:A:189:A:C2	1:A:190:A:O4'	2.75	0.40
1:A:189:A:H62	1:A:190:A:H62	1.68	0.40
1:A:206:C:O5'	1:A:206:C:H6	2.04	0.40
1:A:258:G:N3	1:A:258:G:H2'	2.36	0.40
1:A:318:G:C4	1:A:336:A:C2	3.10	0.40
1:A:403:C:H2'	1:A:404:G:O4'	2.22	0.40
1:A:409:U:O2	1:A:434:U:O2	2.38	0.40
1:A:413:G:O4'	4:D:31:CYS:SG	2.79	0.40
1:A:420:U:H3'	1:A:422:C:C4	2.56	0.40
1:A:451:A:H5'	1:A:452:A:C8	2.56	0.40
1:A:500:G:H22	1:A:549:C:H5'	1.87	0.40
1:A:674:G:C4	1:A:675:A:C8	3.09	0.40
1:A:761:G:C5	1:A:762:U:C4	3.09	0.40
1:A:774:G:C6	1:A:775:G:C6	3.09	0.40
1:A:802:A:H2'	1:A:803:G:O4'	2.21	0.40
1:A:825:A:H1'	8:H:1:SER:N	2.37	0.40
1:A:849:G:C6	1:A:850:U:C5	3.08	0.40
1:A:894:G:C6	1:A:895:G:N7	2.88	0.40
1:A:895:G:C6	1:A:905:U:O2	2.74	0.40
1:A:903:G:N3	1:A:904:U:H1'	2.36	0.40
1:A:925:G:C8	1:A:925:G:P	3.14	0.40
1:A:941:G:N2	9:I:122:ARG:HH22	2.20	0.40
1:A:950:U:O4'	1:A:971:G:C2	2.75	0.40
1:A:969:A:H2'	1:A:970:C:O4'	2.22	0.40
1:A:974:A:N1	14:N:70:HIS:CD2	2.90	0.40
1:A:979:C:H41	1:A:1360:A:H61	1.70	0.40
1:A:1032:G:H2'	1:A:1033:G:C4'	2.51	0.40
1:A:1045:C:H2'	1:A:1045:C:O2	2.21	0.40
1:A:1052:U:H3'	1:A:1200:C:H41	1.84	0.40
1:A:1057:G:OP2	1:A:1058:G:O6	2.39	0.40
1:A:1064:G:N2	1:A:1190:G:O3'	2.54	0.40
1:A:1080:A:H5'	5:E:20:VAL:CG1	2.52	0.40
1:A:1092:A:C4	1:A:1093:A:N9	2.90	0.40
1:A:1128:C:C3'	1:A:1129:C:H6	2.34	0.40
1:A:1130:A:O2'	9:I:19:PHE:HB3	2.21	0.40
1:A:1143:G:H2'	1:A:1144:G:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1151:A:H2'	1:A:1152:A:C8	2.56	0.40
1:A:1159:U:C6	1:A:1162:C:N4	2.89	0.40
1:A:1181:G:N2	1:A:1182:G:N2	2.68	0.40
1:A:1184:G:OP2	2:B:131:LYS:HA	2.21	0.40
1:A:1189:U:C6	3:C:177:LEU:HD11	2.56	0.40
1:A:1231:G:N1	1:A:1232:U:C2	2.89	0.40
1:A:1234:C:C4	1:A:1235:U:C5	3.09	0.40
1:A:1255:G:N2	1:A:1276:G:N2	2.70	0.40
1:A:1276:G:H2'	1:A:1277:C:O4'	2.20	0.40
1:A:1303:C:C5	1:A:1304:G:C8	3.09	0.40
1:A:1317:C:H2'	1:A:1318:A:C8	2.56	0.40
1:A:1319:A:C6	1:A:1323:G:C1'	3.02	0.40
1:A:1342:C:H2'	1:A:1343:G:H8	1.86	0.40
1:A:1353:G:N1	1:A:1370:G:C6	2.89	0.40
1:A:1355:G:C2	1:A:1356:G:C4	3.09	0.40
1:A:1407:C:C2	1:A:1495:U:C2	3.10	0.40
1:A:1420:U:H3	1:A:1480:A:N6	2.19	0.40
1:A:1420:U:O2	1:A:1481:U:O2	2.40	0.40
1:A:1423:G:C8	1:A:1423:G:H3'	2.56	0.40
1:A:1433:A:C5	1:A:1434:A:N7	2.89	0.40
1:A:1503:A:O4'	1:A:1531:A:H4'	2.21	0.40
2:B:27:LYS:C	2:B:29:PHE:N	2.79	0.40
4:D:124:VAL:CG2	4:D:129:VAL:HG11	2.51	0.40
8:H:36:ALA:HA	8:H:39:LEU:HD12	2.03	0.40
9:I:18:VAL:HB	9:I:81:GLY:C	2.46	0.40
11:K:27:ASN:HB3	11:K:56:LYS:HG3	2.04	0.40
12:L:66:ILE:HG22	12:L:98:ARG:HG3	2.02	0.40
12:L:98:ARG:HH22	12:L:107:LYS:HG2	1.85	0.40
13:M:74:MET:O	13:M:77:LYS:HB3	2.22	0.40
17:Q:46:HIS:H	17:Q:74:LEU:N	2.19	0.40
22:W:162:ILE:HG13	22:W:163:ASP:N	2.37	0.40
22:W:195:GLN:CB	22:W:226:ALA:HB2	2.51	0.40
22:W:221:SER:HB2	22:W:234:ILE:HA	2.03	0.40
22:W:258:PHE:CZ	22:W:264:VAL:HB	2.56	0.40
1:A:4:U:OP2	1:A:4:U:C5	2.74	0.40
1:A:62:U:O2'	1:A:380:G:H4'	2.20	0.40
1:A:69:G:N7	1:A:96:U:OP1	2.54	0.40
1:A:82:G:H5'	1:A:89:U:H1'	2.03	0.40
1:A:100:G:H2'	1:A:101:A:C8	2.56	0.40
1:A:117:G:C2	1:A:118:U:H1'	2.56	0.40
1:A:185:U:C5	1:A:185:U:OP2	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:201:G:N2	1:A:468:A:H62	2.20	0.40
1:A:217:C:H2'	1:A:218:U:H6	1.87	0.40
1:A:251:G:C4	1:A:252:U:C6	3.09	0.40
1:A:264:C:H2'	17:Q:65:PRO:HG2	2.03	0.40
1:A:265:G:C8	1:A:265:G:OP2	2.74	0.40
1:A:266:G:C1'	1:A:268:U:OP2	2.70	0.40
1:A:302:G:H2'	1:A:303:A:O4'	2.22	0.40
1:A:311:C:C6	1:A:311:C:H3'	2.56	0.40
1:A:337:G:H4'	1:A:1469:C:C4'	2.51	0.40
1:A:363:A:C8	1:A:364:A:N7	2.89	0.40
1:A:409:U:H5'	4:D:23:GLY:HA3	2.02	0.40
1:A:441:A:N3	1:A:442:G:C8	2.89	0.40
1:A:442:G:H1	1:A:492:C:N4	2.19	0.40
1:A:455:G:N2	1:A:456:A:C1'	2.85	0.40
1:A:501:C:C6	1:A:501:C:H3'	2.56	0.40
1:A:529:G:N2	12:L:47:ALA:HB2	2.36	0.40
1:A:531:U:OP2	1:A:532:A:H5'	2.22	0.40
1:A:575:G:C6	1:A:881:G:C6	3.09	0.40
1:A:580:C:C4'	15:O:56:LEU:HB3	2.51	0.40
1:A:581:G:N1	1:A:759:A:P	2.92	0.40
1:A:591:U:O4	1:A:648:A:N1	2.54	0.40
1:A:595:A:C2	1:A:643:C:N4	2.89	0.40
1:A:622:A:O5'	1:A:622:A:H8	2.04	0.40
1:A:656:G:H21	15:O:22:GLY:CA	2.31	0.40
1:A:668:G:H2'	1:A:669:G:O4'	2.21	0.40
1:A:680:C:C2	1:A:711:G:N1	2.90	0.40
1:A:705:G:H8	1:A:705:G:O5'	2.04	0.40
1:A:720:C:H5"	18:R:38:ILE:HG22	2.04	0.40
1:A:782:A:OP1	1:A:1522:U:H1'	2.21	0.40
1:A:799:G:C6	1:A:800:G:C5	3.10	0.40
1:A:803:G:N1	1:A:804:U:C2	2.90	0.40
1:A:808:C:N3	1:A:809:G:N7	2.70	0.40
1:A:814:A:H5'	1:A:815:A:P	2.60	0.40
1:A:860:A:C6	1:A:861:G:N3	2.89	0.40
1:A:863:U:C2	1:A:867:G:N1	2.89	0.40
1:A:894:G:N1	1:A:895:G:C5	2.89	0.40
1:A:923:A:C2	1:A:924:C:C4	3.09	0.40
1:A:928:G:C2	1:A:929:G:C6	3.09	0.40
1:A:958:A:C5	1:A:959:A:N1	2.89	0.40
1:A:965:U:N3	1:A:969:A:H4'	2.36	0.40
1:A:987:G:C4	1:A:988:G:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:990:C:C2	1:A:1216:A:C2	3.09	0.40
1:A:991:U:N3	1:A:1212:U:H4'	2.36	0.40
1:A:1008:U:O4	14:N:17:ASP:O	2.40	0.40
1:A:1032:G:C6	1:A:1033:G:N9	2.89	0.40
1:A:1058:G:O6	1:A:1059:C:C4	2.74	0.40
1:A:1133:G:N3	1:A:1133:G:H2'	2.36	0.40
1:A:1266:G:C2	1:A:1270:G:C6	3.08	0.40
1:A:1287:A:C2	1:A:1288:A:C2	3.09	0.40
1:A:1333:A:N9	1:A:1334:G:C8	2.89	0.40
1:A:1348:U:C4	1:A:1373:G:N2	2.89	0.40
1:A:1349:A:C2	7:G:31:VAL:CA	3.02	0.40
1:A:1374:A:N3	1:A:1375:A:C8	2.90	0.40
1:A:1377:A:C5'	7:G:94:ARG:NH1	2.85	0.40
1:A:1382:C:N4	7:G:2:ARG:NH1	2.70	0.40
1:A:1532:U:C4	1:A:1534:A:C5	3.09	0.40
2:B:172:ILE:HD13	2:B:193:ASP:HB2	2.02	0.40
2:B:192:PRO:CB	2:B:195:VAL:HB	2.51	0.40
3:C:38:VAL:HG21	3:C:63:ILE:CD1	2.51	0.40
4:D:170:LEU:CB	4:D:181:PHE:HA	2.49	0.40
6:F:55:HIS:CD2	6:F:56:LYS:N	2.89	0.40
8:H:16:GLY:HA3	8:H:24:VAL:HG11	2.03	0.40
9:I:26:LYS:H	9:I:62:LEU:CD2	2.34	0.40
11:K:43:TRP:CE3	11:K:44:ALA:N	2.90	0.40
16:P:69:ASP:HA	16:P:72:ALA:CB	2.51	0.40
17:Q:54:ILE:O	17:Q:54:ILE:HG23	2.21	0.40
1:A:6:G:OP2	1:A:6:G:C2	2.75	0.40
1:A:35:G:C2	1:A:550:G:N3	2.89	0.40
1:A:36:C:C2	1:A:37:U:C6	3.10	0.40
1:A:46:G:N7	1:A:366:A:C6	2.90	0.40
1:A:51:A:C2	1:A:116:A:N9	2.90	0.40
1:A:102:G:C8	1:A:102:G:O5'	2.75	0.40
1:A:104:G:N1	1:A:105:G:C5	2.89	0.40
1:A:115:G:C8	1:A:115:G:O5'	2.75	0.40
1:A:117:G:C5	1:A:118:U:N3	2.90	0.40
1:A:119:A:OP2	1:A:119:A:H8	2.04	0.40
1:A:133:U:C4	1:A:230:G:N2	2.89	0.40
1:A:137:U:O2	1:A:137:U:C2'	2.69	0.40
1:A:153:C:N4	1:A:154:U:N3	2.70	0.40
1:A:154:U:O2	1:A:155:A:C8	2.75	0.40
1:A:155:A:C5	1:A:156:C:C4	3.10	0.40
1:A:250:A:C8	1:A:252:U:N3	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:253:A:O2'	1:A:276:G:H4'	2.22	0.40
1:A:253:A:N3	1:A:275:G:H2'	2.37	0.40
1:A:271:C:C6	1:A:271:C:C3'	3.04	0.40
1:A:293:G:H22	1:A:305:G:C1'	2.34	0.40
1:A:297:G:N2	1:A:301:G:C4	2.90	0.40
1:A:322:C:C6	1:A:322:C:H3'	2.57	0.40
1:A:341:C:C4	1:A:342:C:C5	3.10	0.40
1:A:345:C:H4'	1:A:346:G:N1	2.36	0.40
