Full wwPDB EM Validation Report ⓘ

Mar 25, 2026 – 10:44 AM UTC

PDB ID	:	3JA1 / pdb_00003ja1
EMDB ID	:	EMD-6316
Title	:	Activation of GTP Hydrolysis in mRNA-tRNA Translocation by Elongation Factor G
Authors	:	Li, W.; Liu, Z.; Koripella, R.K.; Langlois, R.; Sanyal, S.; Frank, J.
Deposited on	:	2015-03-30
Resolution	:	3.60 Å(reported)
Based on initial model	:	3J0U

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:

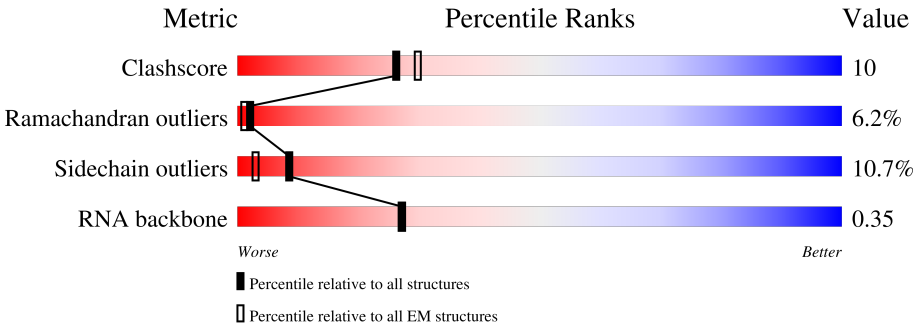
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data 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

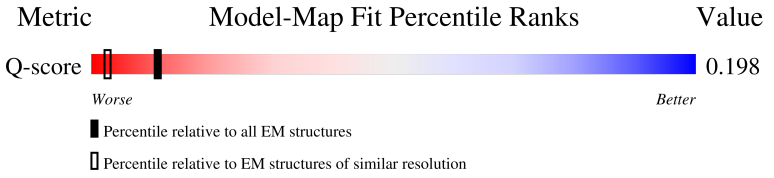
1 Overall quality at a glance

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

The reported resolution of this entry is 3.60 Å.

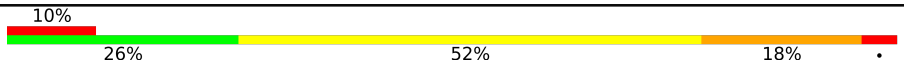
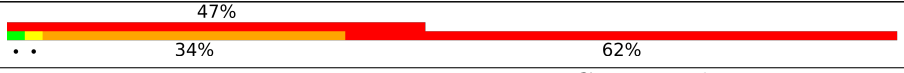
Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.





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	12797 (3.10 - 4.10)

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	SS	91	
2	SA	1542	
3	S1	47	

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Mol	Chain	Length	Quality of chain
4	S2	77	14% 39% 44%
5	ST	86	5% 42% 48% 10%
6	SU	70	27% 24% 53% 19%
7	SG	178	15% 39% 46% 13%
8	SH	129	7% 39% 43% 16%
9	SI	129	7% 36% 48% 16%
10	SJ	103	14% 31% 51% 13% 5%
11	SK	128	13% 38% 44% 15%
12	SL	123	7% 29% 51% 17%
13	SM	117	13% 34% 41% 21%
14	SN	100	31% 48% 19%
15	SO	88	39% 47% 11%
16	SP	82	7% 35% 46% 16%
17	SQ	83	12% 36% 51% 12%
18	SB	240	15% 38% 45% 15%
19	SC	232	10% 39% 44% 15%
20	SD	205	6% 34% 44% 19%
21	SE	166	14% 34% 45% 17% 5%
22	SF	135	34% 33% 44% 20%
23	SR	74	8% 36% 42% 19%
24	S3	702	16% 33% 51% 14%
25	LB	120	20% 39% 38%
26	LA	2904	15% 41% 43%
27	LD	272	11% 32% 51% 14%
28	LU	110	7% 37% 48% 13%

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Mol	Chain	Length	Quality of chain
29	LV	100	11% 40% 41% 17%
30	LW	103	7% 45% 40% 12%
31	LX	94	38% 50% 10%
32	LY	84	12% 26% 43% 23% 8%
33	LZ	77	5% 26% 52% 18%
34	L0	63	19% 25% 56% 17%
35	L1	58	5% 34% 47% 14% 5%
36	L2	70	21% 27% 50% 20%
37	LC	234	35% 32% 50% 15%
38	LE	209	8% 31% 49% 16%
39	L3	56	5% 30% 43% 21% 5%
40	L4	54	6% 41% 46% 9%
41	L5	46	7% 26% 46% 17% 11%
42	L6	64	6% 38% 59%
43	L7	38	45% 37% 11% 8%
44	LF	201	9% 39% 47% 9% 5%
45	LG	178	7% 30% 50% 13% 6%
46	LH	176	6% 35% 45% 15% 5%
47	LJ	164	54% 35% 53% 9%
48	LN	144	41% 47% 10%
49	LK	141	27% 33% 50% 15%
50	LL	142	33% 51% 15%
51	LI	149	75% 32% 50% 16%
52	LO	136	33% 52% 13%
53	LP	127	8% 32% 47% 19%

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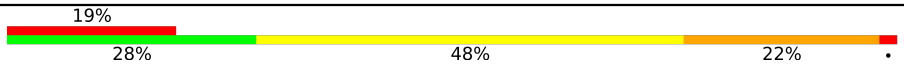
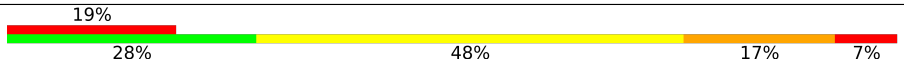
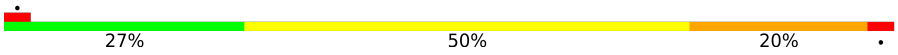
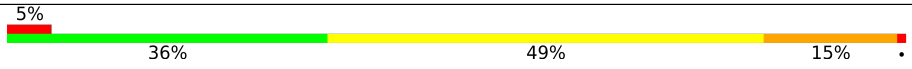
Mol	Chain	Length	Quality of chain
54	LM	123	
55	LQ	117	
56	LR	114	
57	LS	117	
58	LT	103	

2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 156127 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 protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	SS	91	727	464	139	122	2	0	0

- Molecule 2 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	SA	1542	33076	14754	6064	10717	1541	0	0

- Molecule 3 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	S1	47	993	445	167	335	46	0	0

- Molecule 4 is a RNA chain called P/E-tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	S2	77	1639	732	297	534	76	0	0

- Molecule 5 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	ST	86	670	414	138	115	3	0	0

- Molecule 6 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	SU	70	590	366	125	98	1	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
7	SG	178	Total	C	N	O	S	0	0
			1400	874	269	253	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
8	SH	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	SI	129	Total	C	N	O	S	0	0
			1036	642	208	183	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
10	SJ	103	Total	C	N	O	S	0	0
			825	514	158	151	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
11	SK	128	Total	C	N	O	S	0	0
			965	595	196	171	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
12	SL	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	SM	117	Total	C	N	O	S	0	0
			910	564	183	160	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
14	SN	100	Total	C	N	O	S	0	0
			805	499	164	139	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
15	SO	88	Total	C	N	O	S	0	0
			716	440	146	129	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
16	SP	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	SQ	83	Total	C	N	O	S	0	0
			672	425	124	120	3		

- Molecule 18 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	SB	240	Total	C	N	O	S	0	0
			1872	1180	332	352	8		

- Molecule 19 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	SC	232	Total	C	N	O	S	0	0
			1822	1149	346	323	4		

- Molecule 20 is a protein called 30S ribosomal protein S4.

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

- Molecule 21 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	SE	166	Total	C	N	O	S	0	0
			1225	761	232	226	6		

- Molecule 22 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	SF	135	Total	C	N	O	S	0	0
			1101	677	198	219	7		

- Molecule 23 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	SR	74	Total	C	N	O	S	0	0
			626	395	123	107	1		

- Molecule 24 is a protein called Elongation factor G.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	S3	702	Total	C	N	O	S	0	0
			5431	3420	938	1048	25		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
S3	91	ALA	HIS	engineered mutation	UNP P0A6M8

- Molecule 25 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LB	120	Total	C	N	O	P	0	0
			2566	1144	468	835	119		

- Molecule 26 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LA	2904	Total	C	N	O	P	0	0
			62330	27807	11462	20158	2903		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
LA	1618	C	A	conflict	GB 33357927

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Chain	Residue	Modelled	Actual	Comment	Reference
LA	1915	C	U	conflict	GB 33357927
LA	2030	U	A	conflict	GB 33357927
LA	2251	U	G	conflict	GB 33357927

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

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LD	272	Total	C	N	O	S	0	0
			2092	1294	425	366	7		

- Molecule 28 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	LU	110	Total	C	N	O	S	0	0
			857	532	166	156	3		

- Molecule 29 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	LV	100	Total	C	N	O	S	0	0
			787	496	146	143	2		

- Molecule 30 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
30	LW	103	Total	C	N	O	0	0
			789	498	148	143		

- Molecule 31 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	LX	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

- Molecule 32 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	LY	84	Total	C	N	O	S	0	0
			634	391	129	113	1		

- Molecule 33 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	LZ	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 34 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	L0	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 35 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	L1	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 36 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	L2	70	Total	C	N	O	S	0	0
			549	339	104	100	6		

- Molecule 37 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	LC	234	Total	C	N	O	S	0	0
			1733	1081	315	330	7		

- Molecule 38 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	LE	209	Total	C	N	O	S	0	0
			1565	979	288	294	4		

- Molecule 39 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	L3	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 40 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
40	L4	54	Total 441	C 284	N 81	O 76	0	0

- Molecule 41 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	L5	46	Total 377	C 228	N 90	O 57	S 2	0	0

- Molecule 42 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	L6	64	Total 504	C 323	N 105	O 74	S 2	0	0

- Molecule 43 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	L7	38	Total 302	C 185	N 65	O 48	S 4	0	0

- Molecule 44 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	LF	201	Total 1552	C 974	N 283	O 290	S 5	0	0

- Molecule 45 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	LG	178	Total 1420	C 905	N 251	O 258	S 6	0	0

- Molecule 46 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	LH	176	Total 1323	C 832	N 243	O 246	S 2	0	0

- Molecule 47 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	LJ	164	Total	C	N	O	S	0	0
			1233	776	220	231	6		

- Molecule 48 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	LN	144	Total	C	N	O	S	0	0
			1053	654	207	190	2		

- Molecule 49 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	LK	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
50	LL	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 51 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	LI	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

- Molecule 52 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	LO	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 53 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	LP	127	Total	C	N	O	S	0	0
			1008	621	204	178	5		

- Molecule 54 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	LM	123	Total	C	N	O	S	0	0
			947	593	181	167	6		

- Molecule 55 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	LQ	117	Total	C	N	O	S	0	0
			900	557	179	163	1		

- Molecule 56 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	LR	114	Total	C	N	O	S	0	0
			917	574	179	163	1		

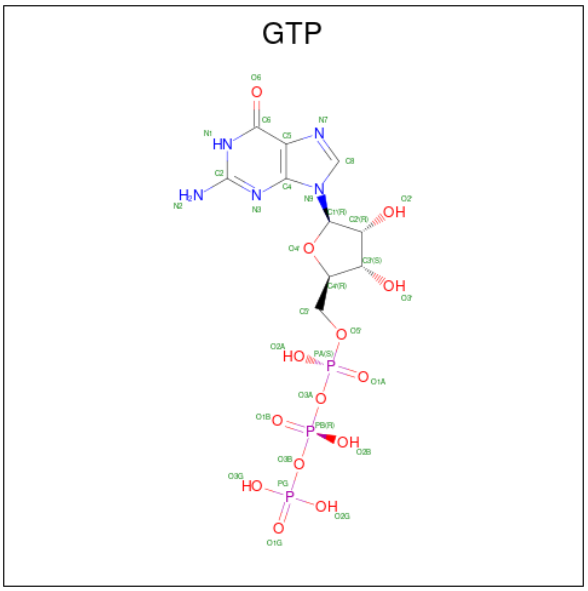
- Molecule 57 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
57	LS	117	Total	C	N	O	0	0
			947	604	192	151		

- Molecule 58 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	LT	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 59 is GUANOSINE-5'-TRIPHOSPHATE (CCD ID: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).

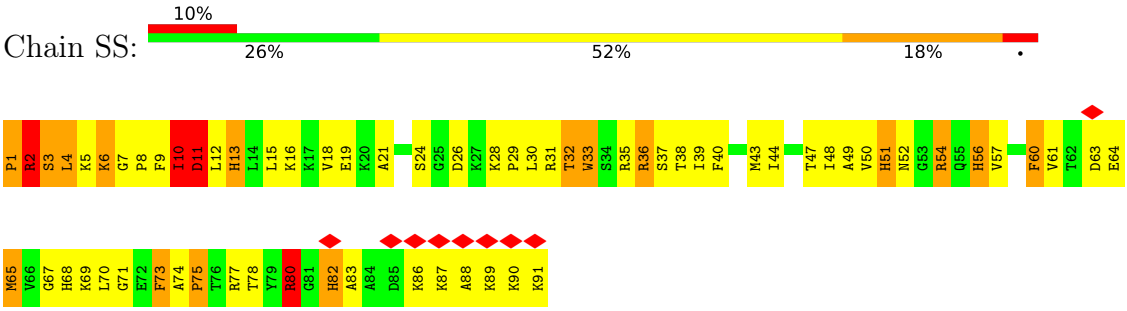


Mol	Chain	Residues	Atoms					AltConf
59	S3	1	Total	C	N	O	P	0
			32	10	5	14	3	

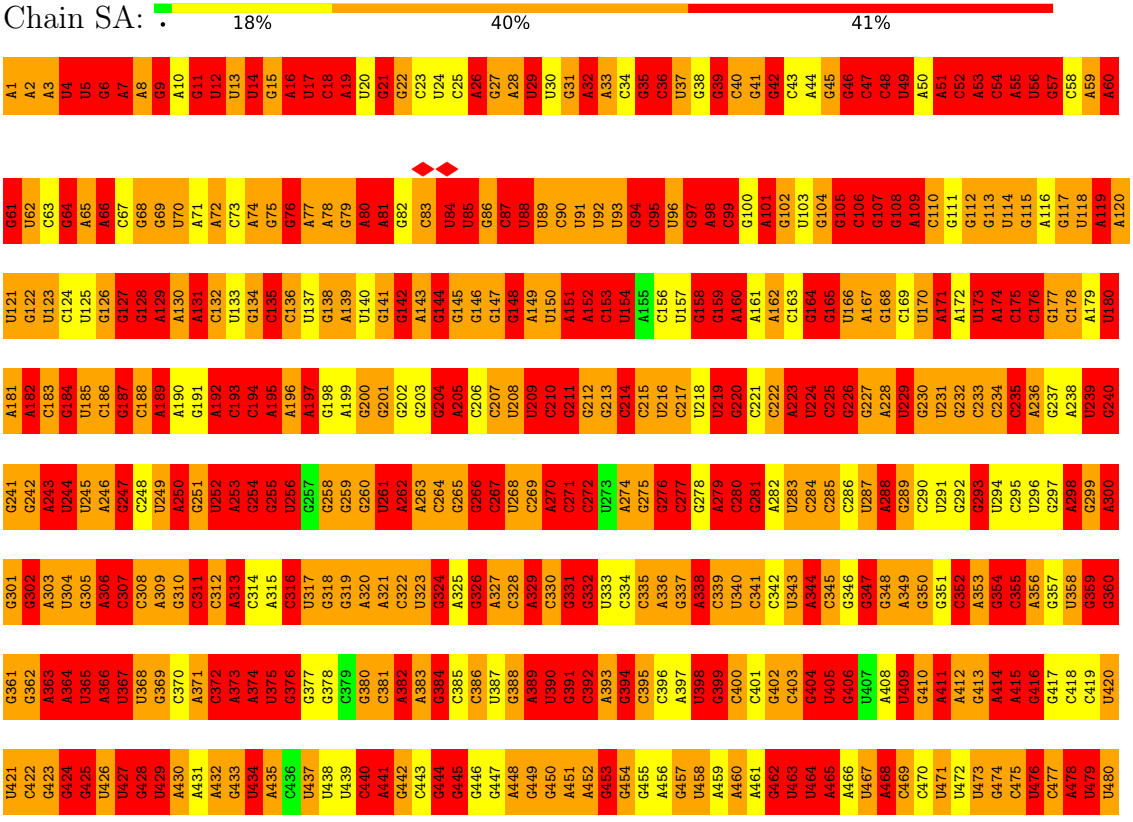
3 Residue-property plots (i)

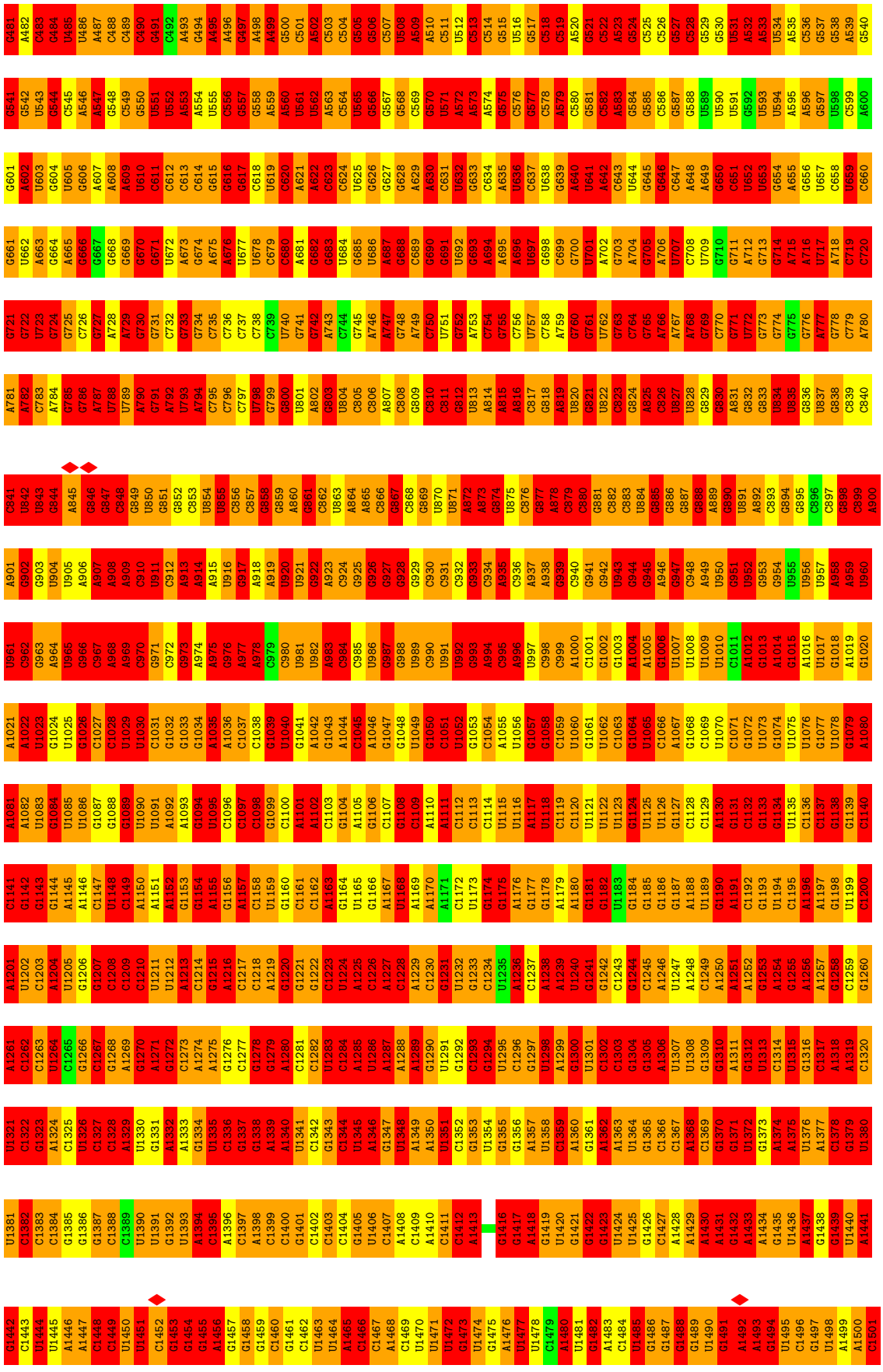
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

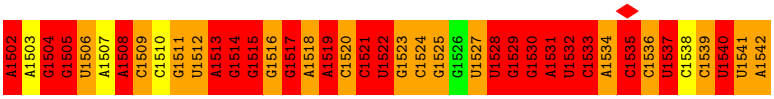
• Molecule 1: 30S ribosomal protein S19



• Molecule 2: 16S ribosomal RNA

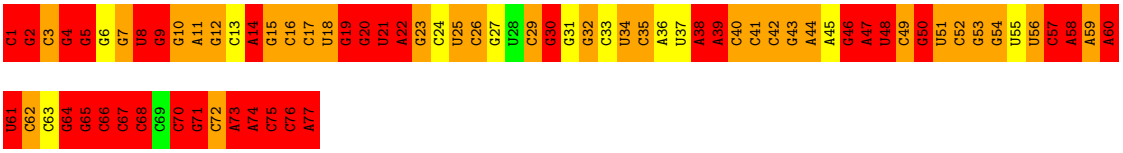




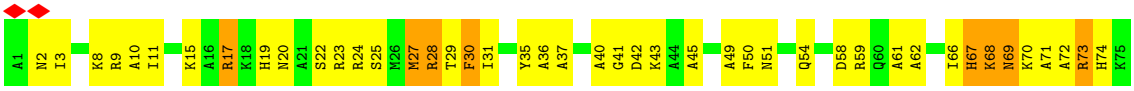


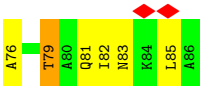
• Molecule 3: mRNA

• Molecule 4: P/E-tRNA

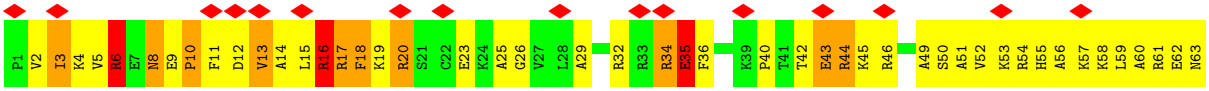


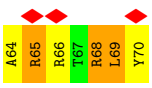
• Molecule 5: 30S ribosomal protein S20



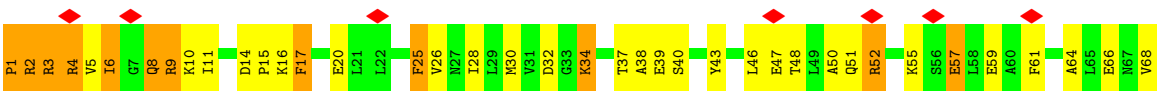


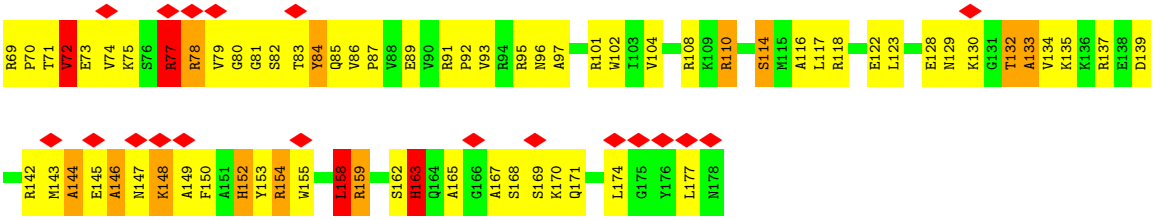
• Molecule 6: 30S ribosomal protein S21



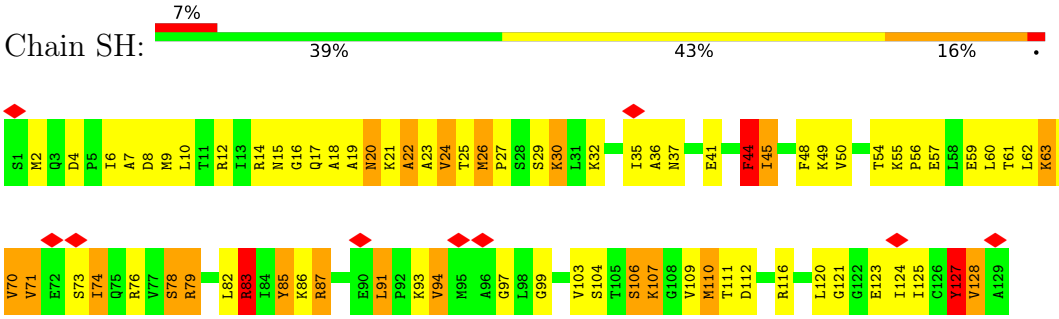


• Molecule 7: 30S ribosomal protein S7

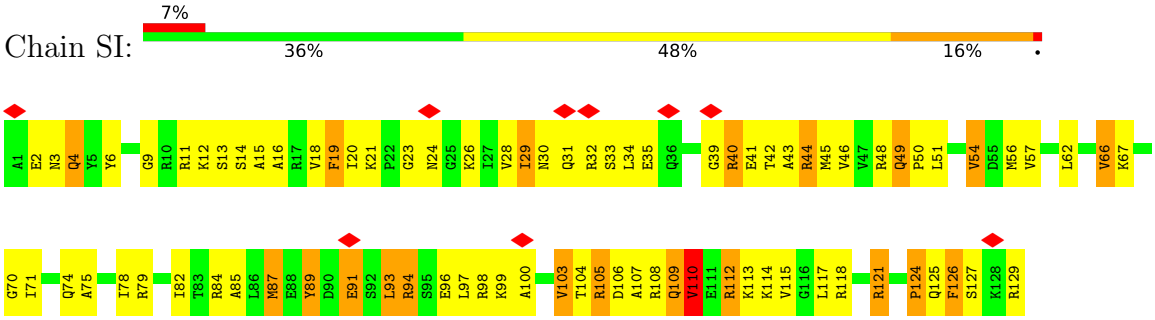




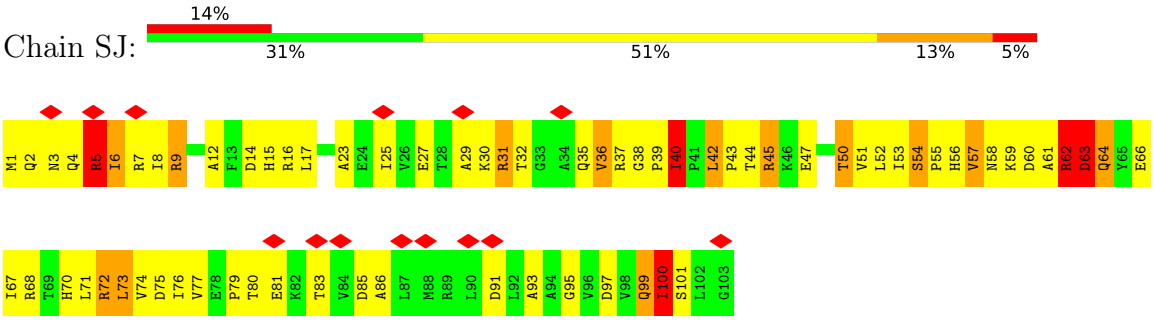
• Molecule 8: 30S ribosomal protein S8



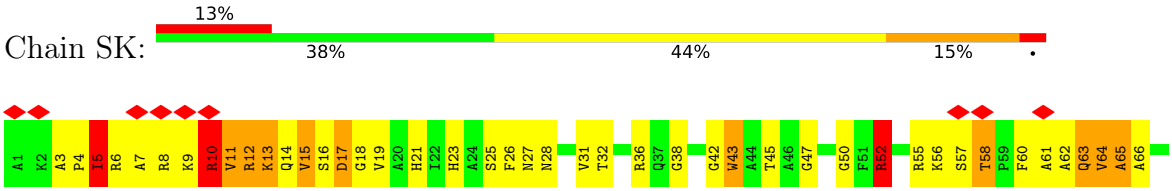
• Molecule 9: 30S ribosomal protein S9

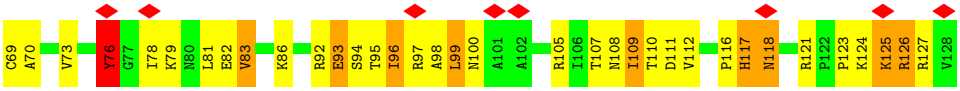


• Molecule 10: 30S ribosomal protein S10

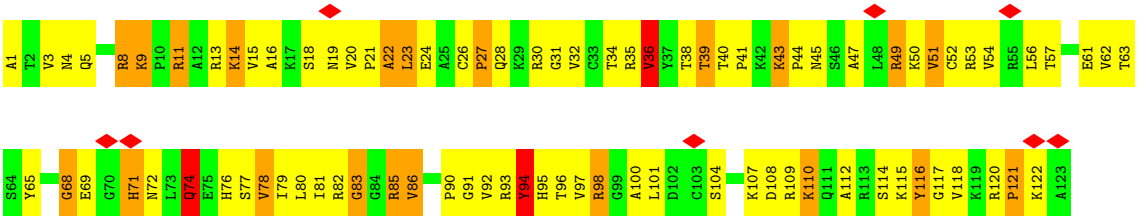


• Molecule 11: 30S ribosomal protein S11

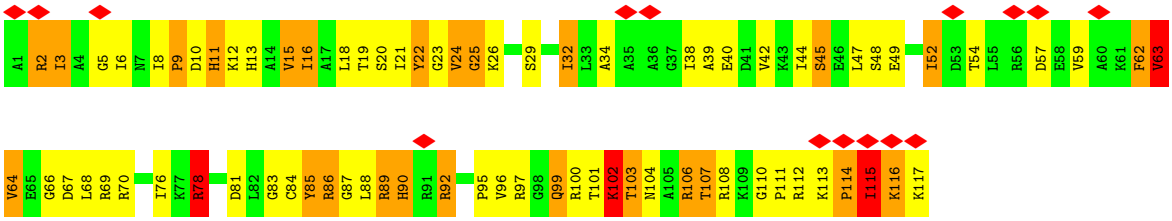




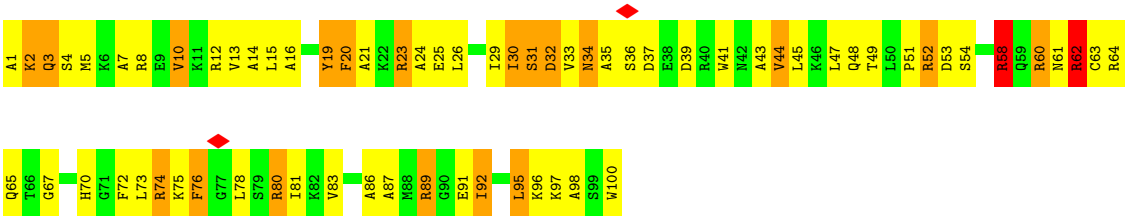
• Molecule 12: 30S ribosomal protein S12



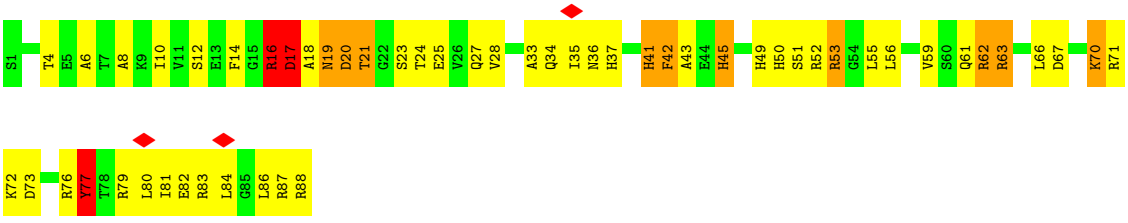
• Molecule 13: 30S ribosomal protein S13



• Molecule 14: 30S ribosomal protein S14

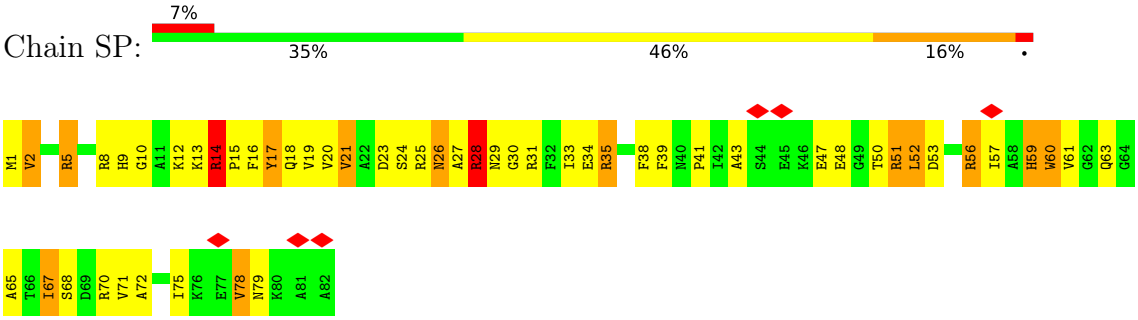


• Molecule 15: 30S ribosomal protein S15



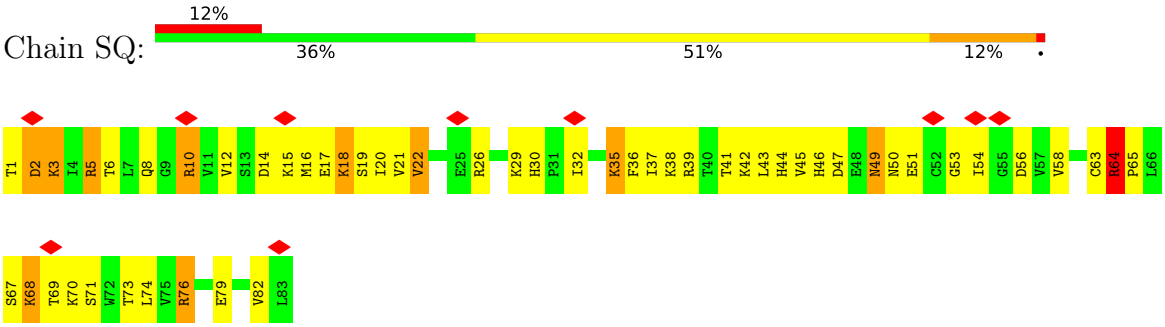
• Molecule 16: 30S ribosomal protein S16

Chain SP:



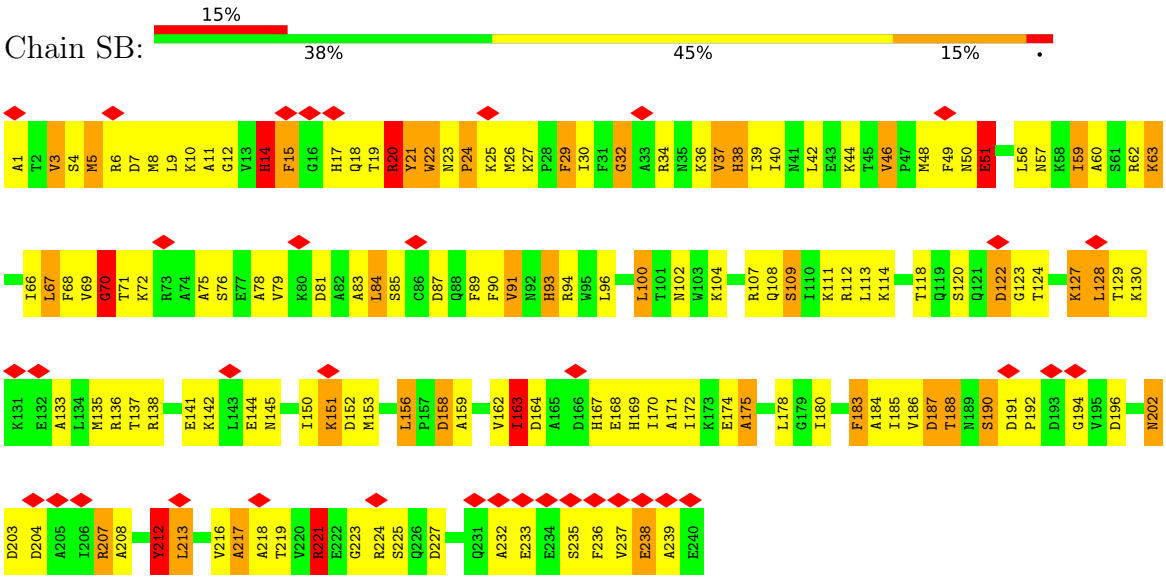
• Molecule 17: 30S ribosomal protein S17

Chain SQ:



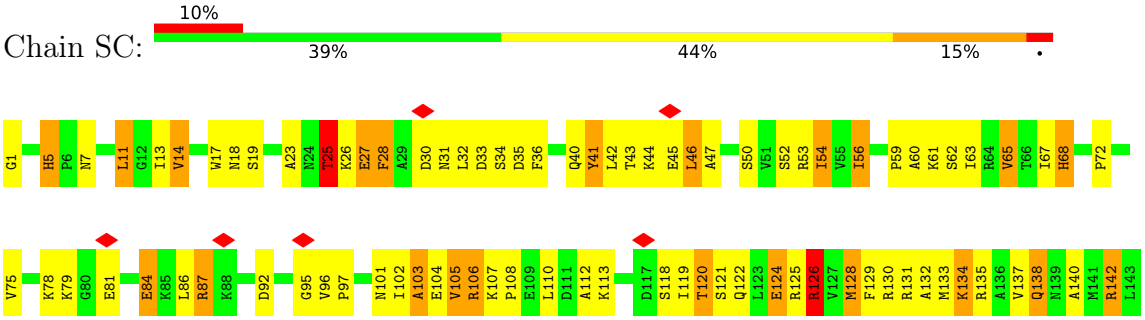
• Molecule 18: 30S ribosomal protein S2

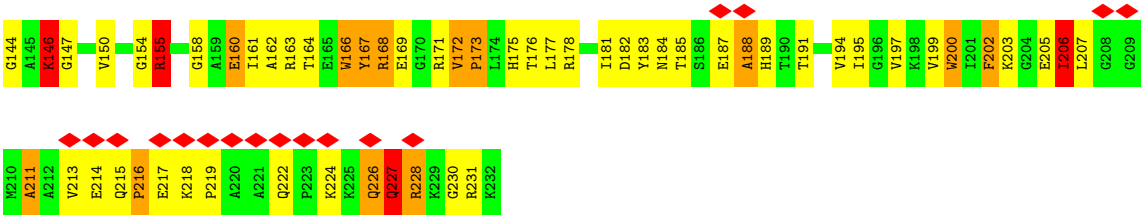
Chain SB:



• Molecule 19: 30S ribosomal protein S3

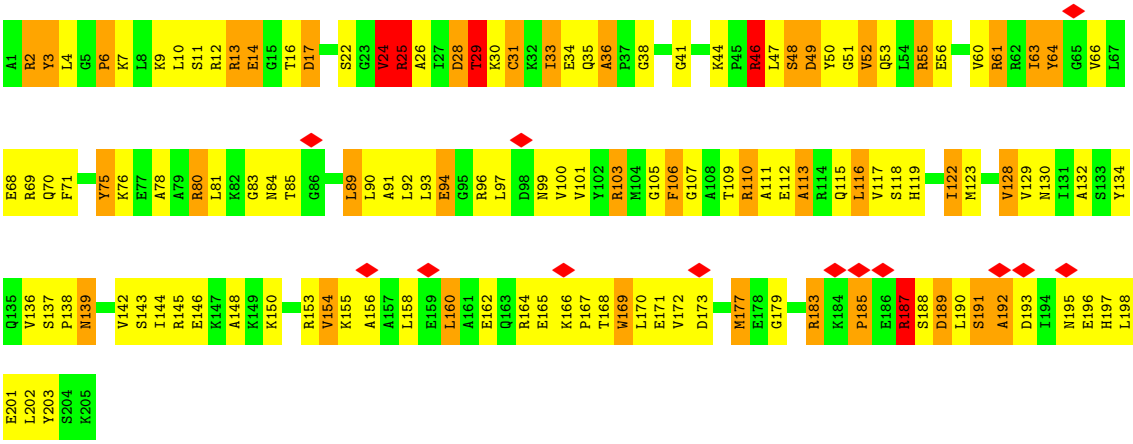
Chain SC:





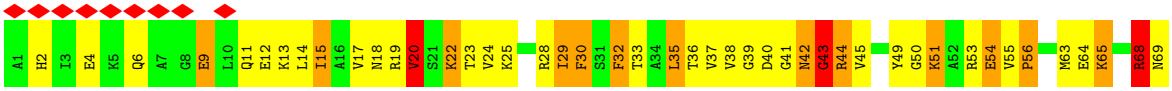
• Molecule 20: 30S ribosomal protein S4

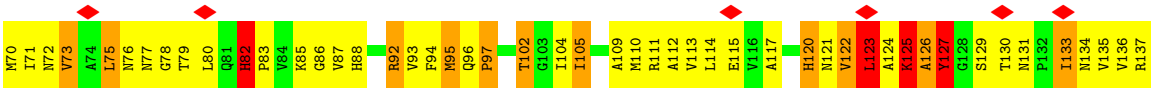
Chain SD:

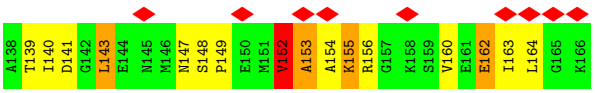


• Molecule 21: 30S ribosomal protein S5

Chain SE:

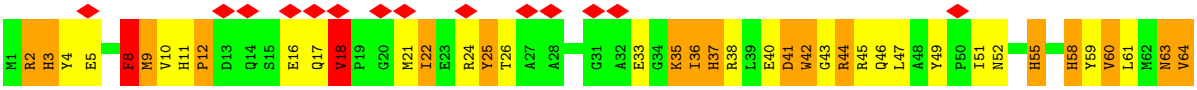


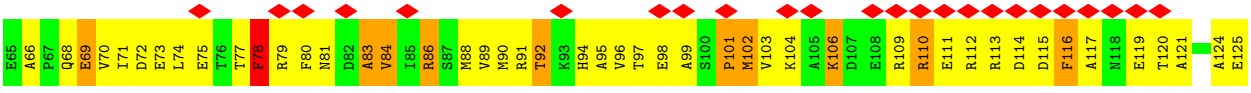


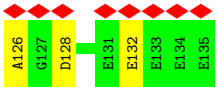


• Molecule 22: 30S ribosomal protein S6

Chain SF:

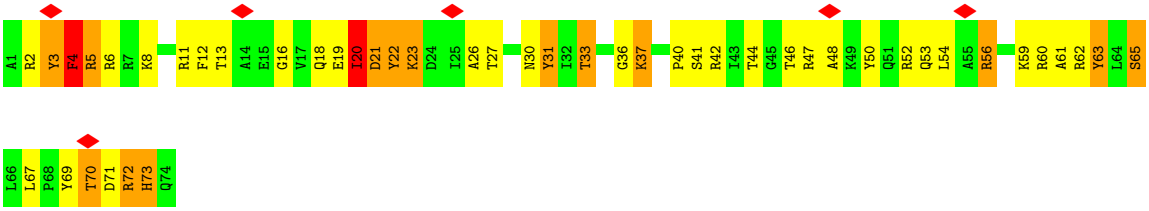






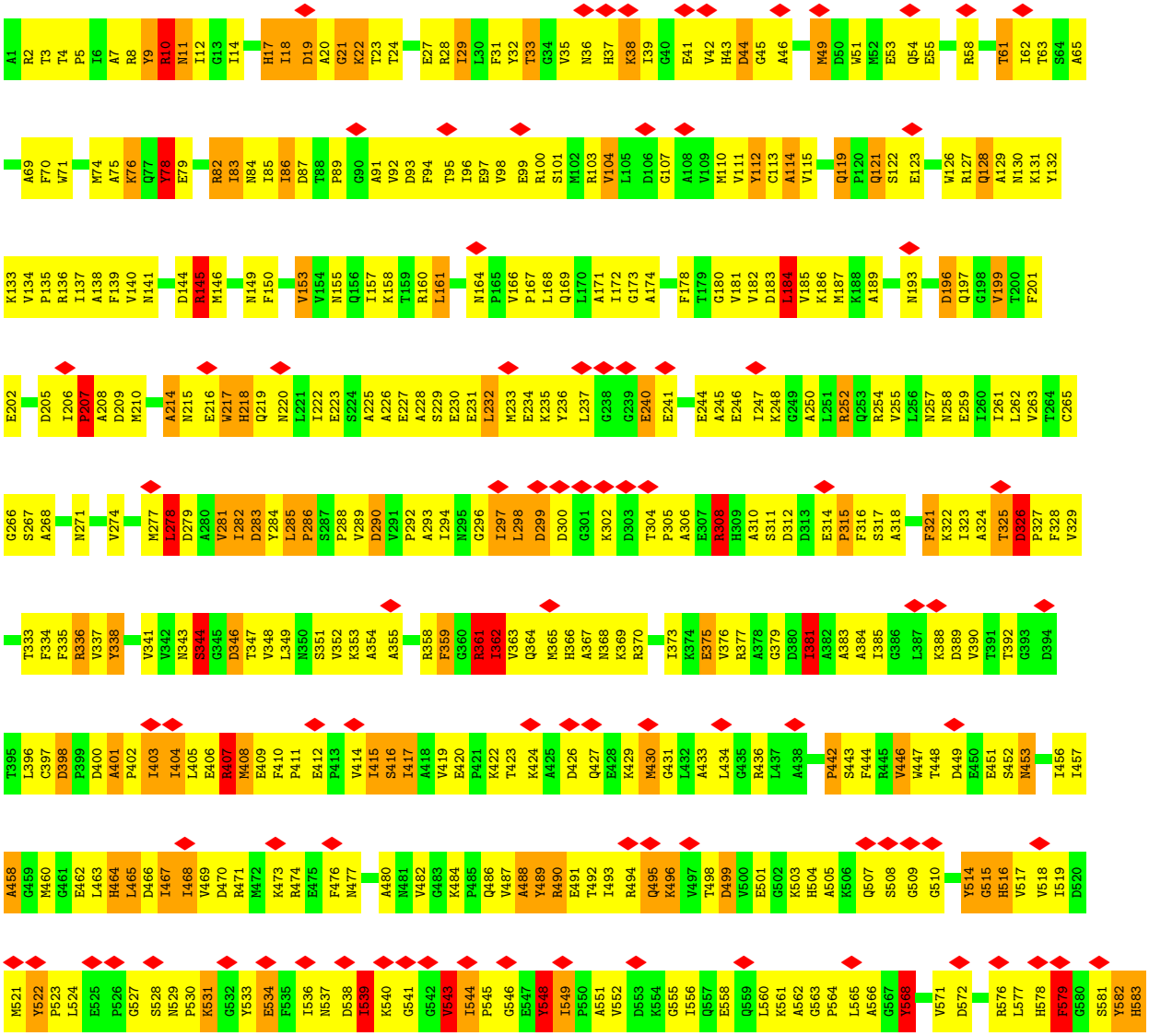
• Molecule 23: 30S ribosomal protein S18

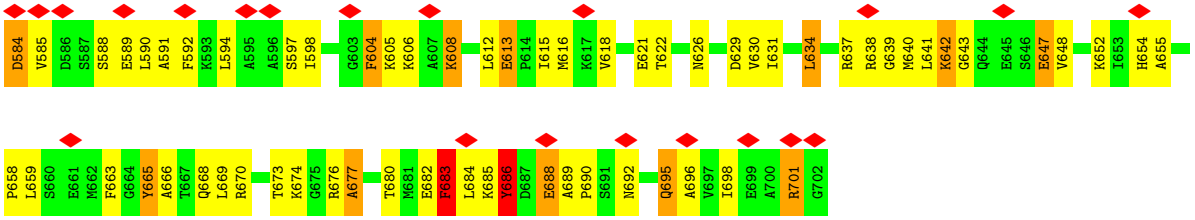
Chain SR:



• Molecule 24: Elongation factor G

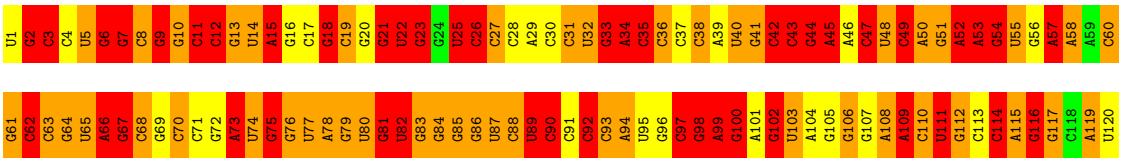
Chain S3:





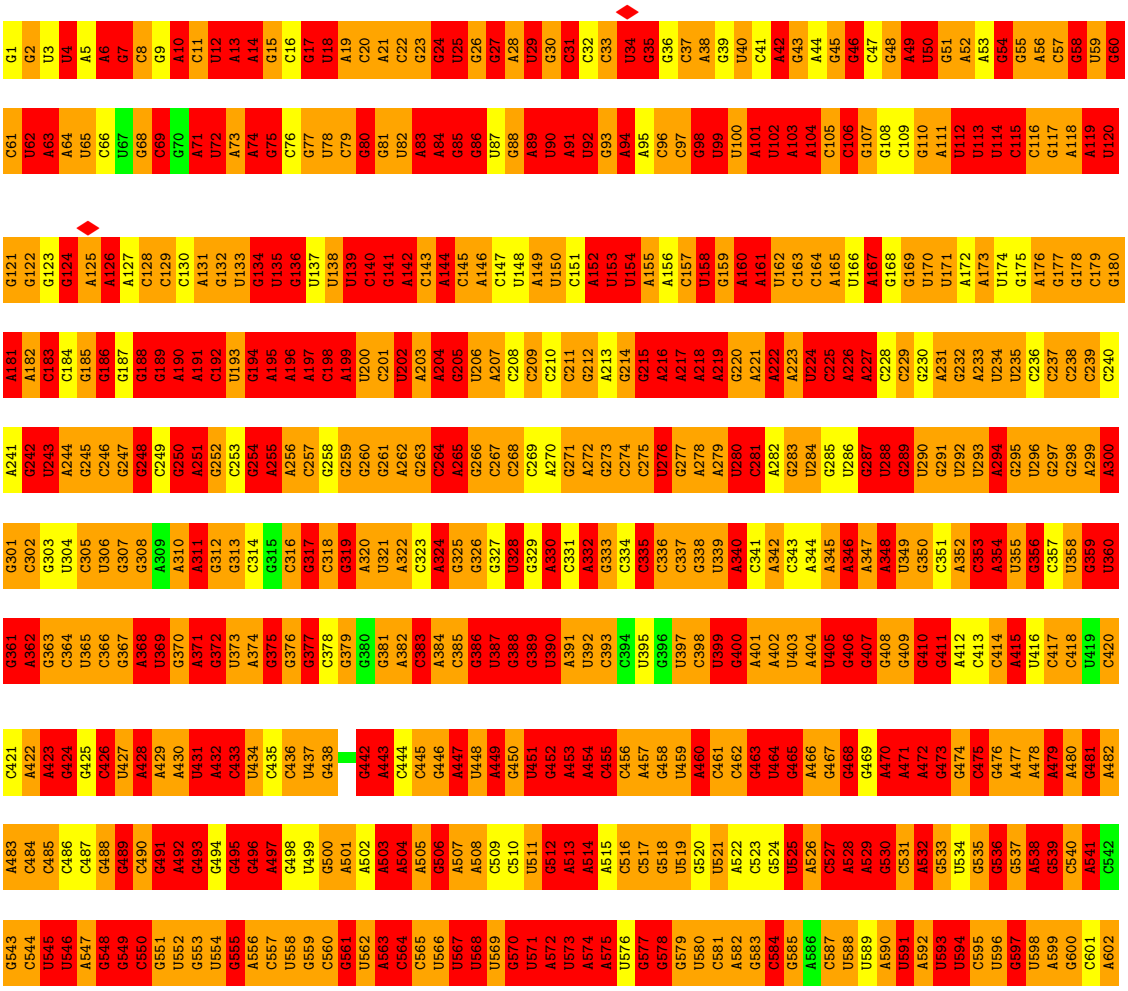
• Molecule 25: 5S ribosomal RNA

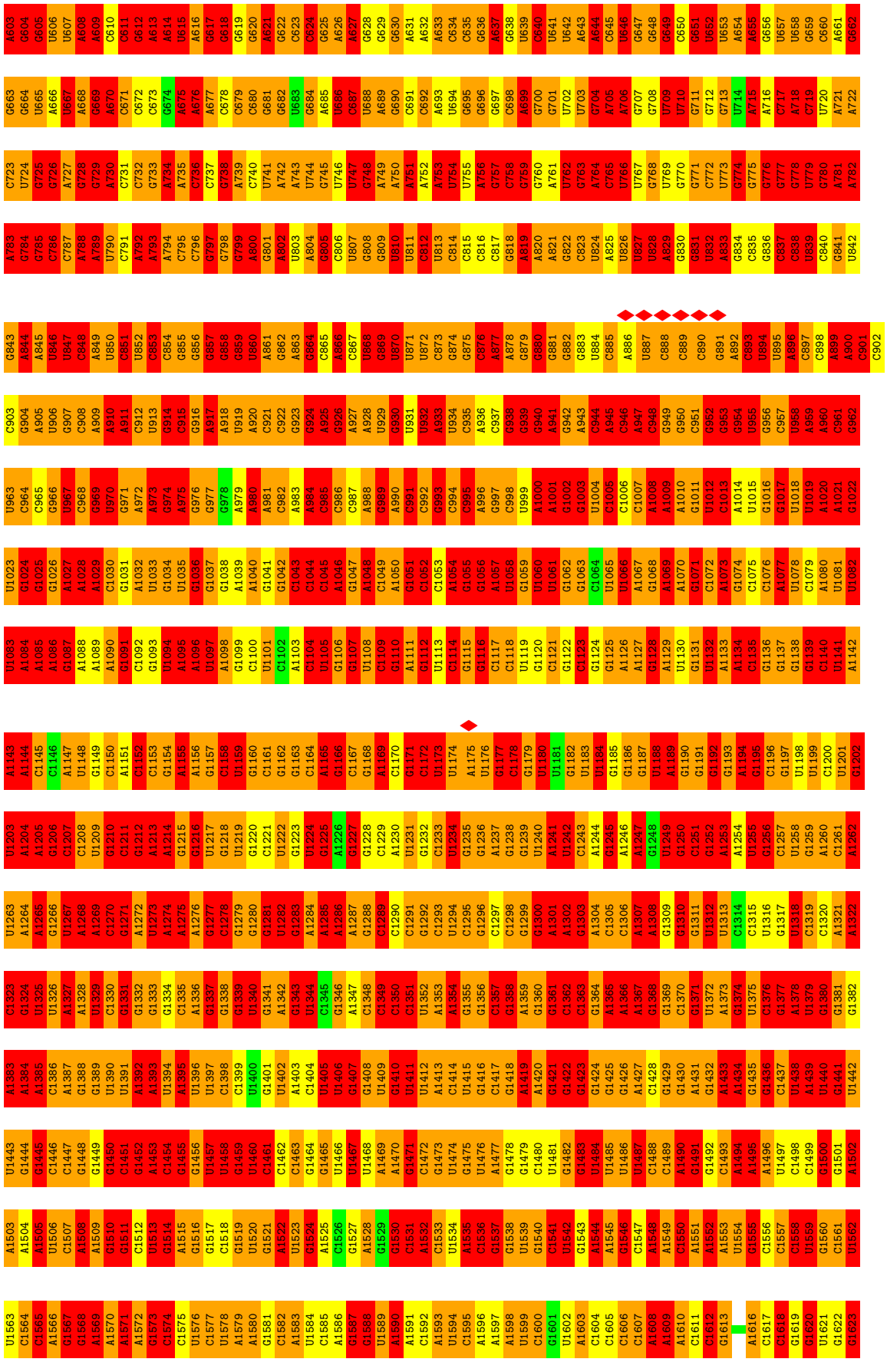
Chain LB:

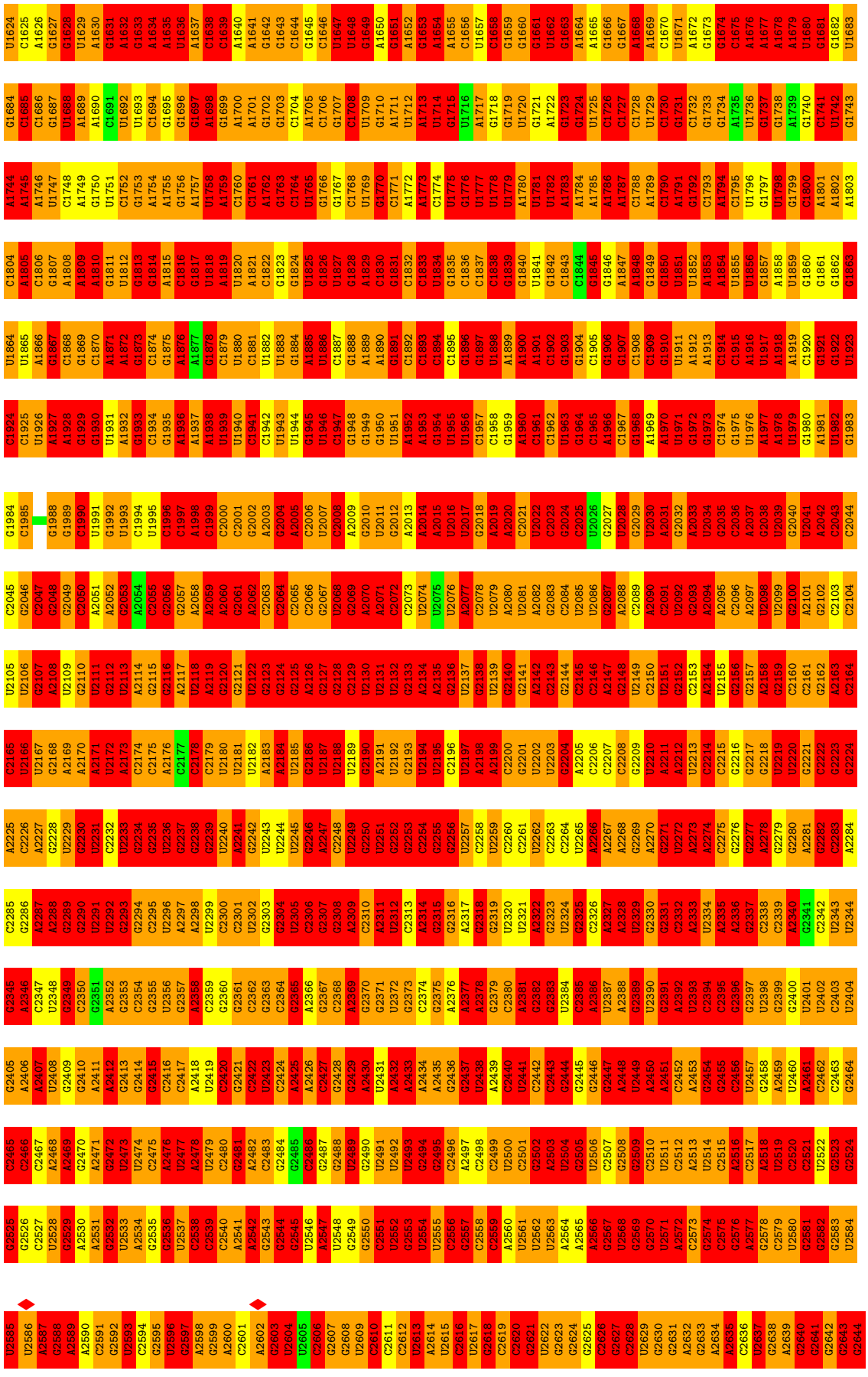


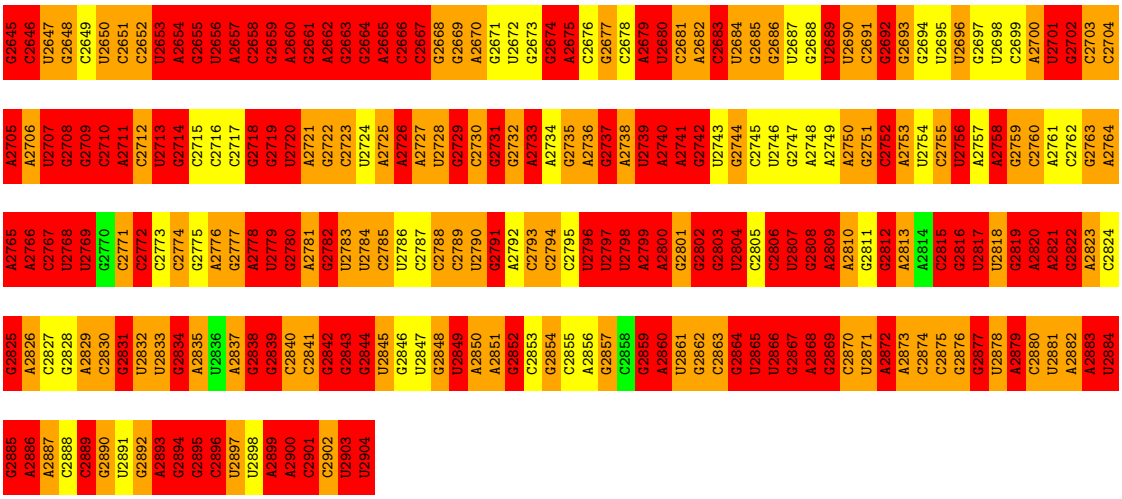
• Molecule 26: 23S ribosomal RNA

Chain LA:



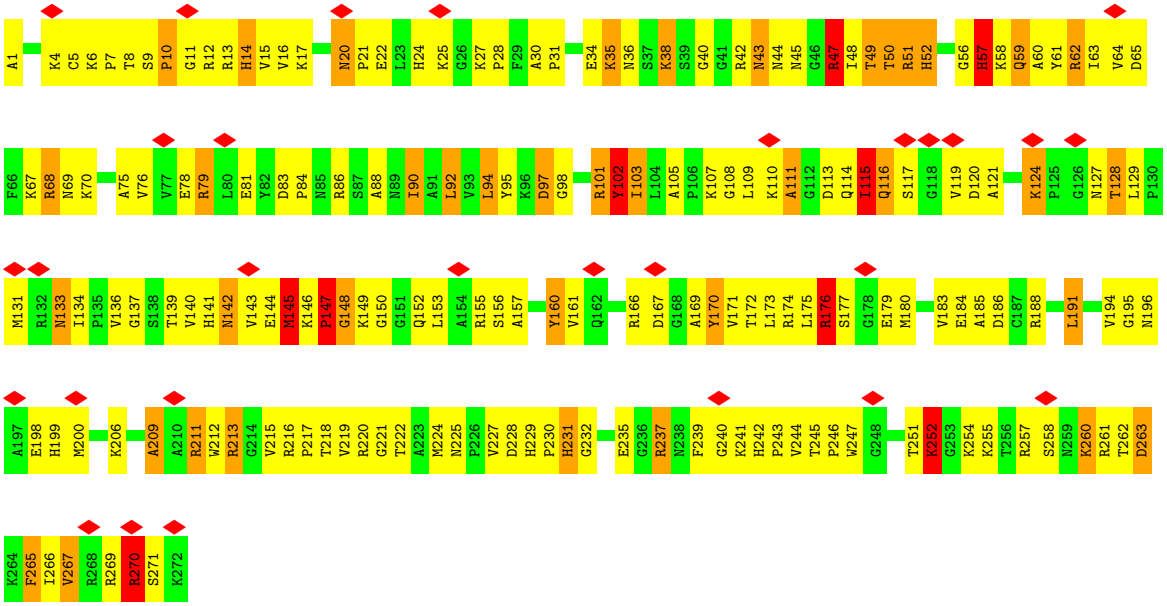






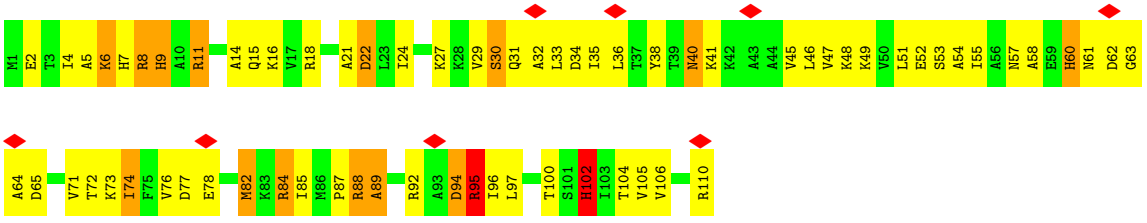
• Molecule 27: 50S ribosomal protein L2

Chain LD:



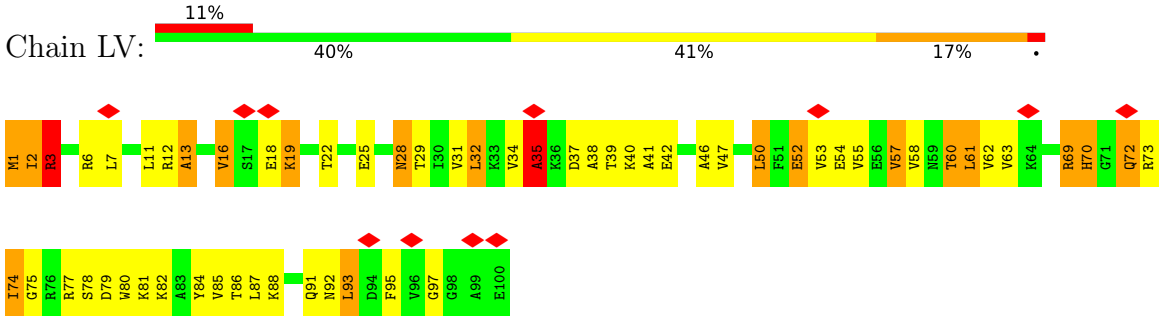
• Molecule 28: 50S ribosomal protein L22

Chain LU:



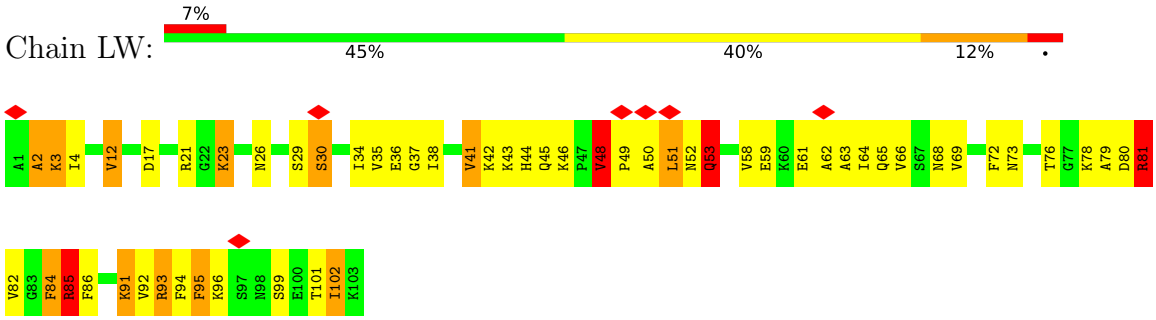
• Molecule 29: 50S ribosomal protein L23

Chain LV:



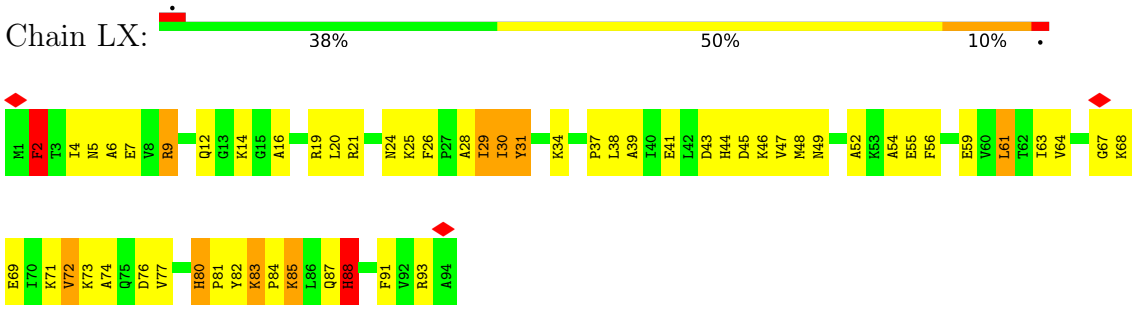
• Molecule 30: 50S ribosomal protein L24

Chain LW:



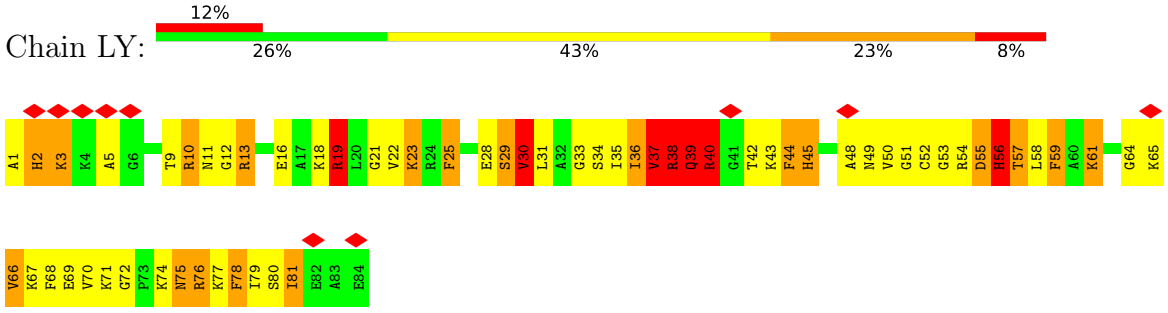
• Molecule 31: 50S ribosomal protein L25

Chain LX:



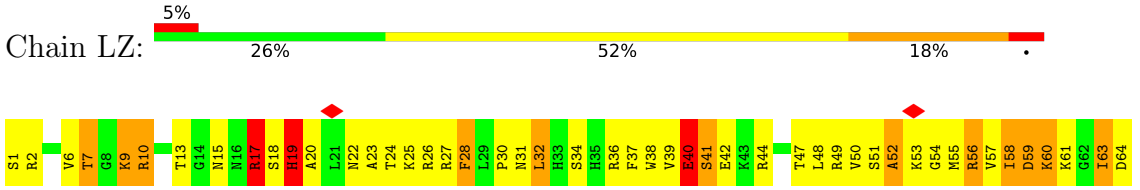
• Molecule 32: 50S ribosomal protein L27

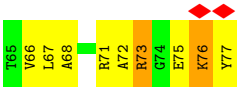
Chain LY:



• Molecule 33: 50S ribosomal protein L28

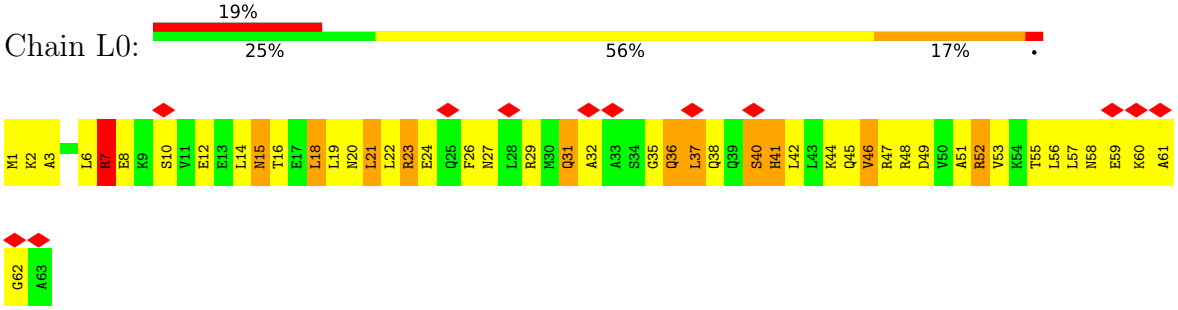
Chain LZ:





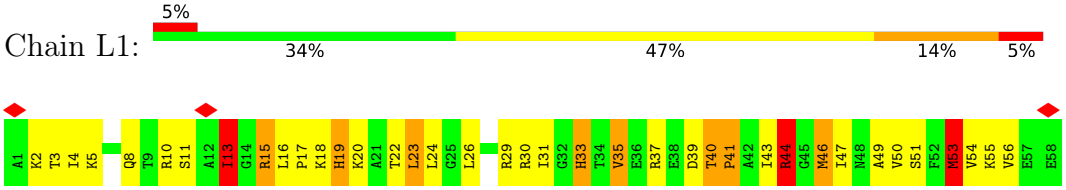
• Molecule 34: 50S ribosomal protein L29

Chain L0:



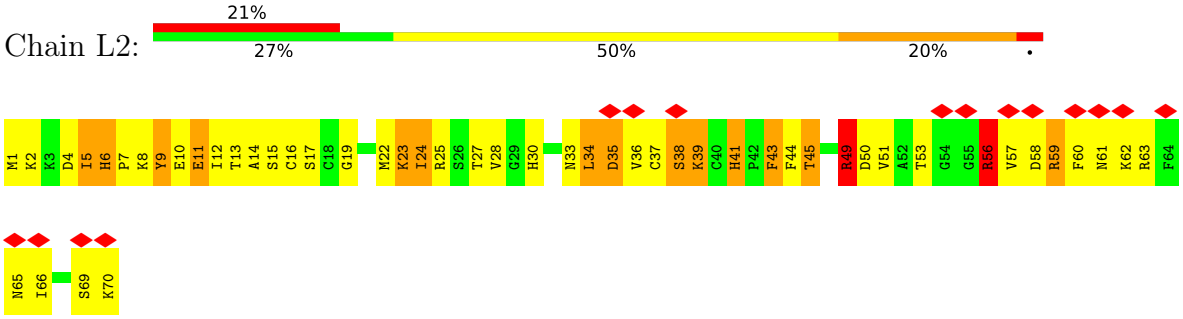
• Molecule 35: 50S ribosomal protein L30

Chain L1:



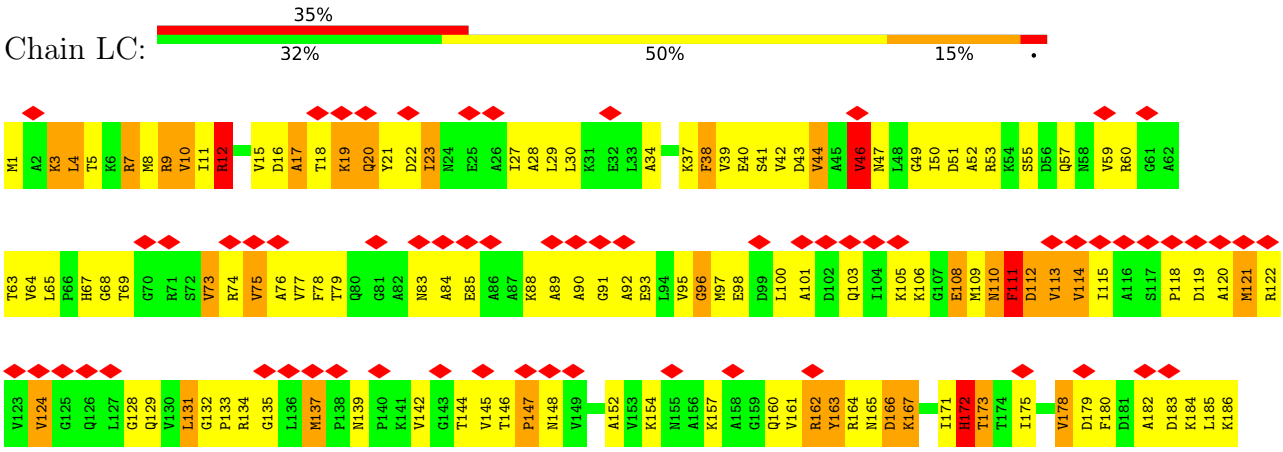
• Molecule 36: 50S ribosomal protein L31

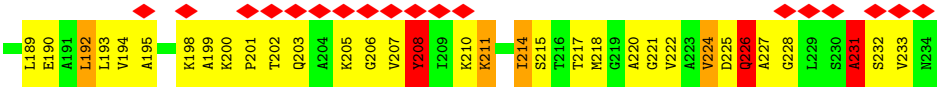
Chain L2:



• Molecule 37: 50S ribosomal protein L1

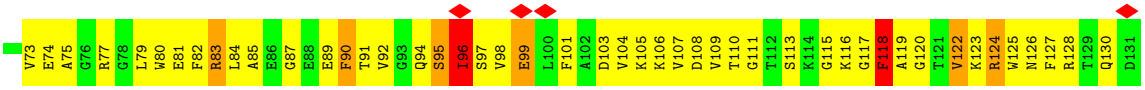
Chain LC:

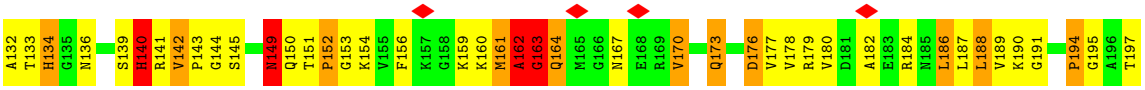


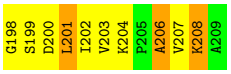


• Molecule 38: 50S ribosomal protein L3

Chain LE:

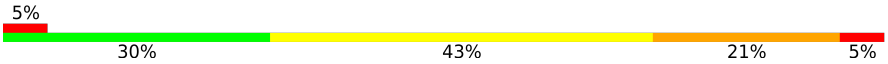


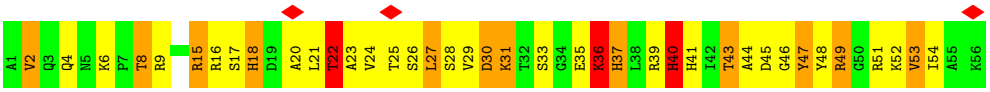




• Molecule 39: 50S ribosomal protein L32

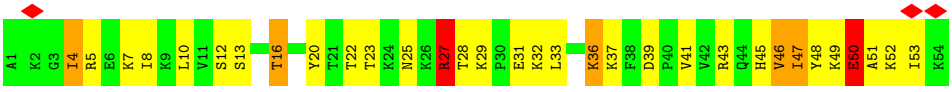
Chain L3:





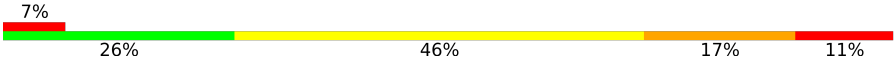
• Molecule 40: 50S ribosomal protein L33

Chain L4:



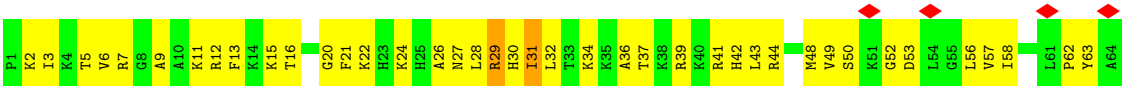
• Molecule 41: 50S ribosomal protein L34

Chain L5:



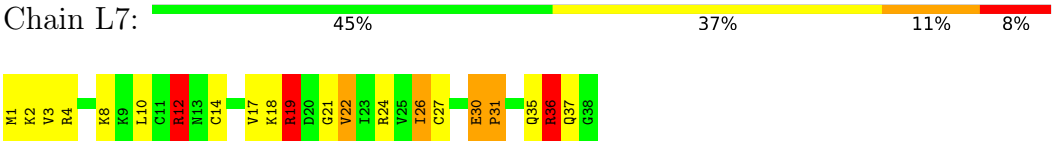
• Molecule 42: 50S ribosomal protein L35

Chain L6:



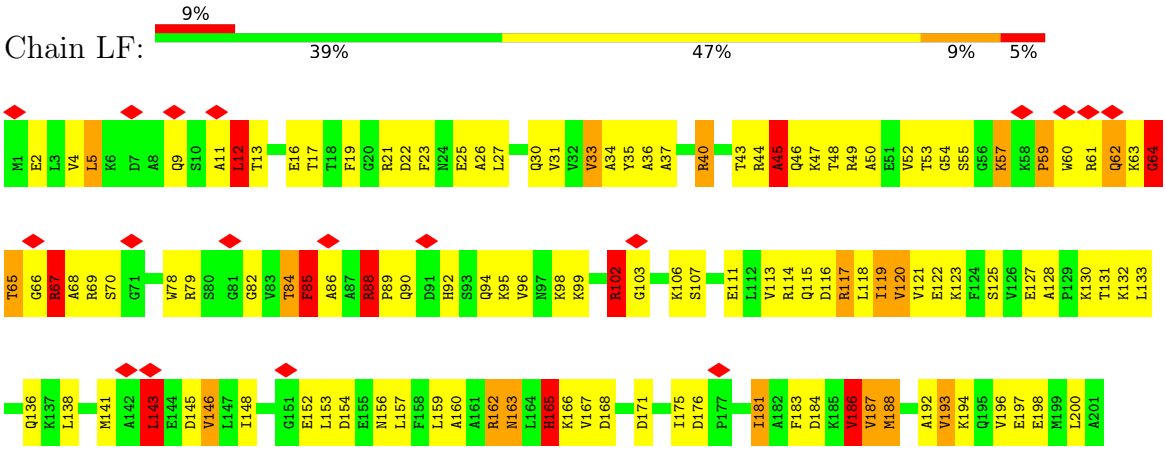
• Molecule 43: 50S ribosomal protein L36

Chain L7:



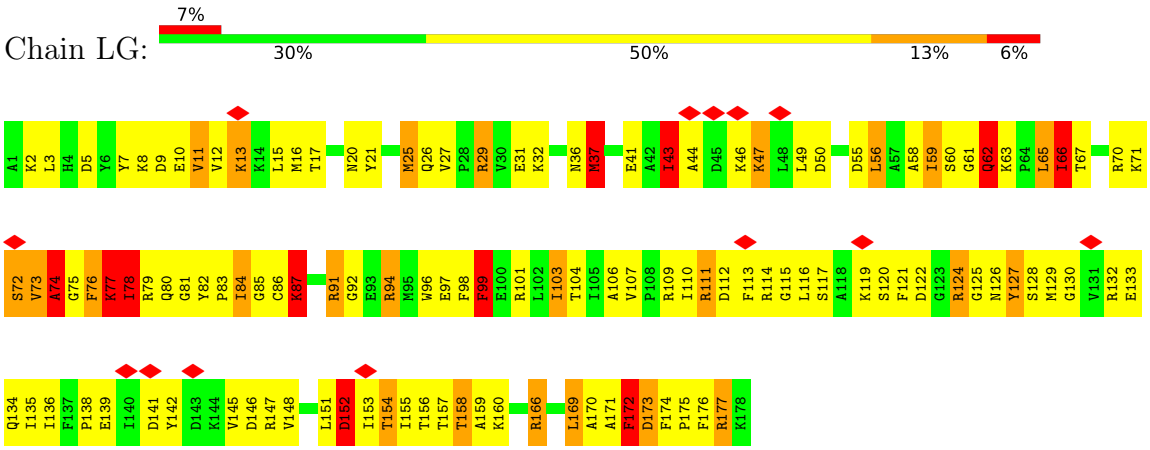
• Molecule 44: 50S ribosomal protein L4

Chain LF:



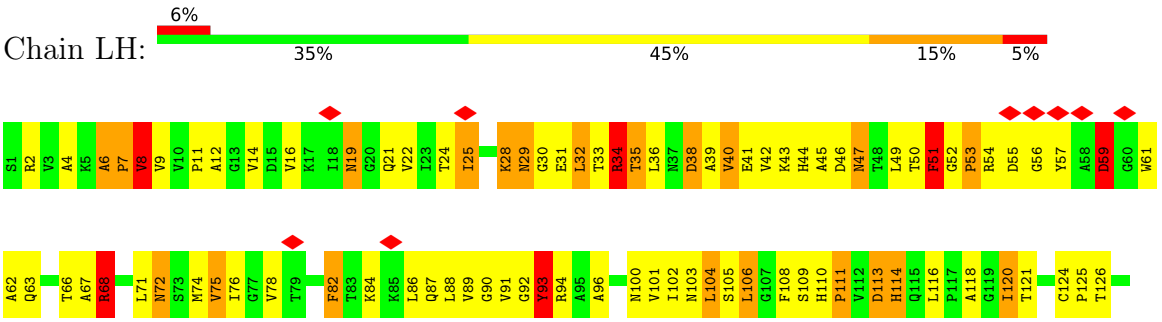
• Molecule 45: 50S ribosomal protein L5

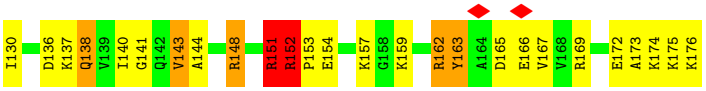
Chain LG:



• Molecule 46: 50S ribosomal protein L6

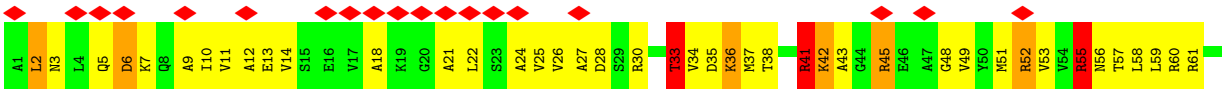
Chain LH:

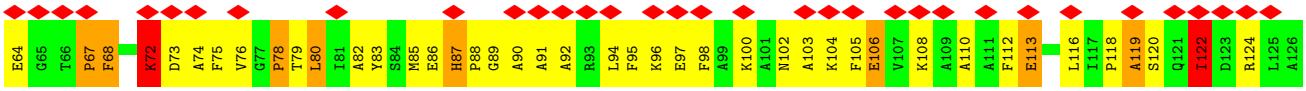


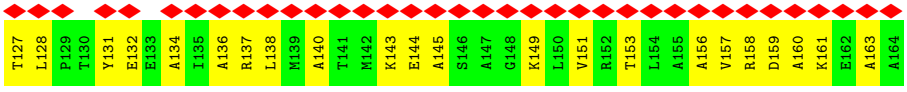


• Molecule 47: 50S ribosomal protein L10

Chain LJ:

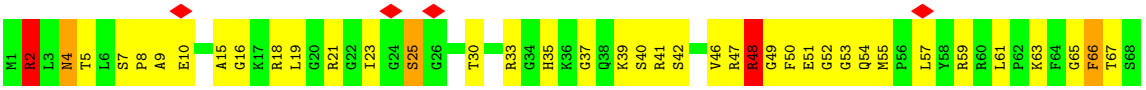


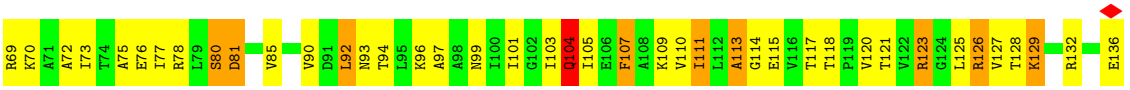


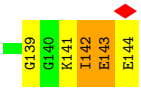


• Molecule 48: 50S ribosomal protein L15

Chain LN:

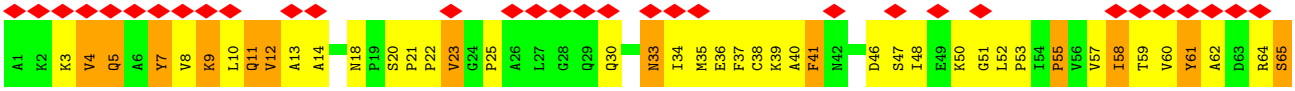


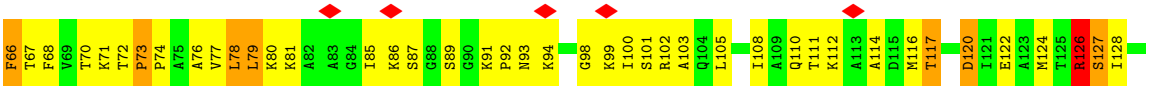


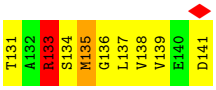


• Molecule 49: 50S ribosomal protein L11

Chain LK:

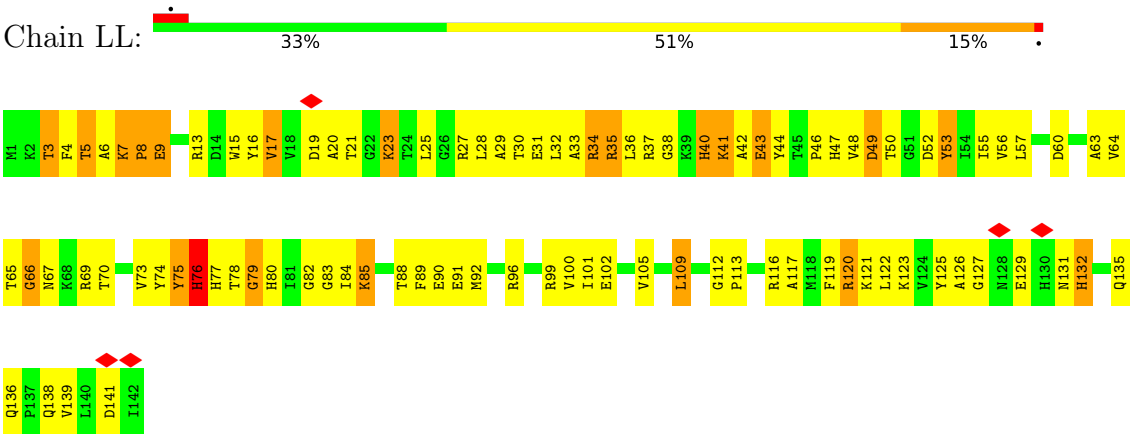






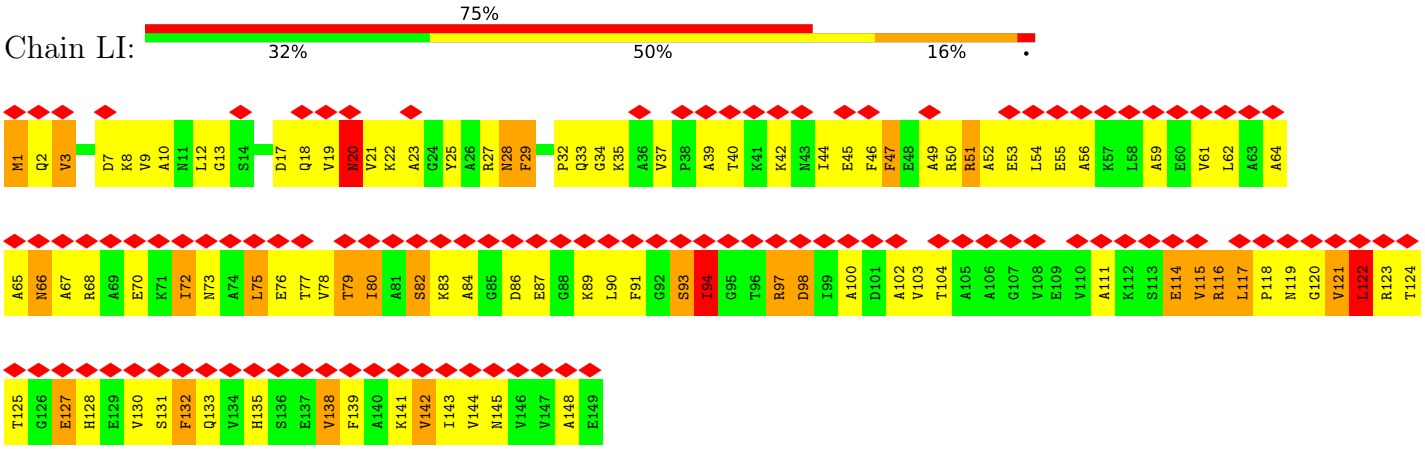
• Molecule 50: 50S ribosomal protein L13

Chain LL:



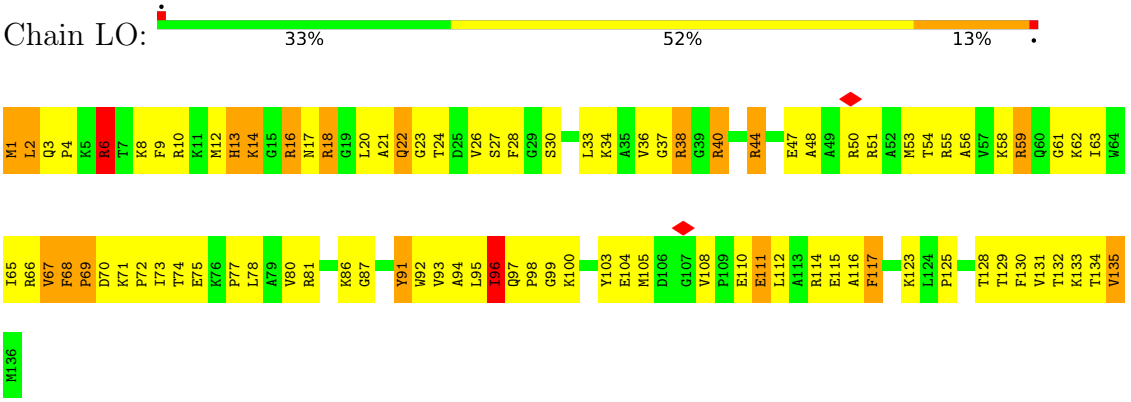
• Molecule 51: 50S ribosomal protein L9

Chain LI:



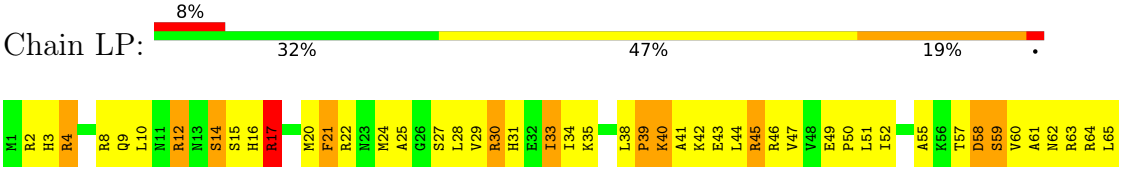
• Molecule 52: 50S ribosomal protein L16

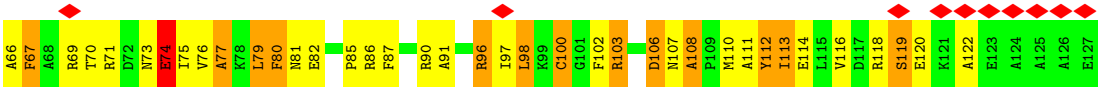
Chain LO:



• Molecule 53: 50S ribosomal protein L17

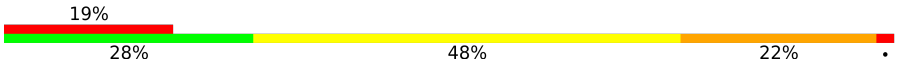
Chain LP:

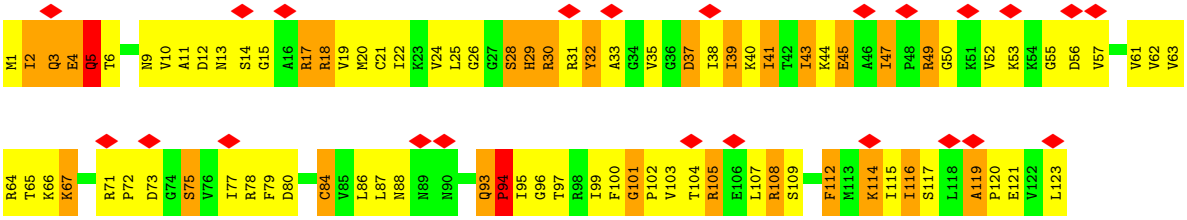




• Molecule 54: 50S ribosomal protein L14

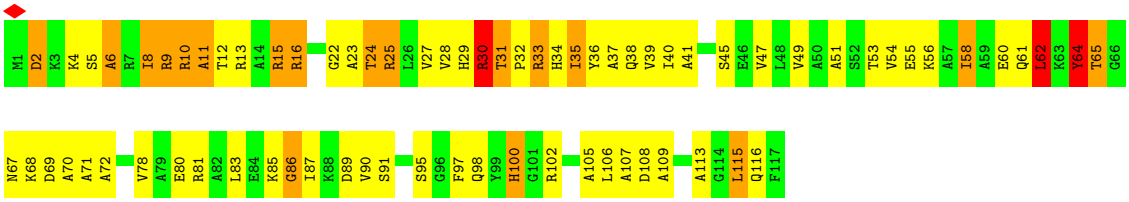
Chain LM:





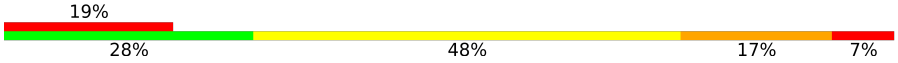
• Molecule 55: 50S ribosomal protein L18

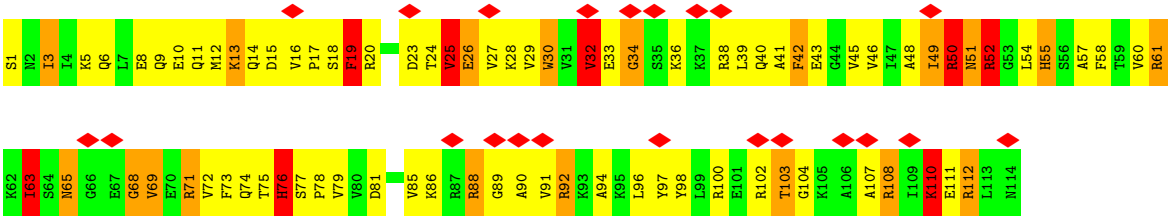
Chain LQ:



• Molecule 56: 50S ribosomal protein L19

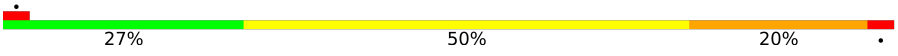
Chain LR:

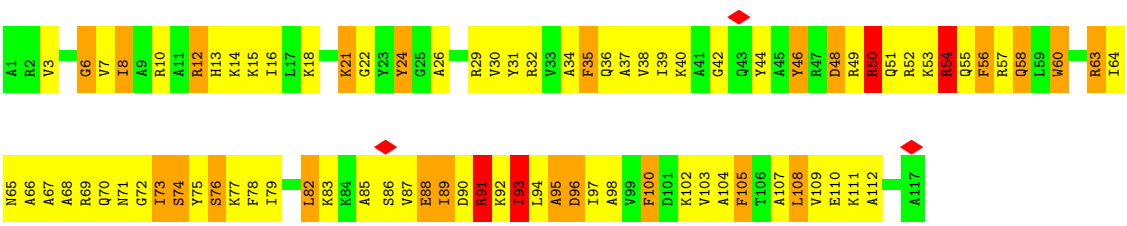




• Molecule 57: 50S ribosomal protein L20

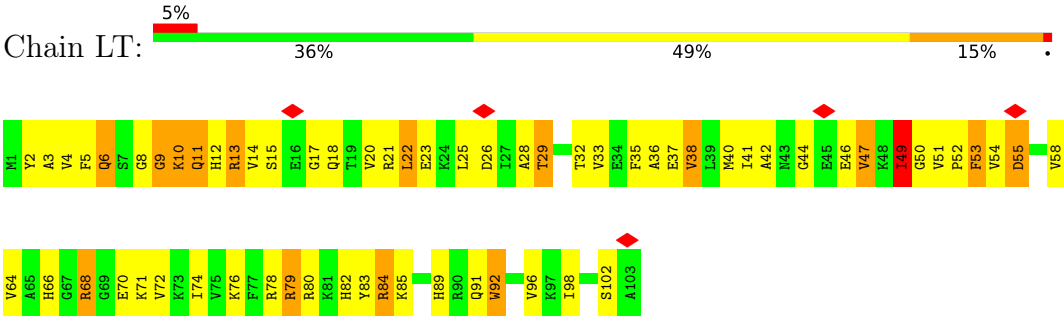
Chain LS:





• Molecule 58: 50S ribosomal protein L21

Chain LT:


5%
36%
49%
15%
M1 Y2 A3 V4 F5 Q6 S7 G8 G9 K10 Q11 H12 R13 V14 S15 E16 G17 Q18 T19 V20 R21 L22 E23 K24 L25 D26 I27 A28 T29
T32 V33 E34 F35 A36 E37 V38 L39 M40 I41 A42 N43 G44 E45 E46 V47 K48 K49 G50 V51 P52 F53 V54 D55
V58 I59 K60 A61
V64 A65 H66 G67 R68 G69 E70 K71 V72 K73 I74 V75 K76 F77 R78 R79 R80 K81 H82 Y83 R84 K85
H89 R90 Q91 W92 V96 K97 I98
S102 A103

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	50000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	CTFFIND3 and CTFIT	Depositor
Microscope	FEI TITAN	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	Not provided	
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	58000	Depositor
Image detector	DIRECT ELECTRON DE-12 (4k x 3k)	Depositor
Maximum map value	0.207	Depositor
Minimum map value	-0.084	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.015	Depositor
Recommended contour level	0.03	Depositor
Map size (Å)	377.99997, 377.99997, 377.99997	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.05, 1.05, 1.05	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: GTP

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	SS	2.19	21/744 (2.8%)	2.73	73/995 (7.3%)
2	SA	2.12	1123/37035 (3.0%)	2.13	2301/57774 (4.0%)
3	S1	2.24	49/1108 (4.4%)	2.28	78/1724 (4.5%)
4	S2	2.11	50/1831 (2.7%)	2.24	142/2853 (5.0%)
5	ST	2.34	26/676 (3.8%)	2.60	48/895 (5.4%)
6	SU	2.18	18/598 (3.0%)	2.72	45/792 (5.7%)
7	SG	2.23	54/1422 (3.8%)	2.53	106/1908 (5.6%)
8	SH	2.16	34/989 (3.4%)	2.55	70/1326 (5.3%)
9	SI	2.18	26/1048 (2.5%)	2.50	74/1394 (5.3%)
10	SJ	2.32	38/835 (4.6%)	2.63	79/1127 (7.0%)
11	SK	2.27	31/982 (3.2%)	2.67	80/1323 (6.0%)
12	SL	2.32	37/969 (3.8%)	2.58	77/1300 (5.9%)
13	SM	2.21	31/919 (3.4%)	2.69	84/1226 (6.9%)
14	SN	2.10	21/817 (2.6%)	2.59	72/1088 (6.6%)
15	SO	2.16	21/724 (2.9%)	2.58	54/966 (5.6%)
16	SP	2.10	19/659 (2.9%)	2.52	51/884 (5.8%)
17	SQ	2.20	16/681 (2.3%)	2.52	53/913 (5.8%)
18	SB	2.20	54/1904 (2.8%)	2.66	172/2565 (6.7%)
19	SC	2.13	54/1852 (2.9%)	2.48	132/2490 (5.3%)
20	SD	2.21	56/1665 (3.4%)	2.48	120/2227 (5.4%)
21	SE	2.13	35/1239 (2.8%)	2.64	99/1664 (5.9%)
22	SF	2.17	33/1121 (2.9%)	2.60	85/1509 (5.6%)
23	SR	2.22	16/637 (2.5%)	2.51	49/851 (5.8%)
24	S3	2.22	184/5532 (3.3%)	2.60	475/7485 (6.3%)
25	LB	2.13	79/2869 (2.8%)	2.09	161/4474 (3.6%)
26	LA	2.15	2159/69808 (3.1%)	2.12	4286/108905 (3.9%)
27	LD	2.27	76/2131 (3.6%)	2.56	159/2863 (5.6%)
28	LU	2.15	27/864 (3.1%)	2.50	63/1156 (5.4%)
29	LV	2.17	24/794 (3.0%)	2.54	46/1060 (4.3%)
30	LW	2.17	22/797 (2.8%)	2.49	57/1062 (5.4%)
31	LX	2.18	28/766 (3.7%)	2.58	53/1025 (5.2%)
32	LY	2.40	33/642 (5.1%)	2.71	54/848 (6.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	LZ	2.38	33/635 (5.2%)	2.65	57/848 (6.7%)
34	L0	2.15	17/510 (3.3%)	2.86	59/677 (8.7%)
35	L1	2.16	12/453 (2.6%)	2.62	31/605 (5.1%)
36	L2	2.14	18/559 (3.2%)	2.55	36/745 (4.8%)
37	LC	2.24	58/1748 (3.3%)	2.74	169/2355 (7.2%)
38	LE	2.26	51/1586 (3.2%)	2.60	119/2134 (5.6%)
39	L3	2.28	19/450 (4.2%)	2.46	33/599 (5.5%)
40	L4	2.30	18/448 (4.0%)	2.40	25/594 (4.2%)
41	L5	2.28	21/380 (5.5%)	2.79	40/498 (8.0%)
42	L6	2.19	18/513 (3.5%)	2.49	34/676 (5.0%)
43	L7	2.17	6/303 (2.0%)	2.34	14/397 (3.5%)
44	LF	2.24	60/1571 (3.8%)	2.47	103/2113 (4.9%)
45	LG	2.10	35/1444 (2.4%)	2.67	129/1937 (6.7%)
46	LH	2.17	45/1343 (3.4%)	2.69	116/1816 (6.4%)
47	LJ	2.17	46/1247 (3.7%)	2.59	102/1679 (6.1%)
48	LN	2.13	32/1062 (3.0%)	2.59	81/1413 (5.7%)
49	LK	2.21	37/1046 (3.5%)	2.78	102/1410 (7.2%)
50	LL	2.28	42/1152 (3.6%)	2.58	101/1551 (6.5%)
51	LI	2.23	43/1122 (3.8%)	2.70	94/1515 (6.2%)
52	LO	2.24	46/1093 (4.2%)	2.52	68/1460 (4.7%)
53	LP	2.30	42/1021 (4.1%)	2.52	78/1364 (5.7%)
54	LM	2.24	29/956 (3.0%)	2.59	82/1279 (6.4%)
55	LQ	2.27	36/910 (4.0%)	2.53	72/1219 (5.9%)
56	LR	2.29	40/929 (4.3%)	2.70	79/1242 (6.4%)
57	LS	2.19	31/960 (3.2%)	2.66	83/1278 (6.5%)
58	LT	2.17	29/829 (3.5%)	2.62	68/1107 (6.1%)
All	All	2.16	5359/168928 (3.2%)	2.28	11473/251183 (4.6%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	SS	0	11
2	SA	0	979
3	S1	0	36
4	S2	0	48
5	ST	0	5
6	SU	0	11
7	SG	0	19
8	SH	0	10

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
9	SI	0	7
10	SJ	0	9
11	SK	0	7
12	SL	0	10
13	SM	0	8
14	SN	0	11
15	SO	0	7
16	SP	0	9
17	SQ	0	6
18	SB	0	13
19	SC	0	11
20	SD	0	18
21	SE	0	11
22	SF	0	12
23	SR	0	9
24	S3	0	38
25	LB	0	68
26	LA	5	1948
27	LD	0	24
28	LU	0	8
29	LV	0	5
30	LW	0	8
31	LX	0	5
32	LY	0	8
33	LZ	0	7
34	L0	0	2
35	L1	0	3
36	L2	0	9
37	LC	0	17
38	LE	0	15
39	L3	0	5
40	L4	0	4
41	L5	0	7
42	L6	0	2
43	L7	0	4
44	LF	0	10
45	LG	0	15
46	LH	0	13
47	LJ	0	10
48	LN	0	12
49	LK	0	10
50	LL	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
51	LI	0	7
52	LO	0	8
53	LP	0	10
54	LM	0	9
55	LQ	0	14
56	LR	0	11
57	LS	0	12
58	LT	0	8
All	All	5	3608

All (5359) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	LG	107	VAL	CA-CB	-12.88	1.45	1.53
27	LD	28	PRO	CA-C	-11.50	1.39	1.52
33	LZ	10	ARG	CA-C	-11.50	1.39	1.52
18	SB	100	LEU	CA-C	11.23	1.60	1.52
52	LO	68	PHE	CA-C	-11.17	1.41	1.52
37	LC	164	ARG	CD-NE	11.14	1.61	1.46
20	SD	51	GLY	CA-C	-11.13	1.40	1.52
26	LA	784	G	O4'-C1'	-11.02	1.25	1.41
25	LB	96	G	C5'-C4'	10.56	1.67	1.51
24	S3	347	THR	CA-C	-10.47	1.39	1.52
24	S3	385	ILE	CA-C	-10.46	1.39	1.52
26	LA	685	A	O3'-P	-10.44	1.45	1.61
26	LA	2125	G	C5'-C4'	10.43	1.66	1.51
27	LD	219	VAL	CA-CB	-10.41	1.42	1.54
38	LE	120	GLY	CA-C	-10.29	1.40	1.51
12	SL	83	GLY	CA-C	-10.25	1.43	1.52
55	LQ	55	GLU	CA-C	10.25	1.65	1.52
2	SA	1342	C	C2'-C1'	-10.23	1.38	1.53
32	LY	40	ARG	CA-C	-10.15	1.40	1.52
50	LL	96	ARG	C-O	10.14	1.28	1.23
8	SH	29	SER	CA-C	-10.11	1.40	1.52
7	SG	102	TRP	N-CA	-9.98	1.34	1.46
32	LY	79	ILE	CA-CB	-9.95	1.44	1.54
40	L4	52	LYS	CA-C	-9.94	1.42	1.53
2	SA	1108	G	C1'-N9	-9.92	1.33	1.48
2	SA	1114	C	C1'-N1	9.91	1.63	1.48
2	SA	608	A	O3'-P	-9.84	1.46	1.61
26	LA	2500	U	O3'-P	-9.82	1.46	1.61
12	SL	9	LYS	C-N	-9.79	1.21	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	S3	458	ALA	CA-C	-9.79	1.40	1.52
12	SL	80	LEU	CA-C	-9.78	1.40	1.52
26	LA	1200	C	C4'-O4'	-9.76	1.30	1.45
26	LA	2599	G	C1'-N9	-9.70	1.33	1.48
2	SA	364	A	C5'-C4'	9.64	1.65	1.51
26	LA	2122	U	C1'-N1	9.63	1.62	1.48
26	LA	1786	A	C2'-C1'	-9.58	1.38	1.53
2	SA	866	C	C2'-C1'	-9.56	1.39	1.53
27	LD	242	HIS	C-N	-9.55	1.22	1.33
26	LA	2234	G	C1'-N9	-9.52	1.33	1.48
10	SJ	47	GLU	N-CA	-9.49	1.34	1.46
25	LB	53	A	C5'-C4'	9.48	1.65	1.51
20	SD	142	VAL	CA-C	-9.43	1.41	1.52
26	LA	2112	G	C5'-C4'	9.43	1.65	1.51
26	LA	2871	U	C5'-C4'	9.42	1.65	1.51
26	LA	389	G	C1'-N9	-9.42	1.33	1.48
26	LA	2074	U	C4'-O4'	-9.39	1.31	1.45
26	LA	192	C	C5'-C4'	9.38	1.65	1.51
26	LA	126	A	C5'-C4'	9.37	1.65	1.51
48	LN	110	VAL	CA-CB	-9.36	1.42	1.54
38	LE	134	HIS	N-CA	-9.34	1.34	1.46
31	LX	29	ILE	N-CA	-9.33	1.35	1.46
26	LA	2204	G	O3'-P	-9.33	1.47	1.61
26	LA	227	A	C1'-N9	-9.32	1.32	1.47
49	LK	137	LEU	N-CA	-9.29	1.34	1.46
1	SS	57	VAL	CA-CB	-9.28	1.46	1.54
26	LA	2427	C	C2'-C1'	-9.28	1.39	1.53
57	LS	16	ILE	CA-CB	-9.26	1.43	1.54
47	LJ	138	LEU	CA-C	9.26	1.64	1.52
49	LK	114	ALA	CA-C	9.26	1.58	1.52
26	LA	896	A	C2'-C1'	-9.25	1.39	1.53
26	LA	928	A	C5'-C4'	9.22	1.65	1.51
2	SA	1251	A	O3'-P	-9.21	1.47	1.61
26	LA	1354	A	O3'-P	-9.19	1.47	1.61
27	LD	24	HIS	ND1-CE1	9.18	1.41	1.32
52	LO	16	ARG	CA-C	-9.18	1.41	1.52
17	SQ	45	VAL	N-CA	-9.18	1.35	1.46
51	LI	93	SER	N-CA	9.15	1.57	1.46
30	LW	94	PHE	CA-C	-9.15	1.41	1.52
5	ST	24	ARG	CA-CB	9.14	1.67	1.53
26	LA	2009	A	O3'-P	-9.12	1.47	1.61
37	LC	96	GLY	CA-C	9.09	1.62	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	483	C	P-O5'	-9.08	1.46	1.59
27	LD	183	VAL	CA-CB	-9.08	1.43	1.54
37	LC	208	TYR	CA-CB	9.07	1.66	1.53
20	SD	83	GLY	CA-C	-9.07	1.41	1.51
26	LA	393	C	C4'-C3'	9.07	1.66	1.52
5	ST	54	GLN	CA-C	9.06	1.63	1.52
26	LA	2364	C	O5'-C5'	9.05	1.56	1.42
26	LA	140	C	C5'-C4'	9.02	1.64	1.51
33	LZ	49	ARG	CA-C	-9.01	1.41	1.52
10	SJ	79	PRO	CA-CB	8.99	1.66	1.53
8	SH	70	VAL	CA-CB	-8.98	1.42	1.55
4	S2	35	C	O3'-P	-8.98	1.47	1.61
26	LA	1363	C	C1'-N1	-8.97	1.34	1.48
51	LI	104	THR	N-CA	8.97	1.51	1.46
26	LA	2158	A	C5'-C4'	8.93	1.64	1.51
31	LX	77	VAL	CA-C	-8.92	1.41	1.52
53	LP	31	HIS	CD2-NE2	8.91	1.47	1.37
2	SA	1253	G	O3'-P	-8.91	1.47	1.61
55	LQ	97	PHE	CA-C	-8.91	1.41	1.52
2	SA	1468	A	C2'-C1'	-8.88	1.40	1.53
2	SA	173	U	O3'-P	-8.87	1.47	1.61
20	SD	164	ARG	CD-NE	8.85	1.58	1.46
26	LA	1322	A	O3'-P	-8.84	1.47	1.61
33	LZ	76	LYS	N-CA	-8.83	1.34	1.46
42	L6	37	THR	CA-C	-8.83	1.41	1.52
22	SF	111	GLU	CA-C	-8.83	1.40	1.52
24	S3	578	HIS	ND1-CE1	8.82	1.41	1.32
37	LC	178	VAL	CA-CB	-8.82	1.42	1.54
24	S3	180	GLY	CA-C	-8.81	1.41	1.51
11	SK	38	GLY	N-CA	8.81	1.58	1.45
26	LA	1969	A	P-O5'	-8.81	1.46	1.59
16	SP	17	TYR	N-CA	-8.80	1.35	1.46
24	S3	363	VAL	CA-C	-8.78	1.41	1.52
30	LW	59	GLU	N-CA	-8.75	1.34	1.46
26	LA	322	A	O3'-P	-8.75	1.48	1.61
27	LD	115	ILE	CA-C	-8.73	1.42	1.52
15	SO	73	ASP	CA-C	8.73	1.62	1.52
26	LA	506	G	O3'-P	-8.73	1.48	1.61
38	LE	177	VAL	CA-C	-8.73	1.43	1.52
2	SA	524	G	O3'-P	-8.72	1.48	1.61
10	SJ	45	ARG	NE-CZ	8.71	1.42	1.33
26	LA	1000	A	O3'-P	-8.72	1.48	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	LK	60	VAL	N-CA	-8.71	1.36	1.46
53	LP	113	ILE	CA-C	-8.71	1.42	1.52
20	SD	61	ARG	N-CA	-8.71	1.35	1.46
24	S3	107	GLY	N-CA	8.70	1.52	1.44
2	SA	920	U	O3'-P	-8.70	1.48	1.61
18	SB	84	LEU	C-N	8.70	1.44	1.33
44	LF	186	VAL	CA-CB	-8.69	1.43	1.53
26	LA	887	U	C5'-C4'	8.69	1.64	1.51
38	LE	37	VAL	N-CA	-8.67	1.35	1.46
2	SA	536	C	O5'-C5'	8.66	1.55	1.42
2	SA	1125	U	O3'-P	-8.65	1.48	1.61
26	LA	113	U	C1'-N1	8.65	1.61	1.48
38	LE	143	PRO	CA-C	-8.64	1.41	1.52
26	LA	1074	G	C1'-N9	-8.64	1.34	1.48
24	S3	456	ILE	N-CA	-8.62	1.36	1.46
2	SA	327	A	O5'-C5'	8.62	1.55	1.42
12	SL	63	THR	CA-C	-8.61	1.42	1.52
55	LQ	100	HIS	CA-C	-8.61	1.46	1.52
24	S3	370	ARG	CD-NE	8.61	1.58	1.46
2	SA	816	A	C2'-C1'	-8.60	1.40	1.53
9	SI	121	ARG	CD-NE	8.60	1.58	1.46
17	SQ	26	ARG	CD-NE	8.60	1.58	1.46
26	LA	2848	G	O3'-P	-8.59	1.48	1.61
26	LA	142	A	C2'-C1'	-8.59	1.40	1.53
45	LG	16	MET	CA-C	-8.59	1.41	1.52
24	S3	206	ILE	CA-C	8.58	1.59	1.52
26	LA	1989	G	O3'-P	-8.56	1.48	1.61
33	LZ	64	ASP	CA-C	-8.56	1.41	1.52
26	LA	2430	A	C1'-N9	-8.54	1.35	1.48
2	SA	126	G	C1'-N9	-8.54	1.35	1.48
2	SA	813	U	O4'-C1'	-8.53	1.28	1.41
24	S3	493	ILE	CA-CB	-8.53	1.44	1.54
32	LY	35	ILE	CA-C	-8.52	1.42	1.52
2	SA	1495	U	O5'-C5'	8.51	1.55	1.42
2	SA	266	G	C1'-N9	-8.50	1.35	1.48
37	LC	74	ARG	CA-C	8.49	1.64	1.52
18	SB	232	ALA	N-CA	-8.48	1.36	1.46
24	S3	665	TYR	N-CA	-8.46	1.36	1.46
26	LA	2887	A	C5'-C4'	8.46	1.64	1.51
26	LA	1668	A	O4'-C1'	-8.45	1.29	1.42
26	LA	2333	A	C2'-C1'	-8.46	1.40	1.53
30	LW	102	ILE	CA-C	-8.46	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	44	A	C1'-N9	-8.45	1.35	1.48
26	LA	2331	G	P-O5'	8.44	1.72	1.59
18	SB	67	LEU	N-CA	-8.42	1.36	1.46
49	LK	68	PHE	CA-C	8.42	1.62	1.52
26	LA	1606	C	C1'-N1	-8.41	1.35	1.48
37	LC	5	THR	CA-C	8.41	1.63	1.52
26	LA	2566	A	C1'-N9	-8.40	1.34	1.47
24	S3	187	MET	CA-C	-8.40	1.42	1.53
2	SA	1048	G	C3'-C2'	-8.39	1.40	1.52
5	ST	43	LYS	CA-CB	8.39	1.66	1.53
26	LA	233	A	C1'-N9	-8.39	1.35	1.48
26	LA	1620	G	C1'-N9	-8.39	1.35	1.48
2	SA	957	U	O3'-P	-8.39	1.48	1.61
54	LM	31	ARG	N-CA	-8.38	1.33	1.46
26	LA	2407	A	C5'-C4'	8.36	1.63	1.51
3	S1	25	U	C5'-C4'	8.36	1.63	1.51
24	S3	460	MET	CA-C	-8.36	1.44	1.53
26	LA	1571	A	O3'-P	-8.36	1.48	1.61
26	LA	2504	U	C3'-C2'	8.35	1.65	1.52
53	LP	77	ALA	N-CA	-8.35	1.35	1.46
2	SA	401	C	C2'-C1'	-8.35	1.40	1.53
52	LO	62	LYS	CA-C	-8.34	1.42	1.52
26	LA	432	A	C5'-C4'	8.33	1.63	1.51
46	LH	31	GLU	N-CA	-8.33	1.35	1.46
26	LA	88	G	C2'-C1'	-8.32	1.40	1.53
26	LA	573	U	C3'-C2'	8.32	1.65	1.52
26	LA	1887	C	C1'-N1	-8.32	1.35	1.48
2	SA	1493	A	C5'-C4'	8.32	1.63	1.51
26	LA	2501	C	O3'-P	-8.31	1.48	1.61
12	SL	76	HIS	ND1-CE1	8.31	1.40	1.32
26	LA	984	A	C1'-N9	-8.29	1.35	1.48
26	LA	2442	C	O3'-P	-8.28	1.48	1.61
31	LX	28	ALA	N-CA	-8.28	1.36	1.46
28	LU	49	LYS	N-CA	-8.28	1.36	1.46
26	LA	830	G	C1'-N9	-8.27	1.34	1.47
49	LK	52	LEU	CA-C	8.27	1.59	1.52
26	LA	1568	G	C5'-C4'	8.26	1.63	1.51
2	SA	999	C	C4'-C3'	8.26	1.65	1.52
3	S1	35	G	P-O5'	-8.26	1.47	1.59
26	LA	2385	C	C2'-C1'	-8.26	1.41	1.53
26	LA	794	A	O3'-P	-8.26	1.48	1.61
19	SC	146	LYS	CA-CB	8.25	1.67	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2281	A	O3'-P	-8.24	1.48	1.61
44	LF	30	GLN	CA-CB	8.24	1.66	1.53
26	LA	606	U	O3'-P	-8.24	1.48	1.61
26	LA	331	C	O3'-P	-8.23	1.48	1.61
45	LG	146	ASP	N-CA	-8.23	1.35	1.46
54	LM	20	MET	CA-C	-8.23	1.42	1.52
26	LA	1634	A	C2'-C1'	-8.22	1.40	1.53
26	LA	2020	A	C1'-N9	-8.22	1.35	1.48
26	LA	1352	U	O3'-P	-8.21	1.48	1.61
18	SB	37	VAL	CA-C	-8.21	1.43	1.52
26	LA	1895	C	C1'-N1	-8.20	1.36	1.48
26	LA	2642	G	P-O5'	-8.21	1.47	1.59
26	LA	1999	C	C2'-C1'	-8.20	1.41	1.53
52	LO	8	LYS	N-CA	-8.20	1.35	1.46
26	LA	2586	U	O5'-C5'	8.20	1.54	1.42
3	S1	52	U	C4'-C3'	8.19	1.64	1.52
40	L4	50	GLU	N-CA	8.19	1.56	1.46
2	SA	1465	A	C2'-C1'	-8.19	1.41	1.53
26	LA	2064	C	C3'-C2'	-8.18	1.40	1.52
4	S2	42	C	O3'-P	-8.18	1.48	1.61
8	SH	74	ILE	CA-CB	-8.18	1.43	1.54
26	LA	167	A	C2'-C1'	-8.17	1.41	1.53
26	LA	514	A	C1'-N9	-8.16	1.35	1.48
20	SD	172	VAL	CA-C	-8.16	1.42	1.52
30	LW	62	ALA	N-CA	-8.16	1.36	1.46
2	SA	601	G	O3'-P	-8.16	1.49	1.61
26	LA	2387	U	P-O5'	-8.15	1.47	1.59
27	LD	262	THR	CA-C	-8.14	1.42	1.52
49	LK	67	THR	CA-C	-8.14	1.42	1.52
30	LW	34	ILE	CA-C	-8.14	1.42	1.52
44	LF	117	ARG	CD-NE	8.14	1.57	1.46
26	LA	495	G	C2'-C1'	-8.13	1.41	1.53
44	LF	121	VAL	CA-C	8.13	1.62	1.52
26	LA	973	A	C2'-C1'	-8.13	1.40	1.53
27	LD	52	HIS	CG-ND1	-8.13	1.29	1.38
2	SA	564	C	O3'-P	-8.12	1.49	1.61
2	SA	1158	C	C4'-C3'	8.12	1.64	1.52
2	SA	1318	A	O3'-P	-8.11	1.49	1.61
26	LA	125	A	C1'-N9	8.11	1.59	1.47
29	LV	13	ALA	C-N	-8.10	1.23	1.33
26	LA	1235	G	C5'-C4'	8.09	1.63	1.51
2	SA	1166	G	O3'-P	-8.08	1.49	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	LX	88	HIS	CB-CG	-8.08	1.38	1.50
2	SA	879	C	O3'-P	-8.08	1.49	1.61
2	SA	1026	G	O5'-C5'	8.08	1.54	1.42
8	SH	123	GLU	CA-CB	8.07	1.64	1.53
25	LB	8	C	O5'-C5'	8.07	1.54	1.42
26	LA	2019	A	O3'-P	-8.07	1.49	1.61
19	SC	199	VAL	CA-CB	-8.07	1.43	1.53
26	LA	59	U	C5'-C4'	8.06	1.63	1.51
2	SA	354	G	O3'-P	-8.06	1.49	1.61
4	S2	56	U	C2'-C1'	8.06	1.65	1.53
26	LA	2781	A	C2'-C1'	8.06	1.65	1.53
26	LA	493	G	O3'-P	-8.06	1.49	1.61
26	LA	2644	G	C4'-C3'	-8.05	1.40	1.52
26	LA	777	G	C2'-C1'	-8.05	1.41	1.53
26	LA	677	A	O5'-C5'	8.04	1.54	1.42
2	SA	262	A	C1'-N9	-8.04	1.35	1.48
27	LD	170	TYR	CA-CB	8.03	1.64	1.53
57	LS	34	ALA	CA-C	-8.03	1.42	1.52
37	LC	64	VAL	CA-CB	-8.03	1.43	1.54
24	S3	89	PRO	CA-C	-8.03	1.42	1.52
25	LB	15	A	C4'-C3'	8.03	1.65	1.53
22	SF	98	GLU	CA-CB	8.02	1.64	1.53
26	LA	778	G	O3'-P	-8.02	1.49	1.61
26	LA	2566	A	C4'-O4'	8.02	1.57	1.45
26	LA	2531	A	C1'-N9	-8.02	1.35	1.48
2	SA	262	A	O3'-P	-8.01	1.49	1.61
26	LA	2725	A	C5'-C4'	8.01	1.63	1.51
26	LA	2176	A	C3'-C2'	8.01	1.64	1.52
2	SA	572	A	C1'-N9	-7.99	1.35	1.48
24	S3	252	ARG	CD-NE	7.99	1.57	1.46
48	LN	46	VAL	CA-CB	-7.98	1.45	1.54
2	SA	224	U	O3'-P	-7.98	1.49	1.61
26	LA	1129	A	P-O5'	-7.98	1.47	1.59
26	LA	530	G	C1'-N9	-7.97	1.35	1.48
26	LA	1323	C	P-O5'	-7.97	1.47	1.59
2	SA	1285	A	C5'-C4'	7.96	1.63	1.51
2	SA	553	A	C2'-C1'	-7.96	1.41	1.53
26	LA	490	C	C5'-C4'	7.96	1.63	1.51
29	LV	42	GLU	CA-CB	7.96	1.65	1.53
26	LA	1260	A	C2'-C1'	-7.95	1.41	1.53
33	LZ	30	PRO	CA-C	-7.94	1.43	1.52
4	S2	20	G	O3'-P	-7.93	1.49	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	S3	299	ASP	CA-C	7.93	1.63	1.52
26	LA	2327	A	C1'-N9	-7.93	1.36	1.48
46	LH	120	ILE	CA-C	-7.93	1.43	1.52
11	SK	123	PRO	N-CA	-7.92	1.37	1.47
26	LA	276	U	O5'-C5'	7.92	1.54	1.42
26	LA	917	A	C4'-O4'	-7.92	1.33	1.45
12	SL	20	VAL	C-N	-7.92	1.27	1.33
53	LP	58	ASP	CA-C	-7.92	1.42	1.52
26	LA	1333	G	C5'-C4'	7.91	1.63	1.51
56	LR	86	LYS	CA-C	7.91	1.63	1.52
26	LA	1672	A	C1'-N9	-7.91	1.36	1.48
2	SA	533	A	C2'-C1'	-7.90	1.41	1.53
2	SA	1508	A	C4'-O4'	-7.90	1.33	1.45
50	LL	100	VAL	CA-CB	-7.90	1.45	1.54
26	LA	971	G	O3'-P	-7.90	1.49	1.61
26	LA	1527	G	C1'-N9	-7.90	1.36	1.48
2	SA	912	C	O3'-P	-7.89	1.49	1.61
24	S3	4	THR	N-CA	-7.89	1.38	1.45
2	SA	411	A	P-O5'	-7.89	1.48	1.59
24	S3	654	HIS	CB-CG	7.89	1.61	1.50
26	LA	367	G	C3'-O3'	7.89	1.53	1.42
26	LA	2060	A	O3'-P	-7.89	1.49	1.61
26	LA	2843	G	O3'-P	-7.89	1.49	1.61
33	LZ	10	ARG	C-N	-7.88	1.24	1.33
26	LA	2791	G	O4'-C1'	7.88	1.53	1.41
18	SB	93	HIS	ND1-CE1	7.88	1.40	1.32
26	LA	410	G	C2'-C1'	-7.88	1.41	1.53
2	SA	927	G	C4'-C3'	7.88	1.64	1.52
26	LA	2663	G	O3'-P	-7.87	1.49	1.61
12	SL	14	LYS	CA-CB	7.87	1.66	1.53
26	LA	2335	A	C1'-N9	-7.87	1.36	1.48
24	S3	71	TRP	NE1-CE2	7.86	1.46	1.37
40	L4	31	GLU	N-CA	7.86	1.55	1.46
26	LA	800	A	O3'-P	-7.86	1.49	1.61
58	LT	29	THR	C-N	7.86	1.44	1.32
34	L0	23	ARG	CD-NE	7.85	1.57	1.46
42	L6	2	LYS	CA-C	-7.85	1.43	1.52
2	SA	968	A	O3'-P	-7.85	1.49	1.61
26	LA	1085	A	C1'-N9	-7.84	1.36	1.48
26	LA	224	U	O5'-C5'	7.84	1.54	1.42
26	LA	2304	G	O3'-P	-7.84	1.49	1.61
26	LA	1004	U	P-O5'	-7.83	1.48	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	1081	A	C1'-N9	-7.83	1.36	1.48
21	SE	92	ARG	CD-NE	7.83	1.57	1.46
2	SA	789	U	C5'-C4'	7.82	1.63	1.51
6	SU	66	ARG	CD-NE	7.82	1.57	1.46
26	LA	2841	C	P-O5'	-7.82	1.48	1.59
26	LA	1810	A	C2'-C1'	-7.82	1.41	1.53
2	SA	10	A	C2'-C1'	-7.81	1.41	1.53
2	SA	813	U	O5'-C5'	7.81	1.54	1.42
19	SC	63	ILE	N-CA	7.81	1.55	1.46
24	S3	618	VAL	N-CA	-7.81	1.37	1.46
2	SA	61	G	O3'-P	-7.81	1.49	1.61
2	SA	699	C	O3'-P	-7.80	1.49	1.61
9	SI	18	VAL	N-CA	-7.80	1.36	1.46
13	SM	23	GLY	C-N	-7.80	1.24	1.33
26	LA	125	A	C2'-C1'	7.80	1.64	1.53
26	LA	2133	G	C3'-O3'	7.80	1.54	1.43
26	LA	2009	A	C3'-C2'	-7.80	1.41	1.52
27	LD	60	ALA	N-CA	-7.80	1.36	1.46
36	L2	66	ILE	CA-C	7.79	1.59	1.52
2	SA	1408	A	C1'-N9	-7.79	1.36	1.48
4	S2	2	G	C4'-C3'	7.79	1.64	1.52
26	LA	459	U	O3'-P	-7.79	1.49	1.61
24	S3	119	GLN	CA-CB	7.79	1.64	1.53
29	LV	63	VAL	CA-CB	-7.79	1.45	1.53
57	LS	16	ILE	CA-C	-7.79	1.43	1.52
24	S3	616	MET	CA-C	-7.79	1.43	1.52
3	S1	30	U	C2'-C1'	-7.78	1.41	1.53
2	SA	843	U	C5'-C4'	7.78	1.62	1.51
2	SA	1373	G	C1'-N9	-7.78	1.36	1.48
2	SA	186	C	C4'-C3'	7.78	1.64	1.52
37	LC	114	VAL	CA-C	7.78	1.61	1.52
26	LA	1371	G	C1'-N9	-7.77	1.36	1.48
10	SJ	25	ILE	N-CA	-7.77	1.37	1.46
7	SG	162	SER	CA-C	7.77	1.62	1.52
50	LL	76	HIS	ND1-CE1	7.76	1.40	1.32
2	SA	1182	G	C4'-C3'	7.76	1.64	1.53
26	LA	2457	U	O4'-C1'	-7.76	1.30	1.41
2	SA	787	A	C4'-O4'	7.76	1.57	1.45
26	LA	2520	C	P-O5'	-7.76	1.48	1.59
37	LC	122	ARG	CD-NE	7.76	1.57	1.46
26	LA	1622	G	O5'-C5'	7.75	1.54	1.42
58	LT	53	PHE	CA-C	7.75	1.63	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	SK	43	TRP	CA-C	-7.75	1.43	1.52
20	SD	31	CYS	CA-C	-7.74	1.43	1.52
44	LF	26	ALA	CA-C	-7.74	1.42	1.52
2	SA	1087	G	C3'-O3'	7.74	1.53	1.42
20	SD	142	VAL	CA-CB	-7.74	1.45	1.54
26	LA	745	G	C2'-C1'	-7.73	1.41	1.53
2	SA	477	C	P-O5'	-7.73	1.48	1.59
47	LJ	30	ARG	CD-NE	7.73	1.57	1.46
44	LF	176	ASP	C-N	-7.72	1.24	1.34
42	L6	52	GLY	CA-C	-7.72	1.41	1.51
26	LA	2547	A	O3'-P	-7.72	1.49	1.61
18	SB	204	ASP	CA-C	7.71	1.60	1.52
26	LA	2432	A	O3'-P	-7.71	1.49	1.61
14	SN	2	LYS	CA-C	-7.71	1.42	1.52
26	LA	1348	C	O3'-P	-7.71	1.49	1.61
26	LA	1210	G	C3'-C2'	7.70	1.64	1.52
26	LA	1721	G	C1'-N9	-7.69	1.35	1.47
26	LA	1607	C	C2'-C1'	-7.69	1.41	1.53
10	SJ	40	ILE	N-CA	-7.69	1.37	1.46
32	LY	68	PHE	CA-CB	7.69	1.62	1.52
24	S3	145	ARG	CD-NE	7.69	1.57	1.46
26	LA	2489	U	C2'-C1'	-7.68	1.41	1.53
25	LB	52	A	C2'-C1'	-7.68	1.41	1.53
26	LA	2448	A	O4'-C1'	-7.68	1.30	1.42
11	SK	58	THR	CA-C	7.67	1.59	1.52
2	SA	764	C	O3'-P	-7.67	1.49	1.61
2	SA	1351	U	C2'-C1'	-7.67	1.41	1.53
14	SN	64	ARG	CD-NE	7.67	1.56	1.46
5	ST	66	ILE	C-N	7.67	1.41	1.32
53	LP	39	PRO	N-CD	-7.66	1.37	1.47
2	SA	305	G	C5'-C4'	7.66	1.62	1.51
8	SH	35	ILE	CA-CB	-7.65	1.45	1.54
2	SA	1431	A	O5'-C5'	7.65	1.53	1.42
38	LE	45	TYR	N-CA	-7.65	1.37	1.46
2	SA	1300	G	O5'-C5'	7.65	1.54	1.42
26	LA	54	G	C2'-C1'	-7.65	1.41	1.53
27	LD	217	PRO	CA-CB	-7.65	1.43	1.53
26	LA	1887	C	P-O5'	-7.65	1.48	1.59
26	LA	2141	G	O4'-C1'	-7.65	1.30	1.41
58	LT	72	VAL	CA-CB	-7.64	1.44	1.54
26	LA	125	A	C4'-C3'	7.64	1.64	1.53
26	LA	1537	G	C3'-O3'	7.64	1.53	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	160	A	C4'-C3'	7.64	1.64	1.52
26	LA	53	A	C1'-N9	-7.64	1.36	1.48
57	LS	95	ALA	N-CA	-7.64	1.36	1.46
26	LA	2095	A	C1'-N9	-7.63	1.36	1.48
26	LA	1024	G	C1'-N9	-7.63	1.36	1.48
26	LA	2055	C	C5'-C4'	7.63	1.62	1.51
26	LA	2544	G	P-O5'	-7.62	1.48	1.59
16	SP	8	ARG	CA-C	-7.62	1.43	1.52
26	LA	1823	G	C1'-N9	-7.61	1.36	1.48
58	LT	20	VAL	N-CA	-7.61	1.37	1.46
2	SA	63	C	C3'-O3'	7.61	1.53	1.42
32	LY	61	LYS	CA-CB	7.61	1.65	1.53
26	LA	121	G	C3'-O3'	7.60	1.53	1.42
26	LA	2443	C	C1'-N1	-7.60	1.37	1.48
38	LE	75	ALA	CA-C	7.60	1.62	1.53
45	LG	119	LYS	CA-C	7.60	1.61	1.52
32	LY	56	HIS	ND1-CE1	7.60	1.40	1.32
47	LJ	127	THR	N-CA	7.60	1.56	1.46
46	LH	82	PHE	CA-C	7.60	1.61	1.52
29	LV	81	LYS	N-CA	-7.59	1.36	1.46
53	LP	35	LYS	CA-C	-7.59	1.43	1.52
26	LA	2147	A	C5'-C4'	7.59	1.62	1.51
2	SA	1175	G	C2'-C1'	-7.58	1.42	1.53
26	LA	740	C	C3'-C2'	-7.58	1.41	1.52
26	LA	1148	U	O3'-P	-7.58	1.49	1.61
26	LA	1404	C	C5'-C4'	7.58	1.62	1.51
26	LA	1919	A	C3'-O3'	7.58	1.53	1.42
26	LA	1783	A	C1'-N9	-7.57	1.36	1.48
2	SA	1291	U	C3'-O3'	7.57	1.53	1.42
2	SA	1344	C	C2'-C1'	-7.57	1.42	1.53
3	S1	31	U	C4'-O4'	7.57	1.56	1.45
38	LE	179	ARG	CD-NE	7.56	1.56	1.46
3	S1	51	C	O3'-P	-7.56	1.49	1.61
26	LA	992	C	O3'-P	-7.55	1.49	1.61
26	LA	1080	A	C2'-O2'	-7.55	1.31	1.42
26	LA	501	A	O5'-C5'	7.54	1.53	1.42
26	LA	1870	C	C5'-C4'	7.54	1.62	1.51
55	LQ	47	VAL	CA-CB	-7.54	1.45	1.53
10	SJ	72	ARG	CD-NE	7.54	1.56	1.46
26	LA	2708	G	C2'-C1'	-7.53	1.42	1.53
23	SR	42	ARG	CD-NE	7.53	1.56	1.46
26	LA	1914	C	C1'-N1	7.53	1.59	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	SP	35	ARG	CD-NE	7.53	1.56	1.46
26	LA	1609	A	O3'-P	-7.53	1.49	1.61
26	LA	699	A	C1'-N9	-7.52	1.36	1.48
2	SA	568	G	O5'-C5'	7.52	1.53	1.42
26	LA	1357	C	C1'-N1	-7.51	1.37	1.48
2	SA	6	G	C3'-O3'	7.51	1.53	1.42
26	LA	2642	G	C5'-C4'	7.51	1.62	1.51
26	LA	338	G	C5'-C4'	7.51	1.62	1.51
34	L0	51	ALA	N-CA	-7.51	1.37	1.46
12	SL	120	ARG	CA-C	7.51	1.62	1.53
24	S3	99	GLU	N-CA	-7.51	1.37	1.46
26	LA	2314	A	C3'-O3'	7.50	1.53	1.42
2	SA	362	G	O3'-P	-7.50	1.50	1.61
25	LB	10	G	C2'-C1'	-7.50	1.42	1.53
26	LA	736	C	C3'-C2'	-7.50	1.41	1.52
7	SG	28	ILE	CA-C	7.49	1.61	1.52
26	LA	2541	A	C5'-C4'	7.49	1.62	1.51
2	SA	1041	G	O3'-P	-7.49	1.50	1.61
20	SD	9	LYS	N-CA	-7.49	1.37	1.46
24	S3	133	LYS	CA-CB	7.49	1.64	1.53
2	SA	734	G	O5'-C5'	7.48	1.53	1.42
27	LD	172	THR	CA-C	-7.48	1.43	1.52
2	SA	722	G	C1'-N9	-7.48	1.36	1.48
4	S2	43	G	C5'-C4'	7.48	1.62	1.51
45	LG	84	ILE	CA-C	7.48	1.62	1.52
24	S3	333	THR	CA-C	-7.48	1.43	1.52
2	SA	838	G	C5'-C4'	7.47	1.62	1.51
26	LA	1864	U	P-O5'	-7.47	1.48	1.59
26	LA	2345	G	C4'-O4'	7.47	1.57	1.45
49	LK	61	TYR	CA-CB	7.47	1.66	1.53
56	LR	20	ARG	CA-C	7.47	1.58	1.52
24	S3	324	ALA	N-CA	-7.47	1.36	1.46
48	LN	117	THR	CA-C	7.47	1.62	1.52
20	SD	200	VAL	CA-C	-7.47	1.41	1.52
25	LB	38	C	C5'-C4'	7.47	1.62	1.51
26	LA	1052	C	O3'-P	-7.47	1.50	1.61
25	LB	73	A	C4'-O4'	-7.47	1.34	1.45
30	LW	64	ILE	CA-CB	-7.47	1.44	1.54
24	S3	379	GLY	CA-C	-7.46	1.41	1.51
26	LA	46	G	C1'-N9	-7.46	1.36	1.48
2	SA	764	C	C2'-C1'	-7.46	1.42	1.53
26	LA	172	A	P-O5'	-7.45	1.48	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
42	L6	26	ALA	N-CA	-7.45	1.36	1.45
26	LA	2590	A	C4'-O4'	-7.45	1.34	1.45
26	LA	107	G	C5'-C4'	7.45	1.62	1.51
26	LA	1035	U	C3'-O3'	7.45	1.53	1.42
2	SA	1457	G	C1'-N9	-7.45	1.36	1.48
2	SA	727	G	O5'-C5'	7.44	1.53	1.42
10	SJ	42	LEU	N-CA	-7.44	1.36	1.45
26	LA	989	G	C3'-C2'	-7.44	1.41	1.52
58	LT	28	ALA	CA-C	-7.44	1.43	1.52
2	SA	584	G	C5'-C4'	7.44	1.62	1.51
2	SA	1141	C	C5'-C4'	7.44	1.62	1.51
24	S3	318	ALA	CA-C	-7.44	1.43	1.52
25	LB	49	C	P-O5'	-7.44	1.48	1.59
26	LA	25	U	O3'-P	-7.44	1.50	1.61
48	LN	53	GLY	CA-C	7.43	1.63	1.51
26	LA	849	A	O5'-C5'	7.43	1.53	1.42
2	SA	759	A	C1'-N9	-7.42	1.36	1.48
26	LA	1894	C	C2'-C1'	7.42	1.64	1.53
46	LH	141	GLY	CA-C	-7.42	1.41	1.51
4	S2	71	G	C3'-O3'	7.41	1.53	1.42
26	LA	1924	C	O5'-C5'	7.41	1.53	1.42
2	SA	332	G	O5'-C5'	7.41	1.53	1.42
24	S3	343	ASN	N-CA	-7.41	1.36	1.46
26	LA	126	A	O4'-C1'	7.41	1.52	1.41
51	LI	111	ALA	CA-C	-7.41	1.43	1.53
57	LS	37	ALA	N-CA	-7.41	1.37	1.46
23	SR	5	ARG	CD-NE	7.40	1.56	1.46
20	SD	144	ILE	CA-C	-7.40	1.44	1.52
26	LA	522	A	C2'-C1'	-7.40	1.42	1.53
35	L1	20	LYS	C-N	7.40	1.43	1.33
26	LA	700	G	C1'-N9	-7.39	1.36	1.48
2	SA	1540	U	C1'-N1	7.39	1.59	1.48
39	L3	41	HIS	CD2-NE2	7.39	1.46	1.37
26	LA	1954	G	C2'-C1'	-7.38	1.42	1.53
26	LA	779	U	P-O5'	-7.38	1.48	1.59
1	SS	43	MET	C-N	7.38	1.43	1.33
15	SO	4	THR	CA-C	-7.38	1.43	1.52
26	LA	1547	C	C3'-O3'	7.38	1.53	1.42
26	LA	1801	A	C1'-N9	-7.38	1.35	1.47
26	LA	2338	C	C4'-C3'	7.38	1.63	1.52
2	SA	302	G	O3'-P	-7.38	1.50	1.61
2	SA	1080	A	O3'-P	-7.37	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
44	LF	17	THR	N-CA	7.37	1.55	1.46
26	LA	1240	U	C2'-C1'	-7.37	1.42	1.53
2	SA	1150	A	C2'-C1'	-7.37	1.42	1.53
33	LZ	34	SER	N-CA	-7.36	1.37	1.46
2	SA	810	C	C2'-C1'	-7.36	1.42	1.53
26	LA	221	A	O5'-C5'	7.36	1.53	1.42
26	LA	1533	C	C5'-C4'	7.36	1.62	1.51
19	SC	119	ILE	CA-CB	-7.36	1.45	1.54
2	SA	887	G	O5'-C5'	7.36	1.53	1.42
3	S1	47	C	C1'-N1	7.36	1.58	1.47
15	SO	80	LEU	N-CA	7.36	1.55	1.46
10	SJ	54	SER	C-N	-7.35	1.26	1.34
53	LP	55	ALA	N-CA	-7.35	1.35	1.46
26	LA	2468	A	O3'-P	-7.34	1.50	1.61
2	SA	538	G	N9-C4	-7.34	1.23	1.38
2	SA	1261	A	C2'-C1'	-7.34	1.42	1.53
53	LP	120	GLU	CA-C	7.34	1.62	1.52
26	LA	1637	A	C5'-C4'	7.34	1.62	1.51
52	LO	18	ARG	CD-NE	7.34	1.56	1.46
25	LB	31	C	C3'-O3'	7.34	1.53	1.42
2	SA	602	A	C3'-O3'	7.33	1.53	1.42
37	LC	139	ASN	C-N	7.33	1.41	1.34
2	SA	813	U	C4'-O4'	-7.33	1.34	1.45
26	LA	1316	U	O3'-P	-7.33	1.50	1.61
2	SA	1421	G	C3'-O3'	7.33	1.53	1.42
26	LA	190	A	O3'-P	-7.32	1.50	1.61
40	L4	5	ARG	CD-NE	7.32	1.56	1.46
26	LA	2243	U	O3'-P	-7.32	1.50	1.61
26	LA	2769	U	P-O5'	-7.31	1.48	1.59
2	SA	696	A	C5'-C4'	7.31	1.62	1.51
2	SA	889	A	C1'-N9	-7.31	1.35	1.47
19	SC	167	TYR	CA-C	7.31	1.61	1.52
26	LA	455	C	O3'-P	-7.31	1.50	1.61
26	LA	2331	G	O3'-P	-7.31	1.50	1.61
2	SA	857	C	O3'-P	-7.31	1.50	1.61
10	SJ	51	VAL	CA-C	7.30	1.61	1.52
5	ST	11	ILE	CA-CB	-7.29	1.45	1.54
2	SA	995	C	C1'-N1	-7.29	1.37	1.48
2	SA	563	A	C5'-C4'	7.29	1.62	1.51
24	S3	220	ASN	CA-CB	7.29	1.65	1.53
48	LN	41	ARG	CA-C	-7.29	1.42	1.53
47	LJ	74	ALA	N-CA	-7.29	1.37	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	564	C	O3'-P	-7.29	1.50	1.61
26	LA	1803	A	C1'-N9	-7.29	1.37	1.48
26	LA	2796	U	P-O5'	-7.29	1.48	1.59
4	S2	37	U	O3'-P	-7.29	1.50	1.61
7	SG	167	ALA	CA-C	-7.29	1.43	1.52
26	LA	212	G	O4'-C1'	-7.28	1.30	1.41
24	S3	519	ILE	CA-C	-7.28	1.44	1.52
26	LA	1620	G	C5'-C4'	7.28	1.62	1.51
26	LA	1843	C	O3'-P	-7.28	1.50	1.61
58	LT	38	VAL	N-CA	-7.28	1.37	1.46
2	SA	842	U	P-O5'	-7.27	1.48	1.59
53	LP	33	ILE	C-O	-7.27	1.16	1.24
26	LA	42	A	C5'-C4'	7.27	1.62	1.51
26	LA	891	G	C4'-C3'	7.27	1.63	1.52
2	SA	394	G	O5'-C5'	7.26	1.53	1.42
26	LA	555	G	P-O5'	-7.26	1.48	1.59
26	LA	1177	G	C4'-O4'	7.26	1.56	1.45
2	SA	1239	A	C2'-C1'	-7.26	1.42	1.53
8	SH	20	ASN	CA-CB	7.26	1.65	1.53
26	LA	2279	G	C4'-C3'	7.26	1.63	1.52
2	SA	643	C	O3'-P	-7.25	1.50	1.61
1	SS	61	VAL	CA-C	7.25	1.61	1.52
26	LA	2619	C	C2'-C1'	-7.25	1.42	1.53
2	SA	1068	G	C2'-C1'	-7.25	1.42	1.53
26	LA	599	A	C1'-N9	-7.25	1.37	1.48
2	SA	100	G	C2'-C1'	-7.25	1.42	1.53
26	LA	1393	A	P-O5'	-7.25	1.48	1.59
26	LA	2039	U	C3'-C2'	-7.25	1.41	1.52
55	LQ	13	ARG	CD-NE	7.25	1.56	1.46
26	LA	64	A	C1'-N9	-7.24	1.37	1.48
26	LA	2756	U	C2'-C1'	-7.24	1.42	1.53
26	LA	1500	G	C5'-C4'	7.24	1.62	1.51
2	SA	140	U	C1'-N1	7.24	1.59	1.48
2	SA	533	A	C1'-N9	-7.23	1.36	1.47
2	SA	780	A	C1'-N9	-7.23	1.37	1.48
26	LA	138	U	C1'-N1	7.23	1.59	1.48
56	LR	50	ARG	CD-NE	7.23	1.56	1.46
26	LA	641	U	C5'-C4'	7.23	1.62	1.51
26	LA	1417	C	C1'-N1	-7.23	1.37	1.48
10	SJ	66	GLU	CA-C	7.22	1.61	1.52
2	SA	1219	A	O3'-P	-7.22	1.50	1.61
26	LA	1266	G	P-O5'	7.22	1.70	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
44	LF	79	ARG	CA-C	-7.22	1.44	1.52
26	LA	2181	U	C3'-O3'	7.22	1.52	1.42
50	LL	41	LYS	CA-C	-7.22	1.43	1.53
26	LA	977	G	C2'-C1'	-7.22	1.42	1.53
1	SS	70	LEU	CA-C	-7.21	1.43	1.52
34	L0	18	LEU	CA-C	-7.21	1.43	1.52
24	S3	131	LYS	CA-CB	7.21	1.64	1.53
12	SL	27	PRO	N-CD	-7.21	1.37	1.47
26	LA	2220	U	C1'-N1	-7.21	1.37	1.48
10	SJ	23	ALA	N-CA	-7.21	1.37	1.46
26	LA	1804	C	C2'-C1'	-7.20	1.42	1.53
2	SA	307	C	C5'-C4'	7.20	1.62	1.51
4	S2	10	G	C4'-C3'	7.20	1.63	1.52
18	SB	156	LEU	CA-C	7.20	1.61	1.52
26	LA	555	G	O3'-P	-7.20	1.50	1.61
53	LP	45	ARG	CA-C	-7.20	1.43	1.52
2	SA	281	G	C5'-C4'	7.19	1.62	1.51
2	SA	857	C	P-O5'	7.19	1.70	1.59
26	LA	2822	G	O3'-P	-7.19	1.50	1.61
4	S2	68	C	C4'-O4'	7.19	1.56	1.45
2	SA	1255	G	C1'-N9	-7.19	1.37	1.48
2	SA	920	U	C5'-C4'	7.18	1.62	1.51
7	SG	38	ALA	C-N	7.18	1.42	1.33
26	LA	1904	G	C3'-C2'	-7.18	1.42	1.52
26	LA	1704	C	C4'-C3'	7.18	1.63	1.52
24	S3	408	MET	CA-CB	7.18	1.65	1.53
26	LA	1240	U	C5'-C4'	7.18	1.62	1.51
26	LA	2260	C	C2'-C1'	-7.18	1.42	1.53
26	LA	2449	U	C5'-C4'	7.18	1.62	1.51
51	LI	128	HIS	CA-C	-7.18	1.43	1.52
53	LP	39	PRO	CA-C	-7.18	1.39	1.52
38	LE	202	ILE	CA-C	-7.18	1.44	1.52
19	SC	202	PHE	N-CA	-7.17	1.37	1.46
24	S3	444	PHE	CA-C	-7.17	1.43	1.52
2	SA	1260	G	C1'-N9	-7.16	1.37	1.48
26	LA	1367	A	P-O5'	-7.16	1.49	1.59
49	LK	14	ALA	CA-CB	7.16	1.62	1.52
26	LA	6	A	C3'-C2'	-7.16	1.42	1.52
24	S3	508	SER	C-N	7.15	1.42	1.33
2	SA	69	G	C2'-C1'	-7.15	1.42	1.53
25	LB	47	C	O3'-P	-7.15	1.50	1.61
31	LX	46	LYS	CA-C	-7.15	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	785	G	C1'-N9	-7.15	1.37	1.48
18	SB	20	ARG	CD-NE	7.15	1.56	1.46
19	SC	72	PRO	CA-CB	-7.15	1.43	1.53
22	SF	42	TRP	CA-C	7.15	1.61	1.52
26	LA	1646	C	C5'-C4'	7.15	1.61	1.51
26	LA	1976	U	O3'-P	-7.15	1.50	1.61
34	L0	53	VAL	CA-CB	-7.15	1.45	1.54
44	LF	26	ALA	N-CA	-7.15	1.37	1.46
31	LX	28	ALA	CA-C	-7.14	1.44	1.52
52	LO	10	ARG	CD-NE	7.14	1.56	1.46
26	LA	2457	U	C3'-O3'	7.14	1.52	1.42
26	LA	2617	U	C2'-C1'	-7.14	1.42	1.53
26	LA	987	C	C2'-O2'	-7.14	1.31	1.42
26	LA	1937	A	C2'-C1'	-7.14	1.42	1.53
19	SC	150	VAL	N-CA	-7.13	1.37	1.46
26	LA	2606	C	O3'-P	-7.13	1.50	1.61
26	LA	1016	G	O3'-P	-7.13	1.50	1.61
50	LL	55	ILE	CA-CB	-7.12	1.45	1.54
26	LA	900	A	C2'-C1'	-7.12	1.42	1.53
43	L7	3	VAL	CA-C	-7.12	1.44	1.52
11	SK	116	PRO	CA-CB	7.12	1.62	1.53
26	LA	677	A	C2'-C1'	-7.12	1.42	1.53
24	S3	65	ALA	CA-C	7.12	1.61	1.52
26	LA	1122	G	C5'-C4'	7.12	1.61	1.51
22	SF	94	HIS	CG-CD2	7.12	1.43	1.35
26	LA	1173	U	O5'-C5'	7.12	1.53	1.42
26	LA	2333	A	O3'-P	-7.12	1.50	1.61
26	LA	981	A	O4'-C1'	-7.11	1.30	1.41
2	SA	1020	G	C4'-O4'	7.11	1.56	1.45
38	LE	27	ILE	N-CA	-7.11	1.37	1.46
26	LA	667	U	O5'-C5'	7.10	1.53	1.42
26	LA	2570	G	C1'-N9	-7.10	1.37	1.48
26	LA	1291	C	O3'-P	-7.10	1.50	1.61
49	LK	122	GLU	N-CA	-7.10	1.37	1.46
26	LA	374	A	C2'-C1'	-7.10	1.42	1.53
26	LA	445	C	C3'-O3'	7.10	1.52	1.42
26	LA	1723	G	C1'-N9	-7.10	1.37	1.48
26	LA	2623	G	C2'-C1'	-7.10	1.42	1.53
32	LY	35	ILE	C-O	-7.10	1.16	1.24
5	ST	59	ARG	CD-NE	7.10	1.56	1.46
20	SD	29	THR	N-CA	-7.10	1.37	1.46
2	SA	185	U	O3'-P	-7.09	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	301	G	C1'-N9	-7.09	1.37	1.48
2	SA	398	U	C3'-O3'	7.09	1.52	1.42
9	SI	24	ASN	N-CA	-7.09	1.41	1.47
26	LA	1634	A	O3'-P	-7.09	1.50	1.61
2	SA	1035	A	O5'-C5'	7.09	1.53	1.42
2	SA	105	G	O3'-P	-7.09	1.50	1.61
26	LA	1842	G	O3'-P	-7.09	1.50	1.61
26	LA	2848	G	P-O5'	-7.09	1.49	1.59
44	LF	122	GLU	N-CA	-7.09	1.37	1.46
26	LA	705	A	C5'-C4'	7.09	1.61	1.51
26	LA	2696	U	C4'-O4'	-7.09	1.34	1.45
26	LA	2401	U	C5'-C4'	7.09	1.61	1.51
26	LA	40	U	C1'-N1	7.09	1.59	1.48
26	LA	1690	A	C3'-O3'	7.09	1.52	1.42
2	SA	1157	A	C1'-N9	-7.08	1.36	1.47
38	LE	178	VAL	CA-C	-7.08	1.43	1.52
26	LA	2283	C	C4'-O4'	7.08	1.56	1.45
38	LE	152	PRO	N-CA	-7.08	1.38	1.47
26	LA	773	U	O3'-P	-7.08	1.50	1.61
26	LA	2503	A	C5'-C4'	7.08	1.61	1.51
27	LD	247	TRP	CA-C	-7.08	1.42	1.52
49	LK	9	LYS	CA-C	7.08	1.61	1.52
26	LA	340	A	C4'-C3'	7.08	1.63	1.52
26	LA	1025	G	C1'-N9	-7.08	1.36	1.47
26	LA	1948	G	C4'-O4'	-7.08	1.34	1.45
34	L0	42	LEU	CA-C	-7.08	1.42	1.52
53	LP	4	ARG	CD-NE	7.08	1.56	1.46
26	LA	2866	U	C1'-N1	-7.07	1.36	1.47
26	LA	909	A	O5'-C5'	7.07	1.53	1.42
2	SA	115	G	C1'-N9	-7.07	1.36	1.47
24	S3	99	GLU	CA-C	7.07	1.61	1.52
26	LA	1967	C	C5'-C4'	7.07	1.61	1.51
26	LA	386	G	O3'-P	-7.07	1.50	1.61
26	LA	2275	C	O3'-P	-7.07	1.50	1.61
35	L1	17	PRO	CA-C	7.07	1.62	1.52
2	SA	1101	A	C3'-O3'	7.06	1.53	1.43
2	SA	28	A	C2'-C1'	-7.06	1.42	1.53
7	SG	66	GLU	N-CA	-7.06	1.37	1.46
8	SH	83	ARG	CA-C	-7.06	1.43	1.52
26	LA	1548	A	O3'-P	-7.06	1.50	1.61
26	LA	677	A	C3'-O3'	7.06	1.52	1.42
11	SK	21	HIS	CA-C	-7.05	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1789	A	C1'-N9	-7.05	1.37	1.48
26	LA	1567	G	C3'-C2'	-7.05	1.42	1.52
26	LA	150	U	C3'-O3'	7.05	1.52	1.42
26	LA	251	A	P-O5'	-7.05	1.49	1.59
26	LA	940	G	C1'-N9	-7.05	1.37	1.48
2	SA	400	C	C5'-C4'	7.05	1.61	1.51
26	LA	243	U	O4'-C1'	7.05	1.52	1.41
2	SA	419	C	O3'-P	-7.04	1.50	1.61
25	LB	109	A	O5'-C5'	7.04	1.53	1.42
26	LA	1100	C	C1'-N1	-7.04	1.37	1.48
2	SA	1315	U	O3'-P	-7.04	1.50	1.61
3	S1	56	G	C4'-O4'	7.04	1.56	1.45
2	SA	1128	C	C5'-C4'	7.04	1.61	1.51
39	L3	28	SER	CA-C	-7.04	1.44	1.52
26	LA	2619	C	C4'-O4'	-7.04	1.34	1.45
37	LC	145	VAL	CA-C	7.04	1.61	1.53
2	SA	216	U	C3'-O3'	7.03	1.52	1.42
26	LA	2498	C	C2'-C1'	-7.03	1.42	1.53
50	LL	16	TYR	CA-C	-7.03	1.44	1.52
2	SA	1091	U	P-O5'	-7.03	1.49	1.59
26	LA	91	A	C4'-C3'	7.03	1.63	1.53
44	LF	167	VAL	N-CA	7.03	1.54	1.46
26	LA	2206	C	C1'-N1	-7.03	1.38	1.48
26	LA	422	A	O3'-P	-7.03	1.50	1.61
26	LA	939	G	O3'-P	-7.03	1.50	1.61
26	LA	2883	A	O3'-P	-7.03	1.50	1.61
1	SS	44	ILE	C-O	7.03	1.30	1.24
49	LK	126	ARG	CD-NE	7.03	1.56	1.46
26	LA	2107	G	C5'-C4'	7.02	1.61	1.51
26	LA	2501	C	C2'-C1'	-7.02	1.42	1.53
2	SA	785	G	C5'-C4'	7.02	1.61	1.51
7	SG	6	ILE	CA-CB	-7.02	1.45	1.54
26	LA	907	G	C3'-C2'	-7.02	1.42	1.52
26	LA	1123	C	C2'-C1'	-7.02	1.42	1.53
26	LA	2011	U	C2'-C1'	-7.02	1.42	1.53
2	SA	814	A	C1'-N9	-7.02	1.37	1.48
5	ST	17	ARG	CA-CB	7.02	1.64	1.53
26	LA	676	A	C3'-O3'	7.02	1.52	1.42
26	LA	933	A	C2'-C1'	-7.01	1.42	1.53
2	SA	609	A	O3'-P	-7.01	1.50	1.61
26	LA	1982	U	C1'-N1	-7.01	1.38	1.48
27	LD	4	LYS	CA-C	-7.01	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	97	G	C4'-C3'	-7.01	1.42	1.52
21	SE	43	GLY	N-CA	-7.01	1.35	1.45
27	LD	216	ARG	C-N	-7.01	1.24	1.33
20	SD	68	GLU	N-CA	-7.00	1.37	1.46
7	SG	84	TYR	CA-CB	7.00	1.63	1.53
2	SA	1370	G	O5'-C5'	7.00	1.52	1.42
11	SK	86	LYS	CA-C	-7.00	1.45	1.53
11	SK	95	THR	C-N	7.00	1.42	1.33
2	SA	956	U	O4'-C1'	-7.00	1.31	1.41
26	LA	489	G	C2'-C1'	-7.00	1.42	1.53
26	LA	1929	G	C2'-C1'	-7.00	1.42	1.53
2	SA	1288	A	C5'-C4'	7.00	1.61	1.51
27	LD	167	ASP	C-N	7.00	1.40	1.33
35	L1	43	ILE	CA-C	-7.00	1.43	1.53
2	SA	43	C	O3'-P	-6.99	1.50	1.61
2	SA	85	U	C5'-C4'	6.99	1.61	1.51
26	LA	113	U	O4'-C1'	6.99	1.52	1.41
26	LA	193	U	O5'-C5'	6.99	1.52	1.42
57	LS	109	VAL	CA-C	-6.99	1.43	1.52
19	SC	199	VAL	CA-C	-6.99	1.44	1.52
36	L2	4	ASP	CA-C	6.99	1.61	1.52
21	SE	153	ALA	CA-C	-6.99	1.44	1.52
26	LA	2572	A	O4'-C1'	-6.99	1.31	1.42
48	LN	15	ALA	CA-C	-6.99	1.43	1.52
28	LU	88	ARG	CA-C	-6.98	1.43	1.52
2	SA	163	C	C5'-C4'	6.98	1.61	1.51
2	SA	1492	A	C2'-C1'	6.98	1.63	1.53
26	LA	207	A	C1'-N9	-6.98	1.37	1.48
26	LA	1810	A	O4'-C1'	-6.98	1.31	1.41
2	SA	1164	G	C5'-C4'	6.97	1.61	1.51
18	SB	15	PHE	CA-C	6.97	1.62	1.52
2	SA	162	A	C3'-O3'	6.97	1.52	1.42
47	LJ	55	ARG	CD-NE	6.97	1.56	1.46
2	SA	53	A	C3'-O3'	6.97	1.52	1.42
27	LD	270	ARG	CD-NE	6.97	1.56	1.46
26	LA	883	G	C2'-C1'	-6.97	1.42	1.53
26	LA	2128	G	O3'-P	-6.97	1.50	1.61
26	LA	2192	U	O3'-P	-6.97	1.50	1.61
32	LY	66	VAL	CA-CB	-6.97	1.45	1.54
2	SA	163	C	C4'-C3'	6.96	1.62	1.52
2	SA	887	G	C2'-C1'	-6.96	1.43	1.53
25	LB	52	A	C4'-O4'	6.96	1.55	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	SQ	70	LYS	N-CA	-6.96	1.38	1.46
26	LA	1012	U	C4'-O4'	-6.96	1.35	1.45
26	LA	2129	C	O5'-C5'	6.96	1.53	1.42
35	L1	13	ILE	CA-CB	-6.96	1.45	1.54
2	SA	199	A	N7-C5	-6.96	1.25	1.39
26	LA	694	U	P-O5'	-6.96	1.49	1.59
26	LA	989	G	O3'-P	-6.96	1.50	1.61
26	LA	1715	G	C5'-C4'	6.96	1.61	1.51
38	LE	94	GLN	N-CA	6.96	1.55	1.46
25	LB	60	C	C5'-C4'	6.95	1.61	1.51
2	SA	49	U	O4'-C1'	-6.95	1.31	1.42
26	LA	795	C	O3'-P	-6.95	1.50	1.61
26	LA	1047	G	O5'-C5'	6.95	1.53	1.42
26	LA	2019	A	P-O5'	-6.95	1.49	1.59
14	SN	19	TYR	CA-C	-6.95	1.44	1.52
2	SA	1464	U	C4'-O4'	6.95	1.55	1.45
2	SA	856	C	C3'-O3'	6.94	1.52	1.42
26	LA	1277	G	C2'-C1'	-6.94	1.43	1.53
26	LA	2663	G	C4'-C3'	6.94	1.62	1.52
2	SA	720	C	O3'-P	-6.94	1.50	1.61
47	LJ	116	LEU	CA-CB	6.94	1.63	1.53
2	SA	264	C	C2'-C1'	-6.94	1.43	1.53
26	LA	2519	U	P-O5'	-6.94	1.49	1.59
50	LL	73	VAL	CA-CB	-6.94	1.47	1.54
25	LB	74	U	O3'-P	-6.94	1.50	1.61
2	SA	368	U	O3'-P	-6.93	1.50	1.61
26	LA	664	G	O3'-P	-6.93	1.50	1.61
26	LA	784	G	C5'-C4'	6.93	1.61	1.51
27	LD	95	TYR	CA-C	-6.93	1.43	1.52
2	SA	335	C	C2'-C1'	-6.93	1.43	1.53
46	LH	57	TYR	C-N	6.93	1.43	1.33
26	LA	219	A	C3'-O3'	-6.93	1.31	1.42
11	SK	11	VAL	CA-C	6.93	1.61	1.52
26	LA	1313	U	C1'-N1	-6.93	1.38	1.48
26	LA	1665	A	C4'-O4'	6.93	1.55	1.45
52	LO	40	ARG	N-CA	-6.93	1.37	1.46
2	SA	269	C	C4'-C3'	-6.92	1.42	1.52
2	SA	608	A	C1'-N9	-6.92	1.37	1.48
26	LA	535	G	C1'-N9	-6.92	1.37	1.48
11	SK	18	GLY	CA-C	-6.92	1.43	1.51
26	LA	1396	U	O3'-P	-6.92	1.50	1.61
26	LA	1954	G	C5'-C4'	6.92	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	LB	56	G	C5'-C4'	6.91	1.61	1.51
26	LA	2289	G	C2'-C1'	-6.91	1.43	1.53
11	SK	63	GLN	C-N	6.91	1.42	1.33
26	LA	1898	U	O3'-P	-6.91	1.50	1.61
31	LX	43	ASP	CA-CB	6.91	1.64	1.53
58	LT	71	LYS	CA-C	-6.91	1.43	1.52
2	SA	385	C	C3'-O3'	6.91	1.52	1.42
2	SA	578	C	O5'-C5'	6.91	1.52	1.42
48	LN	66	PHE	CA-C	-6.91	1.44	1.52
26	LA	1286	A	C1'-N9	-6.90	1.36	1.47
2	SA	406	G	O3'-P	-6.90	1.50	1.61
26	LA	890	C	C5'-C4'	6.90	1.61	1.51
2	SA	1540	U	P-O5'	-6.90	1.49	1.59
26	LA	2430	A	O3'-P	-6.90	1.50	1.61
45	LG	147	ARG	CD-NE	6.90	1.55	1.46
4	S2	47	A	C5'-C4'	6.89	1.61	1.51
52	LO	94	ALA	N-CA	-6.89	1.37	1.46
26	LA	1496	A	C5'-C4'	6.89	1.61	1.51
2	SA	364	A	O3'-P	-6.89	1.50	1.61
26	LA	985	C	C4'-C3'	6.89	1.62	1.52
26	LA	280	U	C5'-C4'	6.89	1.61	1.51
56	LR	79	VAL	CA-CB	-6.89	1.46	1.54
26	LA	850	U	O4'-C1'	-6.89	1.31	1.41
26	LA	1237	A	C1'-N9	-6.89	1.36	1.47
26	LA	960	A	C1'-N9	-6.88	1.37	1.48
27	LD	8	THR	CA-C	-6.88	1.43	1.52
21	SE	51	LYS	CA-CB	6.88	1.65	1.53
47	LJ	143	LYS	CA-C	6.88	1.61	1.52
48	LN	7	SER	N-CA	-6.88	1.39	1.46
2	SA	1492	A	O5'-C5'	6.88	1.52	1.42
2	SA	1165	U	C5'-C4'	6.88	1.61	1.51
26	LA	34	U	C2'-C1'	6.88	1.63	1.53
26	LA	429	A	O3'-P	-6.88	1.50	1.61
26	LA	2523	G	O3'-P	-6.88	1.50	1.61
26	LA	2685	G	O3'-P	-6.88	1.50	1.61
26	LA	2516	A	C5'-C4'	6.88	1.61	1.51
1	SS	68	HIS	ND1-CE1	6.87	1.39	1.32
26	LA	877	A	C4'-C3'	6.87	1.62	1.52
26	LA	1160	G	O3'-P	-6.87	1.50	1.61
26	LA	1565	C	C2'-C1'	-6.87	1.42	1.53
26	LA	1593	A	C2'-C1'	-6.87	1.43	1.53
33	LZ	28	PHE	CA-C	-6.87	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	82	G	C5'-C4'	6.87	1.61	1.51
55	LQ	32	PRO	N-CD	-6.87	1.38	1.47
26	LA	216	A	C1'-N9	-6.87	1.37	1.48
26	LA	1224	U	O4'-C1'	-6.87	1.31	1.41
37	LC	217	THR	N-CA	6.87	1.54	1.46
2	SA	1145	A	O3'-P	-6.86	1.50	1.61
26	LA	2020	A	O3'-P	-6.86	1.50	1.61
26	LA	1663	G	C1'-N9	-6.86	1.37	1.48
44	LF	82	GLY	CA-C	-6.86	1.45	1.52
12	SL	76	HIS	CE1-NE2	-6.86	1.25	1.32
24	S3	308	ARG	CD-NE	6.86	1.55	1.46
26	LA	754	U	O3'-P	-6.86	1.50	1.61
2	SA	1347	G	C5'-C4'	6.86	1.61	1.51
26	LA	1420	A	C4'-C3'	6.86	1.62	1.52
40	L4	5	ARG	N-CA	6.85	1.54	1.46
26	LA	959	A	P-O5'	-6.85	1.49	1.59
26	LA	2226	C	C4'-C3'	6.85	1.62	1.52
26	LA	2618	G	P-O5'	-6.85	1.49	1.59
29	LV	34	VAL	CA-CB	-6.85	1.47	1.54
26	LA	2118	U	C3'-C2'	6.85	1.63	1.52
27	LD	255	LYS	CA-C	-6.85	1.44	1.52
37	LC	206	GLY	C-N	6.85	1.37	1.33
26	LA	2837	A	O3'-P	-6.84	1.50	1.61
2	SA	1121	U	O5'-C5'	6.84	1.52	1.42
24	S3	389	ASP	N-CA	-6.84	1.37	1.46
26	LA	687	C	C4'-O4'	6.84	1.55	1.45
19	SC	228	ARG	CD-NE	6.84	1.55	1.46
26	LA	2017	U	C1'-N1	-6.84	1.38	1.48
2	SA	1354	U	O5'-C5'	6.84	1.52	1.42
23	SR	70	THR	CA-C	6.84	1.60	1.52
24	S3	11	ASN	CA-CB	6.84	1.62	1.53
26	LA	1708	C	C2'-C1'	-6.83	1.43	1.53
42	L6	24	LYS	CA-C	-6.83	1.43	1.52
24	S3	366	HIS	CE1-NE2	-6.83	1.25	1.32
2	SA	690	G	O4'-C1'	-6.83	1.31	1.41
3	S1	44	U	O4'-C1'	6.83	1.51	1.41
2	SA	980	C	O3'-P	-6.83	1.50	1.61
2	SA	1056	U	C3'-O3'	6.83	1.52	1.42
2	SA	453	G	C5'-C4'	6.83	1.61	1.51
26	LA	2041	U	C5'-C4'	6.83	1.61	1.51
2	SA	1187	G	O5'-C5'	6.83	1.52	1.42
22	SF	72	ASP	N-CA	-6.83	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	1320	C	C3'-O3'	6.82	1.52	1.42
13	SM	108	ARG	CA-C	-6.82	1.44	1.52
26	LA	2308	G	C5'-C4'	6.82	1.61	1.51
2	SA	552	U	O4'-C1'	-6.82	1.31	1.41
6	SU	52	VAL	CA-C	6.82	1.61	1.52
26	LA	56	A	O3'-P	-6.82	1.50	1.61
2	SA	1122	U	P-O5'	-6.82	1.49	1.59
26	LA	1813	G	C3'-O3'	-6.81	1.31	1.42
8	SH	64	TYR	CA-C	6.81	1.60	1.52
2	SA	1525	G	O5'-C5'	6.81	1.52	1.42
26	LA	2193	G	O5'-C5'	6.81	1.52	1.42
53	LP	29	VAL	CA-CB	-6.80	1.44	1.54
26	LA	1964	G	C1'-N9	-6.80	1.36	1.47
26	LA	2331	G	C5'-C4'	6.80	1.61	1.51
10	SJ	6	ILE	C-N	6.80	1.42	1.33
26	LA	2259	U	C5'-C4'	6.80	1.61	1.51
31	LX	31	TYR	CA-CB	6.80	1.64	1.53
25	LB	86	G	C3'-C2'	6.80	1.62	1.52
26	LA	1291	C	C4'-C3'	-6.80	1.42	1.52
51	LI	62	LEU	CA-CB	6.80	1.61	1.52
13	SM	25	GLY	CA-C	-6.80	1.42	1.51
2	SA	838	G	O3'-P	-6.80	1.50	1.61
26	LA	589	U	O3'-P	-6.79	1.50	1.61
26	LA	574	A	C2'-C1'	-6.79	1.43	1.53
32	LY	34	SER	C-N	6.79	1.42	1.33
24	S3	248	LYS	CA-C	-6.79	1.44	1.52
24	S3	218	HIS	CE1-NE2	6.79	1.39	1.32
27	LD	160	TYR	N-CA	-6.78	1.38	1.46
14	SN	16	ALA	CA-C	-6.78	1.44	1.52
26	LA	1263	U	C2'-C1'	-6.78	1.43	1.53
52	LO	131	VAL	C-O	-6.78	1.17	1.24
2	SA	795	C	C5'-C4'	6.78	1.61	1.51
26	LA	684	G	C1'-N9	-6.78	1.37	1.48
26	LA	2246	G	C4'-O4'	-6.78	1.35	1.45
26	LA	2337	G	O4'-C1'	-6.77	1.31	1.41
48	LN	126	ARG	CD-NE	6.77	1.55	1.46
24	S3	206	ILE	CA-CB	-6.77	1.49	1.54
26	LA	844	A	O3'-P	-6.77	1.50	1.61
17	SQ	30	HIS	CA-C	-6.77	1.45	1.52
25	LB	2	G	C4'-C3'	6.77	1.62	1.52
26	LA	1941	C	C3'-C2'	-6.77	1.42	1.52
58	LT	58	VAL	N-CA	-6.77	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	LT	84	ARG	CA-C	-6.77	1.44	1.52
26	LA	782	A	O3'-P	-6.77	1.51	1.61
26	LA	2538	C	C4'-C3'	-6.77	1.42	1.52
2	SA	1075	U	C5'-C4'	6.76	1.61	1.51
2	SA	1525	G	C3'-O3'	6.76	1.52	1.42
26	LA	1655	A	C2'-C1'	-6.76	1.43	1.53
26	LA	2401	U	O3'-P	-6.76	1.51	1.61
26	LA	2657	A	C2'-C1'	-6.76	1.43	1.53
57	LS	26	ALA	N-CA	-6.76	1.37	1.46
26	LA	1476	U	O5'-C5'	6.76	1.52	1.42
33	LZ	61	LYS	N-CA	-6.76	1.37	1.46
15	SO	53	ARG	C-N	-6.76	1.25	1.33
16	SP	65	ALA	CA-C	6.76	1.60	1.52
26	LA	828	U	C1'-N1	-6.76	1.38	1.48
26	LA	2676	C	C2'-C1'	-6.76	1.43	1.53
12	SL	35	ARG	CA-C	-6.76	1.44	1.52
26	LA	987	C	O3'-P	-6.76	1.51	1.61
26	LA	2630	G	C3'-O3'	6.75	1.52	1.42
21	SE	82	HIS	CA-C	6.75	1.61	1.52
25	LB	101	A	C5'-C4'	6.75	1.61	1.51
26	LA	2191	A	C3'-C2'	-6.75	1.42	1.52
26	LA	924	G	C5'-C4'	6.75	1.61	1.51
26	LA	2096	C	C2'-C1'	-6.75	1.43	1.53
39	L3	31	LYS	N-CA	-6.75	1.37	1.46
2	SA	187	G	C2'-C1'	6.75	1.63	1.53
26	LA	1165	A	C1'-N9	-6.74	1.37	1.48
26	LA	1964	G	P-O5'	-6.74	1.49	1.59
26	LA	2550	G	C2'-C1'	-6.74	1.43	1.53
26	LA	459	U	C2'-C1'	-6.74	1.43	1.53
58	LT	80	ARG	C-O	-6.74	1.15	1.24
26	LA	682	G	O5'-C5'	6.74	1.52	1.42
26	LA	1761	C	O4'-C1'	-6.74	1.31	1.42
26	LA	2504	U	C2'-C1'	6.74	1.63	1.53
57	LS	83	LYS	N-CA	-6.74	1.38	1.46
26	LA	2225	A	O3'-P	-6.73	1.51	1.61
11	SK	21	HIS	CE1-NE2	-6.73	1.25	1.32
26	LA	1975	G	C3'-C2'	-6.73	1.42	1.52
56	LR	36	LYS	N-CA	-6.73	1.37	1.46
26	LA	1165	A	O3'-P	-6.73	1.51	1.61
55	LQ	54	VAL	CA-CB	-6.73	1.45	1.54
2	SA	1462	C	C3'-O3'	6.73	1.52	1.42
3	S1	58	C	C5'-C4'	6.72	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2566	A	C2'-C1'	-6.72	1.43	1.53
2	SA	414	A	C1'-N9	-6.72	1.37	1.48
14	SN	62	ARG	CD-NE	6.72	1.55	1.46
42	L6	6	VAL	N-CA	-6.72	1.38	1.46
26	LA	1904	G	C1'-N9	-6.72	1.37	1.48
2	SA	480	U	C1'-N1	6.72	1.58	1.48
2	SA	1203	C	C5'-C4'	-6.72	1.41	1.51
2	SA	1230	C	C1'-N1	6.72	1.58	1.48
4	S2	22	A	N9-C8	-6.72	1.24	1.37
25	LB	111	U	C5'-C4'	6.72	1.61	1.51
24	S3	422	LYS	CA-C	-6.72	1.44	1.53
31	LX	9	ARG	C-N	6.72	1.42	1.33
26	LA	1323	C	C2'-C1'	-6.71	1.43	1.53
27	LD	194	VAL	C-N	-6.71	1.25	1.33
24	S3	383	ALA	CA-C	6.71	1.60	1.52
26	LA	2332	C	P-O5'	-6.71	1.49	1.59
2	SA	383	A	C2'-C1'	-6.71	1.43	1.53
5	ST	74	HIS	ND1-CE1	6.71	1.39	1.32
12	SL	74	GLN	CA-C	-6.71	1.43	1.52
26	LA	1137	G	O5'-C5'	6.70	1.52	1.42
44	LF	153	LEU	CA-CB	6.70	1.63	1.53
26	LA	2680	U	C1'-N1	-6.70	1.38	1.48
46	LH	43	LYS	N-CA	-6.70	1.37	1.46
2	SA	204	G	C4'-C3'	6.70	1.62	1.52
26	LA	1245	G	C5'-C4'	6.70	1.61	1.51
26	LA	130	C	O4'-C1'	-6.70	1.31	1.41
26	LA	727	A	N7-C5	-6.69	1.25	1.39
24	S3	397	CYS	CA-C	-6.69	1.44	1.52
26	LA	398	C	C2'-C1'	-6.69	1.43	1.53
47	LJ	38	THR	CA-C	-6.69	1.44	1.52
2	SA	143	A	C1'-N9	-6.69	1.38	1.48
16	SP	16	PHE	CA-C	-6.69	1.44	1.52
26	LA	97	C	C5'-C4'	6.69	1.61	1.51
24	S3	453	ASN	CA-C	6.69	1.61	1.53
26	LA	1124	G	O3'-P	-6.69	1.51	1.61
26	LA	2561	U	C2'-C1'	-6.69	1.43	1.53
26	LA	2299	U	P-O5'	-6.69	1.49	1.59
31	LX	88	HIS	ND1-CE1	6.69	1.39	1.32
28	LU	60	HIS	CA-C	-6.68	1.44	1.52
52	LO	34	LYS	C-O	-6.68	1.16	1.23
26	LA	1912	A	C5'-C4'	6.68	1.61	1.51
26	LA	2255	G	O3'-P	-6.68	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	LR	43	GLU	CA-C	-6.68	1.44	1.52
26	LA	2080	A	O3'-P	-6.68	1.51	1.61
26	LA	1047	G	O3'-P	-6.68	1.51	1.61
24	S3	17	HIS	N-CA	-6.68	1.38	1.46
2	SA	1226	C	C3'-O3'	6.67	1.53	1.43
2	SA	1254	A	C1'-N9	-6.67	1.38	1.48
26	LA	494	G	O3'-P	-6.67	1.51	1.61
26	LA	2171	A	C3'-C2'	6.67	1.62	1.52
1	SS	13	HIS	CA-C	-6.67	1.44	1.52
16	SP	75	ILE	N-CA	-6.67	1.39	1.46
18	SB	36	LYS	CA-CB	6.67	1.63	1.53
2	SA	1257	A	O3'-P	-6.67	1.51	1.61
2	SA	681	A	C4'-O4'	-6.67	1.35	1.45
24	S3	166	VAL	CA-C	-6.67	1.45	1.52
33	LZ	15	ASN	CA-C	-6.67	1.44	1.53
55	LQ	11	ALA	CA-C	-6.67	1.44	1.52
26	LA	322	A	C1'-N9	-6.67	1.36	1.47
26	LA	975	A	C5'-C4'	6.66	1.61	1.51
26	LA	2844	G	C4'-O4'	6.66	1.55	1.45
37	LC	59	VAL	CA-C	6.66	1.60	1.52
55	LQ	29	HIS	CB-CG	-6.66	1.40	1.50
2	SA	120	A	C3'-C2'	6.66	1.62	1.52
50	LL	47	HIS	CB-CG	-6.66	1.40	1.50
9	SI	67	LYS	N-CA	6.66	1.54	1.45
24	S3	528	SER	CA-C	-6.66	1.44	1.52
26	LA	127	A	C2'-C1'	-6.66	1.43	1.53
26	LA	1736	U	C2'-O2'	6.66	1.52	1.42
26	LA	2352	A	O5'-C5'	6.65	1.52	1.42
56	LR	55	HIS	ND1-CE1	6.65	1.39	1.32
2	SA	883	C	C1'-N1	-6.65	1.38	1.48
26	LA	254	G	O3'-P	-6.65	1.51	1.61
2	SA	287	U	P-O5'	-6.65	1.49	1.59
26	LA	739	A	C5'-C4'	6.65	1.61	1.51
26	LA	1901	A	C4'-C3'	-6.65	1.42	1.52
26	LA	831	G	C1'-N9	-6.65	1.38	1.48
42	L6	30	HIS	N-CA	-6.65	1.37	1.46
2	SA	781	A	C1'-N9	-6.65	1.38	1.48
26	LA	1136	G	C2'-C1'	-6.65	1.43	1.53
21	SE	76	ASN	N-CA	-6.64	1.37	1.45
54	LM	78	ARG	CA-C	-6.64	1.45	1.53
26	LA	2385	C	C4'-C3'	6.64	1.62	1.52
26	LA	2739	U	C3'-O3'	6.64	1.52	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1672	A	O5'-C5'	6.64	1.52	1.42
9	SI	82	ILE	CA-CB	-6.64	1.45	1.54
18	SB	163	ILE	CA-CB	-6.64	1.46	1.54
2	SA	74	A	C1'-N9	-6.64	1.38	1.48
18	SB	124	THR	CA-C	-6.64	1.44	1.52
26	LA	2886	A	C2'-C1'	-6.64	1.43	1.53
2	SA	338	A	O3'-P	-6.64	1.51	1.61
26	LA	222	A	C2'-C1'	-6.64	1.43	1.53
2	SA	897	C	C5'-C4'	6.63	1.61	1.51
23	SR	36	GLY	CA-C	-6.63	1.43	1.51
2	SA	760	G	C5'-C4'	6.63	1.61	1.51
26	LA	1393	A	C1'-N9	-6.63	1.38	1.48
37	LC	93	GLU	N-CA	-6.63	1.38	1.46
42	L6	9	ALA	CA-C	-6.63	1.44	1.52
3	S1	40	G	O5'-C5'	6.63	1.52	1.42
25	LB	32	U	C5'-C4'	6.63	1.61	1.51
26	LA	466	A	C1'-N9	-6.63	1.38	1.48
26	LA	2081	U	C5'-C4'	6.63	1.61	1.51
13	SM	54	THR	N-CA	6.63	1.54	1.46
26	LA	1434	A	C1'-N9	-6.63	1.38	1.48
26	LA	2607	G	C2'-C1'	-6.63	1.43	1.53
2	SA	497	G	O4'-C1'	6.62	1.51	1.41
2	SA	1315	U	C3'-O3'	6.62	1.52	1.42
15	SO	61	GLN	N-CA	-6.62	1.38	1.46
2	SA	935	A	C1'-N9	-6.62	1.38	1.48
26	LA	1669	A	C5'-C4'	6.62	1.61	1.51
57	LS	96	ASP	CA-C	-6.62	1.43	1.52
26	LA	1132	U	O3'-P	-6.62	1.51	1.61
37	LC	74	ARG	CA-CB	6.62	1.64	1.53
53	LP	69	ARG	N-CA	-6.62	1.38	1.46
56	LR	76	HIS	ND1-CE1	6.62	1.39	1.32
26	LA	1171	G	C1'-N9	6.62	1.57	1.48
2	SA	1216	A	C1'-N9	-6.62	1.38	1.48
26	LA	2812	G	C1'-N9	-6.62	1.38	1.48
46	LH	2	ARG	CD-NE	6.62	1.55	1.46
24	S3	362	ILE	CA-CB	-6.61	1.46	1.54
40	L4	51	ALA	N-CA	-6.61	1.37	1.46
26	LA	2077	A	C3'-C2'	-6.61	1.42	1.52
2	SA	1038	C	C5'-C4'	6.61	1.61	1.51
26	LA	1317	G	C2'-C1'	-6.61	1.43	1.53
26	LA	2703	C	O3'-P	-6.61	1.51	1.61
2	SA	390	U	C2'-C1'	-6.61	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	981	A	C1'-N9	-6.61	1.38	1.48
26	LA	1267	U	C4'-O4'	-6.61	1.35	1.45
2	SA	763	G	C2'-C1'	-6.60	1.43	1.53
26	LA	42	A	C1'-N9	-6.60	1.38	1.48
47	LJ	112	PHE	CA-C	-6.60	1.45	1.52
2	SA	838	G	C2'-C1'	-6.60	1.43	1.53
2	SA	1228	C	C5'-C4'	6.60	1.61	1.51
4	S2	14	A	C4'-C3'	6.60	1.62	1.52
26	LA	1859	U	C5'-C4'	6.60	1.61	1.51
26	LA	2670	A	C2'-C1'	-6.60	1.43	1.53
30	LW	68	ASN	N-CA	-6.60	1.39	1.46
2	SA	746	A	O3'-P	-6.60	1.51	1.61
24	S3	493	ILE	N-CA	6.60	1.54	1.46
48	LN	21	ARG	CA-C	-6.60	1.44	1.52
21	SE	44	ARG	CD-NE	6.60	1.55	1.46
2	SA	1343	G	C1'-N9	-6.59	1.38	1.48
25	LB	36	C	C2'-C1'	-6.59	1.43	1.53
26	LA	2777	G	C2'-C1'	-6.59	1.43	1.53
26	LA	794	A	C2'-C1'	-6.59	1.43	1.53
52	LO	69	PRO	N-CA	-6.59	1.38	1.47
2	SA	1429	A	C3'-O3'	6.59	1.52	1.42
26	LA	863	A	O5'-C5'	6.59	1.52	1.42
2	SA	455	G	C3'-C2'	-6.59	1.42	1.52
4	S2	57	C	C5'-C4'	6.59	1.61	1.51
26	LA	1134	A	C5'-C4'	6.59	1.61	1.51
4	S2	68	C	C1'-N1	-6.58	1.38	1.48
26	LA	885	C	C5'-C4'	6.58	1.61	1.51
25	LB	101	A	C1'-N9	-6.58	1.38	1.48
26	LA	929	U	O3'-P	-6.58	1.51	1.61
26	LA	1403	A	C5'-C4'	6.58	1.61	1.51
26	LA	2180	U	C2'-C1'	-6.58	1.43	1.53
26	LA	2810	A	O5'-C5'	6.58	1.52	1.42
2	SA	996	A	C5'-C4'	6.58	1.61	1.51
26	LA	774	G	C1'-N9	-6.58	1.37	1.47
26	LA	1950	G	C1'-N9	-6.58	1.38	1.48
2	SA	770	C	C5'-C4'	6.58	1.61	1.51
2	SA	1329	A	C1'-N9	-6.58	1.38	1.48
26	LA	2758	A	P-O5'	6.58	1.69	1.59
56	LR	110	LYS	C-O	-6.58	1.15	1.24
2	SA	876	C	C3'-C2'	6.58	1.62	1.52
17	SQ	19	SER	CA-C	6.58	1.61	1.52
12	SL	95	HIS	N-CA	-6.58	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	SN	3	GLN	N-CA	-6.58	1.37	1.46
26	LA	212	G	C1'-N9	-6.57	1.38	1.48
2	SA	1493	A	C3'-C2'	6.57	1.62	1.52
2	SA	542	G	P-O5'	-6.57	1.49	1.59
2	SA	951	G	C1'-N9	-6.57	1.38	1.48
7	SG	14	ASP	CA-C	6.57	1.60	1.52
26	LA	1005	C	O5'-C5'	6.57	1.52	1.42
26	LA	930	G	C1'-N9	-6.56	1.38	1.48
27	LD	10	PRO	CA-C	-6.56	1.44	1.52
10	SJ	75	ASP	CA-C	6.56	1.61	1.52
26	LA	471	A	C5'-C4'	6.56	1.61	1.51
2	SA	226	G	P-O5'	-6.56	1.50	1.59
47	LJ	119	ALA	C-N	6.56	1.42	1.33
2	SA	117	G	C4'-C3'	6.56	1.62	1.52
51	LI	86	ASP	N-CA	6.56	1.54	1.46
55	LQ	33	ARG	C-N	6.56	1.42	1.33
2	SA	569	C	C5'-C4'	6.55	1.61	1.51
56	LR	30	TRP	C-N	6.55	1.41	1.34
2	SA	1524	C	P-O5'	-6.55	1.50	1.59
19	SC	132	ALA	N-CA	-6.55	1.38	1.46
20	SD	179	GLY	N-CA	-6.55	1.39	1.45
26	LA	1455	G	O3'-P	-6.55	1.51	1.61
4	S2	45	A	C2'-C1'	-6.55	1.43	1.53
26	LA	113	U	C5'-C4'	6.55	1.61	1.51
26	LA	2830	C	C3'-O3'	6.55	1.51	1.42
9	SI	54	VAL	N-CA	6.54	1.54	1.46
46	LH	143	VAL	N-CA	6.54	1.54	1.46
26	LA	375	G	C1'-N9	-6.54	1.38	1.48
26	LA	1969	A	C1'-N9	-6.54	1.38	1.48
2	SA	38	G	C2'-C1'	-6.54	1.43	1.53
26	LA	2493	U	C1'-N1	-6.54	1.38	1.48
2	SA	1047	G	O5'-C5'	6.54	1.52	1.42
26	LA	2194	U	O5'-C5'	6.54	1.52	1.42
26	LA	2298	A	C4'-C3'	-6.54	1.42	1.52
50	LL	43	GLU	CA-C	-6.54	1.44	1.52
26	LA	417	C	O3'-P	-6.54	1.51	1.61
26	LA	767	U	O5'-C5'	6.54	1.52	1.42
26	LA	1562	U	O5'-C5'	6.54	1.52	1.42
2	SA	731	G	C2'-C1'	-6.54	1.43	1.53
2	SA	82	G	C4'-C3'	6.53	1.62	1.52
26	LA	275	C	C2'-C1'	-6.53	1.43	1.53
57	LS	39	ILE	CA-CB	-6.53	1.46	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	SD	34	GLU	N-CA	-6.53	1.42	1.46
24	S3	431	GLY	N-CA	6.53	1.53	1.45
26	LA	1407	G	O3'-P	-6.53	1.51	1.61
26	LA	2458	G	C2'-C1'	-6.53	1.43	1.53
2	SA	275	G	O3'-P	-6.53	1.51	1.61
26	LA	391	A	C5'-C4'	6.53	1.61	1.51
2	SA	1514	G	C4'-O4'	-6.53	1.35	1.45
26	LA	2121	G	C4'-O4'	6.53	1.55	1.45
26	LA	2405	G	C3'-C2'	6.53	1.62	1.52
26	LA	2358	A	C4'-O4'	-6.52	1.35	1.45
47	LJ	45	ARG	C-N	6.52	1.43	1.33
3	S1	38	G	C3'-O3'	6.52	1.51	1.42
25	LB	1	U	C1'-N1	6.52	1.58	1.48
26	LA	2797	U	C3'-O3'	6.52	1.51	1.42
2	SA	1293	C	C4'-C3'	6.52	1.62	1.52
26	LA	1097	U	C3'-C2'	6.52	1.62	1.52
26	LA	2432	A	C1'-N9	-6.52	1.38	1.48
22	SF	17	GLN	C-N	-6.52	1.26	1.33
26	LA	144	A	P-O5'	-6.52	1.50	1.59
26	LA	1482	G	C2'-C1'	-6.52	1.43	1.53
13	SM	48	SER	N-CA	6.51	1.54	1.46
26	LA	266	G	O3'-P	-6.51	1.51	1.61
32	LY	81	ILE	N-CA	-6.51	1.38	1.46
26	LA	2204	G	C5'-C4'	6.51	1.61	1.51
2	SA	885	G	C2-N2	-6.51	1.21	1.34
25	LB	7	G	P-O5'	-6.51	1.50	1.59
26	LA	188	G	C2'-C1'	-6.51	1.43	1.53
26	LA	826	U	C2'-O2'	-6.51	1.32	1.42
26	LA	1394	U	O3'-P	-6.51	1.51	1.61
2	SA	1000	A	C5'-C4'	6.51	1.61	1.51
26	LA	583	G	O4'-C1'	-6.51	1.31	1.41
26	LA	2048	G	O3'-P	-6.51	1.51	1.61
35	L1	10	ARG	CD-NE	6.51	1.55	1.46
18	SB	141	GLU	C-N	-6.51	1.25	1.33
54	LM	32	TYR	N-CA	-6.51	1.41	1.47
2	SA	2	A	C4'-C3'	6.50	1.62	1.53
22	SF	58	HIS	N-CA	-6.50	1.38	1.46
29	LV	86	THR	CA-CB	-6.50	1.44	1.53
51	LI	103	VAL	CA-C	6.50	1.61	1.52
2	SA	503	C	O3'-P	-6.50	1.51	1.61
52	LO	63	ILE	CB-CG1	6.50	1.66	1.53
26	LA	1569	A	C4'-C3'	6.50	1.62	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	1263	C	C4'-C3'	6.50	1.62	1.52
11	SK	19	VAL	CA-C	-6.50	1.45	1.52
26	LA	2172	U	C1'-N1	6.50	1.57	1.47
54	LM	61	VAL	N-CA	-6.50	1.38	1.46
1	SS	83	ALA	CA-C	-6.50	1.44	1.52
22	SF	83	ALA	CA-C	6.50	1.61	1.52
25	LB	76	G	C4'-O4'	-6.50	1.35	1.45
26	LA	898	C	O5'-C5'	6.50	1.52	1.42
1	SS	35	ARG	C-N	6.49	1.42	1.33
12	SL	68	GLY	N-CA	-6.49	1.35	1.45
2	SA	530	G	O3'-P	-6.49	1.51	1.61
13	SM	102	LYS	CA-CB	6.49	1.64	1.53
26	LA	272	A	C4'-O4'	6.49	1.55	1.45
26	LA	1036	G	C3'-C2'	-6.49	1.43	1.52
55	LQ	106	LEU	CA-C	-6.49	1.44	1.52
2	SA	510	A	P-O5'	-6.49	1.50	1.59
24	S3	232	LEU	CA-C	-6.49	1.44	1.52
26	LA	2152	G	C2-N3	6.49	1.45	1.32
27	LD	90	ILE	N-CA	-6.49	1.38	1.46
38	LE	5	VAL	CA-C	6.49	1.59	1.52
22	SF	43	GLY	N-CA	6.49	1.54	1.45
50	LL	90	GLU	CA-C	-6.49	1.44	1.52
2	SA	1542	A	C4'-C3'	6.49	1.62	1.52
26	LA	871	U	O3'-P	-6.49	1.51	1.61
26	LA	2693	G	C2'-C1'	-6.49	1.43	1.53
26	LA	870	U	C3'-C2'	-6.48	1.43	1.52
2	SA	29	U	O5'-C5'	6.48	1.52	1.42
2	SA	390	U	C3'-O3'	6.48	1.51	1.42
36	L2	23	LYS	C-N	6.48	1.43	1.33
2	SA	774	G	O3'-P	-6.48	1.51	1.61
4	S2	59	A	C3'-C2'	6.48	1.62	1.52
26	LA	1722	A	C1'-N9	-6.48	1.38	1.48
2	SA	1472	U	O3'-P	-6.48	1.51	1.61
12	SL	36	VAL	CA-C	-6.48	1.45	1.52
24	S3	244	GLU	C-N	6.48	1.42	1.33
2	SA	546	A	C5'-C4'	6.48	1.60	1.51
19	SC	217	GLU	N-CA	6.48	1.54	1.46
26	LA	1330	C	O5'-C5'	6.48	1.52	1.42
26	LA	1506	U	C5'-C4'	6.48	1.60	1.51
46	LH	46	ASP	CA-CB	6.48	1.64	1.53
2	SA	180	U	O5'-C5'	6.48	1.52	1.42
31	LX	63	ILE	CA-CB	-6.48	1.46	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	994	A	C5'-C4'	6.47	1.60	1.51
2	SA	1477	U	C1'-N1	6.47	1.58	1.48
26	LA	359	G	O4'-C1'	6.47	1.51	1.41
26	LA	1137	G	O3'-P	-6.47	1.51	1.61
26	LA	1698	A	C2'-C1'	-6.47	1.43	1.53
2	SA	1266	G	C5'-C4'	6.47	1.60	1.51
36	L2	62	LYS	CA-C	6.47	1.61	1.52
2	SA	43	C	C2'-O2'	-6.47	1.32	1.42
25	LB	83	G	C1'-N9	-6.47	1.38	1.48
26	LA	1690	A	C1'-N9	-6.47	1.38	1.48
49	LK	71	LYS	CA-CB	6.47	1.62	1.53
55	LQ	11	ALA	N-CA	-6.47	1.38	1.46
11	SK	57	SER	C-N	6.47	1.40	1.33
25	LB	109	A	C4'-O4'	6.47	1.55	1.45
2	SA	1028	C	P-O5'	-6.46	1.50	1.59
18	SB	162	VAL	CA-CB	-6.46	1.46	1.53
26	LA	2631	G	C1'-N9	6.46	1.57	1.48
19	SC	194	VAL	CA-CB	-6.46	1.46	1.54
26	LA	1944	U	O5'-C5'	6.46	1.52	1.42
26	LA	2519	U	C2'-C1'	-6.46	1.43	1.53
2	SA	587	G	P-O5'	6.46	1.69	1.59
26	LA	287	G	C2'-C1'	-6.46	1.43	1.53
26	LA	1759	A	P-O5'	-6.46	1.50	1.59
43	L7	4	ARG	CA-C	-6.46	1.44	1.52
2	SA	1308	U	O3'-P	-6.46	1.51	1.61
26	LA	954	G	C5'-C4'	6.46	1.60	1.51
26	LA	1109	C	P-O5'	-6.46	1.50	1.59
26	LA	1519	G	C2'-C1'	-6.46	1.43	1.53
2	SA	258	G	O3'-P	-6.46	1.51	1.61
2	SA	965	U	C4'-C3'	6.46	1.62	1.52
4	S2	45	A	C1'-N9	-6.46	1.38	1.48
6	SU	32	ARG	CD-NE	6.46	1.55	1.46
22	SF	16	GLU	CA-C	6.46	1.61	1.52
24	S3	149	ASN	N-CA	-6.46	1.38	1.46
52	LO	99	GLY	C-N	6.46	1.42	1.33
56	LR	3	ILE	CA-CB	-6.46	1.46	1.54
11	SK	116	PRO	N-CA	-6.45	1.39	1.47
24	S3	255	VAL	N-CA	6.45	1.54	1.46
26	LA	749	A	C1'-N9	-6.45	1.38	1.48
50	LL	122	LEU	CA-C	-6.45	1.44	1.52
24	S3	490	ARG	CD-NE	6.45	1.55	1.46
46	LH	96	ALA	N-CA	-6.45	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1589	U	O3'-P	-6.45	1.51	1.61
13	SM	52	ILE	CA-CB	-6.45	1.46	1.54
2	SA	1535	C	C3'-C2'	6.45	1.62	1.52
2	SA	1382	C	C3'-C2'	6.44	1.62	1.52
26	LA	764	A	P-O5'	6.44	1.69	1.59
26	LA	1859	U	C3'-C2'	-6.44	1.43	1.52
54	LM	57	VAL	CA-CB	-6.44	1.46	1.54
2	SA	124	C	C4'-C3'	6.44	1.62	1.52
6	SU	64	ALA	C-N	6.44	1.42	1.33
24	S3	674	LYS	CA-CB	6.44	1.62	1.53
36	L2	13	THR	CA-C	-6.44	1.45	1.52
2	SA	693	G	C5'-C4'	6.44	1.60	1.51
26	LA	2885	G	C4'-C3'	6.44	1.62	1.52
18	SB	171	ALA	CA-C	-6.44	1.44	1.52
36	L2	38	SER	N-CA	6.44	1.56	1.46
2	SA	1092	A	C2'-C1'	-6.44	1.43	1.53
41	L5	16	HIS	C-O	-6.43	1.16	1.24
2	SA	921	U	C3'-C2'	6.43	1.62	1.52
26	LA	138	U	C4'-O4'	6.43	1.55	1.45
26	LA	478	A	C1'-N9	-6.43	1.38	1.48
26	LA	689	A	C3'-C2'	-6.43	1.43	1.52
31	LX	52	ALA	C-N	6.43	1.42	1.33
26	LA	618	G	O3'-P	-6.43	1.51	1.61
26	LA	1686	C	P-O5'	-6.43	1.50	1.59
16	SP	14	ARG	CA-CB	6.43	1.60	1.53
19	SC	200	TRP	CA-CB	6.43	1.62	1.53
26	LA	201	C	P-O5'	-6.43	1.50	1.59
26	LA	488	G	C1'-N9	-6.43	1.38	1.48
26	LA	1779	U	P-O5'	-6.43	1.50	1.59
26	LA	2414	G	C2'-C1'	-6.43	1.43	1.53
44	LF	40	ARG	CD-NE	6.43	1.55	1.46
26	LA	2123	G	C4'-C3'	6.42	1.62	1.52
26	LA	2552	U	C5'-C4'	6.42	1.60	1.51
38	LE	110	THR	N-CA	-6.42	1.38	1.46
12	SL	101	LEU	C-O	-6.42	1.18	1.24
2	SA	456	A	C5'-C4'	6.42	1.60	1.51
23	SR	2	ARG	CA-CB	6.42	1.61	1.52
26	LA	2450	A	C4'-C3'	6.42	1.62	1.52
9	SI	100	ALA	CA-C	6.42	1.61	1.52
12	SL	96	THR	N-CA	-6.42	1.38	1.46
26	LA	702	U	C4'-O4'	6.42	1.55	1.45
26	LA	969	G	C5'-C4'	6.42	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	513	C	O3'-P	-6.42	1.51	1.61
26	LA	495	G	P-O5'	-6.42	1.50	1.59
2	SA	295	C	C3'-O3'	6.42	1.51	1.42
26	LA	365	U	C5'-C4'	6.41	1.60	1.51
26	LA	1682	G	C4'-O4'	6.41	1.55	1.45
2	SA	788	U	C4'-O4'	6.41	1.55	1.45
26	LA	986	C	C1'-N1	-6.41	1.38	1.48
2	SA	145	G	P-O5'	-6.41	1.50	1.59
46	LH	109	SER	CA-C	6.41	1.60	1.52
2	SA	990	C	C2'-C1'	-6.41	1.43	1.53
2	SA	1371	G	O3'-P	-6.41	1.51	1.61
26	LA	1508	A	C4'-C3'	6.41	1.62	1.53
26	LA	2056	G	O4'-C1'	-6.41	1.32	1.41
2	SA	363	A	O3'-P	-6.41	1.51	1.61
42	L6	28	LEU	CA-C	-6.41	1.46	1.53
2	SA	653	U	C1'-N1	6.41	1.57	1.47
26	LA	2456	C	C3'-C2'	-6.41	1.43	1.52
21	SE	88	HIS	CG-CD2	-6.40	1.28	1.35
26	LA	1419	A	P-O5'	-6.40	1.50	1.59
26	LA	2643	G	O3'-P	-6.40	1.51	1.61
26	LA	2723	C	C3'-C2'	-6.40	1.43	1.52
2	SA	208	U	C1'-N1	-6.40	1.38	1.48
22	SF	66	ALA	N-CA	-6.40	1.39	1.46
27	LD	114	GLN	CA-C	-6.40	1.45	1.52
37	LC	167	LYS	N-CA	-6.40	1.37	1.46
57	LS	89	ILE	C-N	-6.40	1.25	1.33
19	SC	44	LYS	C-N	6.40	1.43	1.33
28	LU	5	ALA	CA-C	-6.40	1.45	1.52
28	LU	31	GLN	N-CA	-6.40	1.38	1.46
47	LJ	149	LYS	C-N	6.40	1.41	1.33
2	SA	821	G	P-O5'	-6.40	1.50	1.59
2	SA	1216	A	C3'-O3'	6.40	1.51	1.42
2	SA	1508	A	C5'-C4'	6.40	1.60	1.51
26	LA	340	A	C2'-C1'	-6.40	1.43	1.53
2	SA	404	G	O3'-P	-6.40	1.51	1.61
2	SA	1022	A	C2'-C1'	-6.40	1.43	1.53
16	SP	28	ARG	CD-NE	6.40	1.55	1.46
26	LA	1661	G	C5'-C4'	6.40	1.60	1.51
26	LA	2610	C	O3'-P	-6.40	1.51	1.61
47	LJ	11	VAL	CA-C	-6.40	1.44	1.52
2	SA	621	A	C1'-N9	-6.40	1.38	1.48
3	S1	17	U	O3'-P	-6.39	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	456	C	C4'-O4'	6.39	1.55	1.45
26	LA	771	G	C1'-N9	-6.39	1.38	1.48
21	SE	50	GLY	N-CA	6.39	1.51	1.45
50	LL	42	ALA	C-N	6.39	1.42	1.33
6	SU	43	GLU	C-N	6.39	1.42	1.33
24	S3	174	ALA	CA-C	-6.39	1.44	1.52
26	LA	318	C	P-O5'	-6.39	1.50	1.59
35	L1	19	HIS	CB-CG	-6.39	1.41	1.50
2	SA	1457	G	O3'-P	-6.39	1.51	1.61
8	SH	23	ALA	N-CA	-6.39	1.37	1.45
26	LA	637	A	O4'-C1'	-6.39	1.32	1.42
26	LA	1828	G	C2'-C1'	-6.39	1.43	1.53
26	LA	2728	U	C1'-N1	-6.39	1.38	1.48
54	LM	117	SER	CA-C	-6.39	1.44	1.52
2	SA	1263	C	C5'-C4'	6.38	1.60	1.51
25	LB	26	C	C4'-C3'	6.38	1.62	1.52
37	LC	84	ALA	CA-C	-6.38	1.44	1.52
28	LU	96	ILE	CA-C	-6.38	1.44	1.52
8	SH	94	VAL	CA-CB	-6.38	1.45	1.54
26	LA	2260	C	C3'-O3'	6.38	1.51	1.42
27	LD	222	THR	C-N	-6.38	1.24	1.33
29	LV	32	LEU	CA-C	-6.38	1.44	1.52
2	SA	223	A	P-O5'	-6.38	1.50	1.59
26	LA	1397	U	C3'-C2'	-6.38	1.43	1.52
32	LY	22	VAL	CA-C	-6.38	1.44	1.52
13	SM	8	ILE	CA-C	-6.38	1.47	1.52
26	LA	753	A	C5'-C4'	6.38	1.60	1.51
26	LA	35	G	O4'-C1'	6.38	1.51	1.41
26	LA	1164	C	C3'-C2'	-6.38	1.43	1.52
30	LW	81	ARG	CA-C	-6.38	1.47	1.53
2	SA	862	C	C3'-C2'	6.37	1.62	1.52
16	SP	57	ILE	CA-C	-6.37	1.44	1.52
18	SB	14	HIS	CD2-NE2	6.37	1.44	1.37
26	LA	2091	C	P-O5'	-6.37	1.50	1.59
36	L2	50	ASP	CA-C	6.37	1.60	1.53
40	L4	31	GLU	CA-CB	6.37	1.64	1.53
4	S2	36	A	C5'-C4'	6.37	1.60	1.51
21	SE	2	HIS	CA-C	-6.37	1.44	1.52
26	LA	2587	A	C3'-C2'	-6.37	1.43	1.52
44	LF	107	SER	CA-C	6.37	1.60	1.52
26	LA	1981	A	O4'-C1'	-6.37	1.32	1.41
7	SG	143	MET	N-CA	-6.37	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1963	U	O3'-P	-6.37	1.51	1.61
55	LQ	83	LEU	C-N	6.37	1.42	1.33
2	SA	675	A	C2'-C1'	-6.37	1.43	1.53
2	SA	641	U	C3'-C2'	-6.36	1.43	1.52
2	SA	1002	G	C5'-C4'	6.36	1.60	1.51
26	LA	1124	G	C5'-C4'	6.36	1.60	1.51
32	LY	64	GLY	CA-C	-6.36	1.44	1.52
20	SD	69	ARG	C-N	6.36	1.42	1.33
26	LA	1377	G	O4'-C1'	-6.36	1.32	1.41
26	LA	2314	A	O3'-P	-6.36	1.51	1.61
1	SS	73	PHE	C-O	-6.36	1.15	1.24
2	SA	1508	A	O5'-C5'	6.36	1.51	1.42
12	SL	41	PRO	N-CA	-6.36	1.39	1.47
26	LA	831	G	O3'-P	-6.36	1.51	1.61
38	LE	160	LYS	N-CA	6.36	1.53	1.46
45	LG	17	THR	N-CA	-6.36	1.38	1.46
13	SM	34	ALA	CA-C	6.36	1.61	1.52
26	LA	2772	C	O3'-P	-6.36	1.51	1.61
2	SA	48	C	C4'-C3'	6.36	1.62	1.53
2	SA	907	A	C1'-N9	-6.36	1.38	1.48
38	LE	82	PHE	C-N	6.36	1.41	1.33
52	LO	23	GLY	CA-C	-6.36	1.43	1.51
56	LR	1	SER	N-CA	6.36	1.58	1.46
31	LX	47	VAL	CA-CB	-6.35	1.46	1.54
2	SA	687	A	O3'-P	-6.35	1.51	1.61
26	LA	653	U	C5'-C4'	6.35	1.60	1.51
26	LA	1460	U	C4'-C3'	6.35	1.62	1.52
24	S3	521	MET	CA-C	-6.35	1.45	1.52
2	SA	573	A	C2'-C1'	-6.35	1.43	1.53
22	SF	86	ARG	CA-C	-6.35	1.44	1.52
25	LB	83	G	O3'-P	-6.35	1.51	1.61
26	LA	500	G	C5'-C4'	6.35	1.60	1.51
26	LA	943	A	O3'-P	-6.35	1.51	1.61
26	LA	1225	G	O5'-C5'	6.35	1.51	1.42
26	LA	1349	C	O5'-C5'	6.35	1.51	1.42
26	LA	532	A	O4'-C1'	-6.35	1.32	1.42
26	LA	685	A	C2'-C1'	-6.35	1.43	1.53
26	LA	2386	A	C2'-O2'	-6.35	1.32	1.42
2	SA	1181	G	O3'-P	-6.35	1.51	1.61
2	SA	1368	A	O5'-C5'	6.34	1.51	1.42
26	LA	2098	U	O3'-P	-6.34	1.51	1.61
2	SA	306	A	O3'-P	-6.34	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	S1	39	U	C1'-N1	6.34	1.57	1.48
25	LB	36	C	C3'-O3'	6.34	1.51	1.42
26	LA	1274	A	O3'-P	-6.34	1.51	1.61
18	SB	60	ALA	C-N	-6.34	1.25	1.33
26	LA	1640	A	C2'-C1'	-6.34	1.43	1.53
26	LA	2838	G	C3'-O3'	6.34	1.51	1.42
41	L5	34	ARG	N-CA	-6.34	1.38	1.46
20	SD	69	ARG	N-CA	-6.34	1.38	1.46
26	LA	1880	U	O5'-C5'	6.34	1.51	1.42
26	LA	2804	U	O5'-C5'	6.34	1.51	1.42
2	SA	907	A	O3'-P	-6.34	1.51	1.61
26	LA	2406	A	C1'-N9	-6.34	1.37	1.47
26	LA	497	A	C1'-N9	-6.34	1.38	1.48
26	LA	2048	G	C3'-C2'	-6.34	1.43	1.52
2	SA	1046	A	C2'-C1'	-6.33	1.43	1.53
26	LA	139	U	C5'-C4'	6.33	1.60	1.51
19	SC	147	GLY	CA-C	-6.33	1.44	1.51
26	LA	243	U	C4'-O4'	-6.33	1.36	1.45
26	LA	565	C	P-O5'	-6.33	1.50	1.59
27	LD	243	PRO	CA-C	-6.33	1.45	1.52
2	SA	1179	A	C4'-O4'	-6.33	1.36	1.45
17	SQ	42	LYS	C-O	-6.33	1.16	1.24
26	LA	1378	A	C2'-C1'	-6.33	1.43	1.53
26	LA	2298	A	C2'-C1'	-6.33	1.43	1.53
2	SA	831	A	O5'-C5'	6.33	1.51	1.42
47	LJ	92	ALA	C-N	6.33	1.42	1.33
6	SU	64	ALA	N-CA	-6.33	1.38	1.46
26	LA	2382	G	C1'-N9	-6.33	1.37	1.47
49	LK	48	ILE	C-O	6.33	1.30	1.24
21	SE	109	ALA	C-N	6.32	1.43	1.33
26	LA	2250	G	O4'-C1'	-6.32	1.32	1.42
41	L5	24	THR	N-CA	6.32	1.53	1.45
2	SA	272	C	C2'-C1'	-6.32	1.43	1.53
24	S3	560	LEU	CA-C	6.32	1.61	1.52
26	LA	2584	U	O3'-P	-6.32	1.51	1.61
2	SA	392	C	C3'-O3'	6.32	1.51	1.42
2	SA	878	A	C2'-C1'	-6.32	1.43	1.53
26	LA	1777	U	C4'-O4'	-6.32	1.36	1.45
7	SG	91	ARG	CA-CB	6.32	1.65	1.53
17	SQ	10	ARG	CD-NE	6.32	1.55	1.46
26	LA	2486	C	O4'-C1'	-6.31	1.32	1.41
52	LO	81	ARG	CD-NE	6.31	1.55	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	218	U	C3'-C2'	-6.31	1.43	1.52
26	LA	177	G	P-O5'	-6.31	1.50	1.59
26	LA	2575	C	C1'-N1	6.31	1.56	1.47
26	LA	2384	U	C1'-N1	-6.31	1.38	1.47
56	LR	48	ALA	CA-C	-6.31	1.44	1.52
19	SC	133	MET	C-O	-6.31	1.16	1.24
26	LA	868	U	O5'-C5'	6.31	1.51	1.42
26	LA	1252	G	O4'-C1'	-6.31	1.32	1.42
4	S2	55	U	C5'-C4'	6.31	1.60	1.51
26	LA	184	C	C1'-N1	-6.31	1.39	1.48
26	LA	737	C	C4'-C3'	-6.31	1.43	1.52
26	LA	1271	G	C3'-O3'	6.31	1.51	1.42
26	LA	2882	A	C1'-N9	-6.31	1.38	1.48
44	LF	49	ARG	CZ-NH2	-6.31	1.25	1.33
46	LH	169	ARG	N-CA	-6.31	1.38	1.46
58	LT	42	ALA	C-N	6.31	1.42	1.33
24	S3	400	ASP	CA-CB	6.30	1.61	1.53
26	LA	1210	G	O3'-P	-6.30	1.51	1.61
26	LA	1813	G	O3'-P	-6.30	1.51	1.61
26	LA	1909	C	O3'-P	-6.30	1.51	1.61
33	LZ	18	SER	N-CA	-6.30	1.39	1.46
26	LA	1410	G	C2'-C1'	6.30	1.62	1.53
26	LA	1250	G	P-O5'	-6.30	1.50	1.59
26	LA	2052	A	C2'-C1'	-6.30	1.43	1.53
26	LA	1339	G	C1'-N9	-6.30	1.38	1.48
12	SL	28	GLN	CA-C	-6.29	1.45	1.52
26	LA	2363	G	C1'-N9	-6.29	1.38	1.48
26	LA	2631	G	C5'-C4'	6.29	1.60	1.51
2	SA	361	G	C3'-C2'	6.29	1.62	1.52
2	SA	1051	C	C2'-C1'	-6.29	1.44	1.53
26	LA	1071	G	O4'-C1'	-6.29	1.32	1.41
26	LA	2382	G	O4'-C1'	-6.29	1.32	1.42
2	SA	538	G	C2'-C1'	-6.29	1.44	1.53
6	SU	54	ARG	CD-NE	6.29	1.55	1.46
2	SA	1225	A	C1'-N9	6.29	1.56	1.47
24	S3	135	PRO	CA-C	-6.29	1.45	1.52
2	SA	949	A	C5'-C4'	6.29	1.60	1.51
25	LB	22	U	C1'-N1	6.29	1.57	1.48
26	LA	9	G	C1'-N9	-6.29	1.38	1.48
2	SA	956	U	C4'-O4'	6.28	1.54	1.45
2	SA	1364	U	C2'-C1'	-6.28	1.44	1.53
26	LA	1009	A	C1'-N9	-6.28	1.38	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1479	G	O5'-C5'	6.28	1.51	1.42
2	SA	1055	A	O4'-C1'	-6.28	1.32	1.41
26	LA	1925	C	P-O5'	-6.28	1.50	1.59
2	SA	1472	U	C2'-C1'	-6.28	1.44	1.53
26	LA	1565	C	O3'-P	-6.28	1.51	1.61
26	LA	476	G	O3'-P	-6.28	1.51	1.61
26	LA	2416	C	O3'-P	-6.28	1.51	1.61
46	LH	66	THR	CA-C	-6.28	1.44	1.52
2	SA	1486	G	C3'-O3'	6.28	1.51	1.42
2	SA	1412	C	C4'-C3'	6.28	1.61	1.52
26	LA	1286	A	C2'-C1'	-6.28	1.43	1.53
2	SA	579	A	P-O5'	-6.27	1.50	1.59
2	SA	509	A	C1'-N9	-6.27	1.37	1.47
2	SA	839	C	C5'-C4'	-6.27	1.41	1.51
7	SG	148	LYS	CA-C	6.27	1.62	1.52
26	LA	1510	G	C3'-C2'	-6.27	1.43	1.52
26	LA	1957	C	O3'-P	-6.27	1.51	1.61
26	LA	704	G	O3'-P	-6.27	1.51	1.61
26	LA	1511	G	C1'-N9	-6.27	1.38	1.48
49	LK	138	VAL	C-N	6.27	1.39	1.33
23	SR	72	ARG	CD-NE	6.27	1.55	1.46
26	LA	1286	A	C4'-C3'	6.27	1.62	1.53
26	LA	2750	A	C2'-C1'	-6.27	1.43	1.53
40	L4	28	THR	CA-CB	6.27	1.62	1.54
26	LA	1853	A	C1'-N9	-6.27	1.38	1.48
40	L4	43	ARG	CD-NE	6.27	1.55	1.46
50	LL	3	THR	CA-C	-6.26	1.44	1.52
3	S1	18	A	C5'-C4'	6.26	1.60	1.51
5	ST	71	ALA	N-CA	-6.26	1.39	1.46
26	LA	1404	C	O5'-C5'	6.26	1.51	1.42
24	S3	300	ASP	C-N	6.26	1.41	1.33
24	S3	335	PHE	CA-C	-6.26	1.44	1.52
25	LB	82	U	P-O5'	-6.26	1.50	1.59
2	SA	1063	C	C2'-C1'	-6.26	1.44	1.53
39	L3	23	ALA	CA-C	-6.26	1.45	1.52
2	SA	1123	U	P-O5'	-6.26	1.50	1.59
2	SA	1499	A	C1'-N9	-6.26	1.38	1.48
2	SA	512	U	C1'-N1	-6.25	1.39	1.48
21	SE	56	PRO	N-CA	-6.25	1.39	1.47
26	LA	1466	U	C5'-C4'	6.25	1.60	1.51
19	SC	1	GLY	N-CA	6.25	1.55	1.45
26	LA	1128	G	P-O5'	-6.25	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	LL	79	GLY	CA-C	-6.25	1.43	1.51
2	SA	1091	U	C4'-C3'	6.25	1.61	1.52
9	SI	103	VAL	N-CA	-6.25	1.38	1.46
26	LA	2830	C	O3'-P	-6.25	1.51	1.61
28	LU	76	VAL	CA-C	-6.25	1.45	1.52
2	SA	1364	U	C5'-C4'	6.25	1.60	1.51
2	SA	399	G	O3'-P	-6.25	1.51	1.61
4	S2	9	G	C4'-C3'	6.25	1.62	1.53
26	LA	90	U	C4'-O4'	-6.25	1.36	1.45
26	LA	942	G	P-O5'	-6.25	1.50	1.59
26	LA	2601	C	C3'-O3'	-6.25	1.33	1.43
2	SA	1051	C	C3'-C2'	6.24	1.62	1.52
13	SM	101	THR	N-CA	-6.24	1.39	1.46
19	SC	231	ARG	N-CA	-6.24	1.36	1.46
26	LA	2041	U	O3'-P	-6.24	1.51	1.61
47	LJ	144	GLU	CA-CB	6.24	1.63	1.53
2	SA	1540	U	C5'-C4'	6.24	1.60	1.51
26	LA	93	G	C4'-O4'	-6.24	1.36	1.45
26	LA	342	A	C3'-C2'	-6.24	1.43	1.52
26	LA	2679	A	C4'-C3'	-6.24	1.43	1.52
35	L1	35	VAL	N-CA	-6.24	1.38	1.46
10	SJ	31	ARG	CD-NE	6.24	1.54	1.46
22	SF	40	GLU	CA-CB	6.24	1.62	1.53
26	LA	691	C	O3'-P	-6.24	1.51	1.61
26	LA	1211	C	C2'-C1'	-6.24	1.43	1.53
26	LA	1381	G	C1'-N9	-6.24	1.38	1.48
32	LY	19	ARG	CD-NE	6.24	1.54	1.46
38	LE	180	VAL	N-CA	-6.24	1.38	1.46
2	SA	624	C	O5'-C5'	6.24	1.51	1.42
26	LA	304	U	C4'-C3'	6.24	1.61	1.52
20	SD	76	LYS	CA-CB	6.23	1.63	1.53
52	LO	92	TRP	NE1-CE2	-6.23	1.30	1.37
2	SA	1118	U	C1'-N1	6.23	1.57	1.48
4	S2	57	C	P-O5'	-6.23	1.50	1.59
26	LA	370	G	C4'-O4'	-6.23	1.36	1.45
26	LA	725	G	C3'-O3'	6.23	1.51	1.42
26	LA	2443	C	C2'-O2'	-6.23	1.33	1.42
37	LC	148	ASN	CA-CB	6.23	1.62	1.53
54	LM	22	ILE	C-N	6.23	1.41	1.33
26	LA	167	A	C3'-C2'	-6.23	1.43	1.52
26	LA	671	C	O4'-C1'	-6.23	1.32	1.41
2	SA	230	G	C2'-C1'	-6.23	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	1134	G	C2'-C1'	-6.23	1.44	1.53
2	SA	1447	A	C1'-N9	6.23	1.56	1.47
26	LA	1246	A	C2'-C1'	-6.23	1.44	1.53
26	LA	1635	A	P-O5'	-6.23	1.50	1.59
56	LR	61	ARG	CD-NE	6.23	1.54	1.46
12	SL	57	THR	N-CA	6.23	1.54	1.46
26	LA	429	A	C4'-O4'	-6.23	1.36	1.45
26	LA	1784	A	O3'-P	-6.23	1.51	1.61
45	LG	113	PHE	CA-C	6.23	1.60	1.52
7	SG	143	MET	CA-C	6.23	1.60	1.52
36	L2	59	ARG	CA-C	6.23	1.61	1.53
2	SA	64	G	C3'-O3'	6.22	1.52	1.43
24	S3	494	ARG	CD-NE	6.22	1.54	1.46
26	LA	2780	G	C3'-O3'	6.22	1.51	1.42
2	SA	740	U	C3'-C2'	-6.22	1.43	1.52
26	LA	2129	C	C1'-N1	6.22	1.56	1.47
26	LA	2257	U	C5'-C4'	6.22	1.60	1.51
49	LK	114	ALA	CA-CB	-6.22	1.46	1.54
2	SA	1046	A	O3'-P	-6.22	1.51	1.61
19	SC	215	GLN	CA-C	6.22	1.59	1.52
26	LA	2393	U	C2'-C1'	-6.22	1.44	1.53
2	SA	92	U	P-O5'	-6.22	1.50	1.59
2	SA	599	C	O3'-P	-6.21	1.51	1.61
26	LA	1654	A	O5'-C5'	6.21	1.51	1.42
24	S3	429	LYS	CA-C	6.21	1.60	1.52
26	LA	1352	U	O4'-C1'	-6.21	1.32	1.41
26	LA	2356	U	C4'-O4'	-6.21	1.36	1.45
26	LA	2388	A	C1'-N9	-6.21	1.38	1.48
15	SO	41	HIS	CA-C	6.21	1.60	1.52
26	LA	453	A	C2'-C1'	-6.21	1.44	1.53
4	S2	24	C	C5'-C4'	-6.21	1.42	1.51
18	SB	21	TYR	N-CA	-6.21	1.41	1.47
44	LF	196	VAL	N-CA	-6.21	1.38	1.46
26	LA	997	G	C3'-C2'	-6.21	1.43	1.52
26	LA	2355	G	C2'-C1'	-6.21	1.44	1.53
47	LJ	7	LYS	N-CA	-6.21	1.38	1.46
49	LK	18	ASN	C-O	-6.21	1.19	1.24
49	LK	52	LEU	CA-CB	6.21	1.66	1.54
26	LA	335	C	C4'-C3'	-6.21	1.43	1.52
26	LA	1251	C	C1'-N1	-6.21	1.38	1.47
26	LA	2495	G	C1'-N9	-6.21	1.38	1.48
45	LG	169	LEU	N-CA	-6.21	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	LT	61	ALA	N-CA	-6.21	1.37	1.46
24	S3	351	SER	CA-C	-6.20	1.44	1.52
26	LA	505	A	P-O5'	-6.20	1.50	1.59
26	LA	2651	C	C3'-O3'	6.20	1.51	1.42
50	LL	99	ARG	CD-NE	6.20	1.54	1.46
51	LI	114	GLU	C-N	6.20	1.42	1.33
58	LT	6	GLN	CA-CB	6.20	1.62	1.53
2	SA	475	C	O3'-P	-6.20	1.51	1.61
37	LC	85	GLU	CA-CB	6.20	1.63	1.53
54	LM	112	PHE	CA-C	-6.20	1.44	1.52
26	LA	2174	C	C2'-C1'	-6.20	1.44	1.53
8	SH	26	MET	CA-CB	6.20	1.62	1.54
26	LA	532	A	O3'-P	-6.20	1.51	1.61
26	LA	1205	A	O3'-P	-6.20	1.51	1.61
56	LR	76	HIS	CE1-NE2	-6.20	1.26	1.32
26	LA	452	G	O4'-C1'	-6.20	1.32	1.41
2	SA	899	C	C1'-N1	-6.20	1.39	1.48
10	SJ	9	ARG	CD-NE	6.20	1.54	1.46
22	SF	22	ILE	C-N	6.20	1.42	1.34
26	LA	1124	G	C1'-N9	-6.20	1.38	1.48
58	LT	68	ARG	CA-C	-6.20	1.45	1.52
2	SA	549	C	C1'-N1	-6.19	1.39	1.48
26	LA	252	G	C5'-C4'	6.19	1.60	1.51
26	LA	1337	G	O3'-P	-6.19	1.51	1.61
7	SG	132	THR	CA-C	-6.19	1.44	1.52
15	SO	49	HIS	CD2-NE2	6.19	1.44	1.37
26	LA	1490	A	O3'-P	-6.19	1.51	1.61
23	SR	73	HIS	CB-CG	-6.19	1.41	1.50
26	LA	1594	U	O4'-C1'	-6.19	1.32	1.41
2	SA	1140	C	C5'-C4'	6.19	1.60	1.51
8	SH	79	ARG	C-O	-6.19	1.16	1.24
19	SC	120	THR	CA-C	-6.19	1.44	1.52
26	LA	358	U	C2'-C1'	-6.19	1.44	1.53