1:A:378:G:N1	1:A:386:C:C2	2.90	0.40
1:A:380:G:H2'	1:A:380:G:N3	2.37	0.40
1:A:409:U:C5	1:A:409:U:OP2	2.75	0.40
1:A:429:U:H3'	4:D:21:LYS:HE2	2.03	0.40
1:A:454:G:N2	1:A:479:U:H1'	2.29	0.40
1:A:465:A:C5	1:A:466:A:C5	3.09	0.40
1:A:544:G:C5'	4:D:54:LEU:HD11	2.51	0.40
1:A:549:C:C2	1:A:550:G:C8	3.10	0.40
1:A:568:G:N3	1:A:568:G:H2'	2.36	0.40
1:A:583:A:C2	1:A:584:G:H1'	2.56	0.40
1:A:600:A:N1	1:A:639:G:C5	2.90	0.40
1:A:633:G:C6	1:A:634:C:N3	2.89	0.40
1:A:654:G:C5	1:A:655:A:C8	3.08	0.40
1:A:717:U:C2	11:K:117:HIS:HB3	2.57	0.40
1:A:725:G:C2	1:A:726:C:C5	3.09	0.40
1:A:730:G:O2'	1:A:814:A:N6	2.54	0.40
1:A:736:C:C2	1:A:737:C:C6	3.09	0.40
1:A:748:G:C2	1:A:749:A:H1'	2.56	0.40
1:A:759:A:N6	1:A:760:G:C4	2.89	0.40
1:A:779:C:C2	1:A:780:A:C6	3.09	0.40
1:A:792:A:C4	1:A:794:A:O4'	2.74	0.40
1:A:832:G:C6	1:A:855:U:C4	3.10	0.40
1:A:891:U:OP2	1:A:904:U:OP2	2.40	0.40
1:A:929:G:H1'	1:A:1533:C:C5	2.57	0.40
1:A:942:G:C4	1:A:943:U:C6	3.09	0.40
1:A:1004:A:H2'	1:A:1005:A:H5'	2.02	0.40
1:A:1043:G:H3'	1:A:1044:A:C8	2.56	0.40
1:A:1069:C:C6	1:A:1069:C:H3'	2.57	0.40
1:A:1100:C:C6	1:A:1100:C:O5'	2.74	0.40
1:A:1117:A:C8	1:A:1156:G:N2	2.83	0.40
1:A:1169:A:C6	1:A:1170:A:C6	3.09	0.40
1:A:1269:A:H3'	1:A:1270:G:C8	2.56	0.40
1:A:1287:A:C5	1:A:1288:A:N6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1295:U:H2'	1:A:1296:C:O4'	2.20	0.40
1:A:1328:C:H5"	13:M:27:THR:CB	2.52	0.40
1:A:1355:G:C4	1:A:1368:A:N1	2.90	0.40
1:A:1377:A:H3'	7:G:6:ILE:O	2.22	0.40
1:A:1382:C:C6	1:A:1382:C:C3'	3.04	0.40
1:A:1389:C:O2	1:A:1390:U:H1'	2.21	0.40
1:A:1393:U:H5'	1:A:1502:A:O5'	2.21	0.40
1:A:1438:G:O5'	1:A:1438:G:C8	2.75	0.40
1:A:1484:C:H6	1:A:1484:C:O5'	2.03	0.40
1:A:1527:U:C2	1:A:1528:U:C6	3.09	0.40
2:B:127:LYS:HB3	2:B:128:LEU:HD22	2.03	0.40
3:C:28:PHE:CD1	10:J:13:PHE:CZ	3.09	0.40
3:C:89:VAL:HG13	3:C:93:ILE:HD12	2.03	0.40
3:C:123:LEU:HG	3:C:129:PHE:HA	2.03	0.40
4:D:137:SER:O	4:D:140:ASP:HB2	2.21	0.40
5:E:55:VAL:HB	5:E:56:PRO:CD	2.51	0.40
5:E:85:LYS:HG2	5:E:93:VAL:O	2.21	0.40
6:F:44:ARG:HA	6:F:58:HIS:HA	2.03	0.40
7:G:11:ILE:HA	7:G:27:ASN:ND2	2.36	0.40
8:H:104:SER:HA	8:H:109:VAL:HA	2.02	0.40
10:J:28:THR:CG2	10:J:86:ALA:HB2	2.51	0.40
11:K:33:ILE:N	11:K:69:CYS:SG	2.94	0.40
11:K:45:THR:HG22	11:K:46:ALA:N	2.20	0.40
12:L:15:VAL:HB	12:L:17:LYS:HD2	2.04	0.40
12:L:36:VAL:HA	12:L:52:CYS:CB	2.52	0.40
12:L:81:ILE:HA	12:L:96:THR:HA	2.03	0.40
14:N:1:ALA:CB	14:N:5:MET:SD	3.10	0.40
14:N:72:PHE:CD1	14:N:73:LEU:N	2.89	0.40
18:R:35:SER:HB3	18:R:69:TYR:HA	2.02	0.40
19:S:31:ARG:HG3	19:S:56:HIS:ND1	2.35	0.40
20:T:18:LYS:H	20:T:18:LYS:HG3	1.56	0.40
20:T:34:VAL:CG1	20:T:78:LEU:HD12	2.51	0.40
20:T:50:PHE:HB3	20:T:82:ILE:HD13	2.03	0.40
22:W:202:GLU:HB3	22:W:260:HIS:CD2	2.57	0.40
1:A:9:G:OP2	5:E:125:LYS:HA	2.20	0.40
1:A:12:U:C4'	1:A:526:C:H4'	2.43	0.40
1:A:15:G:C2	1:A:16:A:C4	3.09	0.40
1:A:37:U:H5"	12:L:120:ARG:CZ	2.52	0.40
1:A:45:G:C2	1:A:46:G:C4	3.09	0.40
1:A:51:A:C2	1:A:116:A:H1'	2.56	0.40
1:A:103:U:C6	1:A:103:U:O5'	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:118:U:H3	1:A:289:G:C4'	2.34	0.40
1:A:129:A:H4'	17:Q:64:ARG:HA	2.02	0.40
1:A:141:G:N1	1:A:223:A:C4	2.90	0.40
1:A:144:G:OP2	1:A:197:A:H3'	2.21	0.40
1:A:147:G:C2	1:A:176:C:C5	3.10	0.40
1:A:148:G:C8	1:A:148:G:H3'	2.55	0.40
1:A:176:C:O4'	1:A:1447:A:C5	2.75	0.40
1:A:189:A:H3'	1:A:189:A:C8	2.56	0.40
1:A:208:U:C2	1:A:209:U:O4	2.75	0.40
1:A:240:G:O6	1:A:241:G:C6	2.75	0.40
1:A:257:G:N1	1:A:270:A:C5	2.89	0.40
1:A:301:G:C8	1:A:301:G:C3'	3.05	0.40
1:A:315:A:O5'	1:A:315:A:C8	2.74	0.40
1:A:339:C:H2'	1:A:340:U:C6	2.56	0.40
1:A:359:G:C6	1:A:360:G:N3	2.90	0.40
1:A:386:C:O5'	1:A:386:C:H6	2.04	0.40
1:A:404:G:N1	1:A:405:U:C2	2.90	0.40
1:A:420:U:H5'	4:D:43:ARG:HH12	1.86	0.40
1:A:432:A:C8	1:A:433:G:N7	2.90	0.40
1:A:434:U:C2	1:A:435:A:H8	2.36	0.40
1:A:469:C:C5	1:A:470:C:N3	2.90	0.40
1:A:499:A:C8	1:A:499:A:O5'	2.75	0.40
1:A:523:A:H1'	1:A:527:G:C2	2.57	0.40
1:A:543:U:H5'	4:D:13:ARG:HH21	1.87	0.40
1:A:562:U:H3'	12:L:12:ALA:O	2.21	0.40
1:A:571:U:OP1	1:A:819:A:H2'	2.22	0.40
1:A:583:A:O5'	1:A:583:A:H8	2.02	0.40
1:A:592:G:C6	1:A:593:U:N3	2.90	0.40
1:A:605:U:C6	1:A:606:G:N1	2.85	0.40
1:A:607:A:C6	1:A:608:A:C4	3.10	0.40
1:A:607:A:H2'	1:A:608:A:O4'	2.21	0.40
1:A:626:G:H4'	16:P:51:ARG:CZ	2.51	0.40
1:A:745:G:H5'	1:A:851:G:H21	1.87	0.40
1:A:814:A:C5	1:A:816:A:O4'	2.75	0.40
1:A:839:C:O2	1:A:840:C:C5	2.74	0.40
1:A:847:G:C8	1:A:847:G:H3'	2.56	0.40
1:A:859:G:OP2	1:A:869:G:C2	2.74	0.40
1:A:898:G:H2'	1:A:900:A:N7	2.37	0.40
1:A:913:A:C2	1:A:914:A:C1'	3.01	0.40
1:A:913:A:N3	1:A:914:A:H1'	2.37	0.40
1:A:914:A:C8	1:A:914:A:C3'	3.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:936:C:C2	1:A:1380:U:O2	2.74	0.40
1:A:937:A:H2'	1:A:1378:C:H42	1.87	0.40
1:A:939:G:N2	1:A:1375:A:C2	2.89	0.40
1:A:947:G:C6	1:A:948:C:C5	3.10	0.40
1:A:969:A:H62	1:A:1231:G:H1'	1.86	0.40
1:A:977:A:H5'	1:A:981:U:O2	2.21	0.40
1:A:980:C:O2	14:N:58:ARG:HA	2.22	0.40
1:A:1015:G:H5'	14:N:52:ARG:HB2	2.03	0.40
1:A:1024:G:C6	1:A:1025:U:C5	3.10	0.40
1:A:1026:G:H2'	1:A:1026:G:N3	2.36	0.40
1:A:1068:G:N1	1:A:1069:C:C6	2.89	0.40
1:A:1068:G:C4	1:A:1069:C:C6	3.10	0.40
1:A:1070:U:C5	1:A:1085:U:C5	3.09	0.40
1:A:1081:A:H2'	1:A:1082:A:H8	1.86	0.40
1:A:1089:G:N2	1:A:1170:A:C1'	2.83	0.40
1:A:1089:G:C2'	1:A:1169:A:N1	2.84	0.40
1:A:1091:U:C1'	1:A:1171:A:H5"	2.51	0.40
1:A:1116:U:C2	1:A:1117:A:C5	3.10	0.40
1:A:1117:A:N1	2:B:127:LYS:NZ	2.70	0.40
1:A:1123:U:H4'	10:J:39:PRO:HD2	2.04	0.40
1:A:1126:U:O4	10:J:101:SER:HB2	2.21	0.40
1:A:1129:C:C4	1:A:1144:G:N1	2.90	0.40
1:A:1202:U:H2'	1:A:1203:C:O4'	2.21	0.40
1:A:1239:A:C2	1:A:1241:G:O6	2.75	0.40
1:A:1240:U:OP1	1:A:1240:U:C5	2.75	0.40
1:A:1251:A:HO2'	1:A:1252:A:H8	1.60	0.40
1:A:1278:G:N3	1:A:1278:G:H5"	2.36	0.40
1:A:1285:A:C2	1:A:1286:U:C4	3.09	0.40
1:A:1301:U:C2	1:A:1303:C:N1	2.89	0.40
1:A:1304:G:O6	1:A:1305:G:C6	2.73	0.40
1:A:1304:G:N1	1:A:1332:A:OP2	2.54	0.40
1:A:1323:G:C8	1:A:1323:G:H3'	2.57	0.40
1:A:1375:A:C5'	7:G:28:ILE:HG12	2.51	0.40
1:A:1399:C:H1'	1:A:1401:G:C8	2.57	0.40
1:A:1434:A:H2'	1:A:1435:G:C8	2.57	0.40
1:A:1492:A:H2'	1:A:1493:A:H3'	2.04	0.40
1:A:1502:A:N9	1:A:1504:G:C6	2.90	0.40
2:B:22:TRP:CA	2:B:30:ILE:HG12	2.51	0.40
3:C:36:PHE:CD2	3:C:39:ARG:HD2	2.57	0.40
6:F:4:TYR:CD1	6:F:71:ILE:HG12	2.57	0.40
7:G:115:MET:HA	7:G:118:ARG:HD2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:5:TYR:O	9:I:19:PHE:HA	2.21	0.40
10:J:8:ILE:O	10:J:74:VAL:HB	2.21	0.40
10:J:34:ALA:HB3	10:J:80:THR:HG23	2.03	0.40
11:K:28:ASN:HA	11:K:56:LYS:O	2.21	0.40
13:M:112:ARG:HD3	13:M:113:LYS:N	2.37	0.40
15:O:41:HIS:O	15:O:45:HIS:CD2	2.75	0.40
17:Q:61:ARG:HG2	17:Q:75:VAL:HG13	2.04	0.40
17:Q:62:GLU:OE1	17:Q:72:TRP:CE2	2.75	0.40
22:W:103:ARG:H	22:W:103:ARG:NE	2.20	0.40

There are no symmetry-related clashes.

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 PDB entries followed by that with respect to all EM entries.

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	B	216/218 (99%)	149 (69%)	41 (19%)	26 (12%)	0 4
3	C	204/206 (99%)	158 (78%)	28 (14%)	18 (9%)	0 8
4	D	203/205 (99%)	139 (68%)	41 (20%)	23 (11%)	0 5
5	E	148/150 (99%)	104 (70%)	25 (17%)	19 (13%)	0 4
6	F	98/100 (98%)	75 (76%)	16 (16%)	7 (7%)	1 11
7	G	149/151 (99%)	118 (79%)	20 (13%)	11 (7%)	1 10
8	H	127/129 (98%)	90 (71%)	26 (20%)	11 (9%)	0 9
9	I	125/127 (98%)	83 (66%)	25 (20%)	17 (14%)	0 4
10	J	96/98 (98%)	74 (77%)	10 (10%)	12 (12%)	0 4
11	K	115/117 (98%)	81 (70%)	20 (17%)	14 (12%)	0 4
12	L	121/123 (98%)	85 (70%)	22 (18%)	14 (12%)	0 5
13	M	112/114 (98%)	82 (73%)	16 (14%)	14 (12%)	0 4
14	N	93/100 (93%)	61 (66%)	21 (23%)	11 (12%)	0 4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
15	O	86/88 (98%)	65 (76%)	16 (19%)	5 (6%)	1 14
16	P	80/82 (98%)	58 (72%)	13 (16%)	9 (11%)	0 5
17	Q	78/80 (98%)	55 (70%)	16 (20%)	7 (9%)	0 8
18	R	53/55 (96%)	33 (62%)	12 (23%)	8 (15%)	0 3
19	S	77/79 (98%)	61 (79%)	12 (16%)	4 (5%)	1 15
20	T	83/85 (98%)	64 (77%)	14 (17%)	5 (6%)	1 13
21	U	49/51 (96%)	28 (57%)	11 (22%)	10 (20%)	0 2
22	W	274/350 (78%)	236 (86%)	25 (9%)	13 (5%)	2 16
All	All	2587/2708 (96%)	1899 (73%)	430 (17%)	258 (10%)	1 7

All (258) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	11	ALA
2	B	18	GLN
2	B	23	ASN
2	B	27	LYS
2	B	30	ILE
2	B	38	HIS
2	B	134	LEU
2	B	156	LEU
2	B	159	ALA
2	B	169	HIS
3	C	5	HIS
3	C	105	VAL
3	C	126	ARG
3	C	145	ALA
3	C	155	ARG
4	D	31	CYS
4	D	32	LYS
4	D	36	ALA
4	D	37	PRO
4	D	39	GLN
4	D	44	LYS
4	D	128	VAL
4	D	130	ASN
4	D	146	GLU
4	D	148	ALA
4	D	191	SER

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Mol	Chain	Res	Type
5	E	23	THR
5	E	24	VAL
5	E	52	ALA
5	E	72	ASN
5	E	74	ALA
5	E	110	MET
5	E	111	ARG
5	E	129	SER
5	E	137	ARG
5	E	151	MET
6	F	38	ARG
6	F	88	MET
7	G	13	PRO
7	G	31	VAL
7	G	108	ARG
8	H	57	GLU
8	H	73	SER
8	H	74	ILE
8	H	77	VAL
8	H	92	PRO
8	H	101	ALA
9	I	33	SER
9	I	43	ALA
9	I	71	ILE
9	I	97	LEU
9	I	98	ARG
9	I	111	GLU
9	I	121	ARG
9	I	126	PHE
10	J	35	GLN
10	J	54	SER
10	J	58	ASN
10	J	62	ARG
10	J	89	ARG
11	K	15	VAL
11	K	29	THR
11	K	51	PHE
11	K	72	ALA
11	K	102	ALA
12	L	15	VAL
12	L	16	ALA
12	L	25	ALA

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Mol	Chain	Res	Type
12	L	26	CYS
12	L	60	PHE
12	L	101	LEU
12	L	102	ASP
12	L	103	CYS
12	L	112	ALA
12	L	122	LYS
13	M	4	ALA
13	M	6	ILE
13	M	10	ASP
13	M	12	LYS
13	M	22	TYR
13	M	99	GLN
13	M	112	ARG
14	N	48	GLN
14	N	61	ASN
14	N	91	GLU
14	N	99	SER
15	O	45	HIS
15	O	86	LEU
16	P	12	LYS
16	P	48	GLU
17	Q	17	GLU
17	Q	31	PRO
17	Q	48	GLU
18	R	38	ILE
18	R	39	VAL
18	R	71	ASP
20	T	3	ILE
20	T	5	SER
20	T	66	ILE
20	T	85	LEU
21	U	11	PHE
21	U	44	ARG
21	U	51	ALA
22	W	117	LYS
22	W	216	SER
22	W	303	LYS
22	W	307	ASP
2	B	35	ASN
2	B	40	ILE
2	B	66	ILE

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Mol	Chain	Res	Type
3	C	50	SER
3	C	143	LEU
3	C	187	GLU
4	D	3	TYR
4	D	28	ASP
4	D	29	THR
4	D	127	ARG
4	D	139	ASN
4	D	152	SER
4	D	159	GLU
4	D	174	ALA
5	E	76	ASN
5	E	147	ASN
5	E	150	GLU
5	E	154	ALA
6	F	57	ALA
7	G	5	VAL
7	G	10	LYS
7	G	34	LYS
7	G	114	SER
8	H	84	ILE
8	H	102	VAL
9	I	128	LYS
10	J	57	VAL
10	J	74	VAL
10	J	75	ASP
11	K	50	GLY
11	K	114	PRO
12	L	41	PRO
12	L	46	SER
13	M	46	GLU
13	M	65	GLU
13	M	110	GLY
14	N	54	SER
15	O	23	SER
15	O	46	LYS
16	P	43	ALA
16	P	46	LYS
17	Q	69	THR
17	Q	75	VAL
18	R	47	ARG
19	S	8	PRO

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Mol	Chain	Res	Type
21	U	9	GLU
21	U	21	SER
21	U	22	CYS
21	U	24	LYS
22	W	106	VAL
22	W	275	LEU
22	W	302	CYS
2	B	120	SER
2	B	194	GLY
2	B	205	ALA
3	C	12	GLY
4	D	40	HIS
4	D	204	SER
5	E	10	LEU
7	G	95	ARG
7	G	146	ALA
8	H	76	ARG
9	I	4	GLN
9	I	42	THR
9	I	58	GLU
9	I	109	GLN
10	J	39	PRO
10	J	59	LYS
10	J	90	LEU
10	J	94	ALA
11	K	28	ASN
11	K	88	PRO
11	K	91	GLY
11	K	127	ARG
12	L	116	TYR
13	M	18	LEU
14	N	16	ALA
14	N	21	ALA
14	N	23	ARG
14	N	24	ALA
16	P	13	LYS
16	P	25	ARG
18	R	33	THR
18	R	72	ARG
22	W	110	PRO
22	W	120	ALA
22	W	121	ALA

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Mol	Chain	Res	Type
2	B	76	SER
2	B	81	ASP
2	B	127	LYS
2	B	140	LEU
2	B	211	LEU
2	B	219	THR
3	C	48	LYS
6	F	13	ASP
6	F	56	LYS
7	G	77	ARG
7	G	148	LYS
12	L	74	GLN
13	M	36	ALA
16	P	10	GLY
16	P	36	VAL
19	S	22	VAL
20	T	84	LYS
21	U	36	PHE
21	U	40	PRO
22	W	218	VAL
22	W	301	ASP
2	B	33	ALA
3	C	88	LYS
3	C	93	ILE
3	C	148	ILE
3	C	173	PRO
4	D	166	LYS
5	E	146	MET
8	H	100	ILE
9	I	114	LYS
9	I	124	PRO
11	K	120	CYS
11	K	123	PRO
14	N	20	PHE
15	O	72	LYS
17	Q	12	VAL
21	U	39	LYS
22	W	104	THR
2	B	67	LEU
2	B	74	ALA
3	C	4	VAL
3	C	175	HIS

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Mol	Chain	Res	Type
5	E	157	GLY
9	I	49	GLN
13	M	111	PRO
19	S	46	LEU
19	S	66	VAL
2	B	209	VAL
3	C	9	ILE
8	H	56	PRO
11	K	73	VAL
13	M	3	ILE
17	Q	4	ILE
18	R	25	ILE
4	D	167	PRO
5	E	104	ILE
6	F	49	TYR
6	F	12	PRO
9	I	69	GLY
16	P	49	GLY
5	E	152	VAL
14	N	29	ILE
3	C	107	LYS
18	R	32	ILE

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 PDB entries followed by that with respect to all EM entries.