26	LA	1111	A	C1'-N9	-6.19	1.37	1.47
26	LA	2127	G	P-O5'	-6.19	1.50	1.59
26	LA	670	A	C1'-N9	-6.19	1.37	1.47
29	LV	13	ALA	N-CA	-6.19	1.39	1.46
2	SA	840	C	O3'-P	-6.18	1.51	1.61
3	S1	33	A	P-O5'	6.18	1.69	1.59
27	LD	48	ILE	CA-CB	-6.18	1.48	1.54
2	SA	154	U	P-O5'	-6.18	1.50	1.59
14	SN	15	LEU	C-N	-6.18	1.26	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1612	C	C4'-C3'	-6.18	1.43	1.52
26	LA	2488	G	C2'-C1'	-6.18	1.44	1.53
26	LA	1838	C	C2'-C1'	-6.18	1.43	1.53
51	LI	7	ASP	CA-C	6.18	1.60	1.53
57	LS	53	LYS	CA-C	-6.18	1.44	1.52
2	SA	1004	A	O3'-P	-6.18	1.51	1.61
2	SA	1335	U	O4'-C1'	-6.18	1.32	1.42
2	SA	1535	C	C3'-O3'	6.18	1.51	1.42
38	LE	4	LEU	CA-C	-6.18	1.45	1.52
2	SA	1242	G	C1'-N9	-6.17	1.38	1.48
7	SG	78	ARG	N-CA	6.17	1.54	1.46
30	LW	61	GLU	CA-CB	6.17	1.63	1.53
7	SG	52	ARG	CA-CB	6.17	1.63	1.53
26	LA	465	G	C2'-C1'	-6.17	1.44	1.53
2	SA	694	A	O3'-P	-6.17	1.51	1.61
38	LE	69	ALA	C-N	6.17	1.42	1.33
56	LR	38	ARG	CD-NE	6.17	1.54	1.46
20	SD	91	ALA	CA-C	6.17	1.60	1.52
26	LA	579	G	O3'-P	-6.17	1.51	1.61
26	LA	1382	G	C3'-O3'	6.17	1.51	1.42
26	LA	2101	A	P-O5'	-6.17	1.50	1.59
14	SN	24	ALA	N-CA	-6.17	1.39	1.46
26	LA	2545	G	C2'-C1'	-6.17	1.44	1.53
48	LN	77	ILE	CA-CB	-6.17	1.47	1.54
2	SA	300	A	C4'-O4'	-6.16	1.36	1.45
15	SO	51	SER	CA-C	-6.16	1.44	1.52
22	SF	60	VAL	N-CA	-6.16	1.38	1.46
48	LN	110	VAL	CA-C	-6.16	1.45	1.52
26	LA	2153	C	O4'-C1'	-6.16	1.32	1.42
2	SA	793	U	C4'-C3'	6.16	1.62	1.53
26	LA	1659	G	C4'-C3'	6.16	1.61	1.52
1	SS	77	ARG	CD-NE	6.16	1.54	1.46
18	SB	204	ASP	CA-CB	6.16	1.64	1.54
26	LA	139	U	C4'-C3'	6.16	1.61	1.52
26	LA	1791	A	N9-C4	-6.16	1.25	1.37
26	LA	2583	G	C2'-C1'	-6.16	1.44	1.53
26	LA	122	G	C1'-N9	-6.16	1.38	1.48
26	LA	523	C	C3'-C2'	-6.16	1.43	1.52
26	LA	1745	A	C5'-C4'	6.16	1.60	1.51
26	LA	2846	G	P-O5'	-6.16	1.50	1.59
2	SA	9	G	C2'-C1'	-6.16	1.44	1.53
24	S3	336	ARG	CD-NE	6.16	1.54	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	LR	6	GLN	C-N	6.16	1.42	1.33
26	LA	2869	G	C5'-C4'	6.15	1.60	1.51
13	SM	11	HIS	ND1-CE1	6.15	1.38	1.32
14	SN	35	ALA	N-CA	6.15	1.53	1.46
25	LB	77	U	O3'-P	-6.15	1.51	1.61
26	LA	1073	A	C5'-C4'	6.15	1.60	1.51
26	LA	1769	U	O4'-C1'	-6.15	1.32	1.41
26	LA	2284	A	C5'-C4'	6.15	1.60	1.51
2	SA	1138	G	C1'-N9	6.15	1.57	1.48
5	ST	36	ALA	N-CA	-6.15	1.38	1.46
5	ST	82	ILE	CA-CB	-6.15	1.47	1.54
21	SE	85	LYS	CA-C	-6.15	1.46	1.53
22	SF	64	VAL	CA-CB	-6.15	1.46	1.54
24	S3	369	LYS	N-CA	-6.15	1.38	1.45
26	LA	135	U	O3'-P	-6.15	1.51	1.61
56	LR	92	ARG	CA-C	6.15	1.61	1.52
26	LA	74	A	C4'-C3'	6.15	1.62	1.53
26	LA	328	U	C1'-N1	-6.15	1.39	1.48
26	LA	526	A	C3'-O3'	6.15	1.51	1.42
26	LA	240	C	C1'-N1	6.15	1.57	1.48
2	SA	1377	A	C5'-C4'	6.15	1.60	1.51
7	SG	20	GLU	CA-C	-6.15	1.44	1.52
26	LA	798	G	C4'-C3'	-6.15	1.43	1.52
2	SA	31	G	C4'-O4'	-6.14	1.36	1.45
2	SA	1292	G	C4'-O4'	6.14	1.54	1.45
26	LA	1596	A	C3'-O3'	6.14	1.51	1.42
26	LA	446	G	C1'-N9	-6.14	1.37	1.47
26	LA	1772	A	C3'-O3'	6.14	1.51	1.42
26	LA	2268	A	C3'-O3'	6.14	1.51	1.42
44	LF	143	LEU	CA-CB	6.14	1.63	1.53
2	SA	1100	C	O3'-P	-6.14	1.51	1.61
58	LT	49	ILE	N-CA	-6.14	1.38	1.46
2	SA	74	A	C3'-O3'	6.14	1.51	1.42
2	SA	87	C	C5'-C4'	6.14	1.60	1.51
2	SA	281	G	C3'-C2'	6.14	1.62	1.52
26	LA	655	A	O3'-P	-6.14	1.51	1.61
55	LQ	22	GLY	CA-C	6.14	1.60	1.51
2	SA	378	G	O3'-P	-6.14	1.51	1.61
2	SA	731	G	C5'-C4'	6.14	1.60	1.51
2	SA	776	G	O3'-P	-6.14	1.51	1.61
26	LA	1879	C	O3'-P	-6.14	1.51	1.61
26	LA	2422	C	C4'-O4'	-6.14	1.36	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	LE	132	ALA	N-CA	-6.13	1.39	1.46
20	SD	117	VAL	CA-CB	-6.13	1.47	1.54
26	LA	2464	G	C2'-C1'	-6.13	1.44	1.53
26	LA	694	U	C4'-O4'	-6.13	1.36	1.45
52	LO	63	ILE	CA-C	-6.13	1.45	1.52
26	LA	2218	G	C5'-C4'	6.13	1.60	1.51
39	L3	37	HIS	CA-C	-6.13	1.45	1.53
2	SA	17	U	P-O5'	-6.13	1.50	1.59
50	LL	64	VAL	CA-C	-6.13	1.45	1.52
26	LA	2541	A	O4'-C1'	-6.13	1.32	1.41
2	SA	391	G	C2'-C1'	-6.12	1.44	1.53
15	SO	72	LYS	C-N	6.12	1.41	1.33
26	LA	98	G	C4'-O4'	6.12	1.54	1.45
26	LA	2103	C	C3'-C2'	-6.12	1.43	1.52
2	SA	1369	C	C2'-O2'	-6.12	1.33	1.42
20	SD	60	VAL	N-CA	-6.12	1.38	1.46
24	S3	268	ALA	N-CA	-6.12	1.38	1.46
26	LA	718	A	O4'-C1'	-6.12	1.32	1.41
57	LS	38	VAL	CA-CB	-6.12	1.46	1.54
2	SA	711	G	P-O5'	-6.12	1.50	1.59
2	SA	1142	G	C2'-C1'	-6.12	1.44	1.53
26	LA	514	A	O4'-C1'	-6.12	1.32	1.41
2	SA	49	U	C5'-C4'	6.12	1.60	1.51
2	SA	977	A	O4'-C1'	6.12	1.51	1.42
26	LA	1470	A	O4'-C1'	-6.12	1.32	1.41
26	LA	2020	A	O4'-C1'	-6.12	1.32	1.41
26	LA	2119	A	P-O5'	-6.12	1.50	1.59
46	LH	130	ILE	N-CA	-6.12	1.39	1.46
48	LN	33	ARG	CA-C	-6.12	1.44	1.52
51	LI	72	ILE	C-O	-6.12	1.16	1.24
2	SA	298	A	N7-C5	-6.12	1.27	1.39
2	SA	318	G	C1'-N9	-6.12	1.38	1.48
26	LA	2145	C	C3'-C2'	6.12	1.62	1.52
10	SJ	64	GLN	CA-C	-6.11	1.45	1.52
21	SE	120	HIS	N-CA	-6.11	1.38	1.46
26	LA	69	C	C3'-O3'	6.11	1.51	1.42
26	LA	1095	A	C3'-C2'	-6.11	1.43	1.52
26	LA	1370	C	O3'-P	-6.11	1.51	1.61
26	LA	2680	U	C4'-C3'	-6.11	1.43	1.52
26	LA	386	G	C1'-N9	-6.11	1.37	1.47
27	LD	131	MET	C-N	6.11	1.41	1.33
24	S3	4	THR	CA-C	6.11	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1619	G	C4'-C3'	-6.11	1.43	1.52
26	LA	2692	G	O3'-P	-6.11	1.51	1.61
7	SG	96	ASN	N-CA	-6.11	1.39	1.46
2	SA	517	G	O3'-P	-6.11	1.51	1.61
2	SA	806	C	C1'-N1	-6.11	1.39	1.48
24	S3	209	ASP	CA-CB	6.11	1.64	1.54
26	LA	1453	A	C3'-C2'	6.11	1.61	1.52
26	LA	2541	A	O3'-P	-6.11	1.51	1.61
55	LQ	71	ALA	CA-CB	-6.11	1.43	1.53
2	SA	575	G	O3'-P	-6.10	1.51	1.61
26	LA	2693	G	O3'-P	-6.10	1.51	1.61
45	LG	107	VAL	C-N	6.10	1.41	1.33
26	LA	1073	A	C3'-C2'	6.10	1.61	1.52
2	SA	496	A	O4'-C1'	-6.10	1.32	1.41
11	SK	66	ALA	N-CA	6.10	1.53	1.46
6	SU	3	ILE	C-O	-6.10	1.16	1.24
47	LJ	45	ARG	N-CA	-6.10	1.38	1.46
2	SA	210	C	C4'-O4'	6.10	1.54	1.45
2	SA	193	C	C3'-O3'	6.09	1.51	1.42
4	S2	54	G	O5'-C5'	6.09	1.51	1.42
44	LF	181	ILE	CA-C	-6.09	1.45	1.52
49	LK	30	GLN	C-N	6.09	1.40	1.33
26	LA	2249	U	C2'-C1'	-6.09	1.44	1.53
22	SF	102	MET	CA-C	-6.09	1.44	1.52
26	LA	60	G	C2'-C1'	-6.09	1.44	1.53
26	LA	1517	G	C5'-C4'	6.09	1.60	1.51
26	LA	1814	G	C4'-O4'	6.09	1.54	1.45
48	LN	90	VAL	CA-CB	-6.09	1.46	1.54
5	ST	73	ARG	CD-NE	6.09	1.54	1.46
26	LA	1447	C	C4'-O4'	6.09	1.54	1.45
3	S1	20	G	C5'-C4'	6.09	1.60	1.51
26	LA	102	U	C5'-C4'	6.09	1.60	1.51
2	SA	313	A	C1'-N9	-6.09	1.38	1.48
2	SA	1268	G	C4'-O4'	6.09	1.54	1.45
26	LA	237	C	P-O5'	-6.09	1.50	1.59
26	LA	967	U	C3'-O3'	6.09	1.51	1.42
29	LV	61	LEU	CA-C	-6.09	1.45	1.52
25	LB	16	G	C2'-C1'	-6.08	1.44	1.53
36	L2	36	VAL	C-N	6.08	1.42	1.33
37	LC	68	GLY	C-N	6.08	1.41	1.33
2	SA	365	U	C4'-C3'	-6.08	1.43	1.52
2	SA	1490	U	C3'-O3'	6.08	1.51	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	SO	33	ALA	N-CA	-6.08	1.39	1.46
26	LA	272	A	O5'-C5'	6.08	1.51	1.42
26	LA	2123	G	C3'-O3'	6.08	1.51	1.42
18	SB	66	ILE	CA-CB	-6.08	1.47	1.54
27	LD	16	VAL	CA-C	-6.08	1.45	1.52
33	LZ	52	ALA	N-CA	-6.08	1.38	1.46
26	LA	205	G	C5'-C4'	6.08	1.60	1.51
26	LA	1798	U	C4'-O4'	-6.08	1.36	1.45
2	SA	858	G	C1'-N9	-6.08	1.38	1.48
11	SK	23	HIS	ND1-CE1	6.08	1.38	1.32
24	S3	214	ALA	CA-C	-6.08	1.44	1.52
26	LA	738	G	C5'-C4'	6.08	1.60	1.51
26	LA	1342	A	C5'-C4'	6.08	1.60	1.51
58	LT	14	VAL	C-N	6.08	1.41	1.33
2	SA	230	G	O3'-P	-6.07	1.52	1.61
11	SK	6	ARG	CD-NE	6.07	1.54	1.46
26	LA	595	C	O4'-C1'	-6.07	1.32	1.41
26	LA	963	U	O3'-P	-6.07	1.52	1.61
26	LA	1733	G	O3'-P	-6.07	1.52	1.61
26	LA	2012	G	C2'-C1'	-6.07	1.44	1.53
2	SA	1173	U	P-O5'	-6.07	1.50	1.59
2	SA	1427	C	P-O5'	-6.07	1.50	1.59
26	LA	797	G	C2'-C1'	-6.07	1.44	1.53
26	LA	2837	A	C1'-N9	-6.07	1.38	1.48
14	SN	73	LEU	CA-C	-6.07	1.45	1.52
26	LA	2024	G	O3'-P	-6.07	1.52	1.61
26	LA	2336	A	O3'-P	-6.07	1.52	1.61
51	LI	91	PHE	CA-C	6.07	1.61	1.52
26	LA	1283	G	O5'-C5'	6.07	1.51	1.42
26	LA	1302	A	O5'-C5'	6.07	1.51	1.42
56	LR	103	THR	C-N	6.07	1.38	1.33
2	SA	1464	U	C5'-C4'	6.07	1.60	1.51
2	SA	1515	G	C4'-O4'	-6.07	1.36	1.45
26	LA	706	A	C3'-C2'	6.07	1.61	1.52
26	LA	1313	U	O3'-P	-6.07	1.52	1.61
2	SA	397	A	C2'-C1'	-6.06	1.44	1.53
26	LA	2251	U	C2'-C1'	-6.06	1.44	1.53
44	LF	198	GLU	C-N	6.06	1.42	1.34
2	SA	38	G	C4'-C3'	-6.06	1.43	1.52
26	LA	2249	U	C1'-N1	-6.06	1.38	1.47
25	LB	34	A	O5'-C5'	6.06	1.51	1.42
26	LA	1837	C	C2'-C1'	-6.06	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	LO	104	GLU	CA-C	-6.06	1.45	1.52
26	LA	775	G	O4'-C1'	-6.06	1.32	1.42
26	LA	783	A	C2'-C1'	-6.06	1.44	1.53
47	LJ	134	ALA	C-N	-6.06	1.26	1.34
50	LL	4	PHE	CA-C	-6.06	1.45	1.52
26	LA	2308	G	C3'-O3'	6.06	1.52	1.43
38	LE	13	ARG	CD-NE	6.06	1.54	1.46
44	LF	5	LEU	CA-C	-6.06	1.44	1.52
26	LA	1219	U	C4'-O4'	-6.06	1.36	1.45
2	SA	576	C	O4'-C1'	-6.05	1.32	1.42
26	LA	46	G	C5'-C4'	-6.05	1.42	1.51
26	LA	2362	C	P-O5'	-6.05	1.50	1.59
26	LA	188	G	O3'-P	-6.05	1.52	1.61
26	LA	511	U	O4'-C1'	-6.05	1.32	1.41
26	LA	326	G	O5'-C5'	6.05	1.51	1.42
2	SA	1367	C	C4'-C3'	6.05	1.61	1.52
26	LA	398	C	P-O5'	-6.05	1.50	1.59
26	LA	1055	G	C4'-O4'	6.05	1.54	1.45
26	LA	2222	C	C2'-C1'	-6.05	1.44	1.53
26	LA	2262	U	O3'-P	-6.05	1.52	1.61
26	LA	2709	G	O3'-P	-6.05	1.52	1.61
45	LG	158	THR	CA-C	-6.05	1.45	1.52
2	SA	31	G	C2'-C1'	-6.05	1.44	1.53
26	LA	1212	G	C3'-O3'	6.05	1.52	1.43
20	SD	61	ARG	CD-NE	6.05	1.54	1.46
44	LF	96	VAL	CA-C	-6.05	1.46	1.52
1	SS	4	LEU	CA-C	-6.04	1.45	1.52
2	SA	425	G	O5'-C5'	6.04	1.51	1.42
26	LA	822	G	C2'-C1'	-6.04	1.44	1.53
26	LA	1626	A	C1'-N9	-6.04	1.37	1.47
26	LA	2172	U	O3'-P	-6.04	1.52	1.61
2	SA	290	C	O3'-P	-6.04	1.52	1.61
2	SA	345	C	C3'-C2'	-6.04	1.43	1.52
26	LA	1859	U	P-O5'	-6.04	1.50	1.59
26	LA	805	G	C4'-C3'	6.04	1.62	1.53
12	SL	51	VAL	C-O	-6.04	1.18	1.24
26	LA	286	U	C5'-C4'	6.04	1.60	1.51
36	L2	30	HIS	ND1-CE1	6.04	1.38	1.32
2	SA	579	A	C1'-N9	-6.04	1.38	1.48
2	SA	1032	G	C3'-C2'	6.04	1.61	1.52
10	SJ	45	ARG	CA-CB	6.04	1.62	1.53
26	LA	1312	U	O4'-C1'	-6.03	1.32	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1824	G	C1'-N9	-6.03	1.39	1.48
2	SA	792	A	C1'-N9	-6.03	1.39	1.48
2	SA	883	C	O4'-C1'	-6.03	1.32	1.41
25	LB	91	C	C2'-C1'	-6.03	1.44	1.53
26	LA	2393	U	O5'-C5'	6.03	1.51	1.42
31	LX	30	ILE	N-CA	-6.03	1.38	1.46
38	LE	140	HIS	ND1-CE1	6.03	1.38	1.32
10	SJ	25	ILE	C-N	6.03	1.41	1.33
26	LA	1568	G	O3'-P	-6.03	1.52	1.61
26	LA	1677	A	C5'-C4'	6.03	1.60	1.51
26	LA	2691	C	P-O5'	-6.03	1.50	1.59
2	SA	134	G	C3'-O3'	6.03	1.51	1.42
2	SA	411	A	C5'-C4'	6.03	1.60	1.51
26	LA	863	A	C1'-N9	-6.03	1.39	1.48
26	LA	2758	A	C1'-N9	-6.03	1.39	1.48
44	LF	121	VAL	C-N	6.03	1.41	1.33
51	LI	19	VAL	N-CA	-6.03	1.38	1.46
2	SA	893	C	O4'-C1'	-6.03	1.32	1.41
24	S3	473	LYS	N-CA	6.03	1.53	1.46
26	LA	2268	A	O4'-C1'	-6.03	1.32	1.41
2	SA	954	G	C3'-O3'	6.02	1.51	1.42
26	LA	2481	G	C1'-N9	-6.02	1.39	1.48
2	SA	477	C	C1'-N1	6.02	1.57	1.48
37	LC	59	VAL	N-CA	6.02	1.53	1.46
39	L3	36	LYS	N-CA	-6.02	1.38	1.45
40	L4	13	SER	CA-CB	6.02	1.60	1.52
2	SA	750	C	C5'-C4'	6.02	1.60	1.51
26	LA	1010	A	C1'-N9	-6.02	1.39	1.48
26	LA	1589	U	C3'-O3'	6.02	1.51	1.42
26	LA	1792	G	C2'-C1'	-6.02	1.44	1.53
26	LA	1594	U	C3'-O3'	6.02	1.51	1.42
52	LO	66	ARG	N-CA	6.02	1.53	1.46
2	SA	687	A	O4'-C1'	-6.01	1.32	1.42
2	SA	1095	U	C3'-O3'	6.01	1.51	1.42
20	SD	35	GLN	C-N	6.01	1.40	1.33
26	LA	1628	G	C3'-O3'	6.01	1.51	1.42
26	LA	2037	A	C2'-C1'	-6.01	1.44	1.53
26	LA	2576	G	P-O5'	-6.01	1.50	1.59
26	LA	2829	A	O3'-P	-6.01	1.52	1.61
6	SU	32	ARG	CA-CB	6.01	1.62	1.53
38	LE	49	GLN	C-N	6.01	1.42	1.33
2	SA	119	A	O3'-P	-6.01	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	437	U	P-O5'	-6.01	1.50	1.59
2	SA	1363	A	C4'-O4'	6.01	1.54	1.45
21	SE	71	ILE	N-CA	6.01	1.53	1.46
26	LA	127	A	C4'-C3'	-6.01	1.43	1.52
26	LA	503	A	C4'-C3'	6.01	1.62	1.53
26	LA	1493	C	C5'-C4'	6.01	1.60	1.51
2	SA	1114	C	O4'-C1'	-6.01	1.32	1.41
26	LA	1263	U	O3'-P	-6.01	1.52	1.61
26	LA	1549	A	C3'-C2'	-6.01	1.43	1.52
18	SB	69	VAL	CA-CB	-6.01	1.46	1.54
24	S3	171	ALA	CA-C	-6.01	1.45	1.53
26	LA	1693	U	P-O5'	-6.01	1.50	1.59
14	SN	36	SER	CA-C	-6.01	1.44	1.52
26	LA	1167	C	C1'-N1	-6.00	1.39	1.48
26	LA	2631	G	C2'-C1'	-6.00	1.44	1.53
41	L5	39	ARG	C-N	-6.00	1.25	1.33
2	SA	148	G	C5'-C4'	6.00	1.60	1.51
2	SA	641	U	C4'-C3'	6.00	1.62	1.53
5	ST	83	ASN	N-CA	6.00	1.53	1.46
26	LA	283	G	O3'-P	-6.00	1.52	1.61
26	LA	1139	G	O3'-P	-6.00	1.52	1.61
26	LA	1870	C	C4'-C3'	6.00	1.61	1.52
51	LI	91	PHE	N-CA	-6.00	1.38	1.46
2	SA	535	A	O3'-P	-6.00	1.52	1.61
2	SA	622	A	C4'-C3'	-6.00	1.43	1.52
26	LA	1956	U	P-O5'	-6.00	1.50	1.59
26	LA	2744	G	C4'-O4'	6.00	1.54	1.45
33	LZ	39	VAL	CA-CB	-6.00	1.45	1.54
34	L0	12	GLU	C-N	6.00	1.41	1.33
2	SA	268	U	C2'-C1'	-6.00	1.44	1.53
2	SA	714	G	C2'-C1'	-6.00	1.44	1.53
18	SB	235	SER	CA-CB	6.00	1.63	1.53
26	LA	743	A	N7-C5	-6.00	1.27	1.39
26	LA	1169	A	O3'-P	-6.00	1.52	1.61
2	SA	1201	A	C1'-N9	6.00	1.55	1.47
53	LP	9	GLN	CA-CB	6.00	1.62	1.53
2	SA	972	C	C2'-C1'	-5.99	1.44	1.53
2	SA	1430	A	O3'-P	-5.99	1.52	1.61
26	LA	1394	U	C5'-C4'	5.99	1.60	1.51
32	LY	5	ALA	CA-C	5.99	1.60	1.52
2	SA	648	A	C3'-O3'	5.99	1.51	1.42
2	SA	1533	C	C5'-C4'	5.99	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	SD	90	LEU	CA-C	-5.99	1.45	1.52
2	SA	1050	G	C5'-C4'	5.99	1.60	1.51
26	LA	1129	A	C2'-C1'	-5.99	1.44	1.53
26	LA	2290	G	C4'-C3'	5.99	1.61	1.52
26	LA	2451	A	O4'-C1'	-5.99	1.32	1.42
2	SA	1487	G	C4'-C3'	-5.99	1.43	1.52
26	LA	94	A	C5'-C4'	5.99	1.60	1.51
26	LA	111	A	C3'-C2'	5.99	1.61	1.52
26	LA	1776	G	C4'-C3'	5.99	1.61	1.52
2	SA	1251	A	C5'-C4'	5.99	1.60	1.51
20	SD	142	VAL	N-CA	-5.99	1.39	1.46
26	LA	1998	A	C3'-C2'	-5.99	1.43	1.52
26	LA	2649	C	C5'-C4'	5.99	1.60	1.51
33	LZ	7	THR	C-N	-5.99	1.27	1.33
2	SA	16	A	C1'-N9	-5.99	1.39	1.48
26	LA	457	A	C3'-C2'	-5.99	1.44	1.52
26	LA	477	A	C1'-N9	-5.99	1.39	1.48
26	LA	1283	G	C3'-O3'	5.99	1.51	1.42
26	LA	2609	U	C2'-C1'	-5.99	1.44	1.53
26	LA	1478	G	C5'-C4'	5.98	1.60	1.51
26	LA	1675	C	C3'-O3'	5.98	1.52	1.43
2	SA	568	G	O3'-P	-5.98	1.52	1.61
26	LA	747	U	O3'-P	-5.98	1.52	1.61
26	LA	1135	C	O3'-P	-5.98	1.52	1.61
26	LA	2577	A	C5'-C4'	5.98	1.60	1.51
26	LA	2627	G	C5'-C4'	5.98	1.60	1.51
13	SM	64	VAL	N-CA	-5.98	1.39	1.46
18	SB	72	LYS	CA-C	5.98	1.60	1.52
20	SD	60	VAL	CA-CB	-5.98	1.46	1.54
26	LA	980	A	C5'-C4'	5.98	1.60	1.51
26	LA	1326	U	C3'-O3'	5.98	1.51	1.42
26	LA	1419	A	C1'-N9	-5.98	1.39	1.48
26	LA	1503	A	C1'-N9	-5.98	1.39	1.48
45	LG	31	GLU	C-N	5.98	1.42	1.33
26	LA	2456	C	C4'-C3'	5.98	1.61	1.52
31	LX	25	LYS	CA-C	-5.98	1.45	1.52
53	LP	44	LEU	CA-C	-5.98	1.45	1.52
26	LA	194	G	C5'-C4'	5.98	1.60	1.51
26	LA	2874	C	C5'-C4'	5.98	1.60	1.51
47	LJ	95	PHE	CA-C	-5.98	1.44	1.52
57	LS	94	LEU	N-CA	-5.98	1.38	1.46
2	SA	1493	A	C2'-C1'	-5.98	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	S3	338	TYR	CA-C	-5.98	1.45	1.52
26	LA	1561	C	C4'-C3'	-5.97	1.43	1.52
26	LA	1842	G	C3'-C2'	-5.97	1.43	1.52
26	LA	2278	A	P-O5'	-5.97	1.50	1.59
36	L2	70	LYS	CA-C	5.97	1.65	1.52
26	LA	2838	G	O3'-P	-5.97	1.52	1.61
41	L5	30	VAL	C-O	-5.97	1.17	1.24
2	SA	223	A	C1'-N9	-5.97	1.39	1.48
2	SA	1454	G	C2'-C1'	-5.97	1.44	1.53
20	SD	177	MET	CA-CB	5.97	1.61	1.53
26	LA	1111	A	O3'-P	-5.97	1.52	1.61
2	SA	95	C	C4'-C3'	5.97	1.61	1.52
21	SE	41	GLY	C-N	5.97	1.41	1.33
26	LA	61	C	O5'-C5'	-5.97	1.33	1.42
26	LA	386	G	C4'-O4'	-5.97	1.36	1.45
26	LA	837	C	C5'-C4'	5.97	1.60	1.51
26	LA	2669	G	C5'-C4'	5.97	1.60	1.51
27	LD	209	ALA	CA-C	-5.97	1.44	1.52
26	LA	574	A	C4'-O4'	5.97	1.54	1.45
57	LS	30	VAL	CA-CB	-5.97	1.47	1.54
2	SA	261	U	C5'-C4'	5.96	1.60	1.51
25	LB	83	G	P-O5'	-5.96	1.50	1.59
26	LA	1937	A	C4'-O4'	-5.96	1.36	1.45
26	LA	2099	U	C5'-C4'	5.96	1.60	1.51
52	LO	77	PRO	CA-C	-5.96	1.45	1.52
43	L7	19	ARG	CD-NE	5.96	1.54	1.46
18	SB	203	ASP	C-N	5.96	1.41	1.33
26	LA	72	U	P-O5'	-5.96	1.50	1.59
2	SA	1170	A	C1'-N9	-5.96	1.39	1.48
7	SG	30	MET	CA-C	-5.96	1.45	1.52
26	LA	120	U	C5'-C4'	5.96	1.60	1.51
26	LA	1709	U	C1'-N1	-5.96	1.39	1.48
38	LE	108	ASP	N-CA	-5.96	1.38	1.46
26	LA	197	A	C4'-C3'	-5.96	1.43	1.52
26	LA	2819	G	C5'-C4'	5.96	1.60	1.51
30	LW	51	LEU	CA-CB	5.96	1.63	1.53
26	LA	528	A	O5'-C5'	5.96	1.51	1.42
26	LA	2735	G	C3'-O3'	5.96	1.51	1.42
56	LR	76	HIS	N-CA	-5.96	1.38	1.46
2	SA	826	C	C3'-O3'	5.96	1.51	1.42
19	SC	23	ALA	N-CA	-5.96	1.39	1.46
26	LA	706	A	C3'-O3'	5.96	1.51	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1678	A	C5'-C4'	5.96	1.60	1.51
15	SO	18	ALA	C-O	-5.95	1.16	1.24
26	LA	516	C	O3'-P	-5.95	1.52	1.61
2	SA	151	A	C4'-O4'	5.95	1.54	1.45
21	SE	14	LEU	CA-C	-5.95	1.45	1.52
26	LA	2018	G	C2'-C1'	-5.95	1.44	1.53
26	LA	2122	U	P-O5'	5.95	1.68	1.59
26	LA	1950	G	O3'-P	-5.95	1.52	1.61
49	LK	135	MET	CA-C	5.95	1.60	1.52
54	LM	6	THR	N-CA	5.95	1.53	1.46
26	LA	1760	C	P-O5'	-5.95	1.50	1.59
26	LA	2743	U	P-O5'	-5.95	1.50	1.59
24	S3	359	PHE	CA-C	5.94	1.60	1.52
26	LA	1446	C	C5'-C4'	5.94	1.60	1.51
2	SA	505	G	O3'-P	-5.94	1.52	1.61
26	LA	1251	C	C3'-C2'	-5.94	1.44	1.52
26	LA	1283	G	C2'-C1'	-5.94	1.44	1.53
26	LA	2280	G	C1'-N9	-5.94	1.39	1.48
2	SA	329	A	C2'-C1'	-5.94	1.44	1.53
2	SA	413	G	C3'-O3'	5.94	1.52	1.43
3	S1	34	U	C2'-C1'	5.94	1.62	1.53
20	SD	35	GLN	CA-C	-5.94	1.47	1.53
26	LA	107	G	C4'-C3'	5.94	1.61	1.52
26	LA	160	A	C1'-N9	-5.94	1.39	1.48
26	LA	612	G	N3-C4	-5.94	1.23	1.35
26	LA	1014	A	O3'-P	-5.94	1.52	1.61
19	SC	112	ALA	N-CA	-5.94	1.38	1.46
26	LA	2275	C	C2'-C1'	-5.94	1.44	1.53
46	LH	68	ARG	N-CA	-5.94	1.39	1.46
19	SC	43	THR	CA-CB	-5.94	1.43	1.53
26	LA	730	A	O5'-C5'	5.94	1.51	1.42
26	LA	1779	U	O3'-P	-5.94	1.52	1.61
44	LF	132	LYS	N-CA	-5.94	1.38	1.46
26	LA	590	A	C3'-O3'	5.94	1.51	1.42
48	LN	92	LEU	N-CA	-5.94	1.38	1.46
2	SA	1295	U	O3'-P	-5.93	1.52	1.61
26	LA	432	A	C1'-N9	-5.93	1.39	1.48
26	LA	544	C	C3'-C2'	5.93	1.61	1.52
26	LA	1122	G	C1'-N9	-5.93	1.39	1.48
26	LA	2266	A	C1'-N9	-5.93	1.38	1.47
6	SU	34	ARG	CA-C	-5.93	1.45	1.52
26	LA	1009	A	O4'-C1'	-5.93	1.32	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	1102	A	C5'-C4'	5.93	1.60	1.51
7	SG	177	LEU	CA-CB	5.93	1.62	1.53
9	SI	40	ARG	N-CA	-5.93	1.38	1.46
12	SL	81	ILE	CA-C	-5.93	1.45	1.52
57	LS	54	ARG	CD-NE	5.93	1.54	1.46
5	ST	68	LYS	CA-CB	5.93	1.63	1.53
6	SU	62	GLU	C-N	5.93	1.42	1.34
25	LB	19	C	P-O5'	-5.93	1.50	1.59
26	LA	953	G	P-O5'	-5.93	1.50	1.59
27	LD	252	LYS	CA-C	5.93	1.60	1.52
32	LY	37	VAL	CA-C	-5.93	1.45	1.52
45	LG	47	LYS	CA-C	-5.93	1.44	1.52
17	SQ	76	ARG	N-CA	-5.93	1.38	1.45
18	SB	221	ARG	C-N	5.93	1.42	1.33
26	LA	94	A	O3'-P	-5.93	1.52	1.61
26	LA	1544	A	C1'-N9	-5.93	1.39	1.48
26	LA	2361	G	C1'-N9	-5.93	1.39	1.48
2	SA	1227	A	C3'-C2'	-5.92	1.44	1.52
2	SA	1376	U	O3'-P	-5.92	1.52	1.61
18	SB	130	LYS	N-CA	-5.92	1.39	1.46
26	LA	2801	G	C2'-C1'	-5.92	1.44	1.53
26	LA	2008	C	C2'-C1'	5.92	1.62	1.53
2	SA	100	G	C1'-N9	-5.92	1.39	1.48
26	LA	1060	U	O3'-P	-5.92	1.52	1.61
55	LQ	116	GLN	CA-CB	5.92	1.62	1.53
26	LA	939	G	O5'-C5'	5.92	1.51	1.42
2	SA	370	C	O4'-C1'	5.91	1.50	1.41
2	SA	375	U	O3'-P	-5.91	1.52	1.61
2	SA	794	A	C1'-N9	-5.91	1.39	1.48
2	SA	1140	C	O3'-P	-5.91	1.52	1.61
16	SP	68	SER	CA-C	-5.91	1.45	1.53
26	LA	151	C	C1'-N1	-5.91	1.39	1.48
26	LA	995	C	C2'-C1'	-5.91	1.44	1.53
46	LH	87	GLN	CA-C	5.91	1.59	1.52
52	LO	72	PRO	N-CA	-5.91	1.40	1.47
2	SA	1016	A	P-O5'	5.91	1.68	1.59
23	SR	41	SER	CA-C	-5.91	1.44	1.52
24	S3	58	ARG	CD-NE	5.91	1.54	1.46
26	LA	158	U	C2'-C1'	-5.91	1.44	1.53
26	LA	183	C	C5'-C4'	5.91	1.60	1.51
26	LA	2318	G	C5'-C4'	5.91	1.60	1.51
26	LA	658	U	C1'-N1	-5.91	1.39	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	LD	221	GLY	CA-C	-5.91	1.43	1.51
34	L0	19	LEU	C-N	5.91	1.42	1.33
18	SB	239	ALA	C-N	5.91	1.41	1.33
26	LA	2511	U	C4-C5	-5.91	1.31	1.43
2	SA	840	C	C5'-C4'	5.91	1.60	1.51
2	SA	1074	G	C4'-O4'	5.91	1.54	1.45
3	S1	26	U	C3'-O3'	5.91	1.51	1.42
20	SD	162	GLU	CA-C	5.91	1.60	1.52
23	SR	37	LYS	C-N	-5.91	1.27	1.33
26	LA	758	C	C5'-C4'	5.91	1.60	1.51
26	LA	897	C	C5'-C4'	5.91	1.60	1.51
26	LA	2048	G	C2-N2	-5.91	1.22	1.34
26	LA	293	U	C3'-C2'	5.90	1.61	1.52
26	LA	1937	A	C1'-N9	-5.90	1.39	1.48
26	LA	2641	G	O3'-P	-5.90	1.52	1.61
58	LT	33	VAL	CA-CB	-5.90	1.47	1.54
2	SA	157	U	C4'-O4'	-5.90	1.36	1.45
2	SA	438	U	P-O5'	-5.90	1.50	1.59
26	LA	82	U	C3'-O3'	5.90	1.51	1.42
26	LA	737	C	C2'-C1'	-5.90	1.44	1.53
26	LA	1703	G	C5'-C4'	5.90	1.60	1.51
39	L3	40	HIS	ND1-CE1	5.90	1.38	1.32
44	LF	70	SER	CA-CB	5.90	1.62	1.53
2	SA	37	U	C3'-O3'	5.90	1.50	1.42
2	SA	344	A	C3'-C2'	5.90	1.61	1.52
2	SA	1132	C	C3'-C2'	5.90	1.61	1.52
26	LA	494	G	C2'-C1'	-5.90	1.44	1.53
26	LA	1995	U	C5'-C4'	5.90	1.60	1.51
26	LA	1999	C	C4'-O4'	-5.90	1.36	1.45
26	LA	2359	C	P-O5'	-5.90	1.50	1.59
26	LA	2584	U	O5'-C5'	5.90	1.51	1.42
37	LC	5	THR	CA-CB	5.90	1.62	1.53
8	SH	128	VAL	CA-C	5.90	1.59	1.52
26	LA	1206	G	C5'-C4'	5.90	1.60	1.51
46	LH	165	ASP	CA-CB	5.90	1.60	1.52
25	LB	99	A	C4'-O4'	-5.90	1.36	1.45
26	LA	2388	A	O4'-C1'	-5.90	1.32	1.41
27	LD	84	PRO	CA-C	-5.90	1.43	1.52
48	LN	111	ILE	CA-CB	5.90	1.63	1.54
2	SA	233	C	C5'-C4'	5.89	1.60	1.51
2	SA	477	C	C5'-C4'	5.89	1.60	1.51
2	SA	1185	G	C3'-O3'	5.89	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	LD	271	SER	N-CA	-5.89	1.38	1.46
50	LL	129	GLU	CA-C	5.89	1.60	1.52
2	SA	1303	C	C3'-O3'	5.89	1.50	1.42
20	SD	46	ARG	CA-CB	5.89	1.62	1.53
27	LD	11	GLY	CA-C	-5.89	1.44	1.51
50	LL	120	ARG	CD-NE	5.89	1.54	1.46
52	LO	63	ILE	C-O	-5.89	1.16	1.24
2	SA	1186	G	P-O5'	-5.89	1.50	1.59
2	SA	1473	G	C2-N2	-5.89	1.22	1.34
11	SK	92	ARG	N-CA	-5.89	1.39	1.46
26	LA	1106	G	O4'-C1'	5.89	1.50	1.41
24	S3	597	SER	CA-C	-5.89	1.45	1.52
26	LA	1783	A	O3'-P	-5.89	1.52	1.61
19	SC	79	LYS	C-N	5.89	1.41	1.34
26	LA	107	G	C1'-N9	-5.89	1.39	1.48
30	LW	85	ARG	N-CA	5.89	1.53	1.46
30	LW	101	THR	CB-OG1	-5.89	1.34	1.43
2	SA	619	U	O4'-C1'	5.89	1.50	1.41
4	S2	46	G	C4'-C3'	-5.89	1.43	1.52
26	LA	1421	G	C3'-C2'	-5.89	1.44	1.52
3	S1	16	A	C1'-N9	5.88	1.55	1.47
9	SI	16	ALA	CA-C	-5.88	1.45	1.52
26	LA	2421	G	C1'-N9	-5.88	1.39	1.48
28	LU	27	LYS	C-N	5.88	1.41	1.33
33	LZ	73	ARG	CA-C	5.88	1.60	1.52
13	SM	11	HIS	CA-C	5.88	1.60	1.52
26	LA	1523	U	C5'-C4'	5.88	1.60	1.51
26	LA	1776	G	O3'-P	-5.88	1.52	1.61
49	LK	72	THR	CA-C	5.88	1.59	1.53
24	S3	658	PRO	CA-C	-5.88	1.45	1.52
2	SA	780	A	P-O5'	-5.88	1.50	1.59
9	SI	107	ALA	N-CA	-5.88	1.39	1.46
26	LA	1091	G	C1'-N9	-5.88	1.39	1.48
26	LA	1422	G	C3'-O3'	5.88	1.50	1.42
26	LA	1563	U	C2'-C1'	-5.88	1.44	1.53
26	LA	2055	C	C3'-O3'	5.88	1.50	1.42
46	LH	166	GLU	CA-CB	5.88	1.61	1.53
7	SG	59	GLU	CA-CB	5.88	1.62	1.53
7	SG	89	GLU	CA-CB	5.87	1.62	1.53
26	LA	2063	C	O5'-C5'	5.87	1.51	1.42
44	LF	125	SER	CA-CB	5.87	1.63	1.53
2	SA	324	G	C1'-N9	-5.87	1.39	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1938	A	C2'-O2'	-5.87	1.32	1.41
27	LD	211	ARG	CA-C	-5.87	1.45	1.52
50	LL	17	VAL	CA-CB	-5.87	1.47	1.54
53	LP	96	ARG	CZ-NH2	-5.87	1.25	1.33
2	SA	639	G	C1'-N9	-5.87	1.39	1.48
5	ST	50	PHE	C-O	-5.87	1.17	1.24
26	LA	215	G	P-O5'	5.87	1.68	1.59
44	LF	69	ARG	CA-C	5.87	1.60	1.52
54	LM	103	VAL	CA-CB	-5.87	1.47	1.54
2	SA	830	G	C2'-C1'	-5.87	1.44	1.53
2	SA	1475	G	O4'-C1'	-5.87	1.32	1.41
24	S3	446	VAL	CA-CB	-5.87	1.47	1.54
26	LA	841	G	C2'-C1'	-5.87	1.44	1.53
2	SA	693	G	C1'-N9	5.87	1.56	1.48
3	S1	31	U	C3'-O3'	5.87	1.50	1.42
24	S3	114	ALA	N-CA	-5.87	1.39	1.46
26	LA	608	A	O3'-P	-5.87	1.52	1.61
26	LA	1196	C	C3'-O3'	5.87	1.50	1.42
26	LA	1834	U	O3'-P	-5.87	1.52	1.61
40	L4	10	LEU	CA-C	-5.87	1.45	1.52
2	SA	167	A	P-O5'	-5.87	1.50	1.59
2	SA	1511	G	C1'-N9	-5.87	1.39	1.48
26	LA	2015	A	C2'-C1'	-5.87	1.44	1.53
2	SA	422	C	C5'-C4'	5.86	1.60	1.51
2	SA	1453	G	C1'-N9	5.86	1.56	1.48
18	SB	60	ALA	CA-C	-5.86	1.45	1.52
26	LA	628	G	C1'-N9	-5.86	1.39	1.48
52	LO	12	MET	CA-C	-5.86	1.45	1.52
2	SA	1296	C	C4'-O4'	5.86	1.54	1.45
37	LC	55	SER	CA-C	-5.86	1.45	1.52
26	LA	2149	U	C4'-C3'	5.86	1.61	1.52
27	LD	174	ARG	CD-NE	5.86	1.54	1.46
29	LV	50	LEU	CA-C	-5.86	1.45	1.52
4	S2	13	C	O4'-C1'	-5.86	1.32	1.41
26	LA	537	G	C5'-C4'	5.86	1.60	1.51
26	LA	1342	A	C4'-C3'	-5.86	1.44	1.53
50	LL	77	HIS	CE1-NE2	-5.86	1.26	1.32
52	LO	13	HIS	ND1-CE1	5.86	1.38	1.32
2	SA	315	A	C1'-N9	-5.86	1.38	1.47
2	SA	414	A	O5'-C5'	5.86	1.51	1.42
26	LA	680	C	C5'-C4'	5.86	1.60	1.51
26	LA	701	G	C2'-C1'	-5.86	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1687	G	O5'-C5'	5.86	1.51	1.42
26	LA	2243	U	O4'-C1'	-5.86	1.32	1.41
40	L4	45	HIS	CA-C	-5.86	1.45	1.52
45	LG	63	LYS	CA-C	-5.86	1.46	1.52
2	SA	1462	C	C4'-C3'	5.85	1.61	1.52
33	LZ	42	GLU	C-N	5.85	1.41	1.33
2	SA	556	C	C1'-N1	5.85	1.57	1.48
2	SA	819	A	C2'-C1'	-5.85	1.44	1.53
26	LA	444	C	C5'-C4'	5.85	1.60	1.51
26	LA	1979	U	C3'-O3'	5.85	1.50	1.42
26	LA	2667	C	P-O5'	-5.85	1.50	1.59
27	LD	14	HIS	CB-CG	5.85	1.58	1.50
5	ST	37	ALA	N-CA	-5.85	1.38	1.46
26	LA	156	A	C4'-O4'	5.85	1.54	1.45
26	LA	477	A	O3'-P	-5.85	1.52	1.61
21	SE	137	ARG	NE-CZ	5.85	1.39	1.33
26	LA	2892	G	O3'-P	-5.85	1.52	1.61
58	LT	3	ALA	CA-C	-5.85	1.45	1.52
2	SA	545	C	C1'-N1	-5.85	1.39	1.48
2	SA	1050	G	O4'-C1'	-5.85	1.32	1.41
2	SA	1538	C	O3'-P	-5.85	1.52	1.61
26	LA	1487	U	O3'-P	-5.85	1.52	1.61
51	LI	34	GLY	CA-C	-5.85	1.43	1.51
26	LA	2719	G	P-O5'	-5.85	1.50	1.59
45	LG	58	ALA	N-CA	-5.85	1.39	1.46
8	SH	4	ASP	C-O	-5.84	1.16	1.24
26	LA	2168	G	O5'-C5'	5.84	1.51	1.42
32	LY	80	SER	C-O	-5.84	1.17	1.23
26	LA	1056	G	C3'-C2'	-5.84	1.44	1.52
36	L2	14	ALA	C-N	5.84	1.41	1.34
2	SA	1433	A	P-O5'	-5.84	1.50	1.59
25	LB	114	C	C1'-N1	-5.84	1.39	1.48
26	LA	121	G	C1'-N9	-5.84	1.39	1.48
26	LA	2870	C	C4'-O4'	-5.84	1.36	1.45
44	LF	165	HIS	N-CA	-5.84	1.38	1.46
2	SA	843	U	C4'-O4'	5.84	1.54	1.45
22	SF	124	ALA	CA-C	-5.84	1.44	1.52
44	LF	200	LEU	N-CA	-5.84	1.39	1.46
57	LS	66	ALA	N-CA	-5.84	1.39	1.46
2	SA	147	G	C1'-N9	5.84	1.56	1.48
2	SA	285	C	O3'-P	-5.84	1.52	1.61
26	LA	822	G	C3'-O3'	5.84	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2600	A	O4'-C1'	-5.84	1.32	1.41
45	LG	8	LYS	N-CA	-5.84	1.39	1.46
2	SA	560	A	C2'-C1'	-5.83	1.44	1.53
26	LA	1791	A	O5'-C5'	-5.83	1.33	1.42
37	LC	101	ALA	N-CA	-5.83	1.38	1.46
2	SA	5	U	C5'-C4'	5.83	1.60	1.51
25	LB	90	C	O3'-P	-5.83	1.52	1.61
26	LA	1514	G	P-O5'	-5.83	1.50	1.59
27	LD	109	LEU	C-N	-5.83	1.26	1.33
29	LV	88	LYS	N-CA	-5.83	1.39	1.46
2	SA	791	G	C2'-O2'	-5.83	1.33	1.42
2	SA	1319	A	O4'-C1'	5.83	1.50	1.42
20	SD	63	ILE	C-N	5.83	1.42	1.33
24	S3	271	ASN	CA-C	-5.83	1.44	1.52
26	LA	845	A	C2'-C1'	-5.83	1.44	1.53
2	SA	74	A	P-O5'	-5.83	1.51	1.59
26	LA	454	A	C1'-N9	-5.83	1.38	1.47
26	LA	1443	U	O3'-P	-5.83	1.52	1.61
26	LA	2530	A	C5'-C4'	5.83	1.59	1.51
26	LA	2554	U	C3'-O3'	5.83	1.50	1.42
2	SA	1419	G	C2'-C1'	-5.83	1.44	1.53
15	SO	59	VAL	CA-CB	-5.83	1.47	1.54
19	SC	133	MET	CA-CB	5.83	1.62	1.53
26	LA	597	G	C3'-O3'	5.83	1.50	1.42
26	LA	1535	A	O3'-P	-5.83	1.52	1.61
26	LA	1683	U	O3'-P	-5.83	1.52	1.61
26	LA	2184	A	C1'-N9	-5.83	1.39	1.48
2	SA	332	G	C5'-C4'	5.82	1.59	1.51
2	SA	335	C	O4'-C1'	5.82	1.50	1.41
3	S1	48	C	C3'-O3'	5.82	1.51	1.43
26	LA	113	U	P-O5'	5.82	1.68	1.59
26	LA	1111	A	C4'-O4'	-5.82	1.37	1.45
26	LA	2356	U	O3'-P	-5.82	1.52	1.61
25	LB	72	G	O5'-C5'	5.82	1.51	1.42
2	SA	697	U	C5'-C4'	5.82	1.59	1.51
2	SA	893	C	C3'-O3'	5.82	1.50	1.42
24	S3	668	GLN	C-N	-5.82	1.26	1.33
26	LA	561	G	C1'-N9	-5.82	1.39	1.48
26	LA	1572	A	C4'-O4'	-5.82	1.36	1.45
26	LA	1903	G	C5'-C4'	5.82	1.59	1.51
26	LA	2438	U	C3'-O3'	5.82	1.50	1.42
26	LA	2637	U	O4'-C1'	-5.82	1.32	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
42	L6	3	ILE	CA-CB	-5.82	1.46	1.54
9	SI	32	ARG	CD-NE	5.82	1.54	1.46
47	LJ	124	ARG	CZ-NH1	5.82	1.40	1.32
2	SA	433	G	P-O5'	-5.82	1.51	1.59
10	SJ	73	LEU	CA-C	5.82	1.58	1.52
26	LA	697	G	C2'-C1'	-5.82	1.44	1.53
26	LA	2610	C	C1'-N1	5.82	1.56	1.47
29	LV	1	MET	CA-CB	5.82	1.65	1.53
58	LT	66	HIS	ND1-CE1	5.82	1.38	1.32
1	SS	83	ALA	CA-CB	5.82	1.61	1.53
12	SL	16	ALA	C-O	-5.82	1.17	1.24
26	LA	449	A	P-O5'	-5.82	1.51	1.59
26	LA	1771	C	C2'-C1'	-5.82	1.44	1.53
46	LH	148	ARG	CA-C	-5.82	1.42	1.52
50	LL	50	THR	CA-C	-5.82	1.45	1.53
26	LA	103	A	O5'-C5'	5.81	1.51	1.42
26	LA	2160	C	C1'-N1	5.81	1.57	1.48
26	LA	2821	A	O5'-C5'	5.81	1.51	1.42
9	SI	124	PRO	N-CA	-5.81	1.40	1.47
18	SB	186	VAL	CA-C	-5.81	1.45	1.52
20	SD	105	GLY	CA-C	-5.81	1.43	1.51
12	SL	90	PRO	CA-C	5.81	1.60	1.52
39	L3	8	THR	CA-C	-5.81	1.45	1.52
44	LF	192	ALA	CA-CB	5.81	1.62	1.53
48	LN	120	VAL	CA-CB	-5.81	1.48	1.54
3	S1	40	G	C5'-C4'	5.81	1.59	1.51
26	LA	627	A	C1'-N9	-5.81	1.38	1.47
26	LA	2706	A	C5'-C4'	5.81	1.59	1.51
2	SA	911	U	O3'-P	-5.81	1.52	1.61
3	S1	45	G	C3'-C2'	-5.81	1.44	1.52
26	LA	563	A	P-O5'	-5.81	1.51	1.59
58	LT	59	ILE	CA-C	-5.81	1.45	1.52
2	SA	240	G	O3'-P	-5.81	1.52	1.61
2	SA	296	U	P-O5'	-5.81	1.51	1.59
18	SB	81	ASP	CA-CB	5.81	1.62	1.53
25	LB	101	A	C3'-O3'	5.81	1.50	1.42
26	LA	727	A	O3'-P	-5.81	1.52	1.61
24	S3	240	GLU	CA-C	-5.80	1.45	1.52
55	LQ	33	ARG	NE-CZ	5.80	1.39	1.33
26	LA	2455	G	C3'-C2'	-5.80	1.44	1.52
12	SL	21	PRO	CA-C	-5.80	1.46	1.52
18	SB	152	ASP	CA-CB	5.80	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1201	U	C3'-O3'	5.80	1.50	1.42
27	LD	215	VAL	CA-CB	-5.80	1.46	1.54
47	LJ	158	ARG	CD-NE	5.80	1.54	1.46
52	LO	131	VAL	C-N	5.80	1.41	1.33
26	LA	1474	U	O4'-C1'	-5.80	1.32	1.41
26	LA	1820	U	P-O5'	-5.80	1.51	1.59
33	LZ	47	THR	CA-C	-5.80	1.45	1.52
2	SA	34	C	O5'-C5'	5.80	1.51	1.42
26	LA	1043	C	O3'-P	-5.80	1.52	1.61
26	LA	2776	A	P-O5'	-5.80	1.51	1.59
26	LA	1692	U	P-O5'	-5.80	1.51	1.59
56	LR	60	VAL	C-O	-5.80	1.17	1.24
26	LA	1431	A	O5'-C5'	5.79	1.51	1.42
26	LA	1770	G	O4'-C1'	-5.79	1.32	1.41
26	LA	2159	G	C4'-C3'	5.79	1.61	1.52
30	LW	21	ARG	CD-NE	5.79	1.54	1.46
26	LA	970	U	C2'-C1'	-5.79	1.44	1.53
2	SA	478	A	C4'-O4'	5.79	1.54	1.45
2	SA	584	G	C1'-N9	-5.79	1.39	1.48
26	LA	740	C	O5'-C5'	5.79	1.51	1.42
26	LA	784	G	P-O5'	-5.79	1.51	1.59
26	LA	1261	C	C3'-O3'	5.79	1.50	1.42
26	LA	1732	C	O3'-P	5.79	1.69	1.61
26	LA	2313	C	C3'-O3'	5.79	1.50	1.42
44	LF	49	ARG	CA-C	-5.79	1.45	1.52
47	LJ	158	ARG	N-CA	-5.79	1.38	1.46
26	LA	1570	A	C4'-C3'	5.79	1.61	1.52
27	LD	88	ALA	C-N	5.79	1.41	1.33
2	SA	1361	G	O4'-C1'	-5.79	1.32	1.41
3	S1	47	C	C5'-C4'	5.79	1.60	1.51
26	LA	614	A	C4'-C3'	5.79	1.61	1.53
26	LA	894	U	C5'-C4'	5.79	1.59	1.51
39	L3	27	LEU	N-CA	-5.79	1.38	1.46
24	S3	286	PRO	CA-C	-5.79	1.44	1.52
24	S3	346	ASP	CA-C	-5.79	1.44	1.53
26	LA	2002	G	C2'-C1'	-5.79	1.44	1.53
37	LC	5	THR	C-N	5.79	1.41	1.33
38	LE	122	VAL	CA-C	-5.79	1.45	1.52
2	SA	1506	U	C2'-O2'	-5.79	1.32	1.41
26	LA	2681	C	O3'-P	-5.79	1.52	1.61
45	LG	110	ILE	CA-C	5.79	1.59	1.52
53	LP	8	ARG	N-CA	-5.79	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	388	G	C4'-C3'	5.78	1.61	1.52
26	LA	924	G	P-O5'	-5.78	1.51	1.59
2	SA	1514	G	O3'-P	-5.78	1.52	1.61
26	LA	989	G	O5'-C5'	5.78	1.51	1.42
27	LD	56	GLY	N-CA	-5.78	1.38	1.45
45	LG	166	ARG	CD-NE	5.78	1.54	1.46
2	SA	839	C	C4'-C3'	5.78	1.61	1.52
3	S1	44	U	C5'-C4'	5.78	1.59	1.51
2	SA	1148	U	C5'-C4'	5.78	1.59	1.51
26	LA	340	A	C1'-N9	-5.78	1.39	1.48
26	LA	543	G	C1'-N9	-5.78	1.39	1.48
26	LA	1188	U	O5'-C5'	5.78	1.51	1.42
26	LA	1388	G	C2'-C1'	-5.78	1.44	1.53
26	LA	1681	G	C2'-C1'	-5.78	1.44	1.53
2	SA	119	A	C1'-N9	-5.78	1.38	1.47
26	LA	2057	G	C5'-C4'	5.78	1.59	1.51
29	LV	32	LEU	CB-CG	5.78	1.65	1.53
2	SA	458	U	C4'-O4'	5.77	1.54	1.45
26	LA	1535	A	C5'-C4'	5.77	1.60	1.51
57	LS	18	LYS	CA-C	-5.77	1.45	1.52
2	SA	740	U	C5'-C4'	5.77	1.59	1.51
5	ST	49	ALA	N-CA	-5.77	1.39	1.46
20	SD	52	VAL	CA-C	-5.77	1.45	1.52
26	LA	306	U	C3'-O3'	-5.77	1.33	1.42
37	LC	16	ASP	N-CA	-5.77	1.37	1.45
41	L5	9	VAL	C-O	-5.77	1.16	1.24
2	SA	740	U	C2'-O2'	-5.77	1.33	1.42
26	LA	1338	G	C3'-O3'	5.77	1.50	1.42
26	LA	2566	A	P-O5'	5.77	1.68	1.59
30	LW	41	VAL	CA-CB	-5.77	1.45	1.55
37	LC	201	PRO	N-CD	-5.77	1.39	1.47
57	LS	50	ARG	NE-CZ	5.77	1.39	1.33
2	SA	99	C	P-O5'	-5.77	1.51	1.59
2	SA	951	G	C2'-C1'	-5.77	1.44	1.53
19	SC	113	LYS	N-CA	-5.77	1.38	1.46
26	LA	845	A	C1'-N9	-5.77	1.39	1.48
26	LA	1608	A	O4'-C1'	5.77	1.50	1.42
26	LA	2428	G	C2'-C1'	-5.77	1.44	1.53
37	LC	198	LYS	C-N	5.77	1.41	1.33
13	SM	97	ARG	CD-NE	5.77	1.54	1.46
41	L5	31	LEU	N-CA	-5.77	1.39	1.46
2	SA	255	G	C2'-C1'	-5.76	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	486	U	C3'-C2'	5.76	1.61	1.52
25	LB	79	G	O3'-P	-5.76	1.52	1.61
26	LA	1654	A	C5'-C4'	5.76	1.59	1.51
26	LA	2108	A	O3'-P	-5.76	1.52	1.61
26	LA	2477	U	C3'-O3'	5.76	1.50	1.42
49	LK	33	ASN	C-N	5.76	1.41	1.33
2	SA	1154	G	C4'-C3'	5.76	1.61	1.52
8	SH	76	ARG	CZ-NH2	-5.76	1.25	1.33
26	LA	490	C	C4'-C3'	5.76	1.61	1.52
2	SA	1067	A	C5'-C4'	5.76	1.59	1.51
16	SP	35	ARG	NE-CZ	5.76	1.39	1.33
20	SD	92	LEU	CB-CG	5.76	1.65	1.53
24	S3	665	TYR	CA-C	5.76	1.60	1.52
25	LB	65	U	O4'-C1'	-5.76	1.33	1.41
26	LA	2422	C	O3'-P	-5.76	1.52	1.61
56	LR	63	ILE	C-O	-5.76	1.17	1.24
57	LS	14	LYS	N-CA	-5.76	1.39	1.46
17	SQ	44	HIS	CB-CG	-5.76	1.42	1.50
26	LA	593	U	P-O5'	-5.76	1.51	1.59
26	LA	1750	G	P-O5'	5.76	1.68	1.59
26	LA	2895	G	C1'-N9	-5.76	1.39	1.48
33	LZ	57	VAL	CA-CB	-5.76	1.47	1.54
19	SC	95	GLY	CA-C	-5.76	1.43	1.51
26	LA	1147	A	C1'-N9	-5.76	1.39	1.48
26	LA	574	A	C5'-C4'	5.76	1.59	1.51
26	LA	1009	A	C5'-C4'	5.76	1.59	1.51
32	LY	30	VAL	CA-C	5.76	1.60	1.52
58	LT	41	ILE	CA-CB	-5.76	1.47	1.54
2	SA	265	G	C3'-O3'	5.75	1.50	1.42
2	SA	1232	U	C3'-O3'	5.75	1.50	1.42
25	LB	44	G	C1'-N9	-5.75	1.38	1.47
26	LA	1193	G	C5'-C4'	5.75	1.59	1.51
26	LA	1774	C	C3'-C2'	5.75	1.61	1.52
56	LR	81	ASP	C-N	5.75	1.40	1.33
2	SA	705	G	N9-C4	-5.75	1.26	1.38
2	SA	996	A	C3'-C2'	-5.75	1.44	1.52
2	SA	1030	U	P-O5'	5.75	1.68	1.59
9	SI	99	LYS	N-CA	5.75	1.53	1.46
20	SD	94	GLU	N-CA	-5.75	1.38	1.46
24	S3	233	MET	N-CA	-5.75	1.39	1.46
26	LA	492	A	C3'-O3'	5.75	1.50	1.42
26	LA	1871	A	C5'-C4'	5.75	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2118	U	C5'-C4'	5.75	1.59	1.51
27	LD	169	ALA	CA-CB	-5.75	1.47	1.54
11	SK	99	LEU	N-CA	5.75	1.53	1.46
18	SB	56	LEU	N-CA	-5.75	1.39	1.46
24	S3	278	LEU	CA-C	-5.75	1.45	1.52
26	LA	178	G	C1'-N9	-5.75	1.39	1.48
26	LA	186	G	C2-N2	-5.75	1.23	1.34
26	LA	2783	U	C5'-C4'	5.75	1.59	1.51
2	SA	533	A	O3'-P	-5.75	1.52	1.61
22	SF	94	HIS	ND1-CE1	5.75	1.38	1.32
26	LA	1133	A	O3'-P	-5.75	1.52	1.61
26	LA	1747	U	C3'-O3'	5.75	1.50	1.42
26	LA	1780	A	C1'-N9	-5.75	1.38	1.47
26	LA	1957	C	C3'-O3'	5.75	1.50	1.42
26	LA	2044	C	C3'-C2'	-5.75	1.44	1.52
2	SA	1467	C	C5'-C4'	5.75	1.59	1.51
26	LA	267	C	C2'-C1'	5.75	1.61	1.53
26	LA	279	A	C1'-N9	-5.75	1.39	1.48
26	LA	698	C	C1'-N1	-5.75	1.39	1.48
2	SA	8	A	O3'-P	-5.74	1.52	1.61
2	SA	10	A	C1'-N9	-5.74	1.39	1.48
24	S3	352	VAL	N-CA	5.74	1.53	1.46
26	LA	1470	A	C4'-C3'	-5.74	1.44	1.52
26	LA	2717	C	O5'-C5'	5.74	1.51	1.42
51	LI	116	ARG	CA-C	5.74	1.59	1.52
2	SA	489	C	O3'-P	-5.74	1.52	1.61
2	SA	537	G	C3'-O3'	5.74	1.50	1.42
2	SA	1072	G	C2'-O2'	-5.74	1.33	1.42
22	SF	58	HIS	CB-CG	-5.74	1.42	1.50
26	LA	1484	U	O5'-C5'	5.74	1.51	1.42
44	LF	35	TYR	N-CA	-5.74	1.39	1.46
26	LA	962	G	C3'-C2'	5.74	1.61	1.52
2	SA	1406	U	C3'-O3'	5.74	1.50	1.42
26	LA	800	A	C1'-N9	-5.74	1.38	1.47
26	LA	1450	G	O3'-P	-5.74	1.52	1.61
26	LA	1596	A	C3'-C2'	-5.74	1.44	1.52
53	LP	55	ALA	CA-CB	-5.74	1.44	1.53
2	SA	1308	U	O5'-C5'	5.74	1.51	1.42
48	LN	59	ARG	CD-NE	5.74	1.54	1.46
7	SG	47	GLU	CA-C	-5.74	1.45	1.52
24	S3	138	ALA	CA-C	-5.74	1.45	1.53
26	LA	1159	U	C2'-C1'	-5.74	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1281	G	O3'-P	-5.74	1.52	1.61
26	LA	1958	C	O4'-C1'	-5.74	1.33	1.41
26	LA	2025	C	C4'-O4'	-5.73	1.36	1.45
37	LC	74	ARG	CD-NE	5.73	1.54	1.46
45	LG	20	ASN	CA-CB	5.73	1.62	1.53
2	SA	308	C	C4'-O4'	5.73	1.54	1.45
2	SA	880	C	P-O5'	-5.73	1.51	1.59
26	LA	549	G	C3'-O3'	5.73	1.51	1.43
26	LA	1166	G	C5'-C4'	5.73	1.59	1.51
26	LA	2495	G	P-O5'	-5.73	1.51	1.59
2	SA	1244	G	C1'-N9	-5.73	1.39	1.48
24	S3	639	GLY	CA-C	-5.73	1.47	1.52
26	LA	295	G	C2'-C1'	-5.73	1.44	1.53
26	LA	996	A	C2'-C1'	-5.73	1.44	1.53
26	LA	1724	G	C5'-C4'	5.73	1.59	1.51
26	LA	1849	G	C1'-N9	-5.73	1.39	1.48
31	LX	64	VAL	C-N	-5.73	1.26	1.33
54	LM	72	PRO	N-CA	-5.73	1.40	1.47
2	SA	994	A	C1'-N9	-5.73	1.39	1.48
39	L3	33	SER	N-CA	-5.73	1.39	1.46
2	SA	1289	A	C2'-C1'	-5.73	1.44	1.53
24	S3	140	VAL	CA-C	-5.73	1.47	1.53
26	LA	2480	C	P-O5'	-5.73	1.51	1.59
27	LD	30	ALA	C-N	5.73	1.38	1.33
27	LD	217	PRO	CA-C	-5.73	1.46	1.52
26	LA	809	G	O3'-P	-5.73	1.52	1.61
40	L4	36	LYS	CA-C	-5.73	1.45	1.52
2	SA	803	G	N7-C5	-5.72	1.27	1.39
26	LA	263	G	P-O5'	-5.72	1.51	1.59
26	LA	412	A	C1'-N9	-5.72	1.39	1.48
26	LA	2465	C	C5'-C4'	5.72	1.59	1.51
26	LA	2484	G	P-O5'	-5.72	1.51	1.59
26	LA	2568	U	O3'-P	-5.72	1.52	1.61
26	LA	2601	C	C5'-C4'	5.72	1.59	1.51
27	LD	136	VAL	CA-CB	-5.72	1.46	1.54
52	LO	80	VAL	CA-C	-5.72	1.45	1.52
56	LR	46	VAL	CA-C	-5.72	1.45	1.52
58	LT	8	GLY	CA-C	-5.72	1.44	1.51
2	SA	662	U	C3'-O3'	5.72	1.50	1.42
2	SA	1364	U	C4'-C3'	5.72	1.61	1.52
25	LB	94	A	C3'-O3'	5.72	1.50	1.42
26	LA	709	U	C5'-C4'	5.72	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	886	A	C5'-C4'	5.72	1.59	1.51
26	LA	1003	G	O3'-P	-5.72	1.52	1.61
26	LA	1060	U	C5'-C4'	5.72	1.59	1.51
26	LA	1128	G	C2'-C1'	-5.72	1.44	1.53
40	L4	43	ARG	NE-CZ	5.72	1.39	1.33
18	SB	83	ALA	CA-CB	-5.72	1.44	1.53
26	LA	2661	G	C5'-C4'	5.72	1.59	1.51
26	LA	2738	A	C3'-C2'	-5.72	1.44	1.52
53	LP	82	GLU	CA-C	-5.72	1.45	1.53
2	SA	1090	U	O5'-C5'	5.72	1.51	1.42
24	S3	337	VAL	CA-CB	-5.72	1.47	1.54
26	LA	772	C	C4'-C3'	-5.72	1.44	1.52
51	LI	82	SER	CA-C	5.72	1.59	1.52
2	SA	1084	G	C2-N2	-5.72	1.23	1.34
26	LA	305	C	C3'-C2'	-5.72	1.44	1.52
26	LA	1632	A	C3'-C2'	-5.72	1.44	1.52
2	SA	220	G	C5'-C4'	5.72	1.59	1.51
2	SA	1324	A	C4'-C3'	-5.72	1.44	1.52
2	SA	1410	A	C4'-O4'	5.72	1.54	1.45
26	LA	6	A	C5'-C4'	5.72	1.59	1.51
37	LC	205	LYS	CA-C	-5.72	1.45	1.52
2	SA	606	G	C5'-C4'	5.71	1.59	1.51
7	SG	1	PRO	N-CA	5.71	1.55	1.47
26	LA	1742	U	O5'-C5'	5.71	1.51	1.42
26	LA	2247	A	P-O5'	-5.71	1.51	1.59
26	LA	2738	A	C5'-C4'	5.71	1.59	1.51
28	LU	35	ILE	CA-C	-5.71	1.45	1.52
53	LP	49	GLU	N-CA	-5.71	1.40	1.46
2	SA	199	A	P-O5'	-5.71	1.51	1.59
26	LA	126	A	C1'-N9	5.71	1.56	1.48
37	LC	8	MET	CA-C	-5.71	1.45	1.52
2	SA	629	A	C2'-C1'	-5.71	1.44	1.53
2	SA	995	C	C4'-C3'	5.71	1.61	1.52
2	SA	996	A	C1'-N9	-5.71	1.39	1.48
24	S3	670	ARG	N-CA	-5.71	1.39	1.46
26	LA	140	C	C2'-C1'	-5.71	1.44	1.53
26	LA	1476	U	C3'-O3'	5.71	1.50	1.42
26	LA	2821	A	C1'-N9	-5.71	1.39	1.48
2	SA	33	A	C1'-N9	-5.71	1.39	1.48
2	SA	1154	G	C5'-C4'	5.71	1.59	1.51
24	S3	540	LYS	CA-CB	5.71	1.62	1.53
26	LA	1219	U	C3'-O3'	5.71	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1779	U	C3'-O3'	-5.71	1.33	1.42
26	LA	2178	C	C5'-C4'	5.71	1.59	1.51
44	LF	156	ASN	C-N	5.71	1.42	1.33
55	LQ	23	ALA	C-N	5.71	1.41	1.33
45	LG	61	GLY	C-O	-5.71	1.16	1.23
49	LK	34	ILE	CA-C	5.71	1.60	1.52
2	SA	532	A	O5'-C5'	5.71	1.51	1.42
26	LA	133	U	C3'-O3'	5.71	1.50	1.42
26	LA	483	A	C1'-N9	-5.71	1.39	1.48
26	LA	959	A	C1'-N9	-5.71	1.39	1.48
26	LA	1293	C	C5'-C4'	5.71	1.59	1.51
26	LA	2135	A	O4'-C1'	-5.71	1.33	1.41
45	LG	5	ASP	N-CA	5.71	1.53	1.46
26	LA	180	G	O3'-P	-5.70	1.52	1.61
26	LA	481	G	C2'-C1'	-5.70	1.44	1.53
26	LA	1336	A	C1'-N9	-5.70	1.39	1.48
29	LV	58	VAL	N-CA	-5.70	1.39	1.46
39	L3	18	HIS	CB-CG	-5.70	1.42	1.50
2	SA	316	C	C5'-C4'	5.70	1.59	1.51
11	SK	18	GLY	N-CA	-5.70	1.39	1.45
26	LA	2525	G	O3'-P	-5.70	1.52	1.61
2	SA	1527	U	O4'-C1'	-5.70	1.33	1.41
26	LA	221	A	O4'-C1'	-5.70	1.33	1.42
26	LA	1734	G	C1'-N9	-5.70	1.39	1.48
26	LA	1886	U	C1'-N1	-5.70	1.39	1.48
26	LA	703	U	C4'-C3'	-5.70	1.44	1.52
54	LM	2	ILE	CB-CG1	5.70	1.64	1.53
2	SA	941	G	O3'-P	-5.70	1.52	1.61
2	SA	952	U	O3'-P	-5.70	1.52	1.61
26	LA	192	C	O3'-P	-5.70	1.52	1.61
2	SA	462	G	C5'-C4'	5.70	1.59	1.51
26	LA	527	C	O3'-P	-5.70	1.52	1.61
26	LA	1478	G	C1'-N9	-5.70	1.39	1.48
26	LA	2200	C	O4'-C1'	-5.70	1.33	1.41
2	SA	995	C	P-O5'	-5.69	1.51	1.59
4	S2	64	G	C3'-O3'	5.69	1.50	1.42
24	S3	36	ASN	C-N	5.69	1.41	1.33
26	LA	974	G	C4'-C3'	5.69	1.61	1.53
26	LA	1236	G	N7-C5	-5.69	1.27	1.39
2	SA	96	U	C3'-O3'	5.69	1.50	1.42
2	SA	1522	U	O3'-P	-5.69	1.52	1.61
26	LA	900	A	O3'-P	-5.69	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2623	G	C4'-O4'	-5.69	1.37	1.45
26	LA	2897	U	O5'-C5'	5.69	1.50	1.42
2	SA	229	U	O4'-C1'	-5.69	1.33	1.41
2	SA	291	U	C2'-C1'	-5.69	1.44	1.53
7	SG	142	ARG	CZ-NH2	-5.69	1.26	1.33
26	LA	242	G	C2'-C1'	-5.69	1.44	1.53
26	LA	2229	U	P-O5'	-5.69	1.51	1.59
29	LV	35	ALA	CA-C	5.69	1.60	1.52
26	LA	302	C	P-O5'	-5.69	1.51	1.59
26	LA	2758	A	C2'-C1'	-5.69	1.44	1.53
2	SA	819	A	O3'-P	-5.69	1.52	1.61
3	S1	47	C	C4'-C3'	5.69	1.61	1.53
12	SL	16	ALA	N-CA	-5.69	1.39	1.46
14	SN	65	GLN	N-CA	-5.69	1.38	1.46
42	L6	41	ARG	CA-C	-5.69	1.45	1.52
51	LI	83	LYS	N-CA	-5.69	1.38	1.45
8	SH	22	ALA	N-CA	-5.69	1.38	1.46
24	S3	630	VAL	CA-CB	-5.69	1.47	1.54
26	LA	1211	C	C5'-C4'	5.69	1.59	1.51
26	LA	1518	C	C2'-C1'	-5.69	1.44	1.53
55	LQ	62	LEU	CA-C	-5.69	1.45	1.52
26	LA	242	G	O3'-P	-5.68	1.52	1.61
26	LA	423	A	C3'-O3'	5.68	1.50	1.42
26	LA	1331	G	O3'-P	-5.68	1.52	1.61
56	LR	17	PRO	N-CA	5.68	1.53	1.47
2	SA	983	A	C5'-C4'	5.68	1.59	1.51
8	SH	120	LEU	CA-C	5.68	1.60	1.53
47	LJ	80	LEU	N-CA	5.68	1.53	1.45
2	SA	140	U	C4'-C3'	-5.68	1.44	1.52
19	SC	168	ARG	CD-NE	5.68	1.54	1.46
26	LA	1014	A	C5'-C4'	5.68	1.59	1.51
26	LA	953	G	C2'-C1'	-5.68	1.44	1.53
47	LJ	97	GLU	C-N	5.68	1.41	1.34
48	LN	85	VAL	N-CA	-5.68	1.39	1.46
26	LA	1003	G	C5'-C4'	5.68	1.59	1.51
26	LA	1353	A	C4'-O4'	-5.68	1.37	1.45
54	LM	22	ILE	CA-C	-5.68	1.45	1.52
2	SA	34	C	C5'-C4'	-5.67	1.42	1.51
2	SA	284	C	O4'-C1'	5.67	1.50	1.41
25	LB	45	A	C5'-C4'	5.67	1.59	1.51
26	LA	1106	G	C4'-C3'	-5.67	1.44	1.52
26	LA	1320	C	P-O5'	-5.67	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	750	A	C5'-C4'	5.67	1.59	1.51
26	LA	1062	G	C3'-C2'	-5.67	1.44	1.52
52	LO	96	ILE	CA-CB	-5.67	1.47	1.54
2	SA	214	C	C2'-C1'	-5.67	1.44	1.53
2	SA	353	A	C1'-N9	-5.67	1.39	1.48
2	SA	594	U	C3'-C2'	5.67	1.61	1.52
2	SA	1127	G	C2'-C1'	-5.67	1.44	1.53
26	LA	122	G	C4'-O4'	5.67	1.54	1.45
26	LA	754	U	O5'-C5'	5.67	1.50	1.42
26	LA	1476	U	C4'-O4'	5.67	1.54	1.45
26	LA	2390	U	O3'-P	-5.67	1.52	1.61
26	LA	2077	A	C2'-C1'	-5.67	1.44	1.53
26	LA	2307	G	C4'-O4'	-5.67	1.37	1.45
2	SA	1473	G	C3'-O3'	5.67	1.50	1.42
26	LA	549	G	C4'-C3'	5.67	1.61	1.53
2	SA	1361	G	C5'-C4'	5.67	1.59	1.51
12	SL	45	ASN	N-CA	-5.67	1.39	1.47
20	SD	113	ALA	CA-C	-5.67	1.45	1.52
26	LA	1331	G	C1'-N9	-5.67	1.39	1.48
27	LD	246	PRO	N-CD	-5.67	1.39	1.47
52	LO	125	PRO	N-CA	-5.67	1.39	1.47
53	LP	8	ARG	C-N	5.67	1.41	1.33
2	SA	700	G	C1'-N9	-5.67	1.39	1.48
13	SM	3	ILE	CA-CB	-5.67	1.48	1.54
13	SM	116	LYS	C-N	5.67	1.41	1.33
26	LA	1459	G	O3'-P	-5.67	1.52	1.61
26	LA	2447	G	C2'-O2'	-5.67	1.33	1.41
26	LA	891	G	C3'-O3'	5.66	1.50	1.42
2	SA	668	G	C5'-C4'	-5.66	1.42	1.51
2	SA	934	C	C5'-C4'	5.66	1.59	1.51
2	SA	1351	U	C1'-N1	5.66	1.56	1.48
2	SA	1511	G	O3'-P	-5.66	1.52	1.61
3	S1	50	U	C1'-N1	5.66	1.56	1.48
24	S3	32	TYR	CA-CB	5.66	1.62	1.53
24	S3	71	TRP	CZ2-CH2	5.66	1.48	1.37
26	LA	138	U	O5'-C5'	5.66	1.50	1.42
26	LA	848	C	O5'-C5'	5.66	1.50	1.42
26	LA	1222	U	P-O5'	-5.66	1.51	1.59
26	LA	1505	A	C1'-N9	-5.66	1.39	1.48
53	LP	14	SER	CA-C	-5.66	1.45	1.52
2	SA	215	C	C3'-O3'	5.66	1.50	1.42
2	SA	359	G	O3'-P	-5.66	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	1204	A	O3'-P	-5.66	1.52	1.61
2	SA	1364	U	C3'-O3'	5.66	1.50	1.42
2	SA	1404	C	C3'-C2'	-5.66	1.44	1.52
11	SK	19	VAL	N-CA	-5.66	1.39	1.46
26	LA	273	G	O5'-C5'	5.66	1.50	1.42
26	LA	1587	G	C5'-C4'	5.66	1.59	1.51
26	LA	1754	A	C2'-C1'	-5.66	1.44	1.53
26	LA	1875	G	O3'-P	-5.66	1.52	1.61
47	LJ	36	LYS	N-CA	5.66	1.53	1.46
48	LN	35	HIS	CD2-NE2	5.66	1.44	1.37
56	LR	27	VAL	CA-CB	-5.66	1.47	1.54
2	SA	1290	G	C3'-O3'	5.66	1.50	1.42
2	SA	1458	G	C1'-N9	-5.66	1.39	1.48
52	LO	71	LYS	C-N	-5.66	1.26	1.33
2	SA	557	G	N3-C4	-5.66	1.24	1.35
26	LA	1155	A	C1'-N9	-5.66	1.39	1.48
33	LZ	38	TRP	N-CA	-5.66	1.39	1.46
33	LZ	54	GLY	N-CA	-5.66	1.38	1.45
46	LH	8	VAL	CA-CB	-5.66	1.46	1.54
2	SA	71	A	C4'-C3'	5.65	1.61	1.52
4	S2	5	G	P-O5'	-5.65	1.51	1.59
26	LA	116	C	C2'-C1'	-5.65	1.44	1.53
18	SB	207	ARG	CD-NE	5.65	1.54	1.46
26	LA	58	G	O3'-P	-5.65	1.52	1.61
26	LA	573	U	C5'-C4'	5.65	1.59	1.51
37	LC	210	LYS	CA-CB	5.65	1.62	1.53
26	LA	1651	G	P-O5'	-5.65	1.51	1.59
26	LA	2291	U	C3'-O3'	5.65	1.50	1.42
2	SA	1116	U	C4'-C3'	-5.65	1.44	1.52
2	SA	217	C	C3'-O3'	5.65	1.50	1.42
2	SA	886	G	C5'-C4'	5.65	1.59	1.51
2	SA	1519	A	O3'-P	-5.65	1.52	1.61
18	SB	90	PHE	N-CA	-5.65	1.38	1.45
26	LA	2011	U	P-O5'	-5.65	1.51	1.59
46	LH	28	LYS	CA-C	5.65	1.59	1.52
48	LN	101	ILE	C-N	5.65	1.41	1.33
2	SA	188	C	C2'-C1'	-5.65	1.44	1.53
41	L5	21	ARG	CA-C	-5.65	1.45	1.52
10	SJ	100	ILE	CA-CB	-5.64	1.46	1.54
16	SP	18	GLN	CA-C	-5.64	1.45	1.52
26	LA	2398	U	C2'-C1'	-5.64	1.44	1.53
2	SA	1316	G	O3'-P	-5.64	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	S3	225	ALA	N-CA	-5.64	1.39	1.46
26	LA	9	G	P-O5'	-5.64	1.51	1.59
26	LA	1366	A	O3'-P	-5.64	1.52	1.61
26	LA	1574	C	O4'-C1'	5.64	1.50	1.41
26	LA	1602	U	C5'-C4'	5.64	1.59	1.51
27	LD	269	ARG	C-N	5.64	1.41	1.33
49	LK	77	VAL	N-CA	-5.64	1.40	1.46
26	LA	631	A	O4'-C1'	-5.64	1.33	1.41
26	LA	1827	U	C4'-C3'	5.64	1.61	1.52
26	LA	2674	G	C2'-C1'	-5.64	1.44	1.53
44	LF	9	GLN	CA-CB	5.64	1.61	1.53
47	LJ	151	VAL	C-N	5.64	1.41	1.33
2	SA	327	A	P-O5'	-5.64	1.51	1.59
2	SA	506	G	O3'-P	-5.64	1.52	1.61
4	S2	41	C	C5'-C4'	5.64	1.59	1.51
28	LU	9	HIS	CB-CG	5.64	1.58	1.50
2	SA	1482	G	O3'-P	-5.63	1.52	1.61
19	SC	86	LEU	N-CA	-5.63	1.39	1.46
24	S3	245	ALA	CA-C	-5.63	1.45	1.52
26	LA	766	U	C2-N3	-5.63	1.26	1.37
26	LA	1287	A	P-O5'	-5.63	1.51	1.59
54	LM	10	VAL	CA-CB	-5.63	1.48	1.54
26	LA	454	A	C2'-C1'	-5.63	1.44	1.53
26	LA	1923	U	C5'-C4'	5.63	1.59	1.51
57	LS	7	VAL	CA-CB	-5.63	1.47	1.54
26	LA	731	C	O3'-P	-5.63	1.52	1.61
2	SA	1238	A	C5'-C4'	5.63	1.59	1.51
2	SA	1538	C	C1'-N1	5.63	1.56	1.48
13	SM	2	ARG	CA-C	-5.63	1.45	1.52
24	S3	161	LEU	N-CA	-5.63	1.39	1.46
26	LA	1307	A	O3'-P	-5.63	1.52	1.61
38	LE	98	VAL	N-CA	-5.63	1.39	1.46
2	SA	332	G	C4'-C3'	5.63	1.60	1.52
10	SJ	7	ARG	CA-C	-5.63	1.47	1.53
26	LA	191	A	C2'-C1'	-5.63	1.45	1.53
26	LA	1048	A	O3'-P	-5.63	1.52	1.61
26	LA	2807	U	C5'-C4'	5.63	1.59	1.51
52	LO	93	VAL	C-O	-5.63	1.18	1.24
12	SL	9	LYS	CA-CB	5.62	1.60	1.53
26	LA	1101	U	C1'-N1	5.62	1.56	1.48
26	LA	1667	G	O4'-C1'	-5.62	1.33	1.42
26	LA	284	U	P-O5'	5.62	1.68	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1670	C	P-O5'	-5.62	1.51	1.59
26	LA	2472	G	C1'-N9	-5.62	1.39	1.48
46	LH	39	ALA	N-CA	-5.62	1.39	1.46
47	LJ	78	PRO	CA-CB	-5.62	1.45	1.53
52	LO	110	GLU	CA-C	-5.62	1.45	1.52
2	SA	1197	A	C4'-C3'	5.62	1.60	1.52
7	SG	97	ALA	N-CA	-5.62	1.39	1.46
21	SE	93	VAL	N-CA	-5.62	1.40	1.46
26	LA	599	A	P-O5'	-5.62	1.51	1.59
26	LA	1642	G	C1'-N9	-5.62	1.39	1.48
26	LA	2610	C	C2'-C1'	-5.62	1.44	1.53
2	SA	65	A	C3'-O3'	5.62	1.50	1.42
26	LA	328	U	O4'-C1'	5.62	1.50	1.41
26	LA	934	U	O3'-P	-5.62	1.52	1.61
38	LE	150	GLN	CA-C	-5.62	1.45	1.52
26	LA	756	A	C1'-N9	-5.62	1.39	1.48
3	S1	34	U	C3'-C2'	5.62	1.61	1.52
26	LA	1247	A	C5'-C4'	5.62	1.59	1.51
26	LA	1395	A	C1'-N9	-5.62	1.38	1.47
2	SA	220	G	O3'-P	-5.62	1.52	1.61
7	SG	134	VAL	N-CA	-5.62	1.40	1.46
7	SG	145	GLU	CA-CB	5.62	1.62	1.53
26	LA	141	G	C2'-C1'	-5.62	1.45	1.53
26	LA	285	G	O3'-P	-5.62	1.52	1.61
26	LA	2339	C	O3'-P	-5.62	1.52	1.61
41	L5	8	SER	N-CA	-5.62	1.39	1.46
26	LA	891	G	C5'-C4'	5.61	1.59	1.51
26	LA	1262	A	C2'-C1'	-5.61	1.45	1.53
50	LL	105	VAL	N-CA	-5.61	1.38	1.46
53	LP	110	MET	CA-C	-5.61	1.46	1.52
57	LS	91	ARG	NE-CZ	5.61	1.39	1.33
2	SA	588	G	C5'-C4'	5.61	1.59	1.51
2	SA	1337	G	C4'-O4'	5.61	1.53	1.45
2	SA	1455	G	C2'-C1'	-5.61	1.45	1.53
20	SD	107	GLY	N-CA	-5.61	1.39	1.44
26	LA	634	C	C5'-C4'	5.61	1.59	1.51
2	SA	133	U	P-O5'	-5.61	1.51	1.59
2	SA	1473	G	O4'-C1'	-5.61	1.33	1.41
24	S3	426	ASP	C-N	-5.61	1.26	1.33
26	LA	2063	C	O3'-P	-5.61	1.52	1.61
26	LA	2368	C	C4'-C3'	-5.61	1.44	1.52
31	LX	26	PHE	CA-CB	-5.61	1.47	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	L0	61	ALA	CA-C	5.61	1.60	1.53
44	LF	94	GLN	CA-C	-5.61	1.45	1.52
2	SA	98	A	O5'-C5'	5.61	1.50	1.42
2	SA	507	C	C2'-O2'	-5.61	1.34	1.42
26	LA	1174	U	C3'-O3'	5.61	1.50	1.42
26	LA	1081	U	C5'-C4'	5.61	1.59	1.51
27	LD	14	HIS	CA-C	-5.61	1.45	1.52
36	L2	1	MET	C-N	5.61	1.41	1.33
44	LF	57	LYS	N-CA	-5.61	1.39	1.46
54	LM	67	LYS	CA-C	5.61	1.60	1.52
11	SK	124	LYS	CA-C	-5.61	1.45	1.52
19	SC	175	HIS	N-CA	-5.61	1.39	1.46
26	LA	1460	U	C3'-C2'	5.61	1.61	1.52
26	LA	2563	U	C3'-O3'	5.61	1.50	1.42
20	SD	44	LYS	CA-C	5.60	1.60	1.53
2	SA	46	G	C2-N2	-5.60	1.23	1.34
2	SA	283	U	O3'-P	-5.60	1.52	1.61
26	LA	1513	U	C3'-C2'	-5.60	1.44	1.52
7	SG	147	ASN	CA-C	5.60	1.61	1.52
26	LA	2590	A	O3'-P	-5.60	1.52	1.61
53	LP	24	MET	N-CA	-5.60	1.39	1.46
2	SA	602	A	P-O5'	5.60	1.68	1.59
2	SA	802	A	C5'-C4'	5.60	1.59	1.51
2	SA	812	G	P-O5'	5.60	1.68	1.59
2	SA	930	C	C3'-O3'	5.60	1.50	1.42
2	SA	1505	G	C1'-N9	-5.60	1.39	1.48
26	LA	500	G	C4'-O4'	5.60	1.53	1.45
26	LA	537	G	P-O5'	-5.60	1.51	1.59
26	LA	575	A	O4'-C1'	-5.60	1.33	1.41
26	LA	725	G	C2'-C1'	-5.60	1.45	1.53
26	LA	1001	A	C2'-C1'	-5.60	1.45	1.53
39	L3	53	VAL	CA-CB	-5.60	1.46	1.54
2	SA	838	G	C4'-C3'	5.60	1.60	1.52
26	LA	82	U	C3'-C2'	-5.60	1.44	1.52
26	LA	334	C	P-O5'	-5.60	1.51	1.59
26	LA	341	C	O5'-C5'	-5.60	1.34	1.42
26	LA	645	C	O5'-C5'	5.60	1.50	1.42
26	LA	1180	U	P-O5'	-5.60	1.51	1.59
26	LA	1241	A	C5'-C4'	5.60	1.59	1.51
26	LA	2017	U	O3'-P	-5.60	1.52	1.61
38	LE	187	LEU	N-CA	-5.60	1.39	1.46
45	LG	121	PHE	C-N	5.60	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	LL	120	ARG	C-N	5.60	1.42	1.33
26	LA	1	G	C5'-C4'	5.60	1.59	1.51
26	LA	231	A	O5'-C5'	5.60	1.50	1.42
52	LO	110	GLU	N-CA	-5.60	1.39	1.46
2	SA	528	C	C4'-C3'	-5.59	1.44	1.52
5	ST	61	ALA	CA-CB	5.59	1.62	1.53
26	LA	1029	A	N9-C4	-5.59	1.26	1.37
26	LA	1949	G	C5'-C4'	-5.59	1.42	1.51
36	L2	5	ILE	CA-C	-5.59	1.48	1.52
44	LF	114	ARG	N-CA	-5.59	1.39	1.46
46	LH	21	GLN	N-CA	5.59	1.53	1.46
2	SA	1172	C	C2'-C1'	-5.59	1.45	1.53
4	S2	16	C	C5'-C4'	5.59	1.59	1.51
8	SH	104	SER	CA-CB	5.59	1.60	1.53
26	LA	2320	U	O4'-C1'	-5.59	1.33	1.42
37	LC	77	VAL	CA-C	5.59	1.59	1.52
2	SA	326	G	C3'-O3'	5.59	1.50	1.42
2	SA	1195	C	O3'-P	-5.59	1.52	1.61
15	SO	17	ASP	CA-C	-5.59	1.45	1.52
32	LY	19	ARG	C-O	-5.59	1.17	1.24
57	LS	64	ILE	CA-CB	-5.59	1.47	1.54
26	LA	1369	G	P-O5'	-5.59	1.51	1.59
38	LE	141	ARG	C-O	-5.59	1.17	1.24
42	L6	39	ARG	N-CA	-5.59	1.39	1.46
2	SA	960	U	C5'-C4'	5.59	1.59	1.51
24	S3	491	GLU	C-N	5.59	1.40	1.33
26	LA	750	A	C1'-N9	-5.59	1.39	1.48
26	LA	2149	U	P-O5'	5.59	1.68	1.59
26	LA	2718	G	C2'-C1'	-5.59	1.45	1.53
14	SN	7	ALA	CA-C	-5.58	1.45	1.52
2	SA	70	U	C2'-C1'	-5.58	1.44	1.53
2	SA	1130	A	O4'-C1'	5.58	1.50	1.41
26	LA	773	U	C5'-C4'	5.58	1.59	1.51
28	LU	58	ALA	CA-C	5.58	1.60	1.52
2	SA	443	C	O4'-C1'	5.58	1.50	1.41
5	ST	76	ALA	N-CA	-5.58	1.39	1.46
24	S3	208	ALA	N-CA	-5.58	1.39	1.46
26	LA	698	C	N1-C6	5.58	1.48	1.37
26	LA	1792	G	C1'-N9	-5.58	1.39	1.48
26	LA	2714	G	O4'-C1'	-5.58	1.33	1.41
2	SA	854	U	C3'-O3'	5.58	1.50	1.42
10	SJ	9	ARG	CA-C	-5.58	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1902	C	O4'-C1'	-5.58	1.33	1.41
40	L4	29	LYS	N-CA	5.58	1.52	1.46
2	SA	211	G	C4'-C3'	5.58	1.60	1.52
38	LE	125	TRP	C-O	-5.58	1.16	1.24
54	LM	71	ARG	CD-NE	5.58	1.54	1.46
55	LQ	87	ILE	CA-C	5.58	1.58	1.53
2	SA	602	A	C4'-O4'	-5.58	1.37	1.45
26	LA	605	G	C3'-O3'	5.58	1.50	1.42
26	LA	970	U	P-OP1	-5.58	1.37	1.49
26	LA	2349	G	C2'-C1'	-5.58	1.45	1.53
5	ST	15	LYS	N-CA	-5.58	1.39	1.46
10	SJ	2	GLN	C-O	-5.58	1.16	1.23
26	LA	1144	A	O5'-C5'	5.58	1.50	1.42
26	LA	1628	G	O4'-C1'	5.58	1.50	1.41
2	SA	1106	G	P-O5'	-5.57	1.51	1.59
2	SA	1405	G	C5-C4	-5.57	1.27	1.38
14	SN	53	ASP	CA-CB	5.57	1.62	1.53
26	LA	58	G	C3'-C2'	-5.57	1.44	1.52
26	LA	851	C	C2'-C1'	-5.57	1.45	1.53
26	LA	1617	C	C2'-C1'	-5.57	1.44	1.53
47	LJ	25	VAL	CA-CB	-5.57	1.47	1.54
26	LA	400	G	O3'-P	-5.57	1.52	1.61
27	LD	198	GLU	N-CA	-5.57	1.38	1.46
35	L1	31	ILE	CA-CB	-5.57	1.48	1.54
2	SA	1323	G	C3'-O3'	5.57	1.50	1.42
26	LA	1439	A	C5'-C4'	5.57	1.59	1.51
26	LA	2078	C	O4'-C1'	-5.57	1.33	1.41
26	LA	2412	A	C1'-N9	-5.57	1.39	1.48
48	LN	107	PHE	C-O	-5.57	1.16	1.23
55	LQ	100	HIS	CG-CD2	-5.57	1.29	1.35
2	SA	165	G	C3'-C2'	-5.57	1.44	1.52
2	SA	462	G	O3'-P	-5.57	1.52	1.61
2	SA	620	C	C2'-C1'	-5.57	1.45	1.53
20	SD	11	SER	C-N	5.57	1.41	1.34
26	LA	1448	G	O4'-C1'	5.57	1.50	1.41
2	SA	762	U	C3'-C2'	-5.56	1.44	1.52
2	SA	929	G	C5'-C4'	5.56	1.59	1.51
26	LA	857	G	P-O5'	-5.56	1.51	1.59
26	LA	1244	A	O3'-P	-5.56	1.52	1.61
53	LP	17	ARG	CA-C	-5.56	1.45	1.52
2	SA	713	G	C3'-C2'	-5.56	1.44	1.52
26	LA	519	U	C5'-C4'	5.56	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	934	U	O4'-C1'	-5.56	1.33	1.41
26	LA	1530	G	O5'-C5'	5.56	1.50	1.42
2	SA	631	C	C3'-C2'	-5.56	1.44	1.52
26	LA	346	A	P-O5'	-5.56	1.51	1.59
26	LA	2644	G	O3'-P	-5.56	1.52	1.61
52	LO	131	VAL	N-CA	-5.56	1.39	1.46
2	SA	823	C	C1'-N1	-5.56	1.40	1.48
26	LA	1362	C	C2'-C1'	-5.56	1.45	1.53
2	SA	756	C	C5'-C4'	-5.56	1.43	1.51
2	SA	1001	C	C4'-O4'	5.56	1.53	1.45
26	LA	100	U	C1'-N1	5.56	1.56	1.48
26	LA	271	G	C5'-C4'	5.56	1.59	1.51
26	LA	409	G	C4'-C3'	-5.56	1.44	1.52
26	LA	1267	U	O3'-P	-5.56	1.52	1.61
26	LA	2037	A	O4'-C1'	5.56	1.50	1.41
26	LA	2492	U	O3'-P	-5.56	1.52	1.61
26	LA	2525	G	P-O5'	-5.56	1.51	1.59
29	LV	52	GLU	N-CA	-5.56	1.39	1.46
46	LH	39	ALA	CA-C	-5.56	1.47	1.53
52	LO	75	GLU	CA-CB	5.56	1.63	1.53
26	LA	1353	A	C3'-C2'	-5.56	1.44	1.52
26	LA	2753	A	C5'-C4'	5.56	1.59	1.51
47	LJ	89	GLY	CA-C	-5.56	1.45	1.52
26	LA	548	G	O3'-P	-5.55	1.52	1.61
26	LA	1389	G	C4'-C3'	5.55	1.60	1.52
26	LA	1541	C	C2'-C1'	-5.55	1.45	1.53
54	LM	80	ASP	N-CA	-5.55	1.40	1.46
9	SI	49	GLN	CA-CB	-5.55	1.45	1.54
26	LA	320	A	C4'-C3'	-5.55	1.44	1.52
27	LD	160	TYR	CA-C	5.55	1.59	1.52
2	SA	60	A	C4'-C3'	5.55	1.61	1.53
2	SA	170	U	C1'-N1	5.55	1.56	1.48
2	SA	1081	A	C4'-C3'	-5.55	1.44	1.52
2	SA	1512	U	O3'-P	-5.55	1.52	1.61
24	S3	589	GLU	CA-C	-5.55	1.45	1.52
24	S3	668	GLN	CA-C	-5.55	1.45	1.52
25	LB	21	G	C4'-O4'	5.55	1.53	1.45
26	LA	767	U	P-O5'	-5.55	1.51	1.59
26	LA	861	A	O3'-P	5.55	1.69	1.61
2	SA	991	U	P-O5'	-5.55	1.51	1.59
26	LA	929	U	C1'-N1	-5.55	1.40	1.48
26	LA	1493	C	O3'-P	-5.55	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	880	C	C2'-O2'	-5.55	1.34	1.42
2	SA	957	U	C5'-C4'	5.55	1.59	1.51
26	LA	977	G	C1'-N9	-5.55	1.39	1.48
27	LD	231	HIS	CG-CD2	-5.55	1.29	1.35
2	SA	553	A	O3'-P	-5.55	1.52	1.61
2	SA	1247	U	C5'-C4'	5.55	1.59	1.51
26	LA	759	G	C1'-N9	-5.55	1.39	1.48
26	LA	2361	G	P-O5'	-5.55	1.51	1.59
27	LD	145	MET	CA-CB	-5.55	1.46	1.54
50	LL	13	ARG	CD-NE	5.55	1.54	1.46
51	LI	75	LEU	C-N	5.55	1.40	1.33
26	LA	2572	A	O3'-P	-5.54	1.52	1.61
44	LF	2	GLU	C-N	5.54	1.40	1.33
24	S3	202	GLU	CA-CB	5.54	1.62	1.53
31	LX	16	ALA	N-CA	-5.54	1.39	1.46
57	LS	8	ILE	CA-C	-5.54	1.45	1.52
2	SA	498	A	C5'-C4'	5.54	1.59	1.51
24	S3	322	LYS	C-N	-5.54	1.26	1.33
26	LA	1903	G	O5'-C5'	5.54	1.50	1.42
26	LA	1945	G	C3'-O3'	5.54	1.50	1.42
26	LA	1962	C	C2'-O2'	-5.54	1.33	1.41
26	LA	2094	A	C4'-O4'	5.54	1.54	1.45
26	LA	2117	A	C5'-C4'	5.54	1.59	1.51
50	LL	92	MET	CG-SD	5.54	1.94	1.80
22	SF	9	MET	CA-CB	5.54	1.64	1.54
26	LA	1101	U	C2'-C1'	-5.54	1.45	1.53
2	SA	33	A	O4'-C1'	-5.54	1.33	1.41
2	SA	326	G	C5'-C4'	5.54	1.59	1.51
26	LA	18	U	O3'-P	-5.54	1.52	1.61
26	LA	1619	G	O3'-P	-5.54	1.52	1.61
26	LA	2477	U	P-O5'	-5.54	1.51	1.59
26	LA	2729	G	C3'-O3'	5.54	1.50	1.42
26	LA	2869	G	O3'-P	-5.54	1.52	1.61
27	LD	232	GLY	CA-C	5.54	1.59	1.51
38	LE	116	LYS	N-CA	-5.54	1.39	1.46
12	SL	11	ARG	CD-NE	5.54	1.54	1.46
26	LA	52	A	P-O5'	-5.54	1.51	1.59
26	LA	1173	U	C5'-C4'	5.54	1.59	1.51
26	LA	1327	A	C3'-C2'	5.54	1.61	1.52
26	LA	2477	U	C2'-C1'	5.54	1.61	1.53
42	L6	24	LYS	N-CA	-5.54	1.38	1.46
2	SA	279	A	C5'-C4'	5.53	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	327	A	O3'-P	-5.53	1.52	1.61
2	SA	572	A	N9-C8	-5.53	1.26	1.37
2	SA	1513	A	C1'-N9	-5.53	1.39	1.48
2	SA	1528	U	C3'-C2'	5.53	1.61	1.52
7	SG	70	PRO	CA-CB	-5.53	1.46	1.53
26	LA	1078	U	O3'-P	-5.53	1.52	1.61
26	LA	2070	A	C1'-N9	-5.53	1.39	1.48
26	LA	535	G	C4'-O4'	5.53	1.53	1.45
26	LA	1175	A	C2'-C1'	-5.53	1.45	1.53
26	LA	1835	G	C3'-C2'	-5.53	1.44	1.52
2	SA	368	U	C3'-C2'	-5.53	1.44	1.52
27	LD	216	ARG	CD-NE	5.53	1.53	1.46
44	LF	66	GLY	C-N	5.53	1.40	1.33
2	SA	1127	G	C3'-C2'	-5.53	1.44	1.52
21	SE	68	ARG	N-CA	-5.53	1.39	1.46
26	LA	1390	U	P-O5'	-5.53	1.51	1.59
26	LA	2502	G	C3'-C2'	-5.53	1.44	1.52
51	LI	37	VAL	CA-CB	5.53	1.61	1.54
2	SA	1407	C	O3'-P	-5.53	1.52	1.61
26	LA	1058	U	O3'-P	-5.53	1.52	1.61
26	LA	2132	U	O4'-C1'	5.53	1.50	1.41
26	LA	2254	C	C5'-C4'	5.53	1.59	1.51
2	SA	655	A	O5'-C5'	5.52	1.50	1.42
2	SA	868	C	C4'-C3'	-5.52	1.44	1.52
26	LA	772	C	O3'-P	-5.52	1.52	1.61
2	SA	890	G	C2'-C1'	-5.52	1.44	1.53
26	LA	199	A	C2'-C1'	-5.52	1.44	1.53
26	LA	291	G	C5'-C4'	5.52	1.59	1.51
26	LA	881	G	O5'-C5'	5.52	1.50	1.42
26	LA	1559	U	O3'-P	-5.52	1.52	1.61
26	LA	2236	U	P-O5'	-5.52	1.51	1.59
37	LC	161	VAL	CA-C	5.52	1.59	1.52
26	LA	1741	C	C2'-C1'	-5.52	1.45	1.53
26	LA	1870	C	C4'-O4'	-5.52	1.37	1.45
26	LA	2853	C	C4'-O4'	5.52	1.53	1.45
3	S1	21	U	C1'-N1	5.52	1.56	1.48
26	LA	653	U	C4'-C3'	5.52	1.60	1.52
26	LA	658	U	C4'-C3'	5.52	1.60	1.52
26	LA	2604	U	P-O5'	-5.52	1.51	1.59
26	LA	1149	G	O3'-P	-5.52	1.52	1.61
26	LA	1801	A	O3'-P	-5.52	1.52	1.61
34	L0	35	GLY	C-N	-5.52	1.26	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	LR	46	VAL	CA-CB	-5.52	1.47	1.54
1	SS	51	HIS	CB-CG	-5.51	1.42	1.50
5	ST	24	ARG	C-O	-5.51	1.17	1.24
23	SR	31	TYR	C-N	5.51	1.40	1.33
26	LA	857	G	C4'-O4'	-5.51	1.37	1.45
26	LA	2480	C	C5'-C4'	5.51	1.59	1.51
26	LA	2603	G	C1'-N9	-5.51	1.39	1.48
27	LD	12	ARG	N-CA	-5.51	1.40	1.46
53	LP	64	ARG	CA-C	-5.51	1.45	1.52
2	SA	527	G	C2'-C1'	-5.51	1.45	1.53
23	SR	18	GLN	N-CA	5.51	1.53	1.46
2	SA	728	A	O5'-C5'	5.51	1.50	1.42
26	LA	333	G	C3'-O3'	5.51	1.50	1.42
26	LA	1098	A	P-O5'	-5.51	1.51	1.59
26	LA	1353	A	O3'-P	-5.51	1.52	1.61
26	LA	2211	A	C3'-C2'	5.51	1.61	1.52
26	LA	2420	C	C4'-O4'	-5.51	1.37	1.45
26	LA	2794	C	C3'-O3'	5.51	1.50	1.42
27	LD	269	ARG	CA-C	-5.51	1.46	1.52
47	LJ	103	ALA	CA-C	5.51	1.59	1.52
54	LM	52	VAL	CA-CB	-5.51	1.46	1.54
2	SA	112	G	C1'-N9	-5.51	1.39	1.48
26	LA	13	A	C5'-C4'	5.51	1.59	1.51
26	LA	814	C	C2'-C1'	-5.51	1.45	1.53
26	LA	1071	G	C1'-N9	-5.51	1.39	1.48
26	LA	2491	U	C4'-O4'	5.51	1.54	1.45
27	LD	174	ARG	CA-C	-5.51	1.46	1.52
32	LY	16	GLU	CA-C	-5.51	1.45	1.52
51	LI	54	LEU	N-CA	-5.51	1.39	1.46
56	LR	90	ALA	CA-C	-5.51	1.45	1.52
10	SJ	67	ILE	CA-C	-5.51	1.45	1.52
2	SA	110	C	C5'-C4'	5.51	1.59	1.51
2	SA	981	U	C4'-C3'	-5.51	1.44	1.52
4	S2	33	C	C2'-C1'	-5.51	1.45	1.53
19	SC	44	LYS	C-O	-5.51	1.17	1.24
26	LA	1216	G	C4'-C3'	-5.51	1.44	1.52
26	LA	1316	U	C1'-N1	-5.51	1.40	1.48
26	LA	1692	U	C2'-C1'	5.51	1.61	1.53
26	LA	2004	G	C3'-C2'	-5.51	1.44	1.52
26	LA	2391	G	C2-N3	5.51	1.43	1.32
2	SA	463	U	O5'-C5'	5.50	1.50	1.42
26	LA	733	G	C1'-N9	-5.50	1.39	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	328	C	C4'-O4'	5.50	1.54	1.45
2	SA	506	G	C4'-O4'	-5.50	1.37	1.45
2	SA	715	A	C2'-C1'	-5.50	1.45	1.53
25	LB	48	U	C4'-O4'	-5.50	1.37	1.45
26	LA	659	G	C3'-C2'	5.50	1.61	1.52
26	LA	1743	G	N7-C5	-5.50	1.28	1.39
26	LA	2652	C	C2'-C1'	-5.50	1.45	1.53
2	SA	1039	G	C3'-O3'	5.50	1.50	1.42
26	LA	1991	U	O3'-P	-5.50	1.52	1.61
26	LA	2050	C	C1'-N1	-5.50	1.40	1.48
37	LC	214	ILE	CA-CB	5.50	1.61	1.54
53	LP	79	LEU	C-N	-5.50	1.25	1.33
26	LA	421	C	O4'-C1'	-5.50	1.33	1.42
2	SA	145	G	C2'-C1'	-5.50	1.45	1.53
19	SC	130	ARG	CD-NE	5.50	1.53	1.46
26	LA	370	G	O3'-P	-5.50	1.52	1.61
26	LA	2851	A	O3'-P	-5.50	1.52	1.61
41	L5	14	ARG	CD-NE	5.50	1.53	1.46
55	LQ	113	ALA	N-CA	-5.50	1.39	1.46
2	SA	219	U	P-O5'	-5.50	1.51	1.59
2	SA	1048	G	O5'-C5'	5.50	1.50	1.42
4	S2	6	G	P-O5'	-5.50	1.51	1.59
11	SK	25	SER	C-N	-5.50	1.26	1.34
26	LA	246	C	C2'-C1'	-5.50	1.45	1.53
26	LA	1046	A	O3'-P	-5.50	1.52	1.61
26	LA	2106	U	P-O5'	-5.50	1.51	1.59
26	LA	1970	A	O4'-C1'	-5.50	1.33	1.42
26	LA	2233	U	C2'-O2'	-5.50	1.34	1.42
22	SF	2	ARG	CD-NE	5.49	1.53	1.46
24	S3	558	GLU	CA-C	5.49	1.59	1.52
26	LA	2111	U	O5'-C5'	5.49	1.50	1.42
26	LA	2732	G	C1'-N9	-5.49	1.39	1.48
34	L0	21	LEU	CA-CB	5.49	1.60	1.53
39	L3	47	TYR	CA-C	-5.49	1.45	1.52
46	LH	116	LEU	C-N	-5.49	1.26	1.33
58	LT	76	LYS	N-CA	-5.49	1.39	1.46
26	LA	180	G	P-O5'	5.49	1.68	1.59
26	LA	636	G	C5'-C4'	5.49	1.59	1.51
26	LA	2020	A	C2'-O2'	5.49	1.50	1.42
43	L7	18	LYS	CA-C	-5.49	1.46	1.53
2	SA	922	G	P-O5'	-5.49	1.51	1.59
2	SA	1009	U	O5'-C5'	5.49	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	1025	U	C4'-O4'	5.49	1.54	1.45
2	SA	1482	G	C2'-C1'	-5.49	1.45	1.53
26	LA	1253	A	C1'-N9	-5.49	1.38	1.47
26	LA	1767	G	C3'-O3'	5.49	1.50	1.42
26	LA	2661	G	C4'-C3'	5.49	1.60	1.52
31	LX	26	PHE	N-CA	-5.49	1.40	1.45
2	SA	935	A	O5'-C5'	5.49	1.50	1.42
2	SA	1214	C	C4'-C3'	5.49	1.60	1.52
4	S2	5	G	O3'-P	-5.49	1.52	1.61
26	LA	1127	A	C5'-C4'	5.49	1.59	1.51
26	LA	1441	G	C2'-C1'	-5.49	1.45	1.53
26	LA	1928	A	O3'-P	-5.49	1.52	1.61
26	LA	2353	G	O3'-P	-5.49	1.52	1.61
26	LA	2587	A	O4'-C1'	-5.49	1.33	1.41
26	LA	2685	G	C2'-C1'	-5.49	1.45	1.53
26	LA	2700	A	C2'-C1'	-5.49	1.45	1.53
26	LA	2707	U	C5'-C4'	5.49	1.59	1.51
42	L6	34	LYS	C-N	5.49	1.40	1.33
48	LN	5	THR	C-N	5.49	1.40	1.33
49	LK	127	SER	CA-CB	5.49	1.62	1.53
2	SA	292	G	O3'-P	-5.49	1.52	1.61
2	SA	340	U	O5'-C5'	5.49	1.50	1.42
2	SA	449	G	C2'-C1'	-5.49	1.45	1.53
2	SA	1496	C	O4'-C1'	-5.49	1.33	1.41
7	SG	78	ARG	CA-C	5.49	1.60	1.52
24	S3	402	PRO	N-CD	-5.49	1.40	1.47
26	LA	2457	U	C2'-O2'	-5.49	1.34	1.42
44	LF	61	ARG	CD-NE	5.49	1.53	1.46
48	LN	2	ARG	N-CA	-5.49	1.39	1.46
57	LS	12	ARG	CA-C	-5.49	1.45	1.52
2	SA	1523	G	C4'-C3'	-5.48	1.44	1.52
1	SS	6	LYS	CA-C	-5.48	1.45	1.53
2	SA	88	U	C3'-O3'	5.48	1.50	1.42
24	S3	233	MET	CA-CB	5.48	1.61	1.53
24	S3	446	VAL	CA-C	-5.48	1.45	1.52
25	LB	6	G	O3'-P	-5.48	1.52	1.61
25	LB	117	G	C2'-O2'	-5.48	1.34	1.42
26	LA	408	G	C3'-O3'	5.48	1.50	1.42
26	LA	2232	C	C2'-C1'	-5.48	1.45	1.53
26	LA	2680	U	C4'-O4'	-5.48	1.37	1.45
29	LV	39	THR	N-CA	5.48	1.52	1.45
44	LF	12	LEU	CA-C	-5.48	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	LK	72	THR	C-N	5.48	1.39	1.33
15	SO	28	VAL	C-N	-5.48	1.26	1.34
26	LA	589	U	C5'-C4'	5.48	1.59	1.51
26	LA	1963	U	C4'-C3'	5.48	1.60	1.52
49	LK	102	ARG	NE-CZ	5.48	1.39	1.33
25	LB	110	C	C2'-C1'	-5.48	1.45	1.53
26	LA	1806	C	C3'-C2'	5.48	1.60	1.52
38	LE	188	LEU	CA-C	-5.48	1.46	1.52
24	S3	659	LEU	CA-C	-5.48	1.45	1.52
25	LB	97	C	C4'-O4'	5.48	1.53	1.45
26	LA	423	A	N9-C4	-5.48	1.26	1.37
26	LA	867	C	C4'-C3'	5.48	1.60	1.52
26	LA	915	C	O5'-C5'	5.48	1.50	1.42
26	LA	1612	C	C3'-C2'	-5.48	1.44	1.52
26	LA	2399	G	C4'-O4'	5.48	1.53	1.45
26	LA	2608	G	C1'-N9	-5.48	1.39	1.48
55	LQ	13	ARG	CA-C	-5.48	1.45	1.52
26	LA	991	C	O3'-P	-5.48	1.52	1.61
26	LA	1939	U	C2'-C1'	-5.48	1.44	1.53
26	LA	2267	A	C5'-C4'	5.48	1.59	1.51
50	LL	66	GLY	N-CA	5.48	1.53	1.45
2	SA	652	U	C3'-C2'	-5.47	1.44	1.52
2	SA	1189	U	P-O5'	-5.47	1.51	1.59
26	LA	436	C	O3'-P	-5.47	1.52	1.61
26	LA	1015	U	C5'-C4'	-5.47	1.43	1.51
26	LA	2640	G	P-O5'	-5.47	1.51	1.59
55	LQ	8	ILE	N-CA	-5.47	1.39	1.46
2	SA	57	G	O3'-P	-5.47	1.52	1.61
24	S3	82	ARG	CD-NE	5.47	1.53	1.46
24	S3	482	VAL	CA-C	-5.47	1.46	1.52
26	LA	307	G	C4'-C3'	5.47	1.60	1.52
26	LA	546	U	O3'-P	-5.47	1.52	1.61
26	LA	946	C	C3'-C2'	-5.47	1.44	1.52
26	LA	1124	G	C2'-C1'	-5.47	1.45	1.53
37	LC	57	GLN	N-CA	-5.47	1.40	1.46
41	L5	4	THR	C-O	-5.47	1.18	1.24
2	SA	137	U	O5'-C5'	5.47	1.50	1.42
20	SD	91	ALA	N-CA	-5.47	1.39	1.46
24	S3	474	ARG	CA-CB	5.47	1.61	1.53
26	LA	1424	G	C4'-C3'	-5.47	1.44	1.52
26	LA	2425	A	O4'-C1'	-5.47	1.33	1.42
2	SA	510	A	C1'-N9	-5.47	1.39	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	538	G	N1-C2	-5.47	1.26	1.37
2	SA	1516	G	C4'-C3'	-5.47	1.44	1.52
7	SG	4	ARG	CD-NE	5.47	1.53	1.46
11	SK	121	ARG	CA-C	-5.47	1.46	1.52
24	S3	33	THR	N-CA	-5.47	1.39	1.46
24	S3	517	VAL	N-CA	-5.47	1.39	1.46
26	LA	887	U	C3'-O3'	5.47	1.50	1.42
26	LA	888	C	C5'-C4'	5.47	1.59	1.51
26	LA	2478	A	C1'-N9	-5.47	1.39	1.48
2	SA	215	C	C5'-C4'	5.47	1.59	1.51
2	SA	361	G	O3'-P	-5.47	1.52	1.61
2	SA	165	G	C2'-C1'	-5.47	1.45	1.53
2	SA	532	A	C5'-C4'	5.47	1.59	1.51
37	LC	75	VAL	CA-C	5.47	1.58	1.52
51	LI	133	GLN	N-CA	-5.47	1.40	1.46
2	SA	130	A	O5'-C5'	5.46	1.50	1.42
2	SA	819	A	C4'-C3'	5.46	1.60	1.52
2	SA	997	U	O3'-P	5.46	1.69	1.61
2	SA	1468	A	C1'-N9	-5.46	1.39	1.48
26	LA	743	A	P-O5'	-5.46	1.51	1.59
26	LA	2378	A	C2'-C1'	-5.46	1.45	1.53
26	LA	2454	G	N9-C4	-5.46	1.27	1.38
27	LD	172	THR	CA-CB	-5.46	1.45	1.53
26	LA	19	A	C4'-O4'	-5.46	1.37	1.45
26	LA	558	U	C3'-O3'	5.46	1.50	1.42
39	L3	41	HIS	CG-ND1	5.46	1.44	1.38
2	SA	292	G	O5'-C5'	5.46	1.50	1.42
2	SA	790	A	C1'-N9	5.46	1.55	1.47
2	SA	871	U	O5'-C5'	5.46	1.51	1.42
2	SA	1282	C	C5'-C4'	5.46	1.59	1.51
3	S1	18	A	C8-N7	-5.46	1.20	1.31
26	LA	192	C	C1'-N1	-5.46	1.40	1.48
26	LA	2594	C	C1'-N1	-5.46	1.40	1.48
26	LA	2756	U	O3'-P	-5.46	1.52	1.61
28	LU	14	ALA	N-CA	-5.46	1.38	1.46
52	LO	4	PRO	CA-C	5.46	1.59	1.52
56	LR	71	ARG	N-CA	-5.46	1.40	1.46
2	SA	859	G	O3'-P	-5.46	1.52	1.61
8	SH	106	SER	C-N	5.46	1.41	1.33
26	LA	1585	C	C4'-C3'	5.46	1.60	1.52
26	LA	2306	C	C5'-C4'	5.46	1.59	1.51
13	SM	84	CYS	C-O	-5.46	1.17	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	SN	45	LEU	N-CA	-5.46	1.39	1.46
51	LI	124	THR	N-CA	-5.46	1.39	1.46
13	SM	89	ARG	CA-C	-5.46	1.45	1.52
26	LA	324	A	O3'-P	-5.46	1.52	1.61
26	LA	1798	U	C1'-N1	-5.46	1.40	1.48
26	LA	2358	A	N3-C4	-5.46	1.24	1.34
26	LA	2657	A	P-O5'	-5.46	1.51	1.59
32	LY	36	ILE	C-N	-5.46	1.26	1.33
2	SA	166	U	C4'-O4'	5.46	1.53	1.45
2	SA	192	A	C3'-O3'	5.45	1.50	1.42
26	LA	489	G	C1'-N9	-5.45	1.38	1.47
26	LA	1310	G	O4'-C1'	-5.45	1.33	1.41
54	LM	97	THR	CA-C	-5.45	1.45	1.52
2	SA	366	A	C1'-N9	-5.45	1.38	1.47
2	SA	1032	G	C5'-C4'	5.45	1.59	1.51
18	SB	96	LEU	CA-CB	5.45	1.63	1.53
20	SD	122	ILE	CA-C	-5.45	1.46	1.52
26	LA	1213	A	O5'-C5'	5.45	1.50	1.42
26	LA	2392	A	C3'-C2'	-5.45	1.44	1.52
31	LX	91	PHE	CA-C	-5.45	1.46	1.52
51	LI	66	ASN	C-N	5.45	1.40	1.33
53	LP	116	VAL	C-N	-5.45	1.26	1.33
55	LQ	10	ARG	CA-C	-5.45	1.45	1.52
26	LA	1153	C	C2'-O2'	-5.45	1.34	1.42
26	LA	1179	G	C4'-C3'	-5.45	1.44	1.52
26	LA	2619	C	O3'-P	-5.45	1.52	1.61
2	SA	1273	C	O5'-C5'	5.45	1.50	1.42
26	LA	1610	A	C3'-O3'	5.45	1.51	1.43
28	LU	87	PRO	N-CD	-5.45	1.40	1.47
2	SA	966	G	O3'-P	-5.45	1.52	1.61
2	SA	1061	G	C1'-N9	-5.45	1.39	1.48
2	SA	1099	G	O5'-C5'	5.45	1.50	1.42
8	SH	86	LYS	CA-C	-5.45	1.46	1.52
26	LA	852	U	O3'-P	-5.45	1.52	1.61
26	LA	2579	C	C1'-N1	-5.45	1.40	1.48
28	LU	84	ARG	CD-NE	5.45	1.53	1.46
54	LM	62	VAL	CA-C	-5.45	1.46	1.52
2	SA	239	U	P-O5'	-5.44	1.51	1.59
26	LA	1325	U	C3'-C2'	5.44	1.61	1.52
26	LA	1550	C	C1'-N1	5.44	1.56	1.48
26	LA	2017	U	N1-C6	-5.44	1.27	1.38
26	LA	2129	C	C2'-C1'	5.44	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
51	LI	127	GLU	CA-C	-5.44	1.45	1.53
2	SA	735	C	C4'-C3'	-5.44	1.44	1.52
2	SA	961	U	C5'-C4'	5.44	1.59	1.51
2	SA	1075	U	C1'-N1	-5.44	1.40	1.48
2	SA	1222	G	C2'-C1'	-5.44	1.45	1.53
26	LA	53	A	C4'-O4'	-5.44	1.37	1.45
26	LA	1199	U	C4'-O4'	5.44	1.53	1.45
26	LA	2268	A	O5'-C5'	5.44	1.50	1.42
26	LA	2278	A	C3'-O3'	5.44	1.50	1.42
26	LA	2831	G	C1'-N9	-5.44	1.39	1.48
27	LD	9	SER	CA-C	-5.44	1.46	1.52
2	SA	548	G	C1'-N9	-5.44	1.39	1.48
2	SA	1139	G	C3'-O3'	5.44	1.51	1.43