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	B	180/180 (100%)	154 (86%)	26 (14%)	3 13
3	C	170/170 (100%)	144 (85%)	26 (15%)	3 12
4	D	172/172 (100%)	147 (86%)	25 (14%)	3 13
5	E	113/113 (100%)	94 (83%)	19 (17%)	2 10
6	F	87/87 (100%)	72 (83%)	15 (17%)	2 9
7	G	124/124 (100%)	111 (90%)	13 (10%)	6 21
8	H	104/104 (100%)	83 (80%)	21 (20%)	1 7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
9	I	105/105 (100%)	87 (83%)	18 (17%)	2 10
10	J	86/86 (100%)	71 (83%)	15 (17%)	2 9
11	K	90/90 (100%)	73 (81%)	17 (19%)	1 8
12	L	103/103 (100%)	86 (84%)	17 (16%)	2 10
13	M	92/92 (100%)	73 (79%)	19 (21%)	1 6
14	N	79/83 (95%)	71 (90%)	8 (10%)	7 23
15	O	76/76 (100%)	66 (87%)	10 (13%)	4 15
16	P	65/65 (100%)	55 (85%)	10 (15%)	2 12
17	Q	74/74 (100%)	50 (68%)	24 (32%)	0 2
18	R	48/48 (100%)	44 (92%)	4 (8%)	10 30
19	S	70/70 (100%)	58 (83%)	12 (17%)	2 10
20	T	65/65 (100%)	55 (85%)	10 (15%)	2 12
21	U	44/44 (100%)	42 (96%)	2 (4%)	24 46
22	W	238/302 (79%)	206 (87%)	32 (13%)	4 14
All	All	2185/2253 (97%)	1842 (84%)	343 (16%)	4 12

All (343) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	17	HIS
2	B	19	THR
2	B	26	MET
2	B	34	ARG
2	B	81	ASP
2	B	85	SER
2	B	86	CYS
2	B	88	GLN
2	B	89	PHE
2	B	91	VAL
2	B	100	LEU
2	B	101	THR
2	B	105	THR
2	B	106	VAL
2	B	107	ARG
2	B	119	GLN
2	B	122	ASP
2	B	128	LEU

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Mol	Chain	Res	Type
2	B	138	ARG
2	B	150	ILE
2	B	187	ASP
2	B	188	THR
2	B	189	ASN
2	B	198	VAL
2	B	202	ASN
2	B	219	THR
3	C	3	LYS
3	C	4	VAL
3	C	13	ILE
3	C	18	ASN
3	C	54	ILE
3	C	57	GLU
3	C	63	ILE
3	C	69	THR
3	C	71	ARG
3	C	79	LYS
3	C	102	ILE
3	C	114	LEU
3	C	117	ASP
3	C	123	LEU
3	C	124	GLU
3	C	139	ASN
3	C	148	ILE
3	C	149	LYS
3	C	153	SER
3	C	166	TRP
3	C	172	VAL
3	C	178	ARG
3	C	181	ILE
3	C	184	ASN
3	C	185	THR
3	C	200	TRP
4	D	11	SER
4	D	19	PHE
4	D	33	ILE
4	D	35	GLN
4	D	39	GLN
4	D	46	ARG
4	D	49	ASP
4	D	54	LEU

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Mol	Chain	Res	Type
4	D	55	ARG
4	D	56	GLU
4	D	67	LEU
4	D	69	ARG
4	D	88	ASN
4	D	89	LEU
4	D	117	VAL
4	D	122	ILE
4	D	123	MET
4	D	124	VAL
4	D	146	GLU
4	D	158	LEU
4	D	163	GLN
4	D	165	GLU
4	D	166	LYS
4	D	172	VAL
4	D	173	ASP
5	E	10	LEU
5	E	14	LEU
5	E	19	ARG
5	E	31	SER
5	E	47	PHE
5	E	54	GLU
5	E	59	ILE
5	E	63	MET
5	E	73	VAL
5	E	77	ASN
5	E	79	THR
5	E	84	VAL
5	E	95	MET
5	E	104	ILE
5	E	115	GLU
5	E	123	LEU
5	E	127	TYR
5	E	136	VAL
5	E	145	ASN
6	F	5	GLU
6	F	10	VAL
6	F	13	ASP
6	F	15	SER
6	F	30	THR
6	F	36	ILE

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Mol	Chain	Res	Type
6	F	38	ARG
6	F	56	LYS
6	F	67	PRO
6	F	70	VAL
6	F	73	GLU
6	F	81	ASN
6	F	84	VAL
6	F	88	MET
6	F	94	HIS
7	G	8	GLN
7	G	9	ARG
7	G	14	ASP
7	G	30	MET
7	G	31	VAL
7	G	35	LYS
7	G	37	THR
7	G	75	LYS
7	G	92	PRO
7	G	113	LYS
7	G	124	SER
7	G	134	VAL
7	G	135	LYS
8	H	3	GLN
8	H	6	ILE
8	H	8	ASP
8	H	10	LEU
8	H	11	THR
8	H	12	ARG
8	H	17	GLN
8	H	33	VAL
8	H	40	LYS
8	H	46	GLU
8	H	53	ASP
8	H	58	LEU
8	H	59	GLU
8	H	70	VAL
8	H	76	ARG
8	H	78	SER
8	H	91	LEU
8	H	102	VAL
8	H	104	SER
8	H	110	MET

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Mol	Chain	Res	Type
8	H	126	CYS
9	I	29	ILE
9	I	36	GLN
9	I	45	MET
9	I	56	MET
9	I	57	VAL
9	I	60	LEU
9	I	72	SER
9	I	86	LEU
9	I	90	ASP
9	I	91	GLU
9	I	104	THR
9	I	105	ARG
9	I	115	VAL
9	I	122	ARG
9	I	123	ARG
9	I	124	PRO
9	I	126	PHE
9	I	128	LYS
10	J	8	ILE
10	J	11	LYS
10	J	18	ILE
10	J	20	GLN
10	J	28	THR
10	J	35	GLN
10	J	48	ARG
10	J	59	LYS
10	J	63	ASP
10	J	71	LEU
10	J	72	ARG
10	J	73	LEU
10	J	78	GLU
10	J	88	MET
10	J	102	LEU
11	K	17	ASP
11	K	19	VAL
11	K	22	ILE
11	K	25	SER
11	K	30	ILE
11	K	32	THR
11	K	39	ASN
11	K	45	THR

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Mol	Chain	Res	Type
11	K	54	SER
11	K	55	ARG
11	K	59	PRO
11	K	79	LYS
11	K	86	LYS
11	K	93	GLU
11	K	95	THR
11	K	123	PRO
11	K	128	VAL
12	L	2	THR
12	L	5	GLN
12	L	9	LYS
12	L	11	ARG
12	L	13	ARG
12	L	15	VAL
12	L	19	ASN
12	L	20	VAL
12	L	32	VAL
12	L	33	CYS
12	L	46	SER
12	L	58	ASN
12	L	66	ILE
12	L	77	SER
12	L	102	ASP
12	L	119	LYS
12	L	120	ARG
13	M	10	ASP
13	M	15	VAL
13	M	26	LYS
13	M	27	THR
13	M	33	LEU
13	M	38	ILE
13	M	44	ILE
13	M	52	ILE
13	M	59	VAL
13	M	71	GLU
13	M	72	ILE
13	M	78	ARG
13	M	84	CYS
13	M	92	ARG
13	M	99	GLN
13	M	100	ARG

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Mol	Chain	Res	Type
13	M	111	PRO
13	M	112	ARG
13	M	113	LYS
14	N	46	LYS
14	N	48	GLN
14	N	49	THR
14	N	51	PRO
14	N	62	ARG
14	N	81	ILE
14	N	84	ARG
14	N	100	TRP
15	O	2	LEU
15	O	13	GLU
15	O	41	HIS
15	O	45	HIS
15	O	49	HIS
15	O	60	SER
15	O	61	GLN
15	O	77	TYR
15	O	79	GLN
15	O	81	ILE
16	P	1	MET
16	P	25	ARG
16	P	31	ARG
16	P	46	LYS
16	P	48	GLU
16	P	55	ASP
16	P	57	ILE
16	P	59	HIS
16	P	60	TRP
16	P	68	SER
17	Q	5	ARG
17	Q	8	GLN
17	Q	12	VAL
17	Q	16	MET
17	Q	19	SER
17	Q	24	ILE
17	Q	26	ARG
17	Q	28	VAL
17	Q	38	LYS
17	Q	40	THR
17	Q	41	THR

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Mol	Chain	Res	Type
17	Q	43	LEU
17	Q	44	HIS
17	Q	45	VAL
17	Q	46	HIS
17	Q	47	ASP
17	Q	57	VAL
17	Q	61	ARG
17	Q	64	ARG
17	Q	66	LEU
17	Q	70	LYS
17	Q	73	THR
17	Q	75	VAL
17	Q	80	LYS
18	R	27	THR
18	R	37	LYS
18	R	53	GLN
18	R	69	TYR
19	S	5	LYS
19	S	9	PHE
19	S	16	LYS
19	S	33	TRP
19	S	34	SER
19	S	46	LEU
19	S	52	ASN
19	S	60	PHE
19	S	64	GLU
19	S	66	VAL
19	S	69	LYS
19	S	79	TYR
20	T	22	SER
20	T	27	MET
20	T	29	THR
20	T	47	GLN
20	T	56	ILE
20	T	58	ASP
20	T	59	ARG
20	T	65	LEU
20	T	69	ASN
20	T	79	THR
21	U	6	ARG
21	U	45	LYS
22	W	45	ILE

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Mol	Chain	Res	Type
22	W	55	GLU
22	W	68	ARG
22	W	70	ILE
22	W	93	VAL
22	W	98	GLU
22	W	103	ARG
22	W	106	VAL
22	W	109	ARG
22	W	110	PRO
22	W	116	VAL
22	W	123	ILE
22	W	126	ILE
22	W	132	ILE
22	W	141	ILE
22	W	146	VAL
22	W	149	GLU
22	W	156	ILE
22	W	175	GLU
22	W	192	SER
22	W	193	HIS
22	W	194	THR
22	W	220	LYS
22	W	221	SER
22	W	223	LEU
22	W	224	LEU
22	W	233	GLU
22	W	255	LEU
22	W	284	THR
22	W	307	ASP
22	W	312	ILE
22	W	321	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (50) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	41	ASN
2	B	92	ASN
2	B	169	HIS
2	B	189	ASN
3	C	5	HIS
3	C	18	ASN
3	C	122	GLN

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Mol	Chain	Res	Type
3	C	184	ASN
4	D	163	GLN
5	E	131	ASN
6	F	14	GLN
6	F	46	GLN
6	F	58	HIS
7	G	27	ASN
7	G	141	HIS
8	H	17	GLN
8	H	37	ASN
9	I	3	ASN
10	J	15	HIS
10	J	20	GLN
10	J	35	GLN
10	J	58	ASN
11	K	21	HIS
11	K	23	HIS
12	L	4	ASN
13	M	99	GLN
14	N	70	HIS
15	O	37	HIS
15	O	45	HIS
15	O	49	HIS
15	O	50	HIS
16	P	59	HIS
17	Q	8	GLN
17	Q	44	HIS
17	Q	50	ASN
18	R	73	HIS
19	S	52	ASN
20	T	47	GLN
20	T	60	GLN
20	T	67	HIS
20	T	74	HIS
22	W	51	HIS
22	W	62	HIS
22	W	139	ASN
22	W	193	HIS
22	W	215	GLN
22	W	237	ASN
22	W	257	HIS
22	W	260	HIS

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Mol	Chain	Res	Type
22	W	291	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1532/1533 (99%)	489 (31%)	200 (13%)

All (489) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	3	A
1	A	4	U
1	A	5	U
1	A	6	G
1	A	7	A
1	A	8	A
1	A	9	G
1	A	13	U
1	A	14	U
1	A	22	G
1	A	31	G
1	A	32	A
1	A	39	G
1	A	47	C
1	A	48	C
1	A	49	U
1	A	50	A
1	A	51	A
1	A	52	C
1	A	60	A
1	A	61	G
1	A	65	A
1	A	66	A
1	A	70	U
1	A	71	A
1	A	72	A
1	A	73	C
1	A	74	A
1	A	75	G
1	A	76	G
1	A	77	A

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Mol	Chain	Res	Type
1	A	79	G
1	A	81	A
1	A	82	G
1	A	83	C
1	A	84	U
1	A	85	U
1	A	86	G
1	A	87	C
1	A	88	U
1	A	89	U
1	A	90	C
1	A	91	U
1	A	92	U
1	A	94	G
1	A	95	C
1	A	97	G
1	A	107	G
1	A	108	G
1	A	109	A
1	A	110	C
1	A	115	G
1	A	116	A
1	A	119	A
1	A	120	A
1	A	121	U
1	A	127	G
1	A	129	A
1	A	130	A
1	A	131	A
1	A	132	C
1	A	134	G
1	A	135	C
1	A	138	G
1	A	141	G
1	A	142	G
1	A	143	A
1	A	159	G
1	A	160	A
1	A	161	A
1	A	163	C
1	A	164	G
1	A	167	A

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Mol	Chain	Res	Type
1	A	168	G
1	A	173	U
1	A	174	A
1	A	177	G
1	A	181	A
1	A	182	A
1	A	183	C
1	A	195	A
1	A	197	A
1	A	198	G
1	A	199	A
1	A	202	G
1	A	204	G
1	A	205	A
1	A	208	U
1	A	209	U
1	A	210	C
1	A	211	G
1	A	212	G
1	A	214	C
1	A	219	U
1	A	232	G
1	A	240	G
1	A	243	A
1	A	244	U
1	A	245	U
1	A	247	G
1	A	251	G
1	A	252	U
1	A	258	G
1	A	266	G
1	A	267	C
1	A	268	U
1	A	273	U
1	A	274	A
1	A	275	G
1	A	280	C
1	A	281	G
1	A	285	C
1	A	289	G
1	A	299	G
1	A	305	G

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Mol	Chain	Res	Type
1	A	306	A
1	A	307	C
1	A	315	A
1	A	316	C
1	A	320	A
1	A	321	A
1	A	328	C
1	A	329	A
1	A	330	C
1	A	331	G
1	A	332	G
1	A	344	A
1	A	345	C
1	A	346	G
1	A	347	G
1	A	351	G
1	A	352	C
1	A	353	A
1	A	354	G
1	A	363	A
1	A	366	A
1	A	367	U
1	A	368	U
1	A	369	G
1	A	372	C
1	A	373	A
1	A	374	A
1	A	384	G
1	A	388	G
1	A	389	A
1	A	390	U
1	A	392	C
1	A	398	U
1	A	405	U
1	A	406	G
1	A	411	A
1	A	412	A
1	A	413	G
1	A	414	A
1	A	422	C
1	A	423	G
1	A	424	G

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Mol	Chain	Res	Type
1	A	428	G
1	A	429	U
1	A	430	A
1	A	431	A
1	A	439	U
1	A	441	A
1	A	448	A
1	A	451	A
1	A	452	A
1	A	458	U
1	A	459	A
1	A	461	A
1	A	462	G
1	A	463	U
1	A	466	A
1	A	467	U
1	A	468	A
1	A	469	C
1	A	481	G
1	A	482	A
1	A	484	G
1	A	485	U
1	A	486	U
1	A	496	A
1	A	497	G
1	A	498	A
1	A	499	A
1	A	500	G
1	A	501	C
1	A	508	U
1	A	509	A
1	A	511	C
1	A	512	U
1	A	518	C
1	A	523	A
1	A	527	G
1	A	530	G
1	A	531	U
1	A	532	A
1	A	533	A
1	A	534	U
1	A	535	A

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Mol	Chain	Res	Type
1	A	536	C
1	A	537	G
1	A	546	A
1	A	548	G
1	A	549	C
1	A	556	C
1	A	559	A
1	A	560	A
1	A	562	U
1	A	563	A
1	A	564	C
1	A	566	G
1	A	567	G
1	A	572	A
1	A	573	A
1	A	574	A
1	A	575	G
1	A	576	C
1	A	577	G
1	A	579	A
1	A	588	G
1	A	595	A
1	A	596	A
1	A	604	G
1	A	606	G
1	A	607	A
1	A	610	U
1	A	619	U
1	A	629	A
1	A	631	C
1	A	632	U
1	A	633	G
1	A	642	A
1	A	649	A
1	A	653	U
1	A	661	G
1	A	663	A
1	A	665	A
1	A	694	A
1	A	702	A
1	A	703	G
1	A	718	A

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Mol	Chain	Res	Type
1	A	719	C
1	A	720	C
1	A	721	G
1	A	722	G
1	A	723	U
1	A	724	G
1	A	731	G
1	A	733	G
1	A	744	C
1	A	745	G
1	A	748	G
1	A	754	C
1	A	755	G
1	A	767	A
1	A	776	G
1	A	777	A
1	A	787	A
1	A	788	U
1	A	790	A
1	A	792	A
1	A	793	U
1	A	794	A
1	A	811	C
1	A	812	G
1	A	813	U
1	A	815	A
1	A	816	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	828	U
1	A	829	G
1	A	832	G
1	A	843	U
1	A	844	G
1	A	845	A
1	A	846	G
1	A	855	U
1	A	861	G
1	A	870	U
1	A	871	U
1	A	874	G

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Mol	Chain	Res	Type
1	A	884	U
1	A	885	G
1	A	890	G
1	A	914	A
1	A	915	A
1	A	926	G
1	A	927	G
1	A	932	C
1	A	934	C
1	A	935	A
1	A	936	C
1	A	944	G
1	A	960	U
1	A	961	U
1	A	966	G
1	A	967	C
1	A	968	A
1	A	969	A
1	A	970	C
1	A	971	G
1	A	972	C
1	A	974	A
1	A	975	A
1	A	976	G
1	A	977	A
1	A	982	U
1	A	983	A
1	A	992	U
1	A	993	G
1	A	994	A
1	A	1003	G
1	A	1004	A
1	A	1008	U
1	A	1017	U
1	A	1018	G
1	A	1022	A
1	A	1028	C
1	A	1029	U
1	A	1030	U
1	A	1031	C
1	A	1032	G
1	A	1033	G

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Mol	Chain	Res	Type
1	A	1034	G
1	A	1036	A
1	A	1037	C
1	A	1050	G
1	A	1052	U
1	A	1053	G
1	A	1054	C
1	A	1055	A
1	A	1064	G
1	A	1065	U
1	A	1066	C
1	A	1067	A
1	A	1078	U
1	A	1079	G
1	A	1085	U
1	A	1086	U
1	A	1087	G
1	A	1088	G
1	A	1091	U
1	A	1092	A
1	A	1094	G
1	A	1095	U
1	A	1100	C
1	A	1101	A
1	A	1102	A
1	A	1104	G
1	A	1111	A
1	A	1112	C
1	A	1113	C
1	A	1124	G
1	A	1125	U
1	A	1126	U
1	A	1127	G
1	A	1129	C
1	A	1130	A
1	A	1133	G
1	A	1135	U
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1140	C
1	A	1141	C

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Mol	Chain	Res	Type
1	A	1144	G
1	A	1145	A
1	A	1151	A
1	A	1152	A
1	A	1158	C
1	A	1159	U
1	A	1160	G
1	A	1161	C
1	A	1162	C
1	A	1167	A
1	A	1168	U
1	A	1169	A
1	A	1181	G
1	A	1182	G
1	A	1185	G
1	A	1186	G
1	A	1188	A
1	A	1189	U
1	A	1190	G
1	A	1191	A
1	A	1192	C
1	A	1196	A
1	A	1197	A
1	A	1198	G
1	A	1200	C
1	A	1201	A
1	A	1202	U
1	A	1211	U
1	A	1213	A
1	A	1223	C
1	A	1224	U
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1228	C
1	A	1229	A
1	A	1238	A
1	A	1239	A
1	A	1240	U
1	A	1241	G
1	A	1250	A
1	A	1252	A

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Mol	Chain	Res	Type
1	A	1256	A
1	A	1257	A
1	A	1258	G
1	A	1275	A
1	A	1278	G
1	A	1279	G
1	A	1280	A
1	A	1281	C
1	A	1282	C
1	A	1283	U
1	A	1286	U
1	A	1287	A
1	A	1293	C
1	A	1297	G
1	A	1298	U
1	A	1299	A
1	A	1300	G
1	A	1303	C
1	A	1304	G
1	A	1305	G
1	A	1308	U
1	A	1315	U
1	A	1316	G
1	A	1320	C
1	A	1322	C
1	A	1323	G
1	A	1332	A
1	A	1337	G
1	A	1338	G
1	A	1345	U
1	A	1346	A
1	A	1348	U
1	A	1349	A
1	A	1353	G
1	A	1358	U
1	A	1359	C
1	A	1362	A
1	A	1363	A
1	A	1364	U
1	A	1365	G
1	A	1371	G
1	A	1380	U

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Mol	Chain	Res	Type
1	A	1381	U
1	A	1394	A
1	A	1396	A
1	A	1397	C
1	A	1398	A
1	A	1399	C
1	A	1400	C
1	A	1432	G
1	A	1433	A
1	A	1440	U
1	A	1441	A
1	A	1446	A
1	A	1448	C
1	A	1451	U
1	A	1452	C
1	A	1453	G
1	A	1454	G
1	A	1469	C
1	A	1470	U
1	A	1482	G
1	A	1492	A
1	A	1493	A
1	A	1494	G
1	A	1497	G
1	A	1498	U
1	A	1499	A
1	A	1502	A
1	A	1503	A
1	A	1505	G
1	A	1506	U
1	A	1507	A
1	A	1517	G
1	A	1529	G
1	A	1530	G
1	A	1531	A
1	A	1532	U
1	A	1533	C
1	A	1534	A