26	LA	587	C	O3'-P	-5.44	1.52	1.61
26	LA	1267	U	C1'-N1	-5.44	1.40	1.48
52	LO	67	VAL	CA-CB	-5.44	1.47	1.54
26	LA	622	G	C1'-N9	-5.44	1.39	1.48
26	LA	1428	C	C4'-O4'	-5.44	1.37	1.45
30	LW	42	LYS	N-CA	-5.44	1.39	1.46
37	LC	122	ARG	N-CA	-5.44	1.39	1.46
7	SG	86	VAL	CA-C	5.44	1.58	1.52
21	SE	32	PHE	C-O	-5.44	1.16	1.23
24	S3	95	THR	N-CA	5.44	1.53	1.46
26	LA	1600	C	O3'-P	-5.44	1.52	1.61
39	L3	37	HIS	ND1-CE1	5.44	1.38	1.32
49	LK	25	PRO	N-CA	-5.44	1.40	1.47
53	LP	16	HIS	CA-CB	5.44	1.61	1.53
2	SA	293	G	O4'-C1'	-5.44	1.33	1.41
2	SA	1520	C	O3'-P	-5.44	1.52	1.61
26	LA	1462	C	C3'-O3'	5.44	1.50	1.42
26	LA	2488	G	O3'-P	-5.44	1.52	1.61
2	SA	1124	G	C2'-C1'	-5.43	1.44	1.53
2	SA	1412	C	C1'-N1	-5.43	1.40	1.48
26	LA	591	U	C2'-C1'	-5.43	1.45	1.53
26	LA	2236	U	C1'-N1	5.43	1.56	1.48
26	LA	2336	A	C1'-N9	-5.43	1.38	1.47
32	LY	40	ARG	CZ-NH1	5.43	1.40	1.32
7	SG	97	ALA	CA-C	-5.43	1.45	1.52
26	LA	31	C	C3'-O3'	5.43	1.50	1.42
26	LA	866	A	P-O5'	-5.43	1.51	1.59
26	LA	1800	C	C1'-N1	-5.43	1.39	1.47
26	LA	2020	A	C2'-C1'	-5.43	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2709	G	C2-N3	5.43	1.43	1.32
2	SA	849	G	C5'-C4'	5.43	1.59	1.51
26	LA	894	U	O3'-P	5.43	1.69	1.61
2	SA	250	A	C1'-N9	5.43	1.56	1.48
26	LA	1020	A	O3'-P	-5.43	1.53	1.61
38	LE	199	SER	CA-C	-5.43	1.45	1.52
44	LF	111	GLU	CA-C	5.43	1.60	1.52
20	SD	66	VAL	C-O	-5.43	1.17	1.24
25	LB	21	G	C3'-C2'	-5.43	1.44	1.52
26	LA	2415	G	O3'-P	-5.43	1.53	1.61
2	SA	608	A	O4'-C1'	-5.43	1.33	1.41
2	SA	1089	G	C1'-N9	-5.43	1.39	1.48
26	LA	12	U	N1-C6	5.43	1.48	1.38
44	LF	136	GLN	C-N	5.43	1.41	1.33
50	LL	57	LEU	CA-C	-5.43	1.45	1.52
2	SA	122	G	P-O5'	5.42	1.67	1.59
2	SA	1181	G	C5'-C4'	5.42	1.59	1.51
22	SF	21	MET	C-N	5.42	1.40	1.33
26	LA	244	A	P-O5'	-5.42	1.51	1.59
26	LA	671	C	C4'-O4'	-5.42	1.37	1.45
26	LA	742	A	O4'-C1'	-5.42	1.33	1.41
26	LA	1202	G	O5'-C5'	5.42	1.50	1.42
26	LA	1433	A	O3'-P	-5.42	1.53	1.61
26	LA	1444	G	C2-N2	-5.42	1.23	1.34
26	LA	2634	A	C1'-N9	-5.42	1.39	1.48
37	LC	3	LYS	CA-CB	5.42	1.59	1.52
13	SM	90	HIS	N-CA	-5.42	1.39	1.46
26	LA	23	G	C5'-C4'	5.42	1.59	1.51
26	LA	1913	A	O3'-P	-5.42	1.53	1.61
26	LA	1967	C	C2'-C1'	-5.42	1.45	1.53
26	LA	2212	A	C3'-O3'	-5.42	1.35	1.43
38	LE	186	LEU	CA-C	-5.42	1.46	1.52
2	SA	1465	A	O3'-P	-5.42	1.53	1.61
24	S3	298	LEU	CA-CB	5.42	1.63	1.53
46	LH	106	LEU	N-CA	5.42	1.51	1.46
2	SA	1041	G	C2'-C1'	5.42	1.61	1.53
26	LA	178	G	O5'-C5'	5.42	1.50	1.42
26	LA	1380	G	C3'-O3'	5.42	1.50	1.42
26	LA	1809	A	C4'-O4'	-5.42	1.37	1.45
32	LY	54	ARG	N-CA	-5.42	1.39	1.46
33	LZ	31	ASN	CA-C	-5.42	1.45	1.53
34	L0	42	LEU	N-CA	5.42	1.53	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	LG	60	SER	N-CA	-5.42	1.39	1.46
2	SA	743	A	C5'-C4'	5.42	1.59	1.51
2	SA	1392	G	P-O5'	-5.42	1.51	1.59
15	SO	87	ARG	CD-NE	5.42	1.53	1.46
24	S3	488	ALA	N-CA	-5.42	1.39	1.46
26	LA	1401	G	O5'-C5'	5.42	1.50	1.42
29	LV	95	PHE	C-N	5.42	1.40	1.33
44	LF	154	ASP	CA-CB	5.42	1.62	1.53
48	LN	23	ILE	CA-C	-5.42	1.45	1.52
15	SO	6	ALA	CA-C	-5.42	1.45	1.52
26	LA	1254	A	O3'-P	-5.42	1.53	1.61
46	LH	16	VAL	C-N	5.42	1.42	1.33
49	LK	41	PHE	CA-C	-5.42	1.46	1.53
2	SA	180	U	P-O5'	-5.41	1.51	1.59
24	S3	123	GLU	CA-C	-5.41	1.45	1.52
24	S3	666	ALA	CA-C	-5.41	1.45	1.52
26	LA	38	A	P-O5'	-5.41	1.51	1.59
26	LA	1303	G	C2'-C1'	-5.41	1.45	1.53
26	LA	1528	A	C3'-O3'	5.41	1.50	1.42
26	LA	2033	A	C2'-C1'	-5.41	1.45	1.53
26	LA	2285	C	O3'-P	-5.41	1.53	1.61
46	LH	176	LYS	CA-C	5.41	1.64	1.52
2	SA	1375	A	O4'-C1'	5.41	1.49	1.41
48	LN	65	GLY	N-CA	5.41	1.51	1.45
58	LT	91	GLN	CA-C	-5.41	1.45	1.52
2	SA	659	U	C3'-O3'	5.41	1.50	1.42
2	SA	1052	U	C5'-C4'	5.41	1.59	1.51
2	SA	1076	U	P-O5'	-5.41	1.51	1.59
3	S1	53	G	O5'-C5'	5.41	1.50	1.42
26	LA	30	G	O4'-C1'	-5.41	1.33	1.41
26	LA	220	G	C1'-N9	-5.41	1.39	1.48
26	LA	462	C	O3'-P	-5.41	1.53	1.61
26	LA	1073	A	C3'-O3'	5.41	1.50	1.42
26	LA	1858	A	C3'-O3'	5.41	1.50	1.42
28	LU	34	ASP	C-N	5.41	1.40	1.34
2	SA	141	G	O4'-C1'	-5.41	1.33	1.41
2	SA	291	U	O3'-P	-5.41	1.53	1.61
2	SA	372	C	C5'-C4'	5.41	1.59	1.51
15	SO	41	HIS	CB-CG	5.41	1.57	1.50
22	SF	11	HIS	CG-CD2	-5.41	1.29	1.35
26	LA	1893	C	O3'-P	-5.41	1.53	1.61
7	SG	75	LYS	CA-C	-5.41	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1093	G	C3'-O3'	-5.41	1.34	1.42
26	LA	2180	U	C5'-C4'	5.41	1.59	1.51
29	LV	85	VAL	CA-CB	-5.41	1.47	1.53
15	SO	84	LEU	C-N	5.41	1.41	1.33
19	SC	134	LYS	CA-C	5.41	1.60	1.52
26	LA	850	U	C2'-C1'	-5.41	1.45	1.53
26	LA	955	U	C1'-N1	5.41	1.56	1.48
26	LA	2774	C	C3'-C2'	-5.41	1.44	1.52
28	LU	71	VAL	CA-CB	-5.41	1.47	1.54
2	SA	358	U	C5'-C4'	5.40	1.59	1.51
4	S2	55	U	C1'-N1	-5.40	1.40	1.48
25	LB	119	A	C4'-C3'	5.40	1.60	1.52
26	LA	639	U	O3'-P	-5.40	1.53	1.61
26	LA	2531	A	N9-C4	-5.40	1.27	1.37
26	LA	2735	G	C3'-C2'	-5.40	1.44	1.52
2	SA	30	U	C2'-C1'	-5.40	1.45	1.53
3	S1	49	U	C4'-C3'	5.40	1.61	1.53
9	SI	40	ARG	CA-C	5.40	1.60	1.52
26	LA	180	G	C2'-C1'	-5.40	1.45	1.53
26	LA	964	C	P-O5'	-5.40	1.51	1.59
41	L5	37	LYS	N-CA	5.40	1.53	1.46
26	LA	134	G	C2'-C1'	-5.40	1.45	1.53
26	LA	1231	U	O4'-C1'	-5.40	1.33	1.41
26	LA	1312	U	P-O5'	-5.40	1.51	1.59
26	LA	1457	U	C2'-C1'	-5.40	1.45	1.53
26	LA	1590	A	C4'-O4'	-5.40	1.37	1.45
26	LA	1625	C	C4'-C3'	5.40	1.60	1.52
26	LA	1810	A	C3'-C2'	-5.40	1.44	1.52
38	LE	154	LYS	CA-CB	-5.40	1.46	1.53
25	LB	18	G	C1'-N9	-5.40	1.39	1.48
26	LA	1150	C	C1'-N1	5.40	1.56	1.48
2	SA	1486	G	C5'-C4'	5.40	1.59	1.51
10	SJ	76	ILE	CA-CB	-5.40	1.47	1.54
26	LA	170	U	O5'-C5'	5.40	1.50	1.42
26	LA	584	C	C1'-N1	-5.40	1.40	1.48
41	L5	33	ARG	NE-CZ	5.40	1.39	1.33
47	LJ	104	LYS	N-CA	-5.40	1.39	1.46
2	SA	76	G	C4'-C3'	5.40	1.60	1.52
2	SA	562	U	P-O5'	-5.40	1.51	1.59
53	LP	108	ALA	C-N	-5.40	1.27	1.33
2	SA	375	U	C3'-C2'	-5.39	1.44	1.52
2	SA	1177	G	O3'-P	-5.39	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	S3	218	HIS	C-N	-5.39	1.26	1.33
25	LB	76	G	C3'-C2'	-5.39	1.44	1.52
26	LA	1398	C	O3'-P	-5.39	1.53	1.61
26	LA	2752	C	C4'-O4'	-5.39	1.37	1.45
2	SA	121	U	C5'-C4'	5.39	1.59	1.51
2	SA	409	U	P-O5'	-5.39	1.51	1.59
2	SA	623	C	C4'-O4'	5.39	1.53	1.45
2	SA	1279	G	O4'-C1'	-5.39	1.33	1.41
2	SA	1497	G	P-O5'	-5.39	1.51	1.59
23	SR	6	ARG	CA-C	5.39	1.59	1.52
26	LA	460	A	C1'-N9	-5.39	1.39	1.48
38	LE	35	THR	CA-CB	-5.39	1.47	1.53
44	LF	200	LEU	CA-CB	5.39	1.61	1.53
53	LP	28	LEU	N-CA	-5.39	1.40	1.46
53	LP	46	ARG	NE-CZ	5.39	1.39	1.33
2	SA	1485	U	C2'-C1'	-5.39	1.45	1.53
19	SC	110	LEU	CA-C	5.39	1.59	1.52
26	LA	1659	G	O4'-C1'	-5.39	1.33	1.41
26	LA	1771	C	C5'-C4'	5.39	1.59	1.51
26	LA	2645	G	O5'-C5'	5.39	1.50	1.42
2	SA	711	G	C4'-O4'	-5.39	1.37	1.45
2	SA	1016	A	C1'-N9	5.39	1.56	1.48
2	SA	1384	C	C4'-O4'	5.39	1.53	1.45
7	SG	170	LYS	CA-CB	5.39	1.61	1.53
8	SH	35	ILE	C-O	-5.39	1.18	1.24
17	SQ	30	HIS	ND1-CE1	5.39	1.38	1.32
22	SF	109	ARG	NE-CZ	5.39	1.39	1.33
26	LA	255	A	O3'-P	-5.39	1.53	1.61
26	LA	397	U	C4'-C3'	-5.39	1.44	1.52
49	LK	105	LEU	CA-C	-5.39	1.45	1.52
2	SA	1194	U	O3'-P	-5.39	1.53	1.61
26	LA	2590	A	C1'-N9	-5.39	1.39	1.48
30	LW	44	HIS	ND1-CE1	5.39	1.38	1.32
2	SA	1015	G	C2'-C1'	-5.39	1.45	1.53
3	S1	32	U	C3'-C2'	5.39	1.60	1.52
26	LA	1385	A	C1'-N9	-5.39	1.38	1.47
26	LA	1965	C	O3'-P	-5.39	1.53	1.61
26	LA	2476	A	C4'-O4'	-5.39	1.37	1.45
34	L0	36	GLN	CA-CB	5.39	1.61	1.53
34	L0	37	LEU	C-N	-5.39	1.26	1.33
56	LR	76	HIS	CG-ND1	-5.39	1.32	1.38
2	SA	597	G	C4'-O4'	-5.38	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	878	A	C3'-O3'	5.38	1.50	1.42
2	SA	1286	U	C4'-C3'	5.38	1.60	1.52
26	LA	296	U	O3'-P	-5.38	1.53	1.61
26	LA	925	A	C5'-C4'	5.38	1.59	1.51
26	LA	1761	C	P-O5'	-5.38	1.51	1.59
37	LC	224	VAL	C-N	5.38	1.40	1.33
2	SA	630	A	C5'-C4'	5.38	1.59	1.51
2	SA	752	G	O3'-P	-5.38	1.53	1.61
26	LA	21	A	C4'-C3'	-5.38	1.44	1.52
1	SS	5	LYS	N-CA	5.38	1.52	1.46
2	SA	391	G	O3'-P	-5.38	1.53	1.61
2	SA	510	A	C5'-C4'	5.38	1.59	1.51
2	SA	847	G	O5'-C5'	5.38	1.50	1.42
3	S1	23	C	O3'-P	-5.38	1.53	1.61
24	S3	430	MET	N-CA	-5.38	1.39	1.46
24	S3	578	HIS	CG-CD2	5.38	1.41	1.35
26	LA	1391	U	C4'-C3'	5.38	1.60	1.52
26	LA	2217	G	C3'-O3'	5.38	1.50	1.42
27	LD	143	VAL	CA-CB	-5.38	1.47	1.54
27	LD	191	LEU	N-CA	-5.38	1.39	1.46
26	LA	2726	A	C2'-C1'	-5.38	1.45	1.53
2	SA	222	C	O3'-P	-5.38	1.53	1.61
2	SA	1199	U	O4'-C1'	5.38	1.49	1.41
8	SH	6	ILE	CA-C	-5.38	1.46	1.52
20	SD	198	LEU	N-CA	-5.38	1.39	1.46
26	LA	996	A	C5'-C4'	5.38	1.59	1.51
26	LA	1328	A	C2'-C1'	5.38	1.61	1.53
26	LA	2788	C	C3'-C2'	-5.38	1.44	1.52
45	LG	151	LEU	N-CA	-5.38	1.39	1.46
17	SQ	5	ARG	CD-NE	5.38	1.53	1.46
26	LA	624	C	O4'-C1'	-5.38	1.33	1.41
51	LI	27	ARG	C-O	-5.38	1.17	1.24
2	SA	1504	G	C3'-C2'	5.37	1.61	1.52
18	SB	185	ILE	CA-C	-5.37	1.45	1.52
26	LA	1643	G	C4'-O4'	-5.37	1.37	1.45
2	SA	619	U	C2'-C1'	-5.37	1.45	1.53
2	SA	1066	C	C3'-C2'	5.37	1.60	1.52
17	SQ	6	THR	CA-C	-5.37	1.46	1.52
26	LA	475	C	C1'-N1	-5.37	1.40	1.48
26	LA	1411	U	O5'-C5'	5.37	1.50	1.42
26	LA	2486	C	C2'-C1'	-5.37	1.45	1.53
31	LX	38	LEU	N-CA	-5.37	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2647	U	C2'-C1'	-5.37	1.45	1.53
2	SA	67	C	C2'-O2'	-5.37	1.34	1.42
2	SA	131	A	C4'-O4'	-5.37	1.37	1.45
2	SA	946	A	C3'-O3'	5.37	1.50	1.42
9	SI	33	SER	N-CA	-5.37	1.39	1.46
21	SE	75	LEU	C-O	5.37	1.30	1.23
26	LA	857	G	O3'-P	-5.37	1.53	1.61
26	LA	1727	C	O5'-C5'	5.37	1.50	1.42
26	LA	1926	U	C5'-C4'	5.37	1.59	1.51
26	LA	2278	A	C1'-N9	-5.37	1.39	1.48
26	LA	2522	U	C4'-O4'	-5.37	1.37	1.45
29	LV	92	ASN	CA-C	-5.37	1.45	1.52
2	SA	993	G	O5'-C5'	5.37	1.50	1.42
2	SA	1502	A	C3'-O3'	5.37	1.51	1.43
6	SU	58	LYS	CA-CB	5.37	1.62	1.53
26	LA	44	A	C5'-C4'	5.37	1.59	1.51
26	LA	1164	C	C3'-O3'	5.37	1.50	1.42
26	LA	1792	G	O4'-C1'	-5.37	1.33	1.41
31	LX	84	PRO	N-CA	-5.37	1.40	1.47
56	LR	68	GLY	N-CA	5.37	1.53	1.45
2	SA	908	A	C4'-C3'	-5.36	1.44	1.52
2	SA	1423	G	C2'-O2'	-5.36	1.34	1.42
24	S3	115	VAL	CA-CB	-5.36	1.47	1.54
24	S3	676	ARG	CD-NE	5.36	1.53	1.46
26	LA	1490	A	O5'-C5'	5.36	1.50	1.42
26	LA	2306	C	C3'-O3'	5.36	1.50	1.42
37	LC	47	ASN	C-N	5.36	1.40	1.33
38	LE	111	GLY	N-CA	5.36	1.50	1.45
26	LA	1384	A	C1'-N9	-5.36	1.40	1.48
26	LA	1829	A	C1'-N9	-5.36	1.40	1.48
26	LA	1910	G	C2'-C1'	-5.36	1.45	1.53
26	LA	1977	A	O5'-C5'	5.36	1.50	1.42
2	SA	113	G	C3'-C2'	-5.36	1.44	1.52
2	SA	199	A	C1'-N9	-5.36	1.40	1.48
2	SA	1020	G	C2'-O2'	5.36	1.50	1.42
20	SD	49	ASP	CA-C	-5.36	1.45	1.52
26	LA	921	C	C5'-C4'	5.36	1.59	1.51
26	LA	2843	G	C4'-O4'	5.36	1.53	1.45
44	LF	133	LEU	CA-C	-5.36	1.45	1.52
47	LJ	122	ILE	CA-CB	5.36	1.61	1.54
26	LA	662	G	C3'-O3'	5.36	1.50	1.42
36	L2	44	PHE	CA-CB	5.36	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
47	LJ	160	ALA	CA-C	5.36	1.59	1.52
2	SA	319	G	O3'-P	-5.36	1.53	1.61
21	SE	77	ASN	CA-C	-5.36	1.48	1.53
26	LA	23	G	O3'-P	-5.36	1.53	1.61
26	LA	195	A	C3'-C2'	-5.36	1.44	1.52
26	LA	628	G	C3'-C2'	-5.36	1.44	1.52
26	LA	1778	U	C5'-C4'	5.36	1.59	1.51
2	SA	1268	G	O5'-C5'	5.36	1.50	1.42
5	ST	24	ARG	N-CA	-5.36	1.40	1.46
10	SJ	80	THR	CA-C	-5.36	1.46	1.52
24	S3	467	ILE	CA-CB	-5.36	1.46	1.54
26	LA	1	G	O5'-C5'	5.36	1.50	1.42
26	LA	1029	A	C2'-C1'	-5.36	1.45	1.53
26	LA	1037	G	O3'-P	-5.36	1.53	1.61
28	LU	74	ILE	CA-CB	-5.36	1.47	1.54
37	LC	231	ALA	N-CA	-5.36	1.39	1.46
47	LJ	136	ALA	CA-C	5.36	1.59	1.52
50	LL	139	VAL	N-CA	5.36	1.52	1.46
26	LA	663	G	C5'-C4'	5.35	1.59	1.51
2	SA	1287	A	C4'-O4'	5.35	1.53	1.45
3	S1	58	C	O5'-C5'	5.35	1.50	1.42
13	SM	59	VAL	C-N	5.35	1.41	1.33
26	LA	693	A	O3'-P	-5.35	1.53	1.61
26	LA	1065	U	C5'-C4'	5.35	1.59	1.51
26	LA	1568	G	C3'-O3'	5.35	1.50	1.42
26	LA	2875	C	O4'-C1'	5.35	1.49	1.41
34	L0	53	VAL	N-CA	-5.35	1.40	1.46
37	LC	105	LYS	C-N	5.35	1.41	1.33
2	SA	403	C	O3'-P	-5.35	1.53	1.61
2	SA	475	C	C2'-C1'	-5.35	1.45	1.53
26	LA	1234	U	C5'-C4'	5.35	1.59	1.51
26	LA	2680	U	O3'-P	-5.35	1.53	1.61
13	SM	11	HIS	CG-CD2	5.35	1.41	1.35
26	LA	1078	U	O5'-C5'	5.35	1.50	1.42
26	LA	2679	A	O4'-C1'	-5.35	1.33	1.41
2	SA	302	G	C1'-N9	-5.35	1.40	1.48
2	SA	624	C	C1'-N1	-5.35	1.40	1.48
26	LA	1115	G	O3'-P	-5.35	1.53	1.61
26	LA	1133	A	O4'-C1'	-5.35	1.33	1.42
26	LA	1958	C	O3'-P	-5.35	1.53	1.61
7	SG	68	VAL	CA-CB	-5.35	1.46	1.54
24	S3	5	PRO	CA-C	-5.35	1.47	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	854	C	C2'-C1'	-5.35	1.45	1.53
26	LA	1612	C	C2'-C1'	-5.35	1.45	1.53
26	LA	1951	U	P-O5'	-5.35	1.51	1.59
26	LA	2068	U	C2'-C1'	-5.35	1.45	1.53
33	LZ	66	VAL	CA-C	-5.35	1.46	1.52
2	SA	546	A	O3'-P	-5.34	1.53	1.61
12	SL	110	LYS	CA-C	-5.34	1.45	1.52
19	SC	166	TRP	NE1-CE2	-5.34	1.31	1.37
26	LA	116	C	C1'-N1	-5.34	1.40	1.48
26	LA	1176	U	C3'-O3'	5.34	1.50	1.42
26	LA	1703	G	C3'-O3'	5.34	1.50	1.42
26	LA	2683	C	O4'-C1'	-5.34	1.33	1.41
29	LV	57	VAL	CA-CB	5.34	1.61	1.54
47	LJ	85	MET	N-CA	-5.34	1.39	1.46
50	LL	27	ARG	CD-NE	5.34	1.53	1.46
53	LP	106	ASP	CA-C	-5.34	1.45	1.52
2	SA	1353	G	O3'-P	-5.34	1.53	1.61
25	LB	40	U	C2'-C1'	-5.34	1.45	1.53
26	LA	1916	A	C3'-C2'	5.34	1.60	1.52
2	SA	1161	C	C3'-C2'	-5.34	1.44	1.52
20	SD	129	VAL	CA-C	-5.34	1.46	1.52
26	LA	1465	G	C5'-C4'	5.34	1.59	1.51
47	LJ	13	GLU	N-CA	5.34	1.52	1.46
2	SA	709	U	C1'-N1	-5.34	1.40	1.48
9	SI	35	GLU	C-O	-5.34	1.17	1.24
25	LB	52	A	P-O5'	-5.34	1.51	1.59
26	LA	2759	G	O4'-C1'	-5.34	1.33	1.41
2	SA	1411	C	C3'-O3'	5.34	1.50	1.42
26	LA	668	A	O4'-C1'	-5.34	1.33	1.41
26	LA	750	A	O5'-C5'	5.34	1.50	1.42
26	LA	2897	U	C3'-C2'	-5.34	1.44	1.52
2	SA	1055	A	C4'-C3'	5.34	1.60	1.52
2	SA	1466	C	O3'-P	-5.34	1.53	1.61
3	S1	17	U	C3'-O3'	5.34	1.50	1.42
26	LA	571	U	C5'-C4'	5.34	1.59	1.51
26	LA	923	G	C4'-O4'	5.34	1.53	1.45
26	LA	2430	A	C2'-O2'	-5.34	1.34	1.42
49	LK	91	LYS	CA-C	-5.34	1.46	1.52
2	SA	679	C	O3'-P	-5.33	1.53	1.61
26	LA	49	A	O4'-C1'	-5.33	1.33	1.42
26	LA	974	G	O3'-P	-5.33	1.53	1.61
26	LA	2796	U	C3'-C2'	5.33	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
47	LJ	159	ASP	N-CA	-5.33	1.39	1.46
50	LL	25	LEU	CA-C	-5.33	1.45	1.52
52	LO	91	TYR	N-CA	-5.33	1.39	1.46
2	SA	269	C	C2'-C1'	-5.33	1.45	1.53
2	SA	850	U	C1'-N1	5.33	1.56	1.48
2	SA	920	U	C4'-C3'	-5.33	1.44	1.52
2	SA	1113	C	P-O5'	-5.33	1.51	1.59
2	SA	1501	C	C2'-C1'	-5.33	1.45	1.53
21	SE	71	ILE	CA-C	-5.33	1.46	1.52
24	S3	134	VAL	CA-CB	-5.33	1.48	1.54
26	LA	1512	C	C5'-C4'	5.33	1.59	1.51
26	LA	2588	G	C2'-C1'	-5.33	1.45	1.53
2	SA	1515	G	O4'-C1'	-5.33	1.33	1.41
25	LB	113	C	O5'-C5'	5.33	1.50	1.42
26	LA	10	A	C4'-C3'	5.33	1.60	1.52
26	LA	171	U	C5'-C4'	5.33	1.59	1.51
26	LA	256	A	O3'-P	-5.33	1.53	1.61
26	LA	858	G	P-O5'	-5.33	1.51	1.59
26	LA	1908	C	C5'-C4'	5.33	1.59	1.51
26	LA	1979	U	O4'-C1'	-5.33	1.33	1.41
26	LA	16	C	C3'-O3'	5.33	1.50	1.42
16	SP	34	GLU	CA-C	-5.33	1.45	1.52
24	S3	279	ASP	CA-CB	5.33	1.61	1.53
25	LB	99	A	C3'-C2'	-5.33	1.44	1.52
26	LA	206	U	P-O5'	-5.33	1.51	1.59
26	LA	1664	A	O5'-C5'	5.33	1.50	1.42
26	LA	2548	U	O4'-C1'	-5.33	1.33	1.41
28	LU	87	PRO	C-O	-5.33	1.17	1.23
30	LW	82	VAL	CA-CB	-5.33	1.48	1.54
32	LY	78	PHE	C-N	-5.33	1.27	1.33
2	SA	119	A	C5'-C4'	5.33	1.59	1.51
22	SF	55	HIS	CA-C	-5.33	1.45	1.52
26	LA	1827	U	C2-N3	-5.33	1.27	1.37
22	SF	2	ARG	C-N	-5.33	1.26	1.33
24	S3	294	ILE	CB-CG1	5.33	1.64	1.53
25	LB	62	C	O3'-P	-5.33	1.53	1.61
26	LA	743	A	O3'-P	-5.33	1.53	1.61
26	LA	1611	C	C5'-C4'	5.33	1.59	1.51
26	LA	2511	U	C3'-O3'	5.33	1.50	1.42
26	LA	2554	U	C5'-C4'	5.33	1.59	1.51
2	SA	267	C	O5'-C5'	5.32	1.50	1.42
2	SA	1120	C	C4'-O4'	-5.32	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	1206	G	O4'-C1'	-5.32	1.33	1.41
2	SA	1363	A	C2'-C1'	-5.32	1.45	1.53
3	S1	48	C	C1'-N1	5.32	1.55	1.47
18	SB	93	HIS	CG-CD2	-5.32	1.29	1.35
26	LA	55	G	O3'-P	-5.32	1.53	1.61
26	LA	1672	A	O4'-C1'	-5.32	1.33	1.41
26	LA	2082	A	O5'-C5'	5.32	1.50	1.42
26	LA	2281	A	C5'-C4'	5.32	1.59	1.51
26	LA	2670	A	P-O5'	5.32	1.67	1.59
26	LA	2782	G	C1'-N9	-5.32	1.40	1.48
28	LU	29	VAL	CA-C	-5.32	1.46	1.52
38	LE	77	ARG	CA-CB	-5.32	1.44	1.53
42	L6	6	VAL	CA-C	5.32	1.58	1.53
26	LA	1158	C	O4'-C1'	-5.32	1.33	1.41
45	LG	62	GLN	C-N	-5.32	1.26	1.32
53	LP	16	HIS	ND1-CE1	5.32	1.37	1.32
4	S2	65	G	C4'-O4'	5.32	1.53	1.45
22	SF	88	MET	CA-C	-5.32	1.46	1.52
24	S3	17	HIS	ND1-CE1	5.32	1.37	1.32
26	LA	379	G	N9-C4	-5.32	1.27	1.38
26	LA	1013	C	C5'-C4'	5.32	1.59	1.51
26	LA	1053	C	C1'-N1	-5.32	1.40	1.48
26	LA	1839	G	N9-C4	-5.32	1.27	1.38
26	LA	1856	U	O3'-P	-5.32	1.53	1.61
26	LA	2759	G	C1'-N9	-5.32	1.40	1.48
38	LE	18	ASP	N-CA	5.32	1.53	1.46
38	LE	141	ARG	NE-CZ	5.32	1.39	1.33
47	LJ	87	HIS	CA-C	5.32	1.59	1.53
12	SL	56	LEU	CA-C	-5.32	1.45	1.53
26	LA	2542	A	P-O5'	-5.32	1.51	1.59
2	SA	1217	C	C5'-C4'	5.32	1.59	1.51
9	SI	75	ALA	N-CA	-5.32	1.40	1.46
26	LA	376	G	N9-C4	-5.32	1.27	1.38
26	LA	2558	C	P-O5'	-5.32	1.51	1.59
32	LY	31	LEU	N-CA	-5.32	1.39	1.45
45	LG	56	LEU	CA-CB	5.32	1.61	1.53
51	LI	115	VAL	N-CA	5.32	1.52	1.46
2	SA	770	C	O3'-P	-5.32	1.53	1.61
21	SE	4	GLU	C-N	5.32	1.40	1.33
26	LA	781	A	C3'-C2'	-5.32	1.44	1.52
26	LA	1790	C	C3'-O3'	5.32	1.50	1.42
26	LA	2399	G	C5'-C4'	5.32	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	L1	17	PRO	N-CA	-5.32	1.40	1.47
51	LI	79	THR	CA-C	-5.32	1.46	1.52
1	SS	69	LYS	CA-C	-5.31	1.46	1.52
2	SA	898	G	O4'-C1'	-5.31	1.33	1.41
23	SR	73	HIS	CD2-NE2	5.31	1.43	1.37
24	S3	338	TYR	CZ-OH	5.31	1.49	1.38
26	LA	2492	U	O4'-C1'	-5.31	1.33	1.42
2	SA	343	U	O4'-C1'	-5.31	1.33	1.41
13	SM	102	LYS	CA-C	-5.31	1.47	1.53
25	LB	2	G	C2'-O2'	-5.31	1.34	1.42
26	LA	1172	C	O3'-P	-5.31	1.53	1.61
27	LD	120	ASP	CA-CB	5.31	1.61	1.53
47	LJ	53	VAL	C-O	-5.31	1.18	1.24
9	SI	126	PHE	CA-C	-5.31	1.46	1.52
26	LA	701	G	C4'-C3'	5.31	1.60	1.52
36	L2	39	LYS	CA-C	5.31	1.59	1.52
52	LO	9	PHE	N-CA	-5.31	1.38	1.45
2	SA	1125	U	C4'-O4'	5.31	1.53	1.45
3	S1	36	U	C5'-C4'	5.31	1.59	1.51
18	SB	78	ALA	C-O	-5.31	1.17	1.24
26	LA	171	U	C4'-C3'	-5.31	1.44	1.52
26	LA	2267	A	O3'-P	-5.31	1.53	1.61
30	LW	26	ASN	N-CA	-5.31	1.40	1.46
51	LI	52	ALA	N-CA	-5.31	1.40	1.46
56	LR	13	LYS	CA-C	5.31	1.58	1.52
22	SF	2	ARG	CA-C	5.31	1.59	1.52
24	S3	326	ASP	C-N	-5.31	1.29	1.33
24	S3	503	LYS	CA-CB	5.31	1.62	1.53
26	LA	996	A	C1'-N9	-5.31	1.40	1.48
26	LA	1137	G	C2'-C1'	-5.31	1.45	1.53
26	LA	1773	A	C5'-C4'	5.31	1.59	1.51
38	LE	46	ARG	CD-NE	5.31	1.53	1.46
2	SA	137	U	N1-C2	-5.30	1.27	1.38
2	SA	457	G	O5'-C5'	5.30	1.50	1.42
2	SA	1093	A	C3'-O3'	5.30	1.50	1.42
4	S2	56	U	C1'-N1	5.30	1.56	1.48
6	SU	36	PHE	C-O	-5.30	1.17	1.24
13	SM	84	CYS	CA-C	-5.30	1.46	1.52
26	LA	1527	G	C5'-C4'	5.30	1.59	1.51
26	LA	2405	G	C1'-N9	-5.30	1.40	1.48
26	LA	2413	G	C1'-N9	-5.30	1.40	1.48
53	LP	90	ARG	CA-C	5.30	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	545	C	P-O5'	-5.30	1.51	1.59
26	LA	812	C	P-O5'	-5.30	1.51	1.59
28	LU	52	GLU	CA-CB	5.30	1.61	1.53
26	LA	1192	G	C1'-N9	-5.30	1.40	1.48
26	LA	2357	G	C4'-C3'	5.30	1.60	1.52
26	LA	2380	C	O4'-C1'	5.30	1.49	1.41
54	LM	18	ARG	CA-C	-5.30	1.46	1.52
2	SA	826	C	O3'-P	-5.30	1.53	1.61
18	SB	34	ARG	CA-CB	5.30	1.62	1.53
26	LA	8	C	O3'-P	-5.30	1.53	1.61
26	LA	1321	A	C5'-C4'	5.30	1.59	1.51
26	LA	2121	G	C2'-C1'	-5.30	1.45	1.53
27	LD	84	PRO	N-CD	-5.30	1.40	1.47
31	LX	6	ALA	N-CA	-5.30	1.39	1.45
38	LE	26	VAL	N-CA	-5.30	1.40	1.46
2	SA	1523	G	O3'-P	-5.30	1.53	1.61
9	SI	87	MET	CA-C	-5.30	1.45	1.52
58	LT	18	GLN	CA-C	-5.30	1.46	1.52
11	SK	94	SER	N-CA	-5.30	1.39	1.46
16	SP	70	ARG	CD-NE	5.30	1.53	1.46
26	LA	848	C	C5'-C4'	5.30	1.59	1.51
26	LA	1216	G	O4'-C1'	-5.30	1.33	1.41
46	LH	104	LEU	C-N	-5.30	1.26	1.33
58	LT	66	HIS	CA-C	-5.30	1.46	1.52
7	SG	3	ARG	NE-CZ	5.29	1.38	1.33
18	SB	9	LEU	CA-C	5.29	1.59	1.52
26	LA	798	G	C2'-C1'	-5.29	1.45	1.53
20	SD	116	LEU	C-N	5.29	1.40	1.33
21	SE	85	LYS	C-N	5.29	1.38	1.33
23	SR	16	GLY	CA-C	-5.29	1.44	1.51
26	LA	99	U	O3'-P	-5.29	1.53	1.61
26	LA	695	G	O3'-P	-5.29	1.53	1.61
26	LA	1331	G	O5'-C5'	5.29	1.50	1.42
26	LA	2283	C	C2'-O2'	-5.29	1.34	1.42
26	LA	2427	C	C5'-C4'	5.29	1.59	1.51
28	LU	30	SER	N-CA	-5.29	1.39	1.46
1	SS	90	LYS	CA-CB	5.29	1.60	1.53
2	SA	268	U	C3'-O3'	5.29	1.50	1.42
2	SA	1428	A	C4'-C3'	-5.29	1.44	1.52
4	S2	72	C	C2'-C1'	-5.29	1.45	1.53
10	SJ	52	LEU	CA-C	5.29	1.60	1.53
26	LA	1476	U	O3'-P	-5.29	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	L1	22	THR	CA-C	-5.29	1.46	1.52
39	L3	4	GLN	N-CA	-5.29	1.39	1.46
44	LF	50	ALA	N-CA	-5.29	1.39	1.46
41	L5	34	ARG	CD-NE	5.29	1.53	1.46
45	LG	111	ARG	N-CA	-5.29	1.40	1.46
57	LS	38	VAL	CA-C	-5.29	1.46	1.52
2	SA	1091	U	C3'-C2'	-5.29	1.44	1.52
2	SA	1304	G	N9-C4	5.29	1.48	1.38
26	LA	288	U	O4'-C1'	5.29	1.49	1.41
26	LA	799	G	C1'-N9	-5.29	1.40	1.48
26	LA	1092	C	C2'-C1'	-5.29	1.45	1.53
26	LA	2006	C	O3'-P	-5.29	1.53	1.61
26	LA	2165	C	P-O5'	-5.29	1.51	1.59
27	LD	45	ASN	CA-C	5.29	1.59	1.52
28	LU	47	VAL	C-N	-5.29	1.27	1.33
47	LJ	35	ASP	N-CA	-5.29	1.40	1.46
52	LO	130	PHE	CA-C	-5.29	1.45	1.52
2	SA	577	G	C2'-C1'	-5.29	1.45	1.53
2	SA	721	G	C2'-C1'	-5.29	1.45	1.53
2	SA	1333	A	O4'-C1'	5.29	1.49	1.41
7	SG	48	THR	CA-CB	5.29	1.61	1.53
24	S3	39	ILE	C-O	-5.29	1.17	1.24
24	S3	112	TYR	N-CA	-5.29	1.39	1.46
26	LA	1281	G	C5-C4	-5.29	1.27	1.38
26	LA	2579	C	C2'-C1'	-5.29	1.45	1.53
17	SQ	22	VAL	CA-C	-5.29	1.45	1.52
26	LA	2131	U	C1'-N1	5.29	1.56	1.48
26	LA	2330	G	C4'-O4'	-5.29	1.37	1.45
27	LD	228	ASP	CA-CB	-5.29	1.44	1.53
2	SA	1081	A	C3'-C2'	-5.28	1.44	1.52
2	SA	1113	C	O3'-P	-5.28	1.53	1.61
9	SI	66	VAL	CA-C	-5.28	1.46	1.52
26	LA	279	A	C3'-O3'	5.28	1.50	1.42
46	LH	125	PRO	C-O	-5.28	1.17	1.24
2	SA	504	C	P-O5'	5.28	1.67	1.59
2	SA	1206	G	C2'-C1'	-5.28	1.45	1.53
2	SA	1319	A	P-O5'	-5.28	1.51	1.59
26	LA	1084	A	P-O5'	-5.28	1.51	1.59
26	LA	2469	A	C4'-C3'	-5.28	1.44	1.52
26	LA	2567	G	C5'-C4'	5.28	1.59	1.51
51	LI	73	ASN	C-N	5.28	1.41	1.33
16	SP	47	GLU	N-CA	-5.28	1.39	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	SC	106	ARG	CD-NE	5.28	1.53	1.46
26	LA	773	U	P-O5'	-5.28	1.51	1.59
26	LA	1430	G	C3'-O3'	5.28	1.50	1.42
26	LA	1470	A	C2'-C1'	-5.28	1.45	1.53
26	LA	2768	U	C2'-O2'	-5.28	1.34	1.42
26	LA	2784	U	O3'-P	-5.28	1.53	1.61
28	LU	76	VAL	C-N	-5.28	1.26	1.33
52	LO	125	PRO	N-CD	-5.28	1.40	1.47
26	LA	1265	A	C2'-C1'	5.28	1.60	1.53
51	LI	55	GLU	CA-C	5.28	1.59	1.52
2	SA	627	G	C3'-C2'	-5.28	1.44	1.52
2	SA	1310	G	C3'-O3'	5.28	1.50	1.42
2	SA	1349	A	P-O5'	-5.28	1.51	1.59
3	S1	27	A	C1'-N9	5.28	1.54	1.47
10	SJ	45	ARG	CA-C	-5.28	1.45	1.52
26	LA	1127	A	C1'-N9	-5.28	1.40	1.48
26	LA	1677	A	C2'-C1'	-5.28	1.45	1.53
45	LG	155	ILE	CA-C	-5.28	1.46	1.52
2	SA	19	A	C4'-C3'	-5.28	1.44	1.52
2	SA	148	G	O5'-C5'	5.28	1.50	1.42
2	SA	339	C	O4'-C1'	5.28	1.49	1.41
2	SA	563	A	C1'-N9	-5.28	1.40	1.48
20	SD	97	LEU	CA-C	-5.28	1.45	1.52
26	LA	1138	G	C1'-N9	-5.28	1.40	1.48
26	LA	1994	C	O5'-C5'	5.28	1.50	1.42
26	LA	2725	A	O5'-C5'	5.28	1.50	1.42
29	LV	57	VAL	C-N	-5.28	1.26	1.33
2	SA	1403	C	C3'-O3'	5.27	1.50	1.42
8	SH	109	VAL	CA-CB	-5.27	1.47	1.54
26	LA	924	G	C4'-C3'	-5.27	1.44	1.52
26	LA	1581	G	C4'-C3'	5.27	1.60	1.52
19	SC	144	GLY	CA-C	5.27	1.59	1.51
24	S3	398	ASP	CA-CB	5.27	1.61	1.53
26	LA	494	G	O4'-C1'	5.27	1.49	1.41
26	LA	865	C	C3'-C2'	-5.27	1.45	1.52
26	LA	972	A	P-O5'	-5.27	1.51	1.59
26	LA	1134	A	P-O5'	-5.27	1.51	1.59
26	LA	1303	G	O3'-P	-5.27	1.53	1.61
26	LA	1372	U	C2'-C1'	-5.27	1.45	1.53
26	LA	2284	A	C2'-C1'	-5.27	1.45	1.53
46	LH	44	HIS	C-O	-5.27	1.17	1.23
47	LJ	26	VAL	CA-C	-5.27	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	329	A	C4'-C3'	5.27	1.61	1.53
2	SA	484	G	C2'-C1'	-5.27	1.45	1.53
2	SA	544	G	C5'-C4'	5.27	1.59	1.51
4	S2	34	U	C5'-C4'	5.27	1.59	1.51
41	L5	11	LYS	C-N	5.27	1.40	1.33
52	LO	14	LYS	CA-C	-5.27	1.45	1.52
2	SA	484	G	P-O5'	-5.27	1.51	1.59
6	SU	13	VAL	CA-C	5.27	1.59	1.52
7	SG	37	THR	CA-C	-5.27	1.46	1.52
26	LA	24	G	O5'-C5'	5.27	1.50	1.42
26	LA	55	G	C3'-O3'	5.27	1.50	1.42
26	LA	119	A	C2'-C1'	-5.27	1.45	1.53
26	LA	152	A	C5'-C4'	5.27	1.59	1.51
26	LA	162	U	C2-N3	-5.27	1.27	1.37
26	LA	1936	A	C3'-O3'	5.27	1.51	1.43
34	L0	46	VAL	CA-C	5.27	1.59	1.52
38	LE	14	ILE	N-CA	5.27	1.52	1.46
2	SA	497	G	O3'-P	-5.27	1.53	1.61
2	SA	867	G	C4'-C3'	-5.27	1.44	1.52
19	SC	200	TRP	CA-C	-5.27	1.46	1.52
26	LA	1103	A	C2'-O2'	5.27	1.50	1.42
28	LU	9	HIS	CD2-NE2	5.27	1.43	1.37
31	LX	20	LEU	C-O	-5.27	1.18	1.24
46	LH	124	CYS	CA-C	5.27	1.57	1.52
2	SA	1498	U	C4'-O4'	5.27	1.53	1.45
2	SA	1512	U	C4'-C3'	-5.27	1.44	1.52
19	SC	43	THR	CA-C	-5.27	1.45	1.52
26	LA	2245	U	O3'-P	-5.27	1.53	1.61
32	LY	9	THR	CA-C	-5.27	1.46	1.52
2	SA	266	G	C4'-O4'	-5.26	1.37	1.45
26	LA	384	A	O3'-P	-5.26	1.53	1.61
26	LA	872	U	C3'-O3'	5.26	1.50	1.42
26	LA	1287	A	N7-C5	-5.26	1.28	1.39
26	LA	2281	A	C3'-O3'	5.26	1.50	1.42
26	LA	2290	G	C5'-C4'	5.26	1.59	1.51
50	LL	121	LYS	CA-C	-5.26	1.45	1.52
2	SA	430	A	C1'-N9	-5.26	1.40	1.48
2	SA	1209	C	C4'-C3'	5.26	1.60	1.52
20	SD	48	SER	C-N	-5.26	1.26	1.34
25	LB	3	C	C3'-O3'	5.26	1.50	1.42
26	LA	49	A	C4'-C3'	5.26	1.61	1.53
26	LA	50	U	C3'-O3'	5.26	1.51	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	85	G	C4'-O4'	-5.26	1.37	1.45
26	LA	1121	C	P-O5'	5.26	1.67	1.59
2	SA	162	A	C1'-N9	-5.26	1.40	1.48
2	SA	1312	G	C2-N2	-5.26	1.24	1.34
26	LA	1304	A	C1'-N9	-5.26	1.40	1.48
26	LA	2080	A	C5'-C4'	5.26	1.59	1.51
26	LA	2300	C	P-O5'	-5.26	1.51	1.59
26	LA	2732	G	P-O5'	-5.26	1.51	1.59
34	L0	47	ARG	C-N	5.26	1.41	1.33
2	SA	4	U	C5'-C4'	5.26	1.59	1.51
2	SA	55	A	O4'-C1'	5.26	1.49	1.41
2	SA	1175	G	C1'-N9	-5.26	1.40	1.48
18	SB	100	LEU	N-CA	-5.26	1.40	1.46
18	SB	153	MET	CA-C	5.26	1.59	1.52
26	LA	620	G	C2'-C1'	-5.26	1.45	1.53
26	LA	1578	U	O4'-C1'	-5.26	1.33	1.41
26	LA	1939	U	O4'-C1'	-5.26	1.34	1.42
48	LN	111	ILE	CA-C	-5.26	1.46	1.52
50	LL	34	ARG	CA-C	-5.26	1.46	1.52
2	SA	681	A	C3'-C2'	-5.26	1.44	1.52
26	LA	1492	G	O3'-P	-5.26	1.53	1.61
26	LA	2017	U	C4'-O4'	-5.26	1.37	1.45
44	LF	69	ARG	CD-NE	5.26	1.53	1.46
2	SA	989	U	O3'-P	-5.26	1.53	1.61
2	SA	1156	G	O5'-C5'	5.26	1.50	1.42
25	LB	107	G	C2'-O2'	-5.26	1.34	1.42
26	LA	1652	A	C2'-O2'	-5.26	1.34	1.42
26	LA	2038	G	O3'-P	-5.26	1.53	1.61
26	LA	2225	A	C5'-C4'	5.26	1.59	1.51
26	LA	2703	C	C1'-N1	5.26	1.56	1.48
27	LD	1	ALA	C-N	5.26	1.41	1.33
26	LA	372	G	C2'-C1'	-5.25	1.45	1.53
2	SA	636	U	C2'-O2'	5.25	1.50	1.42
2	SA	975	A	C5'-C4'	5.25	1.59	1.51
26	LA	2047	C	O5'-C5'	5.25	1.50	1.42
26	LA	2272	U	P-O5'	-5.25	1.51	1.59
26	LA	2631	G	O5'-C5'	5.25	1.50	1.42
41	L5	10	LEU	CA-C	-5.25	1.46	1.52
48	LN	114	GLY	C-O	-5.25	1.20	1.24
48	LN	139	GLY	N-CA	5.25	1.52	1.45
2	SA	685	G	O4'-C1'	5.25	1.49	1.41
7	SG	91	ARG	CD-NE	5.25	1.53	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	SL	120	ARG	CD-NE	5.25	1.53	1.46
19	SC	216	PRO	N-CD	-5.25	1.40	1.47
26	LA	2874	C	O3'-P	-5.25	1.53	1.61
46	LH	152	ARG	CD-NE	5.25	1.53	1.46
47	LJ	67	PRO	CA-C	5.25	1.58	1.52
2	SA	157	U	O5'-C5'	5.25	1.50	1.42
2	SA	332	G	O3'-P	-5.25	1.53	1.61
2	SA	473	U	O4'-C1'	5.25	1.49	1.41
2	SA	1044	A	O5'-C5'	5.25	1.50	1.42
2	SA	1226	C	O5'-C5'	5.25	1.50	1.42
4	S2	32	G	O5'-C5'	5.25	1.50	1.42
25	LB	29	A	C1'-N9	-5.25	1.40	1.48
26	LA	83	A	P-O5'	-5.25	1.51	1.59
26	LA	1873	G	C4'-C3'	5.25	1.60	1.52
27	LD	156	SER	CA-C	-5.25	1.46	1.52
56	LR	24	THR	N-CA	5.25	1.52	1.46
2	SA	1221	G	O5'-C5'	5.25	1.50	1.42
4	S2	74	A	C3'-C2'	5.25	1.60	1.52
7	SG	3	ARG	CD-NE	5.25	1.53	1.46
7	SG	11	ILE	CA-CB	-5.25	1.49	1.54
26	LA	8	C	C3'-O3'	5.25	1.50	1.42
26	LA	415	A	O3'-P	-5.25	1.53	1.61
26	LA	1643	G	O3'-P	-5.25	1.53	1.61
26	LA	2854	G	O5'-C5'	5.25	1.50	1.42
51	LI	45	GLU	C-N	5.25	1.40	1.33
51	LI	98	ASP	C-N	5.25	1.39	1.34
57	LS	3	VAL	CA-CB	-5.25	1.46	1.54
2	SA	123	U	O5'-C5'	5.25	1.50	1.42
2	SA	759	A	C2'-O2'	-5.25	1.34	1.42
2	SA	939	G	C3'-O3'	5.25	1.50	1.42
4	S2	32	G	O4'-C1'	-5.25	1.33	1.41
26	LA	228	C	C2'-C1'	-5.25	1.45	1.53
26	LA	919	U	C4'-O4'	-5.25	1.37	1.45
26	LA	2201	G	C4'-C3'	5.25	1.60	1.52
2	SA	525	C	C2'-C1'	-5.25	1.45	1.53
26	LA	601	C	C3'-O3'	5.25	1.50	1.42
26	LA	1928	A	C1'-N9	-5.25	1.40	1.48
26	LA	1965	C	C1'-N1	5.25	1.56	1.48
26	LA	2154	A	C5'-C4'	5.25	1.59	1.51
2	SA	16	A	C2'-C1'	-5.24	1.45	1.53
2	SA	561	U	O3'-P	-5.24	1.53	1.61
2	SA	841	C	C2'-C1'	-5.24	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	1118	U	C4'-C3'	-5.24	1.44	1.52
2	SA	1221	G	C2'-C1'	-5.24	1.45	1.53
2	SA	303	A	C3'-O3'	5.24	1.50	1.42
2	SA	609	A	C4'-O4'	5.24	1.53	1.45
26	LA	1836	C	C4'-O4'	-5.24	1.37	1.45
2	SA	1023	U	C3'-C2'	-5.24	1.44	1.52
17	SQ	58	VAL	CA-C	-5.24	1.46	1.52
26	LA	2723	C	C2'-C1'	-5.24	1.45	1.53
53	LP	50	PRO	N-CA	-5.24	1.40	1.47
55	LQ	81	ARG	CD-NE	5.24	1.53	1.46
2	SA	486	U	C4'-O4'	5.24	1.53	1.45
2	SA	1041	G	C4'-C3'	5.24	1.60	1.52
26	LA	465	G	C5'-C4'	5.24	1.59	1.51
26	LA	1772	A	C1'-N9	-5.24	1.40	1.48
26	LA	2160	C	C4'-O4'	5.24	1.53	1.45
26	LA	2167	U	C3'-O3'	5.24	1.50	1.42
38	LE	176	ASP	C-N	5.24	1.39	1.33
26	LA	1703	G	C2'-C1'	-5.24	1.45	1.53
26	LA	2224	G	O4'-C1'	-5.24	1.33	1.41
2	SA	1007	U	C4'-C3'	-5.24	1.44	1.52
2	SA	1264	U	C4'-C3'	-5.24	1.44	1.52
3	S1	26	U	C1'-N1	-5.24	1.40	1.48
26	LA	796	C	O3'-P	-5.24	1.53	1.61
26	LA	871	U	C4'-O4'	5.24	1.53	1.45
26	LA	1305	C	C4'-C3'	-5.24	1.44	1.52
26	LA	2222	C	O3'-P	-5.24	1.53	1.61
2	SA	447	G	C5'-C4'	5.23	1.59	1.51
3	S1	47	C	C3'-O3'	5.23	1.51	1.43
26	LA	717	C	P-O5'	5.23	1.67	1.59
26	LA	2117	A	C4'-C3'	5.23	1.60	1.52
56	LR	89	GLY	C-N	5.23	1.40	1.33
2	SA	38	G	C5'-C4'	5.23	1.59	1.51
17	SQ	54	ILE	C-N	5.23	1.41	1.33
23	SR	44	THR	CA-C	5.23	1.59	1.52
24	S3	297	ILE	CB-CG1	5.23	1.64	1.53
25	LB	63	C	C2'-C1'	-5.23	1.45	1.53
26	LA	1217	U	C4'-O4'	-5.23	1.37	1.45
26	LA	2159	G	C5'-C4'	5.23	1.59	1.51
26	LA	2187	U	O5'-C5'	5.23	1.50	1.42
2	SA	127	G	C5'-C4'	5.23	1.59	1.51
2	SA	926	G	C4'-O4'	5.23	1.53	1.45
10	SJ	47	GLU	CA-CB	5.23	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	SL	95	HIS	CD2-NE2	5.23	1.43	1.37
19	SC	142	ARG	C-O	-5.23	1.17	1.24
22	SF	55	HIS	ND1-CE1	5.23	1.37	1.32
24	S3	468	ILE	CA-CB	-5.23	1.48	1.54
24	S3	615	ILE	N-CA	-5.23	1.40	1.46
26	LA	1517	G	C2'-C1'	-5.23	1.45	1.53
26	LA	1978	A	C1'-N9	-5.23	1.40	1.48
37	LC	64	VAL	C-O	-5.23	1.17	1.24
44	LF	176	ASP	CA-CB	5.23	1.60	1.53
51	LI	52	ALA	C-N	5.23	1.40	1.33
2	SA	387	U	C4'-C3'	5.23	1.60	1.52
2	SA	421	U	O5'-C5'	5.23	1.50	1.42
26	LA	19	A	O3'-P	-5.23	1.53	1.61
26	LA	2827	C	P-O5'	-5.23	1.51	1.59
30	LW	34	ILE	N-CA	-5.23	1.39	1.46
2	SA	1072	G	C1'-N9	-5.23	1.40	1.48
2	SA	1143	G	C3'-C2'	5.23	1.60	1.52
26	LA	1349	C	O3'-P	-5.23	1.53	1.61
26	LA	1759	A	C5'-C4'	5.23	1.59	1.51
26	LA	1763	G	C2'-C1'	-5.23	1.45	1.53
26	LA	1875	G	C1'-N9	5.23	1.55	1.48
26	LA	2357	G	P-O5'	-5.23	1.51	1.59
2	SA	84	U	C5'-C4'	5.22	1.59	1.51
2	SA	263	A	C5'-C4'	5.22	1.59	1.51
2	SA	1138	G	C3'-O3'	5.22	1.50	1.42
3	S1	49	U	C3'-O3'	5.22	1.50	1.43
18	SB	188	THR	N-CA	-5.22	1.40	1.46
19	SC	19	SER	C-O	-5.22	1.17	1.23
22	SF	3	HIS	CA-C	-5.22	1.46	1.52
25	LB	76	G	O3'-P	-5.22	1.53	1.61
26	LA	461	C	C3'-C2'	-5.22	1.45	1.52
26	LA	1419	A	C4'-O4'	-5.22	1.37	1.45
26	LA	1720	U	P-O5'	-5.22	1.51	1.59
26	LA	2071	A	C3'-C2'	-5.22	1.45	1.52
26	LA	2208	C	C3'-O3'	5.22	1.50	1.42
26	LA	2655	G	C2'-C1'	-5.22	1.45	1.53
50	LL	70	THR	N-CA	-5.22	1.39	1.46
51	LI	123	ARG	N-CA	5.22	1.53	1.45
2	SA	69	G	O5'-C5'	5.22	1.50	1.42
2	SA	558	G	C4'-C3'	-5.22	1.44	1.52
2	SA	1030	U	C5'-C4'	5.22	1.59	1.51
24	S3	369	LYS	CA-C	5.22	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	30	G	O5'-C5'	5.22	1.50	1.42
26	LA	2134	A	O3'-P	-5.22	1.53	1.61
26	LA	2152	G	C2'-C1'	-5.22	1.45	1.53
26	LA	2869	G	C3'-C2'	-5.22	1.45	1.52
47	LJ	116	LEU	CA-C	-5.22	1.46	1.52
51	LI	98	ASP	CA-CB	5.22	1.61	1.53
51	LI	142	VAL	CA-CB	-5.22	1.46	1.54
53	LP	114	GLU	CA-C	-5.22	1.46	1.52
6	SU	44	ARG	CA-C	-5.22	1.46	1.52
14	SN	92	ILE	C-N	-5.22	1.27	1.33
19	SC	189	HIS	CD2-NE2	5.22	1.43	1.37
26	LA	635	C	C2'-O2'	-5.22	1.34	1.42
26	LA	1809	A	O3'-P	-5.22	1.53	1.61
21	SE	13	LYS	N-CA	-5.22	1.39	1.46
26	LA	635	C	C2'-C1'	-5.22	1.45	1.53
26	LA	1240	U	O3'-P	-5.22	1.53	1.61
26	LA	1680	U	C3'-C2'	5.22	1.60	1.52
26	LA	1688	U	C3'-O3'	5.22	1.50	1.42
26	LA	2050	C	C2'-O2'	-5.22	1.34	1.42
37	LC	121	MET	C-N	5.22	1.40	1.33
44	LF	52	VAL	CA-CB	-5.22	1.48	1.54
47	LJ	88	PRO	C-N	5.22	1.41	1.33
26	LA	10	A	N3-C4	-5.22	1.24	1.34
26	LA	532	A	C3'-O3'	-5.22	1.35	1.43
26	LA	1080	A	O3'-P	-5.22	1.53	1.61
2	SA	45	G	O3'-P	-5.22	1.53	1.61
2	SA	640	A	C5'-C4'	5.22	1.59	1.51
2	SA	1403	C	C1'-N1	-5.22	1.40	1.48
8	SH	8	ASP	N-CA	-5.22	1.40	1.46
19	SC	31	ASN	CA-C	-5.22	1.45	1.52
20	SD	75	TYR	N-CA	-5.22	1.40	1.46
26	LA	2538	C	C2'-C1'	-5.22	1.45	1.53
44	LF	45	ALA	CA-C	5.22	1.59	1.52
2	SA	648	A	C2'-C1'	-5.21	1.45	1.53
8	SH	71	VAL	CA-CB	-5.21	1.46	1.53
11	SK	63	GLN	CA-CB	5.21	1.61	1.53
16	SP	67	ILE	CA-C	5.21	1.59	1.52
23	SR	46	THR	N-CA	5.21	1.52	1.46
26	LA	37	C	O3'-P	-5.21	1.53	1.61
26	LA	800	A	C3'-C2'	-5.21	1.45	1.52
26	LA	881	G	C5'-C4'	5.21	1.59	1.51
29	LV	46	ALA	CA-CB	-5.21	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	LY	31	LEU	CA-C	-5.21	1.45	1.53
32	LY	38	ARG	N-CA	-5.21	1.39	1.46
54	LM	40	LYS	CA-C	-5.21	1.46	1.52
2	SA	1210	C	C3'-O3'	5.21	1.50	1.42
24	S3	267	SER	CA-C	-5.21	1.46	1.52
26	LA	389	G	O3'-P	-5.21	1.53	1.61
26	LA	813	U	C3'-C2'	-5.21	1.45	1.52
44	LF	37	ALA	N-CA	-5.21	1.40	1.46
2	SA	27	G	P-O5'	-5.21	1.51	1.59
2	SA	251	G	C3'-C2'	5.21	1.60	1.52
26	LA	336	C	C4'-O4'	5.21	1.53	1.45
26	LA	2553	G	C4'-O4'	-5.21	1.37	1.45
50	LL	83	GLY	CA-C	-5.21	1.44	1.51
2	SA	577	G	O4'-C1'	-5.21	1.33	1.41
2	SA	1100	C	C4'-C3'	5.21	1.60	1.52
3	S1	43	U	C4'-C3'	5.21	1.60	1.52
26	LA	433	C	C1'-N1	5.21	1.56	1.48
26	LA	919	U	C1'-N1	-5.21	1.40	1.48
26	LA	1662	U	O3'-P	-5.21	1.53	1.61
26	LA	1943	U	C5'-C4'	5.21	1.59	1.51
52	LO	74	THR	CA-C	-5.21	1.45	1.52
52	LO	92	TRP	CA-C	-5.21	1.46	1.52
2	SA	121	U	C3'-O3'	5.21	1.50	1.42
2	SA	296	U	O5'-C5'	5.21	1.50	1.42
26	LA	1880	U	C5'-C4'	5.21	1.59	1.51
26	LA	2272	U	O5'-C5'	5.21	1.50	1.42
26	LA	2467	C	O3'-P	-5.21	1.53	1.61
2	SA	425	G	C3'-O3'	5.21	1.50	1.42
26	LA	1373	A	C2'-C1'	-5.21	1.45	1.53
26	LA	1743	G	O5'-C5'	5.21	1.50	1.42
46	LH	111	PRO	C-N	-5.21	1.27	1.33
2	SA	1266	G	C1'-N9	-5.20	1.40	1.48
2	SA	1430	A	C3'-O3'	5.20	1.50	1.42
26	LA	225	C	C5'-C4'	5.20	1.59	1.51
26	LA	262	A	O3'-P	-5.20	1.53	1.61
26	LA	2259	U	C2'-O2'	-5.20	1.34	1.42
46	LH	7	PRO	CA-C	5.20	1.59	1.52
2	SA	39	G	C3'-C2'	5.20	1.60	1.52
2	SA	279	A	C1'-N9	-5.20	1.40	1.48
2	SA	630	A	N7-C5	-5.20	1.28	1.39
2	SA	1333	A	C5'-C4'	5.20	1.59	1.51
26	LA	2335	A	P-O5'	-5.20	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2488	G	P-O5'	-5.20	1.51	1.59
45	LG	91	ARG	CA-C	-5.20	1.45	1.52
2	SA	906	A	O3'-P	-5.20	1.53	1.61
4	S2	21	U	C3'-O3'	5.20	1.50	1.42
15	SO	80	LEU	CA-C	-5.20	1.46	1.52
24	S3	631	ILE	N-CA	-5.20	1.40	1.46
26	LA	105	C	C4'-C3'	-5.20	1.44	1.52
26	LA	1465	G	C1'-N9	-5.20	1.40	1.48
52	LO	59	ARG	C-N	5.20	1.40	1.33
55	LQ	9	ARG	N-CA	-5.20	1.40	1.46
2	SA	924	C	C4'-O4'	5.20	1.53	1.45
2	SA	1027	C	C2'-C1'	-5.20	1.45	1.53
5	ST	54	GLN	CA-CB	-5.20	1.47	1.53
19	SC	92	ASP	CA-C	-5.20	1.46	1.52
26	LA	301	G	O3'-P	-5.20	1.53	1.61
26	LA	794	A	C4'-O4'	-5.20	1.37	1.45
26	LA	1779	U	C4'-O4'	-5.20	1.37	1.45
26	LA	2590	A	P-O5'	-5.20	1.51	1.59
26	LA	2747	G	O3'-P	-5.20	1.53	1.61
33	LZ	9	LYS	C-N	5.20	1.39	1.33
56	LR	6	GLN	CA-C	-5.20	1.46	1.52
2	SA	724	G	C1'-N9	-5.20	1.40	1.48
20	SD	81	LEU	N-CA	-5.20	1.39	1.45
21	SE	143	LEU	CA-C	5.20	1.59	1.52
26	LA	738	G	C2'-O2'	-5.20	1.34	1.42
26	LA	959	A	C2'-C1'	-5.20	1.45	1.53
26	LA	2400	G	C1'-N9	-5.20	1.40	1.48
26	LA	2535	G	C1'-N9	-5.20	1.40	1.48
2	SA	298	A	C1'-N9	-5.20	1.40	1.48
2	SA	1349	A	C1'-N9	-5.20	1.40	1.48
2	SA	1418	A	P-O5'	-5.20	1.51	1.59
11	SK	3	ALA	CA-C	5.20	1.59	1.52
26	LA	298	G	C4'-C3'	5.20	1.60	1.52
26	LA	462	C	P-O5'	-5.20	1.51	1.59
26	LA	514	A	C3'-O3'	5.20	1.50	1.42
26	LA	972	A	C5'-C4'	5.20	1.59	1.51
26	LA	1960	A	C3'-O3'	5.20	1.50	1.42
26	LA	2358	A	O5'-C5'	5.20	1.50	1.42
26	LA	2471	A	O4'-C1'	5.20	1.49	1.42
45	LG	132	ARG	N-CA	5.20	1.52	1.46
2	SA	507	C	P-O5'	-5.19	1.51	1.59
2	SA	653	U	C5'-C4'	5.19	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	766	A	O3'-P	-5.19	1.53	1.61
26	LA	584	C	C2'-C1'	-5.19	1.45	1.53
26	LA	1156	A	C5'-C4'	5.19	1.59	1.51
26	LA	2226	C	C4'-O4'	-5.19	1.37	1.45
26	LA	2616	C	C1'-N1	-5.19	1.40	1.48
26	LA	2731	G	C1'-N9	-5.19	1.40	1.48
2	SA	89	U	P-O5'	-5.19	1.51	1.59
2	SA	772	U	C1'-N1	-5.19	1.40	1.48
2	SA	1204	A	P-O5'	-5.19	1.51	1.59
8	SH	18	ALA	N-CA	-5.19	1.40	1.46
26	LA	266	G	C4'-C3'	5.19	1.60	1.52
26	LA	2056	G	P-O5'	5.19	1.67	1.59
2	SA	490	C	C2'-C1'	-5.19	1.45	1.53
8	SH	7	ALA	CA-C	-5.19	1.46	1.52
10	SJ	7	ARG	CA-CB	5.19	1.60	1.53
19	SC	191	THR	CA-C	-5.19	1.45	1.52
24	S3	468	ILE	N-CA	-5.19	1.40	1.46
26	LA	129	C	O3'-P	-5.19	1.53	1.61
32	LY	76	ARG	CD-NE	5.19	1.53	1.46
58	LT	74	ILE	N-CA	-5.19	1.40	1.46
2	SA	117	G	C5'-C4'	5.19	1.59	1.51
2	SA	350	G	C3'-O3'	5.19	1.50	1.42
26	LA	516	C	C3'-O3'	-5.19	1.34	1.42
26	LA	1670	C	C2'-C1'	5.19	1.61	1.53
2	SA	881	G	O3'-P	-5.19	1.53	1.61
2	SA	1176	A	C1'-N9	-5.19	1.40	1.48
4	S2	50	G	C2-N2	-5.19	1.24	1.34
14	SN	81	ILE	CA-CB	5.19	1.60	1.54
26	LA	1145	C	O3'-P	-5.19	1.53	1.61
26	LA	1195	G	C1'-N9	-5.19	1.40	1.48
26	LA	1988	G	O3'-P	-5.19	1.53	1.61
31	LX	30	ILE	CA-CB	-5.19	1.47	1.53
32	LY	77	LYS	N-CA	-5.19	1.39	1.46
47	LJ	52	ARG	NE-CZ	5.19	1.38	1.33
3	S1	41	A	C5'-C4'	5.19	1.59	1.51
29	LV	82	LYS	N-CA	-5.19	1.39	1.46
37	LC	180	PHE	CA-C	-5.19	1.46	1.52
55	LQ	30	ARG	C-N	5.19	1.39	1.33
56	LR	78	PRO	C-N	-5.19	1.28	1.34
2	SA	1213	A	C4'-O4'	-5.18	1.38	1.45
26	LA	400	G	C2'-C1'	-5.18	1.45	1.53
26	LA	711	G	C2'-C1'	-5.18	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1272	A	O3'-P	-5.18	1.53	1.61
26	LA	1329	U	O5'-C5'	5.18	1.50	1.42
26	LA	1895	C	C2'-C1'	-5.18	1.45	1.53
26	LA	1998	A	C2'-C1'	-5.18	1.45	1.53
28	LU	82	MET	N-CA	-5.18	1.39	1.46
26	LA	1115	G	C4'-O4'	5.18	1.53	1.45
26	LA	1171	G	C5'-C4'	5.18	1.59	1.51
26	LA	2577	A	C3'-C2'	-5.18	1.45	1.52
26	LA	2844	G	C1'-N9	-5.18	1.40	1.48
33	LZ	30	PRO	N-CA	-5.18	1.41	1.46
33	LZ	56	ARG	CD-NE	5.18	1.53	1.46
49	LK	64	ARG	C-N	5.18	1.41	1.33
2	SA	205	A	O5'-C5'	5.18	1.50	1.42
2	SA	465	A	P-O5'	-5.18	1.51	1.59
2	SA	1214	C	C3'-O3'	5.18	1.50	1.42
10	SJ	62	ARG	N-CA	5.18	1.52	1.46
24	S3	5	PRO	C-N	-5.18	1.28	1.34
24	S3	622	THR	CA-C	-5.18	1.45	1.52
13	SM	113	LYS	CA-C	5.18	1.59	1.53
2	SA	1148	U	O3'-P	-5.18	1.53	1.61
6	SU	65	ARG	C-N	5.18	1.41	1.33
27	LD	142	ASN	N-CA	-5.18	1.39	1.46
38	LE	92	VAL	CA-C	5.18	1.58	1.52
52	LO	1	MET	N-CA	5.18	1.56	1.46
2	SA	1422	G	C2'-O2'	-5.18	1.34	1.42
25	LB	84	G	P-O5'	-5.18	1.51	1.59
26	LA	430	A	C2'-O2'	-5.18	1.34	1.42
26	LA	609	A	O5'-C5'	5.18	1.50	1.42
26	LA	1088	A	O3'-P	-5.18	1.53	1.61
50	LL	84	ILE	CA-C	-5.18	1.46	1.52
55	LQ	61	GLN	CA-C	5.18	1.59	1.52
2	SA	507	C	C3'-O3'	5.17	1.50	1.42
2	SA	983	A	C3'-C2'	-5.17	1.45	1.52
4	S2	40	C	O3'-P	-5.17	1.53	1.61
26	LA	372	G	C1'-N9	-5.17	1.39	1.47
26	LA	1166	G	C2'-C1'	-5.17	1.45	1.53
26	LA	1444	G	O5'-C5'	5.17	1.50	1.42
26	LA	1556	C	O3'-P	-5.17	1.53	1.61
26	LA	1836	C	C2'-C1'	-5.17	1.45	1.53
26	LA	1922	G	O3'-P	-5.17	1.53	1.61
26	LA	2274	A	C2'-C1'	-5.17	1.45	1.53
26	LA	2334	U	P-O5'	-5.17	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	LZ	1	SER	CA-CB	5.17	1.63	1.53
2	SA	98	A	C3'-C2'	-5.17	1.45	1.52
2	SA	1178	G	C3'-C2'	-5.17	1.45	1.52
24	S3	674	LYS	CA-C	-5.17	1.46	1.53
26	LA	1294	U	N1-C2	-5.17	1.28	1.38
26	LA	1539	U	O5'-C5'	5.17	1.50	1.42
26	LA	2421	G	C3'-C2'	-5.17	1.45	1.52
35	L1	54	VAL	CA-C	-5.17	1.46	1.52
2	SA	1456	A	O3'-P	-5.17	1.53	1.61
2	SA	1480	A	C2'-C1'	-5.17	1.45	1.53
7	SG	92	PRO	CA-CB	-5.17	1.46	1.53
21	SE	33	THR	CA-C	-5.17	1.46	1.52
26	LA	86	G	C5'-C4'	5.17	1.59	1.51
26	LA	552	U	C3'-O3'	5.17	1.50	1.42
26	LA	2292	U	O3'-P	-5.17	1.53	1.61
32	LY	13	ARG	N-CA	-5.17	1.39	1.46
2	SA	616	G	O5'-C5'	5.17	1.50	1.42
2	SA	830	G	O4'-C1'	5.17	1.49	1.41
26	LA	1310	G	C5'-C4'	5.17	1.59	1.51
37	LC	166	ASP	C-O	-5.17	1.17	1.24
2	SA	844	G	C4'-C3'	5.17	1.60	1.52
2	SA	978	A	C1'-N9	-5.17	1.40	1.48
2	SA	992	U	C4'-C3'	5.17	1.60	1.53
2	SA	1330	U	P-O5'	-5.17	1.51	1.59
33	LZ	72	ALA	N-CA	-5.17	1.39	1.46
12	SL	34	THR	CA-CB	5.17	1.61	1.53
24	S3	37	HIS	CB-CG	5.17	1.57	1.50
26	LA	187	G	C5'-C4'	5.17	1.59	1.51
26	LA	2481	G	C4'-C3'	5.17	1.60	1.52
58	LT	102	SER	CA-CB	5.17	1.60	1.53
22	SF	89	VAL	CA-CB	-5.17	1.47	1.54
26	LA	47	C	C2'-C1'	-5.17	1.45	1.53
26	LA	627	A	C3'-O3'	5.17	1.50	1.43
26	LA	1351	C	P-O5'	-5.17	1.52	1.59
26	LA	2558	C	C1'-N1	5.17	1.56	1.48
2	SA	129	A	O4'-C1'	-5.16	1.34	1.42
2	SA	147	G	C3'-C2'	5.16	1.60	1.52
2	SA	620	C	C5'-C4'	5.16	1.58	1.51
7	SG	9	ARG	CA-CB	5.16	1.61	1.53
26	LA	495	G	O3'-P	-5.16	1.53	1.61
26	LA	2458	G	O4'-C1'	-5.16	1.34	1.42
27	LD	63	ILE	N-CA	-5.16	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
51	LI	33	GLN	C-N	5.16	1.41	1.33
2	SA	812	G	C2-N2	-5.16	1.24	1.34
2	SA	1395	C	C3'-O3'	5.16	1.49	1.42
26	LA	1785	A	C6-N1	-5.16	1.25	1.35
26	LA	2176	A	P-O5'	-5.16	1.52	1.59
40	L4	50	GLU	C-O	-5.16	1.17	1.24
24	S3	187	MET	CA-CB	5.16	1.61	1.53
26	LA	628	G	O3'-P	-5.16	1.53	1.61
26	LA	823	C	C2'-C1'	-5.16	1.45	1.53
26	LA	1906	G	C4'-O4'	5.16	1.53	1.45
55	LQ	100	HIS	ND1-CE1	5.16	1.37	1.32
18	SB	66	ILE	N-CA	-5.16	1.40	1.46
21	SE	80	LEU	CA-C	-5.16	1.46	1.52
26	LA	24	G	C3'-C2'	-5.16	1.45	1.52
26	LA	973	A	C2'-O2'	-5.16	1.33	1.41
26	LA	1051	G	C2-N2	-5.16	1.24	1.34
26	LA	1564	C	C5'-C4'	5.16	1.58	1.51
26	LA	1698	A	O3'-P	-5.16	1.53	1.61
26	LA	2365	G	O3'-P	-5.16	1.53	1.61
26	LA	2644	G	C6-N1	-5.16	1.29	1.39
26	LA	2841	C	O3'-P	-5.16	1.53	1.61
49	LK	30	GLN	C-O	-5.16	1.17	1.24
13	SM	42	VAL	N-CA	-5.16	1.40	1.46
26	LA	928	A	O4'-C1'	-5.16	1.33	1.41
26	LA	1684	G	C2'-O2'	-5.16	1.34	1.42
26	LA	1825	U	C3'-C2'	-5.16	1.45	1.52
46	LH	71	LEU	CA-C	-5.16	1.46	1.52
2	SA	8	A	O4'-C1'	-5.16	1.34	1.42
2	SA	148	G	C4'-O4'	-5.16	1.37	1.45
2	SA	1446	A	C4'-C3'	5.16	1.60	1.52
4	S2	32	G	C4'-C3'	5.16	1.60	1.52
13	SM	26	LYS	C-N	5.16	1.40	1.33
26	LA	447	A	C1'-N9	-5.16	1.39	1.47
26	LA	980	A	C1'-N9	-5.16	1.40	1.48
26	LA	1492	G	C4'-O4'	5.16	1.53	1.45
26	LA	1802	A	N9-C4	-5.16	1.27	1.37
26	LA	2846	G	C1'-N9	-5.16	1.40	1.48
37	LC	106	LYS	CA-CB	5.16	1.61	1.53
46	LH	130	ILE	C-N	-5.16	1.27	1.33
49	LK	80	LYS	CA-C	-5.16	1.46	1.52
10	SJ	71	LEU	CA-CB	5.15	1.61	1.53
2	SA	337	G	C8-N7	-5.15	1.20	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	1113	C	O5'-C5'	5.15	1.50	1.42
2	SA	1419	G	P-O5'	5.15	1.67	1.59
3	S1	54	U	O4'-C1'	5.15	1.49	1.41
5	ST	19	HIS	ND1-CE1	5.15	1.37	1.32
6	SU	55	HIS	CA-CB	5.15	1.61	1.53
24	S3	470	ASP	C-O	-5.15	1.18	1.24
26	LA	101	A	C5'-C4'	5.15	1.58	1.51
26	LA	287	G	O3'-P	-5.15	1.53	1.61
26	LA	1168	G	O3'-P	-5.15	1.53	1.61
26	LA	1263	U	O4'-C1'	-5.15	1.33	1.41
26	LA	1876	A	C4'-C3'	5.15	1.60	1.52
31	LX	87	GLN	C-O	-5.15	1.17	1.24
56	LR	41	ALA	N-CA	-5.15	1.39	1.45
18	SB	70	GLY	C-N	5.15	1.40	1.33
20	SD	156	ALA	N-CA	-5.15	1.40	1.46
26	LA	7	G	C4'-C3'	-5.15	1.44	1.52
26	LA	827	U	C2'-C1'	-5.15	1.45	1.53
26	LA	1425	G	C3'-C2'	-5.15	1.45	1.52
26	LA	2512	C	C3'-C2'	-5.15	1.45	1.52
27	LD	141	HIS	CD2-NE2	5.15	1.43	1.37
32	LY	1	ALA	C-N	5.15	1.40	1.33
2	SA	384	G	P-O5'	-5.15	1.52	1.59
26	LA	176	A	C2'-C1'	-5.15	1.45	1.53
26	LA	1127	A	O3'-P	-5.15	1.53	1.61
26	LA	2474	U	C4'-C3'	5.15	1.60	1.52
2	SA	304	U	N1-C6	-5.15	1.27	1.38
2	SA	454	G	C3'-O3'	5.15	1.49	1.42
2	SA	1008	U	P-O5'	-5.15	1.52	1.59
9	SI	21	LYS	CA-C	-5.15	1.47	1.52
26	LA	466	A	P-O5'	-5.15	1.52	1.59
26	LA	1195	G	C3'-O3'	5.15	1.49	1.42
26	LA	1484	U	C2'-O2'	-5.15	1.34	1.42
26	LA	2221	G	C4'-O4'	-5.15	1.37	1.45
26	LA	2449	U	O5'-C5'	5.15	1.50	1.42
26	LA	2644	G	P-O5'	-5.15	1.52	1.59
28	LU	77	ASP	CA-C	-5.15	1.46	1.52
42	L6	12	ARG	CZ-NH2	-5.15	1.26	1.33
53	LP	67	PHE	N-CA	-5.15	1.39	1.46
55	LQ	62	LEU	CA-CB	5.15	1.62	1.53
26	LA	744	U	O3'-P	-5.15	1.53	1.61
26	LA	822	G	C1'-N9	-5.15	1.40	1.48
26	LA	849	A	C2'-O2'	-5.15	1.34	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2175	C	C2'-C1'	-5.15	1.45	1.53
37	LC	38	PHE	CA-C	5.15	1.59	1.52
2	SA	72	A	P-O5'	-5.14	1.52	1.59
15	SO	66	LEU	N-CA	-5.14	1.40	1.46
26	LA	2153	C	C2'-C1'	-5.14	1.45	1.53
33	LZ	50	VAL	CA-C	-5.14	1.46	1.52
17	SQ	46	HIS	CA-C	-5.14	1.46	1.52
24	S3	370	ARG	CA-C	-5.14	1.46	1.52
26	LA	791	C	P-O5'	-5.14	1.52	1.59
26	LA	929	U	C5'-C4'	5.14	1.58	1.51
26	LA	2599	G	C2'-C1'	-5.14	1.45	1.53
26	LA	2887	A	P-O5'	-5.14	1.52	1.59
30	LW	50	ALA	N-CA	-5.14	1.39	1.46
35	L1	55	LYS	N-CA	-5.14	1.40	1.46
37	LC	160	GLN	CA-C	5.14	1.59	1.52
44	LF	86	ALA	C-N	5.14	1.40	1.33
46	LH	53	PRO	C-N	5.14	1.41	1.33
2	SA	920	U	P-O5'	-5.14	1.52	1.59
24	S3	167	PRO	N-CA	-5.14	1.40	1.47
26	LA	1800	C	C3'-O3'	-5.14	1.35	1.43
26	LA	2669	G	O3'-P	-5.14	1.53	1.61
26	LA	2748	A	C3'-C2'	-5.14	1.45	1.52
2	SA	356	A	C4'-O4'	5.14	1.53	1.45
7	SG	87	PRO	N-CD	-5.14	1.40	1.47
9	SI	91	GLU	CA-CB	5.14	1.62	1.53
19	SC	30	ASP	N-CA	-5.14	1.40	1.46
20	SD	137	SER	CA-CB	5.14	1.63	1.53
26	LA	1856	U	C2'-C1'	-5.14	1.45	1.53
38	LE	65	ALA	N-CA	-5.14	1.40	1.46
38	LE	159	LYS	CA-CB	5.14	1.60	1.53
53	LP	114	GLU	C-N	5.14	1.40	1.33
26	LA	181	A	C5'-C4'	5.14	1.58	1.51
51	LI	59	ALA	C-N	5.14	1.41	1.33
55	LQ	25	ARG	CD-NE	5.14	1.53	1.46
2	SA	396	C	O3'-P	-5.14	1.53	1.61
2	SA	694	A	N9-C4	-5.14	1.27	1.37
2	SA	1417	G	O3'-P	-5.14	1.53	1.61
7	SG	1	PRO	C-N	5.14	1.40	1.33
8	SH	25	THR	C-N	5.14	1.38	1.33
18	SB	184	ALA	C-N	-5.14	1.26	1.33
26	LA	502	A	C5-C6	-5.14	1.30	1.41
26	LA	806	C	P-O5'	-5.14	1.52	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	LX	54	ALA	CA-C	5.14	1.59	1.52
37	LC	165	ASN	N-CA	-5.14	1.39	1.45
2	SA	271	C	O3'-P	-5.13	1.53	1.61
2	SA	771	G	C2'-C1'	-5.13	1.45	1.53
2	SA	972	C	O3'-P	-5.13	1.53	1.61
19	SC	108	PRO	CA-CB	-5.13	1.46	1.53
26	LA	429	A	C3'-O3'	5.13	1.49	1.42
26	LA	1832	C	C5'-C4'	5.13	1.58	1.51
26	LA	2731	G	C4'-O4'	-5.13	1.37	1.45
46	LH	88	LEU	N-CA	-5.13	1.39	1.46
50	LL	47	HIS	CG-CD2	-5.13	1.30	1.35
2	SA	440	C	O3'-P	-5.13	1.53	1.61
2	SA	596	A	C4'-O4'	5.13	1.53	1.45
2	SA	874	G	C4'-C3'	-5.13	1.44	1.52
10	SJ	31	ARG	NE-CZ	5.13	1.38	1.33
13	SM	2	ARG	CD-NE	5.13	1.53	1.46
22	SF	18	VAL	C-N	5.13	1.40	1.33
26	LA	1437	C	C2'-C1'	-5.13	1.45	1.53
26	LA	2463	C	C3'-O3'	5.13	1.49	1.42
2	SA	108	G	C4'-C3'	5.13	1.60	1.52
2	SA	717	U	P-O5'	5.13	1.67	1.59
2	SA	1541	U	O5'-C5'	5.13	1.50	1.42
7	SG	83	THR	CA-C	-5.13	1.45	1.52
26	LA	68	G	C2'-C1'	-5.13	1.45	1.53
26	LA	715	A	O3'-P	-5.13	1.53	1.61
26	LA	901	C	O5'-C5'	5.13	1.50	1.42
26	LA	1982	U	C3'-O3'	5.13	1.49	1.42
26	LA	2379	G	C4'-O4'	5.13	1.53	1.45
2	SA	1092	A	O4'-C1'	-5.13	1.33	1.41
26	LA	860	U	O3'-P	-5.13	1.53	1.61
26	LA	2745	C	C4'-O4'	-5.13	1.37	1.45
50	LL	80	HIS	CE1-NE2	5.13	1.37	1.32
2	SA	798	U	O3'-P	-5.13	1.53	1.61
2	SA	1156	G	C1'-N9	-5.13	1.40	1.48
2	SA	1291	U	O3'-P	-5.13	1.53	1.61
26	LA	340	A	C3'-O3'	5.13	1.49	1.42
26	LA	459	U	C5'-C4'	5.13	1.58	1.51
54	LM	93	GLN	CA-C	5.13	1.59	1.52
2	SA	71	A	O5'-C5'	5.13	1.50	1.42
2	SA	82	G	C3'-O3'	-5.13	1.34	1.42
20	SD	78	ALA	N-CA	-5.13	1.40	1.46
26	LA	507	A	C4'-C3'	-5.13	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1363	C	C2'-C1'	-5.13	1.45	1.53
26	LA	1591	A	C3'-O3'	5.13	1.49	1.42
37	LC	4	LEU	C-N	-5.13	1.26	1.33
48	LN	96	LYS	CA-C	-5.13	1.45	1.52
2	SA	1379	G	C5'-C4'	5.12	1.58	1.51
24	S3	381	ILE	CA-C	-5.12	1.46	1.52
26	LA	35	G	O3'-P	-5.12	1.53	1.61
26	LA	2003	A	C2'-C1'	-5.12	1.45	1.53
2	SA	1182	G	C1'-N9	-5.12	1.39	1.47
24	S3	505	ALA	CA-CB	5.12	1.60	1.53
26	LA	245	G	O3'-P	-5.12	1.53	1.61
26	LA	592	A	C2'-C1'	-5.12	1.45	1.53
26	LA	847	U	O3'-P	-5.12	1.53	1.61
26	LA	1902	C	O3'-P	-5.12	1.53	1.61
26	LA	2176	A	C3'-O3'	5.12	1.49	1.42
2	SA	712	A	O5'-C5'	5.12	1.50	1.42
21	SE	22	LYS	CA-C	5.12	1.59	1.52
26	LA	187	G	C3'-O3'	5.12	1.49	1.42
26	LA	274	C	C4'-O4'	-5.12	1.37	1.45
26	LA	368	A	O3'-P	-5.12	1.53	1.61
26	LA	705	A	C1'-N9	-5.12	1.40	1.48
26	LA	857	G	C1'-N9	-5.12	1.40	1.48
26	LA	1519	G	C2-N2	-5.12	1.24	1.34
43	L7	36	ARG	CD-NE	5.12	1.53	1.46
49	LK	89	SER	C-N	5.12	1.40	1.34
26	LA	2340	A	O4'-C1'	5.12	1.49	1.41
2	SA	275	G	C2'-C1'	-5.12	1.45	1.53
2	SA	456	A	O3'-P	5.12	1.68	1.61
2	SA	551	U	O3'-P	-5.12	1.53	1.61
2	SA	992	U	C1'-N1	5.12	1.55	1.47
2	SA	1372	U	C1'-N1	5.12	1.56	1.48
8	SH	125	ILE	C-N	-5.12	1.27	1.33
24	S3	665	TYR	C-N	5.12	1.40	1.33
26	LA	1112	G	C2-N3	5.12	1.43	1.32
26	LA	1656	C	C2'-C1'	-5.12	1.45	1.53
26	LA	2521	C	O5'-C5'	5.12	1.50	1.42
26	LA	2612	C	O5'-C5'	5.12	1.50	1.42
26	LA	577	G	C1'-N9	-5.12	1.40	1.48
26	LA	904	G	C3'-O3'	5.12	1.49	1.42
26	LA	1666	G	C2-N2	-5.12	1.24	1.34
39	L3	53	VAL	N-CA	-5.12	1.40	1.46
2	SA	116	A	O5'-C5'	5.12	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	455	G	C2'-C1'	-5.12	1.45	1.53
8	SH	15	ASN	CA-C	-5.12	1.46	1.52
14	SN	86	ALA	C-O	-5.12	1.18	1.24
20	SD	130	ASN	C-N	5.12	1.40	1.33
26	LA	852	U	O5'-C5'	5.12	1.50	1.42
26	LA	1471	G	C2'-O2'	-5.12	1.34	1.42
26	LA	1680	U	O5'-C5'	5.12	1.50	1.42
44	LF	99	LYS	C-O	-5.12	1.17	1.24
2	SA	1252	A	C2'-C1'	-5.11	1.45	1.53
24	S3	549	ILE	CA-CB	5.11	1.57	1.53
26	LA	247	G	O4'-C1'	-5.11	1.33	1.41
26	LA	662	G	C1'-N9	-5.11	1.40	1.48
26	LA	1700	A	C3'-O3'	5.11	1.49	1.42
26	LA	1789	A	C2'-C1'	-5.11	1.45	1.53
26	LA	2000	C	O3'-P	-5.11	1.53	1.61
26	LA	2140	G	C3'-O3'	5.11	1.49	1.42
32	LY	10	ARG	CD-NE	5.11	1.53	1.46
37	LC	9	ARG	N-CA	-5.11	1.40	1.46
19	SC	124	GLU	C-N	5.11	1.41	1.33
24	S3	426	ASP	C-O	-5.11	1.17	1.24
24	S3	433	ALA	N-CA	-5.11	1.40	1.46
56	LR	34	GLY	N-CA	5.11	1.52	1.45
2	SA	804	U	O5'-C5'	5.11	1.50	1.42
39	L3	39	ARG	C-N	5.11	1.40	1.33
44	LF	159	LEU	C-N	5.11	1.41	1.33
2	SA	1336	C	C4'-C3'	5.11	1.60	1.53
11	SK	108	ASN	CA-C	-5.11	1.46	1.52
1	SS	86	LYS	CA-CB	5.11	1.62	1.53
2	SA	511	C	O4'-C1'	5.11	1.49	1.42
5	ST	8	LYS	N-CA	-5.11	1.39	1.46
18	SB	108	GLN	N-CA	-5.11	1.40	1.46
20	SD	53	GLN	N-CA	-5.11	1.40	1.46
26	LA	319	G	C3'-C2'	-5.11	1.45	1.52
26	LA	538	A	O5'-C5'	5.11	1.50	1.42
26	LA	1152	C	C5'-C4'	5.11	1.58	1.51
26	LA	1628	G	N7-C5	-5.11	1.29	1.39
26	LA	1676	A	C5'-C4'	5.11	1.58	1.51
45	LG	166	ARG	CA-C	-5.11	1.45	1.52
49	LK	77	VAL	CA-CB	5.11	1.60	1.54
55	LQ	107	ALA	N-CA	-5.11	1.40	1.46
56	LR	42	PHE	CA-C	-5.11	1.46	1.52
2	SA	849	G	C2'-C1'	-5.11	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	356	G	O5'-C5'	5.11	1.50	1.42
26	LA	743	A	N9-C4	-5.11	1.27	1.37
26	LA	2214	C	C1'-N1	5.11	1.56	1.48
26	LA	2331	G	O5'-C5'	5.11	1.50	1.42
41	L5	32	ALA	CA-C	-5.11	1.46	1.52
11	SK	9	LYS	CA-CB	5.10	1.61	1.53
26	LA	642	U	C2'-C1'	5.10	1.61	1.53
26	LA	1042	G	C1'-N9	-5.10	1.40	1.48
2	SA	445	G	C2'-O2'	-5.10	1.34	1.42
2	SA	1082	A	C2'-C1'	-5.10	1.45	1.53
26	LA	1057	A	O3'-P	-5.10	1.53	1.61
26	LA	1483	G	N7-C5	-5.10	1.29	1.39
58	LT	32	THR	N-CA	5.10	1.52	1.46
2	SA	570	G	O3'-P	-5.10	1.53	1.61
3	S1	54	U	O5'-C5'	5.10	1.50	1.42
2	SA	338	A	C3'-C2'	-5.10	1.45	1.52
8	SH	12	ARG	CA-C	-5.10	1.46	1.52
26	LA	2131	U	N1-C6	-5.10	1.27	1.38
40	L4	53	ILE	N-CA	5.10	1.51	1.46
2	SA	206	C	C4'-C3'	5.10	1.60	1.52
2	SA	902	G	O5'-C5'	5.10	1.50	1.42
26	LA	292	U	O5'-C5'	5.10	1.50	1.42
26	LA	1188	U	C3'-C2'	-5.10	1.45	1.52
26	LA	1359	A	C4'-O4'	5.10	1.53	1.45
26	LA	1660	G	C3'-C2'	-5.10	1.45	1.52
39	L3	54	ILE	CA-CB	-5.10	1.47	1.54
42	L6	44	ARG	CA-C	-5.10	1.46	1.52
44	LF	146	VAL	CA-CB	-5.10	1.48	1.54
26	LA	903	C	C1'-N1	5.10	1.56	1.48
2	SA	270	A	O5'-C5'	5.09	1.50	1.42
2	SA	791	G	C2'-C1'	-5.09	1.45	1.53
4	S2	74	A	P-O5'	-5.09	1.52	1.59
26	LA	69	C	C2'-C1'	-5.09	1.45	1.53
26	LA	637	A	C3'-O3'	5.09	1.50	1.43
26	LA	921	C	P-O5'	5.09	1.67	1.59
26	LA	1516	G	C1'-N9	-5.09	1.40	1.48
26	LA	1898	U	C1'-N1	-5.09	1.40	1.48
26	LA	1838	C	C5'-C4'	5.09	1.58	1.51
50	LL	113	PRO	N-CD	-5.09	1.40	1.47
2	SA	313	A	O3'-P	-5.09	1.53	1.61
2	SA	327	A	O4'-C1'	5.09	1.49	1.42
2	SA	472	U	C2'-C1'	-5.09	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SA	701	U	C4'-O4'	-5.09	1.38	1.45
7	SG	139	ASP	N-CA	-5.09	1.40	1.46
26	LA	1076	C	P-O5'	-5.09	1.52	1.59
26	LA	2861	U	C3'-C2'	-5.09	1.45	1.52
2	SA	71	A	C5'-C4'	5.09	1.58	1.51
2	SA	1313	U	C4'-C3'	-5.09	1.45	1.52
13	SM	39	ALA	CA-CB	5.09	1.61	1.53
14	SN	86	ALA	N-CA	-5.09	1.40	1.46
26	LA	1038	G	C5'-C4'	5.09	1.58	1.51
26	LA	1451	C	C5'-C4'	5.09	1.58	1.51
26	LA	1795	C	O3'-P	-5.09	1.53	1.61
2	SA	674	G	C2'-C1'	-5.09	1.45	1.53
2	SA	1419	G	C3'-O3'	5.09	1.49	1.42
26	LA	1254	A	C1'-N9	-5.09	1.40	1.48
26	LA	1891	G	C4'-C3'	-5.09	1.45	1.52
27	LD	148	GLY	C-N	5.09	1.40	1.33
54	LM	6	THR	CA-CB	-5.09	1.45	1.53
2	SA	345	C	O3'-P	-5.09	1.53	1.61
2	SA	1448	C	P-O5'	-5.09	1.52	1.59
2	SA	1490	U	O3'-P	-5.09	1.53	1.61
2	SA	1531	A	C2'-O2'	-5.09	1.34	1.42
5	ST	72	ALA	N-CA	-5.09	1.40	1.46
26	LA	686	U	O3'-P	-5.09	1.53	1.61
26	LA	1326	U	C1'-N1	-5.09	1.40	1.48
26	LA	1720	U	C3'-O3'	5.09	1.49	1.42
26	LA	1947	C	P-O5'	-5.09	1.52	1.59
48	LN	113	ALA	CA-C	-5.09	1.46	1.52
2	SA	1335	U	C3'-C2'	5.08	1.60	1.52
26	LA	116	C	O3'-P	-5.08	1.53	1.61
26	LA	517	C	C2'-C1'	-5.08	1.45	1.53
46	LH	66	THR	N-CA	-5.08	1.40	1.46
53	LP	40	LYS	CA-CB	5.08	1.61	1.53
2	SA	584	G	C2'-C1'	-5.08	1.45	1.53
2	SA	1510	C	C2'-O2'	-5.08	1.34	1.42
10	SJ	85	ASP	CA-C	-5.08	1.46	1.52
11	SK	92	ARG	CD-NE	5.08	1.53	1.46
26	LA	100	U	C2'-C1'	-5.08	1.45	1.53
26	LA	138	U	C2'-C1'	5.08	1.60	1.53
26	LA	1053	C	O5'-C5'	5.08	1.50	1.42
26	LA	2035	G	C4'-C3'	5.08	1.60	1.53
26	LA	2510	C	P-O5'	-5.08	1.52	1.59
40	L4	41	VAL	CA-CB	-5.08	1.48	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
51	LI	86	ASP	CA-C	5.08	1.59	1.52
2	SA	875	U	O3'-P	-5.08	1.53	1.61
2	SA	922	G	O4'-C1'	-5.08	1.34	1.41
10	SJ	64	GLN	CA-CB	5.08	1.61	1.53
26	LA	718	A	O3'-P	-5.08	1.53	1.61
26	LA	1274	A	O4'-C1'	-5.08	1.34	1.41
48	LN	70	LYS	CA-C	-5.08	1.46	1.52
2	SA	21	G	O5'-C5'	5.08	1.50	1.42
2	SA	168	G	C3'-C2'	5.08	1.60	1.52
2	SA	430	A	C4'-C3'	5.08	1.60	1.52
19	SC	129	PHE	N-CA	-5.08	1.39	1.46
26	LA	551	G	C5'-C4'	5.08	1.58	1.51
26	LA	774	G	O4'-C1'	-5.08	1.34	1.42
26	LA	1069	A	C5'-C4'	5.08	1.58	1.51
2	SA	1033	G	C2-N2	-5.08	1.24	1.34
2	SA	1291	U	C1'-N1	5.08	1.56	1.48
10	SJ	39	PRO	N-CA	-5.08	1.40	1.47
10	SJ	83	THR	CA-CB	5.08	1.61	1.53
24	S3	419	VAL	CA-C	-5.08	1.46	1.52
26	LA	1236	G	P-O5'	-5.08	1.52	1.59
26	LA	1613	G	P-O5'	-5.08	1.52	1.59
26	LA	2583	G	P-O5'	-5.08	1.52	1.59
27	LD	242	HIS	N-CA	-5.08	1.38	1.46
42	L6	2	LYS	C-N	-5.08	1.27	1.34
43	L7	17	VAL	C-N	5.08	1.41	1.33
50	LL	56	VAL	C-N	5.08	1.41	1.33
52	LO	117	PHE	CA-C	-5.08	1.45	1.52
2	SA	632	U	C3'-C2'	5.08	1.60	1.52
21	SE	24	VAL	CA-CB	-5.08	1.49	1.54
26	LA	1713	A	C1'-N9	-5.08	1.39	1.47
13	SM	100	ARG	NE-CZ	5.08	1.38	1.33
25	LB	13	G	C3'-O3'	5.08	1.49	1.42
26	LA	139	U	O3'-P	-5.08	1.53	1.61
26	LA	462	C	C4'-C3'	-5.08	1.45	1.52
26	LA	2902	C	C5'-C4'	5.08	1.58	1.51
54	LM	84	CYS	N-CA	-5.08	1.39	1.46
56	LR	52	ARG	NE-CZ	5.08	1.38	1.33
1	SS	56	HIS	ND1-CE1	5.07	1.37	1.32
2	SA	1432	G	C5'-C4'	5.07	1.58	1.51
26	LA	175	G	C4'-C3'	5.07	1.60	1.52
26	LA	693	A	C4'-C3'	-5.07	1.45	1.52
26	LA	1666	G	C1'-N9	-5.07	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2239	G	O3'-P	-5.07	1.53	1.61
26	LA	2773	C	C3'-C2'	-5.07	1.45	1.52
33	LZ	71	ARG	N-CA	-5.07	1.40	1.46
34	L0	41	HIS	ND1-CE1	5.07	1.37	1.32
55	LQ	16	ARG	C-N	5.07	1.40	1.33
2	SA	89	U	C4'-O4'	5.07	1.53	1.45
2	SA	240	G	C3'-C2'	5.07	1.60	1.52
2	SA	633	G	C1'-N9	-5.07	1.40	1.48
2	SA	714	G	O3'-P	-5.07	1.53	1.61
26	LA	889	C	C2'-C1'	-5.07	1.45	1.53
26	LA	2205	A	N9-C4	-5.07	1.27	1.37
2	SA	214	C	C1'-N1	-5.07	1.40	1.48
2	SA	743	A	O3'-P	-5.07	1.53	1.61
9	SI	98	ARG	CA-CB	5.07	1.61	1.53
24	S3	451	GLU	N-CA	-5.07	1.39	1.46
26	LA	2436	G	P-O5'	-5.07	1.52	1.59
26	LA	2575	C	C3'-C2'	5.07	1.60	1.52
37	LC	4	LEU	CA-CB	5.07	1.61	1.53
2	SA	437	U	C1'-N1	-5.07	1.40	1.48
2	SA	1161	C	O5'-C5'	5.07	1.50	1.42
21	SE	126	ALA	CA-C	-5.07	1.46	1.52
2	SA	152	A	O5'-C5'	5.07	1.50	1.42
2	SA	1412	C	C2'-C1'	-5.07	1.45	1.53
12	SL	112	ALA	N-CA	-5.07	1.40	1.46
18	SB	128	LEU	CA-C	-5.07	1.46	1.52
24	S3	235	LYS	CA-CB	5.07	1.61	1.53
24	S3	604	PHE	CA-CB	5.07	1.61	1.53
25	LB	34	A	C4'-O4'	5.07	1.53	1.45
26	LA	383	C	O3'-P	-5.07	1.53	1.61
26	LA	642	U	C1'-N1	5.07	1.56	1.48
26	LA	954	G	O5'-C5'	5.07	1.50	1.42
26	LA	1701	A	C4'-O4'	5.07	1.53	1.45
26	LA	2528	U	C4'-O4'	-5.07	1.38	1.45
44	LF	115	GLN	N-CA	-5.07	1.39	1.46
46	LH	82	PHE	CB-CG	5.07	1.62	1.50
49	LK	100	ILE	N-CA	5.07	1.52	1.46
2	SA	77	A	C4'-C3'	-5.07	1.45	1.52
2	SA	162	A	C4'-C3'	5.07	1.60	1.52
2	SA	762	U	C1'-N1	-5.07	1.40	1.48
2	SA	867	G	O4'-C1'	-5.07	1.34	1.41
2	SA	1300	G	C2'-C1'	-5.07	1.45	1.53
7	SG	147	ASN	C-N	5.07	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	SO	52	ARG	CD-NE	5.07	1.53	1.46
26	LA	1383	A	C2'-O2'	-5.07	1.34	1.41
26	LA	2735	G	O3'-P	-5.07	1.53	1.61
27	LD	57	HIS	C-N	5.07	1.41	1.33
33	LZ	66	VAL	N-CA	-5.07	1.40	1.46
2	SA	14	U	C3'-O3'	5.06	1.49	1.42
26	LA	1766	G	C5'-C4'	5.06	1.58	1.51
26	LA	639	U	C3'-O3'	5.06	1.49	1.42
26	LA	792	A	O4'-C1'	-5.06	1.34	1.42
26	LA	843	G	O3'-P	-5.06	1.53	1.61
37	LC	69	THR	C-N	5.06	1.40	1.33
50	LL	63	ALA	N-CA	-5.06	1.39	1.46
2	SA	97	G	P-O5'	-5.06	1.52	1.59
2	SA	683	G	C2'-C1'	-5.06	1.45	1.53
2	SA	1059	C	C3'-C2'	-5.06	1.45	1.52
18	SB	7	ASP	CA-CB	5.06	1.61	1.53
18	SB	168	GLU	N-CA	-5.06	1.40	1.46
26	LA	63	A	C4'-C3'	-5.06	1.45	1.52
26	LA	430	A	C3'-C2'	-5.06	1.45	1.52
26	LA	603	A	C4'-O4'	-5.06	1.38	1.45
38	LE	208	LYS	C-N	5.06	1.40	1.33
2	SA	496	A	P-O5'	-5.06	1.52	1.59
2	SA	649	A	C3'-O3'	5.06	1.49	1.42
2	SA	1455	G	O3'-P	-5.06	1.53	1.61
7	SG	118	ARG	CD-NE	5.06	1.53	1.46
26	LA	1825	U	N1-C2	-5.06	1.28	1.38
26	LA	2739	U	O5'-C5'	5.06	1.50	1.42
26	LA	2778	A	O3'-P	-5.06	1.53	1.61
46	LH	143	VAL	C-O	5.06	1.30	1.24
2	SA	586	C	C5'-C4'	5.06	1.58	1.51
2	SA	633	G	C4'-O4'	5.06	1.53	1.45
18	SB	238	GLU	C-N	5.06	1.40	1.33
2	SA	101	A	C2'-C1'	-5.05	1.45	1.53
26	LA	2003	A	C3'-C2'	-5.05	1.45	1.52
26	LA	2104	C	C3'-C2'	5.05	1.60	1.52
26	LA	2648	G	C2'-C1'	-5.05	1.45	1.53
3	S1	43	U	O3'-P	5.05	1.68	1.61
12	SL	22	ALA	N-CA	5.05	1.52	1.46
26	LA	1690	A	C2'-C1'	-5.05	1.45	1.53
26	LA	2135	A	C1'-N9	-5.05	1.40	1.48
26	LA	2859	G	P-O5'	-5.05	1.52	1.59
49	LK	58	ILE	CA-CB	5.05	1.60	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	LM	53	LYS	C-O	-5.05	1.18	1.24
2	SA	365	U	C5'-C4'	5.05	1.58	1.51
24	S3	267	SER	N-CA	-5.05	1.40	1.46
25	LB	114	C	C3'-O3'	5.05	1.49	1.42
26	LA	2048	G	N7-C5	-5.05	1.29	1.39
2	SA	1392	G	C1'-N9	-5.05	1.40	1.48
2	SA	1539	C	O5'-C5'	5.05	1.50	1.42
14	SN	23	ARG	C-N	5.05	1.40	1.33
25	LB	56	G	C3'-C2'	-5.05	1.45	1.52
26	LA	890	C	C2'-C1'	5.05	1.60	1.53
26	LA	1340	U	C3'-O3'	5.05	1.49	1.42
26	LA	2109	U	O3'-P	-5.05	1.53	1.61
26	LA	2198	A	C2'-C1'	-5.05	1.45	1.53
38	LE	84	LEU	C-N	5.05	1.40	1.33
2	SA	311	C	P-O5'	-5.05	1.52	1.59
2	SA	1471	U	C2'-C1'	-5.05	1.45	1.53
8	SH	26	MET	CG-SD	-5.05	1.68	1.80
26	LA	446	G	C5-C6	-5.05	1.32	1.42
28	LU	97	LEU	CA-CB	-5.05	1.46	1.53
2	SA	106	C	P-O5'	5.05	1.67	1.59
2	SA	723	U	C1'-N1	5.05	1.56	1.48
2	SA	1044	A	C3'-O3'	5.05	1.49	1.42
26	LA	274	C	C3'-O3'	5.05	1.49	1.42
26	LA	426	C	C5'-C4'	5.05	1.58	1.51
26	LA	695	G	C1'-N9	-5.05	1.40	1.48
26	LA	1074	G	C4'-C3'	5.05	1.60	1.52
26	LA	1163	G	C2'-O2'	-5.05	1.34	1.42
26	LA	1455	G	O4'-C1'	5.05	1.49	1.41
26	LA	2635	A	C1'-N9	-5.05	1.40	1.48
26	LA	2668	G	C4'-O4'	5.05	1.53	1.45
36	L2	6	HIS	CA-CB	5.05	1.61	1.53
46	LH	11	PRO	CA-CB	5.05	1.60	1.53
47	LJ	138	LEU	C-N	5.05	1.40	1.33
2	SA	1069	C	O3'-P	-5.04	1.53	1.61
26	LA	1451	C	O4'-C1'	-5.04	1.34	1.42
26	LA	1533	C	C1'-N1	5.04	1.56	1.48
26	LA	1756	G	O5'-C5'	5.04	1.50	1.42
2	SA	29	U	C3'-O3'	5.04	1.49	1.42
16	SP	71	VAL	CA-CB	-5.04	1.48	1.54
18	SB	130	LYS	CA-C	-5.04	1.45	1.52
26	LA	1168	G	O5'-C5'	-5.04	1.34	1.42
37	LC	88	LYS	CA-C	5.04	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	L5	44	VAL	N-CA	-5.04	1.40	1.46
2	SA	103	U	O5'-C5'	-5.04	1.34	1.42
13	SM	9	PRO	N-CD	5.04	1.54	1.47
26	LA	708	G	P-O5'	-5.04	1.52	1.59
26	LA	1838	C	P-O5'	-5.04	1.52	1.59
26	LA	1892	C	C1'-N1	5.04	1.56	1.48
26	LA	2053	G	C1'-N9	-5.04	1.40	1.48
26	LA	2662	A	C4'-O4'	-5.04	1.38	1.45
51	LI	68	ARG	CA-C	-5.04	1.46	1.52
57	LS	65	ASN	CA-C	-5.04	1.46	1.52
2	SA	448	A	C5'-C4'	5.04	1.58	1.51
7	SG	93	VAL	CA-C	-5.04	1.45	1.52
24	S3	42	VAL	C-N	5.04	1.40	1.33
26	LA	2281	A	C4'-O4'	-5.04	1.38	1.45
27	LD	110	LYS	CA-C	-5.04	1.46	1.52
2	SA	191	G	C3'-O3'	5.04	1.49	1.42
2	SA	1057	G	O5'-C5'	5.04	1.50	1.42
16	SP	63	GLN	C-N	5.04	1.40	1.33
21	SE	136	VAL	CA-CB	-5.04	1.48	1.54
24	S3	79	GLU	CA-C	-5.04	1.46	1.52
25	LB	33	G	C4'-C3'	5.04	1.60	1.52
26	LA	2005	A	P-O5'	-5.04	1.52	1.59
30	LW	43	LYS	CE-NZ	-5.04	1.34	1.49
44	LF	62	GLN	C-O	-5.04	1.17	1.24
2	SA	626	G	C1'-N9	-5.04	1.40	1.48
2	SA	743	A	C1'-N9	-5.04	1.40	1.48
2	SA	956	U	P-O5'	-5.04	1.52	1.59
2	SA	1400	C	C2'-C1'	-5.04	1.45	1.53
7	SG	163	HIS	CB-CG	5.04	1.57	1.50
8	SH	25	THR	CA-CB	-5.04	1.44	1.53
24	S3	563	GLY	CA-C	-5.04	1.44	1.51
26	LA	2475	C	O3'-P	-5.04	1.53	1.61
26	LA	2653	U	C5'-C4'	5.04	1.58	1.51
32	LY	72	GLY	CA-C	-5.04	1.44	1.51
2	SA	916	U	C2'-C1'	5.04	1.60	1.53
2	SA	949	A	C1'-N9	-5.04	1.40	1.48
6	SU	12	ASP	CA-CB	5.04	1.59	1.53
24	S3	227	GLU	CA-CB	5.04	1.62	1.53
26	LA	1902	C	C2'-C1'	-5.04	1.45	1.53
26	LA	1991	U	C2'-O2'	-5.04	1.34	1.42
2	SA	252	U	C5'-C4'	5.03	1.58	1.51
26	LA	418	C	O3'-P	-5.03	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	1728	C	C2'-C1'	-5.03	1.45	1.53
33	LZ	18	SER	C-N	5.03	1.40	1.33
36	L2	15	SER	CA-CB	5.03	1.61	1.53
2	SA	330	C	O5'-C5'	5.03	1.50	1.42
2	SA	612	C	O3'-P	-5.03	1.53	1.61
2	SA	784	A	C3'-O3'	5.03	1.49	1.42
19	SC	150	VAL	C-N	5.03	1.40	1.33
26	LA	297	G	C3'-O3'	5.03	1.49	1.42
26	LA	568	U	C5'-C4'	5.03	1.58	1.51
26	LA	1257	C	C3'-O3'	5.03	1.49	1.42
26	LA	1903	G	C4'-O4'	5.03	1.53	1.45
7	SG	6	ILE	N-CA	5.03	1.52	1.46
12	SL	54	VAL	CA-CB	-5.03	1.48	1.54
24	S3	41	GLU	C-N	5.03	1.40	1.33
26	LA	678	C	O3'-P	-5.03	1.53	1.61
26	LA	1912	A	C3'-O3'	-5.03	1.34	1.42
26	LA	2001	C	C5'-C4'	5.03	1.58	1.51
26	LA	2697	G	O5'-C5'	5.03	1.50	1.42
33	LZ	66	VAL	CA-CB	5.03	1.60	1.54
2	SA	401	C	O3'-P	-5.03	1.53	1.61
2	SA	1220	G	N9-C8	-5.03	1.27	1.37
10	SJ	9	ARG	N-CA	-5.03	1.39	1.46
26	LA	1405	U	C1'-N1	5.03	1.55	1.48
26	LA	2057	G	C5-C4	-5.03	1.28	1.38
26	LA	2272	U	O3'-P	-5.03	1.53	1.61
26	LA	2385	C	C5'-C4'	5.03	1.58	1.51
26	LA	2389	G	C1'-N9	-5.03	1.40	1.48
26	LA	2833	U	O5'-C5'	5.03	1.50	1.42
2	SA	134	G	O5'-C5'	5.03	1.50	1.42
2	SA	276	G	C4'-C3'	5.03	1.60	1.52
2	SA	1037	C	C5'-C4'	5.03	1.58	1.51
4	S2	11	A	O3'-P	5.03	1.68	1.61
4	S2	73	A	C3'-C2'	5.03	1.60	1.52
26	LA	369	U	C3'-O3'	5.03	1.49	1.42
26	LA	1194	A	C5'-C4'	5.03	1.58	1.51
54	LM	115	ILE	CA-C	-5.03	1.46	1.52
2	SA	782	A	C1'-N9	-5.03	1.40	1.48
16	SP	38	PHE	N-CA	-5.03	1.39	1.46
26	LA	468	G	C1'-N9	-5.03	1.40	1.48
26	LA	1153	C	O3'-P	-5.03	1.53	1.61
26	LA	1330	C	C4'-O4'	-5.03	1.38	1.45
26	LA	2201	G	O3'-P	-5.03	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2346	A	O3'-P	-5.03	1.53	1.61
26	LA	2735	G	C2'-C1'	-5.03	1.45	1.53
31	LX	24	ASN	N-CA	-5.03	1.39	1.46
45	LG	2	LYS	C-N	5.03	1.40	1.33
51	LI	46	PHE	CA-CB	5.03	1.61	1.53
54	LM	105	ARG	CA-C	5.03	1.59	1.52
2	SA	270	A	C2'-C1'	-5.02	1.45	1.53
26	LA	88	G	C1'-N9	-5.02	1.40	1.48
26	LA	1422	G	P-O5'	-5.02	1.52	1.59
26	LA	1827	U	O3'-P	-5.02	1.53	1.61
26	LA	2755	C	C2'-C1'	-5.02	1.45	1.53
2	SA	591	U	C4'-C3'	-5.02	1.45	1.52
26	LA	572	A	C5'-C4'	5.02	1.58	1.51
26	LA	601	C	C4'-O4'	5.02	1.53	1.45
26	LA	1920	C	C4'-O4'	5.02	1.53	1.45
57	LS	102	LYS	N-CA	-5.02	1.39	1.46
2	SA	623	C	C3'-C2'	-5.02	1.45	1.52
2	SA	904	U	O3'-P	-5.02	1.53	1.61
2	SA	1202	U	P-O5'	-5.02	1.52	1.59
20	SD	55	ARG	C-O	-5.02	1.18	1.24
26	LA	136	G	O4'-C1'	5.02	1.49	1.41
33	LZ	24	THR	CA-C	-5.02	1.46	1.52
2	SA	9	G	C2-N2	-5.02	1.24	1.34
26	LA	261	G	C2-N3	5.02	1.42	1.32
26	LA	962	G	P-O5'	-5.02	1.52	1.59
26	LA	1414	C	C2'-C1'	-5.02	1.45	1.53
26	LA	1667	G	O3'-P	-5.02	1.53	1.61
26	LA	2078	C	C3'-O3'	5.02	1.49	1.42
37	LC	119	ASP	CA-CB	5.02	1.61	1.53
2	SA	79	G	O5'-C5'	5.02	1.50	1.42
2	SA	188	C	C3'-O3'	5.02	1.49	1.42
2	SA	538	G	C1'-N9	-5.02	1.40	1.48
2	SA	1098	C	C3'-O3'	5.02	1.49	1.42
2	SA	1374	A	C2'-C1'	-5.02	1.45	1.53
25	LB	43	C	O5'-C5'	5.02	1.50	1.42
26	LA	324	A	O4'-C1'	5.02	1.49	1.41
26	LA	696	G	O3'-P	-5.02	1.53	1.61
26	LA	2659	G	O3'-P	-5.02	1.53	1.61
44	LF	79	ARG	CD-NE	5.02	1.53	1.46
45	LG	77	LYS	CA-CB	-5.02	1.45	1.53
55	LQ	12	THR	CA-C	-5.02	1.45	1.52
25	LB	88	C	C1'-N1	5.02	1.54	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2263	C	O5'-C5'	5.02	1.50	1.42
46	LH	82	PHE	CA-CB	5.02	1.62	1.53
46	LH	100	ASN	CA-C	5.02	1.59	1.52
2	SA	268	U	C5'-C4'	5.01	1.58	1.51
2	SA	409	U	O5'-C5'	5.01	1.50	1.42
2	SA	473	U	N1-C2	5.01	1.48	1.38
2	SA	1172	C	C3'-O3'	5.01	1.49	1.42
4	S2	65	G	N9-C4	-5.01	1.27	1.38
26	LA	220	G	C3'-O3'	5.01	1.49	1.42
26	LA	1699	G	P-O5'	5.01	1.67	1.59
26	LA	1771	C	C4'-O4'	-5.01	1.38	1.45
30	LW	30	SER	C-N	5.01	1.39	1.33
44	LF	184	ASP	N-CA	-5.01	1.40	1.46
2	SA	1138	G	O5'-C5'	5.01	1.50	1.42
2	SA	1303	C	C5'-C4'	5.01	1.58	1.51
24	S3	127	ARG	C-O	-5.01	1.18	1.24
24	S3	153	VAL	N-CA	-5.01	1.40	1.46
26	LA	126	A	C3'-C2'	5.01	1.60	1.52
26	LA	352	A	C3'-C2'	5.01	1.60	1.52
26	LA	853	C	P-O5'	-5.01	1.52	1.59
26	LA	1680	U	C1'-N1	-5.01	1.41	1.48
38	LE	145	SER	CA-CB	5.01	1.61	1.53
2	SA	537	G	C4'-O4'	5.01	1.53	1.45
2	SA	837	U	N1-C2	-5.01	1.28	1.38
2	SA	848	C	C3'-O3'	5.01	1.49	1.42
2	SA	1064	G	O3'-P	-5.01	1.53	1.61
2	SA	1419	G	C3'-C2'	-5.01	1.45	1.52
2	SA	1420	U	C4'-C3'	-5.01	1.45	1.52
9	SI	78	ILE	C-N	5.01	1.40	1.34
24	S3	126	TRP	CA-CB	5.01	1.61	1.53
26	LA	389	G	C2'-O2'	-5.01	1.34	1.42
26	LA	415	A	C5'-C4'	5.01	1.58	1.51
26	LA	455	C	C4'-O4'	-5.01	1.38	1.45
26	LA	1761	C	O3'-P	-5.01	1.53	1.61
26	LA	2172	U	C3'-O3'	5.01	1.50	1.43
57	LS	109	VAL	C-N	-5.01	1.27	1.33
3	S1	48	C	C4'-O4'	5.01	1.53	1.45
4	S2	52	C	C3'-O3'	5.01	1.49	1.42
8	SH	70	VAL	N-CA	5.01	1.50	1.46
26	LA	610	C	C2'-C1'	-5.01	1.45	1.53
26	LA	1947	C	C3'-O3'	5.01	1.49	1.42
26	LA	2056	G	C4'-C3'	-5.01	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	LA	2431	U	O5'-C5'	5.01	1.50	1.42
45	LG	124	ARG	CA-C	5.01	1.59	1.52
50	LL	29	ALA	N-CA	-5.01	1.40	1.46
51	LI	118	PRO	CA-CB	-5.01	1.46	1.53
2	SA	914	A	O4'-C1'	-5.01	1.34	1.41
24	S3	262	LEU	CA-CB	5.01	1.61	1.53
41	L5	44	VAL	CA-CB	-5.01	1.47	1.54
2	SA	292	G	C1'-N9	-5.01	1.40	1.48
2	SA	1331	G	P-O5'	-5.01	1.52	1.59
14	SN	52	ARG	CA-C	-5.01	1.46	1.52
26	LA	202	U	C3'-C2'	-5.01	1.45	1.52
26	LA	1187	G	C2-N2	-5.01	1.24	1.34
41	L5	27	GLY	N-CA	-5.01	1.39	1.45
45	LG	82	TYR	CA-C	-5.01	1.47	1.52
51	LI	116	ARG	N-CA	5.01	1.50	1.46
53	LP	66	ALA	CA-C	5.01	1.59	1.52
21	SE	73	VAL	CA-C	5.00	1.59	1.52
25	LB	92	C	C3'-C2'	5.00	1.60	1.52
57	LS	112	ALA	N-CA	-5.00	1.40	1.46
2	SA	1373	G	C3'-O3'	5.00	1.49	1.42
19	SC	189	HIS	CB-CG	5.00	1.57	1.50
26	LA	1296	G	C2'-C1'	-5.00	1.45	1.53
26	LA	1550	C	C2'-C1'	-5.00	1.45	1.53
26	LA	1570	A	C3'-O3'	5.00	1.49	1.42
26	LA	1697	G	O4'-C1'	-5.00	1.34	1.41
26	LA	2548	U	C2'-C1'	-5.00	1.45	1.53
55	LQ	86	GLY	CA-C	-5.00	1.44	1.51
1	SS	61	VAL	N-CA	-5.00	1.40	1.46
2	SA	933	G	O4'-C1'	5.00	1.49	1.41
19	SC	222	GLN	CA-C	5.00	1.58	1.53
24	S3	489	TYR	C-N	-5.00	1.26	1.33
26	LA	255	A	C2'-C1'	-5.00	1.45	1.53
26	LA	478	A	C4'-O4'	-5.00	1.38	1.45
26	LA	560	C	C5'-C4'	5.00	1.58	1.51
26	LA	691	C	C2'-C1'	-5.00	1.45	1.53
26	LA	1593	A	C3'-O3'	5.00	1.49	1.42
26	LA	1744	A	C1'-N9	-5.00	1.40	1.48
41	L5	1	MET	CA-CB	5.00	1.63	1.53