All (200) RNA pucker outliers are listed below:

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Mol	Chain	Res	Type

Mol	Chain	Res	Type
1	A	5	U
1	A	7	A
1	A	8	A
1	A	13	U
1	A	30	U
1	A	31	G
1	A	47	C
1	A	49	U
1	A	51	A
1	A	60	A
1	A	65	A
1	A	71	A
1	A	73	C
1	A	75	G
1	A	81	A
1	A	84	U
1	A	86	G
1	A	87	C
1	A	90	C
1	A	92	U
1	A	94	G
1	A	95	C
1	A	109	A
1	A	115	G
1	A	119	A
1	A	120	A
1	A	129	A
1	A	130	A
1	A	131	A
1	A	134	G
1	A	140	U
1	A	167	A
1	A	168	G
1	A	173	U
1	A	178	C
1	A	181	A
1	A	183	C
1	A	197	A
1	A	198	G
1	A	203	G
1	A	204	G

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Mol	Chain	Res	Type
1	A	210	C
1	A	243	A
1	A	246	A
1	A	251	G
1	A	256	U
1	A	266	G
1	A	267	C
1	A	274	A
1	A	275	G
1	A	279	A
1	A	280	C
1	A	305	G
1	A	315	A
1	A	320	A
1	A	327	A
1	A	344	A
1	A	345	C
1	A	346	G
1	A	347	G
1	A	351	G
1	A	352	C
1	A	366	A
1	A	368	U
1	A	372	C
1	A	373	A
1	A	388	G
1	A	391	G
1	A	408	A
1	A	412	A
1	A	422	C
1	A	428	G
1	A	429	U
1	A	430	A
1	A	438	U
1	A	450	G
1	A	451	A
1	A	467	U
1	A	481	G
1	A	484	G
1	A	485	U
1	A	495	A
1	A	496	A

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Mol	Chain	Res	Type
1	A	499	A
1	A	500	G
1	A	505	G
1	A	508	U
1	A	511	C
1	A	513	C
1	A	530	G
1	A	531	U
1	A	532	A
1	A	535	A
1	A	536	C
1	A	547	A
1	A	548	G
1	A	559	A
1	A	563	A
1	A	566	G
1	A	575	G
1	A	576	C
1	A	637	C
1	A	641	U
1	A	652	U
1	A	681	A
1	A	686	U
1	A	717	U
1	A	720	C
1	A	721	G
1	A	723	U
1	A	744	C
1	A	754	C
1	A	772	U
1	A	792	A
1	A	793	U
1	A	817	C
1	A	820	U
1	A	823	C
1	A	843	U
1	A	845	A
1	A	870	U
1	A	884	U
1	A	889	A
1	A	913	A
1	A	914	A

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Mol	Chain	Res	Type
1	A	922	G
1	A	934	C
1	A	941	G
1	A	960	U
1	A	966	G
1	A	974	A
1	A	982	U
1	A	991	U
1	A	1030	U
1	A	1036	A
1	A	1041	G
1	A	1046	A
1	A	1049	U
1	A	1053	G
1	A	1054	C
1	A	1064	G
1	A	1066	C
1	A	1078	U
1	A	1087	G
1	A	1094	G
1	A	1101	A
1	A	1111	A
1	A	1129	C
1	A	1136	C
1	A	1140	C
1	A	1151	A
1	A	1160	G
1	A	1161	C
1	A	1167	A
1	A	1168	U
1	A	1185	G
1	A	1188	A
1	A	1189	U
1	A	1190	G
1	A	1191	A
1	A	1197	A
1	A	1201	A
1	A	1223	C
1	A	1224	U
1	A	1228	C
1	A	1239	A
1	A	1263	C

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Mol	Chain	Res	Type
1	A	1280	A
1	A	1282	C
1	A	1283	U
1	A	1285	A
1	A	1298	U
1	A	1299	A
1	A	1303	C
1	A	1319	A
1	A	1331	G
1	A	1336	C
1	A	1337	G
1	A	1345	U
1	A	1348	U
1	A	1358	U
1	A	1362	A
1	A	1363	A
1	A	1364	U
1	A	1380	U
1	A	1396	A
1	A	1399	C
1	A	1432	G
1	A	1440	U
1	A	1452	C
1	A	1477	U
1	A	1482	G
1	A	1493	A
1	A	1494	G
1	A	1498	U
1	A	1502	A
1	A	1506	U
1	A	1530	G
1	A	1532	U
1	A	1533	C

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	70:U	O3'	71:A	P	1.39

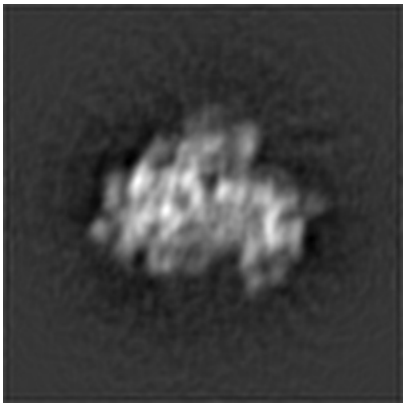
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-1884. These allow visual inspection of the internal detail of the map and identification of artifacts.

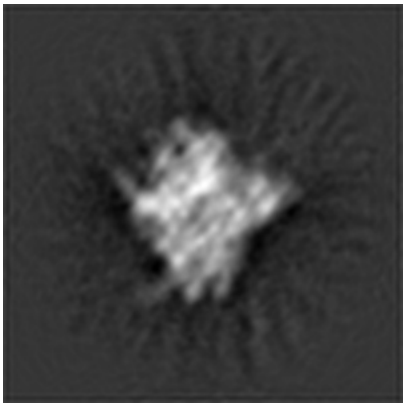
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

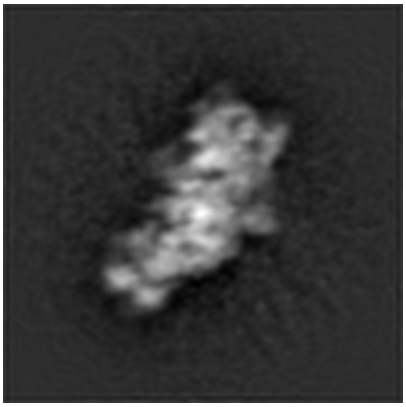
6.1.1 Primary map



X



Y

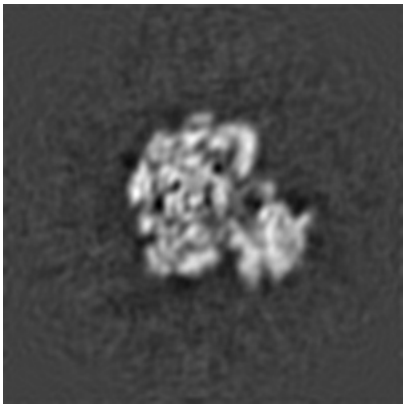


Z

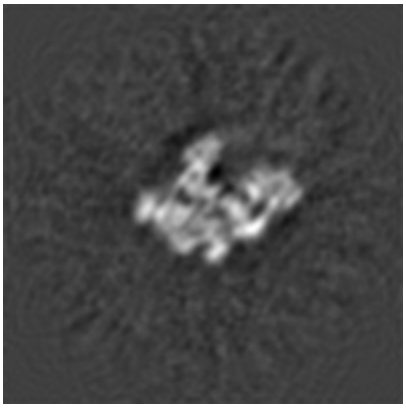
The images above show the map projected in three orthogonal directions.

6.2 Central slices

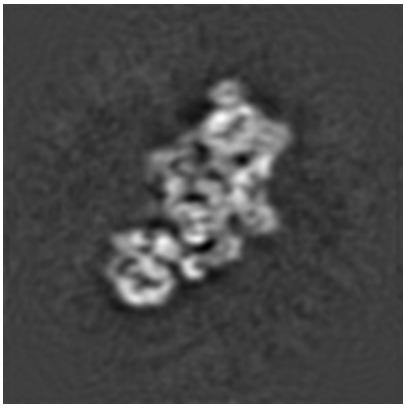
6.2.1 Primary map



X Index: 62



Y Index: 62

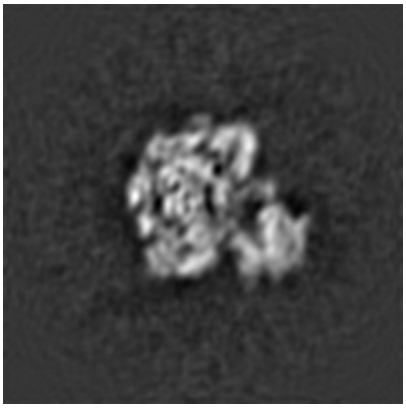


Z Index: 62

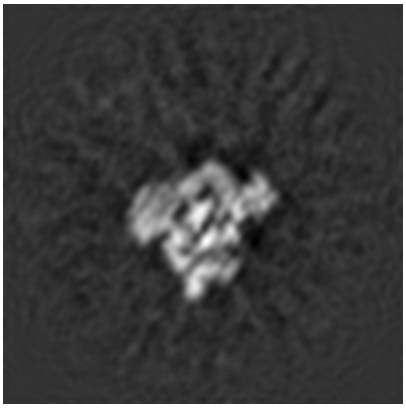
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

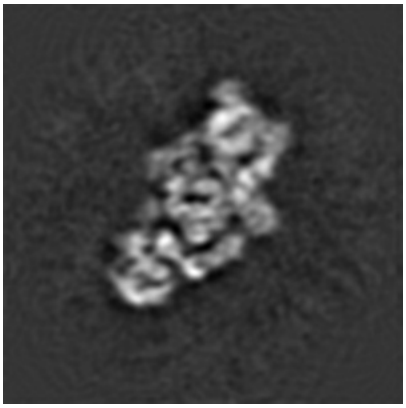
6.3.1 Primary map



X Index: 61



Y Index: 51

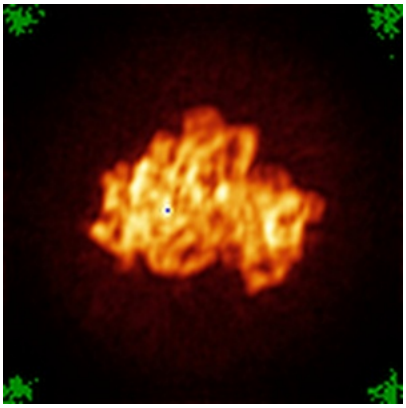


Z Index: 63

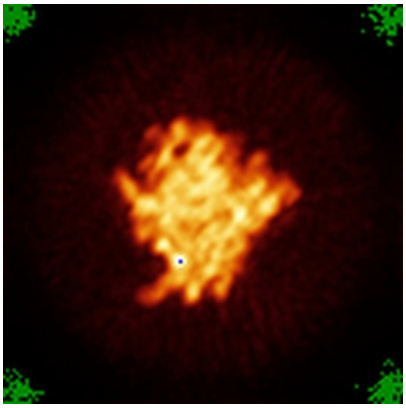
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