All (11473) bond angle outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1568	G	P-O5'-C5'	25.30	158.84	120.90
26	LA	826	U	P-O3'-C3'	22.14	153.42	120.20
26	LA	2516	A	P-O5'-C5'	19.57	150.25	120.90
26	LA	1409	U	P-O5'-C5'	19.31	149.86	120.90
2	SA	1344	C	O3'-P-O5'	18.31	131.47	104.00
45	LG	106	ALA	CA-C-N	18.03	131.60	120.24
45	LG	106	ALA	C-N-CA	18.03	131.60	120.24
2	SA	1316	G	P-O3'-C3'	17.98	147.17	120.20
26	LA	880	G	P-O5'-C5'	17.28	146.82	120.90
26	LA	2451	A	P-O5'-C5'	17.09	146.53	120.90
49	LK	40	ALA	N-CA-C	17.08	131.64	111.82
2	SA	995	C	P-O5'-C5'	16.42	145.53	120.90
2	SA	119	A	P-O3'-C3'	16.35	144.73	120.20
26	LA	974	G	P-O3'-C3'	16.09	144.33	120.20
26	LA	2500	U	P-O3'-C3'	16.06	144.28	120.20
26	LA	114	U	P-O5'-C5'	15.82	144.63	120.90
2	SA	412	A	P-O3'-C3'	15.66	143.69	120.20
2	SA	224	U	P-O3'-C3'	15.49	143.44	120.20
26	LA	2427	C	P-O5'-C5'	15.49	144.13	120.90
26	LA	776	G	P-O3'-C3'	15.41	143.32	120.20
26	LA	1912	A	P-O5'-C5'	15.19	143.68	120.90
26	LA	2889	C	P-O5'-C5'	15.08	143.52	120.90
26	LA	653	U	P-O3'-C3'	15.06	142.79	120.20
26	LA	34	U	C2'-C3'-O3'	15.00	132.00	109.50
26	LA	2105	U	P-O5'-C5'	15.00	143.40	120.90
26	LA	2451	A	O4'-C1'-N9	14.91	130.56	108.20
2	SA	841	C	P-O3'-C3'	14.82	142.43	120.20
13	SM	52	ILE	N-CA-C	14.76	125.68	110.62
2	SA	475	C	P-O5'-C5'	14.48	142.63	120.90
2	SA	792	A	P-O5'-C5'	14.48	142.62	120.90
25	LB	34	A	P-O3'-C3'	14.42	141.83	120.20
2	SA	3	A	P-O3'-C3'	14.40	141.81	120.20
26	LA	1916	A	P-O5'-C5'	14.28	142.31	120.90
2	SA	764	C	P-O3'-C3'	14.20	141.50	120.20
2	SA	1447	A	O3'-P-O5'	-14.20	82.70	104.00
37	LC	186	LYS	N-CA-C	14.15	126.70	111.28
26	LA	900	A	P-O3'-C3'	14.12	141.39	120.20
2	SA	840	C	P-O5'-C5'	14.10	142.05	120.90
3	S1	23	C	P-O3'-C3'	14.09	141.33	120.20
26	LA	1731	G	P-O3'-C3'	14.08	141.32	120.20
2	SA	271	C	P-O3'-C3'	14.06	141.29	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2287	A	P-O3'-C3'	14.04	141.26	120.20
26	LA	1122	G	C5'-C4'-C3'	14.00	137.01	116.00
2	SA	1358	U	O4'-C4'-C3'	-13.96	90.04	104.00
2	SA	1257	A	P-O3'-C3'	13.95	141.12	120.20
22	SF	44	ARG	NE-CZ-NH1	13.91	135.41	121.50
26	LA	2832	U	P-O3'-C3'	13.89	141.03	120.20
2	SA	1541	U	P-O5'-C5'	13.84	141.66	120.90
24	S3	663	PHE	CA-CB-CG	-13.72	100.08	113.80
26	LA	2800	A	P-O5'-C5'	13.70	141.45	120.90
2	SA	1206	G	P-O5'-C5'	13.70	141.45	120.90
4	S2	29	C	P-O5'-C5'	13.68	141.41	120.90
24	S3	155	ASN	CA-CB-CG	-13.64	98.95	112.60
26	LA	1761	C	P-O3'-C3'	13.63	140.65	120.20
2	SA	1448	C	P-O5'-C5'	13.50	141.15	120.90
2	SA	811	C	P-O5'-C5'	13.45	141.07	120.90
24	S3	522	TYR	O-C-N	-13.42	112.35	121.88
26	LA	1240	U	P-O5'-C5'	13.40	141.00	120.90
31	LX	49	ASN	CA-CB-CG	-13.35	99.25	112.60
26	LA	125	A	O3'-P-O5'	13.33	124.00	104.00
2	SA	348	G	C5'-C4'-C3'	13.33	135.99	116.00
2	SA	1207	G	P-O3'-C3'	13.29	140.13	120.20
34	L0	27	ASN	CA-CB-CG	-13.22	99.38	112.60
57	LS	96	ASP	CA-CB-CG	-13.20	99.40	112.60
26	LA	455	C	P-O3'-C3'	13.15	139.92	120.20
26	LA	2071	A	P-O5'-C5'	13.12	140.57	120.90
26	LA	1406	U	P-O5'-C5'	12.94	140.31	120.90
26	LA	1647	U	C2'-C3'-O3'	12.93	128.89	109.50
2	SA	1358	U	C5'-C4'-C3'	12.91	135.37	116.00
46	LH	110	HIS	CA-CB-CG	12.89	126.69	113.80
26	LA	885	C	P-O5'-C5'	12.85	140.17	120.90
26	LA	704	G	C2'-C3'-O3'	12.79	128.69	109.50
3	S1	22	G	P-O3'-C3'	12.78	139.37	120.20
51	LI	61	VAL	N-CA-C	12.78	122.54	110.53
41	L5	23	ALA	N-CA-C	12.77	125.19	111.28
2	SA	209	U	P-O3'-C3'	12.74	139.31	120.20
26	LA	896	A	P-O5'-C5'	12.73	140.00	120.90
26	LA	1940	U	P-O5'-C5'	12.73	139.99	120.90
26	LA	2127	G	C5'-C4'-C3'	12.65	134.17	115.20
24	S3	92	VAL	CA-C-N	12.63	137.21	120.28
24	S3	92	VAL	C-N-CA	12.63	137.21	120.28
48	LN	81	ASP	CA-C-N	12.61	137.18	120.28
48	LN	81	ASP	C-N-CA	12.61	137.18	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1210	G	P-O3'-C3'	12.58	139.08	120.20
2	SA	956	U	P-O3'-C3'	12.57	139.06	120.20
38	LE	90	PHE	CA-CB-CG	-12.56	101.24	113.80
26	LA	2575	C	C5'-C4'-C3'	12.53	134.00	115.20
26	LA	2246	G	C5'-C4'-C3'	-12.52	97.22	116.00
26	LA	370	G	P-O3'-C3'	12.51	138.97	120.20
26	LA	267	C	P-O5'-C5'	12.50	139.65	120.90
26	LA	909	A	O3'-P-O5'	-12.45	85.33	104.00
2	SA	1201	A	C2'-C3'-O3'	12.41	128.11	109.50
2	SA	1417	G	P-O3'-C3'	12.37	138.75	120.20
57	LS	105	PHE	CA-CB-CG	-12.37	101.43	113.80
26	LA	574	A	C1'-O4'-C4'	-12.30	97.60	109.90
33	LZ	18	SER	N-CA-C	12.28	124.35	110.97
26	LA	27	G	C2'-C3'-O3'	12.28	127.91	109.50
26	LA	2126	A	O3'-P-O5'	-12.26	85.61	104.00
26	LA	669	G	P-O3'-C3'	12.25	138.58	120.20
2	SA	956	U	P-O5'-C5'	12.23	139.25	120.90
13	SM	44	ILE	CA-C-N	12.21	136.64	120.28
13	SM	44	ILE	C-N-CA	12.21	136.64	120.28
55	LQ	100	HIS	CA-C-O	-12.21	111.01	119.68
26	LA	1176	U	P-O3'-C3'	-12.20	101.90	120.20
26	LA	113	U	O4'-C1'-C2'	-12.19	95.42	107.60
26	LA	909	A	P-O3'-C3'	12.15	138.42	120.20
4	S2	20	G	P-O3'-C3'	12.14	138.41	120.20
26	LA	1582	C	P-O5'-C5'	12.14	139.11	120.90
2	SA	642	A	P-O5'-C5'	12.11	139.06	120.90
26	LA	1856	U	P-O5'-C5'	12.08	139.02	120.90
2	SA	411	A	P-O3'-C3'	12.08	138.32	120.20
2	SA	429	U	C4'-C3'-C2'	-12.07	90.53	102.60
26	LA	29	U	P-O3'-C3'	12.06	138.29	120.20
26	LA	2581	G	P-O3'-C3'	12.05	138.27	120.20
26	LA	1897	G	C5'-C4'-C3'	-11.99	98.01	116.00
26	LA	141	G	C5'-C4'-C3'	-11.96	98.06	116.00
10	SJ	91	ASP	CA-C-N	11.94	136.86	120.63
10	SJ	91	ASP	C-N-CA	11.94	136.86	120.63
26	LA	1964	G	P-O3'-C3'	-11.90	102.35	120.20
48	LN	103	ILE	N-CA-C	11.84	121.79	110.42
26	LA	2245	U	O3'-P-O5'	-11.83	86.26	104.00
26	LA	2609	U	P-O3'-C3'	11.80	137.91	120.20
2	SA	1473	G	P-O5'-C5'	11.79	138.59	120.90
26	LA	2465	C	P-O5'-C5'	11.76	138.54	120.90
11	SK	27	ASN	CA-CB-CG	-11.76	100.84	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1811	G	C5'-C4'-C3'	11.76	133.64	116.00
47	LJ	95	PHE	N-CA-C	11.75	125.45	111.82
26	LA	2808	G	P-O3'-C3'	11.73	137.80	120.20
26	LA	2479	U	P-O5'-C5'	11.70	138.45	120.90
26	LA	2867	G	P-O3'-C3'	11.67	137.70	120.20
27	LD	129	LEU	O-C-N	-11.67	113.60	121.88
2	SA	1000	A	P-O3'-C3'	11.66	137.69	120.20
26	LA	1275	A	C1'-O4'-C4'	-11.65	98.05	109.70
46	LH	82	PHE	N-CA-C	11.59	126.27	108.42
46	LH	2	ARG	N-CA-C	11.59	125.35	111.33
2	SA	1006	G	P-O5'-C5'	11.55	138.22	120.90
4	S2	76	C	P-O5'-C5'	11.54	138.21	120.90
26	LA	1369	G	C4'-C3'-C2'	-11.54	91.06	102.60
1	SS	9	PHE	CA-CB-CG	-11.52	102.28	113.80
2	SA	1301	U	P-O5'-C5'	11.51	138.17	120.90
26	LA	242	G	P-O5'-C5'	11.51	138.17	120.90
22	SF	41	ASP	CA-CB-CG	11.50	124.10	112.60
1	SS	13	HIS	CA-CB-CG	-11.48	102.32	113.80
26	LA	2572	A	P-O3'-C3'	11.47	137.41	120.20
2	SA	243	A	P-O3'-C3'	11.45	137.37	120.20
6	SU	61	ARG	O-C-N	-11.44	110.14	122.03
37	LC	113	VAL	CA-C-N	11.44	137.37	123.19
37	LC	113	VAL	C-N-CA	11.44	137.37	123.19
8	SH	44	PHE	CA-CB-CG	-11.41	102.39	113.80
2	SA	483	C	P-O5'-C5'	11.41	138.01	120.90
2	SA	227	G	P-O3'-C3'	11.39	137.29	120.20
18	SB	202	ASN	CA-C-N	11.39	136.00	122.44
18	SB	202	ASN	C-N-CA	11.39	136.00	122.44
26	LA	2133	G	P-O3'-C3'	11.37	137.26	120.20
2	SA	518	C	P-O3'-C3'	11.37	137.25	120.20
34	L0	49	ASP	CA-CB-CG	-11.36	101.24	112.60
2	SA	866	C	P-O5'-C5'	11.35	137.93	120.90
34	L0	55	THR	N-CA-C	11.35	124.77	111.71
3	S1	53	G	C2'-C3'-O3'	11.32	126.48	109.50
26	LA	224	U	C5'-C4'-C3'	-11.22	99.16	116.00
26	LA	2579	C	P-O3'-C3'	11.21	137.02	120.20
2	SA	1131	G	P-O5'-C5'	11.20	137.69	120.90
2	SA	1054	C	C4'-C3'-C2'	11.17	113.77	102.60
26	LA	541	A	P-O5'-C5'	11.17	137.66	120.90
26	LA	1514	G	P-O5'-C5'	11.17	137.66	120.90
4	S2	49	C	P-O5'-C5'	11.17	137.65	120.90
26	LA	1643	G	C5'-C4'-C3'	11.17	132.75	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	101	A	P-O3'-C3'	11.15	136.92	120.20
26	LA	2796	U	P-O5'-C5'	11.14	137.61	120.90
26	LA	1962	C	P-O5'-C5'	11.12	137.57	120.90
26	LA	1911	U	C5'-C4'-C3'	-11.11	99.33	116.00
6	SU	12	ASP	N-CA-C	11.11	125.89	108.67
2	SA	899	C	P-O3'-C3'	11.11	136.86	120.20
26	LA	100	U	P-O3'-C3'	11.08	136.82	120.20
26	LA	2497	A	C4'-C3'-C2'	-11.08	91.52	102.60
49	LK	71	LYS	N-CA-C	11.06	122.83	108.34
25	LB	6	G	P-O5'-C5'	11.06	137.48	120.90
26	LA	2133	G	C2'-C3'-O3'	11.04	126.07	109.50
26	LA	2793	C	P-O5'-C5'	11.04	137.46	120.90
21	SE	140	ILE	CA-C-N	11.02	135.42	120.54
21	SE	140	ILE	C-N-CA	11.02	135.42	120.54
2	SA	960	U	C2'-C3'-O3'	11.02	126.02	109.50
25	LB	66	A	P-O3'-C3'	11.01	136.72	120.20
26	LA	298	G	P-O3'-C3'	11.01	136.72	120.20
45	LG	76	PHE	CA-CB-CG	-11.01	102.79	113.80
21	SE	120	HIS	CA-CB-CG	-10.98	102.82	113.80
26	LA	914	G	C5'-C4'-C3'	-10.98	99.53	116.00
26	LA	271	G	C5'-C4'-C3'	-10.98	98.74	115.20
26	LA	551	G	C5'-C4'-C3'	10.97	132.46	116.00
2	SA	539	A	C4'-C3'-C2'	-10.95	91.65	102.60
26	LA	2731	G	P-O5'-C5'	10.94	137.32	120.90
26	LA	1438	U	P-O5'-C5'	10.93	137.30	120.90
24	S3	566	ALA	CA-C-O	10.93	130.54	118.52
26	LA	2841	C	C5'-C4'-C3'	-10.93	99.61	116.00
26	LA	910	A	C2'-C3'-O3'	10.90	125.85	109.50
22	SF	64	VAL	O-C-N	-10.88	109.01	122.61
2	SA	1440	U	P-O3'-C3'	10.87	136.51	120.20
26	LA	2176	A	C5'-C4'-C3'	-10.86	99.71	116.00
2	SA	4	U	P-O3'-C3'	10.84	136.46	120.20
26	LA	1565	C	P-O5'-C5'	10.81	137.12	120.90
26	LA	133	U	P-O5'-C5'	10.80	137.10	120.90
26	LA	332	A	O4'-C1'-C2'	-10.78	95.02	105.80
2	SA	810	C	P-O5'-C5'	10.78	137.07	120.90
2	SA	1302	C	P-O3'-C3'	10.78	136.36	120.20
26	LA	101	A	O4'-C1'-C2'	-10.76	96.84	107.60
46	LH	103	ASN	CA-CB-CG	-10.74	101.86	112.60
49	LK	21	PRO	N-CA-C	10.73	123.80	110.70
2	SA	1259	C	C5'-C4'-C3'	-10.71	99.93	116.00
26	LA	1160	G	C5'-C4'-C3'	-10.71	99.94	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	485	U	C2'-C3'-O3'	10.71	125.56	109.50
26	LA	1069	A	P-O3'-C3'	10.70	136.25	120.20
2	SA	372	C	P-O3'-C3'	10.66	136.19	120.20
34	L0	52	ARG	NE-CZ-NH1	-10.66	110.84	121.50
2	SA	776	G	P-O3'-C3'	10.66	136.19	120.20
42	L6	53	ASP	CA-CB-CG	-10.65	101.95	112.60
4	S2	76	C	P-O3'-C3'	10.63	136.15	120.20
2	SA	933	G	P-O5'-C5'	10.63	136.85	120.90
26	LA	1205	A	P-O3'-C3'	10.62	136.14	120.20
26	LA	2682	A	C4'-C3'-C2'	-10.62	91.98	102.60
56	LR	20	ARG	O-C-N	-10.60	111.20	121.38
36	L2	15	SER	N-CA-C	10.60	123.90	111.71
6	SU	17	ARG	NE-CZ-NH2	-10.60	109.66	119.20
40	L4	4	ILE	N-CA-C	-10.58	103.23	112.12
2	SA	307	C	P-O3'-C3'	10.57	136.06	120.20
2	SA	898	G	C4'-C3'-C2'	-10.57	92.03	102.60
2	SA	420	U	P-O3'-C3'	10.57	136.06	120.20
26	LA	1648	U	C5'-C4'-C3'	-10.56	100.16	116.00
2	SA	410	G	O3'-P-O5'	10.56	119.84	104.00
26	LA	1460	U	P-O3'-C3'	10.56	136.03	120.20
2	SA	819	A	O4'-C1'-C2'	-10.55	97.05	107.60
26	LA	306	U	C5'-C4'-C3'	-10.54	100.18	116.00
37	LC	218	MET	O-C-N	-10.54	112.04	121.85
24	S3	183	ASP	CA-CB-CG	-10.53	102.07	112.60
26	LA	2019	A	P-O3'-C3'	10.53	136.00	120.20
26	LA	1914	C	C5'-C4'-C3'	-10.53	100.21	116.00
2	SA	772	U	P-O5'-C5'	10.51	136.67	120.90
26	LA	2689	U	O4'-C1'-C2'	10.51	116.31	105.80
56	LR	97	TYR	N-CA-C	10.51	125.20	111.75
26	LA	941	A	P-O5'-C5'	10.50	136.65	120.90
26	LA	2126	A	C4'-C3'-C2'	-10.50	92.10	102.60
25	LB	86	G	P-O3'-C3'	10.50	135.95	120.20
45	LG	79	ARG	NE-CZ-NH1	-10.49	111.01	121.50
26	LA	574	A	O4'-C1'-N9	10.49	124.23	108.50
26	LA	2663	G	P-O3'-C3'	10.47	135.91	120.20
26	LA	1559	U	C5'-C4'-C3'	-10.47	99.49	115.20
3	S1	35	G	P-O5'-C5'	10.45	136.58	120.90
2	SA	1226	C	C2'-C3'-O3'	10.45	125.18	109.50
26	LA	2655	G	P-O5'-C5'	-10.45	105.22	120.90
26	LA	1840	G	C5'-C4'-C3'	-10.45	100.33	116.00
37	LC	172	HIS	CA-CB-CG	10.43	124.23	113.80
26	LA	1757	A	C1'-O4'-C4'	-10.43	99.47	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2385	C	P-O3'-C3'	-10.43	104.56	120.20
27	LD	152	GLN	N-CA-C	10.43	122.64	111.28
26	LA	1142	A	P-O3'-C3'	10.42	135.84	120.20
2	SA	1213	A	P-O3'-C3'	10.42	135.83	120.20
19	SC	104	GLU	N-CA-C	10.42	124.08	110.43
26	LA	695	G	C4'-C3'-C2'	-10.41	92.19	102.60
2	SA	831	A	C5'-C4'-C3'	-10.41	100.39	116.00
27	LD	242	HIS	CA-C-O	-10.40	111.13	119.66
4	S2	7	G	P-O3'-C3'	10.40	135.80	120.20
26	LA	2508	G	C5'-C4'-C3'	10.39	131.59	116.00
29	LV	75	GLY	N-CA-C	10.39	128.83	112.31
2	SA	1208	C	P-O3'-C3'	10.38	135.77	120.20
26	LA	2657	A	P-O5'-C5'	10.38	136.47	120.90
11	SK	108	ASN	CA-CB-CG	-10.37	102.23	112.60
2	SA	717	U	P-O3'-C3'	10.36	135.74	120.20
39	L3	41	HIS	CA-CB-CG	-10.36	103.44	113.80
26	LA	995	C	P-O5'-C5'	10.35	136.43	120.90
26	LA	1209	U	P-O3'-C3'	-10.35	104.67	120.20
4	S2	2	G	P-O5'-C5'	10.35	136.42	120.90
26	LA	2566	A	P-O5'-C5'	-10.35	105.38	120.90
2	SA	1451	U	P-O3'-C3'	10.34	135.71	120.20
2	SA	182	A	C5'-C4'-C3'	-10.34	99.69	115.20
26	LA	2304	G	C2'-C3'-O3'	10.34	125.00	109.50
26	LA	2887	A	P-O5'-C5'	10.33	136.39	120.90
2	SA	197	A	P-O3'-C3'	10.33	135.69	120.20
33	LZ	20	ALA	N-CA-C	-10.33	100.90	112.57
11	SK	58	THR	N-CA-C	10.32	120.01	108.14
26	LA	229	C	C4'-C3'-C2'	-10.32	92.28	102.60
55	LQ	69	ASP	CA-CB-CG	-10.31	102.29	112.60
2	SA	1388	C	C5'-C4'-C3'	-10.30	100.55	116.00
2	SA	199	A	P-O5'-C5'	10.30	136.34	120.90
57	LS	32	ARG	NE-CZ-NH2	10.29	128.47	119.20
2	SA	247	G	P-O5'-C5'	10.29	136.33	120.90
26	LA	139	U	P-O3'-C3'	10.28	135.62	120.20
5	ST	51	ASN	N-CA-CB	10.28	125.24	110.12
2	SA	1018	G	C5'-C4'-C3'	-10.26	100.61	116.00
26	LA	513	A	C5'-C4'-C3'	-10.26	100.60	116.00
26	LA	763	G	C5'-C4'-C3'	10.26	131.39	116.00
2	SA	120	A	C5'-C4'-C3'	-10.24	100.63	116.00
2	SA	150	U	P-O5'-C5'	10.24	136.26	120.90
26	LA	2151	U	P-O5'-C5'	10.24	136.26	120.90
26	LA	1781	U	C4'-C3'-C2'	10.20	112.80	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	LG	106	ALA	N-CA-C	-10.20	100.51	113.16
49	LK	4	VAL	O-C-N	-10.20	113.67	122.65
16	SP	20	VAL	N-CA-C	10.20	123.54	108.45
26	LA	1341	G	P-O3'-C3'	-10.19	104.91	120.20
2	SA	982	U	C2'-C3'-O3'	10.19	124.78	109.50
2	SA	2	A	P-O3'-C3'	10.18	135.47	120.20
2	SA	197	A	P-O5'-C5'	-10.18	105.63	120.90
26	LA	1847	A	P-O3'-C3'	-10.18	104.94	120.20
2	SA	921	U	C4'-C3'-C2'	-10.17	92.43	102.60
26	LA	1389	G	P-O5'-C5'	-10.17	105.64	120.90
2	SA	909	A	P-O5'-C5'	10.17	136.15	120.90
11	SK	58	THR	CB-CA-C	-10.17	96.44	110.37
26	LA	1778	U	C5'-C4'-C3'	-10.16	99.96	115.20
34	L0	22	LEU	CA-C-N	10.16	139.99	121.70
34	L0	22	LEU	C-N-CA	10.16	139.99	121.70
24	S3	98	VAL	CB-CA-C	-10.16	98.97	111.97
4	S2	13	C	O3'-P-O5'	10.15	119.23	104.00
29	LV	55	VAL	CA-C-O	10.14	130.94	120.39
26	LA	516	C	P-O3'-C3'	10.12	135.38	120.20
4	S2	58	A	P-O3'-C3'	10.12	135.37	120.20
26	LA	1476	U	P-O5'-C5'	-10.09	105.76	120.90
8	SH	17	GLN	OE1-CD-NE2	-10.09	112.51	122.60
26	LA	2471	A	C2'-C3'-O3'	10.09	124.63	109.50
47	LJ	35	ASP	CA-CB-CG	10.08	122.68	112.60
26	LA	575	A	C5'-C4'-C3'	10.08	131.11	116.00
55	LQ	34	HIS	CA-CB-CG	10.07	123.87	113.80
2	SA	587	G	O3'-P-O5'	-10.06	88.91	104.00
2	SA	309	A	P-O3'-C3'	-10.05	105.13	120.20
18	SB	185	ILE	N-CA-C	-10.04	91.31	107.28
26	LA	1967	C	O5'-C5'-C4'	10.04	126.56	111.50
26	LA	2385	C	P-O5'-C5'	10.04	135.96	120.90
21	SE	32	PHE	CA-CB-CG	-10.04	103.76	113.80
22	SF	42	TRP	N-CA-C	-10.03	100.68	113.72
26	LA	451	U	C1'-O4'-C4'	-10.03	99.67	109.70
26	LA	2171	A	P-O3'-C3'	10.03	135.24	120.20
28	LU	24	ILE	O-C-N	-10.02	112.42	122.14
26	LA	217	A	P-O3'-C3'	10.02	135.23	120.20
26	LA	1925	C	C5'-C4'-O4'	10.02	124.83	109.80
26	LA	1857	G	O3'-P-O5'	-10.01	88.99	104.00
26	LA	2566	A	C4'-C3'-C2'	10.00	112.60	102.60
2	SA	1338	G	P-O5'-C5'	-9.99	105.91	120.90
24	S3	144	ASP	N-CA-C	9.99	122.17	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	LY	54	ARG	CA-C-N	9.99	133.67	120.28
32	LY	54	ARG	C-N-CA	9.99	133.67	120.28
26	LA	2178	C	P-O5'-C5'	9.99	135.88	120.90
46	LH	100	ASN	OD1-CG-ND2	-9.99	112.61	122.60
26	LA	1587	G	P-O5'-C5'	9.98	135.88	120.90
26	LA	1834	U	C4'-C3'-C2'	9.98	112.58	102.60
2	SA	185	U	P-O5'-C5'	9.98	135.87	120.90
26	LA	2270	A	P-O5'-C5'	9.98	135.86	120.90
26	LA	777	G	C5'-C4'-C3'	9.97	130.95	116.00
2	SA	650	G	P-O3'-C3'	9.96	135.14	120.20
2	SA	255	G	C4'-C3'-C2'	-9.96	92.64	102.60
26	LA	1905	C	C5'-C4'-C3'	-9.96	101.07	116.00
29	LV	91	GLN	OE1-CD-NE2	-9.95	112.65	122.60
52	LO	40	ARG	NE-CZ-NH2	9.94	128.15	119.20
26	LA	322	A	C5'-C4'-C3'	9.94	130.11	115.20
26	LA	1086	A	O3'-P-O5'	-9.93	89.11	104.00
4	S2	22	A	C1'-O4'-C4'	-9.92	99.78	109.70
18	SB	218	ALA	N-CA-C	9.92	122.09	111.28
45	LG	158	THR	N-CA-CB	9.91	125.15	110.49
2	SA	1100	C	P-O5'-C5'	9.89	135.74	120.90
26	LA	194	G	P-O5'-C5'	9.89	135.74	120.90
4	S2	39	A	C5'-C4'-C3'	-9.89	101.16	116.00
26	LA	2652	C	C5'-C4'-C3'	9.89	130.83	116.00
19	SC	137	VAL	N-CA-C	9.88	119.91	110.42
26	LA	511	U	P-O3'-C3'	9.88	135.02	120.20
26	LA	1107	G	C5'-C4'-C3'	-9.87	101.19	116.00
26	LA	1167	C	O4'-C1'-N1	9.87	123.31	108.50
9	SI	103	VAL	N-CA-C	9.86	120.68	110.72
2	SA	235	C	P-O5'-C5'	-9.86	106.11	120.90
8	SH	15	ASN	CA-CB-CG	-9.86	102.74	112.60
18	SB	104	LYS	CA-C-N	9.86	133.49	120.28
18	SB	104	LYS	C-N-CA	9.86	133.49	120.28
38	LE	154	LYS	N-CA-C	-9.85	96.04	108.45
21	SE	75	LEU	CA-C-O	9.85	131.99	121.45
2	SA	1454	G	C5'-C4'-C3'	9.84	130.76	116.00
3	S1	19	A	P-O5'-C5'	9.84	135.66	120.90
26	LA	397	U	C5'-C4'-C3'	-9.84	101.24	116.00
55	LQ	31	THR	O-C-N	-9.83	112.76	121.71
28	LU	62	ASP	N-CA-C	9.81	121.97	111.28
26	LA	729	G	C5'-C4'-C3'	-9.81	101.29	116.00
26	LA	2700	A	C4'-C3'-C2'	-9.79	92.81	102.60
2	SA	276	G	P-O5'-C5'	9.79	135.59	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	876	C	P-O3'-C3'	9.79	134.89	120.20
26	LA	2245	U	P-O5'-C5'	9.79	135.59	120.90
26	LA	2127	G	P-O3'-C3'	9.79	134.88	120.20
2	SA	1076	U	P-O5'-C5'	9.78	135.57	120.90
26	LA	125	A	P-O3'-C3'	9.78	134.87	120.20
2	SA	1264	U	P-O5'-C5'	9.78	135.56	120.90
45	LG	146	ASP	N-CA-C	9.78	124.03	110.24
26	LA	1950	G	P-O5'-C5'	9.76	135.54	120.90
26	LA	590	A	P-O5'-C5'	9.76	135.54	120.90
26	LA	1927	A	P-O3'-C3'	9.76	134.84	120.20
5	ST	2	ASN	CA-C-N	9.76	133.60	120.63
5	ST	2	ASN	C-N-CA	9.76	133.60	120.63
26	LA	773	U	C5'-C4'-C3'	-9.76	101.37	116.00
46	LH	165	ASP	CA-CB-CG	-9.75	102.85	112.60
33	LZ	57	VAL	N-CA-C	9.74	119.78	110.42
26	LA	266	G	C5'-C4'-C3'	9.74	130.61	116.00
26	LA	1675	C	P-O3'-C3'	-9.74	105.59	120.20
24	S3	424	LYS	CA-C-N	9.72	133.08	120.44
24	S3	424	LYS	C-N-CA	9.72	133.08	120.44
26	LA	297	G	C5'-C4'-C3'	-9.72	101.42	116.00
26	LA	1168	G	P-O5'-C5'	9.71	135.47	120.90
2	SA	931	C	C5'-C4'-C3'	9.71	130.57	116.00
3	S1	41	A	P-O3'-C3'	9.71	134.76	120.20
2	SA	1375	A	P-O5'-C5'	9.71	135.46	120.90
2	SA	497	G	P-O3'-C3'	9.69	134.74	120.20
5	ST	62	ALA	N-CA-C	9.69	121.85	111.28
2	SA	1449	C	C5'-C4'-C3'	-9.69	101.47	116.00
2	SA	1362	A	O4'-C1'-N9	9.69	122.73	108.20
26	LA	2507	C	P-O5'-C5'	9.68	135.43	120.90
6	SU	46	ARG	N-CA-C	-9.68	99.48	112.26
24	S3	230	GLU	CA-C-N	9.68	133.02	120.44
24	S3	230	GLU	C-N-CA	9.68	133.02	120.44
2	SA	395	C	C4'-C3'-C2'	-9.68	92.92	102.60
26	LA	2566	A	P-O3'-C3'	-9.68	105.68	120.20
3	S1	15	G	O4'-C1'-C2'	-9.68	96.12	105.80
51	LI	132	PHE	CA-CB-CG	9.66	123.47	113.80
48	LN	111	ILE	CA-CB-CG1	9.66	126.83	110.40
26	LA	42	A	P-O5'-C5'	9.66	135.39	120.90
26	LA	2587	A	C5'-C4'-C3'	9.66	130.49	116.00
12	SL	108	ASP	CA-CB-CG	-9.65	102.95	112.60
26	LA	1757	A	C4'-C3'-C2'	-9.65	92.95	102.60
44	LF	78	TRP	O-C-N	-9.64	111.31	122.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	S2	30	G	C5'-C4'-C3'	9.64	130.46	116.00
26	LA	1967	C	P-O5'-C5'	9.64	135.36	120.90
26	LA	2293	G	C5'-C4'-C3'	-9.63	101.55	116.00
2	SA	1529	G	P-O3'-C3'	9.63	134.64	120.20
26	LA	1921	G	O4'-C1'-N9	9.62	122.94	108.50
35	L1	35	VAL	O-C-N	-9.63	112.27	122.95
2	SA	1404	C	P-O5'-C5'	9.62	135.33	120.90
25	LB	86	G	C4'-C3'-C2'	-9.62	92.98	102.60
14	SN	91	GLU	CA-C-N	9.61	131.69	123.33
14	SN	91	GLU	C-N-CA	9.61	131.69	123.33
26	LA	2101	A	P-O5'-C5'	9.61	135.31	120.90
2	SA	1346	A	O4'-C1'-C2'	-9.61	96.19	105.80
26	LA	2157	G	P-O3'-C3'	9.61	134.61	120.20
21	SE	86	GLY	CA-C-O	-9.60	112.94	121.58
4	S2	73	A	C2'-C3'-O3'	9.59	128.09	113.70
26	LA	2236	U	P-O3'-C3'	9.59	134.59	120.20
4	S2	66	C	C5'-C4'-C3'	-9.59	101.61	116.00
2	SA	819	A	O4'-C1'-N9	9.59	122.88	108.50
45	LG	99	PHE	CA-CB-CG	-9.59	104.21	113.80
2	SA	128	G	P-O3'-C3'	9.58	134.57	120.20
26	LA	2506	U	O3'-P-O5'	9.57	118.36	104.00
2	SA	321	A	C5'-C4'-C3'	9.56	130.34	116.00
41	L5	3	ARG	NE-CZ-NH2	9.56	127.81	119.20
2	SA	810	C	C4'-C3'-C2'	-9.56	93.04	102.60
26	LA	2262	U	C4'-C3'-C2'	-9.55	93.05	102.60
26	LA	44	A	C5'-C4'-C3'	-9.55	101.68	116.00
26	LA	1341	G	C4'-C3'-C2'	-9.55	93.05	102.60
2	SA	1045	C	P-O5'-C5'	9.54	135.22	120.90
2	SA	1442	G	C5'-C4'-C3'	9.55	130.32	116.00
26	LA	2205	A	C4'-C3'-C2'	-9.55	93.05	102.60
26	LA	1696	G	C5'-C4'-C3'	9.54	130.31	116.00
18	SB	130	LYS	N-CA-C	9.54	122.68	111.71
26	LA	100	U	O4'-C1'-N1	9.54	122.81	108.50
26	LA	1686	C	P-O5'-C5'	9.53	135.20	120.90
2	SA	834	U	C5'-C4'-C3'	-9.53	101.70	116.00
24	S3	492	THR	O-C-N	-9.52	113.27	123.26
26	LA	2135	A	C5'-C4'-C3'	-9.51	101.73	116.00
26	LA	27	G	P-O3'-C3'	9.51	134.47	120.20
26	LA	1740	G	P-O5'-C5'	9.51	135.17	120.90
26	LA	1320	C	P-O5'-C5'	9.51	135.17	120.90
2	SA	8	A	O4'-C4'-C3'	-9.50	96.60	106.10
4	S2	46	G	O3'-P-O5'	9.50	118.25	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	L0	27	ASN	N-CA-C	9.49	121.70	111.36
38	LE	15	PHE	CA-CB-CG	-9.48	104.31	113.80
1	SS	68	HIS	CA-CB-CG	9.48	123.28	113.80
15	SO	67	ASP	O-C-N	-9.48	112.23	122.09
26	LA	390	U	C2'-C3'-O3'	9.48	123.71	109.50
2	SA	582	C	C5'-C4'-C3'	-9.47	101.79	116.00
26	LA	18	U	O4'-C1'-N1	9.47	122.71	108.50
11	SK	92	ARG	CD-NE-CZ	9.47	137.66	124.40
56	LR	57	ALA	CA-C-N	9.47	135.08	122.30
56	LR	57	ALA	C-N-CA	9.47	135.08	122.30
44	LF	48	THR	N-CA-CB	9.46	123.44	110.38
27	LD	225	ASN	CA-CB-CG	-9.46	103.14	112.60
44	LF	59	PRO	CA-C-N	9.46	132.95	120.28
44	LF	59	PRO	C-N-CA	9.46	132.95	120.28
2	SA	962	C	C5'-C4'-C3'	-9.46	101.82	116.00
2	SA	1397	C	P-O3'-C3'	9.44	134.36	120.20
26	LA	300	A	P-O3'-C3'	-9.43	106.06	120.20
26	LA	849	A	C5'-C4'-C3'	-9.42	101.86	116.00
2	SA	961	U	O5'-C5'-C4'	9.42	125.63	111.50
26	LA	1510	G	C5'-C4'-C3'	-9.42	101.88	116.00
2	SA	890	G	C5'-C4'-O4'	9.41	123.22	109.10
26	LA	945	A	C1'-C2'-O2'	-9.41	97.68	111.80
52	LO	97	GLN	CA-C-N	9.41	131.61	119.84
52	LO	97	GLN	C-N-CA	9.41	131.61	119.84
2	SA	489	C	P-O5'-C5'	9.41	135.01	120.90
11	SK	98	ALA	CA-C-N	9.41	132.89	120.28
11	SK	98	ALA	C-N-CA	9.41	132.89	120.28
18	SB	203	ASP	CA-CB-CG	9.40	122.00	112.60
2	SA	836	G	C5'-C4'-C3'	9.40	130.10	116.00
2	SA	1195	C	P-O3'-C3'	9.40	134.30	120.20
26	LA	1266	G	C2'-C3'-O3'	9.40	123.60	109.50
8	SH	2	MET	N-CA-C	9.39	121.12	111.07
34	L0	15	ASN	CA-CB-CG	9.39	122.00	112.60
9	SI	33	SER	CA-C-N	9.39	133.22	120.54
9	SI	33	SER	C-N-CA	9.39	133.22	120.54
47	LJ	102	ASN	CA-CB-CG	9.39	121.99	112.60
2	SA	476	U	C5'-C4'-C3'	-9.38	101.92	116.00
26	LA	111	A	C5'-C4'-C3'	-9.38	101.93	116.00
2	SA	1433	A	P-O3'-C3'	9.38	134.26	120.20
15	SO	10	ILE	N-CA-C	9.38	121.31	110.62
40	L4	32	LYS	N-CA-C	9.37	123.09	110.35
25	LB	68	C	C5'-C4'-C3'	-9.36	101.96	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	L0	49	ASP	N-CA-C	9.36	122.47	111.71
24	S3	255	VAL	N-CA-CB	9.36	121.50	110.55
7	SG	32	ASP	CA-CB-CG	9.35	121.95	112.60
26	LA	1522	A	C5'-C4'-C3'	9.35	129.22	115.20
26	LA	1925	C	C5'-C4'-C3'	-9.35	101.98	116.00
58	LT	4	VAL	O-C-N	-9.35	113.16	123.26
26	LA	935	C	P-O5'-C5'	9.34	134.91	120.90
26	LA	748	G	C1'-O4'-C4'	-9.34	100.36	109.70
24	S3	629	ASP	CA-CB-CG	-9.34	103.26	112.60
32	LY	12	GLY	O-C-N	-9.33	112.98	122.59
26	LA	1966	A	P-O3'-C3'	9.33	134.19	120.20
26	LA	1573	G	P-O5'-C5'	9.33	134.89	120.90
26	LA	1097	U	C1'-O4'-C4'	-9.32	100.58	109.90
44	LF	92	HIS	CA-CB-CG	-9.30	104.50	113.80
26	LA	264	C	C4'-C3'-C2'	-9.30	93.30	102.60
26	LA	1543	G	C5'-C4'-C3'	-9.30	102.05	116.00
26	LA	568	U	P-O5'-C5'	-9.30	106.95	120.90
48	LN	115	GLU	O-C-N	-9.29	110.42	122.78
26	LA	1965	C	C5'-C4'-C3'	-9.29	102.06	116.00
26	LA	362	A	C5'-C4'-C3'	-9.29	102.06	116.00
8	SH	111	THR	CA-CB-OG1	9.29	123.53	109.60
2	SA	371	A	C4'-C3'-C2'	-9.29	93.31	102.60
54	LM	4	GLU	N-CA-C	9.28	123.25	109.24
26	LA	2667	C	P-O5'-C5'	9.27	134.81	120.90
2	SA	565	U	C5'-C4'-C3'	9.27	129.90	116.00
2	SA	1213	A	C5'-C4'-C3'	9.27	129.10	115.20
4	S2	33	C	C4'-C3'-C2'	-9.27	93.33	102.60
26	LA	2123	G	P-O5'-C5'	9.27	134.80	120.90
26	LA	675	A	C5'-C4'-C3'	-9.27	102.10	116.00
26	LA	2163	A	O4'-C1'-N9	9.26	122.39	108.50
26	LA	931	U	C3'-C2'-C1'	-9.25	92.25	101.50
26	LA	1270	C	O4'-C1'-C2'	9.24	115.04	105.80
21	SE	110	MET	CA-C-N	9.24	135.38	120.60
21	SE	110	MET	C-N-CA	9.24	135.38	120.60
26	LA	113	U	O4'-C1'-N1	9.24	122.36	108.50
24	S3	474	ARG	NE-CZ-NH1	9.23	130.73	121.50
2	SA	1538	C	P-O3'-C3'	9.23	134.04	120.20
26	LA	2726	A	C4'-C3'-C2'	-9.23	93.37	102.60
2	SA	640	A	O3'-P-O5'	9.22	117.83	104.00
26	LA	34	U	P-O3'-C3'	9.21	134.02	120.20
26	LA	113	U	C4'-C3'-C2'	-9.21	93.39	102.60
2	SA	746	A	C5'-C4'-C3'	-9.21	102.18	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1515	G	C4'-C3'-O3'	-9.21	99.19	113.00
26	LA	798	G	C5'-C4'-C3'	-9.21	102.19	116.00
3	S1	42	U	P-O3'-C3'	9.20	134.00	120.20
53	LP	31	HIS	CA-CB-CG	-9.20	104.60	113.80
26	LA	1071	G	P-O5'-C5'	9.20	134.70	120.90
24	S3	536	ILE	N-CA-C	9.20	121.13	107.80
2	SA	196	A	C5'-C4'-C3'	-9.19	102.21	116.00
4	S2	19	G	P-O5'-C5'	9.19	134.69	120.90
2	SA	393	A	C4'-C3'-C2'	-9.19	93.42	102.60
6	SU	17	ARG	NE-CZ-NH1	9.19	130.69	121.50
26	LA	2140	G	C4'-C3'-C2'	-9.19	93.41	102.60
28	LU	94	ASP	CA-CB-CG	-9.18	103.42	112.60
36	L2	58	ASP	CA-CB-CG	-9.18	103.42	112.60
38	LE	99	GLU	N-CA-C	9.18	122.13	111.11
26	LA	1200	C	O3'-P-O5'	9.18	117.77	104.00
56	LR	52	ARG	NE-CZ-NH2	9.18	127.46	119.20
26	LA	2402	U	P-O3'-C3'	-9.18	106.44	120.20
2	SA	742	G	C5'-C4'-C3'	-9.17	102.25	116.00
31	LX	83	LYS	CA-C-N	9.16	128.77	119.24
31	LX	83	LYS	C-N-CA	9.16	128.77	119.24
26	LA	1087	G	C5'-C4'-C3'	-9.16	102.26	116.00
56	LR	19	PHE	CA-CB-CG	-9.16	104.64	113.80
53	LP	47	VAL	N-CA-C	9.16	119.14	110.53
26	LA	84	A	P-O5'-C5'	-9.15	107.17	120.90
2	SA	1516	G	O4'-C1'-C2'	-9.15	98.45	107.60
23	SR	3	TYR	CA-C-N	9.15	138.17	121.70
23	SR	3	TYR	C-N-CA	9.15	138.17	121.70
26	LA	274	C	C5'-C4'-C3'	-9.15	102.28	116.00
6	SU	59	LEU	N-CA-C	9.14	121.01	111.14
26	LA	2410	G	C4'-C3'-C2'	-9.14	93.46	102.60
26	LA	883	G	C4'-C3'-C2'	-9.14	93.46	102.60
52	LO	18	ARG	NE-CZ-NH2	9.14	127.42	119.20
27	LD	146	LYS	CA-C-O	-9.13	110.88	120.28
2	SA	1467	C	P-O5'-C5'	9.12	134.58	120.90
10	SJ	29	ALA	N-CA-C	9.12	121.30	111.36
26	LA	142	A	O3'-P-O5'	-9.12	90.32	104.00
26	LA	2119	A	P-O3'-C3'	9.12	133.88	120.20
51	LI	130	VAL	CA-C-O	9.12	129.28	120.25
15	SO	21	THR	N-CA-CB	9.12	125.90	110.49
26	LA	2165	C	C4'-C3'-C2'	-9.12	93.48	102.60
12	SL	76	HIS	CG-CD2-NE2	9.11	116.31	107.20
44	LF	27	LEU	O-C-N	-9.11	112.68	122.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	328	C	P-O3'-C3'	9.10	133.85	120.20
4	S2	68	C	C5'-C4'-C3'	9.10	129.65	116.00
2	SA	154	U	P-O5'-C5'	9.10	134.55	120.90
2	SA	1486	G	C4'-C3'-C2'	-9.09	93.51	102.60
26	LA	1905	C	C5'-C4'-O4'	9.09	123.43	109.80
2	SA	215	C	C5'-C4'-C3'	-9.08	102.38	116.00
26	LA	79	C	C4'-C3'-C2'	-9.08	93.52	102.60
26	LA	1914	C	O4'-C1'-C2'	-9.07	98.53	107.60
26	LA	1643	G	P-O3'-C3'	9.07	133.81	120.20
2	SA	1029	U	P-O3'-C3'	9.07	133.80	120.20
26	LA	1942	C	P-O3'-C3'	9.07	133.80	120.20
2	SA	765	G	C3'-C2'-C1'	9.06	110.36	101.30
26	LA	2751	G	C3'-C2'-C1'	-9.06	92.44	101.50
26	LA	1963	U	P-O3'-C3'	9.06	133.79	120.20
41	L5	19	ARG	NE-CZ-NH1	-9.06	112.44	121.50
2	SA	1055	A	C4'-C3'-C2'	-9.06	93.54	102.60
46	LH	106	LEU	CA-C-O	9.06	128.59	119.08
2	SA	1028	C	P-O5'-C5'	9.06	134.48	120.90
19	SC	33	ASP	CA-CB-CG	-9.05	103.55	112.60
36	L2	61	ASN	N-CA-C	9.05	124.11	112.89
26	LA	2061	G	C2'-C3'-O3'	9.04	123.06	109.50
8	SH	26	MET	O-C-N	-9.04	112.68	122.17
26	LA	773	U	P-O5'-C5'	9.04	134.46	120.90
26	LA	2126	A	P-O5'-C5'	-9.04	107.34	120.90
2	SA	170	U	C5'-C4'-C3'	-9.04	102.45	116.00
30	LW	81	ARG	NE-CZ-NH1	9.03	130.53	121.50
12	SL	38	THR	N-CA-CB	9.03	123.30	109.85
26	LA	756	A	C5'-C4'-C3'	-9.03	102.46	116.00
26	LA	1567	G	O3'-P-O5'	-9.03	90.46	104.00
5	ST	11	ILE	N-CA-C	9.02	119.83	110.72
26	LA	2100	G	C5'-C4'-C3'	9.02	129.53	116.00
24	S3	368	ASN	CA-C-O	9.02	130.06	121.67
2	SA	1086	U	C5'-C4'-C3'	-9.02	102.48	116.00
26	LA	2258	C	C4'-C3'-C2'	-9.02	93.58	102.60
26	LA	63	A	P-O5'-C5'	-9.01	107.38	120.90
26	LA	1073	A	C2'-C3'-O3'	9.01	127.22	113.70
2	SA	631	C	P-O5'-C5'	-9.01	107.38	120.90
26	LA	386	G	P-O3'-C3'	9.01	133.71	120.20
26	LA	548	G	P-O5'-C5'	8.99	134.39	120.90
58	LT	46	GLU	CA-C-N	8.99	133.40	120.91
58	LT	46	GLU	C-N-CA	8.99	133.40	120.91
26	LA	212	G	C4'-C3'-C2'	-8.98	93.62	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	SE	18	ASN	CA-CB-CG	-8.98	103.62	112.60
26	LA	604	G	P-O5'-C5'	8.98	134.37	120.90
2	SA	194	C	C5'-C4'-C3'	-8.97	102.54	116.00
45	LG	133	GLU	CA-C-O	8.97	129.90	120.30
4	S2	37	U	P-O3'-C3'	8.96	133.65	120.20
26	LA	113	U	O5'-C5'-C4'	8.96	124.95	111.50
2	SA	890	G	C3'-C2'-C1'	-8.96	92.54	101.50
26	LA	2642	G	P-O3'-C3'	-8.96	106.76	120.20
3	S1	48	C	P-O3'-C3'	8.96	133.64	120.20
57	LS	51	GLN	O-C-N	-8.96	111.94	122.15
2	SA	1351	U	C4'-C3'-C2'	-8.96	93.64	102.60
2	SA	432	A	C1'-O4'-C4'	-8.95	100.95	109.90
46	LH	62	ALA	N-CA-C	8.95	120.65	111.07
47	LJ	7	LYS	N-CA-C	8.96	121.12	111.36
26	LA	18	U	P-O5'-C5'	8.95	134.32	120.90
2	SA	1246	A	C5'-C4'-C3'	-8.95	102.58	116.00
26	LA	1923	U	P-O5'-C5'	8.95	134.32	120.90
43	L7	22	VAL	O-C-N	-8.94	113.60	123.26
2	SA	476	U	P-O5'-C5'	8.94	134.31	120.90
54	LM	49	ARG	N-CA-C	8.94	123.20	111.75
26	LA	2127	G	P-O5'-C5'	8.94	134.31	120.90
2	SA	1431	A	P-O5'-C5'	-8.94	107.49	120.90
26	LA	2247	A	P-O5'-C5'	8.94	134.31	120.90
26	LA	2863	C	C4'-C3'-C2'	-8.94	93.66	102.60
26	LA	2458	G	O3'-P-O5'	-8.93	90.60	104.00
23	SR	4	PHE	CA-CB-CG	8.93	122.73	113.80
26	LA	25	U	P-O5'-C5'	8.93	134.29	120.90
26	LA	95	A	C4'-C3'-C2'	-8.93	93.67	102.60
2	SA	686	U	P-O3'-C3'	8.92	133.59	120.20
38	LE	195	GLY	N-CA-C	8.92	122.28	112.29
2	SA	486	U	C5'-C4'-C3'	-8.92	102.62	116.00
2	SA	51	A	O4'-C4'-C3'	-8.92	97.18	106.10
3	S1	31	U	C1'-O4'-C4'	-8.91	100.99	109.90
26	LA	2295	C	C4'-C3'-C2'	-8.91	93.69	102.60
26	LA	101	A	O4'-C1'-N9	8.91	121.86	108.50
2	SA	846	G	P-O3'-C3'	-8.91	106.84	120.20
29	LV	70	HIS	N-CA-CB	8.90	125.53	110.49
2	SA	148	G	C5'-C4'-C3'	8.89	129.34	116.00
26	LA	859	G	O4'-C1'-C2'	-8.89	96.91	105.80
26	LA	870	U	C5'-C4'-O4'	8.89	123.14	109.80
2	SA	1517	G	C4'-C3'-C2'	-8.89	93.71	102.60
12	SL	76	HIS	CE1-NE2-CD2	-8.88	100.11	109.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	LH	8	VAL	CA-C-N	8.88	137.96	121.97
46	LH	8	VAL	C-N-CA	8.88	137.96	121.97
21	SE	102	THR	N-CA-CB	8.88	125.49	110.49
19	SC	18	ASN	CA-CB-CG	-8.87	103.73	112.60
25	LB	102	G	P-O3'-C3'	8.87	133.51	120.20
26	LA	1559	U	C5'-C4'-O4'	8.88	122.41	109.10
26	LA	1967	C	C5'-C4'-C3'	8.87	129.31	116.00
26	LA	2716	C	C5'-C4'-C3'	8.86	129.30	116.00
42	L6	39	ARG	N-CA-C	8.86	121.74	111.11
44	LF	25	GLU	N-CA-C	8.86	120.70	111.14
2	SA	791	G	O4'-C1'-N9	8.85	121.78	108.50
7	SG	128	GLU	O-C-N	-8.85	111.27	122.34
26	LA	2621	G	P-O3'-C3'	8.85	133.48	120.20
10	SJ	63	ASP	CA-C-N	8.85	135.25	122.77
10	SJ	63	ASP	C-N-CA	8.85	135.25	122.77
2	SA	235	C	C1'-O4'-C4'	-8.85	101.05	109.90
12	SL	8	ARG	NE-CZ-NH2	8.85	127.16	119.20
2	SA	972	C	O4'-C1'-N1	8.84	121.77	108.50
26	LA	372	G	O4'-C1'-N9	8.84	121.46	108.20
15	SO	17	ASP	CA-CB-CG	8.84	121.44	112.60
13	SM	102	LYS	N-CA-C	-8.84	99.50	111.96
15	SO	84	LEU	N-CA-CB	-8.84	97.41	110.49
46	LH	84	LYS	N-CA-CB	8.84	123.48	110.49
26	LA	1670	C	C1'-C2'-O2'	8.84	121.65	108.40
2	SA	225	C	C4'-C3'-C2'	-8.83	93.77	102.60
26	LA	462	C	O3'-P-O5'	-8.83	90.76	104.00
26	LA	2471	A	C5'-C4'-O4'	8.82	122.33	109.10
5	ST	51	ASN	CA-CB-CG	8.82	121.42	112.60
26	LA	126	A	O4'-C1'-N9	8.82	121.73	108.50
26	LA	93	G	C5'-C4'-C3'	8.82	129.22	116.00
26	LA	381	G	O3'-P-O5'	8.81	117.22	104.00
2	SA	1490	U	P-O5'-C5'	8.81	134.12	120.90
3	S1	53	G	P-O5'-C5'	8.81	134.12	120.90
9	SI	32	ARG	N-CA-C	-8.81	96.82	108.19
2	SA	211	G	O4'-C1'-N9	8.81	121.72	108.50
2	SA	1081	A	C5'-C4'-C3'	-8.81	102.78	116.00
27	LD	225	ASN	O-C-N	-8.81	111.19	121.32
3	S1	21	U	O4'-C1'-N1	8.81	121.71	108.50
26	LA	1570	A	C5'-C4'-C3'	-8.81	102.79	116.00
57	LS	100	PHE	N-CA-C	8.81	120.49	111.07
24	S3	158	LYS	N-CA-C	8.80	120.49	111.07
26	LA	436	C	P-O5'-C5'	8.80	134.10	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	SI	39	GLY	N-CA-C	-8.80	103.51	114.16
26	LA	2602	A	C1'-O4'-C4'	-8.79	100.91	109.70
26	LA	640	C	P-O5'-C5'	8.79	134.09	120.90
26	LA	2575	C	C2'-C3'-O3'	8.79	122.69	109.50
37	LC	98	GLU	CA-C-N	8.78	132.93	120.28
37	LC	98	GLU	C-N-CA	8.78	132.93	120.28
24	S3	486	GLN	CA-C-N	8.78	132.26	120.50
24	S3	486	GLN	C-N-CA	8.78	132.26	120.50
11	SK	70	ALA	N-CA-C	8.78	121.95	111.33
24	S3	522	TYR	N-CA-C	8.78	123.65	108.82
1	SS	29	PRO	CA-C-N	-8.77	108.92	121.99
1	SS	29	PRO	C-N-CA	-8.77	108.92	121.99
26	LA	574	A	C5'-C4'-O4'	8.77	122.95	109.80
21	SE	136	VAL	N-CA-CB	8.77	121.43	110.47
26	LA	705	A	P-O3'-C3'	8.76	133.34	120.20
49	LK	18	ASN	CA-C-O	-8.76	111.07	119.13
26	LA	2566	A	O4'-C1'-C2'	8.75	114.55	105.80
2	SA	352	C	C5'-C4'-C3'	-8.75	102.88	116.00
2	SA	813	U	O4'-C4'-C3'	8.75	112.75	104.00
4	S2	31	G	C4'-C3'-C2'	-8.75	93.85	102.60
18	SB	8	MET	CA-C-O	8.75	129.82	120.55
26	LA	2119	A	O3'-P-O5'	-8.75	90.88	104.00
38	LE	189	VAL	CA-C-O	8.75	130.99	120.84
39	L3	54	ILE	CA-C-O	-8.75	111.28	120.64
41	L5	14	ARG	NE-CZ-NH1	-8.75	112.75	121.50
2	SA	1106	G	P-O5'-C5'	8.74	134.02	120.90
2	SA	643	C	C1'-C2'-O2'	8.74	121.51	108.40
25	LB	87	U	C3'-C2'-C1'	-8.74	92.76	101.50
26	LA	2174	C	O4'-C4'-C3'	-8.74	95.26	104.00
37	LC	199	ALA	N-CA-C	8.74	123.49	113.01
50	LL	33	ALA	CA-C-N	8.74	131.80	120.44
50	LL	33	ALA	C-N-CA	8.74	131.80	120.44
2	SA	167	A	P-O5'-C5'	8.73	134.00	120.90
2	SA	741	G	P-O3'-C3'	-8.73	107.11	120.20
26	LA	317	G	C5'-C4'-C3'	8.73	129.09	116.00
26	LA	548	G	P-O3'-C3'	8.73	133.30	120.20
26	LA	1236	G	P-O5'-C5'	8.73	133.99	120.90
45	LG	82	TYR	O-C-N	-8.73	116.12	121.71
6	SU	66	ARG	NE-CZ-NH2	8.72	127.05	119.20
26	LA	1510	G	P-O5'-C5'	8.72	133.98	120.90
26	LA	1555	G	C5'-C4'-C3'	-8.72	102.92	116.00
26	LA	2840	C	P-O3'-C3'	-8.72	107.12	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	LE	164	GLN	N-CA-C	8.71	124.02	111.56
2	SA	1076	U	P-O3'-C3'	-8.71	107.13	120.20
13	SM	47	LEU	CB-CA-C	8.71	120.52	109.80
46	LH	113	ASP	CA-CB-CG	8.71	121.31	112.60
21	SE	162	GLU	N-CA-C	8.71	122.02	111.40
25	LB	14	U	O4'-C1'-C2'	-8.71	97.09	105.80
26	LA	469	G	P-O3'-C3'	-8.71	107.14	120.20
26	LA	2385	C	O4'-C1'-C2'	8.71	116.31	107.60
26	LA	2050	C	P-O5'-C5'	8.70	133.96	120.90
26	LA	2581	G	C4'-C3'-C2'	-8.70	93.90	102.60
26	LA	2891	U	O4'-C1'-N1	8.70	121.55	108.50
2	SA	1007	U	C5'-C4'-C3'	-8.70	102.96	116.00
26	LA	1322	A	C2'-C3'-O3'	8.69	126.73	113.70
2	SA	153	C	C5'-C4'-C3'	-8.68	102.97	116.00
26	LA	2357	G	C4'-C3'-C2'	-8.68	93.92	102.60
20	SD	154	VAL	N-CA-C	8.68	119.24	110.82
6	SU	42	THR	N-CA-CB	8.68	122.73	110.67
26	LA	667	U	P-O5'-C5'	-8.68	107.88	120.90
37	LC	157	LYS	CA-C-N	8.67	132.60	120.29
37	LC	157	LYS	C-N-CA	8.67	132.60	120.29
2	SA	673	A	C5'-C4'-C3'	-8.67	103.00	116.00
26	LA	611	C	C5'-C4'-C3'	-8.67	103.00	116.00
14	SN	25	GLU	CA-C-N	8.66	133.48	120.31
14	SN	25	GLU	C-N-CA	8.66	133.48	120.31
2	SA	1188	A	P-O3'-C3'	8.66	133.19	120.20
26	LA	1090	A	P-O3'-C3'	8.66	133.19	120.20
26	LA	821	A	O3'-P-O5'	-8.66	91.01	104.00
26	LA	2346	A	P-O3'-C3'	8.65	133.18	120.20
26	LA	603	A	P-O3'-C3'	8.65	133.17	120.20
26	LA	1207	C	C4'-C3'-C2'	-8.64	93.95	102.60
26	LA	1346	G	P-O5'-C5'	-8.64	107.94	120.90
2	SA	1344	C	C5'-C4'-C3'	8.64	128.96	116.00
24	S3	263	VAL	O-C-N	-8.64	114.33	123.14
26	LA	2213	U	P-O3'-C3'	8.64	133.16	120.20
26	LA	359	G	C5'-C4'-C3'	-8.63	103.05	116.00
2	SA	795	C	O4'-C1'-N1	8.63	121.45	108.50
32	LY	59	PHE	N-CA-CB	8.63	124.14	110.85
26	LA	2173	A	O5'-C5'-C4'	8.63	124.44	111.50
2	SA	816	A	C4'-C3'-C2'	-8.62	93.97	102.60
16	SP	53	ASP	CA-CB-CG	-8.62	103.98	112.60
26	LA	2403	C	P-O5'-C5'	-8.62	107.97	120.90
48	LN	129	LYS	N-CA-C	8.62	121.45	111.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2568	U	P-O5'-C5'	8.61	133.82	120.90
51	LI	64	ALA	N-CA-C	8.61	120.44	111.14
38	LE	163	GLY	CA-C-N	8.61	135.02	122.36
38	LE	163	GLY	C-N-CA	8.61	135.02	122.36
2	SA	1073	U	C5'-C4'-C3'	-8.61	103.08	116.00
26	LA	281	C	P-O5'-C5'	8.61	133.82	120.90
26	LA	2017	U	P-O3'-C3'	8.61	133.12	120.20
2	SA	631	C	P-O3'-C3'	8.61	133.12	120.20
26	LA	624	C	C4'-C3'-C2'	-8.61	93.99	102.60
27	LD	14	HIS	CA-CB-CG	-8.61	105.19	113.80
26	LA	2158	A	O3'-P-O5'	-8.61	91.09	104.00
26	LA	2154	A	O5'-C5'-C4'	8.61	124.41	111.50
26	LA	2567	G	P-O3'-C3'	8.61	133.11	120.20
2	SA	1484	C	O4'-C4'-C3'	-8.60	95.40	104.00
22	SF	11	HIS	CA-C-N	8.60	130.59	119.84
22	SF	11	HIS	C-N-CA	8.60	130.59	119.84
19	SC	175	HIS	CA-CB-CG	-8.60	105.20	113.80
26	LA	294	A	C1'-C2'-O2'	8.60	121.30	108.40
26	LA	2272	U	C2'-C3'-O3'	8.60	126.60	113.70
2	SA	68	G	P-O5'-C5'	8.60	133.79	120.90
2	SA	686	U	O4'-C1'-C2'	-8.60	97.20	105.80
26	LA	313	G	C5'-C4'-C3'	-8.60	103.11	116.00
2	SA	372	C	C4'-C3'-C2'	8.59	111.19	102.60
26	LA	1541	C	O5'-C5'-C4'	8.59	124.39	111.50
26	LA	2253	G	P-O3'-C3'	8.59	133.08	120.20
2	SA	1253	G	C2'-C3'-O3'	8.59	126.58	113.70
2	SA	485	U	C4'-C3'-C2'	-8.58	94.02	102.60
26	LA	1871	A	C4'-C3'-C2'	-8.58	94.02	102.60
19	SC	32	LEU	O-C-N	-8.58	113.03	122.12
26	LA	1005	C	O3'-P-O5'	-8.58	91.14	104.00
2	SA	1005	A	O5'-C5'-C4'	8.57	124.36	111.50
21	SE	6	GLN	OE1-CD-NE2	-8.57	114.03	122.60
26	LA	2375	G	C5'-C4'-C3'	-8.57	103.14	116.00
26	LA	46	G	C4'-C3'-C2'	-8.57	94.03	102.60
51	LI	13	GLY	CA-C-N	8.57	131.58	120.44
51	LI	13	GLY	C-N-CA	8.57	131.58	120.44
25	LB	104	A	C5'-C4'-C3'	-8.57	103.15	116.00
26	LA	1752	C	P-O5'-C5'	8.57	133.75	120.90
2	SA	485	U	O4'-C1'-C2'	-8.56	97.24	105.80
27	LD	143	VAL	CB-CA-C	-8.56	99.48	111.21
37	LC	222	VAL	CA-C-N	8.56	135.06	122.39
37	LC	222	VAL	C-N-CA	8.56	135.06	122.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1496	A	P-O5'-C5'	8.56	133.74	120.90
27	LD	127	ASN	CA-CB-CG	-8.56	104.04	112.60
2	SA	1516	G	C3'-C2'-C1'	8.55	109.85	101.30
3	S1	32	U	C5'-C4'-C3'	8.55	128.83	116.00
2	SA	1065	U	O3'-P-O5'	-8.55	91.17	104.00
26	LA	140	C	C5'-C4'-C3'	8.55	128.83	116.00
26	LA	443	A	P-O3'-C3'	-8.55	107.37	120.20
2	SA	386	C	P-O5'-C5'	8.55	133.72	120.90
26	LA	140	C	O4'-C1'-N1	8.55	121.32	108.50
26	LA	573	U	C2'-C3'-O3'	8.55	122.32	109.50
2	SA	216	U	P-O5'-C5'	8.55	133.72	120.90
2	SA	485	U	O3'-P-O5'	8.55	116.82	104.00
26	LA	2469	A	C5'-C4'-C3'	-8.55	103.18	116.00
32	LY	75	ASN	CA-CB-CG	-8.55	104.05	112.60
2	SA	1043	G	P-O5'-C5'	8.55	133.72	120.90
26	LA	1472	C	C5'-C4'-C3'	-8.54	103.19	116.00
51	LI	23	ALA	N-CA-C	8.54	122.80	112.38
26	LA	665	U	C5'-C4'-C3'	-8.54	103.19	116.00
2	SA	1441	A	P-O5'-C5'	8.54	133.71	120.90
26	LA	1184	U	C5'-C4'-O4'	8.53	122.60	109.80
33	LZ	56	ARG	CA-C-N	8.54	131.31	120.56
33	LZ	56	ARG	C-N-CA	8.54	131.31	120.56
2	SA	1176	A	C5'-C4'-C3'	-8.53	103.20	116.00
25	LB	42	C	C1'-C2'-O2'	8.53	121.20	108.40
26	LA	1743	G	C4'-C3'-C2'	-8.53	94.07	102.60
26	LA	1446	C	P-O5'-C5'	8.53	133.69	120.90
26	LA	2543	G	C5'-C4'-C3'	-8.53	103.21	116.00
18	SB	171	ALA	N-CA-C	8.52	120.57	111.28
2	SA	304	U	C5'-C4'-C3'	-8.52	103.22	116.00
2	SA	652	U	P-O3'-C3'	8.52	132.98	120.20
46	LH	138	GLN	N-CA-C	8.52	120.49	111.03
6	SU	56	ALA	N-CA-C	8.52	120.56	111.28
18	SB	238	GLU	N-CA-C	8.52	120.65	111.36
26	LA	346	A	P-O5'-C5'	8.52	133.68	120.90
25	LB	88	C	P-O3'-C3'	8.52	132.97	120.20
26	LA	2651	C	O3'-P-O5'	-8.52	91.23	104.00
46	LH	154	GLU	O-C-N	-8.52	113.90	121.31
2	SA	84	U	P-O5'-C5'	-8.51	108.13	120.90
26	LA	387	U	C5'-C4'-O4'	8.51	121.87	109.10
2	SA	929	G	C5'-C4'-C3'	-8.51	103.23	116.00
26	LA	1634	A	C2'-C3'-O3'	8.51	122.27	109.50
2	SA	88	U	P-O3'-C3'	-8.51	107.44	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	LW	17	ASP	CA-CB-CG	-8.51	104.09	112.60
25	LB	54	G	P-O5'-C5'	8.51	133.66	120.90
2	SA	1202	U	O4'-C1'-N1	8.51	121.26	108.50
2	SA	1406	U	C4'-C3'-O3'	-8.51	100.24	113.00
1	SS	2	ARG	NE-CZ-NH2	8.50	126.85	119.20
1	SS	63	ASP	CA-CB-CG	-8.50	104.10	112.60
2	SA	215	C	P-O5'-C5'	8.50	133.65	120.90
4	S2	2	G	C4'-C3'-C2'	-8.50	94.10	102.60
3	S1	23	C	C2'-C3'-O3'	8.50	122.25	109.50
8	SH	20	ASN	N-CA-CB	-8.50	99.18	111.84
2	SA	477	C	C4'-C3'-C2'	-8.49	94.11	102.60
18	SB	85	SER	CA-C-O	8.49	131.72	121.87
18	SB	107	ARG	N-CA-CB	8.49	122.60	110.12
26	LA	2033	A	C2'-C3'-O3'	8.49	122.24	109.50
2	SA	747	A	P-O5'-C5'	8.49	133.63	120.90
2	SA	792	A	C5'-C4'-C3'	8.49	128.73	116.00
26	LA	2519	U	P-O5'-C5'	8.49	133.63	120.90
54	LM	75	SER	N-CA-C	-8.48	96.93	108.38
2	SA	264	C	P-O5'-C5'	8.48	133.62	120.90
20	SD	84	ASN	N-CA-CB	-8.48	97.22	109.85
26	LA	139	U	C1'-C2'-O2'	8.48	121.12	108.40
26	LA	1914	C	P-O3'-C3'	-8.48	107.48	120.20
2	SA	1199	U	P-O5'-C5'	8.48	133.62	120.90
3	S1	33	A	C5'-C4'-C3'	8.48	128.72	116.00
26	LA	1378	A	C5'-C4'-O4'	8.48	121.82	109.10
27	LD	31	PRO	CB-CA-C	8.48	120.32	109.89
19	SC	130	ARG	CD-NE-CZ	8.48	136.27	124.40
22	SF	8	PHE	CA-CB-CG	-8.48	105.32	113.80
2	SA	960	U	P-O3'-C3'	8.47	132.91	120.20
18	SB	239	ALA	CA-C-O	8.47	132.63	120.51
33	LZ	26	ARG	O-C-N	-8.47	113.50	123.41
24	S3	87	ASP	CA-CB-CG	8.47	121.07	112.60
26	LA	2805	C	P-O5'-C5'	8.47	133.60	120.90
2	SA	343	U	C2'-C3'-O3'	8.47	126.40	113.70
24	S3	100	ARG	NE-CZ-NH2	-8.47	111.58	119.20
2	SA	83	C	C4'-C3'-C2'	-8.46	94.14	102.60
18	SB	111	LYS	CA-C-N	8.46	131.62	120.28
18	SB	111	LYS	C-N-CA	8.46	131.62	120.28
26	LA	2143	C	P-O3'-C3'	-8.46	107.50	120.20
26	LA	2803	G	P-O5'-C5'	-8.46	108.20	120.90
56	LR	58	PHE	O-C-N	-8.46	113.40	123.13
18	SB	174	GLU	O-C-N	-8.46	112.51	122.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	752	A	C3'-C2'-C1'	-8.46	93.04	101.50
2	SA	1008	U	P-O5'-C5'	8.46	133.59	120.90
2	SA	404	G	C5'-C4'-C3'	-8.46	103.32	116.00
2	SA	965	U	P-O3'-C3'	8.45	132.88	120.20
37	LC	18	THR	CA-CB-OG1	8.45	122.28	109.60
26	LA	101	A	P-O5'-C5'	8.45	133.58	120.90
2	SA	1362	A	C1'-O4'-C4'	-8.45	101.25	109.70
26	LA	2355	G	C1'-C2'-O2'	8.45	121.07	108.40
56	LR	11	GLN	O-C-N	-8.45	112.34	122.22
18	SB	46	VAL	O-C-N	-8.44	111.48	121.10
23	SR	62	ARG	NE-CZ-NH2	8.44	126.80	119.20
37	LC	97	MET	CA-C-N	8.44	131.59	120.28
37	LC	97	MET	C-N-CA	8.44	131.59	120.28
26	LA	2623	G	C4'-C3'-C2'	-8.44	94.17	102.60
6	SU	20	ARG	NE-CZ-NH1	8.43	129.93	121.50
26	LA	2174	C	C5'-C4'-C3'	8.43	128.65	116.00
47	LJ	34	VAL	CA-C-O	8.43	129.72	120.95
2	SA	320	A	C4'-C3'-C2'	-8.43	94.17	102.60
2	SA	764	C	C5'-C4'-C3'	-8.42	103.37	116.00
21	SE	131	ASN	O-C-N	-8.42	111.64	121.32
26	LA	821	A	P-O3'-C3'	8.42	132.83	120.20
17	SQ	44	HIS	CA-CB-CG	-8.42	105.38	113.80
26	LA	60	G	C4'-C3'-C2'	-8.42	94.18	102.60
26	LA	705	A	P-O5'-C5'	-8.42	108.27	120.90
52	LO	68	PHE	O-C-N	-8.42	114.56	121.80
26	LA	176	A	P-O5'-C5'	8.41	133.52	120.90
44	LF	116	ASP	CA-CB-CG	8.41	121.01	112.60
23	SR	62	ARG	O-C-N	-8.41	113.34	122.09
26	LA	613	A	C4'-C3'-C2'	-8.41	94.19	102.60
26	LA	2731	G	O4'-C1'-C2'	8.41	116.01	107.60
2	SA	168	G	C4'-C3'-C2'	-8.41	94.19	102.60
2	SA	429	U	C3'-C2'-O2'	-8.41	101.99	114.60
2	SA	851	G	P-O3'-C3'	8.41	132.81	120.20
26	LA	1682	G	O3'-P-O5'	-8.40	91.39	104.00
24	S3	283	ASP	N-CA-C	8.40	120.36	111.03
12	SL	16	ALA	N-CA-C	8.40	122.10	109.25
2	SA	505	G	C4'-C3'-O3'	-8.40	100.40	113.00
18	SB	57	ASN	CA-CB-CG	-8.40	104.20	112.60
19	SC	131	ARG	N-CA-C	-8.40	103.48	114.31
26	LA	558	U	C5'-C4'-C3'	-8.40	103.41	116.00
20	SD	7	LYS	N-CA-C	8.39	120.20	111.14
26	LA	2506	U	C4'-C3'-C2'	-8.39	94.21	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1295	C	O3'-P-O5'	8.39	116.58	104.00
26	LA	570	G	C3'-C2'-C1'	-8.39	93.11	101.50
26	LA	1046	A	P-O5'-C5'	8.39	133.48	120.90
34	L0	59	GLU	N-CA-C	8.39	120.50	111.36
2	SA	1054	C	O4'-C4'-C3'	-8.38	97.72	106.10
26	LA	2711	A	P-O3'-C3'	8.38	132.78	120.20
26	LA	946	C	C5'-C4'-C3'	-8.38	103.43	116.00
2	SA	89	U	P-O5'-C5'	8.38	133.47	120.90
26	LA	1872	A	P-O3'-C3'	8.38	132.77	120.20
26	LA	2314	A	P-O5'-C5'	-8.38	108.33	120.90
26	LA	2645	G	P-O3'-C3'	8.38	132.77	120.20
26	LA	1490	A	P-O3'-C3'	8.38	132.77	120.20
26	LA	1678	A	O5'-C5'-C4'	8.37	124.06	111.50
2	SA	395	C	C5'-C4'-C3'	-8.37	103.44	116.00
26	LA	2440	C	P-O3'-C3'	8.37	132.76	120.20
51	LI	47	PHE	CA-CB-CG	-8.37	105.43	113.80
26	LA	2665	A	C4'-C3'-C2'	-8.37	94.23	102.60
2	SA	380	G	P-O3'-C3'	8.37	132.75	120.20
1	SS	36	ARG	CA-C-N	8.37	137.52	121.54
1	SS	36	ARG	C-N-CA	8.37	137.52	121.54
26	LA	437	U	C1'-O4'-C4'	-8.36	101.54	109.90
26	LA	1022	G	O4'-C1'-N9	8.36	120.74	108.20
26	LA	1084	A	C5'-C4'-C3'	-8.36	103.46	116.00
45	LG	148	VAL	CB-CA-C	8.36	123.00	112.04
2	SA	1412	C	C5'-C4'-C3'	-8.36	103.47	116.00
26	LA	1538	G	P-O5'-C5'	-8.35	108.37	120.90
51	LI	104	THR	N-CA-C	8.35	115.63	108.78
26	LA	1819	A	C3'-C2'-O2'	-8.35	102.07	114.60
26	LA	2001	C	C3'-C2'-C1'	8.35	109.65	101.30
27	LD	245	THR	N-CA-CB	8.35	120.41	109.55
26	LA	531	C	C4'-C3'-C2'	-8.35	94.25	102.60
2	SA	471	U	C5'-C4'-C3'	-8.35	103.48	116.00
21	SE	39	GLY	O-C-N	-8.35	115.80	123.56
26	LA	2492	U	O4'-C1'-N1	8.35	120.72	108.20
37	LC	77	VAL	N-CA-C	8.35	120.55	107.28
26	LA	611	C	C4'-C3'-C2'	-8.35	94.25	102.60
2	SA	849	G	O4'-C4'-C3'	-8.34	95.66	104.00
14	SN	26	LEU	CA-C-O	8.34	129.56	119.97
3	S1	39	U	C4'-C3'-C2'	-8.34	94.26	102.60
27	LD	257	ARG	NE-CZ-NH1	8.34	129.84	121.50
2	SA	986	U	C5'-C4'-C3'	-8.34	103.50	116.00
13	SM	5	GLY	CA-C-N	8.34	131.23	120.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	SM	5	GLY	C-N-CA	8.34	131.23	120.56
26	LA	1732	C	P-O5'-C5'	-8.34	108.39	120.90
2	SA	1148	U	P-O5'-C5'	8.33	133.40	120.90
25	LB	56	G	C4'-C3'-C2'	8.33	110.93	102.60
26	LA	931	U	C5'-C4'-C3'	8.32	127.69	115.20
26	LA	1394	U	P-O5'-C5'	8.32	133.39	120.90
26	LA	2383	G	O3'-P-O5'	8.32	116.49	104.00
26	LA	1174	U	O4'-C1'-C2'	-8.32	99.28	107.60
26	LA	1583	A	C1'-O4'-C4'	-8.32	101.38	109.70
2	SA	1179	A	C4'-C3'-C2'	-8.32	94.28	102.60
26	LA	196	A	C1'-O4'-C4'	-8.32	101.38	109.70
26	LA	880	G	P-O3'-C3'	-8.32	107.72	120.20
26	LA	2642	G	C5'-C4'-C3'	-8.32	103.52	116.00
36	L2	7	PRO	N-CA-C	8.32	124.26	113.86
24	S3	32	TYR	N-CA-CB	8.32	122.07	110.01
24	S3	225	ALA	CA-C-O	8.31	129.53	119.97
26	LA	2149	U	C5'-C4'-C3'	8.31	128.47	116.00
53	LP	118	ARG	CA-C-N	8.30	132.33	120.79
53	LP	118	ARG	C-N-CA	8.30	132.33	120.79
2	SA	1231	G	O3'-P-O5'	8.30	116.45	104.00
24	S3	642	LYS	CA-C-O	8.30	129.46	120.24
26	LA	1730	C	P-O3'-C3'	8.30	132.65	120.20
26	LA	2821	A	P-O5'-C5'	-8.30	108.45	120.90
24	S3	254	ARG	NE-CZ-NH2	-8.29	111.73	119.20
26	LA	2128	G	P-O5'-C5'	-8.29	108.47	120.90
2	SA	1345	U	O4'-C1'-N1	8.28	120.62	108.20
24	S3	552	VAL	CB-CA-C	-8.29	100.79	112.22
2	SA	26	A	C5'-C4'-C3'	-8.28	103.58	116.00
52	LO	22	GLN	N-CA-C	-8.28	103.37	113.97
26	LA	2483	C	P-O3'-C3'	-8.28	107.78	120.20
26	LA	2163	A	O4'-C1'-C2'	-8.28	99.32	107.60
30	LW	96	LYS	N-CA-C	-8.28	103.63	114.31
18	SB	145	ASN	N-CA-CB	8.28	122.01	110.01
26	LA	2531	A	O5'-C5'-C4'	8.28	123.92	111.50
26	LA	752	A	C5'-C4'-C3'	8.27	127.61	115.20
26	LA	2884	U	P-O5'-C5'	8.27	133.31	120.90
53	LP	87	PHE	CA-CB-CG	-8.27	105.53	113.80
26	LA	1706	C	O4'-C1'-N1	8.26	120.59	108.20
26	LA	2756	U	C2'-C3'-O3'	8.26	121.89	109.50
27	LD	263	ASP	CA-CB-CG	-8.26	104.34	112.60
2	SA	1189	U	C5'-C4'-O4'	8.26	122.19	109.80
2	SA	411	A	P-O5'-C5'	8.26	133.28	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
14	SN	44	VAL	N-CA-C	8.26	119.04	110.62
26	LA	1640	A	P-O5'-C5'	8.26	133.28	120.90
2	SA	199	A	O3'-P-O5'	-8.25	91.62	104.00
54	LM	61	VAL	O-C-N	-8.25	114.18	123.00
24	S3	220	ASN	CA-C-N	8.24	131.33	120.28
24	S3	220	ASN	C-N-CA	8.24	131.33	120.28
13	SM	8	ILE	CA-C-O	8.24	124.22	119.94
21	SE	141	ASP	CA-CB-CG	-8.24	104.36	112.60
26	LA	932	U	O4'-C4'-C3'	8.24	112.24	104.00
37	LC	50	ILE	N-CA-CB	8.24	121.84	111.46
2	SA	394	G	C4'-C3'-C2'	-8.24	94.36	102.60
55	LQ	29	HIS	CA-CB-CG	8.24	122.04	113.80
26	LA	1375	U	P-O5'-C5'	8.23	133.25	120.90
37	LC	124	VAL	N-CA-C	8.23	119.97	111.00
26	LA	2774	C	P-O5'-C5'	8.23	133.24	120.90
32	LY	11	ASN	CA-CB-CG	-8.23	104.37	112.60
2	SA	1003	G	C5'-C4'-C3'	8.22	128.34	116.00
47	LJ	144	GLU	N-CA-C	8.22	119.87	111.07
26	LA	124	G	C3'-C2'-C1'	-8.22	93.08	101.30
26	LA	295	G	C5'-C4'-O4'	8.22	122.13	109.80
12	SL	34	THR	N-CA-C	-8.22	101.75	112.68
26	LA	2569	G	O4'-C1'-C2'	-8.22	99.38	107.60
33	LZ	64	ASP	N-CA-C	8.22	121.28	111.33
26	LA	1434	A	O4'-C4'-C3'	-8.22	95.78	104.00
50	LL	34	ARG	CA-C-N	8.22	131.29	120.28
50	LL	34	ARG	C-N-CA	8.22	131.29	120.28
2	SA	1054	C	C2'-C3'-O3'	8.21	121.82	109.50
18	SB	213	LEU	N-CA-C	8.22	120.01	111.14
26	LA	2140	G	C5'-C4'-C3'	-8.22	103.68	116.00
26	LA	733	G	C5'-C4'-C3'	8.21	128.32	116.00
26	LA	2354	C	O3'-P-O5'	8.21	116.32	104.00
4	S2	18	U	O4'-C1'-C2'	-8.21	97.59	105.80
26	LA	2352	A	P-O3'-C3'	8.21	132.52	120.20
2	SA	290	C	P-O3'-C3'	-8.21	107.88	120.20
24	S3	104	VAL	N-CA-C	8.21	118.30	110.42
26	LA	512	G	P-O3'-C3'	8.21	132.51	120.20
26	LA	696	G	P-O5'-C5'	8.20	133.20	120.90
26	LA	1958	C	C4'-C3'-C2'	-8.20	94.40	102.60
2	SA	1227	A	C3'-C2'-C1'	-8.20	93.30	101.50
24	S3	95	THR	N-CA-C	8.20	121.25	111.33
26	LA	682	G	P-O5'-C5'	-8.19	108.61	120.90
2	SA	831	A	C4'-C3'-C2'	-8.19	94.41	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	944	G	C1'-O4'-C4'	-8.19	101.71	109.90
4	S2	56	U	P-O3'-C3'	8.19	132.49	120.20
26	LA	2096	C	O4'-C1'-N1	8.19	120.79	108.50
40	L4	22	THR	O-C-N	-8.19	114.88	123.56
24	S3	137	ILE	O-C-N	-8.19	114.34	123.10
28	LU	34	ASP	CA-CB-CG	-8.19	104.41	112.60
45	LG	135	ILE	N-CA-C	8.19	119.96	110.62
26	LA	2647	U	P-O3'-C3'	8.19	132.48	120.20
47	LJ	128	LEU	O-C-N	-8.19	112.13	121.79
32	LY	44	PHE	CA-CB-CG	-8.19	105.61	113.80
24	S3	257	ASN	N-CA-C	8.18	121.12	111.71
26	LA	1938	A	C2'-C3'-O3'	8.18	121.78	109.50
26	LA	2535	G	P-O5'-C5'	-8.18	108.62	120.90
26	LA	2466	C	C5'-C4'-C3'	-8.18	103.73	116.00
2	SA	812	G	O3'-P-O5'	-8.18	91.73	104.00
26	LA	141	G	O4'-C1'-N9	8.18	120.77	108.50
2	SA	853	C	O4'-C1'-N1	8.18	120.77	108.50
26	LA	2021	C	C2'-C3'-O3'	8.18	121.76	109.50
26	LA	1150	C	O4'-C1'-N1	8.17	120.76	108.50
26	LA	2454	G	O4'-C4'-C3'	8.17	112.17	104.00
33	LZ	39	VAL	CA-CB-CG1	8.17	124.29	110.40
45	LG	170	ALA	CA-C-O	8.17	124.53	119.55
35	L1	53	MET	N-CA-C	-8.17	101.10	112.45
16	SP	39	PHE	O-C-N	-8.17	113.76	123.31
26	LA	1610	A	C3'-C2'-O2'	-8.17	102.35	114.60
2	SA	173	U	O4'-C1'-C2'	8.16	113.96	105.80
5	ST	15	LYS	CA-C-N	8.16	131.21	120.28
5	ST	15	LYS	C-N-CA	8.16	131.21	120.28
38	LE	204	LYS	CA-C-O	-8.16	111.37	119.69
2	SA	391	G	C5'-C4'-C3'	8.16	128.24	116.00
2	SA	1167	A	C2'-C3'-O3'	8.16	121.73	109.50
28	LU	54	ALA	N-CA-C	8.16	120.90	111.11
26	LA	1670	C	O4'-C4'-C3'	8.15	112.16	104.00
16	SP	60	TRP	CB-CG-CD2	-8.15	115.39	126.80
26	LA	1035	U	O3'-P-O5'	8.15	116.23	104.00
2	SA	1209	C	O5'-C5'-C4'	-8.15	99.28	111.50
2	SA	416	G	P-O5'-C5'	8.14	133.12	120.90
10	SJ	85	ASP	N-CA-C	8.14	120.24	111.36
26	LA	1843	C	C4'-C3'-C2'	-8.14	94.46	102.60
56	LR	88	ARG	NE-CZ-NH2	8.14	126.53	119.20
8	SH	14	ARG	O-C-N	-8.14	113.69	122.07
2	SA	1028	C	C5'-C4'-C3'	-8.14	103.80	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1419	G	P-O5'-C5'	-8.14	108.69	120.90
26	LA	1323	C	P-O3'-C3'	8.13	132.40	120.20
26	LA	2271	G	C5'-C4'-C3'	8.13	128.20	116.00
2	SA	2	A	C2'-C3'-O3'	8.13	121.70	109.50
25	LB	10	G	C5'-C4'-C3'	-8.13	103.80	116.00
4	S2	58	A	C4'-C3'-C2'	-8.13	94.47	102.60
26	LA	1937	A	C1'-O4'-C4'	-8.13	101.77	109.90
45	LG	77	LYS	CA-C-N	8.13	136.61	121.97
45	LG	77	LYS	C-N-CA	8.13	136.61	121.97
3	S1	44	U	C1'-O4'-C4'	-8.13	101.77	109.90
26	LA	1558	C	C5'-C4'-O4'	8.13	121.29	109.10
26	LA	525	U	P-O3'-C3'	8.12	132.39	120.20
2	SA	496	A	C5'-C4'-C3'	8.12	128.18	116.00
12	SL	22	ALA	CA-C-N	8.12	137.05	121.54
12	SL	22	ALA	C-N-CA	8.12	137.05	121.54
20	SD	193	ASP	CA-CB-CG	8.12	120.72	112.60
26	LA	859	G	C3'-C2'-C1'	-8.12	93.38	101.50
18	SB	49	PHE	CA-CB-CG	8.12	121.92	113.80
26	LA	4	U	P-O5'-C5'	8.12	133.08	120.90
26	LA	2242	G	P-O3'-C3'	8.12	132.38	120.20
26	LA	242	G	P-O3'-C3'	8.12	132.38	120.20
26	LA	1437	C	C3'-C2'-C1'	8.12	109.42	101.30
26	LA	1097	U	C3'-C2'-C1'	-8.12	93.18	101.30
26	LA	242	G	C4'-C3'-O3'	8.11	121.57	109.40
26	LA	388	G	C5'-C4'-O4'	8.11	121.97	109.80
26	LA	717	C	O4'-C4'-C3'	-8.11	95.89	104.00
27	LD	217	PRO	N-CA-C	8.11	124.01	111.11
26	LA	341	C	P-O5'-C5'	8.11	133.07	120.90
41	L5	43	THR	CA-C-N	8.11	136.57	121.97
41	L5	43	THR	C-N-CA	8.11	136.57	121.97
14	SN	87	ALA	N-CA-C	8.11	120.12	111.28
2	SA	146	G	C5'-C4'-C3'	8.11	128.16	116.00
26	LA	2385	C	C5'-C4'-C3'	8.11	128.16	116.00
4	S2	74	A	P-O3'-C3'	-8.10	108.05	120.20
21	SE	141	ASP	N-CA-CB	-8.10	97.87	109.94
26	LA	2069	G	C4'-C3'-C2'	-8.10	94.50	102.60
29	LV	62	VAL	CB-CA-C	-8.10	99.88	110.98
2	SA	60	A	P-O3'-C3'	8.10	132.35	120.20
2	SA	410	G	C5'-C4'-C3'	-8.10	103.85	116.00
14	SN	48	GLN	N-CA-CB	-8.10	97.30	110.42
2	SA	547	A	P-O5'-C5'	-8.10	108.75	120.90
26	LA	1095	A	C4'-C3'-C2'	-8.10	94.50	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	LI	52	ALA	N-CA-C	8.10	119.89	111.14
2	SA	921	U	P-O3'-C3'	-8.10	108.06	120.20
26	LA	101	A	C4'-C3'-C2'	-8.10	94.50	102.60
13	SM	92	ARG	NE-CZ-NH1	8.09	129.59	121.50
2	SA	818	G	P-O3'-C3'	8.09	132.34	120.20
2	SA	1410	A	P-O5'-C5'	8.09	133.03	120.90
26	LA	1810	A	C5'-C4'-C3'	8.09	128.13	116.00
25	LB	12	C	P-O3'-C3'	-8.09	108.07	120.20
2	SA	411	A	O4'-C1'-C2'	-8.09	97.72	105.80
24	S3	351	SER	N-CA-CB	-8.09	98.07	110.44
26	LA	1417	C	C4'-C3'-C2'	-8.09	94.51	102.60
26	LA	926	G	P-O5'-C5'	8.09	133.03	120.90
2	SA	972	C	C5'-C4'-C3'	-8.08	103.88	116.00
3	S1	38	G	C3'-C2'-C1'	8.08	109.38	101.30
2	SA	156	C	O4'-C1'-N1	8.08	120.62	108.50
12	SL	43	LYS	O-C-N	-8.08	112.03	121.32
26	LA	2451	A	O3'-P-O5'	-8.08	91.88	104.00
16	SP	65	ALA	O-C-N	-8.07	113.51	123.36
26	LA	1093	G	O3'-P-O5'	-8.07	91.89	104.00
26	LA	2112	G	O4'-C1'-C2'	-8.07	99.53	107.60
26	LA	1847	A	P-O5'-C5'	8.07	133.01	120.90
15	SO	56	LEU	N-CA-CB	8.07	122.65	110.22
24	S3	314	GLU	O-C-N	8.07	128.48	121.30
26	LA	879	G	P-O5'-C5'	8.07	133.00	120.90
26	LA	1270	C	P-O5'-C5'	8.07	133.00	120.90
2	SA	243	A	C2'-C3'-O3'	8.07	121.60	109.50
26	LA	2101	A	C5'-C4'-C3'	-8.07	103.90	116.00
35	L1	54	VAL	CB-CA-C	-8.07	99.65	111.19
50	LL	76	HIS	CB-CG-CD2	-8.07	120.71	131.20
51	LI	130	VAL	O-C-N	-8.07	114.72	123.03
21	SE	148	SER	O-C-N	-8.06	112.05	121.32
36	L2	65	ASN	CA-CB-CG	8.06	120.66	112.60
8	SH	103	VAL	O-C-N	-8.06	115.21	123.03
21	SE	82	HIS	CA-C-N	8.06	128.68	120.14
21	SE	82	HIS	C-N-CA	8.06	128.68	120.14
26	LA	679	C	C4'-C3'-C2'	-8.06	94.54	102.60
26	LA	2726	A	N9-C1'-C2'	-8.06	101.91	114.00
33	LZ	75	GLU	N-CA-C	8.06	122.28	110.59
26	LA	1654	A	C4'-C3'-C2'	8.06	110.66	102.60
24	S3	410	PHE	CA-C-O	-8.06	113.23	120.56
34	L0	44	LYS	CA-C-O	8.06	129.18	120.24
2	SA	1362	A	P-O5'-C5'	8.05	132.98	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	SE	88	HIS	CE1-NE2-CD2	-8.05	100.95	109.00
26	LA	1434	A	P-O5'-C5'	8.05	132.98	120.90
26	LA	572	A	P-O3'-C3'	8.05	132.27	120.20
2	SA	96	U	C4'-C3'-C2'	-8.05	94.55	102.60
26	LA	317	G	P-O5'-C5'	8.05	132.97	120.90
2	SA	394	G	C5'-C4'-C3'	-8.04	103.93	116.00
26	LA	1009	A	C1'-C2'-O2'	8.04	120.47	108.40
26	LA	677	A	P-O5'-C5'	-8.04	108.84	120.90
49	LK	120	ASP	CA-CB-CG	8.04	120.64	112.60
58	LT	26	ASP	CA-C-N	8.04	131.59	120.49
58	LT	26	ASP	C-N-CA	8.04	131.59	120.49
2	SA	173	U	C2'-C3'-O3'	8.04	121.56	109.50
2	SA	848	C	C4'-C3'-C2'	-8.04	94.56	102.60
2	SA	1348	U	C4'-C3'-C2'	-8.04	94.56	102.60
9	SI	56	MET	O-C-N	-8.04	112.69	122.25
26	LA	1463	C	C5'-C4'-C3'	-8.04	103.95	116.00
53	LP	67	PHE	CA-CB-CG	8.04	121.84	113.80
2	SA	1234	C	P-O5'-C5'	8.03	132.95	120.90
26	LA	1020	A	O3'-P-O5'	8.03	116.04	104.00
36	L2	2	LYS	N-CA-CB	8.03	123.40	110.16
2	SA	1006	G	O3'-P-O5'	-8.02	91.97	104.00
21	SE	148	SER	N-CA-C	8.02	127.54	109.81
26	LA	2574	G	C4'-C3'-C2'	-8.02	94.58	102.60
50	LL	56	VAL	CA-C-O	8.02	129.78	120.71
4	S2	56	U	C2'-C3'-O3'	8.02	125.73	113.70
26	LA	399	U	C4'-C3'-C2'	-8.02	94.58	102.60
10	SJ	71	LEU	CA-C-O	8.02	128.74	120.24
26	LA	1543	G	C5'-C4'-O4'	8.02	121.82	109.80
27	LD	231	HIS	N-CA-C	8.02	119.65	111.07
26	LA	96	C	C4'-C3'-O3'	-8.01	100.98	113.00
13	SM	68	LEU	N-CA-C	8.01	119.64	111.07
25	LB	52	A	C5'-C4'-C3'	8.01	128.02	116.00
20	SD	50	TYR	CA-C-N	8.01	128.83	119.94
20	SD	50	TYR	C-N-CA	8.01	128.83	119.94
26	LA	2337	G	O3'-P-O5'	8.01	116.01	104.00
26	LA	2607	G	P-O3'-C3'	-8.01	108.19	120.20
26	LA	2861	U	P-O5'-C5'	8.01	132.91	120.90
26	LA	1519	G	C5'-C4'-C3'	-8.00	104.00	116.00
26	LA	2486	C	C1'-O4'-C4'	-8.00	101.90	109.90
26	LA	2641	G	C5'-C4'-C3'	-8.00	104.00	116.00
26	LA	2717	C	O3'-P-O5'	8.00	116.00	104.00
2	SA	251	G	O3'-P-O5'	-8.00	92.00	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1300	G	P-O5'-C5'	-8.00	108.90	120.90
26	LA	564	C	C4'-C3'-C2'	-7.99	94.61	102.60
24	S3	436	ARG	NE-CZ-NH2	-7.99	112.01	119.20
33	LZ	58	ILE	O-C-N	-7.99	113.80	121.87
26	LA	1871	A	P-O5'-C5'	7.99	132.88	120.90
27	LD	265	PHE	CB-CA-C	-7.99	98.66	109.28
52	LO	71	LYS	N-CA-C	7.99	121.20	109.62
2	SA	561	U	C5'-C4'-C3'	7.98	127.17	115.20
26	LA	717	C	O4'-C1'-N1	7.98	120.47	108.50
15	SO	87	ARG	N-CA-C	7.98	120.25	110.91
2	SA	157	U	O3'-P-O5'	-7.98	92.04	104.00
4	S2	21	U	C5'-C4'-C3'	7.98	127.96	116.00
26	LA	242	G	C5'-C4'-C3'	-7.97	103.24	115.20
26	LA	1071	G	O4'-C4'-C3'	7.97	111.97	104.00
26	LA	2385	C	C1'-O4'-C4'	-7.97	101.93	109.90
2	SA	510	A	C5'-C4'-C3'	-7.97	104.05	116.00
26	LA	368	A	C3'-C2'-C1'	7.97	109.27	101.30
26	LA	125	A	O4'-C1'-N9	7.96	120.15	108.20
26	LA	2140	G	O4'-C4'-C3'	7.96	111.97	104.00
26	LA	195	A	C3'-C2'-C1'	7.96	109.26	101.30
2	SA	1444	U	C5'-C4'-C3'	-7.96	104.06	116.00
2	SA	1511	G	P-O3'-C3'	7.96	132.14	120.20
25	LB	44	G	P-O5'-C5'	7.96	132.84	120.90
35	L1	44	ARG	NE-CZ-NH2	7.96	126.36	119.20
38	LE	17	GLU	N-CA-C	7.96	127.76	110.80
55	LQ	55	GLU	O-C-N	-7.96	113.51	123.06
26	LA	381	G	C5'-C4'-C3'	7.96	127.94	116.00
26	LA	1104	C	C5'-C4'-C3'	-7.96	104.06	116.00
26	LA	1212	G	P-O3'-C3'	-7.96	108.26	120.20
51	LI	89	LYS	CA-C-N	7.96	136.74	121.54
51	LI	89	LYS	C-N-CA	7.96	136.74	121.54
31	LX	56	PHE	O-C-N	7.96	130.55	122.12
53	LP	9	GLN	OE1-CD-NE2	-7.96	114.64	122.60
26	LA	221	A	P-O5'-C5'	-7.95	108.97	120.90
52	LO	116	ALA	N-CA-C	7.95	120.86	111.71
9	SI	57	VAL	N-CA-C	7.95	118.50	110.23
26	LA	2312	U	O3'-P-O5'	7.95	115.93	104.00
26	LA	1611	C	P-O5'-C5'	-7.95	108.97	120.90
27	LD	92	LEU	CA-C-N	-7.95	110.33	121.77
27	LD	92	LEU	C-N-CA	-7.95	110.33	121.77
26	LA	1458	U	P-O3'-C3'	7.95	132.12	120.20
33	LZ	15	ASN	O-C-N	-7.95	113.62	122.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1213	A	C4'-C3'-O3'	7.95	121.32	109.40
26	LA	2241	A	C4'-C3'-C2'	-7.95	94.66	102.60
20	SD	33	ILE	CA-C-O	7.94	125.89	118.90
26	LA	218	A	P-O3'-C3'	7.94	132.11	120.20
11	SK	62	ALA	N-CA-C	-7.94	102.57	111.07
26	LA	525	U	O3'-P-O5'	-7.94	92.09	104.00
26	LA	1272	A	P-O3'-C3'	7.94	132.11	120.20
26	LA	2734	A	C4'-C3'-C2'	-7.94	94.66	102.60
26	LA	1396	U	C3'-C2'-O2'	-7.94	102.69	114.60
26	LA	1659	G	C4'-C3'-C2'	-7.94	94.66	102.60
29	LV	25	GLU	CA-C-O	7.94	129.40	120.90
53	LP	69	ARG	CA-C-O	-7.94	112.06	120.55
26	LA	1097	U	C5'-C4'-C3'	7.94	127.90	116.00
26	LA	776	G	C3'-C2'-C1'	-7.93	93.57	101.50
26	LA	2666	C	C5'-C4'-C3'	-7.93	104.10	116.00
53	LP	50	PRO	N-CA-CB	7.93	111.13	103.51
26	LA	603	A	O3'-P-O5'	-7.93	92.10	104.00
30	LW	30	SER	N-CA-CB	7.93	123.90	110.49
2	SA	211	G	C5'-C4'-C3'	-7.93	104.11	116.00
26	LA	1458	U	C2'-C3'-O3'	7.93	121.39	109.50
26	LA	1653	G	P-O3'-C3'	-7.93	108.31	120.20
26	LA	1973	G	C1'-O4'-C4'	-7.93	101.97	109.90
26	LA	2725	A	C4'-C3'-C2'	-7.93	94.67	102.60
19	SC	188	ALA	O-C-N	-7.92	114.38	123.33
26	LA	1953	A	O4'-C1'-N9	7.92	120.09	108.20
2	SA	1322	C	C4'-C3'-O3'	7.92	121.28	109.40
26	LA	124	G	O3'-P-O5'	-7.92	92.12	104.00
26	LA	2163	A	P-O3'-C3'	7.92	132.08	120.20
26	LA	464	U	C4'-C3'-C2'	-7.92	94.68	102.60
26	LA	1668	A	C4'-C3'-C2'	-7.92	94.68	102.60
2	SA	588	G	C5'-C4'-C3'	-7.92	104.12	116.00
50	LL	3	THR	CA-CB-OG1	7.92	121.47	109.60
3	S1	44	U	C5'-C4'-C3'	7.92	127.87	116.00
56	LR	8	GLU	N-CA-C	7.92	119.69	111.14
26	LA	267	C	C5'-C4'-C3'	-7.91	104.13	116.00
2	SA	740	U	C5'-C4'-C3'	-7.91	104.13	116.00
44	LF	17	THR	CA-CB-OG1	7.91	121.47	109.60
26	LA	1423	G	O4'-C4'-C3'	7.91	111.91	104.00