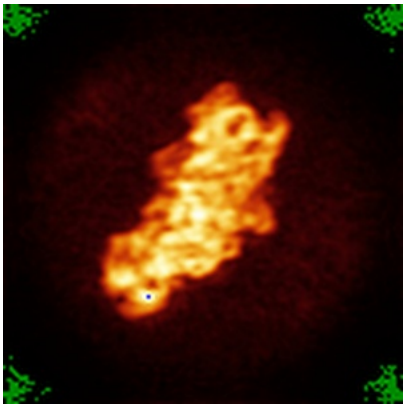
6.4.1 Primary map



X



Y

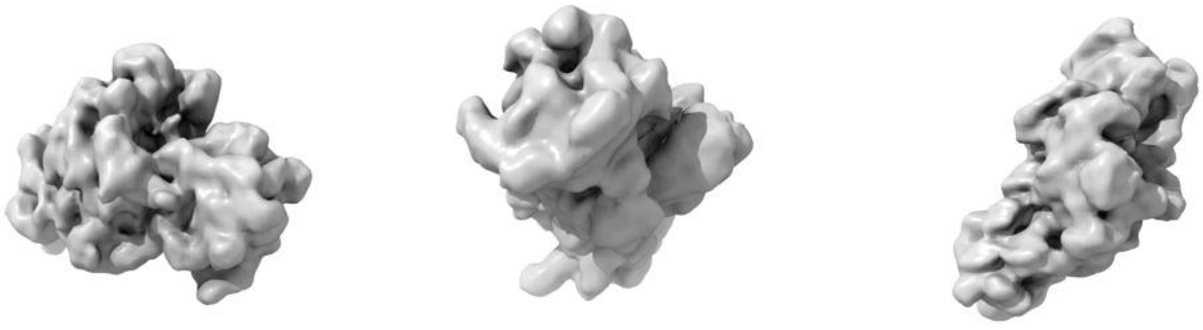


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 3.16. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

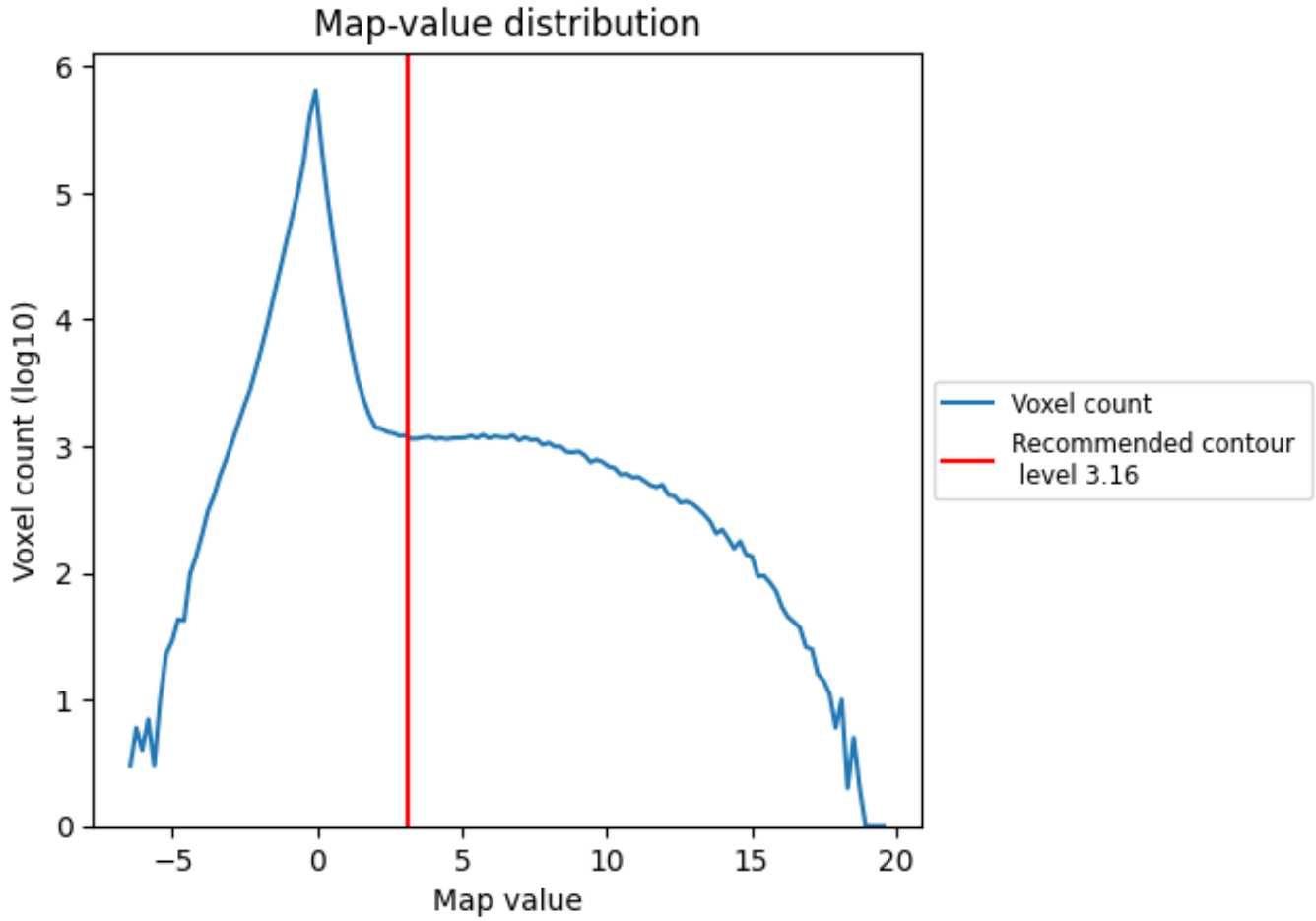
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

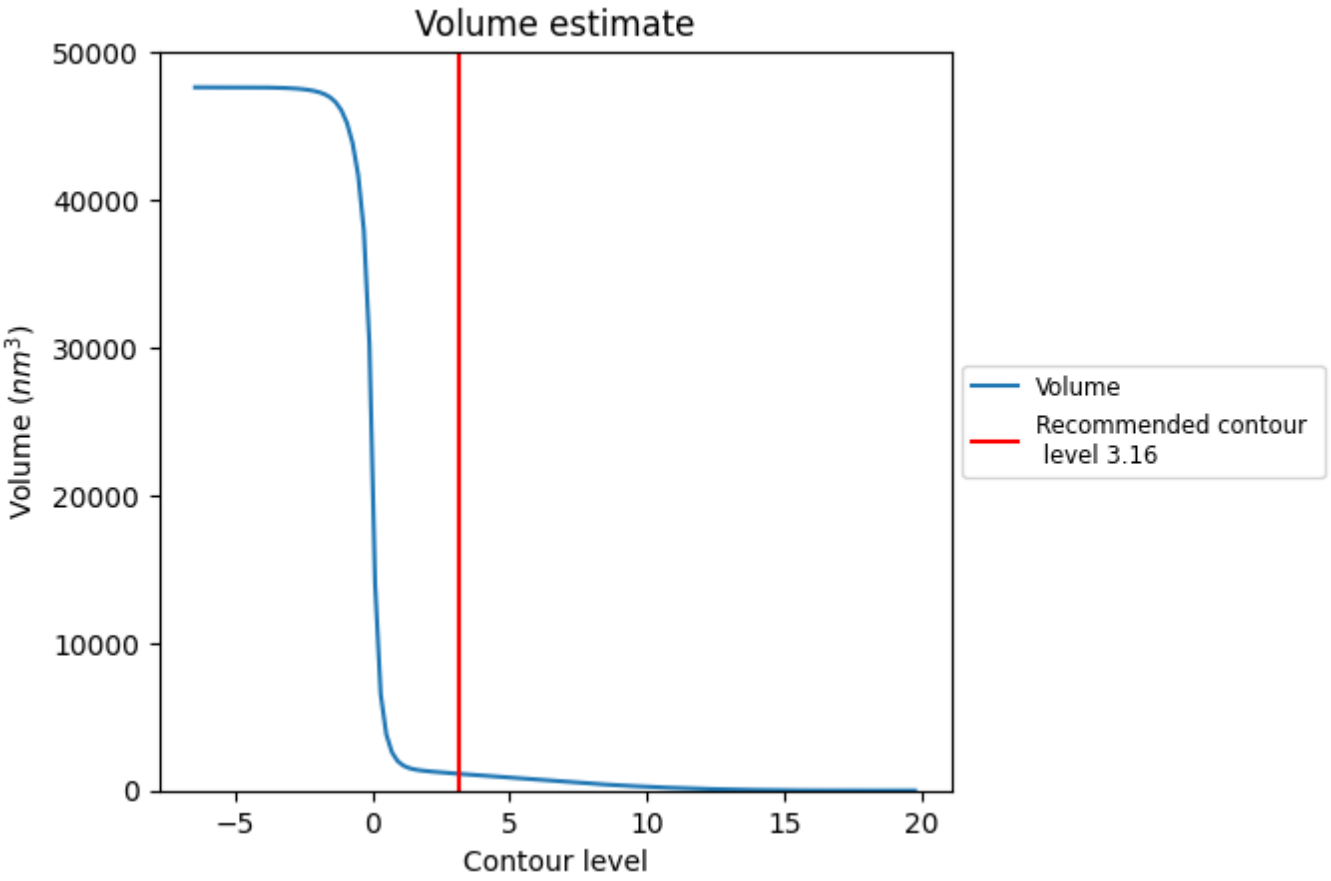
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

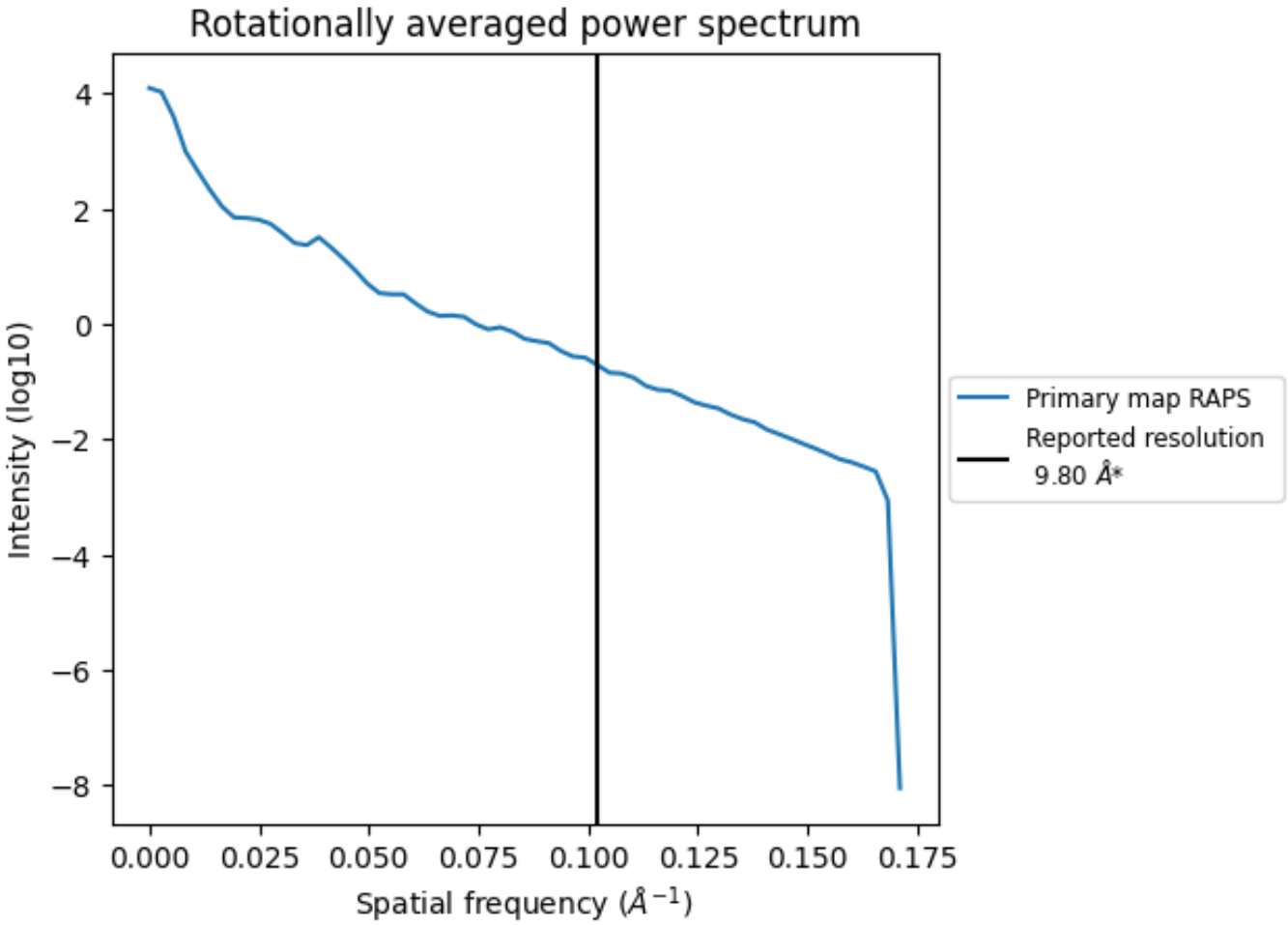
7.2 Volume estimate



The volume at the recommended contour level is 1134 nm^3; this corresponds to an approximate mass of 1025 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.102 Å^{-1}

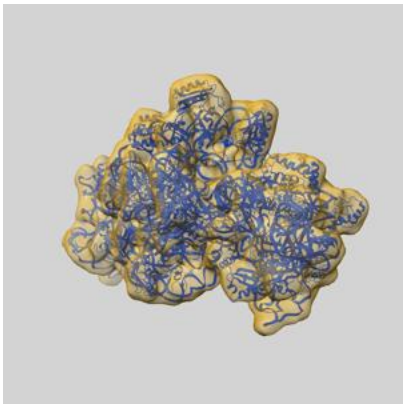
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

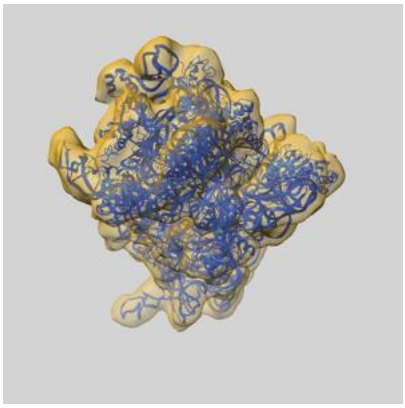
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-1884 and PDB model 2YKR. Per-residue inclusion information can be found in section 3 on page 8.

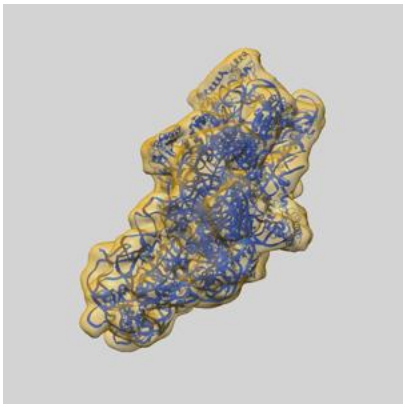
9.1 Map-model overlay



X



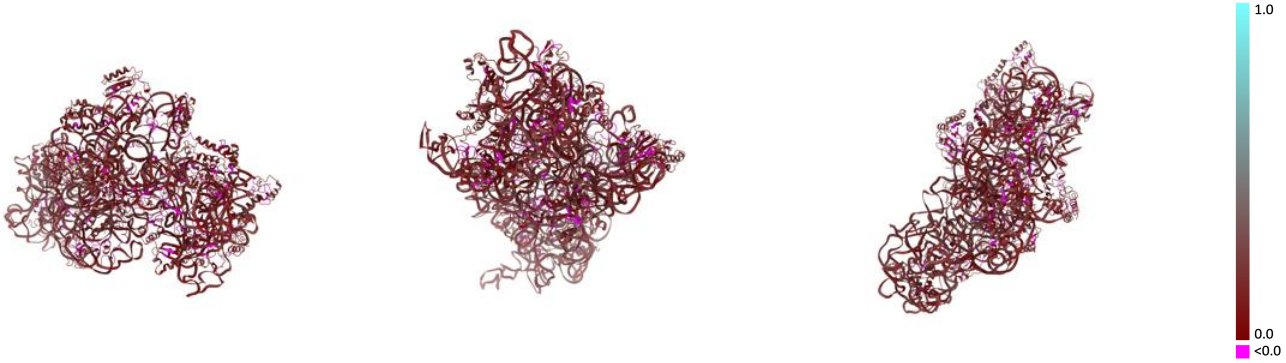
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 3.16 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

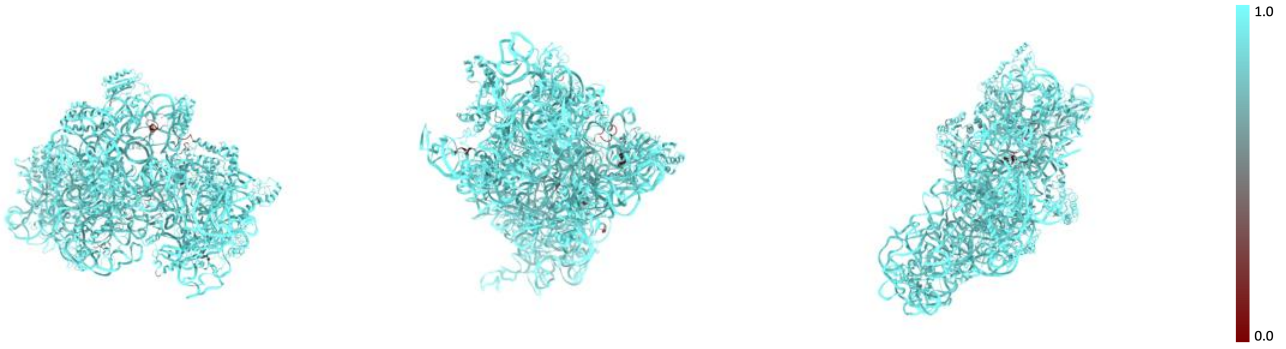
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

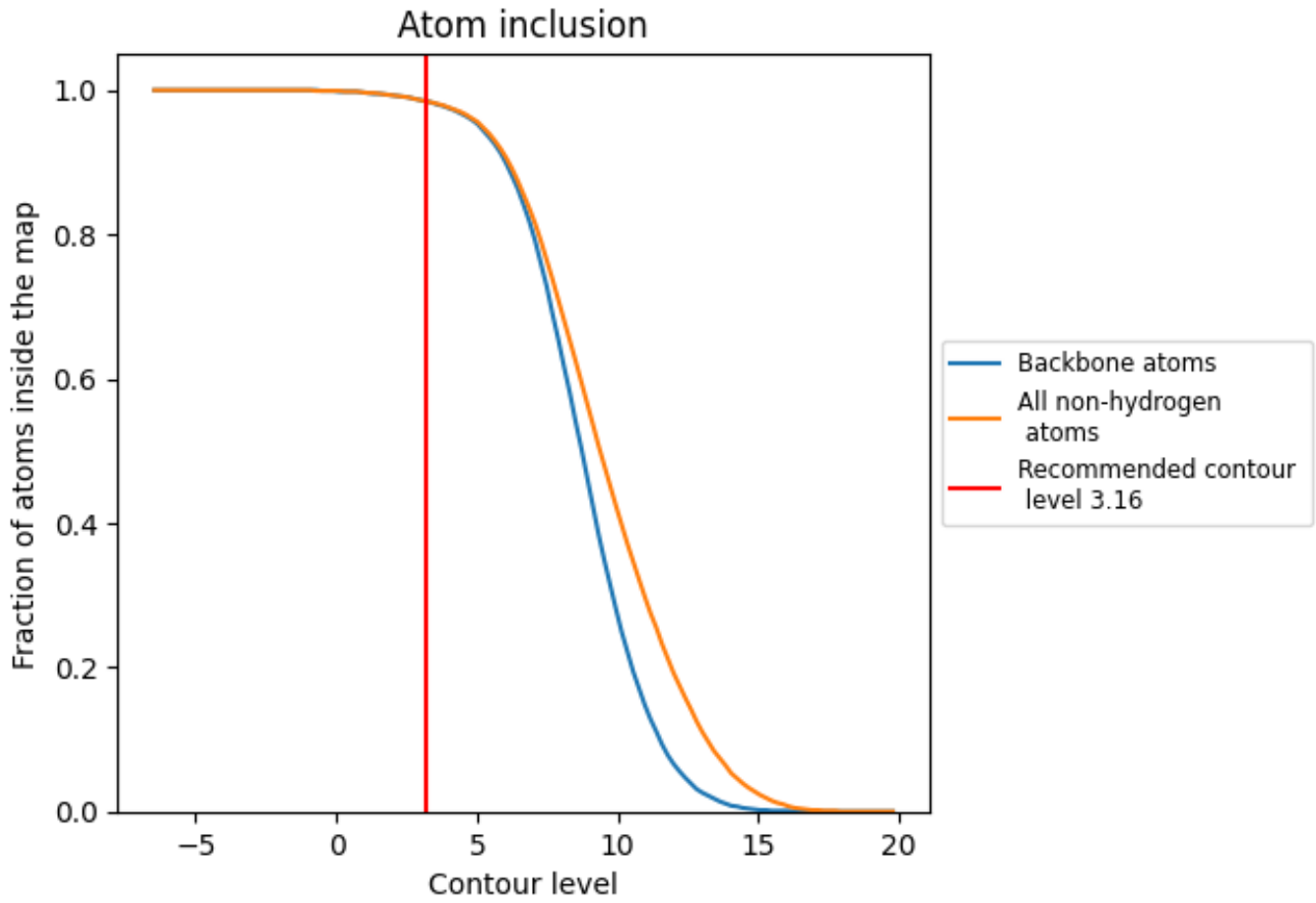
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (3.16).

9.4 Atom inclusion (i)



At the recommended contour level, 98% of all backbone atoms, 98% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (3.16) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9850	0.1530
A	0.9990	0.1730
B	0.9700	0.1270
C	0.9850	0.1370
D	0.9760	0.1140
E	0.9800	0.1420
F	0.9650	0.1330
G	0.8990	0.1010
H	0.9830	0.1310
I	0.9910	0.1110
J	0.9650	0.0940
K	0.9800	0.1120
L	0.9870	0.1060
M	0.9950	0.1390
N	0.9560	0.0920
O	0.9940	0.1460
P	0.9950	0.1050
Q	0.9730	0.1290
R	1.0000	0.1060
S	0.9970	0.1010
T	0.9990	0.1300
U	0.5600	0.0310
W	0.9350	0.1390