2	SA	1502	A	P-O3'-C3'	-7.91	108.34	120.20
5	ST	10	ALA	N-CA-C	7.91	120.90	111.33
2	SA	8	A	C3'-C2'-C1'	-7.91	93.59	101.50
4	S2	73	A	C4'-C3'-C2'	-7.91	94.69	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	19	ASP	CA-CB-CG	7.90	120.50	112.60
26	LA	1423	G	C4'-C3'-C2'	-7.90	94.70	102.60
26	LA	2118	U	O5'-C5'-C4'	7.90	123.55	111.70
24	S3	364	GLN	O-C-N	-7.90	113.18	123.21
26	LA	2189	U	C5'-C4'-C3'	-7.90	104.15	116.00
2	SA	404	G	N9-C1'-C2'	-7.90	100.16	112.00
2	SA	790	A	C4'-C3'-C2'	-7.90	94.70	102.60
2	SA	1141	C	O4'-C1'-N1	7.90	120.35	108.50
26	LA	2248	C	P-O5'-C5'	-7.90	109.06	120.90
26	LA	2297	A	P-O5'-C5'	-7.90	109.06	120.90
2	SA	100	G	C5'-C4'-O4'	7.90	121.64	109.80
48	LN	97	ALA	O-C-N	-7.89	113.75	122.12
2	SA	242	G	P-O5'-C5'	-7.89	109.06	120.90
25	LB	8	C	P-O5'-C5'	-7.89	109.06	120.90
26	LA	1021	A	C5'-C4'-C3'	-7.89	104.16	116.00
26	LA	1300	G	P-O3'-C3'	-7.89	108.36	120.20
26	LA	1697	G	P-O5'-C5'	7.89	132.74	120.90
26	LA	2437	G	C2'-C3'-O3'	7.89	125.54	113.70
46	LH	110	HIS	CB-CG-CD2	-7.89	120.94	131.20
26	LA	2455	G	C5'-C4'-C3'	-7.89	104.17	116.00
54	LM	105	ARG	O-C-N	-7.89	113.94	122.07
2	SA	843	U	C5'-C4'-C3'	-7.88	104.17	116.00
26	LA	2616	C	C5'-C4'-C3'	7.88	127.83	116.00
2	SA	889	A	C5'-C4'-C3'	7.88	127.03	115.20
22	SF	33	GLU	CA-C-N	7.88	129.03	120.44
22	SF	33	GLU	C-N-CA	7.88	129.03	120.44
26	LA	503	A	O4'-C1'-C2'	7.88	113.68	105.80
26	LA	1553	A	P-O5'-C5'	-7.88	109.08	120.90
52	LO	91	TYR	CB-CG-CD1	-7.88	108.98	120.80
26	LA	248	G	P-O5'-C5'	7.88	132.72	120.90
26	LA	1694	C	C1'-O4'-C4'	-7.88	101.82	109.70
5	ST	70	LYS	N-CA-C	7.88	119.87	111.28
26	LA	260	G	C4'-C3'-C2'	-7.88	94.72	102.60
2	SA	748	G	C5'-C4'-C3'	7.88	127.81	116.00
26	LA	860	U	C1'-C2'-O2'	7.88	120.21	108.40
35	L1	29	ARG	NE-CZ-NH2	7.87	126.28	119.20
2	SA	204	G	P-O3'-C3'	7.87	132.00	120.20
26	LA	1436	G	O3'-P-O5'	7.87	115.81	104.00
33	LZ	59	ASP	CA-CB-CG	7.87	120.47	112.60
7	SG	71	THR	CA-C-N	7.87	133.73	123.03
7	SG	71	THR	C-N-CA	7.87	133.73	123.03
26	LA	1113	U	P-O3'-C3'	-7.87	108.40	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	LQ	31	THR	CA-CB-OG1	7.87	121.40	109.60
2	SA	753	A	C5'-C4'-C3'	-7.87	103.40	115.20
2	SA	519	C	C4'-C3'-C2'	-7.86	94.74	102.60
26	LA	956	G	C4'-C3'-O3'	-7.86	101.20	113.00
50	LL	5	THR	O-C-N	-7.86	114.21	123.41
26	LA	1764	C	C5'-C4'-C3'	7.86	127.79	116.00
2	SA	223	A	P-O5'-C5'	7.86	132.69	120.90
22	SF	99	ALA	O-C-N	-7.86	114.07	123.10
26	LA	212	G	P-O5'-C5'	-7.86	109.12	120.90
26	LA	805	G	C4'-C3'-C2'	-7.86	94.74	102.60
26	LA	1307	A	O4'-C4'-C3'	-7.86	96.14	104.00
26	LA	255	A	C4'-C3'-O3'	-7.85	101.22	113.00
26	LA	357	C	C4'-C3'-C2'	-7.85	94.75	102.60
2	SA	1175	G	O4'-C4'-C3'	-7.85	96.15	104.00
2	SA	1377	A	O3'-P-O5'	-7.85	92.22	104.00
7	SG	144	ALA	N-CA-C	7.85	122.12	112.23
26	LA	1236	G	P-O3'-C3'	-7.85	108.43	120.20
29	LV	70	HIS	CA-CB-CG	-7.85	105.95	113.80
32	LY	61	LYS	O-C-N	-7.85	113.93	122.09
26	LA	271	G	O4'-C1'-C2'	-7.85	97.95	105.80
26	LA	1486	U	C4'-C3'-C2'	-7.85	94.75	102.60
26	LA	550	C	C1'-O4'-C4'	-7.84	102.06	109.90
2	SA	1041	G	C4'-C3'-O3'	-7.84	101.24	113.00
26	LA	1976	U	C5'-C4'-C3'	-7.84	104.24	116.00
26	LA	2162	G	C5'-C4'-C3'	7.84	127.76	116.00
26	LA	1026	G	O3'-P-O5'	-7.84	92.24	104.00
26	LA	1133	A	C2'-C3'-O3'	7.84	121.26	109.50
26	LA	2665	A	O4'-C1'-N9	7.84	120.26	108.50
26	LA	1440	U	C4'-C3'-C2'	-7.84	94.76	102.60
26	LA	2256	G	O4'-C1'-N9	7.84	120.26	108.50
38	LE	82	PHE	CB-CA-C	-7.84	98.07	110.14
57	LS	13	HIS	CA-CB-CG	-7.84	105.96	113.80
28	LU	82	MET	CB-CA-C	7.83	122.68	109.75
2	SA	754	C	O4'-C4'-C3'	7.83	111.83	104.00
2	SA	812	G	C3'-C2'-C1'	7.83	109.13	101.30
26	LA	1531	C	C5'-C4'-C3'	7.83	127.75	116.00
13	SM	110	GLY	CA-C-N	7.83	127.88	119.89
13	SM	110	GLY	C-N-CA	7.83	127.88	119.89
26	LA	228	C	C4'-C3'-C2'	-7.83	94.77	102.60
47	LJ	73	ASP	CA-CB-CG	7.83	120.43	112.60
2	SA	830	G	O4'-C4'-C3'	-7.83	96.17	104.00
3	S1	34	U	O4'-C4'-C3'	7.83	111.83	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	SI	19	PHE	CA-CB-CG	-7.83	105.97	113.80
24	S3	584	ASP	CA-CB-CG	-7.83	104.77	112.60
2	SA	291	U	C4'-C3'-C2'	-7.83	94.77	102.60
26	LA	511	U	P-O5'-C5'	7.83	132.64	120.90
26	LA	1647	U	C5'-C4'-C3'	7.83	126.94	115.20
26	LA	2758	A	C4'-C3'-C2'	-7.83	94.78	102.60
14	SN	32	ASP	CA-CB-CG	7.82	120.42	112.60
26	LA	824	U	C4'-C3'-C2'	-7.82	94.78	102.60
26	LA	2844	G	P-O3'-C3'	7.82	131.94	120.20
27	LD	167	ASP	CA-CB-CG	7.82	120.42	112.60
37	LC	190	GLU	N-CA-C	7.82	120.70	111.71
58	LT	54	VAL	CA-C-O	7.82	127.97	120.31
1	SS	40	PHE	CA-C-N	7.82	128.23	119.32
1	SS	40	PHE	C-N-CA	7.82	128.23	119.32
4	S2	48	U	P-O3'-C3'	-7.82	108.47	120.20
26	LA	1045	C	P-O3'-C3'	7.82	131.93	120.20
26	LA	2531	A	C5'-C4'-C3'	-7.82	104.27	116.00
2	SA	805	C	N1-C1'-C2'	7.82	123.72	112.00
4	S2	59	A	O5'-C5'-C4'	7.82	123.42	111.70
19	SC	11	LEU	O-C-N	-7.82	114.02	122.07
22	SF	111	GLU	N-CA-C	7.81	122.08	112.23
26	LA	553	G	C4'-C3'-C2'	-7.81	94.79	102.60
27	LD	13	ARG	O-C-N	-7.81	112.89	122.11
26	LA	2808	G	O4'-C1'-N9	7.81	120.22	108.50
35	L1	16	LEU	CA-C-N	7.81	127.47	119.19
35	L1	16	LEU	C-N-CA	7.81	127.47	119.19
56	LR	38	ARG	NE-CZ-NH2	7.81	126.23	119.20
2	SA	925	G	P-O5'-C5'	7.81	132.61	120.90
2	SA	1044	A	O4'-C1'-C2'	-7.81	99.79	107.60
2	SA	1267	C	C3'-C2'-C1'	7.81	109.11	101.30
24	S3	216	GLU	N-CA-C	7.81	119.87	111.36
26	LA	741	U	C5'-C4'-C3'	-7.81	104.29	116.00
26	LA	1025	G	P-O3'-C3'	7.81	131.91	120.20
26	LA	1758	U	C5'-C4'-C3'	7.81	127.71	116.00
30	LW	46	LYS	N-CA-C	7.81	119.49	109.65
16	SP	41	PRO	N-CA-C	-7.81	103.73	114.27
12	SL	122	LYS	N-CA-C	7.80	120.66	110.43
26	LA	2464	G	C3'-C2'-C1'	7.80	109.10	101.30
26	LA	2739	U	O5'-C5'-C4'	7.80	123.20	111.50
2	SA	895	G	O3'-P-O5'	-7.80	92.30	104.00
26	LA	1663	G	O3'-P-O5'	-7.80	92.30	104.00
2	SA	135	C	C1'-O4'-C4'	-7.80	102.10	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	LG	91	ARG	NE-CZ-NH2	7.80	126.22	119.20
56	LR	42	PHE	CA-CB-CG	-7.80	106.00	113.80
26	LA	1568	G	C5'-C4'-C3'	-7.79	104.31	116.00
2	SA	265	G	C4'-C3'-O3'	-7.79	101.31	113.00
27	LD	8	THR	N-CA-C	7.79	119.77	111.28
31	LX	5	ASN	OD1-CG-ND2	-7.79	114.81	122.60
2	SA	252	U	C4'-C3'-O3'	-7.79	101.31	113.00
26	LA	93	G	C1'-O4'-C4'	7.79	117.69	109.90
26	LA	350	G	C5'-C4'-C3'	-7.79	104.31	116.00
20	SD	70	GLN	N-CA-C	7.79	119.77	111.28
25	LB	68	C	O4'-C1'-N1	7.79	120.18	108.50
26	LA	635	C	P-O5'-C5'	7.79	132.58	120.90
56	LR	65	ASN	CA-CB-CG	-7.79	104.81	112.60
2	SA	1506	U	C3'-C2'-O2'	-7.78	102.92	114.60
6	SU	8	ASN	N-CA-CB	7.78	123.64	110.49
2	SA	1302	C	C5'-C4'-C3'	-7.78	104.33	116.00
2	SA	312	C	C1'-C2'-O2'	7.78	120.07	108.40
2	SA	1086	U	C4'-C3'-C2'	-7.78	94.82	102.60
9	SI	112	ARG	CD-NE-CZ	-7.78	113.51	124.40
52	LO	73	ILE	O-C-N	7.78	131.47	123.07
26	LA	1565	C	C5'-C4'-C3'	-7.78	103.53	115.20
26	LA	1898	U	O3'-P-O5'	-7.78	92.33	104.00
26	LA	81	G	C4'-C3'-C2'	-7.78	94.82	102.60
2	SA	1433	A	C4'-C3'-C2'	-7.78	94.83	102.60
26	LA	458	G	C3'-C2'-C1'	-7.77	93.73	101.50
26	LA	1272	A	O4'-C1'-N9	7.77	120.16	108.50
33	LZ	10	ARG	CA-C-O	-7.77	111.98	119.91
2	SA	682	G	C4'-C3'-O3'	-7.77	101.34	113.00
26	LA	470	A	C4'-C3'-C2'	-7.77	94.83	102.60
26	LA	889	C	C5'-C4'-C3'	-7.77	104.34	116.00
32	LY	52	CYS	N-CA-C	7.77	120.00	110.91
49	LK	110	GLN	N-CA-C	7.77	119.75	111.28
26	LA	184	C	C1'-C2'-O2'	7.77	120.06	108.40
26	LA	456	C	P-O5'-C5'	7.77	132.56	120.90
26	LA	854	C	C4'-C3'-C2'	-7.77	94.83	102.60
57	LS	42	GLY	O-C-N	-7.77	113.90	122.68
24	S3	315	PRO	N-CA-C	7.77	122.44	111.33
26	LA	2451	A	O5'-C5'-C4'	7.77	123.35	111.70
31	LX	16	ALA	N-CA-C	7.77	120.43	111.11
2	SA	871	U	C1'-O4'-C4'	-7.77	101.93	109.70
22	SF	40	GLU	N-CA-CB	7.76	122.76	110.57
32	LY	55	ASP	CA-C-N	7.76	136.37	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	LY	55	ASP	C-N-CA	7.76	136.37	121.54
26	LA	2648	G	P-O5'-C5'	-7.76	109.26	120.90
7	SG	142	ARG	N-CA-C	-7.76	102.15	111.69
19	SC	62	SER	CA-C-N	7.76	133.31	123.14
19	SC	62	SER	C-N-CA	7.76	133.31	123.14
26	LA	986	C	P-O5'-C5'	7.76	132.54	120.90
26	LA	1802	A	O3'-P-O5'	7.76	115.64	104.00
26	LA	2473	U	C4'-C3'-C2'	-7.76	94.84	102.60
27	LD	47	ARG	O-C-N	-7.76	114.25	122.94
26	LA	1729	U	C4'-C3'-C2'	7.75	110.35	102.60
38	LE	189	VAL	O-C-N	-7.75	114.71	122.93
44	LF	36	ALA	O-C-N	-7.75	113.31	122.15
26	LA	405	U	C5'-C4'-C3'	7.75	127.63	116.00
26	LA	2429	G	P-O5'-C5'	-7.75	109.27	120.90
26	LA	279	A	C5'-C4'-C3'	7.75	127.62	116.00
53	LP	74	GLU	O-C-N	-7.75	113.32	122.15
26	LA	1158	C	P-O5'-C5'	-7.74	109.28	120.90
26	LA	2892	G	P-O3'-C3'	7.74	131.82	120.20
37	LC	29	LEU	CA-C-O	-7.74	112.73	120.70
2	SA	1234	C	C4'-C3'-O3'	-7.74	101.39	113.00
26	LA	2058	A	O4'-C1'-N9	7.74	119.81	108.20
26	LA	2574	G	C4'-C3'-O3'	7.74	124.61	113.00
26	LA	1494	A	P-O5'-C5'	7.74	132.50	120.90
50	LL	122	LEU	O-C-N	-7.74	114.19	123.16
2	SA	576	C	C4'-C3'-C2'	-7.73	94.87	102.60
26	LA	923	G	P-O3'-C3'	-7.73	108.60	120.20
58	LT	74	ILE	CA-C-N	-7.73	113.60	123.19
58	LT	74	ILE	C-N-CA	-7.73	113.60	123.19
2	SA	34	C	O3'-P-O5'	-7.73	92.40	104.00
6	SU	18	PHE	CA-C-N	7.73	134.67	121.14
6	SU	18	PHE	C-N-CA	7.73	134.67	121.14
26	LA	2153	C	P-O5'-C5'	-7.73	109.31	120.90
2	SA	182	A	O4'-C1'-N9	7.73	119.79	108.20
11	SK	121	ARG	NE-CZ-NH1	-7.73	113.77	121.50
38	LE	126	ASN	CA-CB-CG	-7.73	104.87	112.60
2	SA	1535	C	C1'-O4'-C4'	-7.73	102.17	109.90
2	SA	1335	U	O4'-C1'-C2'	7.72	113.53	105.80
2	SA	1405	G	C5'-C4'-C3'	7.72	127.59	116.00
19	SC	79	LYS	O-C-N	-7.72	114.72	122.99
26	LA	232	G	P-O3'-C3'	-7.72	108.61	120.20
26	LA	1450	G	O4'-C4'-C3'	-7.72	96.28	104.00
2	SA	816	A	C5'-C4'-C3'	7.72	126.78	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2732	G	C2'-C3'-O3'	7.72	125.28	113.70
49	LK	117	THR	CA-C-O	7.72	129.26	120.54
23	SR	67	LEU	CA-C-N	7.72	128.75	120.11
23	SR	67	LEU	C-N-CA	7.72	128.75	120.11
2	SA	1297	G	P-O3'-C3'	7.72	131.78	120.20
10	SJ	42	LEU	CA-C-N	7.72	129.49	119.84
10	SJ	42	LEU	C-N-CA	7.72	129.49	119.84
2	SA	351	G	O3'-P-O5'	-7.71	92.43	104.00
8	SH	37	ASN	CA-CB-CG	-7.71	104.89	112.60
2	SA	1274	A	P-O5'-C5'	7.71	132.47	120.90
26	LA	38	A	P-O5'-C5'	7.71	132.47	120.90
26	LA	2713	U	P-O3'-C3'	7.71	131.77	120.20
51	LI	128	HIS	CA-CB-CG	7.71	121.51	113.80
2	SA	877	G	C5'-C4'-C3'	7.71	127.56	116.00
3	S1	17	U	C3'-C2'-C1'	7.71	109.01	101.30
57	LS	103	VAL	CA-C-O	7.71	128.05	119.42
2	SA	277	C	C4'-C3'-C2'	7.71	110.31	102.60
5	ST	51	ASN	CB-CA-C	-7.71	98.00	110.79
26	LA	2092	U	P-O5'-C5'	-7.71	109.34	120.90
26	LA	2566	A	O4'-C4'-C3'	-7.71	98.39	106.10
39	L3	44	ALA	CA-C-O	7.71	127.38	118.90
2	SA	1053	G	P-O3'-C3'	-7.71	108.64	120.20
25	LB	78	A	C4'-C3'-C2'	-7.71	94.89	102.60
6	SU	66	ARG	NH1-CZ-NH2	-7.70	109.28	119.30
26	LA	506	G	O4'-C1'-C2'	-7.70	98.10	105.80
26	LA	2700	A	C3'-C2'-C1'	7.70	109.00	101.30
25	LB	55	U	P-O5'-C5'	7.70	132.45	120.90
18	SB	114	LYS	CA-C-N	7.70	130.91	120.44
18	SB	114	LYS	C-N-CA	7.70	130.91	120.44
26	LA	231	A	C2'-C3'-O3'	7.70	125.25	113.70
26	LA	2061	G	C4'-C3'-C2'	-7.70	94.90	102.60
31	LX	41	GLU	N-CA-C	7.70	122.56	110.17
26	LA	2566	A	C5'-C4'-C3'	7.70	126.74	115.20
19	SC	28	PHE	CA-CB-CG	-7.69	106.11	113.80
24	S3	637	ARG	NE-CZ-NH2	-7.69	112.28	119.20
26	LA	675	A	C2'-C3'-O3'	7.69	125.23	113.70
38	LE	75	ALA	N-CA-C	7.69	121.66	111.28
44	LF	60	TRP	CB-CG-CD2	-7.69	116.04	126.80
21	SE	121	ASN	CA-CB-CG	-7.69	104.91	112.60
35	L1	49	ALA	O-C-N	-7.69	112.23	122.23
2	SA	1504	G	C2'-C3'-O3'	7.68	121.03	109.50
4	S2	46	G	C4'-C3'-O3'	-7.68	101.47	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	SG	139	ASP	O-C-N	-7.68	113.98	122.12
26	LA	2501	C	O3'-P-O5'	7.68	115.52	104.00
20	SD	187	ARG	NE-CZ-NH2	-7.68	112.29	119.20
45	LG	13	LYS	N-CA-C	7.68	119.65	111.28
26	LA	241	A	O3'-P-O5'	-7.68	92.48	104.00
26	LA	1044	C	C5'-C4'-C3'	-7.68	104.48	116.00
26	LA	1789	A	O3'-P-O5'	-7.68	92.48	104.00
2	SA	368	U	O3'-P-O5'	-7.68	92.49	104.00
26	LA	1383	A	C4'-C3'-C2'	-7.68	94.92	102.60
2	SA	755	G	C4'-C3'-C2'	-7.67	94.93	102.60
26	LA	1344	U	P-O5'-C5'	7.67	132.41	120.90
49	LK	21	PRO	CA-C-O	-7.67	109.43	120.56
57	LS	16	ILE	N-CA-C	7.67	117.79	110.42
2	SA	782	A	C2'-C3'-O3'	7.67	125.21	113.70
11	SK	65	ALA	O-C-N	-7.67	114.17	122.07
14	SN	89	ARG	NE-CZ-NH1	7.67	129.17	121.50
2	SA	143	A	O3'-P-O5'	-7.67	92.50	104.00
2	SA	1470	U	C4'-C3'-C2'	-7.67	94.93	102.60
26	LA	881	G	C5'-C4'-C3'	-7.67	104.50	116.00
26	LA	1666	G	O3'-P-O5'	7.67	115.50	104.00
2	SA	235	C	O4'-C1'-C2'	7.67	115.27	107.60
2	SA	400	C	C1'-C2'-O2'	7.67	119.90	108.40
2	SA	571	U	P-O5'-C5'	7.67	132.40	120.90
24	S3	222	ILE	N-CA-CB	7.67	122.08	110.58
45	LG	65	LEU	N-CA-C	-7.67	102.92	111.28
2	SA	1075	U	C4'-C3'-O3'	-7.67	101.50	113.00
47	LJ	159	ASP	CA-CB-CG	7.66	120.26	112.60
52	LO	94	ALA	O-C-N	-7.66	114.61	123.27
2	SA	210	C	O4'-C1'-C2'	-7.66	98.14	105.80
26	LA	1097	U	O5'-C5'-C4'	7.66	122.99	111.50
2	SA	176	C	P-O3'-C3'	-7.66	108.71	120.20
2	SA	1497	G	O4'-C1'-N9	7.66	119.99	108.50
26	LA	219	A	P-O3'-C3'	7.66	131.69	120.20
26	LA	1489	C	C5'-C4'-C3'	-7.66	104.51	116.00
26	LA	1240	U	C5'-C4'-C3'	7.66	127.49	116.00
24	S3	654	HIS	CA-CB-CG	7.66	121.46	113.80
26	LA	2207	C	C5'-C4'-O4'	7.66	121.29	109.80
26	LA	2718	G	C5'-C4'-C3'	7.66	127.48	116.00
8	SH	123	GLU	N-CA-CB	7.66	123.03	110.17
14	SN	81	ILE	N-CA-C	7.66	118.40	110.36
26	LA	821	A	C5'-C4'-C3'	-7.66	104.52	116.00
26	LA	1378	A	P-O5'-C5'	-7.66	109.42	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	LE	173	GLN	OE1-CD-NE2	-7.65	114.95	122.60
26	LA	1518	C	O4'-C1'-N1	7.65	119.97	108.50
8	SH	121	GLY	CA-C-O	-7.65	113.82	121.93
26	LA	2646	C	P-O5'-C5'	-7.65	109.43	120.90
2	SA	60	A	O4'-C1'-C2'	-7.65	98.15	105.80
2	SA	796	C	P-O3'-C3'	-7.65	108.73	120.20
2	SA	847	G	C5'-C4'-C3'	-7.65	104.53	116.00
13	SM	97	ARG	NE-CZ-NH2	-7.65	112.32	119.20
2	SA	17	U	C5'-C4'-C3'	-7.64	104.53	116.00
8	SH	116	ARG	N-CA-C	7.64	120.72	111.40
26	LA	379	G	C5'-C4'-O4'	-7.64	98.34	109.80
1	SS	51	HIS	CE1-NE2-CD2	-7.64	101.36	109.00
26	LA	111	A	C4'-C3'-C2'	-7.64	94.96	102.60
26	LA	331	C	P-O5'-C5'	-7.64	109.44	120.90
26	LA	894	U	P-O3'-C3'	-7.64	108.74	120.20
26	LA	1324	G	P-O5'-C5'	-7.64	109.44	120.90
26	LA	1654	A	O3'-P-O5'	7.64	115.46	104.00
26	LA	1495	A	C4'-C3'-C2'	-7.64	94.96	102.60
27	LD	113	ASP	CA-C-O	7.64	128.95	120.70
26	LA	614	A	O4'-C1'-C2'	7.64	113.44	105.80
2	SA	1305	G	C4'-C3'-C2'	-7.63	94.97	102.60
14	SN	29	ILE	N-CA-C	7.63	118.43	110.72
26	LA	223	A	C1'-O4'-C4'	-7.63	102.27	109.90
57	LS	8	ILE	CB-CA-C	-7.63	102.01	112.24
37	LC	232	SER	N-CA-C	7.63	120.33	111.02
25	LB	116	G	C5'-C4'-C3'	-7.63	104.55	116.00
26	LA	1649	G	C4'-C3'-C2'	-7.63	94.97	102.60
26	LA	974	G	C3'-C2'-C1'	-7.63	93.87	101.50
2	SA	449	G	P-O5'-C5'	7.63	132.34	120.90
11	SK	126	ARG	CA-C-N	7.63	136.10	121.54
11	SK	126	ARG	C-N-CA	7.63	136.10	121.54
26	LA	1450	G	P-O3'-C3'	7.63	131.64	120.20
26	LA	1513	U	P-O5'-C5'	7.63	132.34	120.90
12	SL	86	VAL	N-CA-CB	7.62	121.86	112.10
38	LE	95	SER	CA-C-N	7.62	135.69	121.97
38	LE	95	SER	C-N-CA	7.62	135.69	121.97
44	LF	193	VAL	CB-CA-C	-7.62	101.85	112.14
26	LA	1838	C	C5'-C4'-C3'	7.62	126.64	115.20
24	S3	172	ILE	N-CA-CB	7.62	121.50	111.90
2	SA	117	G	O4'-C1'-C2'	7.62	115.22	107.60
26	LA	1592	C	O4'-C1'-N1	7.62	119.93	108.50
29	LV	40	LYS	CA-C-N	7.62	130.80	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	LV	40	LYS	C-N-CA	7.62	130.80	120.44
56	LR	25	VAL	CA-C-O	7.62	130.30	120.78
2	SA	793	U	O4'-C4'-C3'	-7.62	98.48	106.10
19	SC	63	ILE	N-CA-CB	7.62	121.92	111.41
26	LA	1961	C	C4'-C3'-C2'	-7.62	94.98	102.60
26	LA	2531	A	P-O5'-C5'	-7.61	109.48	120.90
2	SA	1082	A	P-O5'-C5'	7.61	132.32	120.90
26	LA	1254	A	C5'-C4'-C3'	7.61	127.42	116.00
26	LA	147	C	P-O5'-C5'	7.61	132.32	120.90
26	LA	1901	A	O4'-C1'-N9	7.61	119.92	108.50
47	LJ	42	LYS	N-CA-C	7.61	120.31	111.02
3	S1	39	U	C5'-C4'-C3'	7.61	127.41	116.00
7	SG	73	GLU	O-C-N	-7.61	113.96	123.17
26	LA	1322	A	P-O3'-C3'	7.61	131.61	120.20
26	LA	1760	C	C5'-C4'-C3'	-7.61	104.59	116.00
2	SA	1513	A	P-O5'-C5'	-7.61	109.49	120.90
26	LA	2633	G	C4'-C3'-C2'	-7.61	94.99	102.60
26	LA	1211	C	P-O3'-C3'	7.61	131.61	120.20
26	LA	2226	C	C4'-C3'-C2'	-7.61	95.00	102.60
11	SK	112	VAL	N-CA-C	-7.60	104.95	112.17
32	LY	39	GLN	N-CA-C	7.60	120.69	110.35
45	LG	26	GLN	N-CA-CB	7.60	121.04	110.01
5	ST	76	ALA	N-CA-C	7.60	119.35	111.14
20	SD	173	ASP	CA-C-O	7.60	129.47	120.20
26	LA	1538	G	O4'-C4'-C3'	-7.60	96.40	104.00
26	LA	2450	A	C5'-C4'-C3'	7.60	127.40	116.00
46	LH	173	ALA	N-CA-C	7.60	121.53	110.28
56	LR	51	ASN	OD1-CG-ND2	7.60	130.20	122.60
26	LA	1626	A	C4'-C3'-C2'	7.60	110.20	102.60
26	LA	2020	A	C5'-C4'-C3'	7.60	127.40	116.00
58	LT	53	PHE	CA-CB-CG	-7.60	106.20	113.80
26	LA	1991	U	C5'-C4'-C3'	7.60	127.39	116.00
26	LA	2430	A	C5'-C4'-C3'	7.59	127.39	116.00
2	SA	813	U	P-O5'-C5'	-7.59	109.51	120.90
2	SA	485	U	O4'-C1'-N1	7.59	119.59	108.20
2	SA	1335	U	C2'-C3'-O3'	7.59	120.89	109.50
26	LA	2529	G	C3'-C2'-C1'	7.59	108.89	101.30
7	SG	17	PHE	CA-CB-CG	7.59	121.39	113.80
7	SG	147	ASN	N-CA-C	7.59	121.37	112.72
57	LS	76	SER	N-CA-C	-7.59	102.36	111.69
2	SA	1241	G	P-O5'-C5'	7.58	132.28	120.90
24	S3	323	ILE	N-CA-C	-7.58	97.49	108.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	272	A	O3'-P-O5'	-7.58	92.62	104.00
26	LA	164	C	O4'-C1'-N1	7.58	119.88	108.50
57	LS	21	LYS	O-C-N	-7.58	113.96	123.06
2	SA	169	C	P-O5'-C5'	7.58	132.27	120.90
26	LA	1911	U	O3'-P-O5'	7.58	115.37	104.00
44	LF	157	LEU	N-CA-C	-7.58	101.91	112.45
2	SA	810	C	O3'-P-O5'	7.58	115.37	104.00
8	SH	24	VAL	O-C-N	-7.58	115.30	123.18
26	LA	2165	C	P-O3'-C3'	-7.58	108.83	120.20
26	LA	2529	G	O4'-C1'-C2'	-7.58	100.03	107.60
2	SA	42	G	O4'-C1'-N9	7.57	119.86	108.50
26	LA	2094	A	C1'-O4'-C4'	-7.57	102.13	109.70
51	LI	35	LYS	O-C-N	-7.57	113.25	122.34
36	L2	66	ILE	O-C-N	-7.57	115.57	120.42
2	SA	1152	A	C5'-C4'-C3'	-7.57	104.65	116.00
58	LT	80	ARG	NE-CZ-NH1	7.57	129.07	121.50
24	S3	411	PRO	N-CA-C	7.57	123.08	111.57
26	LA	1307	A	P-O5'-C5'	-7.57	109.55	120.90
2	SA	1136	C	O4'-C1'-N1	7.57	119.85	108.50
2	SA	1173	U	C5'-C4'-C3'	-7.57	104.65	116.00
8	SH	64	TYR	CB-CA-C	-7.57	101.26	110.94
26	LA	2030	U	O4'-C1'-C2'	-7.57	98.23	105.80
25	LB	87	U	C1'-O4'-C4'	-7.56	102.14	109.70
2	SA	791	G	C5'-C4'-C3'	7.56	127.34	116.00
19	SC	119	ILE	CA-C-O	7.56	129.44	121.05
2	SA	510	A	P-O5'-C5'	7.56	132.24	120.90
26	LA	819	A	O4'-C4'-C3'	7.56	111.56	104.00
26	LA	2008	C	O4'-C4'-C3'	7.56	111.56	104.00
25	LB	115	A	C1'-O4'-C4'	-7.56	102.34	109.90
26	LA	346	A	C4'-C3'-C2'	-7.56	95.04	102.60
2	SA	1281	C	P-O5'-C5'	7.56	132.23	120.90
22	SF	80	PHE	CA-CB-CG	7.56	121.36	113.80
2	SA	1361	G	O3'-P-O5'	-7.55	92.67	104.00
26	LA	2669	G	C5'-C4'-C3'	7.55	127.33	116.00
26	LA	1242	U	C5'-C4'-C3'	-7.55	104.67	116.00
26	LA	2848	G	P-O3'-C3'	7.55	131.53	120.20
35	L1	33	HIS	N-CA-C	-7.55	94.72	110.80
2	SA	1449	C	C4'-C3'-C2'	-7.55	95.05	102.60
3	S1	51	C	C4'-C3'-C2'	-7.55	95.05	102.60
26	LA	638	G	C1'-C2'-O2'	7.55	119.72	108.40
46	LH	62	ALA	CA-C-O	-7.55	112.89	120.82
52	LO	51	ARG	NE-CZ-NH2	7.55	125.99	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	772	U	C5'-C4'-O4'	7.55	121.12	109.80
56	LR	20	ARG	CA-C-O	7.55	127.11	119.86
26	LA	1168	G	O3'-P-O5'	-7.54	92.69	104.00
26	LA	1849	G	O3'-P-O5'	-7.54	92.69	104.00
37	LC	226	GLN	CA-C-N	7.54	135.95	121.54
37	LC	226	GLN	C-N-CA	7.54	135.95	121.54
26	LA	1169	A	C4'-C3'-C2'	-7.54	95.06	102.60
38	LE	34	VAL	N-CA-C	7.54	119.83	109.80
2	SA	496	A	P-O5'-C5'	7.54	132.21	120.90
26	LA	1672	A	C4'-C3'-C2'	-7.54	95.06	102.60
20	SD	115	GLN	N-CA-C	7.54	119.50	111.28
26	LA	1347	A	C5'-C4'-C3'	-7.54	104.69	116.00
16	SP	59	HIS	CE1-NE2-CD2	-7.54	101.46	109.00
26	LA	1012	U	N1-C1'-C2'	7.54	125.30	114.00
36	L2	65	ASN	CA-C-N	7.54	126.36	120.33
36	L2	65	ASN	C-N-CA	7.54	126.36	120.33
24	S3	27	GLU	O-C-N	-7.53	114.31	122.07
37	LC	142	VAL	N-CA-C	-7.53	105.37	112.83
2	SA	121	U	O5'-C5'-C4'	7.53	122.80	111.50
2	SA	169	C	C1'-C2'-O2'	7.53	119.69	108.40
2	SA	1267	C	C4'-C3'-C2'	-7.53	95.07	102.60
2	SA	1458	G	C4'-C3'-C2'	-7.53	95.07	102.60
26	LA	2295	C	C3'-C2'-C1'	7.53	108.83	101.30
26	LA	641	U	O3'-P-O5'	7.53	115.29	104.00
26	LA	2894	G	P-O3'-C3'	-7.53	108.91	120.20
27	LD	156	SER	CA-C-O	7.53	129.76	121.56
58	LT	8	GLY	N-CA-C	-7.53	100.27	111.19
18	SB	17	HIS	CE1-NE2-CD2	-7.52	101.48	109.00
27	LD	30	ALA	O-C-N	-7.52	113.64	120.71
56	LR	90	ALA	CA-C-O	7.52	129.59	121.16
18	SB	217	ALA	CA-C-O	-7.52	112.45	120.42
24	S3	37	HIS	CE1-NE2-CD2	-7.52	101.48	109.00
38	LE	142	VAL	CA-C-N	7.52	127.28	119.76
38	LE	142	VAL	C-N-CA	7.52	127.28	119.76
51	LI	34	GLY	N-CA-C	7.52	125.70	115.32
28	LU	100	THR	CA-CB-OG1	7.52	120.88	109.60
26	LA	1350	C	P-O3'-C3'	-7.52	108.93	120.20
26	LA	377	G	C4'-C3'-C2'	-7.51	95.09	102.60
27	LD	265	PHE	CA-CB-CG	-7.51	106.29	113.80
2	SA	376	G	O3'-P-O5'	7.51	115.27	104.00
20	SD	46	ARG	NE-CZ-NH1	7.51	129.01	121.50
26	LA	613	A	C2'-C3'-O3'	7.51	120.77	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	406	GLU	N-CA-C	7.51	119.47	111.28
26	LA	392	U	C1'-O4'-C4'	-7.51	102.39	109.90
26	LA	913	U	C3'-C2'-O2'	-7.51	103.33	114.60
26	LA	2260	C	O4'-C1'-N1	7.51	119.77	108.50
18	SB	239	ALA	O-C-N	-7.51	112.61	122.59
19	SC	84	GLU	N-CA-C	7.51	119.54	111.36
26	LA	466	A	C4'-C3'-C2'	-7.51	95.09	102.60
26	LA	754	U	O3'-P-O5'	7.50	115.26	104.00
2	SA	833	G	P-O5'-C5'	-7.50	109.64	120.90
26	LA	184	C	C5'-C4'-C3'	-7.50	104.75	116.00
26	LA	1918	A	C5'-C4'-O4'	7.50	120.35	109.10
26	LA	2391	G	C3'-C2'-O2'	-7.50	103.34	114.60
56	LR	17	PRO	N-CA-C	7.50	122.48	110.40
26	LA	2112	G	P-O3'-C3'	7.50	131.45	120.20
46	LH	43	LYS	CB-CA-C	7.50	121.91	109.53
26	LA	2138	G	O3'-P-O5'	-7.50	92.75	104.00
26	LA	2579	C	O3'-P-O5'	-7.50	92.75	104.00
28	LU	110	ARG	NE-CZ-NH2	7.50	125.95	119.20
26	LA	488	G	P-O5'-C5'	7.50	132.15	120.90
2	SA	1361	G	C5'-C4'-C3'	7.50	127.24	116.00
49	LK	108	ILE	N-CA-CB	7.50	120.73	110.54
26	LA	443	A	O4'-C1'-N9	7.49	119.44	108.20
26	LA	2831	G	O5'-C5'-C4'	-7.49	100.26	111.50
22	SF	115	ASP	N-CA-C	-7.49	102.79	112.23
26	LA	2073	C	O4'-C4'-C3'	7.49	111.49	104.00
2	SA	1427	C	C4'-C3'-O3'	-7.49	101.77	113.00
37	LC	12	ARG	NE-CZ-NH2	7.49	125.94	119.20
3	S1	27	A	P-O3'-C3'	7.49	131.43	120.20
2	SA	30	U	O3'-P-O5'	-7.49	92.77	104.00
2	SA	708	C	C3'-C2'-C1'	7.49	108.78	101.30
2	SA	878	A	O3'-P-O5'	-7.49	92.77	104.00
26	LA	1081	U	P-O5'-C5'	7.49	132.13	120.90
26	LA	1255	U	C5'-C4'-O4'	7.49	121.03	109.80
26	LA	1403	A	C4'-C3'-C2'	-7.49	95.11	102.60
26	LA	1670	C	C4'-C3'-C2'	-7.49	95.11	102.60
2	SA	1166	G	C4'-C3'-O3'	-7.48	101.78	113.00
3	S1	28	U	C4'-C3'-C2'	-7.48	95.12	102.60
26	LA	1123	C	P-O3'-C3'	7.48	131.43	120.20
26	LA	1249	U	C5'-C4'-C3'	-7.48	104.77	116.00
2	SA	654	G	P-O3'-C3'	-7.48	108.97	120.20
7	SG	78	ARG	CA-C-N	7.48	135.44	121.97
7	SG	78	ARG	C-N-CA	7.48	135.44	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	701	G	C4'-C3'-O3'	-7.48	101.78	113.00
26	LA	2803	G	C5'-C4'-C3'	-7.48	104.78	116.00
49	LK	85	ILE	CA-C-N	7.48	130.81	120.63
49	LK	85	ILE	C-N-CA	7.48	130.81	120.63
2	SA	458	U	O4'-C1'-N1	7.48	119.72	108.50
26	LA	2841	C	P-O5'-C5'	7.48	132.12	120.90
30	LW	38	ILE	N-CA-C	7.48	118.28	110.72
2	SA	340	U	C4'-C3'-C2'	-7.48	95.12	102.60
26	LA	704	G	P-O3'-C3'	7.48	131.42	120.20
26	LA	1261	C	C4'-C3'-C2'	-7.48	95.12	102.60
26	LA	124	G	P-O3'-C3'	-7.47	108.99	120.20
26	LA	1596	A	O3'-P-O5'	7.47	115.21	104.00
44	LF	54	GLY	CA-C-N	7.47	135.82	121.54
44	LF	54	GLY	C-N-CA	7.47	135.82	121.54
47	LJ	34	VAL	O-C-N	-7.47	114.62	121.87
26	LA	1017	G	P-O5'-C5'	-7.47	109.69	120.90
26	LA	2581	G	O4'-C1'-N9	7.47	119.71	108.50
26	LA	2827	C	C2'-C3'-O3'	7.47	124.91	113.70
7	SG	8	GLN	CA-C-N	7.47	131.44	120.90
7	SG	8	GLN	C-N-CA	7.47	131.44	120.90
24	S3	4	THR	CA-C-O	-7.47	113.63	120.50
26	LA	2056	G	O4'-C4'-C3'	7.47	111.47	104.00
52	LO	130	PHE	CA-CB-CG	7.47	121.27	113.80
2	SA	465	A	P-O5'-C5'	7.47	132.10	120.90
2	SA	926	G	C2'-C3'-O3'	7.47	124.90	113.70
2	SA	1174	G	C4'-C3'-C2'	-7.47	95.13	102.60
2	SA	124	C	C4'-C3'-C2'	-7.47	95.13	102.60
2	SA	547	A	C4'-C3'-C2'	-7.47	95.13	102.60
26	LA	2204	G	C4'-C3'-O3'	-7.47	101.80	113.00
2	SA	432	A	O4'-C1'-C2'	7.46	115.06	107.60
26	LA	1737	G	P-O5'-C5'	7.46	132.10	120.90
35	L1	55	LYS	CA-C-N	-7.46	113.52	122.93
35	L1	55	LYS	C-N-CA	-7.46	113.52	122.93
2	SA	1027	C	O4'-C4'-C3'	-7.46	96.54	104.00
24	S3	210	MET	CA-C-O	-7.46	111.67	120.10
26	LA	2496	C	O4'-C4'-C3'	7.46	111.46	104.00
26	LA	1740	G	O5'-C5'-C4'	-7.46	100.31	111.50
26	LA	277	G	C1'-O4'-C4'	-7.46	102.44	109.90
45	LG	58	ALA	N-CA-C	7.46	120.29	111.71
2	SA	265	G	P-O3'-C3'	-7.46	109.01	120.20
26	LA	459	U	P-O5'-C5'	7.46	132.08	120.90
27	LD	52	HIS	CA-CB-CG	-7.46	106.34	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	LL	34	ARG	CB-CA-C	7.46	122.58	110.88
26	LA	45	G	P-O3'-C3'	7.45	131.38	120.20
26	LA	205	G	C4'-C3'-C2'	-7.45	95.15	102.60
26	LA	1894	C	O4'-C4'-C3'	7.45	111.45	104.00
26	LA	2501	C	C5'-C4'-C3'	7.45	127.18	116.00
29	LV	54	GLU	O-C-N	-7.45	114.22	123.01
26	LA	1628	G	C5'-C4'-C3'	-7.45	104.83	116.00
33	LZ	63	ILE	N-CA-C	7.45	119.11	110.62
2	SA	411	A	O4'-C4'-C3'	-7.45	98.66	106.10
30	LW	50	ALA	N-CA-C	7.45	121.96	113.02
58	LT	47	VAL	O-C-N	-7.45	114.49	122.61
26	LA	126	A	C5'-C4'-O4'	7.44	120.96	109.80
2	SA	883	C	C4'-C3'-C2'	-7.44	95.16	102.60
2	SA	1449	C	P-O3'-C3'	-7.44	109.04	120.20
5	ST	23	ARG	NE-CZ-NH1	7.44	128.94	121.50
2	SA	886	G	P-O5'-C5'	7.44	132.06	120.90
23	SR	40	PRO	CA-C-O	-7.44	112.93	121.56
26	LA	2820	A	C2'-C3'-O3'	7.44	120.66	109.50
30	LW	38	ILE	O-C-N	-7.44	114.17	121.83
55	LQ	97	PHE	CA-CB-CG	-7.44	106.36	113.80
2	SA	1078	U	C1'-O4'-C4'	-7.44	102.46	109.90
26	LA	1966	A	O4'-C1'-N9	7.44	119.66	108.50
2	SA	275	G	P-O5'-C5'	7.43	132.05	120.90
2	SA	441	A	C5'-C4'-C3'	-7.43	104.85	116.00
2	SA	713	G	C4'-C3'-C2'	-7.43	95.17	102.60
26	LA	1135	C	O5'-C5'-C4'	7.43	122.65	111.50
26	LA	1828	G	O3'-P-O5'	-7.43	92.85	104.00
26	LA	2020	A	P-O5'-C5'	-7.43	109.75	120.90
45	LG	109	ARG	NE-CZ-NH2	7.43	125.89	119.20
4	S2	73	A	C5'-C4'-O4'	7.43	120.95	109.80
26	LA	1285	A	P-O3'-C3'	7.43	131.35	120.20
26	LA	1878	G	C4'-C3'-C2'	-7.43	95.17	102.60
26	LA	2596	U	C4'-C3'-O3'	-7.43	101.85	113.00
47	LJ	59	LEU	CA-C-O	-7.43	112.67	120.55
26	LA	2589	A	O4'-C4'-C3'	7.43	111.43	104.00
24	S3	87	ASP	CB-CA-C	-7.43	98.16	110.19
48	LN	48	ARG	N-CA-CB	7.43	121.05	109.83
26	LA	1222	U	C3'-C2'-C1'	7.43	108.73	101.30
48	LN	7	SER	CA-C-O	-7.43	112.56	119.76
2	SA	1501	C	O3'-P-O5'	-7.43	92.86	104.00
26	LA	469	G	C5'-C4'-O4'	7.43	120.94	109.80
39	L3	18	HIS	CA-CB-CG	-7.43	106.37	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	LK	111	THR	N-CA-CB	7.43	121.79	110.28
2	SA	1498	U	P-O3'-C3'	7.42	131.34	120.20
26	LA	1275	A	O4'-C1'-N9	7.42	119.33	108.20
26	LA	1715	G	P-O3'-C3'	7.42	131.34	120.20
36	L2	33	ASN	CA-CB-CG	-7.42	105.17	112.60
26	LA	490	C	C1'-O4'-C4'	-7.42	102.48	109.90
26	LA	2214	C	C4'-C3'-C2'	-7.42	95.18	102.60
2	SA	934	C	O5'-C5'-C4'	7.42	122.83	111.70
24	S3	548	TYR	CA-C-N	7.42	124.92	120.24
24	S3	548	TYR	C-N-CA	7.42	124.92	120.24
25	LB	92	C	C1'-C2'-O2'	7.42	119.53	108.40
26	LA	543	G	N9-C1'-C2'	-7.42	100.87	112.00
26	LA	2431	U	C5'-C4'-C3'	-7.42	104.87	116.00
9	SI	89	TYR	N-CA-CB	-7.42	99.18	110.16
26	LA	2660	A	O5'-C5'-C4'	7.42	122.63	111.50
2	SA	1306	A	P-O3'-C3'	-7.42	109.08	120.20
24	S3	647	GLU	N-CA-C	-7.42	98.09	109.14
26	LA	1268	A	P-O3'-C3'	-7.42	109.08	120.20
48	LN	73	ILE	CA-C-N	7.42	133.70	122.65
48	LN	73	ILE	C-N-CA	7.42	133.70	122.65
26	LA	1559	U	P-O5'-C5'	7.41	132.02	120.90
26	LA	2815	C	P-O5'-C5'	-7.41	109.78	120.90
32	LY	64	GLY	O-C-N	-7.41	116.84	123.88
26	LA	2316	G	O4'-C1'-C2'	7.41	115.01	107.60
32	LY	13	ARG	NE-CZ-NH2	-7.41	112.53	119.20
2	SA	880	C	O5'-C5'-C4'	-7.41	100.39	111.50
24	S3	234	GLU	N-CA-C	7.41	119.00	111.07
26	LA	1591	A	P-O5'-C5'	7.41	132.01	120.90
7	SG	74	VAL	N-CA-CB	7.41	120.79	111.46
28	LU	22	ASP	O-C-N	-7.41	112.76	122.39
54	LM	38	ILE	CA-C-O	7.41	128.67	120.59
2	SA	785	G	C5'-C4'-C3'	-7.41	104.89	116.00
20	SD	191	SER	N-CA-CB	7.41	123.01	110.49
26	LA	1428	C	P-O3'-C3'	-7.41	109.09	120.20
26	LA	2582	G	O5'-C5'-C4'	7.41	122.61	111.50
2	SA	48	C	C1'-O4'-C4'	-7.41	102.30	109.70
2	SA	451	A	C2'-C3'-O3'	7.41	120.61	109.50
13	SM	19	THR	CA-C-N	7.41	130.81	120.29
13	SM	19	THR	C-N-CA	7.41	130.81	120.29
26	LA	288	U	C4'-C3'-C2'	-7.41	95.19	102.60
26	LA	1127	A	P-O3'-C3'	7.41	131.31	120.20
47	LJ	58	LEU	CB-CA-C	-7.41	98.26	110.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	S1	58	C	C1'-O4'-C4'	-7.40	102.30	109.70
24	S3	533	TYR	N-CA-C	-7.40	97.33	109.40
26	LA	2135	A	C4'-C3'-C2'	-7.40	95.20	102.60
27	LD	83	ASP	CB-CA-C	7.40	118.66	110.15
18	SB	170	ILE	O-C-N	-7.40	114.66	121.91
18	SB	236	PHE	CA-CB-CG	-7.40	106.40	113.80
26	LA	177	G	C2'-C3'-O3'	7.40	120.60	109.50
39	L3	51	ARG	CG-CD-NE	-7.40	95.72	112.00
29	LV	70	HIS	ND1-CE1-NE2	7.40	115.80	108.40
42	L6	30	HIS	ND1-CE1-NE2	7.40	115.80	108.40
2	SA	719	C	P-O3'-C3'	-7.40	109.10	120.20
2	SA	1043	G	O4'-C1'-N9	7.40	119.60	108.50
46	LH	114	HIS	N-CA-CB	7.40	122.99	110.49
2	SA	415	A	C1'-C2'-O2'	7.40	119.50	108.40
7	SG	50	ALA	N-CA-C	7.40	121.56	112.54
54	LM	107	LEU	CA-C-N	7.40	135.01	121.70
54	LM	107	LEU	C-N-CA	7.40	135.01	121.70
2	SA	444	G	P-O3'-C3'	-7.40	109.11	120.20
24	S3	4	THR	N-CA-C	-7.40	97.01	108.55
26	LA	2022	U	O3'-P-O5'	7.40	115.09	104.00
2	SA	39	G	C4'-C3'-C2'	-7.39	95.20	102.60
2	SA	361	G	C2'-C3'-O3'	-7.39	102.61	113.70
26	LA	387	U	O4'-C1'-N1	7.39	119.29	108.20
26	LA	1608	A	C2'-C3'-O3'	7.39	120.59	109.50
26	LA	2801	G	C4'-C3'-C2'	-7.39	95.21	102.60
2	SA	1374	A	C1'-O4'-C4'	-7.39	102.51	109.90
55	LQ	105	ALA	N-CA-C	7.39	119.42	111.36
41	L5	19	ARG	NE-CZ-NH2	7.39	125.85	119.20
26	LA	1692	U	P-O3'-C3'	7.39	131.28	120.20
54	LM	105	ARG	NE-CZ-NH2	-7.39	112.55	119.20
2	SA	530	G	C5'-C4'-C3'	7.38	127.08	116.00
2	SA	621	A	P-O5'-C5'	-7.38	109.82	120.90
2	SA	761	G	C4'-C3'-C2'	-7.38	95.22	102.60
26	LA	353	C	O4'-C1'-N1	7.38	119.58	108.50
26	LA	611	C	C2'-C3'-O3'	7.38	124.77	113.70
26	LA	1536	C	O5'-C5'-C4'	7.38	122.77	111.70
26	LA	2501	C	P-O5'-C5'	7.38	131.97	120.90
26	LA	2185	U	O4'-C1'-N1	7.38	119.57	108.50
26	LA	2338	C	O4'-C1'-N1	7.38	119.57	108.50
26	LA	1131	G	P-O5'-C5'	-7.38	109.83	120.90
26	LA	1631	G	C4'-C3'-C2'	-7.38	95.22	102.60
20	SD	142	VAL	O-C-N	-7.38	115.44	123.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	SE	114	LEU	CA-C-O	7.38	128.44	120.10
26	LA	2803	G	C4'-C3'-C2'	-7.38	95.22	102.60
47	LJ	9	ALA	N-CA-C	7.38	119.40	111.36
2	SA	753	A	P-O3'-C3'	-7.38	109.14	120.20
2	SA	1366	C	C5'-C4'-C3'	-7.37	104.94	116.00
31	LX	5	ASN	CA-CB-CG	7.37	119.97	112.60
18	SB	113	LEU	N-CA-C	7.37	119.10	111.14
26	LA	103	A	C5'-C4'-C3'	-7.37	104.94	116.00
26	LA	1681	G	P-O3'-C3'	-7.37	109.14	120.20
26	LA	2735	G	C4'-C3'-O3'	-7.37	101.94	113.00
23	SR	21	ASP	CA-CB-CG	-7.37	105.23	112.60
26	LA	104	A	C4'-C3'-O3'	-7.37	101.95	113.00
2	SA	689	C	C4'-C3'-O3'	-7.36	101.96	113.00
11	SK	69	CYS	CA-C-O	-7.36	113.09	120.82
17	SQ	36	PHE	CA-CB-CG	-7.36	106.44	113.80
26	LA	1662	U	P-O5'-C5'	7.36	131.94	120.90
26	LA	1828	G	C3'-C2'-O2'	-7.36	103.55	114.60
2	SA	97	G	O4'-C1'-C2'	-7.36	100.24	107.60
2	SA	682	G	C2'-C3'-O3'	7.36	124.74	113.70
2	SA	848	C	O4'-C1'-N1	7.36	119.54	108.50
5	ST	71	ALA	CA-C-N	7.36	130.48	120.54
5	ST	71	ALA	C-N-CA	7.36	130.48	120.54
45	LG	104	THR	O-C-N	-7.36	115.38	120.83
2	SA	847	G	C1'-O4'-C4'	-7.36	102.54	109.90
24	S3	76	LYS	CA-C-N	7.36	134.38	121.80
24	S3	76	LYS	C-N-CA	7.36	134.38	121.80
26	LA	1475	G	P-O3'-C3'	-7.36	109.17	120.20
26	LA	1694	C	C3'-C2'-C1'	-7.36	94.14	101.50
13	SM	26	LYS	N-CA-C	7.35	118.94	111.07
20	SD	25	ARG	O-C-N	-7.35	112.90	122.39
25	LB	44	G	C5'-C4'-C3'	7.35	126.23	115.20
26	LA	2872	A	C2'-C3'-O3'	7.35	124.73	113.70
26	LA	275	C	C5'-C4'-C3'	7.35	127.03	116.00
9	SI	43	ALA	N-CA-C	7.35	121.16	111.75
18	SB	15	PHE	CA-CB-CG	7.35	121.15	113.80
26	LA	1263	U	P-O5'-C5'	7.35	131.92	120.90
8	SH	41	GLU	N-CA-C	7.35	120.34	111.82
26	LA	1453	A	O4'-C1'-N9	7.35	119.52	108.50
33	LZ	19	HIS	CA-CB-CG	-7.35	106.45	113.80
24	S3	138	ALA	N-CA-C	7.34	121.24	110.59
51	LI	68	ARG	NE-CZ-NH2	7.34	125.81	119.20
57	LS	49	ARG	N-CA-C	7.34	119.29	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	LN	127	VAL	O-C-N	-7.34	115.24	123.10
2	SA	812	G	C2'-C3'-O3'	7.34	124.71	113.70
2	SA	881	G	O3'-P-O5'	-7.34	92.99	104.00
26	LA	776	G	O4'-C4'-C3'	-7.34	98.76	106.10
26	LA	1542	U	C5'-C4'-C3'	-7.34	104.99	116.00
26	LA	1676	A	O3'-P-O5'	7.34	115.01	104.00
26	LA	1946	U	C5'-C4'-C3'	7.34	127.01	116.00
26	LA	2337	G	C3'-C2'-C1'	-7.34	93.96	101.30
26	LA	2459	A	C5'-C4'-C3'	-7.34	104.99	116.00
2	SA	1145	A	O3'-P-O5'	-7.34	93.00	104.00
26	LA	1831	G	O4'-C1'-C2'	-7.34	100.26	107.60
26	LA	1843	C	P-O3'-C3'	7.34	131.21	120.20
26	LA	1097	U	P-O5'-C5'	-7.33	109.90	120.90
2	SA	971	G	P-O3'-C3'	-7.33	109.20	120.20
24	S3	530	PRO	CA-C-O	-7.33	113.33	121.32
26	LA	1717	A	C4'-C3'-C2'	-7.33	95.27	102.60
34	L0	14	LEU	CA-C-N	7.33	130.70	120.29
34	L0	14	LEU	C-N-CA	7.33	130.70	120.29
57	LS	67	ALA	N-CA-C	7.33	119.91	111.11
10	SJ	68	ARG	NE-CZ-NH2	-7.33	112.60	119.20
2	SA	711	G	C4'-C3'-C2'	-7.33	95.27	102.60
2	SA	1012	A	P-O3'-C3'	-7.33	109.21	120.20
26	LA	125	A	C3'-C2'-C1'	7.33	108.83	101.50
26	LA	2272	U	O5'-C5'-C4'	7.33	122.49	111.50
26	LA	2494	G	C5'-C4'-C3'	-7.33	105.01	116.00
2	SA	1484	C	P-O5'-C5'	7.32	131.89	120.90
26	LA	1418	G	C4'-C3'-O3'	-7.32	102.02	113.00
56	LR	58	PHE	CA-CB-CG	-7.32	106.48	113.80
2	SA	1399	C	P-O5'-C5'	-7.32	109.92	120.90
14	SN	25	GLU	CA-C-O	7.32	128.14	119.28
21	SE	127	TYR	N-CA-C	-7.32	98.23	109.14
2	SA	463	U	P-O3'-C3'	7.32	131.18	120.20
25	LB	85	G	C4'-C3'-C2'	7.32	109.92	102.60
38	LE	66	GLY	N-CA-C	7.32	123.18	113.37
19	SC	169	GLU	CA-C-N	7.32	132.22	120.07
19	SC	169	GLU	C-N-CA	7.32	132.22	120.07
20	SD	53	GLN	N-CA-CB	-7.32	99.40	110.01
26	LA	846	U	P-O3'-C3'	7.32	131.18	120.20
26	LA	1944	U	P-O3'-C3'	-7.32	109.22	120.20
26	LA	1885	A	P-O5'-C5'	-7.32	109.92	120.90
2	SA	158	G	O4'-C4'-C3'	-7.32	96.69	104.00
18	SB	14	HIS	CE1-NE2-CD2	-7.32	101.68	109.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	337	VAL	N-CA-C	7.32	118.67	107.99
26	LA	385	C	O3'-P-O5'	-7.32	93.03	104.00
26	LA	1647	U	C1'-O4'-C4'	-7.32	102.39	109.70
24	S3	254	ARG	NE-CZ-NH1	7.31	128.81	121.50
24	S3	591	ALA	CA-C-O	7.31	128.30	120.55
26	LA	2583	G	C2'-C3'-O3'	7.31	124.67	113.70
2	SA	1268	G	P-O3'-C3'	7.31	131.17	120.20
4	S2	19	G	C4'-C3'-C2'	-7.31	95.29	102.60
26	LA	19	A	O4'-C1'-N9	7.31	119.47	108.50
26	LA	1907	G	C3'-C2'-C1'	-7.31	93.99	101.30
26	LA	2150	C	C5'-C4'-C3'	7.31	126.97	116.00
26	LA	882	G	C5'-C4'-C3'	7.31	126.96	116.00
46	LH	57	TYR	N-CA-CB	7.31	120.58	109.91
18	SB	14	HIS	CB-CG-CD2	-7.31	121.70	131.20
26	LA	882	G	C4'-C3'-C2'	-7.31	95.29	102.60
28	LU	96	ILE	CB-CA-C	-7.30	99.82	110.63
46	LH	42	VAL	CA-C-N	7.30	132.90	122.09
46	LH	42	VAL	C-N-CA	7.30	132.90	122.09
55	LQ	11	ALA	O-C-N	-7.30	114.55	122.07
2	SA	1074	G	P-O5'-C5'	7.30	131.85	120.90
26	LA	886	A	C4'-C3'-C2'	-7.30	95.30	102.60
57	LS	52	ARG	O-C-N	-7.30	114.38	122.12
26	LA	546	U	C4'-C3'-C2'	7.30	109.90	102.60
26	LA	2384	U	P-O5'-C5'	7.30	131.85	120.90
2	SA	1404	C	C5'-C4'-C3'	-7.30	105.05	116.00
26	LA	2733	A	C2'-C3'-O3'	7.30	124.65	113.70
47	LJ	52	ARG	CA-C-N	-7.30	113.63	123.12
47	LJ	52	ARG	C-N-CA	-7.30	113.63	123.12
22	SF	41	ASP	N-CA-C	-7.30	97.80	109.76
26	LA	1421	G	P-O3'-C3'	7.30	131.15	120.20
26	LA	2281	A	P-O3'-C3'	-7.30	109.25	120.20
2	SA	604	G	C4'-C3'-C2'	-7.29	95.31	102.60
7	SG	159	ARG	N-CA-C	-7.29	102.72	111.69
13	SM	57	ASP	N-CA-C	7.29	119.31	111.36
26	LA	723	C	C5'-C4'-C3'	7.29	126.94	116.00
26	LA	1979	U	C4'-C3'-C2'	-7.29	95.31	102.60
2	SA	1057	G	P-O3'-C3'	-7.29	109.26	120.20
26	LA	744	U	O4'-C1'-C2'	-7.29	100.31	107.60
26	LA	1896	G	C5'-C4'-C3'	7.29	126.94	116.00
26	LA	2802	G	N9-C1'-C2'	-7.29	101.06	112.00
51	LI	28	ASN	CA-CB-CG	7.29	119.89	112.60
7	SG	78	ARG	N-CA-C	7.29	126.33	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2894	G	P-O5'-C5'	7.29	131.84	120.90
4	S2	47	A	P-O5'-C5'	-7.29	109.97	120.90
46	LH	76	ILE	CA-C-N	7.29	128.19	120.03
46	LH	76	ILE	C-N-CA	7.29	128.19	120.03
26	LA	806	C	O4'-C1'-N1	7.29	119.43	108.50
57	LS	90	ASP	N-CA-C	7.29	120.98	109.39
2	SA	696	A	C3'-C2'-C1'	-7.29	94.02	101.30
26	LA	546	U	O4'-C4'-C3'	-7.29	98.81	106.10
50	LL	91	GLU	N-CA-C	-7.29	103.27	111.14
26	LA	90	U	P-O5'-C5'	7.28	131.82	120.90
2	SA	842	U	C2'-C3'-O3'	7.28	120.42	109.50
2	SA	1341	U	C1'-O4'-C4'	7.28	117.18	109.90
21	SE	42	ASN	CB-CA-C	-7.28	98.65	110.08
26	LA	131	A	C5'-C4'-C3'	7.28	126.92	116.00
26	LA	515	A	C4'-C3'-O3'	-7.28	102.08	113.00
50	LL	60	ASP	N-CA-C	7.28	120.14	111.33
53	LP	61	ALA	N-CA-C	7.28	119.29	111.36
24	S3	228	ALA	N-CA-C	7.28	118.86	111.07
26	LA	2024	G	C5'-C4'-C3'	-7.28	105.09	116.00
26	LA	577	G	C1'-O4'-C4'	-7.27	102.63	109.90
26	LA	1834	U	C2'-C3'-O3'	7.27	124.61	113.70
26	LA	2263	C	P-O5'-C5'	-7.27	109.99	120.90
2	SA	851	G	P-O5'-C5'	-7.27	110.00	120.90
26	LA	11	C	P-O3'-C3'	7.27	131.10	120.20
54	LM	108	ARG	NE-CZ-NH1	7.27	128.77	121.50
2	SA	957	U	P-O5'-C5'	7.27	131.80	120.90
27	LD	20	ASN	OD1-CG-ND2	-7.27	115.33	122.60
37	LC	95	VAL	CA-C-O	7.27	128.30	120.53
2	SA	1314	C	O3'-P-O5'	-7.26	93.10	104.00
24	S3	53	GLU	CA-C-N	7.26	129.88	120.44
24	S3	53	GLU	C-N-CA	7.26	129.88	120.44
26	LA	2744	G	O3'-P-O5'	7.26	114.90	104.00
46	LH	165	ASP	N-CA-CB	7.26	121.24	110.49
2	SA	1532	U	P-O5'-C5'	-7.26	110.01	120.90
26	LA	989	G	O5'-C5'-C4'	7.26	122.59	111.70
2	SA	147	G	C1'-C2'-O2'	7.26	119.29	108.40
2	SA	685	G	C5'-C4'-C3'	-7.26	105.11	116.00
2	SA	1411	C	C4'-C3'-C2'	-7.26	95.34	102.60
8	SH	78	SER	N-CA-CB	7.26	120.74	110.36
26	LA	925	A	C5'-C4'-C3'	-7.26	105.11	116.00
26	LA	2067	G	C5'-C4'-C3'	-7.26	104.31	115.20
38	LE	125	TRP	CA-C-O	7.26	127.06	119.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1327	C	C5'-C4'-C3'	-7.26	105.11	116.00
37	LC	8	MET	N-CA-C	-7.26	103.08	112.23
2	SA	908	A	P-O5'-C5'	7.26	131.79	120.90
2	SA	1441	A	C3'-C2'-C1'	7.26	108.56	101.30
13	SM	21	ILE	CA-C-N	7.26	135.40	121.54
13	SM	21	ILE	C-N-CA	7.26	135.40	121.54
26	LA	782	A	O4'-C1'-C2'	7.26	113.06	105.80
26	LA	1738	G	P-O5'-C5'	-7.26	110.02	120.90
26	LA	1761	C	O4'-C1'-N1	7.26	119.09	108.20
18	SB	196	ASP	N-CA-C	7.25	119.27	111.36
26	LA	691	C	C5'-C4'-C3'	-7.25	105.12	116.00
26	LA	900	A	C4'-C3'-C2'	-7.25	95.34	102.60
26	LA	1541	C	C3'-C2'-O2'	7.25	121.58	110.70
44	LF	30	GLN	O-C-N	-7.25	113.88	122.15
56	LR	100	ARG	NE-CZ-NH1	-7.25	114.25	121.50
1	SS	75	PRO	N-CA-C	7.25	127.41	112.47
2	SA	986	U	P-O5'-C5'	7.25	131.78	120.90
10	SJ	57	VAL	CB-CA-C	7.25	123.19	111.29
24	S3	186	LYS	CA-C-N	7.25	132.44	122.07
24	S3	186	LYS	C-N-CA	7.25	132.44	122.07
26	LA	2581	G	C1'-C2'-O2'	7.25	119.28	108.40
26	LA	2842	G	P-O5'-C5'	7.25	131.78	120.90
3	S1	52	U	P-O3'-C3'	7.25	131.08	120.20
47	LJ	5	GLN	CA-C-N	7.25	130.00	120.28
47	LJ	5	GLN	C-N-CA	7.25	130.00	120.28
1	SS	77	ARG	NH1-CZ-NH2	-7.25	109.88	119.30
13	SM	3	ILE	O-C-N	-7.25	115.15	122.62
6	SU	16	ARG	NH1-CZ-NH2	-7.25	109.88	119.30
20	SD	71	PHE	CA-C-N	7.25	130.31	120.38
20	SD	71	PHE	C-N-CA	7.25	130.31	120.38
26	LA	101	A	C1'-C2'-O2'	7.25	119.27	108.40
26	LA	763	G	C4'-C3'-C2'	-7.25	95.35	102.60
26	LA	880	G	C4'-C3'-O3'	-7.25	102.13	113.00
26	LA	1002	G	C1'-C2'-O2'	7.25	119.27	108.40
26	LA	1966	A	C3'-C2'-C1'	7.25	108.55	101.30
26	LA	2005	A	P-O3'-C3'	7.25	131.07	120.20
44	LF	154	ASP	N-CA-C	7.25	120.90	110.10
53	LP	100	CYS	N-CA-C	7.25	121.38	112.54
2	SA	343	U	P-O3'-C3'	7.25	131.07	120.20
26	LA	1004	U	C5'-C4'-C3'	-7.25	105.13	116.00
26	LA	2382	G	C5'-C4'-C3'	-7.25	104.33	115.20
45	LG	107	VAL	CA-C-O	-7.25	112.69	118.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1412	C	C4'-C3'-C2'	-7.25	95.36	102.60
2	SA	308	C	O4'-C1'-N1	7.24	119.37	108.50
3	S1	35	G	C2'-C3'-O3'	7.24	124.56	113.70
26	LA	2030	U	P-O5'-C5'	7.24	131.76	120.90
27	LD	20	ASN	CA-CB-CG	-7.24	105.36	112.60
28	LU	63	GLY	O-C-N	-7.24	113.28	122.70
2	SA	1513	A	O4'-C1'-C2'	-7.24	100.36	107.60
26	LA	774	G	C5'-C4'-C3'	-7.24	104.34	115.20
26	LA	2127	G	O4'-C4'-C3'	-7.24	98.86	106.10
1	SS	26	ASP	N-CA-C	7.24	120.23	109.59
2	SA	952	U	O3'-P-O5'	-7.24	93.14	104.00
26	LA	2574	G	C5'-C4'-C3'	7.24	126.86	116.00
27	LD	78	GLU	CA-C-O	-7.24	113.40	121.00
56	LR	24	THR	N-CA-CB	7.24	120.57	110.07
2	SA	1538	C	P-O5'-C5'	7.24	131.76	120.90
17	SQ	30	HIS	CE1-NE2-CD2	-7.24	101.76	109.00
26	LA	180	G	O4'-C4'-C3'	-7.24	96.76	104.00
26	LA	1073	A	C5'-C4'-C3'	-7.24	105.14	116.00
2	SA	148	G	O4'-C4'-C3'	-7.24	96.77	104.00
26	LA	1325	U	C3'-C2'-O2'	-7.24	103.75	114.60
26	LA	1626	A	C5'-C4'-C3'	-7.24	104.35	115.20
27	LD	157	ALA	CA-C-O	7.24	128.62	120.80
14	SN	44	VAL	CB-CA-C	-7.23	102.37	112.14
26	LA	2378	A	C5'-C4'-C3'	7.23	126.85	116.00
2	SA	235	C	C5'-C4'-C3'	-7.23	105.15	116.00
2	SA	911	U	C1'-C2'-O2'	7.23	119.25	108.40
19	SC	47	ALA	N-CA-C	7.23	120.08	111.33
26	LA	2409	G	C5'-C4'-C3'	-7.23	105.15	116.00
1	SS	35	ARG	NE-CZ-NH2	7.23	125.71	119.20
2	SA	832	G	N9-C1'-C2'	-7.23	101.16	112.00
26	LA	2128	G	C5'-C4'-C3'	7.23	126.85	116.00
26	LA	2193	G	O5'-C5'-C4'	7.23	122.34	111.50
26	LA	2614	A	O3'-P-O5'	-7.23	93.15	104.00
28	LU	32	ALA	N-CA-C	7.23	119.16	111.28
2	SA	437	U	C5'-C4'-C3'	-7.23	105.16	116.00
2	SA	1533	C	C2'-C3'-O3'	7.23	120.34	109.50
9	SI	85	ALA	N-CA-CB	7.23	120.55	110.07
53	LP	97	ILE	O-C-N	-7.23	115.27	122.93
13	SM	67	ASP	CA-CB-CG	7.23	119.83	112.60
26	LA	1385	A	C5'-C4'-C3'	-7.23	104.36	115.20
26	LA	1654	A	O5'-C5'-C4'	7.23	122.34	111.50
50	LL	116	ARG	CA-C-O	-7.23	112.76	120.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1176	U	O4'-C1'-N1	7.22	119.34	108.50
2	SA	443	C	P-O5'-C5'	-7.22	110.07	120.90
25	LB	41	G	C3'-C2'-C1'	-7.22	94.28	101.50
26	LA	1670	C	P-O3'-C3'	7.22	131.03	120.20
26	LA	2249	U	C2'-C3'-O3'	7.22	120.33	109.50
26	LA	2642	G	C4'-C3'-O3'	-7.22	102.17	113.00
11	SK	100	ASN	OD1-CG-ND2	-7.22	115.38	122.60
26	LA	2256	G	C5'-C4'-C3'	-7.22	105.17	116.00
45	LG	133	GLU	CA-C-N	7.22	132.82	121.56
45	LG	133	GLU	C-N-CA	7.22	132.82	121.56
2	SA	412	A	O4'-C4'-C3'	-7.22	98.88	106.10
26	LA	1127	A	O5'-C5'-C4'	7.22	122.33	111.50
38	LE	45	TYR	O-C-N	-7.22	116.07	123.29
19	SC	215	GLN	N-CA-C	7.22	120.11	109.50
24	S3	132	TYR	CA-CB-CG	7.22	126.89	113.90
26	LA	1948	G	P-O3'-C3'	-7.22	109.38	120.20
31	LX	7	GLU	CB-CG-CD	-7.22	100.33	112.60
2	SA	991	U	C4'-C3'-O3'	7.21	120.22	109.40
12	SL	107	LYS	N-CA-C	7.21	120.41	110.24
26	LA	22	C	C4'-C3'-C2'	-7.21	95.39	102.60
56	LR	54	LEU	N-CA-C	7.21	120.06	111.33
26	LA	1947	C	C4'-C3'-C2'	-7.21	95.39	102.60
26	LA	40	U	O5'-C5'-C4'	7.21	122.31	111.50
26	LA	62	U	O3'-P-O5'	-7.21	93.19	104.00
26	LA	810	U	P-O5'-C5'	7.21	131.71	120.90
26	LA	2728	U	C1'-O4'-C4'	-7.21	102.69	109.90
38	LE	110	THR	CA-C-O	-7.21	112.75	120.46
2	SA	1098	C	O3'-P-O5'	-7.21	93.19	104.00
24	S3	32	TYR	CB-CA-C	-7.21	99.57	110.88
24	S3	299	ASP	CA-CB-CG	7.21	119.81	112.60
26	LA	73	A	C5'-C4'-C3'	7.21	126.81	116.00
26	LA	861	A	C5'-C4'-C3'	-7.21	105.19	116.00
26	LA	1073	A	P-O5'-C5'	7.21	131.71	120.90
26	LA	2164	C	C4'-C3'-C2'	-7.21	95.39	102.60
2	SA	315	A	P-O5'-C5'	-7.21	110.09	120.90
15	SO	36	ASN	O-C-N	-7.21	113.94	122.15
26	LA	2515	C	O3'-P-O5'	-7.21	93.19	104.00
2	SA	1299	A	O4'-C1'-N9	7.20	119.31	108.50
29	LV	28	ASN	N-CA-CB	7.20	122.66	110.49
26	LA	158	U	C4'-C3'-C2'	-7.20	95.40	102.60
26	LA	1725	U	C4'-C3'-C2'	-7.20	95.40	102.60
37	LC	3	LYS	N-CA-CB	7.20	121.14	110.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	LI	17	ASP	CA-C-O	7.20	130.22	121.94
2	SA	151	A	P-O5'-C5'	-7.20	110.10	120.90
24	S3	229	SER	CA-C-N	7.19	130.51	120.29
24	S3	229	SER	C-N-CA	7.19	130.51	120.29
26	LA	366	C	N1-C1'-C2'	-7.19	101.21	112.00
26	LA	389	G	P-O3'-C3'	7.19	130.99	120.20
2	SA	90	C	C3'-C2'-C1'	-7.19	94.11	101.30
2	SA	339	C	P-O3'-C3'	-7.19	109.41	120.20
2	SA	793	U	P-O5'-C5'	7.19	131.69	120.90
26	LA	86	G	O4'-C1'-C2'	7.19	114.79	107.60
26	LA	659	G	P-O5'-C5'	-7.19	110.11	120.90
29	LV	13	ALA	N-CA-CB	-7.19	103.55	111.10
53	LP	17	ARG	N-CA-CB	-7.19	99.58	110.01
26	LA	160	A	C5'-C4'-C3'	-7.19	105.22	116.00
49	LK	138	VAL	N-CA-CB	7.19	118.37	110.53
2	SA	681	A	C5'-C4'-C3'	-7.19	105.22	116.00
9	SI	13	SER	CA-C-O	-7.19	112.77	120.46
24	S3	71	TRP	CB-CG-CD2	-7.19	116.74	126.80
26	LA	901	C	P-O5'-C5'	-7.19	110.12	120.90
26	LA	1019	U	C5'-C4'-C3'	-7.19	105.22	116.00
2	SA	325	A	C4'-C3'-C2'	-7.18	95.42	102.60
26	LA	164	C	C5'-C4'-C3'	7.18	126.78	116.00
26	LA	1344	U	P-O3'-C3'	-7.18	109.42	120.20
26	LA	2729	G	C5'-C4'-C3'	7.18	126.78	116.00
20	SD	153	ARG	N-CA-C	7.18	119.97	111.71
58	LT	70	GLU	CA-C-N	7.18	131.58	121.24
58	LT	70	GLU	C-N-CA	7.18	131.58	121.24
26	LA	2243	U	P-O3'-C3'	7.18	130.97	120.20
2	SA	153	C	C5'-C4'-O4'	7.18	120.57	109.80
26	LA	1570	A	O5'-C5'-C4'	7.18	122.27	111.50
26	LA	2872	A	C4'-C3'-O3'	-7.18	102.23	113.00
6	SU	54	ARG	NE-CZ-NH2	-7.18	112.74	119.20
8	SH	4	ASP	CA-CB-CG	7.17	119.77	112.60
26	LA	789	A	O4'-C1'-N9	7.17	118.96	108.20
26	LA	1508	A	P-O3'-C3'	7.17	130.96	120.20
26	LA	2006	C	O4'-C4'-C3'	7.17	111.17	104.00
46	LH	163	TYR	CA-CB-CG	7.17	126.81	113.90
58	LT	41	ILE	O-C-N	-7.17	115.65	123.18
26	LA	1009	A	P-O3'-C3'	-7.17	109.44	120.20
26	LA	2242	G	C5'-C4'-C3'	-7.17	105.24	116.00
31	LX	44	HIS	CE1-NE2-CD2	-7.17	101.83	109.00
2	SA	59	A	O4'-C1'-N9	7.17	119.25	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	125	U	O5'-C5'-C4'	7.17	122.25	111.50
2	SA	514	C	P-O5'-C5'	7.17	131.65	120.90
25	LB	29	A	C4'-C3'-C2'	7.17	109.77	102.60
26	LA	1092	C	C5'-C4'-O4'	7.17	120.55	109.80
29	LV	70	HIS	CE1-NE2-CD2	-7.17	101.83	109.00
2	SA	1474	U	C2'-C3'-O3'	7.17	124.45	113.70
2	SA	1494	G	O3'-P-O5'	-7.17	93.25	104.00
26	LA	571	U	P-O5'-C5'	-7.17	110.15	120.90
26	LA	2548	U	O3'-P-O5'	-7.17	93.25	104.00
57	LS	110	GLU	O-C-N	-7.17	114.53	122.12
26	LA	2443	C	C3'-C2'-C1'	7.16	108.46	101.30
44	LF	162	ARG	NE-CZ-NH2	7.16	125.65	119.20
50	LL	67	ASN	CA-C-N	7.16	131.20	120.31
50	LL	67	ASN	C-N-CA	7.16	131.20	120.31
50	LL	112	GLY	O-C-N	-7.16	114.61	121.77
24	S3	640	MET	N-CA-CB	7.16	122.84	110.81
44	LF	61	ARG	NE-CZ-NH2	7.16	125.64	119.20
2	SA	765	G	C5'-C4'-C3'	-7.16	105.26	116.00
26	LA	662	G	C5'-C4'-C3'	-7.16	105.26	116.00
26	LA	897	C	P-O5'-C5'	7.16	131.64	120.90
27	LD	111	ALA	N-CA-C	7.16	120.09	110.35
34	L0	8	GLU	O-C-N	-7.16	114.36	122.09
47	LJ	30	ARG	N-CA-CB	7.16	122.59	110.49
47	LJ	94	LEU	N-CA-CB	-7.16	99.20	110.22
2	SA	1112	C	C3'-C2'-C1'	7.16	108.46	101.30
26	LA	1953	A	C3'-C2'-C1'	7.16	108.66	101.50
26	LA	2316	G	C1'-O4'-C4'	-7.16	102.74	109.90
38	LE	144	GLY	CA-C-N	-7.16	112.68	122.77
38	LE	144	GLY	C-N-CA	-7.16	112.68	122.77
48	LN	30	THR	N-CA-CB	7.16	122.58	110.49
8	SH	30	LYS	N-CA-C	7.15	119.08	111.28
27	LD	195	GLY	CA-C-N	7.15	132.30	122.07
27	LD	195	GLY	C-N-CA	7.15	132.30	122.07
2	SA	274	A	C5'-C4'-C3'	7.15	125.93	115.20
26	LA	2901	C	O4'-C4'-C3'	7.15	111.15	104.00
38	LE	89	GLU	N-CA-C	7.15	120.07	110.35
25	LB	28	C	P-O3'-C3'	-7.15	109.48	120.20
2	SA	1527	U	P-O5'-C5'	-7.15	110.18	120.90
14	SN	8	ARG	NH1-CZ-NH2	7.15	128.59	119.30
26	LA	105	C	P-O5'-C5'	7.15	131.62	120.90
2	SA	393	A	O4'-C1'-N9	7.15	119.22	108.50
25	LB	55	U	P-O3'-C3'	-7.15	109.48	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	LG	141	ASP	CA-CB-CG	7.15	119.75	112.60
26	LA	2111	U	P-O3'-C3'	-7.14	109.48	120.20
26	LA	33	C	O4'-C1'-N1	7.14	118.92	108.20
26	LA	889	C	O5'-C5'-C4'	7.14	122.22	111.50
55	LQ	55	GLU	CA-C-N	7.14	129.85	120.28
55	LQ	55	GLU	C-N-CA	7.14	129.85	120.28
11	SK	79	LYS	N-CA-C	-7.14	105.49	114.56
18	SB	68	PHE	CA-CB-CG	7.14	120.94	113.80
18	SB	38	HIS	CA-C-N	7.14	134.82	121.97
18	SB	38	HIS	C-N-CA	7.14	134.82	121.97
2	SA	1167	A	C1'-O4'-C4'	-7.14	102.56	109.70
26	LA	932	U	C3'-C2'-C1'	7.14	108.44	101.30
38	LE	122	VAL	N-CA-CB	7.14	123.00	111.23
2	SA	452	A	P-O5'-C5'	7.13	131.60	120.90
23	SR	65	SER	N-CA-C	7.13	121.37	111.74
26	LA	1904	G	C3'-C2'-C1'	-7.13	94.17	101.30
26	LA	1971	U	C4'-C3'-C2'	-7.13	95.47	102.60
26	LA	1951	U	P-O3'-C3'	7.13	130.90	120.20
22	SF	51	ILE	N-CA-CB	-7.13	102.95	110.72
26	LA	1015	U	C5'-C4'-C3'	-7.13	105.30	116.00
26	LA	2017	U	O4'-C4'-C3'	7.13	111.13	104.00
26	LA	2295	C	O4'-C1'-N1	7.13	119.20	108.50
57	LS	77	LYS	CA-C-N	7.13	130.14	120.44
57	LS	77	LYS	C-N-CA	7.13	130.14	120.44
2	SA	606	G	P-O3'-C3'	-7.13	109.50	120.20
2	SA	1143	G	C2'-C3'-O3'	7.13	124.39	113.70
26	LA	129	C	C1'-C2'-O2'	7.13	119.09	108.40
19	SC	81	GLU	CA-C-O	7.13	128.11	120.55
25	LB	87	U	O4'-C4'-C3'	-7.13	98.97	106.10
26	LA	1618	C	C3'-C2'-O2'	-7.13	103.91	114.60
27	LD	69	ASN	CA-CB-CG	-7.13	105.47	112.60
5	ST	67	HIS	CB-CA-C	-7.13	107.31	115.79
10	SJ	40	ILE	N-CA-C	7.13	124.27	108.88
24	S3	427	GLN	N-CA-C	7.13	119.66	111.11
26	LA	2401	U	O4'-C1'-C2'	-7.13	100.47	107.60
26	LA	2475	C	O4'-C4'-C3'	7.13	111.13	104.00
7	SG	114	SER	N-CA-C	7.12	125.98	110.80
26	LA	1497	U	C4'-C3'-C2'	-7.12	95.47	102.60
2	SA	355	C	C5'-C4'-O4'	7.12	120.48	109.80
2	SA	1215	G	C5'-C4'-C3'	-7.12	105.32	116.00
4	S2	77	A	P-O5'-C5'	-7.12	110.21	120.90
26	LA	1834	U	P-O5'-C5'	7.12	131.59	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2011	U	C5'-C4'-C3'	-7.12	105.31	116.00
44	LF	46	GLN	N-CA-C	7.12	120.82	110.42
44	LF	138	LEU	N-CA-C	7.12	119.12	111.36
2	SA	394	G	O3'-P-O5'	-7.12	93.32	104.00
19	SC	155	ARG	NE-CZ-NH1	7.12	128.62	121.50
26	LA	62	U	C4'-C3'-O3'	-7.12	102.32	113.00
26	LA	1018	U	C5'-C4'-C3'	-7.12	105.32	116.00
29	LV	97	GLY	N-CA-C	7.12	121.28	112.73
1	SS	83	ALA	N-CA-CB	-7.12	99.45	111.20
24	S3	185	VAL	N-CA-C	-7.12	104.26	110.74
58	LT	9	GLY	O-C-N	-7.12	113.44	122.70
26	LA	442	G	O4'-C1'-C2'	7.12	112.92	105.80
26	LA	962	G	O3'-P-O5'	-7.12	93.32	104.00
26	LA	2493	U	C1'-C2'-O2'	7.12	119.08	108.40
26	LA	2124	G	O3'-P-O5'	7.12	114.68	104.00
26	LA	2213	U	C3'-C2'-C1'	-7.12	94.38	101.50
2	SA	404	G	C5'-C4'-O4'	7.12	120.47	109.80
2	SA	442	G	C5'-C4'-C3'	-7.12	105.33	116.00
26	LA	1097	U	O4'-C1'-C2'	-7.12	100.48	107.60
2	SA	960	U	C5'-C4'-C3'	7.11	125.87	115.20
2	SA	1176	A	P-O5'-C5'	7.11	131.57	120.90
11	SK	23	HIS	ND1-CE1-NE2	7.11	115.51	108.40
24	S3	19	ASP	CA-C-O	7.11	129.11	120.57
26	LA	1955	U	P-O5'-C5'	7.11	131.57	120.90
45	LG	12	VAL	CA-CB-CG1	7.11	122.49	110.40
2	SA	787	A	P-O5'-C5'	-7.11	110.23	120.90
26	LA	454	A	P-O3'-C3'	-7.11	109.53	120.20
2	SA	479	U	P-O3'-C3'	-7.11	109.54	120.20
3	S1	17	U	P-O3'-C3'	7.11	130.86	120.20
26	LA	1709	U	C4'-C3'-C2'	-7.11	95.49	102.60
27	LD	180	MET	CA-C-O	7.11	128.21	120.32
33	LZ	22	ASN	N-CA-CB	7.11	120.41	110.17
39	L3	26	SER	N-CA-C	7.11	121.47	111.52
2	SA	306	A	C5'-C4'-C3'	-7.11	105.34	116.00
2	SA	811	C	C3'-C2'-C1'	7.11	108.41	101.30
2	SA	1205	U	C4'-C3'-O3'	-7.11	102.34	113.00
2	SA	1282	C	C5'-C4'-C3'	-7.11	105.34	116.00
25	LB	88	C	C2'-C3'-O3'	7.11	120.16	109.50
26	LA	142	A	P-O5'-C5'	7.11	131.56	120.90
44	LF	21	ARG	CA-C-N	7.11	130.96	120.87
44	LF	21	ARG	C-N-CA	7.11	130.96	120.87
47	LJ	157	VAL	CA-C-N	7.11	131.11	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	LJ	157	VAL	C-N-CA	7.11	131.11	120.31
38	LE	45	TYR	N-CA-C	7.10	118.94	108.14
2	SA	533	A	C3'-C2'-C1'	-7.10	94.40	101.50
2	SA	1002	G	P-O5'-C5'	7.10	131.56	120.90
38	LE	99	GLU	CB-CG-CD	7.10	124.67	112.60
26	LA	644	A	P-O3'-C3'	-7.10	109.55	120.20
26	LA	987	C	C3'-C2'-C1'	7.10	108.40	101.30
2	SA	1391	U	O4'-C4'-C3'	7.10	111.10	104.00
24	S3	172	ILE	CA-C-N	-7.10	113.05	121.85
24	S3	172	ILE	C-N-CA	-7.10	113.05	121.85
24	S3	592	PHE	CA-CB-CG	-7.10	106.70	113.80
26	LA	1114	C	C5'-C4'-C3'	-7.10	105.35	116.00
26	LA	2310	C	P-O3'-C3'	7.10	130.85	120.20
24	S3	61	THR	CA-C-O	7.10	129.11	121.16
26	LA	862	G	C5'-C4'-O4'	7.10	120.44	109.80
2	SA	1227	A	O4'-C4'-C3'	-7.09	99.00	106.10
2	SA	519	C	C3'-C2'-C1'	7.09	108.39	101.30
18	SB	204	ASP	CA-CB-CG	7.09	119.69	112.60
26	LA	199	A	O4'-C1'-C2'	-7.09	98.71	105.80
26	LA	922	C	P-O3'-C3'	7.09	130.84	120.20
26	LA	1471	G	P-O3'-C3'	-7.09	109.56	120.20
26	LA	1577	C	P-O3'-C3'	7.09	130.84	120.20
31	LX	85	LYS	N-CA-C	7.09	125.91	110.80
26	LA	1875	G	O3'-P-O5'	-7.09	93.37	104.00
2	SA	183	C	O4'-C4'-C3'	7.09	113.19	106.10
26	LA	2144	G	P-O3'-C3'	-7.09	109.57	120.20
58	LT	25	LEU	CA-C-N	7.09	130.11	120.54
58	LT	25	LEU	C-N-CA	7.09	130.11	120.54
2	SA	899	C	O4'-C1'-N1	7.09	119.13	108.50
26	LA	1897	G	O4'-C1'-N9	7.09	119.13	108.50
26	LA	2129	C	C4'-C3'-C2'	-7.09	95.51	102.60
28	LU	102	HIS	ND1-CE1-NE2	7.09	115.49	108.40
26	LA	332	A	O3'-P-O5'	-7.08	93.37	104.00
26	LA	1341	G	C1'-O4'-C4'	-7.08	102.62	109.70
2	SA	261	U	O3'-P-O5'	7.08	114.62	104.00
2	SA	321	A	C4'-C3'-C2'	-7.08	95.52	102.60
2	SA	812	G	O4'-C4'-C3'	-7.08	96.92	104.00
26	LA	6	A	P-O3'-C3'	7.08	130.82	120.20
44	LF	187	VAL	CA-C-O	-7.08	111.93	120.78
2	SA	1477	U	C4'-C3'-C2'	-7.08	95.52	102.60
2	SA	158	G	O4'-C1'-N9	7.08	119.12	108.50
19	SC	32	LEU	CA-C-O	7.08	128.05	120.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1202	U	P-O3'-C3'	-7.08	109.58	120.20
26	LA	780	G	O4'-C1'-C2'	-7.08	100.52	107.60
26	LA	1411	U	P-O5'-C5'	-7.08	110.28	120.90
2	SA	800	G	C2'-C3'-O3'	7.08	124.31	113.70
2	SA	1374	A	O4'-C1'-N9	7.08	119.11	108.50
26	LA	91	A	C4'-C3'-O3'	7.08	120.01	109.40
26	LA	2119	A	P-O5'-C5'	7.08	131.51	120.90
38	LE	57	ALA	O-C-N	-7.08	114.78	122.07
46	LH	105	SER	CA-C-N	7.08	132.04	120.23
46	LH	105	SER	C-N-CA	7.08	132.04	120.23
48	LN	66	PHE	CA-CB-CG	7.08	120.88	113.80
57	LS	32	ARG	NE-CZ-NH1	-7.08	114.42	121.50
13	SM	90	HIS	CE1-NE2-CD2	-7.07	101.93	109.00
18	SB	102	ASN	CA-C-N	7.07	130.07	120.38
18	SB	102	ASN	C-N-CA	7.07	130.07	120.38
26	LA	931	U	N1-C1'-C2'	-7.07	103.39	114.00
26	LA	982	C	P-O3'-C3'	7.07	130.81	120.20
26	LA	1873	G	C5'-C4'-C3'	-7.07	105.39	116.00
2	SA	973	G	P-O3'-C3'	7.07	130.81	120.20
26	LA	2146	C	O4'-C1'-C2'	-7.07	98.73	105.80
26	LA	2336	A	C4'-C3'-O3'	7.07	120.01	109.40
51	LI	54	LEU	N-CA-C	7.07	119.07	111.36
24	S3	258	ASN	OD1-CG-ND2	-7.07	115.53	122.60
36	L2	49	ARG	NE-CZ-NH2	7.07	125.56	119.20
58	LT	66	HIS	CB-CG-CD2	-7.07	122.01	131.20
26	LA	1452	G	C2'-C3'-O3'	7.07	120.10	109.50
54	LM	40	LYS	CA-C-O	-7.07	112.80	120.36
56	LR	13	LYS	CB-CA-C	-7.07	96.77	109.71
14	SN	49	THR	N-CA-C	7.07	119.06	111.36
26	LA	291	G	C5'-C4'-C3'	7.07	126.60	116.00
26	LA	2251	U	O4'-C1'-C2'	7.07	114.67	107.60
26	LA	2608	G	P-O5'-C5'	-7.07	110.30	120.90
34	L0	52	ARG	NE-CZ-NH2	7.07	125.56	119.20
26	LA	907	G	O5'-C5'-C4'	7.07	122.10	111.50
8	SH	12	ARG	NE-CZ-NH2	-7.06	112.84	119.20
26	LA	2458	G	O4'-C1'-N9	7.06	118.79	108.20
46	LH	35	THR	CA-C-N	-7.06	112.76	123.07
46	LH	35	THR	C-N-CA	-7.06	112.76	123.07
3	S1	30	U	C4'-C3'-C2'	-7.06	95.54	102.60
18	SB	4	SER	N-CA-C	7.06	118.98	111.28
37	LC	110	ASN	OD1-CG-ND2	-7.06	115.54	122.60
26	LA	272	A	C5'-C4'-C3'	7.06	126.59	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1386	C	O4'-C1'-N1	7.06	119.09	108.50
26	LA	1715	G	O5'-C5'-C4'	7.06	122.29	111.70
31	LX	44	HIS	ND1-CE1-NE2	7.06	115.46	108.40
24	S3	376	VAL	CA-CB-CG1	-7.06	98.40	110.40
26	LA	574	A	C3'-C2'-C1'	-7.06	94.24	101.30
26	LA	601	C	C1'-O4'-C4'	-7.06	102.84	109.90
44	LF	127	GLU	N-CA-C	7.06	118.97	111.28
49	LK	103	ALA	N-CA-C	7.06	118.97	111.28
2	SA	527	G	O4'-C4'-C3'	-7.06	96.94	104.00
2	SA	694	A	C4'-C3'-O3'	-7.06	102.42	113.00
13	SM	81	ASP	N-CA-C	7.06	121.72	113.18
26	LA	1302	A	O4'-C1'-C2'	7.06	112.86	105.80
26	LA	1290	C	C3'-C2'-C1'	7.05	108.35	101.30
26	LA	2583	G	P-O5'-C5'	7.05	131.48	120.90
1	SS	70	LEU	N-CA-C	7.05	118.76	111.14
2	SA	1500	A	P-O3'-C3'	-7.05	109.62	120.20
10	SJ	62	ARG	NE-CZ-NH2	7.05	125.55	119.20
26	LA	470	A	P-O5'-C5'	-7.05	110.32	120.90
26	LA	2382	G	O3'-P-O5'	-7.05	93.42	104.00
26	LA	2134	A	O4'-C1'-N9	7.05	119.08	108.50
47	LJ	153	THR	N-CA-CB	7.05	120.71	110.20
2	SA	1205	U	O4'-C4'-C3'	7.05	111.05	104.00
26	LA	125	A	C4'-C3'-C2'	-7.05	95.55	102.60
26	LA	2613	U	C5'-C4'-C3'	7.05	125.78	115.20
44	LF	103	GLY	O-C-N	-7.05	113.53	122.70
57	LS	7	VAL	N-CA-C	7.05	118.66	110.62
26	LA	1786	A	O4'-C1'-C2'	-7.05	98.75	105.80
12	SL	76	HIS	ND1-CE1-NE2	7.05	115.45	108.40
23	SR	59	LYS	N-CA-C	7.05	118.75	111.14
26	LA	822	G	C4'-C3'-C2'	7.05	109.65	102.60
33	LZ	19	HIS	CB-CG-CD2	-7.05	122.04	131.20
3	S1	21	U	C4'-C3'-C2'	-7.04	95.56	102.60
11	SK	4	PRO	CA-C-N	7.04	134.65	121.97
11	SK	4	PRO	C-N-CA	7.04	134.65	121.97
18	SB	142	LYS	N-CA-C	7.04	119.04	111.36
26	LA	573	U	C4'-C3'-C2'	-7.04	95.56	102.60
7	SG	74	VAL	CA-C-O	7.04	128.06	120.53
26	LA	1506	U	O3'-P-O5'	7.04	114.56	104.00
37	LC	51	ASP	CA-C-O	-7.04	113.45	120.70
49	LK	86	LYS	N-CA-C	7.04	118.84	111.03
2	SA	869	G	C5'-C4'-C3'	7.04	126.56	116.00
6	SU	61	ARG	CA-C-N	7.04	129.71	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	SU	61	ARG	C-N-CA	7.04	129.71	120.28
16	SP	26	ASN	CA-CB-CG	-7.04	105.56	112.60
2	SA	1096	C	O4'-C1'-N1	7.04	119.06	108.50
26	LA	2462	C	C5'-C4'-C3'	-7.04	105.44	116.00
50	LL	139	VAL	N-CA-C	7.04	119.76	109.63
2	SA	760	G	C4'-C3'-C2'	-7.04	95.56	102.60
2	SA	992	U	C2'-C3'-O3'	7.04	120.05	109.50
24	S3	495	GLN	CA-C-N	7.04	134.98	121.54
24	S3	495	GLN	C-N-CA	7.04	134.98	121.54
3	S1	27	A	C4'-C3'-C2'	-7.03	95.57	102.60
26	LA	2827	C	O4'-C1'-N1	7.03	119.05	108.50
46	LH	2	ARG	O-C-N	-7.03	114.66	122.12
2	SA	1291	U	C3'-C2'-C1'	7.03	108.33	101.30
26	LA	304	U	C5'-C4'-C3'	-7.03	105.45	116.00
26	LA	1906	G	C1'-O4'-C4'	-7.03	102.87	109.90
2	SA	1354	U	C5'-C4'-C3'	-7.03	105.45	116.00
12	SL	61	GLU	O-C-N	-7.03	114.78	123.36
24	S3	33	THR	N-CA-C	7.03	118.94	111.28
26	LA	1241	A	O4'-C1'-N9	7.03	119.05	108.50
26	LA	1668	A	P-O3'-C3'	-7.03	109.65	120.20
26	LA	2167	U	O5'-C5'-C4'	7.03	122.05	111.50
33	LZ	58	ILE	CA-CB-CG1	7.03	122.35	110.40
53	LP	74	GLU	N-CA-CB	7.03	120.56	110.16
2	SA	792	A	C4'-C3'-O3'	-7.03	102.46	113.00
26	LA	322	A	P-O3'-C3'	7.03	130.74	120.20
2	SA	894	G	C4'-C3'-C2'	-7.03	95.57	102.60
26	LA	581	C	C5'-C4'-C3'	-7.03	105.46	116.00
26	LA	2653	U	C1'-C2'-O2'	7.03	118.94	108.40
2	SA	1296	C	O4'-C1'-C2'	7.03	114.62	107.60
26	LA	1924	C	O4'-C1'-C2'	-7.03	100.57	107.60
26	LA	2564	A	P-O3'-C3'	-7.03	109.66	120.20
51	LI	49	ALA	N-CA-C	7.03	118.73	111.14
26	LA	2246	G	P-O5'-C5'	7.02	131.44	120.90
24	S3	474	ARG	CB-CA-C	-7.02	99.80	110.90
26	LA	386	G	P-O5'-C5'	-7.02	110.37	120.90
26	LA	2196	C	C5'-C4'-C3'	-7.02	105.47	116.00
2	SA	928	G	O5'-C5'-C4'	7.02	122.03	111.50
2	SA	964	A	P-O3'-C3'	7.02	130.73	120.20
26	LA	1965	C	O4'-C1'-C2'	-7.02	100.58	107.60
45	LG	134	GLN	N-CA-C	7.02	120.67	110.42
48	LN	37	GLY	O-C-N	-7.02	116.10	122.77
26	LA	318	C	P-O5'-C5'	7.02	131.43	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	ST	27	MET	O-C-N	-7.02	114.73	122.03
37	LC	129	GLN	N-CA-C	-7.02	104.59	113.01
4	S2	65	G	O4'-C4'-C3'	-7.01	96.98	104.00
12	SL	120	ARG	O-C-N	-7.01	116.00	121.47
26	LA	1571	A	P-O3'-C3'	7.01	130.72	120.20
46	LH	38	ASP	CA-CB-CG	-7.01	105.59	112.60
8	SH	10	LEU	O-C-N	-7.01	114.69	122.12
26	LA	1833	C	O4'-C4'-C3'	7.01	111.01	104.00
20	SD	10	LEU	CA-C-N	7.01	130.25	120.29
20	SD	10	LEU	C-N-CA	7.01	130.25	120.29
39	L3	45	ASP	CA-CB-CG	-7.01	105.59	112.60
45	LG	115	GLY	CA-C-N	7.01	132.32	122.36
45	LG	115	GLY	C-N-CA	7.01	132.32	122.36
2	SA	796	C	O4'-C1'-C2'	7.01	114.61	107.60
19	SC	87	ARG	NE-CZ-NH1	7.01	128.51	121.50
26	LA	126	A	O4'-C1'-C2'	-7.01	100.59	107.60
26	LA	1325	U	C2'-C3'-O3'	7.01	120.01	109.50
26	LA	2083	G	P-O3'-C3'	7.01	130.72	120.20
26	LA	2227	A	C4'-C3'-C2'	-7.01	95.59	102.60
53	LP	76	VAL	O-C-N	-7.01	112.45	122.12
47	LJ	87	HIS	CA-CB-CG	7.01	120.81	113.80
2	SA	47	C	O4'-C1'-N1	7.01	118.71	108.20
46	LH	124	CYS	CA-C-N	7.01	126.49	118.85
46	LH	124	CYS	C-N-CA	7.01	126.49	118.85
2	SA	1141	C	C5'-C4'-C3'	-7.00	105.49	116.00
13	SM	6	ILE	O-C-N	-7.00	114.62	121.90
26	LA	1956	U	C4'-C3'-C2'	-7.00	95.60	102.60
26	LA	2725	A	C3'-C2'-C1'	7.00	108.50	101.50
2	SA	250	A	C1'-O4'-C4'	-7.00	102.90	109.90
10	SJ	71	LEU	CB-CA-C	-7.00	98.94	110.14
26	LA	1009	A	P-O5'-C5'	7.00	131.40	120.90
26	LA	805	G	C3'-C2'-O2'	-7.00	104.10	114.60
26	LA	1420	A	C1'-O4'-C4'	-7.00	102.90	109.90
26	LA	1902	C	C4'-C3'-C2'	-7.00	95.60	102.60
26	LA	139	U	N1-C1'-C2'	7.00	122.50	112.00
26	LA	2781	A	C5'-C4'-C3'	-7.00	105.50	116.00
26	LA	564	C	C5'-C4'-C3'	-7.00	105.51	116.00
26	LA	1129	A	O5'-C5'-C4'	-7.00	101.00	111.50
26	LA	1726	C	P-O5'-C5'	-7.00	110.41	120.90
26	LA	2758	A	C1'-O4'-C4'	-7.00	102.90	109.90
2	SA	222	C	P-O5'-C5'	7.00	131.39	120.90
26	LA	682	G	C5'-C4'-C3'	7.00	126.49	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2527	C	C5'-C4'-C3'	7.00	126.49	116.00
26	LA	1234	U	C5'-C4'-C3'	-6.99	105.51	116.00
26	LA	2350	C	C5'-C4'-C3'	-6.99	105.51	116.00
34	L0	60	LYS	CA-C-N	6.99	132.06	122.34
34	L0	60	LYS	C-N-CA	6.99	132.06	122.34
2	SA	673	A	O4'-C1'-N9	6.99	118.99	108.50
2	SA	418	C	C4'-C3'-C2'	-6.99	95.61	102.60
2	SA	1194	U	C5'-C4'-O4'	6.99	120.29	109.80
31	LX	43	ASP	CB-CA-C	-6.99	97.73	109.48
2	SA	488	C	C5'-C4'-C3'	-6.99	105.52	116.00
26	LA	532	A	C4'-C3'-O3'	6.99	119.88	109.40
26	LA	1449	G	P-O5'-C5'	6.99	131.38	120.90
26	LA	2011	U	C5'-C4'-O4'	6.99	120.28	109.80
52	LO	30	SER	N-CA-C	6.99	118.90	111.28
26	LA	728	G	P-O3'-C3'	-6.99	109.72	120.20
26	LA	2223	G	P-O3'-C3'	6.99	130.68	120.20
33	LZ	18	SER	CA-C-N	6.99	134.88	121.54
33	LZ	18	SER	C-N-CA	6.99	134.88	121.54
26	LA	311	A	O4'-C1'-N9	6.99	118.68	108.20
26	LA	1396	U	P-O3'-C3'	-6.99	109.72	120.20
26	LA	2504	U	C4'-C3'-C2'	-6.98	95.62	102.60
10	SJ	56	HIS	CA-CB-CG	-6.98	106.82	113.80
26	LA	863	A	P-O3'-C3'	-6.98	109.73	120.20
26	LA	2172	U	C3'-C2'-O2'	-6.98	104.13	114.60
26	LA	2716	C	C3'-C2'-C1'	6.98	108.28	101.30
18	SB	27	LYS	N-CA-C	6.98	125.24	109.81
23	SR	60	ARG	CA-C-N	6.98	129.51	120.44
23	SR	60	ARG	C-N-CA	6.98	129.51	120.44
24	S3	317	SER	N-CA-CB	6.98	122.29	110.49
26	LA	821	A	C4'-C3'-C2'	-6.98	95.62	102.60
26	LA	1174	U	O4'-C1'-N1	6.98	118.97	108.50
26	LA	2590	A	C4'-C3'-C2'	-6.98	95.62	102.60
2	SA	48	C	O4'-C1'-N1	6.98	118.67	108.20
3	S1	44	U	P-O5'-C5'	6.98	131.37	120.90
24	S3	314	GLU	CA-C-O	-6.98	113.19	119.75
49	LK	85	ILE	CB-CA-C	-6.98	103.92	111.59
24	S3	215	ASN	OD1-CG-ND2	6.98	129.58	122.60
26	LA	2127	G	O3'-P-O5'	-6.98	93.54	104.00
26	LA	144	A	P-O5'-C5'	6.97	131.36	120.90
26	LA	2806	C	C4'-C3'-C2'	-6.97	95.62	102.60
26	LA	577	G	P-O5'-C5'	6.97	131.36	120.90
27	LD	174	ARG	N-CA-C	-6.97	97.87	109.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	LW	49	PRO	N-CA-C	6.97	122.58	113.86
2	SA	965	U	C1'-C2'-O2'	6.97	118.86	108.40
26	LA	1034	G	P-O3'-C3'	6.97	130.66	120.20
26	LA	2007	U	O4'-C4'-C3'	6.97	110.97	104.00
7	SG	146	ALA	N-CA-C	6.97	120.26	111.69
26	LA	113	U	O3'-P-O5'	6.97	114.45	104.00
26	LA	471	A	O5'-C5'-C4'	-6.97	101.05	111.50
26	LA	1271	G	C2'-C3'-O3'	6.97	124.15	113.70
38	LE	136	ASN	CA-CB-CG	-6.97	105.63	112.60
24	S3	643	GLY	O-C-N	-6.97	117.02	123.78
26	LA	1578	U	O5'-C5'-C4'	6.97	121.95	111.50
27	LD	128	THR	CA-CB-OG1	6.97	120.05	109.60
52	LO	3	GLN	O-C-N	-6.97	114.95	122.06
2	SA	939	G	O4'-C4'-C3'	6.97	110.97	104.00
46	LH	44	HIS	CE1-NE2-CD2	-6.97	102.03	109.00
2	SA	692	U	C5'-C4'-C3'	-6.96	105.56	116.00
26	LA	1189	A	C5'-C4'-C3'	-6.96	105.55	116.00
26	LA	2726	A	C1'-O4'-C4'	-6.96	102.74	109.70
2	SA	166	U	C1'-O4'-C4'	-6.96	102.94	109.90
3	S1	34	U	C5'-C4'-C3'	-6.96	105.56	116.00
15	SO	42	PHE	CA-C-N	6.96	130.18	120.29
15	SO	42	PHE	C-N-CA	6.96	130.18	120.29
26	LA	1971	U	P-O5'-C5'	-6.96	110.46	120.90
51	LI	121	VAL	CA-C-N	6.96	134.84	121.54
51	LI	121	VAL	C-N-CA	6.96	134.84	121.54
26	LA	2362	C	C5'-C4'-C3'	-6.96	105.56	116.00
26	LA	2444	G	C3'-C2'-C1'	6.96	108.26	101.30
1	SS	11	ASP	N-CA-C	6.96	125.62	110.80
2	SA	276	G	P-O3'-C3'	6.96	130.64	120.20
26	LA	554	U	C3'-C2'-C1'	6.96	108.26	101.30
27	LD	24	HIS	CG-CD2-NE2	6.96	114.16	107.20
2	SA	1296	C	C1'-O4'-C4'	-6.96	102.94	109.90
19	SC	31	ASN	CA-CB-CG	-6.96	105.64	112.60
24	S3	411	PRO	CB-CA-C	-6.96	101.00	110.60
26	LA	83	A	C5'-C4'-C3'	-6.96	105.57	116.00
12	SL	71	HIS	ND1-CE1-NE2	6.96	115.36	108.40
26	LA	458	G	O4'-C4'-C3'	-6.96	99.14	106.10
26	LA	1020	A	P-O3'-C3'	6.96	130.63	120.20
26	LA	1142	A	O5'-C5'-C4'	6.96	122.13	111.70
26	LA	2873	A	O4'-C1'-N9	6.96	118.63	108.20
2	SA	1308	U	C5'-C4'-C3'	-6.95	105.57	116.00
11	SK	6	ARG	NE-CZ-NH2	6.95	125.46	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	549	G	C4'-C3'-C2'	-6.95	95.65	102.60
26	LA	616	A	C5'-C4'-C3'	-6.95	105.57	116.00
29	LV	95	PHE	CA-C-O	-6.95	114.01	121.38
38	LE	167	ASN	CA-CB-CG	6.95	119.55	112.60
47	LJ	3	ASN	CA-C-N	6.95	134.13	121.06
47	LJ	3	ASN	C-N-CA	6.95	134.13	121.06
2	SA	1015	G	C5'-C4'-C3'	-6.95	105.57	116.00
2	SA	1130	A	C1'-C2'-O2'	6.95	118.83	108.40
21	SE	134	ASN	CA-CB-CG	-6.95	105.65	112.60
24	S3	470	ASP	N-CA-C	6.95	118.86	111.28
26	LA	894	U	O4'-C4'-C3'	-6.95	97.05	104.00
56	LR	85	VAL	CB-CA-C	-6.95	102.63	112.22
25	LB	27	C	C1'-O4'-C4'	-6.95	102.95	109.90
26	LA	372	G	O4'-C1'-C2'	-6.95	98.85	105.80
26	LA	1434	A	P-O3'-C3'	-6.95	109.77	120.20
26	LA	2126	A	P-O3'-C3'	6.95	130.63	120.20
31	LX	48	MET	N-CA-C	6.95	118.86	111.28
2	SA	647	C	O4'-C4'-C3'	6.95	110.95	104.00
2	SA	889	A	C3'-C2'-O2'	-6.95	104.18	114.60
20	SD	201	GLU	N-CA-C	-6.95	103.79	111.36
48	LN	103	ILE	N-CA-CB	-6.95	102.42	110.55
2	SA	1515	G	C2'-C3'-O3'	6.95	124.12	113.70
26	LA	2282	G	C5'-C4'-C3'	-6.94	104.78	115.20
2	SA	487	A	P-O5'-C5'	6.94	131.31	120.90
26	LA	2443	C	O5'-C5'-C4'	-6.94	101.09	111.50
2	SA	582	C	P-O5'-C5'	6.94	131.31	120.90
2	SA	866	C	C5'-C4'-C3'	6.94	126.41	116.00
2	SA	1315	U	P-O5'-C5'	6.94	131.31	120.90
25	LB	107	G	P-O5'-C5'	6.94	131.31	120.90
45	LG	156	THR	N-CA-CB	6.94	123.62	111.55
2	SA	337	G	C4'-C3'-C2'	-6.94	95.66	102.60
9	SI	110	VAL	N-CA-C	6.94	123.77	109.34
2	SA	124	C	O4'-C4'-C3'	6.94	110.94	104.00
26	LA	1343	G	O4'-C4'-C3'	6.94	110.94	104.00
26	LA	670	A	O4'-C4'-C3'	-6.94	99.16	106.10
2	SA	1294	G	C5'-C4'-C3'	-6.93	105.60	116.00
15	SO	16	ARG	N-CA-C	-6.93	98.10	107.88
16	SP	53	ASP	CA-C-N	6.93	129.88	120.38
16	SP	53	ASP	C-N-CA	6.93	129.88	120.38
2	SA	573	A	O3'-P-O5'	-6.93	93.60	104.00
2	SA	1152	A	O5'-C5'-C4'	6.93	121.90	111.50
26	LA	954	G	P-O3'-C3'	-6.93	109.80	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	LE	96	ILE	N-CA-CB	6.93	122.67	111.23
45	LG	98	PHE	O-C-N	6.93	129.21	122.07
46	LH	51	PHE	CA-C-O	6.93	129.90	121.72
2	SA	499	A	O4'-C1'-C2'	-6.93	98.87	105.80
4	S2	22	A	P-O5'-C5'	-6.93	110.50	120.90
26	LA	1307	A	P-O3'-C3'	6.93	130.60	120.20
26	LA	1016	G	P-O5'-C5'	-6.93	110.51	120.90
57	LS	60	TRP	O-C-N	-6.93	114.61	122.09
2	SA	1232	U	O3'-P-O5'	6.92	114.39	104.00
24	S3	247	ILE	O-C-N	-6.92	115.12	121.91
26	LA	374	A	C5'-C4'-C3'	6.92	126.39	116.00
26	LA	722	A	C5'-C4'-C3'	6.92	126.39	116.00
26	LA	1924	C	C4'-C3'-C2'	-6.92	95.68	102.60
2	SA	1213	A	C2'-C3'-O3'	6.92	119.89	109.50
26	LA	205	G	C1'-O4'-C4'	-6.92	102.78	109.70
26	LA	2103	C	C4'-C3'-C2'	6.92	109.52	102.60
2	SA	546	A	P-O5'-C5'	-6.92	110.52	120.90
26	LA	109	C	P-O3'-C3'	6.92	130.58	120.20
26	LA	2268	A	C4'-C3'-C2'	-6.92	95.68	102.60
37	LC	75	VAL	N-CA-C	6.92	118.13	108.23
38	LE	40	LEU	N-CA-C	6.92	121.34	112.34
26	LA	958	U	P-O5'-C5'	-6.92	110.52	120.90
26	LA	1148	U	C4'-C3'-C2'	-6.92	95.68	102.60
49	LK	12	VAL	O-C-N	-6.92	115.39	123.00
2	SA	29	U	P-O5'-C5'	-6.92	110.52	120.90
2	SA	528	C	C5'-C4'-C3'	-6.92	105.62	116.00
26	LA	13	A	C2'-C3'-O3'	6.92	119.88	109.50
31	LX	63	ILE	CB-CA-C	-6.92	101.57	111.19
2	SA	1249	C	P-O5'-C5'	6.92	131.27	120.90
11	SK	63	GLN	CA-C-O	-6.92	113.46	121.07
2	SA	309	A	P-O5'-C5'	6.91	131.27	120.90
2	SA	905	U	P-O5'-C5'	6.91	131.27	120.90
20	SD	155	LYS	N-CA-C	6.91	118.81	111.28
24	S3	346	ASP	CA-CB-CG	6.91	119.51	112.60
26	LA	1221	C	P-O5'-C5'	-6.91	110.53	120.90
26	LA	1677	A	C4'-C3'-C2'	-6.91	95.69	102.60
26	LA	2165	C	O4'-C1'-C2'	-6.91	100.69	107.60
28	LU	31	GLN	OE1-CD-NE2	-6.91	115.69	122.60
51	LI	141	LYS	N-CA-C	6.91	119.83	109.25
26	LA	38	A	C3'-C2'-C1'	6.91	108.21	101.30
26	LA	1642	G	C4'-C3'-C2'	-6.91	95.69	102.60
32	LY	71	LYS	CA-C-N	6.91	132.72	121.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	LY	71	LYS	C-N-CA	6.91	132.72	121.87
2	SA	626	G	C5'-C4'-C3'	-6.91	105.64	116.00
2	SA	1353	G	C4'-C3'-C2'	-6.91	95.69	102.60
26	LA	811	U	O4'-C1'-C2'	-6.91	98.89	105.80
26	LA	1219	U	C5'-C4'-C3'	-6.91	105.64	116.00
49	LK	101	SER	N-CA-CB	6.91	120.26	109.69
2	SA	897	C	C4'-C3'-C2'	-6.91	95.69	102.60
26	LA	2229	U	C1'-C2'-O2'	6.91	118.76	108.40
2	SA	1139	G	O5'-C5'-C4'	6.91	122.06	111.70
26	LA	1793	C	P-O5'-C5'	-6.91	110.54	120.90
26	LA	2840	C	P-O5'-C5'	-6.91	110.54	120.90
37	LC	233	VAL	N-CA-C	6.91	117.66	110.62
26	LA	1794	A	C4'-C3'-O3'	-6.90	102.64	113.00
47	LJ	68	PHE	CA-CB-CG	6.90	120.70	113.80
2	SA	311	C	P-O5'-C5'	6.90	131.25	120.90
26	LA	1161	C	O4'-C1'-C2'	-6.90	100.70	107.60
26	LA	1459	G	P-O3'-C3'	6.90	130.55	120.20
26	LA	1807	G	O4'-C4'-C3'	-6.90	97.10	104.00
51	LI	128	HIS	N-CA-C	-6.90	98.23	108.79
2	SA	1192	C	C4'-C3'-C2'	-6.90	95.70	102.60
26	LA	628	G	O4'-C1'-N9	6.90	118.85	108.50
26	LA	1121	C	O3'-P-O5'	6.90	114.35	104.00
26	LA	1598	A	C4'-C3'-C2'	-6.90	95.70	102.60
26	LA	2016	U	C4'-C3'-C2'	-6.90	95.70	102.60
2	SA	1073	U	O4'-C1'-N1	6.90	118.84	108.50
2	SA	1252	A	P-O3'-C3'	-6.90	109.86	120.20
2	SA	1420	U	C5'-C4'-C3'	-6.90	105.65	116.00
10	SJ	9	ARG	CA-C-O	6.90	128.88	120.60
15	SO	14	PHE	CA-CB-CG	-6.90	106.90	113.80
49	LK	92	PRO	CA-C-O	-6.90	113.80	121.32
2	SA	318	G	C4'-C3'-C2'	-6.90	95.70	102.60
26	LA	126	A	C1'-O4'-C4'	-6.90	103.00	109.90
19	SC	65	VAL	CB-CA-C	-6.89	101.53	110.98
21	SE	72	ASN	CA-CB-CG	-6.89	105.70	112.60
26	LA	1416	G	O5'-C5'-C4'	-6.89	101.36	111.70
26	LA	2025	C	O5'-C5'-C4'	6.89	121.84	111.50
26	LA	2721	A	C5'-C4'-C3'	-6.89	105.66	116.00
48	LN	101	ILE	CB-CA-C	-6.89	102.22	110.84
24	S3	327	PRO	N-CA-C	-6.89	104.92	114.98
26	LA	1365	A	P-O5'-C5'	-6.89	110.56	120.90
26	LA	1761	C	C2'-C3'-O3'	6.89	119.84	109.50
26	LA	1785	A	P-O5'-C5'	-6.89	110.56	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	LN	57	LEU	N-CA-C	6.89	119.64	111.71
2	SA	140	U	O4'-C1'-C2'	-6.89	100.71	107.60
2	SA	693	G	C2'-C3'-O3'	6.89	124.03	113.70
2	SA	756	C	P-O3'-C3'	6.89	130.53	120.20
2	SA	1326	U	P-O3'-C3'	-6.89	109.87	120.20
26	LA	1351	C	C4'-C3'-C2'	-6.89	95.71	102.60
26	LA	1909	C	C4'-C3'-C2'	-6.89	95.71	102.60
26	LA	2256	G	C4'-C3'-C2'	-6.89	95.71	102.60
53	LP	14	SER	N-CA-C	6.89	118.44	111.07
26	LA	1763	G	P-O3'-C3'	6.89	130.53	120.20
2	SA	582	C	C5'-C4'-O4'	6.89	120.13	109.80
26	LA	1420	A	O4'-C1'-N9	6.89	118.83	108.50
20	SD	49	ASP	N-CA-CB	-6.88	99.61	110.28
26	LA	13	A	O4'-C1'-C2'	-6.88	98.92	105.80
26	LA	1792	G	C4'-C3'-C2'	-6.88	95.72	102.60
26	LA	1351	C	C5'-C4'-C3'	-6.88	105.68	116.00
26	LA	1379	U	P-O5'-C5'	6.88	131.22	120.90
41	L5	10	LEU	CB-CA-C	6.88	122.22	110.79
26	LA	75	G	C5'-C4'-C3'	6.88	126.32	116.00
56	LR	100	ARG	N-CA-C	-6.88	104.63	113.16
2	SA	999	C	P-O5'-C5'	6.88	131.22	120.90
30	LW	62	ALA	N-CA-C	6.88	118.86	111.36
38	LE	133	THR	CA-C-N	6.88	130.64	120.87
38	LE	133	THR	C-N-CA	6.88	130.64	120.87
26	LA	2638	G	C2'-C3'-O3'	6.88	119.81	109.50
45	LG	75	GLY	O-C-N	-6.88	114.86	122.84
45	LG	114	ARG	NE-CZ-NH1	-6.88	114.62	121.50
26	LA	831	G	O4'-C1'-N9	6.88	118.81	108.50
26	LA	2901	C	O4'-C1'-N1	6.88	118.81	108.50
2	SA	74	A	P-O5'-C5'	-6.87	110.59	120.90
24	S3	539	ILE	CA-CB-CG1	6.87	122.09	110.40
26	LA	1591	A	P-O3'-C3'	-6.87	109.89	120.20
2	SA	151	A	P-O3'-C3'	-6.87	109.89	120.20
6	SU	35	GLU	CA-C-O	6.87	127.87	120.38
26	LA	404	A	C2'-C3'-O3'	6.87	119.81	109.50
26	LA	1661	G	C1'-O4'-C4'	-6.87	103.03	109.90
26	LA	2877	G	C4'-C3'-C2'	-6.87	95.73	102.60
26	LA	1159	U	O4'-C1'-C2'	6.87	114.47	107.60
2	SA	630	A	O5'-C5'-C4'	-6.87	101.20	111.50
26	LA	2507	C	C5'-C4'-C3'	6.87	126.30	116.00
56	LR	26	GLU	CA-C-O	6.87	128.58	120.20
2	SA	531	U	C2'-C3'-O3'	6.87	119.80	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	841	C	C2'-C3'-O3'	6.87	119.80	109.50
2	SA	1240	U	O4'-C1'-C2'	-6.87	98.93	105.80
26	LA	1453	A	C4'-C3'-C2'	-6.87	95.73	102.60
30	LW	68	ASN	N-CA-C	-6.87	104.00	114.16
37	LC	203	GLN	CB-CA-C	-6.87	100.10	110.88
2	SA	1054	C	C5'-C4'-O4'	6.86	119.39	109.10
10	SJ	72	ARG	CA-C-O	6.86	129.86	121.56
25	LB	29	A	C4'-C3'-O3'	-6.86	102.71	113.00
26	LA	2607	G	P-O5'-C5'	6.86	131.19	120.90
2	SA	1466	C	P-O5'-C5'	6.86	131.19	120.90
14	SN	60	ARG	CA-C-O	6.86	123.68	119.77
26	LA	535	G	C1'-O4'-C4'	-6.86	103.04	109.90
26	LA	770	G	C4'-C3'-C2'	-6.86	95.74	102.60
37	LC	10	VAL	CA-C-N	6.86	129.86	120.46
37	LC	10	VAL	C-N-CA	6.86	129.86	120.46
26	LA	140	C	C4'-C3'-C2'	-6.86	95.74	102.60
26	LA	1402	U	C4'-C3'-C2'	-6.86	95.74	102.60
2	SA	252	U	C5'-C4'-C3'	-6.86	105.71	116.00
2	SA	1317	C	P-O3'-C3'	-6.86	109.91	120.20
24	S3	207	PRO	N-CA-C	6.86	126.60	112.47
26	LA	131	A	O4'-C1'-N9	6.86	118.78	108.50
30	LW	78	LYS	CA-C-N	6.86	134.64	121.54
30	LW	78	LYS	C-N-CA	6.86	134.64	121.54
2	SA	301	G	P-O5'-C5'	-6.86	110.62	120.90
2	SA	374	A	C5'-C4'-C3'	-6.86	105.72	116.00
26	LA	51	G	O3'-P-O5'	-6.86	93.72	104.00
26	LA	570	G	O5'-C5'-C4'	6.86	121.98	111.70
2	SA	1223	C	O5'-C5'-C4'	6.85	121.78	111.50
24	S3	246	GLU	CA-C-N	6.85	129.20	120.56
24	S3	246	GLU	C-N-CA	6.85	129.20	120.56
2	SA	182	A	P-O5'-C5'	-6.85	110.62	120.90
2	SA	728	A	P-O3'-C3'	6.85	130.48	120.20
50	LL	132	HIS	CB-CG-CD2	-6.85	122.29	131.20
26	LA	316	C	O4'-C1'-N1	6.85	118.78	108.50
2	SA	794	A	C4'-C3'-C2'	-6.85	95.75	102.60
13	SM	63	VAL	N-CA-C	6.85	123.59	109.34
20	SD	25	ARG	NE-CZ-NH1	-6.85	114.65	121.50
26	LA	891	G	C5'-C4'-C3'	6.85	126.27	116.00
26	LA	1475	G	C4'-C3'-O3'	-6.85	99.13	109.40
26	LA	2327	A	C4'-C3'-C2'	6.85	109.45	102.60
28	LU	53	SER	N-CA-CB	6.85	119.94	110.01
36	L2	66	ILE	N-CA-CB	6.85	115.79	110.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	232	LEU	CA-C-O	-6.85	113.16	120.42
26	LA	93	G	O4'-C1'-C2'	-6.85	100.75	107.60
26	LA	126	A	O5'-C5'-C4'	6.85	121.77	111.50
26	LA	2709	G	P-O5'-C5'	6.85	131.17	120.90
26	LA	1343	G	C1'-O4'-C4'	-6.85	103.05	109.90
2	SA	342	C	P-O5'-C5'	6.84	131.17	120.90
26	LA	837	C	C4'-C3'-C2'	-6.84	95.76	102.60
26	LA	1452	G	O4'-C1'-C2'	6.84	112.64	105.80
26	LA	2810	A	P-O5'-C5'	-6.84	110.64	120.90
57	LS	103	VAL	O-C-N	-6.84	114.10	122.18
26	LA	1245	G	C5'-C4'-C3'	-6.84	105.74	116.00
2	SA	750	C	P-O5'-C5'	6.84	131.16	120.90
7	SG	122	GLU	CA-C-O	6.84	127.83	119.97
26	LA	1072	C	P-O3'-C3'	-6.84	109.94	120.20
26	LA	2593	U	P-O3'-C3'	-6.84	109.94	120.20
42	L6	56	LEU	CA-C-O	6.84	128.00	120.82
57	LS	69	ARG	NE-CZ-NH2	6.84	125.35	119.20
2	SA	32	A	C4'-C3'-C2'	-6.84	95.76	102.60
20	SD	148	ALA	N-CA-CB	-6.84	100.37	110.49
25	LB	51	G	O5'-C5'-C4'	6.84	121.75	111.50
26	LA	361	G	P-O5'-C5'	-6.84	110.65	120.90
26	LA	2029	G	C5'-C4'-C3'	6.84	126.26	116.00
44	LF	175	ILE	O-C-N	-6.84	114.03	122.57
50	LL	4	PHE	CA-CB-CG	6.84	120.64	113.80
51	LI	135	HIS	CE1-NE2-CD2	-6.84	102.16	109.00
52	LO	9	PHE	CA-CB-CG	-6.84	106.96	113.80
2	SA	328	C	C2'-C3'-O3'	6.83	119.75	109.50
26	LA	1725	U	C1'-O4'-C4'	-6.83	103.06	109.90
29	LV	25	GLU	O-C-N	-6.83	114.98	122.09
2	SA	591	U	O4'-C4'-C3'	6.83	110.83	104.00
2	SA	771	G	C5'-C4'-C3'	-6.83	105.75	116.00
2	SA	1020	G	O3'-P-O5'	6.83	114.25	104.00
2	SA	1081	A	O4'-C4'-C3'	6.83	110.83	104.00
9	SI	70	GLY	O-C-N	-6.83	118.08	123.27
13	SM	45	SER	N-CA-C	6.83	118.73	111.28
26	LA	24	G	C4'-C3'-C2'	6.83	109.43	102.60
26	LA	451	U	O3'-P-O5'	-6.83	93.75	104.00
26	LA	2212	A	P-O5'-C5'	6.83	131.15	120.90
45	LG	153	ILE	N-CA-CB	6.83	119.00	111.89
4	S2	41	C	P-O5'-C5'	6.83	131.15	120.90
26	LA	1183	U	P-O3'-C3'	6.83	130.45	120.20
26	LA	2455	G	C1'-C2'-O2'	6.83	118.65	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	268	U	P-O5'-C5'	6.83	131.15	120.90
2	SA	1163	A	P-O3'-C3'	-6.83	109.95	120.20
32	LY	70	VAL	N-CA-C	-6.83	98.28	108.12
37	LC	111	PHE	CA-C-N	6.83	134.58	121.54
37	LC	111	PHE	C-N-CA	6.83	134.58	121.54
4	S2	33	C	C3'-C2'-C1'	6.83	108.12	101.30
21	SE	136	VAL	CB-CA-C	-6.83	103.10	112.04
26	LA	1522	A	P-O5'-C5'	-6.83	110.66	120.90
26	LA	1624	U	C1'-O4'-C4'	-6.83	103.08	109.90
26	LA	2802	G	C3'-C2'-C1'	-6.83	94.47	101.30
31	LX	88	HIS	N-CA-CB	6.83	122.10	110.77
47	LJ	48	GLY	CA-C-N	6.83	131.91	123.10
47	LJ	48	GLY	C-N-CA	6.83	131.91	123.10
9	SI	107	ALA	N-CA-C	6.82	118.72	111.28
14	SN	30	ILE	CB-CA-C	6.82	119.37	110.84
16	SP	70	ARG	CA-C-N	6.82	129.81	120.46
16	SP	70	ARG	C-N-CA	6.82	129.81	120.46
26	LA	2697	G	C5'-C4'-C3'	-6.82	105.77	116.00
26	LA	756	A	C4'-C3'-C2'	-6.82	95.78	102.60
26	LA	2396	G	C5'-C4'-C3'	-6.82	105.77	116.00
31	LX	80	HIS	CA-C-O	6.82	126.03	119.62
56	LR	57	ALA	CA-C-O	6.82	128.93	120.54
37	LC	18	THR	CB-CA-C	-6.82	98.12	109.99
11	SK	12	ARG	N-CA-C	6.82	118.67	108.31
54	LM	11	ALA	O-C-N	-6.82	113.94	122.19
18	SB	11	ALA	CB-CA-C	-6.82	99.34	110.79
26	LA	726	G	C4'-C3'-C2'	-6.82	95.78	102.60
26	LA	1012	U	C1'-O4'-C4'	-6.82	102.88	109.70
26	LA	1524	G	C3'-C2'-O2'	6.82	120.93	110.70
26	LA	1680	U	C4'-C3'-C2'	-6.82	95.78	102.60
26	LA	1856	U	C5'-C4'-C3'	-6.82	105.77	116.00
26	LA	2291	U	O4'-C4'-C3'	6.82	110.82	104.00
26	LA	2721	A	C5'-C4'-O4'	6.82	120.03	109.80
26	LA	472	A	C3'-C2'-C1'	-6.82	94.48	101.30
26	LA	2110	G	C4'-C3'-O3'	6.82	119.62	109.40
57	LS	51	GLN	N-CA-C	6.82	118.79	111.36
2	SA	1259	C	C4'-C3'-C2'	-6.81	95.79	102.60
26	LA	1536	C	P-O5'-C5'	6.81	131.12	120.90
26	LA	2631	G	C1'-O4'-C4'	-6.81	103.09	109.90
47	LJ	156	ALA	N-CA-C	6.81	119.55	111.71
25	LB	99	A	C4'-C3'-C2'	-6.81	95.79	102.60
26	LA	12	U	P-O5'-C5'	6.81	131.12	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1704	C	C4'-C3'-C2'	-6.81	95.79	102.60
26	LA	1708	C	O3'-P-O5'	6.81	114.22	104.00
34	L0	3	ALA	CA-C-N	6.81	129.41	120.28
34	L0	3	ALA	C-N-CA	6.81	129.41	120.28
2	SA	99	C	C4'-C3'-O3'	-6.81	102.78	113.00
2	SA	660	C	P-O3'-C3'	-6.81	109.98	120.20
18	SB	172	ILE	N-CA-C	-6.81	104.13	110.53
2	SA	279	A	P-O3'-C3'	6.81	130.41	120.20
2	SA	787	A	O3'-P-O5'	6.81	114.21	104.00
24	S3	265	CYS	N-CA-C	6.81	119.10	108.96
26	LA	1012	U	C5'-C4'-O4'	6.81	119.31	109.10
26	LA	1790	C	C1'-C2'-O2'	6.81	118.61	108.40
56	LR	45	VAL	O-C-N	-6.81	115.82	123.10
2	SA	873	A	C4'-C3'-O3'	6.81	119.61	109.40
26	LA	61	C	P-O3'-C3'	-6.81	109.99	120.20
26	LA	540	C	O4'-C1'-N1	6.81	118.71	108.50
2	SA	18	C	P-O5'-C5'	6.80	131.11	120.90
23	SR	8	LYS	N-CA-C	6.80	119.67	108.99
26	LA	18	U	O4'-C1'-C2'	-6.80	100.80	107.60
26	LA	1128	G	C3'-C2'-O2'	-6.80	104.39	114.60
46	LH	162	ARG	NE-CZ-NH2	6.80	125.32	119.20
2	SA	536	C	C5'-C4'-C3'	-6.80	105.80	116.00
26	LA	142	A	C4'-C3'-C2'	-6.80	95.80	102.60
55	LQ	31	THR	N-CA-CB	6.80	118.24	111.10
9	SI	3	ASN	CA-CB-CG	-6.80	105.80	112.60
26	LA	1151	A	C5'-C4'-C3'	6.80	126.20	116.00
26	LA	1412	U	C1'-O4'-C4'	6.80	116.70	109.90
26	LA	2397	G	C2'-C3'-O3'	6.80	123.90	113.70
6	SU	15	LEU	CA-C-N	6.80	129.28	120.44
6	SU	15	LEU	C-N-CA	6.80	129.28	120.44
26	LA	2569	G	C5'-C4'-C3'	6.80	126.20	116.00
26	LA	2589	A	P-O5'-C5'	6.80	131.10	120.90
2	SA	159	G	P-O5'-C5'	6.80	131.10	120.90
2	SA	1159	U	O5'-C5'-C4'	-6.80	101.50	111.70
26	LA	1665	A	C1'-O4'-C4'	-6.80	103.10	109.90
26	LA	1906	G	P-O3'-C3'	-6.80	110.00	120.20
2	SA	1323	G	C2'-C3'-O3'	6.80	123.89	113.70
26	LA	2282	G	C2'-C3'-O3'	6.80	119.69	109.50
26	LA	23	G	P-O5'-C5'	6.79	131.09	120.90
26	LA	2302	U	C1'-O4'-C4'	-6.79	103.11	109.90
57	LS	51	GLN	CA-C-O	6.79	127.62	120.42
2	SA	260	G	C4'-C3'-C2'	6.79	109.39	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	SP	9	HIS	CE1-NE2-CD2	-6.79	102.21	109.00
26	LA	779	U	P-O5'-C5'	6.79	131.09	120.90
26	LA	1261	C	C5'-C4'-C3'	-6.79	105.81	116.00
26	LA	2534	A	C1'-C2'-O2'	6.79	118.59	108.40
44	LF	156	ASN	N-CA-C	-6.79	104.47	112.89
53	LP	120	GLU	N-CA-C	6.79	125.27	110.80
13	SM	34	ALA	N-CA-C	6.79	119.55	111.33
26	LA	1001	A	C4'-C3'-O3'	-6.79	102.81	113.00
26	LA	1116	G	C4'-C3'-C2'	-6.79	95.81	102.60
26	LA	2325	G	N9-C1'-C2'	6.79	122.19	112.00
26	LA	2381	A	C5'-C4'-C3'	6.79	126.19	116.00
49	LK	124	MET	N-CA-C	6.79	119.26	111.11
24	S3	328	PHE	N-CA-C	6.79	120.82	112.54
10	SJ	85	ASP	CA-C-O	6.79	127.62	120.42
24	S3	21	GLY	N-CA-C	-6.79	105.95	115.32
24	S3	464	HIS	CE1-NE2-CD2	-6.79	102.21	109.00
26	LA	953	G	P-O5'-C5'	6.79	131.08	120.90
26	LA	2676	C	P-O5'-C5'	-6.79	110.72	120.90
28	LU	6	LYS	N-CA-CB	6.79	121.71	110.85
2	SA	1215	G	P-O5'-C5'	6.79	131.08	120.90
12	SL	92	VAL	N-CA-C	6.79	117.80	108.84
19	SC	155	ARG	NE-CZ-NH2	-6.79	113.09	119.20
26	LA	463	G	C4'-C3'-C2'	-6.79	95.81	102.60
2	SA	1223	C	P-O3'-C3'	6.79	130.38	120.20
26	LA	1040	A	C1'-O4'-C4'	-6.79	103.11	109.90
26	LA	2258	C	C5'-C4'-C3'	6.79	125.38	115.20
2	SA	1168	U	P-O3'-C3'	6.78	130.38	120.20
26	LA	2551	C	O4'-C1'-N1	6.78	118.67	108.50
36	L2	39	LYS	O-C-N	-6.78	113.57	122.59
26	LA	2163	A	O5'-C5'-C4'	6.78	121.67	111.50
26	LA	2288	A	O4'-C1'-C2'	-6.78	99.02	105.80
2	SA	599	C	C4'-C3'-C2'	-6.78	95.82	102.60
26	LA	1118	C	O5'-C5'-C4'	-6.78	101.33	111.50
44	LF	106	LYS	O-C-N	6.78	129.31	122.12
26	LA	2186	G	C1'-O4'-C4'	-6.78	103.12	109.90
27	LD	30	ALA	N-CA-C	6.78	122.79	113.16
8	SH	124	ILE	O-C-N	-6.78	114.37	122.77
26	LA	134	G	P-O3'-C3'	-6.78	110.03	120.20
26	LA	2808	G	P-O5'-C5'	6.78	131.06	120.90
52	LO	91	TYR	CB-CG-CD2	6.78	130.97	120.80
56	LR	74	GLN	CB-CA-C	-6.78	99.05	109.89
26	LA	736	C	O4'-C1'-N1	6.78	118.66	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1541	C	P-O5'-C5'	6.78	131.06	120.90
26	LA	2213	U	O4'-C1'-N1	6.78	118.36	108.20
46	LH	152	ARG	NE-CZ-NH2	6.78	125.30	119.20
53	LP	122	ALA	N-CA-C	6.78	125.23	110.80
26	LA	370	G	O3'-P-O5'	6.77	114.16	104.00
26	LA	652	U	O5'-C5'-C4'	6.77	121.66	111.50
26	LA	1078	U	O4'-C1'-N1	6.77	118.66	108.50
25	LB	6	G	O4'-C1'-N9	6.77	118.66	108.50
26	LA	271	G	O3'-P-O5'	-6.77	93.84	104.00
26	LA	747	U	C5'-C4'-C3'	-6.77	105.84	116.00
26	LA	2275	C	C5'-C4'-C3'	6.77	126.16	116.00
26	LA	2426	A	C2'-C3'-O3'	6.77	119.66	109.50
26	LA	2519	U	O3'-P-O5'	-6.77	93.84	104.00
30	LW	34	ILE	O-C-N	-6.77	115.17	123.10
1	SS	32	THR	CA-C-O	6.77	127.76	120.38
25	LB	57	A	C2'-C3'-O3'	6.77	123.86	113.70
26	LA	889	C	O4'-C1'-N1	6.77	118.66	108.50
27	LD	114	GLN	CA-C-O	6.77	128.56	121.31
2	SA	221	C	C5'-C4'-C3'	-6.77	105.85	116.00
2	SA	759	A	P-O3'-C3'	6.77	130.35	120.20
2	SA	1224	U	C2'-C3'-O3'	6.77	119.65	109.50
18	SB	135	MET	O-C-N	-6.77	113.94	122.27
18	SB	137	THR	CA-C-O	6.77	127.94	120.63
26	LA	792	A	P-O5'-C5'	6.77	131.05	120.90
26	LA	988	A	C5'-C4'-C3'	6.77	126.15	116.00
34	L0	47	ARG	N-CA-C	-6.77	105.15	113.41
49	LK	72	THR	CA-C-N	6.77	127.35	120.38
49	LK	72	THR	C-N-CA	6.77	127.35	120.38
54	LM	10	VAL	CB-CA-C	6.77	119.03	111.45
21	SE	120	HIS	N-CA-C	6.77	118.74	111.36
26	LA	1100	C	O4'-C1'-N1	6.77	118.65	108.50
26	LA	1860	G	C5'-C4'-C3'	-6.77	105.85	116.00
26	LA	2274	A	O3'-P-O5'	-6.77	93.85	104.00
26	LA	2663	G	P-O5'-C5'	6.77	131.05	120.90
26	LA	1177	G	C3'-C2'-C1'	6.77	108.07	101.30
26	LA	1227	G	O5'-C5'-C4'	6.77	121.65	111.50
26	LA	1531	C	O4'-C1'-N1	6.77	118.65	108.50
26	LA	1949	G	O3'-P-O5'	6.76	114.15	104.00
47	LJ	61	ARG	CA-C-N	6.76	129.64	120.44
47	LJ	61	ARG	C-N-CA	6.76	129.64	120.44
2	SA	1351	U	P-O3'-C3'	6.76	130.34	120.20
11	SK	109	ILE	O-C-N	-6.76	114.12	122.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2631	G	P-O5'-C5'	-6.76	110.76	120.90
32	LY	11	ASN	OD1-CG-ND2	-6.76	115.84	122.60
2	SA	433	G	C1'-O4'-C4'	-6.76	103.14	109.90
20	SD	118	SER	N-CA-CB	6.76	120.06	110.12
26	LA	1940	U	C5'-C4'-C3'	-6.76	105.06	115.20
14	SN	61	ASN	OD1-CG-ND2	6.76	129.36	122.60
23	SR	2	ARG	NE-CZ-NH1	6.76	128.26	121.50
26	LA	257	C	O4'-C1'-N1	6.76	118.64	108.50
46	LH	141	GLY	CA-C-O	6.76	127.43	119.45
2	SA	141	G	C5'-C4'-C3'	-6.76	105.86	116.00
26	LA	2035	G	C5'-C4'-C3'	6.76	125.34	115.20
26	LA	2250	G	P-O5'-C5'	-6.76	110.76	120.90
26	LA	2610	C	O3'-P-O5'	-6.76	93.86	104.00
47	LJ	145	ALA	CA-C-N	6.76	129.23	120.44
47	LJ	145	ALA	C-N-CA	6.76	129.23	120.44
4	S2	18	U	O3'-P-O5'	-6.76	93.87	104.00
24	S3	263	VAL	CA-C-O	6.76	128.42	120.72
26	LA	385	C	P-O5'-C5'	-6.76	110.76	120.90
26	LA	1982	U	C1'-C2'-O2'	6.76	118.53	108.40
26	LA	2752	C	O3'-P-O5'	6.76	114.13	104.00
2	SA	115	G	P-O5'-C5'	-6.75	110.77	120.90
2	SA	980	C	C1'-O4'-C4'	-6.75	103.14	109.90
14	SN	8	ARG	NE-CZ-NH2	-6.75	113.12	119.20
14	SN	53	ASP	N-CA-C	6.75	119.50	111.33
26	LA	1265	A	C4'-C3'-C2'	6.75	109.36	102.60
26	LA	2441	U	C3'-C2'-C1'	6.75	108.06	101.30
2	SA	930	C	O4'-C1'-N1	6.75	118.63	108.50
24	S3	259	GLU	N-CA-CB	-6.75	101.92	110.90
26	LA	403	U	P-O5'-C5'	6.75	131.03	120.90
26	LA	1041	G	C5'-C4'-C3'	-6.75	105.87	116.00
26	LA	1260	A	C4'-C3'-C2'	-6.75	95.85	102.60
2	SA	159	G	N9-C1'-C2'	-6.75	101.87	112.00
26	LA	113	U	C5'-C4'-C3'	6.75	126.13	116.00
26	LA	895	U	C5'-C4'-C3'	-6.75	105.07	115.20
26	LA	985	C	O4'-C1'-N1	6.75	118.63	108.50
51	LI	135	HIS	O-C-N	-6.75	115.70	123.33
2	SA	323	U	P-O5'-C5'	6.75	131.03	120.90
23	SR	72	ARG	NE-CZ-NH2	-6.75	113.12	119.20
26	LA	881	G	P-O3'-C3'	6.75	130.33	120.20
26	LA	2618	G	P-O5'-C5'	6.75	131.03	120.90
2	SA	1134	G	C4'-C3'-C2'	-6.75	95.85	102.60
26	LA	1766	G	C5'-C4'-C3'	-6.75	105.88	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	139	U	C4'-C3'-C2'	-6.75	95.85	102.60
2	SA	1233	G	C1'-O4'-C4'	-6.75	103.16	109.90
26	LA	1059	G	C1'-O4'-C4'	-6.75	103.16	109.90
2	SA	1067	A	C5'-C4'-C3'	-6.74	105.08	115.20
2	SA	1193	G	O4'-C1'-N9	6.74	118.61	108.50
26	LA	2863	C	C3'-C2'-C1'	6.74	108.04	101.30
26	LA	349	U	C3'-C2'-C1'	-6.74	94.56	101.30
26	LA	612	G	C1'-O4'-C4'	-6.74	103.16	109.90
26	LA	1076	C	P-O5'-C5'	6.74	131.01	120.90
52	LO	78	LEU	N-CA-CB	6.74	120.01	109.83
2	SA	38	G	P-O3'-C3'	-6.74	110.09	120.20
2	SA	530	G	C4'-C3'-C2'	6.74	109.34	102.60
2	SA	698	G	C1'-O4'-C4'	-6.74	103.16	109.90
2	SA	949	A	O3'-P-O5'	6.74	114.11	104.00
22	SF	69	GLU	CB-CG-CD	6.74	124.06	112.60
50	LL	88	THR	N-CA-CB	6.74	119.87	110.17
50	LL	89	PHE	CA-CB-CG	-6.74	107.06	113.80
2	SA	267	C	O5'-C5'-C4'	6.74	121.61	111.50
2	SA	750	C	C5'-C4'-C3'	-6.74	105.90	116.00
10	SJ	70	HIS	ND1-CE1-NE2	6.74	115.14	108.40
26	LA	238	C	C1'-O4'-C4'	-6.74	103.17	109.90
26	LA	568	U	C5'-C4'-C3'	6.74	126.10	116.00
26	LA	1422	G	C5'-C4'-C3'	-6.74	105.90	116.00
26	LA	2166	U	C5'-C4'-C3'	-6.74	105.90	116.00
56	LR	11	GLN	CA-C-O	6.74	127.71	120.10
8	SH	85	TYR	CA-CB-CG	-6.73	101.78	113.90
26	LA	2022	U	P-O3'-C3'	-6.73	110.10	120.20
56	LR	51	ASN	CA-CB-CG	-6.73	105.87	112.60
58	LT	13	ARG	CD-NE-CZ	-6.73	114.97	124.40
2	SA	1026	G	P-O5'-C5'	6.73	131.00	120.90
14	SN	21	ALA	N-CA-C	6.73	118.28	111.07
26	LA	165	A	P-O5'-C5'	6.73	131.00	120.90
26	LA	2096	C	C3'-C2'-O2'	6.73	120.80	110.70
26	LA	2237	G	C5'-C4'-C3'	-6.73	105.90	116.00
37	LC	19	LYS	O-C-N	-6.73	114.80	122.68
50	LL	116	ARG	N-CA-C	6.73	118.70	111.36
2	SA	481	G	C4'-C3'-C2'	-6.73	95.87	102.60
2	SA	1166	G	C4'-C3'-C2'	6.73	109.33	102.60
3	S1	54	U	C4'-C3'-C2'	6.73	109.33	102.60
26	LA	1787	A	C3'-C2'-O2'	6.73	120.80	110.70
44	LF	27	LEU	CA-C-O	6.73	127.89	120.82
1	SS	54	ARG	NE-CZ-NH2	6.73	125.26	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	275	G	C5'-C4'-C3'	-6.73	105.91	116.00
26	LA	1074	G	C1'-O4'-C4'	-6.73	103.17	109.90
2	SA	182	A	C3'-C2'-O2'	-6.73	104.51	114.60
18	SB	18	GLN	CA-C-N	6.73	130.53	120.31
18	SB	18	GLN	C-N-CA	6.73	130.53	120.31
26	LA	2522	U	C4'-C3'-O3'	-6.73	102.91	113.00
26	LA	2569	G	C3'-C2'-C1'	6.73	108.03	101.30
58	LT	5	PHE	O-C-N	-6.73	115.03	123.17
26	LA	2717	C	C4'-C3'-C2'	-6.73	95.87	102.60
2	SA	903	G	O4'-C1'-C2'	-6.72	100.88	107.60
2	SA	1034	G	O4'-C1'-N9	6.72	118.59	108.50
2	SA	1089	G	C4'-C3'-C2'	-6.72	95.88	102.60
24	S3	417	ILE	CA-CB-CG2	-6.72	99.07	110.50
26	LA	2801	G	O4'-C1'-C2'	-6.72	100.88	107.60
50	LL	21	THR	OG1-CB-CG2	-6.72	95.85	109.30
2	SA	171	A	C4'-C3'-O3'	-6.72	102.92	113.00
2	SA	850	U	C5'-C4'-C3'	-6.72	105.92	116.00
2	SA	1254	A	P-O5'-C5'	6.72	130.99	120.90
26	LA	2159	G	P-O3'-C3'	6.72	130.28	120.20
57	LS	56	PHE	N-CA-C	6.72	118.61	111.28
46	LH	137	LYS	O-C-N	-6.72	114.36	122.22
55	LQ	61	GLN	OE1-CD-NE2	-6.72	115.88	122.60
26	LA	1778	U	P-O3'-C3'	-6.72	110.12	120.20
26	LA	2269	G	P-O5'-C5'	-6.72	110.82	120.90
32	LY	36	ILE	CA-C-N	6.72	134.06	121.97
32	LY	36	ILE	C-N-CA	6.72	134.06	121.97
8	SH	26	MET	N-CA-CB	6.72	117.58	111.27
21	SE	83	PRO	CA-C-O	-6.72	113.66	121.86
22	SF	78	PHE	N-CA-C	6.72	118.68	111.36
7	SG	129	ASN	N-CA-C	6.72	120.84	112.24
26	LA	273	G	P-O3'-C3'	6.72	130.27	120.20
26	LA	2140	G	C1'-O4'-C4'	-6.72	103.18	109.90
26	LA	2600	A	C4'-C3'-C2'	-6.72	95.88	102.60
58	LT	59	ILE	CA-C-N	6.72	131.10	121.50
58	LT	59	ILE	C-N-CA	6.72	131.10	121.50
18	SB	32	GLY	CA-C-N	6.71	129.95	120.28
18	SB	32	GLY	C-N-CA	6.71	129.95	120.28
52	LO	54	THR	N-CA-CB	6.71	119.99	110.12
2	SA	1109	C	C1'-C2'-O2'	6.71	118.47	108.40
26	LA	205	G	P-O5'-C5'	6.71	130.97	120.90
26	LA	1349	C	C2'-C3'-O3'	6.71	123.77	113.70
26	LA	1879	C	P-O5'-C5'	-6.71	110.83	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	467	U	C5'-C4'-C3'	6.71	126.07	116.00
2	SA	973	G	C4'-C3'-C2'	-6.71	95.89	102.60
2	SA	1451	U	C2'-C3'-O3'	6.71	119.57	109.50
2	SA	1471	U	C4'-C3'-C2'	-6.71	95.89	102.60
3	S1	50	U	O4'-C1'-C2'	6.71	114.31	107.60
19	SC	140	ALA	N-CA-C	6.71	118.39	111.14
26	LA	2162	G	C4'-C3'-C2'	-6.71	95.89	102.60
27	LD	149	LYS	N-CA-C	6.71	118.25	111.07
26	LA	2106	U	P-O3'-C3'	6.71	130.26	120.20
2	SA	689	C	C5'-C4'-C3'	6.71	126.06	116.00
7	SG	47	GLU	O-C-N	-6.71	114.50	122.15
20	SD	14	GLU	CA-C-O	6.71	127.70	119.79
26	LA	235	U	P-O3'-C3'	6.71	130.26	120.20
26	LA	931	U	O4'-C1'-N1	6.71	118.26	108.20
26	LA	2422	C	P-O5'-C5'	6.71	130.96	120.90
42	L6	16	THR	CA-CB-CG2	6.71	121.90	110.50
2	SA	1534	A	P-O3'-C3'	6.71	130.26	120.20
9	SI	74	GLN	OE1-CD-NE2	-6.71	115.89	122.60
17	SQ	21	VAL	N-CA-C	6.71	117.50	107.51
19	SC	35	ASP	N-CA-CB	-6.71	100.26	110.12
21	SE	35	LEU	O-C-N	-6.71	115.32	123.30
26	LA	1904	G	P-O5'-C5'	-6.71	110.84	120.90
26	LA	2279	G	C5'-C4'-C3'	6.71	126.06	116.00
52	LO	68	PHE	CA-CB-CG	-6.71	107.09	113.80
2	SA	370	C	P-O3'-C3'	-6.71	110.14	120.20
2	SA	434	U	C5'-C4'-C3'	-6.71	105.94	116.00
26	LA	1912	A	C4'-C3'-C2'	6.71	109.31	102.60
57	LS	71	ASN	CA-CB-CG	-6.71	105.89	112.60
2	SA	693	G	C5'-C4'-C3'	6.70	126.06	116.00
4	S2	32	G	C4'-C3'-C2'	-6.70	95.90	102.60
26	LA	1699	G	O4'-C1'-N9	6.70	118.25	108.20
38	LE	161	MET	CG-SD-CE	-6.70	86.16	100.90
49	LK	86	LYS	CA-C-N	6.70	134.34	121.54
49	LK	86	LYS	C-N-CA	6.70	134.34	121.54
2	SA	708	C	C2'-C3'-O3'	6.70	123.75	113.70
2	SA	1213	A	C1'-C2'-O2'	-6.70	101.75	111.80
26	LA	2330	G	P-O3'-C3'	-6.70	110.15	120.20
26	LA	2447	G	P-O3'-C3'	6.70	130.25	120.20
2	SA	1018	G	C4'-C3'-C2'	-6.70	95.90	102.60
26	LA	186	G	O4'-C1'-C2'	-6.70	100.90	107.60
38	LE	50	VAL	N-CA-CB	6.70	122.42	111.44
26	LA	1851	U	C4'-C3'-O3'	-6.70	102.96	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	SR	37	LYS	CA-C-N	6.69	129.47	120.50
23	SR	37	LYS	C-N-CA	6.69	129.47	120.50
26	LA	50	U	O4'-C1'-C2'	-6.69	99.11	105.80
26	LA	1238	G	O5'-C5'-C4'	6.69	121.54	111.50
26	LA	1973	G	C4'-C3'-C2'	-6.69	95.91	102.60
51	LI	82	SER	CA-C-O	6.69	128.97	121.40
2	SA	486	U	C4'-C3'-C2'	-6.69	95.91	102.60
2	SA	1453	G	P-O3'-C3'	6.69	130.24	120.20
4	S2	54	G	C5'-C4'-O4'	6.69	119.84	109.80
24	S3	336	ARG	NE-CZ-NH2	6.69	125.22	119.20
28	LU	45	VAL	CA-C-O	6.69	127.70	120.47
26	LA	2224	G	C4'-C3'-C2'	-6.69	95.91	102.60
26	LA	2280	G	O3'-P-O5'	6.69	114.04	104.00
2	SA	1217	C	C3'-C2'-C1'	6.69	107.99	101.30
26	LA	2036	C	P-O5'-C5'	-6.69	110.87	120.90
26	LA	2580	U	O4'-C4'-C3'	6.69	110.69	104.00
26	LA	512	G	C5'-C4'-O4'	-6.69	99.77	109.80
26	LA	556	A	O5'-C5'-C4'	6.69	121.53	111.50
26	LA	1637	A	O4'-C4'-C3'	6.69	110.69	104.00
26	LA	1853	A	O5'-C5'-C4'	6.69	121.53	111.50
26	LA	2544	G	C1'-O4'-C4'	-6.69	103.21	109.90
26	LA	2607	G	C1'-O4'-C4'	-6.69	103.21	109.90
27	LD	152	GLN	CB-CG-CD	-6.69	101.23	112.60
38	LE	70	LYS	CA-C-O	6.69	127.61	119.38
2	SA	923	A	C5'-C4'-C3'	-6.69	105.97	116.00
7	SG	34	LYS	N-CA-C	6.69	119.65	109.62
26	LA	728	G	C5'-C4'-C3'	-6.69	105.17	115.20
2	SA	1437	A	C5'-C4'-C3'	-6.68	105.97	116.00
24	S3	112	TYR	CA-CB-CG	-6.68	101.87	113.90
26	LA	1163	G	C5'-C4'-C3'	-6.68	105.97	116.00
26	LA	2481	G	O3'-P-O5'	-6.68	93.97	104.00
48	LN	118	THR	N-CA-C	6.68	114.24	108.22
2	SA	566	G	O4'-C1'-C2'	6.68	112.48	105.80
2	SA	948	C	C5'-C4'-C3'	-6.68	105.98	116.00
31	LX	4	ILE	CB-CA-C	-6.68	102.03	111.19
49	LK	36	GLU	N-CA-CB	6.68	119.94	110.12
2	SA	145	G	C5'-C4'-O4'	6.68	119.82	109.80
10	SJ	40	ILE	O-C-N	-6.68	113.48	121.10
26	LA	806	C	C4'-C3'-C2'	-6.68	95.92	102.60
26	LA	1467	U	C4'-C3'-O3'	-6.68	102.98	113.00
42	L6	3	ILE	N-CA-C	6.68	119.40	111.05
5	ST	9	ARG	NE-CZ-NH2	6.68	125.21	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	SB	22	TRP	CD2-CE2-CZ2	-6.68	115.72	122.40
19	SC	42	LEU	N-CA-C	6.68	118.35	111.14
26	LA	865	C	C5'-C4'-O4'	6.68	119.12	109.10
26	LA	1021	A	P-O3'-C3'	-6.68	110.18	120.20
26	LA	1901	A	P-O5'-C5'	-6.68	110.88	120.90
2	SA	937	A	C2'-C3'-O3'	6.68	123.71	113.70
2	SA	1419	G	C5'-C4'-C3'	6.68	126.01	116.00
13	SM	62	PHE	N-CA-C	6.68	119.87	109.52
25	LB	51	G	C5'-C4'-C3'	-6.68	105.98	116.00
26	LA	813	U	O3'-P-O5'	6.68	114.02	104.00
26	LA	1156	A	P-O5'-C5'	6.68	130.92	120.90
27	LD	50	THR	N-CA-C	-6.68	97.73	108.55
45	LG	96	TRP	N-CA-C	6.68	118.56	111.28
50	LL	91	GLU	N-CA-CB	6.68	119.75	110.07
26	LA	1324	G	P-O3'-C3'	-6.67	110.19	120.20
26	LA	2230	G	N9-C1'-C2'	6.67	122.01	112.00
2	SA	811	C	O4'-C1'-N1	6.67	118.51	108.50
7	SG	85	GLN	CA-C-O	6.67	128.33	120.66
26	LA	1209	U	O3'-P-O5'	6.67	114.01	104.00
21	SE	154	ALA	N-CA-C	6.67	120.23	109.02
26	LA	815	C	P-O5'-C5'	6.67	130.91	120.90
26	LA	896	A	C1'-O4'-C4'	-6.67	103.03	109.70
26	LA	1831	G	C4'-C3'-C2'	-6.67	95.93	102.60
26	LA	2223	G	C4'-C3'-C2'	-6.67	95.93	102.60
47	LJ	91	ALA	N-CA-C	6.67	119.40	111.33
2	SA	55	A	C5'-C4'-C3'	-6.67	106.00	116.00
2	SA	960	U	C4'-C3'-O3'	6.67	119.41	109.40
26	LA	163	C	O4'-C1'-N1	6.67	118.50	108.50
26	LA	1568	G	O4'-C4'-C3'	6.67	110.67	104.00
35	L1	46	MET	O-C-N	-6.67	114.55	122.15
26	LA	1128	G	O3'-P-O5'	-6.67	94.00	104.00
26	LA	2274	A	C1'-O4'-C4'	6.67	116.57	109.90
27	LD	110	LYS	CA-C-O	6.67	128.59	121.45
20	SD	103	ARG	NE-CZ-NH1	6.67	128.17	121.50
26	LA	1460	U	O5'-C5'-C4'	6.67	121.50	111.50
26	LA	1568	G	O4'-C1'-C2'	6.67	114.27	107.60
26	LA	2279	G	C4'-C3'-C2'	-6.67	95.93	102.60
37	LC	175	ILE	N-CA-C	-6.67	106.29	112.96
53	LP	31	HIS	CE1-NE2-CD2	-6.67	102.33	109.00
2	SA	765	G	C1'-O4'-C4'	6.67	116.56	109.90
26	LA	1382	G	O4'-C1'-N9	6.67	118.50	108.50
28	LU	2	GLU	N-CA-CB	6.67	121.49	110.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	418	C	C5'-C4'-C3'	6.66	126.00	116.00
2	SA	1303	C	O3'-P-O5'	-6.66	94.00	104.00
21	SE	125	LYS	CB-CA-C	-6.66	97.16	110.42
26	LA	2	G	P-O5'-C5'	6.66	130.89	120.90
26	LA	324	A	C1'-O4'-C4'	-6.66	103.24	109.90
26	LA	2072	C	O4'-C1'-N1	6.66	118.50	108.50
51	LI	138	VAL	CA-C-N	6.66	131.91	122.72
51	LI	138	VAL	C-N-CA	6.66	131.91	122.72
2	SA	290	C	C4'-C3'-O3'	-6.66	103.01	113.00
38	LE	52	THR	CA-C-N	6.66	130.32	122.19
38	LE	52	THR	C-N-CA	6.66	130.32	122.19
26	LA	376	G	C2'-C3'-O3'	6.66	123.69	113.70
26	LA	1123	C	N1-C1'-C2'	-6.66	102.01	112.00
26	LA	2289	G	P-O5'-C5'	6.66	130.89	120.90
38	LE	108	ASP	CA-C-O	-6.66	113.51	120.70
26	LA	482	A	C3'-C2'-C1'	6.66	107.96	101.30
26	LA	847	U	C3'-C2'-O2'	6.66	120.69	110.70
26	LA	953	G	P-O3'-C3'	-6.66	110.21	120.20
26	LA	2822	G	P-O3'-C3'	-6.66	110.21	120.20
48	LN	42	SER	N-CA-CB	6.66	119.88	109.69
2	SA	533	A	C5'-C4'-O4'	6.66	119.08	109.10
2	SA	220	G	C5'-C4'-O4'	6.66	119.78	109.80
20	SD	165	GLU	N-CA-C	6.66	120.36	109.24
26	LA	1868	C	C5'-C4'-C3'	-6.66	106.02	116.00
26	LA	2874	C	C1'-C2'-O2'	6.66	118.38	108.40
48	LN	4	ASN	CA-CB-CG	-6.66	105.94	112.60
26	LA	1714	U	C1'-C2'-O2'	6.65	118.38	108.40
26	LA	2425	A	C4'-C3'-C2'	-6.65	95.95	102.60
26	LA	1736	U	P-O5'-C5'	6.65	130.88	120.90
6	SU	16	ARG	NE-CZ-NH2	6.65	125.19	119.20
26	LA	389	G	C4'-C3'-O3'	6.65	122.98	113.00
26	LA	760	G	C4'-C3'-C2'	-6.65	95.95	102.60
26	LA	1166	G	O4'-C1'-C2'	6.65	114.25	107.60
26	LA	2197	U	O4'-C1'-C2'	6.65	112.45	105.80
26	LA	2198	A	P-O3'-C3'	6.65	130.18	120.20
2	SA	608	A	O4'-C1'-C2'	6.65	114.25	107.60
2	SA	943	U	C4'-C3'-O3'	-6.65	103.03	113.00
26	LA	2782	G	C5'-C4'-O4'	6.65	119.77	109.80
54	LM	33	ALA	N-CA-C	6.65	120.27	110.30
2	SA	247	G	C4'-C3'-O3'	-6.65	103.03	113.00
2	SA	1052	U	O4'-C4'-C3'	-6.65	97.35	104.00
17	SQ	67	SER	O-C-N	-6.65	116.64	123.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	SB	3	VAL	O-C-N	-6.65	115.16	121.87
19	SC	25	THR	N-CA-CB	6.65	121.73	110.49
26	LA	1493	C	O4'-C1'-N1	6.65	118.17	108.20
54	LM	86	LEU	N-CA-C	6.65	120.12	110.28
38	LE	39	ASP	O-C-N	-6.65	115.56	123.27
2	SA	12	U	O3'-P-O5'	-6.64	94.03	104.00
2	SA	171	A	P-O3'-C3'	6.64	130.17	120.20
2	SA	1009	U	P-O5'-C5'	-6.64	110.93	120.90
2	SA	1109	C	C1'-O4'-C4'	-6.64	103.26	109.90
8	SH	15	ASN	O-C-N	-6.64	114.58	122.15
29	LV	25	GLU	CB-CA-C	6.64	121.44	110.81
50	LL	46	PRO	N-CA-CB	-6.64	96.89	103.20
50	LL	67	ASN	OD1-CG-ND2	-6.64	115.95	122.60
58	LT	71	LYS	CA-C-O	6.64	128.29	120.58
2	SA	839	C	P-O5'-C5'	6.64	130.86	120.90
7	SG	142	ARG	CA-C-O	-6.64	112.87	120.24
26	LA	413	C	P-O5'-C5'	6.64	130.86	120.90
26	LA	705	A	C5'-C4'-C3'	-6.64	106.04	116.00
53	LP	27	SER	N-CA-C	6.64	119.35	111.71
2	SA	757	U	C3'-C2'-C1'	6.64	107.94	101.30
26	LA	644	A	C4'-C3'-C2'	-6.64	95.96	102.60
1	SS	6	LYS	CA-C-O	6.64	133.08	121.53
2	SA	368	U	C4'-C3'-O3'	-6.64	103.04	113.00
2	SA	1221	G	P-O3'-C3'	-6.64	110.24	120.20
26	LA	1097	U	P-O3'-C3'	6.64	130.16	120.20
26	LA	2212	A	O5'-C5'-C4'	-6.64	101.74	111.70
38	LE	207	VAL	CA-C-N	6.64	134.22	121.54
38	LE	207	VAL	C-N-CA	6.64	134.22	121.54
4	S2	40	C	C5'-C4'-C3'	-6.64	106.04	116.00
26	LA	2430	A	C4'-C3'-C2'	6.64	109.24	102.60
18	SB	79	VAL	N-CA-C	-6.64	104.02	110.72
25	LB	31	C	P-O5'-C5'	6.64	130.86	120.90
25	LB	91	C	P-O3'-C3'	6.64	130.15	120.20
26	LA	46	G	C1'-O4'-C4'	-6.64	103.26	109.90
58	LT	80	ARG	NH1-CZ-NH2	-6.64	110.67	119.30
2	SA	973	G	O3'-P-O5'	6.63	113.95	104.00
16	SP	9	HIS	CA-CB-CG	-6.63	107.17	113.80
26	LA	1392	A	C1'-O4'-C4'	-6.63	103.27	109.90
24	S3	226	ALA	CA-C-O	6.63	127.45	120.42
26	LA	1300	G	C3'-C2'-O2'	-6.63	104.65	114.60
26	LA	2851	A	C5'-C4'-C3'	6.63	125.95	116.00
2	SA	796	C	C1'-O4'-C4'	-6.63	103.27	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1491	G	C4'-C3'-C2'	6.63	109.23	102.60
26	LA	975	A	C5'-C4'-C3'	-6.63	106.05	116.00
26	LA	2160	C	P-O3'-C3'	6.63	130.15	120.20
26	LA	2511	U	C2'-C3'-O3'	6.63	123.65	113.70
2	SA	349	A	C3'-C2'-O2'	6.63	120.65	110.70
2	SA	538	G	P-O5'-C5'	6.63	130.85	120.90
26	LA	139	U	O4'-C1'-N1	6.63	118.45	108.50
26	LA	481	G	O4'-C1'-N9	6.63	118.14	108.20
26	LA	2225	A	P-O5'-C5'	6.63	130.84	120.90
2	SA	954	G	O5'-C5'-C4'	6.63	121.44	111.50
22	SF	44	ARG	NH1-CZ-NH2	-6.63	110.68	119.30
24	S3	566	ALA	O-C-N	-6.63	115.02	121.85
26	LA	100	U	O4'-C1'-C2'	-6.63	100.97	107.60
26	LA	532	A	C4'-C3'-C2'	-6.63	95.97	102.60
26	LA	1330	C	P-O5'-C5'	6.63	130.84	120.90
2	SA	194	C	P-O3'-C3'	-6.62	110.26	120.20
26	LA	1778	U	C2'-C3'-O3'	6.62	119.44	109.50
38	LE	22	ILE	CB-CA-C	-6.62	103.56	111.18
2	SA	738	C	P-O5'-C5'	6.62	130.84	120.90
26	LA	1890	A	P-O3'-C3'	-6.62	110.27	120.20
26	LA	2086	U	P-O5'-C5'	6.62	130.84	120.90
26	LA	2844	G	C5'-C4'-O4'	6.62	119.73	109.80
38	LE	68	PHE	CA-CB-CG	-6.62	107.18	113.80
2	SA	692	U	C4'-C3'-C2'	-6.62	95.98	102.60
26	LA	1379	U	O4'-C1'-N1	6.62	118.43	108.50
26	LA	1499	C	C5'-C4'-O4'	6.62	119.73	109.80
2	SA	521	G	C5'-C4'-C3'	6.62	125.93	116.00
26	LA	360	U	C4'-C3'-C2'	-6.62	95.98	102.60
26	LA	513	A	N9-C1'-C2'	6.62	121.93	112.00
26	LA	877	A	P-O3'-C3'	6.62	130.13	120.20
26	LA	892	A	C5'-C4'-C3'	6.62	125.93	116.00
17	SQ	1	THR	CA-C-N	6.62	134.18	121.54
17	SQ	1	THR	C-N-CA	6.62	134.18	121.54
26	LA	1019	U	P-O5'-C5'	6.62	130.83	120.90
41	L5	14	ARG	NE-CZ-NH2	6.62	125.16	119.20
2	SA	434	U	C4'-C3'-O3'	-6.62	103.08	113.00
2	SA	608	A	C3'-C2'-C1'	-6.62	94.69	101.30
2	SA	1515	G	O3'-P-O5'	-6.62	94.08	104.00
25	LB	109	A	O4'-C4'-C3'	-6.62	97.38	104.00
26	LA	2012	G	O4'-C1'-N9	6.62	118.42	108.50
26	LA	2427	C	O5'-C5'-C4'	6.62	121.42	111.50
58	LT	74	ILE	CB-CA-C	-6.62	100.84	110.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	178	C	C5'-C4'-O4'	6.61	119.72	109.80
2	SA	239	U	C5'-C4'-O4'	6.61	119.72	109.80
26	LA	2053	G	C5'-C4'-C3'	-6.61	106.08	116.00
2	SA	61	G	C5'-C4'-C3'	6.61	125.92	116.00
4	S2	46	G	O4'-C4'-C3'	6.61	110.61	104.00
26	LA	1187	G	O4'-C1'-C2'	6.61	114.21	107.60
26	LA	1419	A	C4'-C3'-C2'	6.61	109.21	102.60
7	SG	114	SER	CA-C-N	6.61	129.80	120.28
7	SG	114	SER	C-N-CA	6.61	129.80	120.28
26	LA	517	C	C5'-C4'-C3'	-6.61	106.09	116.00
41	L5	14	ARG	CB-CG-CD	6.61	126.50	111.30
4	S2	67	C	P-O3'-C3'	-6.61	110.29	120.20
25	LB	65	U	P-O3'-C3'	6.61	130.11	120.20
26	LA	282	A	P-O5'-C5'	-6.61	110.99	120.90
26	LA	1700	A	C4'-C3'-C2'	-6.61	95.99	102.60
37	LC	137	MET	CB-CA-C	6.61	118.93	110.34
38	LE	27	ILE	CA-C-O	6.61	126.94	120.27
38	LE	95	SER	CA-CB-OG	6.61	124.31	111.10
2	SA	970	C	P-O3'-C3'	-6.61	110.29	120.20
26	LA	131	A	O4'-C1'-C2'	-6.61	100.99	107.60
26	LA	2751	G	O3'-P-O5'	-6.61	94.09	104.00
47	LJ	6	ASP	N-CA-CB	6.61	119.83	110.12
24	S3	111	VAL	CA-C-N	6.60	132.85	122.94
24	S3	111	VAL	C-N-CA	6.60	132.85	122.94
26	LA	444	C	P-O5'-C5'	-6.60	110.99	120.90
26	LA	1845	G	C5'-C4'-C3'	6.60	125.91	116.00
20	SD	28	ASP	CA-CB-CG	-6.60	106.00	112.60
26	LA	998	C	C1'-O4'-C4'	-6.60	103.30	109.90
26	LA	2039	U	C4'-C3'-O3'	-6.60	103.10	113.00
35	L1	18	LYS	O-C-N	-6.60	115.12	122.12
26	LA	2666	C	C4'-C3'-C2'	-6.60	96.00	102.60
30	LW	95	PHE	CB-CA-C	-6.60	98.22	109.51
32	LY	67	LYS	O-C-N	-6.60	114.41	123.12
2	SA	448	A	O4'-C4'-C3'	-6.60	97.40	104.00
2	SA	1280	A	O4'-C1'-C2'	6.60	112.40	105.80
26	LA	2581	G	O4'-C1'-C2'	-6.60	101.00	107.60
48	LN	47	ARG	N-CA-CB	-6.60	100.82	110.26
24	S3	283	ASP	N-CA-CB	-6.60	100.41	109.98
26	LA	854	C	P-O5'-C5'	-6.60	111.00	120.90
26	LA	2251	U	P-O3'-C3'	-6.60	110.30	120.20
26	LA	2552	U	P-O5'-C5'	-6.60	111.00	120.90
26	LA	2464	G	C4'-C3'-C2'	-6.60	96.00	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	537	G	P-O5'-C5'	6.59	130.79	120.90
2	SA	987	G	C1'-O4'-C4'	-6.59	103.31	109.90
55	LQ	45	SER	O-C-N	-6.59	115.09	122.34
58	LT	12	HIS	CB-CA-C	-6.59	97.76	109.70
26	LA	2719	G	C4'-C3'-O3'	-6.59	103.11	113.00
47	LJ	35	ASP	O-C-N	-6.59	115.03	122.08
2	SA	1298	U	P-O5'-C5'	6.59	130.79	120.90
4	S2	57	C	C4'-C3'-C2'	6.59	109.19	102.60
9	SI	125	GLN	N-CA-CB	6.59	119.79	110.36
26	LA	1245	G	C5'-C4'-O4'	6.59	119.69	109.80
26	LA	1254	A	C1'-C2'-O2'	6.59	118.29	108.40
26	LA	2078	C	C4'-C3'-C2'	-6.59	96.01	102.60
2	SA	573	A	P-O3'-C3'	6.59	130.08	120.20
2	SA	1286	U	C2'-C3'-O3'	6.59	123.58	113.70
20	SD	17	ASP	N-CA-C	6.59	124.83	110.80
25	LB	75	G	P-O5'-C5'	6.59	130.78	120.90
26	LA	1966	A	O3'-P-O5'	6.59	113.88	104.00
29	LV	13	ALA	N-CA-C	6.59	114.15	108.22
45	LG	107	VAL	CB-CA-C	-6.59	107.37	114.35
4	S2	21	U	C2'-C3'-O3'	6.59	123.58	113.70
24	S3	364	GLN	CA-C-O	6.59	127.69	120.71
26	LA	2056	G	C4'-C3'-C2'	-6.59	96.01	102.60
26	LA	2210	U	P-O3'-C3'	-6.59	110.32	120.20
28	LU	7	HIS	CA-CB-CG	6.59	120.39	113.80
46	LH	30	GLY	CA-C-N	6.59	130.70	120.75
46	LH	30	GLY	C-N-CA	6.59	130.70	120.75
2	SA	607	A	C1'-C2'-O2'	6.59	118.28	108.40
21	SE	117	ALA	CA-C-O	6.59	127.48	119.31
26	LA	370	G	O4'-C1'-C2'	6.59	112.39	105.80
2	SA	595	A	O4'-C4'-C3'	-6.58	99.52	106.10
12	SL	3	VAL	CA-C-N	6.58	129.00	120.44
12	SL	3	VAL	C-N-CA	6.58	129.00	120.44
26	LA	1129	A	C5'-C4'-C3'	-6.58	106.12	116.00
26	LA	1245	G	P-O5'-C5'	-6.58	111.03	120.90
51	LI	55	GLU	N-CA-C	6.58	119.30	111.33
18	SB	10	LYS	N-CA-C	6.58	118.25	111.14
26	LA	1499	C	C5'-C4'-C3'	-6.58	106.13	116.00
26	LA	2779	U	O4'-C1'-N1	6.58	118.07	108.20
40	L4	45	HIS	ND1-CE1-NE2	6.58	114.98	108.40
2	SA	1	A	P-O3'-C3'	-6.58	110.33	120.20
21	SE	82	HIS	CE1-NE2-CD2	-6.58	102.42	109.00
26	LA	711	G	C4'-C3'-C2'	-6.58	96.02	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1097	U	O4'-C1'-N1	6.58	118.37	108.50
26	LA	1263	U	P-O3'-C3'	6.58	130.07	120.20
26	LA	2035	G	P-O5'-C5'	-6.58	111.03	120.90
26	LA	2837	A	C1'-O4'-C4'	-6.58	103.32	109.90
38	LE	149	ASN	OD1-CG-ND2	-6.58	116.02	122.60
26	LA	1273	U	P-O3'-C3'	-6.58	110.33	120.20
31	LX	73	LYS	N-CA-CB	6.58	122.27	110.83
2	SA	1004	A	C5'-C4'-C3'	-6.58	106.14	116.00
2	SA	1363	A	O4'-C1'-C2'	-6.58	99.22	105.80
26	LA	1688	U	P-O5'-C5'	6.58	130.76	120.90
2	SA	768	A	C4'-C3'-C2'	-6.57	96.03	102.60
4	S2	2	G	O4'-C1'-N9	6.57	118.36	108.50
22	SF	78	PHE	CB-CA-C	-6.57	99.67	110.85
34	L0	46	VAL	N-CA-CB	6.57	122.08	111.23
37	LC	182	ALA	CA-C-N	6.57	128.99	120.44
37	LC	182	ALA	C-N-CA	6.57	128.99	120.44
24	S3	160	ARG	CA-C-N	6.57	129.62	120.29
24	S3	160	ARG	C-N-CA	6.57	129.62	120.29
26	LA	2168	G	P-O5'-C5'	-6.57	111.04	120.90
44	LF	176	ASP	CA-CB-CG	6.57	119.17	112.60
4	S2	48	U	O3'-P-O5'	-6.57	94.14	104.00
26	LA	2226	C	O4'-C4'-C3'	6.57	110.57	104.00
1	SS	71	GLY	CA-C-N	6.57	129.08	120.28
1	SS	71	GLY	C-N-CA	6.57	129.08	120.28
24	S3	32	TYR	CA-C-N	6.57	129.08	120.28
24	S3	32	TYR	C-N-CA	6.57	129.08	120.28
57	LS	104	ALA	CA-C-O	6.57	127.38	120.42
11	SK	105	ARG	NE-CZ-NH2	6.57	125.11	119.20
24	S3	467	ILE	N-CA-C	6.57	119.26	111.05
26	LA	24	G	P-O5'-C5'	-6.57	111.05	120.90
34	L0	6	LEU	CA-C-O	6.57	127.79	120.70
2	SA	500	G	C4'-C3'-C2'	-6.57	96.03	102.60
2	SA	566	G	C5'-C4'-O4'	6.57	118.95	109.10
2	SA	1049	U	C5'-C4'-C3'	-6.57	105.35	115.20
24	S3	465	LEU	N-CA-CB	6.57	119.77	110.12
26	LA	1733	G	C3'-C2'-C1'	-6.57	94.73	101.30
26	LA	2502	G	O4'-C4'-C3'	-6.57	99.53	106.10
2	SA	71	A	P-O3'-C3'	-6.56	110.36	120.20
2	SA	509	A	C2'-C3'-O3'	6.56	119.35	109.50
30	LW	93	ARG	NE-CZ-NH1	6.56	128.06	121.50
26	LA	95	A	O4'-C4'-C3'	6.56	110.56	104.00
26	LA	1816	C	O3'-P-O5'	6.56	113.84	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	LG	175	PRO	N-CA-C	6.56	121.52	111.15
25	LB	106	G	C1'-C2'-O2'	6.56	118.24	108.40
26	LA	418	C	P-O3'-C3'	6.56	130.04	120.20
9	SI	33	SER	O-C-N	-6.56	115.97	122.99
21	SE	51	LYS	CG-CD-CE	6.56	126.39	111.30
26	LA	159	G	O4'-C4'-C3'	6.56	110.56	104.00
26	LA	386	G	O4'-C4'-C3'	-6.56	99.54	106.10
1	SS	19	GLU	N-CA-C	6.56	119.25	111.71
2	SA	843	U	N1-C1'-C2'	6.56	121.84	112.00
7	SG	134	VAL	N-CA-C	6.56	116.72	110.42
24	S3	75	ALA	CA-C-N	6.56	134.06	121.54
24	S3	75	ALA	C-N-CA	6.56	134.06	121.54
26	LA	131	A	O4'-C4'-C3'	-6.56	97.44	104.00
26	LA	2584	U	O4'-C1'-N1	6.56	118.34	108.50
2	SA	713	G	O4'-C1'-C2'	-6.56	101.04	107.60
26	LA	2502	G	P-O3'-C3'	6.56	130.03	120.20
2	SA	1033	G	C4'-C3'-C2'	-6.55	96.05	102.60
26	LA	893	C	C1'-O4'-C4'	-6.55	103.34	109.90
26	LA	2282	G	P-O3'-C3'	6.55	130.03	120.20
2	SA	1044	A	C4'-C3'-C2'	-6.55	96.05	102.60
26	LA	2784	U	C4'-C3'-O3'	-6.55	103.17	113.00
2	SA	691	G	P-O5'-C5'	6.55	130.73	120.90
26	LA	555	G	O5'-C5'-C4'	-6.55	101.67	111.50
26	LA	1164	C	O4'-C1'-N1	6.55	118.33	108.50
26	LA	1842	G	C4'-C3'-O3'	-6.55	103.17	113.00
26	LA	2172	U	P-O5'-C5'	6.55	130.73	120.90
3	S1	58	C	C2'-C3'-O3'	6.55	119.33	109.50
15	SO	41	HIS	CA-C-O	6.55	127.70	120.82
18	SB	4	SER	CB-CA-C	-6.55	99.92	110.79
26	LA	2755	C	C1'-O4'-C4'	-6.55	103.15	109.70
37	LC	41	SER	CB-CA-C	-6.55	98.99	109.80
2	SA	352	C	O5'-C5'-C4'	6.55	121.32	111.50
2	SA	422	C	O4'-C1'-C2'	-6.55	99.25	105.80
26	LA	373	U	O4'-C4'-C3'	6.55	110.55	104.00
26	LA	2076	U	P-O5'-C5'	-6.55	111.08	120.90
2	SA	99	C	C2'-C3'-O3'	6.55	123.52	113.70
2	SA	526	C	P-O3'-C3'	6.55	130.02	120.20
18	SB	59	ILE	N-CA-C	6.55	121.20	112.04
26	LA	986	C	O4'-C1'-N1	6.55	118.32	108.50
26	LA	1775	U	C4'-C3'-C2'	-6.55	96.05	102.60
26	LA	2475	C	O4'-C1'-C2'	6.55	114.15	107.60
52	LO	56	ALA	CA-C-N	-6.55	110.67	120.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	LO	56	ALA	C-N-CA	-6.55	110.67	120.82
2	SA	88	U	P-O5'-C5'	6.54	130.72	120.90
10	SJ	5	ARG	CB-CG-CD	6.54	126.35	111.30
3	S1	32	U	O5'-C5'-C4'	6.54	121.32	111.50
26	LA	1055	G	C5'-C4'-C3'	6.54	125.81	116.00
26	LA	1657	U	O3'-P-O5'	-6.54	94.18	104.00
26	LA	2628	C	C4'-C3'-C2'	-6.54	96.06	102.60
26	LA	2697	G	C4'-C3'-C2'	-6.54	96.06	102.60
47	LJ	75	PHE	CA-C-N	6.54	133.75	121.97
47	LJ	75	PHE	C-N-CA	6.54	133.75	121.97
2	SA	860	A	P-O3'-C3'	-6.54	110.39	120.20
2	SA	1278	G	C2'-C3'-O3'	6.54	119.31	109.50
8	SH	97	GLY	CA-C-O	6.54	128.08	119.58
26	LA	152	A	C4'-C3'-O3'	-6.54	103.19	113.00
26	LA	751	A	P-O5'-C5'	-6.54	111.09	120.90
26	LA	990	A	O3'-P-O5'	-6.54	94.19	104.00
26	LA	1331	G	C5'-C4'-C3'	-6.54	106.19	116.00
54	LM	94	PRO	N-CA-C	6.54	125.94	112.47
7	SG	101	ARG	CB-CA-C	-6.54	100.61	110.88
24	S3	196	ASP	CA-CB-CG	6.54	119.14	112.60
25	LB	60	C	O4'-C1'-N1	6.54	118.31	108.50
26	LA	2867	G	O3'-P-O5'	6.54	113.81	104.00
37	LC	142	VAL	O-C-N	-6.54	115.80	122.14
20	SD	85	THR	CA-C-N	-6.54	112.81	120.00
20	SD	85	THR	C-N-CA	-6.54	112.81	120.00
26	LA	775	G	O3'-P-O5'	6.54	113.81	104.00
45	LG	133	GLU	O-C-N	-6.54	115.69	123.27
2	SA	95	C	C4'-C3'-C2'	-6.54	96.06	102.60
2	SA	563	A	O4'-C4'-C3'	-6.54	97.46	104.00
26	LA	480	A	C4'-C3'-C2'	-6.54	96.06	102.60
37	LC	73	VAL	CA-C-N	6.54	130.04	120.82
37	LC	73	VAL	C-N-CA	6.54	130.04	120.82
49	LK	37	PHE	O-C-N	-6.54	115.19	122.12
2	SA	980	C	C4'-C3'-O3'	-6.54	103.20	113.00
4	S2	22	A	C2'-C3'-O3'	6.54	119.30	109.50
26	LA	823	C	C5'-C4'-O4'	6.54	119.60	109.80
26	LA	861	A	O4'-C1'-N9	6.54	118.30	108.50
42	L6	57	VAL	CA-C-N	6.54	130.80	120.47
42	L6	57	VAL	C-N-CA	6.54	130.80	120.47
2	SA	890	G	C1'-O4'-C4'	-6.53	103.17	109.70
2	SA	1320	C	O3'-P-O5'	6.53	113.80	104.00
4	S2	26	C	C5'-C4'-C3'	-6.53	106.20	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	SE	92	ARG	N-CA-C	6.53	119.06	108.41
24	S3	281	VAL	CA-C-N	6.53	129.74	120.53
24	S3	281	VAL	C-N-CA	6.53	129.74	120.53
24	S3	689	ALA	CA-C-O	-6.53	114.11	120.19
26	LA	752	A	C3'-C2'-O2'	-6.53	104.80	114.60
26	LA	1054	A	P-O3'-C3'	-6.53	110.40	120.20
26	LA	1095	A	O4'-C1'-C2'	-6.53	99.27	105.80
29	LV	77	ARG	N-CA-CB	6.53	119.77	109.71
44	LF	145	ASP	N-CA-CB	6.53	121.53	110.49
26	LA	2325	G	C1'-O4'-C4'	-6.53	103.37	109.90
2	SA	332	G	O3'-P-O5'	-6.53	94.20	104.00
9	SI	99	LYS	O-C-N	-6.53	114.24	122.27
14	SN	4	SER	N-CA-C	6.53	118.40	111.28
15	SO	79	ARG	CA-C-O	6.53	127.68	120.82
25	LB	109	A	P-O5'-C5'	-6.53	111.10	120.90
26	LA	753	A	C5'-C4'-C3'	-6.53	106.20	116.00
26	LA	1546	G	P-O3'-C3'	-6.53	110.41	120.20
26	LA	2451	A	O4'-C1'-C2'	6.53	112.33	105.80
2	SA	121	U	C3'-C2'-C1'	-6.53	94.77	101.30
26	LA	692	C	O3'-P-O5'	-6.53	94.21	104.00
26	LA	943	A	P-O3'-C3'	-6.53	110.41	120.20
26	LA	2786	U	C4'-C3'-C2'	-6.53	96.07	102.60
55	LQ	100	HIS	N-CA-C	6.53	119.25	108.48
4	S2	39	A	P-O5'-C5'	6.53	130.69	120.90
19	SC	128	MET	N-CA-C	6.53	124.70	110.80
26	LA	277	G	P-O5'-C5'	6.53	130.69	120.90
26	LA	776	G	C4'-C3'-C2'	-6.53	96.07	102.60
26	LA	1402	U	O3'-P-O5'	6.53	113.79	104.00
26	LA	1680	U	C5'-C4'-C3'	6.53	125.79	116.00
26	LA	2063	C	O4'-C4'-C3'	6.53	110.53	104.00
27	LD	267	VAL	O-C-N	-6.53	114.48	122.18
42	L6	41	ARG	NE-CZ-NH2	6.53	125.07	119.20
49	LK	72	THR	CA-CB-OG1	6.53	119.39	109.60
7	SG	25	PHE	CA-CB-CG	-6.53	107.27	113.80
24	S3	654	HIS	ND1-CE1-NE2	6.53	114.92	108.40
26	LA	1070	A	O3'-P-O5'	-6.53	94.21	104.00
26	LA	2010	G	C4'-C3'-C2'	-6.53	96.08	102.60
33	LZ	56	ARG	O-C-N	-6.53	114.24	122.27
16	SP	14	ARG	O-C-N	-6.52	115.10	121.17
26	LA	1664	A	C5'-C4'-C3'	-6.52	106.22	116.00
2	SA	210	C	C4'-C3'-C2'	-6.52	96.08	102.60
2	SA	1395	C	C5'-C4'-O4'	6.52	119.58	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	S2	71	G	C1'-C2'-O2'	6.52	118.18	108.40
4	S2	73	A	C3'-C2'-C1'	-6.52	94.78	101.30
18	SB	12	GLY	O-C-N	-6.52	115.17	122.28
26	LA	429	A	O5'-C5'-C4'	6.52	121.28	111.50
26	LA	1087	G	O4'-C4'-C3'	6.52	110.52	104.00
26	LA	2018	G	O4'-C1'-N9	6.52	118.28	108.50
19	SC	101	ASN	CA-CB-CG	-6.52	106.08	112.60
26	LA	1476	U	P-O3'-C3'	-6.52	110.42	120.20
26	LA	2067	G	C5'-C4'-O4'	6.52	118.88	109.10
2	SA	746	A	C4'-C3'-C2'	-6.52	96.08	102.60
2	SA	847	G	P-O5'-C5'	-6.52	111.12	120.90
7	SG	77	ARG	CA-C-N	6.52	133.99	121.54
7	SG	77	ARG	C-N-CA	6.52	133.99	121.54
26	LA	2437	G	C5'-C4'-O4'	6.52	119.58	109.80
12	SL	4	ASN	OD1-CG-ND2	-6.52	116.08	122.60
19	SC	87	ARG	NE-CZ-NH2	-6.52	113.33	119.20
24	S3	316	PHE	N-CA-C	6.52	119.43	110.24
26	LA	456	C	O4'-C4'-C3'	-6.52	99.58	106.10
26	LA	822	G	O4'-C4'-C3'	-6.52	97.48	104.00
26	LA	1929	G	O4'-C1'-N9	6.52	117.98	108.20
2	SA	841	C	C1'-O4'-C4'	-6.52	103.18	109.70
2	SA	1198	G	C1'-O4'-C4'	-6.52	103.38	109.90
10	SJ	72	ARG	O-C-N	-6.52	114.69	123.10
26	LA	231	A	P-O3'-C3'	6.52	129.97	120.20
37	LC	172	HIS	CB-CG-CD2	-6.52	122.73	131.20
2	SA	609	A	N9-C1'-C2'	-6.51	104.23	114.00
2	SA	1222	G	O4'-C4'-C3'	-6.51	97.48	104.00
24	S3	222	ILE	O-C-N	-6.51	115.12	121.83
24	S3	367	ALA	O-C-N	-6.51	113.93	122.59
26	LA	72	U	C4'-C3'-C2'	6.51	109.11	102.60
26	LA	1483	G	N9-C1'-C2'	-6.51	102.23	112.00
26	LA	1843	C	O5'-C5'-C4'	-6.51	101.73	111.50
26	LA	1859	U	P-O5'-C5'	6.51	130.67	120.90
26	LA	1934	C	P-O3'-C3'	6.51	129.97	120.20
26	LA	1996	C	C4'-C3'-C2'	-6.51	96.09	102.60
22	SF	84	VAL	N-CA-C	6.51	122.89	109.34
26	LA	903	C	P-O5'-C5'	6.51	130.67	120.90
26	LA	2386	A	C3'-C2'-C1'	6.51	107.81	101.30
37	LC	22	ASP	CA-C-N	6.51	128.77	120.56
37	LC	22	ASP	C-N-CA	6.51	128.77	120.56
2	SA	10	A	C4'-C3'-C2'	-6.51	96.09	102.60
2	SA	307	C	O3'-P-O5'	-6.51	94.23	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1219	A	O4'-C4'-C3'	6.51	110.51	104.00
2	SA	1327	C	O4'-C1'-N1	6.51	118.27	108.50
26	LA	37	C	P-O3'-C3'	6.51	129.97	120.20
26	LA	180	G	C5'-C4'-C3'	6.51	125.77	116.00
26	LA	1204	A	P-O5'-C5'	-6.51	111.13	120.90
26	LA	1574	C	O3'-P-O5'	-6.51	94.23	104.00
44	LF	47	LYS	N-CA-CB	6.51	119.66	109.83
3	S1	22	G	C2'-C3'-O3'	6.51	119.27	109.50
2	SA	341	C	C5'-C4'-C3'	-6.51	106.24	116.00
26	LA	513	A	C4'-C3'-C2'	-6.51	96.09	102.60
26	LA	1708	C	P-O5'-C5'	6.51	130.66	120.90
2	SA	946	A	C4'-C3'-O3'	-6.51	103.24	113.00
24	S3	51	TRP	CE2-CD2-CE3	6.51	125.31	118.80
26	LA	1154	G	P-O5'-C5'	-6.51	111.14	120.90
26	LA	1827	U	C4'-C3'-C2'	-6.51	96.09	102.60
2	SA	551	U	P-O5'-C5'	6.50	130.66	120.90
57	LS	30	VAL	N-CA-CB	-6.50	103.26	111.46
15	SO	20	ASP	CA-C-N	6.50	133.96	121.54
15	SO	20	ASP	C-N-CA	6.50	133.96	121.54
26	LA	437	U	C4'-C3'-C2'	-6.50	96.10	102.60
26	LA	2316	G	C3'-C2'-C1'	-6.50	94.80	101.30
45	LG	139	GLU	CA-C-N	6.50	133.68	121.97
45	LG	139	GLU	C-N-CA	6.50	133.68	121.97
24	S3	169	GLN	CA-C-N	6.50	133.02	122.29
24	S3	169	GLN	C-N-CA	6.50	133.02	122.29
24	S3	209	ASP	CA-C-O	6.50	126.56	118.43
26	LA	867	C	C4'-C3'-O3'	-6.50	103.25	113.00
26	LA	1190	G	O3'-P-O5'	6.50	113.75	104.00
26	LA	2043	C	O3'-P-O5'	-6.50	94.25	104.00
26	LA	2463	C	O3'-P-O5'	6.50	113.75	104.00
45	LG	49	LEU	CA-C-O	6.50	127.44	119.97
2	SA	1018	G	O4'-C4'-C3'	6.50	110.50	104.00
2	SA	1420	U	C5'-C4'-O4'	6.50	119.55	109.80
5	ST	36	ALA	N-CA-CB	-6.50	100.29	110.30
26	LA	116	C	C4'-C3'-C2'	-6.50	96.10	102.60
26	LA	2480	C	O4'-C1'-N1	6.50	118.25	108.50
41	L5	34	ARG	NE-CZ-NH2	6.50	125.05	119.20
2	SA	1159	U	P-O5'-C5'	6.50	130.64	120.90
26	LA	1123	C	O4'-C1'-N1	6.50	118.25	108.50
26	LA	1541	C	O4'-C4'-C3'	-6.50	97.50	104.00
26	LA	2002	G	C4'-C3'-C2'	-6.50	96.10	102.60
26	LA	2475	C	O3'-P-O5'	6.50	113.74	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2727	A	C5'-C4'-O4'	6.50	119.54	109.80
38	LE	149	ASN	N-CA-C	6.50	118.91	111.11
24	S3	510	GLY	CA-C-N	6.50	128.88	120.44
24	S3	510	GLY	C-N-CA	6.50	128.88	120.44
26	LA	2874	C	C4'-C3'-O3'	-6.50	103.26	113.00
54	LM	96	GLY	CA-C-O	-6.50	115.73	121.58
2	SA	1133	G	O3'-P-O5'	-6.49	94.26	104.00
9	SI	18	VAL	CB-CA-C	-6.49	100.64	111.29
18	SB	186	VAL	N-CA-C	-6.49	99.11	108.53
28	LU	65	ASP	CB-CA-C	6.49	123.34	110.42
29	LV	69	ARG	N-CA-C	6.49	119.18	110.35
46	LH	151	ARG	N-CA-CB	6.49	121.46	110.49
54	LM	120	PRO	N-CA-C	6.49	121.14	110.55
22	SF	45	ARG	CA-C-N	6.49	130.78	121.50
22	SF	45	ARG	C-N-CA	6.49	130.78	121.50
26	LA	735	A	C5'-C4'-O4'	6.49	119.53	109.80
26	LA	1941	C	O5'-C5'-C4'	6.49	121.24	111.50
26	LA	2488	G	P-O5'-C5'	-6.49	111.17	120.90
39	L3	15	ARG	NE-CZ-NH2	6.49	125.04	119.20
40	L4	43	ARG	N-CA-C	6.49	120.04	111.28
55	LQ	29	HIS	CE1-NE2-CD2	-6.49	102.51	109.00
2	SA	270	A	P-O3'-C3'	-6.49	110.47	120.20
2	SA	412	A	P-O5'-C5'	6.49	130.63	120.90
26	LA	919	U	C2'-C3'-O3'	6.49	123.43	113.70
2	SA	1139	G	C1'-O4'-C4'	-6.49	103.21	109.70
2	SA	1369	C	O4'-C1'-N1	6.49	118.23	108.50
6	SU	12	ASP	CA-CB-CG	6.49	119.09	112.60
10	SJ	54	SER	CA-C-N	6.49	127.05	120.04
10	SJ	54	SER	C-N-CA	6.49	127.05	120.04
16	SP	79	ASN	CA-C-O	-6.49	114.31	121.84
24	S3	311	SER	CA-C-N	6.49	128.97	120.28
24	S3	311	SER	C-N-CA	6.49	128.97	120.28
26	LA	1914	C	P-O5'-C5'	-6.49	111.17	120.90
21	SE	42	ASN	CA-CB-CG	6.49	119.08	112.60
26	LA	260	G	C1'-C2'-O2'	6.49	118.13	108.40
26	LA	2803	G	C2'-C3'-O3'	6.49	123.43	113.70
44	LF	130	LYS	CA-C-N	6.49	128.97	120.28
44	LF	130	LYS	C-N-CA	6.49	128.97	120.28
45	LG	152	ASP	CA-C-N	6.49	129.72	122.59
45	LG	152	ASP	C-N-CA	6.49	129.72	122.59
2	SA	1158	C	O4'-C4'-C3'	-6.48	97.52	104.00
2	SA	1359	C	P-O3'-C3'	-6.48	110.47	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	295	G	C5'-C4'-C3'	-6.48	106.27	116.00
26	LA	356	G	P-O5'-C5'	-6.48	111.17	120.90
26	LA	2755	C	C2'-C3'-O3'	6.48	119.22	109.50
2	SA	323	U	C4'-C3'-C2'	-6.48	96.12	102.60
48	LN	107	PHE	O-C-N	-6.48	114.72	122.63
50	LL	33	ALA	N-CA-CB	-6.48	100.59	110.12
2	SA	1224	U	P-O3'-C3'	6.48	129.92	120.20
12	SL	95	HIS	CE1-NE2-CD2	-6.48	102.52	109.00
26	LA	442	G	C5'-C4'-C3'	-6.48	105.48	115.20
50	LL	102	GLU	O-C-N	-6.48	115.40	122.07
2	SA	1023	U	C5'-C4'-C3'	-6.48	106.28	116.00
2	SA	1050	G	C5'-C4'-C3'	6.48	125.72	116.00
2	SA	1427	C	C2'-C3'-O3'	6.48	123.42	113.70
19	SC	119	ILE	O-C-N	-6.48	115.16	121.90
2	SA	114	U	O5'-C5'-C4'	-6.48	101.78	111.50
2	SA	1321	U	C5'-C4'-C3'	6.48	125.72	116.00
26	LA	1153	C	C5'-C4'-C3'	-6.48	106.28	116.00
26	LA	2021	C	C1'-O4'-C4'	-6.48	103.22	109.70
19	SC	45	GLU	CB-CG-CD	6.48	123.61	112.60
40	L4	25	ASN	CA-CB-CG	-6.48	106.12	112.60
26	LA	210	C	P-O5'-C5'	6.47	130.61	120.90
26	LA	574	A	O4'-C1'-C2'	-6.47	101.13	107.60
26	LA	826	U	C1'-O4'-C4'	-6.47	103.42	109.90
26	LA	2155	U	C4'-C3'-C2'	-6.47	96.13	102.60
26	LA	2575	C	C5'-C4'-O4'	6.47	118.81	109.10
38	LE	145	SER	N-CA-C	-6.47	97.72	108.34
47	LJ	95	PHE	CA-CB-CG	-6.47	107.33	113.80
48	LN	94	THR	CA-C-O	6.47	127.41	119.97
26	LA	2128	G	O4'-C4'-C3'	6.47	110.47	104.00
26	LA	2298	A	C5'-C4'-O4'	6.47	119.51	109.80
26	LA	2450	A	N9-C1'-C2'	6.47	121.71	112.00
38	LE	23	PRO	N-CA-CB	6.47	109.07	103.31
45	LG	67	THR	O-C-N	-6.47	115.65	122.96
12	SL	74	GLN	N-CA-CB	6.47	121.42	110.49
24	S3	344	SER	CB-CA-C	-6.47	97.55	110.42
26	LA	1106	G	C5'-C4'-C3'	-6.47	106.30	116.00
46	LH	89	VAL	N-CA-C	-6.47	99.05	108.11
51	LI	32	PRO	CB-CA-C	-6.47	102.18	111.62
52	LO	103	TYR	O-C-N	-6.47	115.50	123.33
2	SA	655	A	C4'-C3'-C2'	-6.47	96.13	102.60
26	LA	2501	C	O4'-C1'-N1	6.47	118.20	108.50
2	SA	209	U	C2'-C3'-O3'	6.47	119.20	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1504	G	C4'-C3'-C2'	-6.47	96.13	102.60
10	SJ	5	ARG	O-C-N	-6.47	112.76	122.20
26	LA	245	G	C4'-C3'-C2'	-6.47	96.13	102.60
26	LA	356	G	P-O3'-C3'	-6.47	110.50	120.20
26	LA	430	A	C2'-C3'-O3'	6.47	123.40	113.70
26	LA	455	C	C4'-C3'-C2'	-6.47	96.13	102.60
26	LA	1012	U	O5'-C5'-C4'	6.47	121.40	111.70
26	LA	1903	G	O4'-C1'-N9	6.47	118.20	108.50
26	LA	2064	C	C1'-O4'-C4'	-6.47	103.43	109.90
26	LA	2521	C	O4'-C1'-N1	6.47	118.20	108.50
2	SA	78	A	P-O5'-C5'	6.46	130.60	120.90
26	LA	125	A	O4'-C4'-C3'	6.46	112.56	106.10
26	LA	1741	C	C5'-C4'-C3'	-6.46	106.30	116.00
2	SA	387	U	O4'-C4'-C3'	-6.46	97.54	104.00
14	SN	33	VAL	N-CA-C	6.46	117.99	110.62
26	LA	505	A	O4'-C1'-C2'	6.46	114.06	107.60
26	LA	1352	U	C4'-C3'-C2'	-6.46	96.14	102.60
56	LR	69	VAL	N-CA-C	6.46	122.78	109.34
18	SB	212	TYR	CA-C-N	-6.46	111.65	120.44
18	SB	212	TYR	C-N-CA	-6.46	111.65	120.44
19	SC	118	SER	CA-C-N	6.46	128.83	120.56
19	SC	118	SER	C-N-CA	6.46	128.83	120.56
26	LA	1128	G	O4'-C1'-N9	6.46	117.89	108.20
26	LA	2242	G	O3'-P-O5'	-6.46	94.31	104.00
26	LA	2406	A	C4'-C3'-C2'	6.46	109.06	102.60
26	LA	2559	C	P-O3'-C3'	6.46	129.89	120.20
56	LR	25	VAL	O-C-N	-6.46	114.49	122.57
2	SA	441	A	C5'-C4'-O4'	6.46	119.49	109.80
26	LA	2574	G	O4'-C1'-C2'	-6.46	101.14	107.60
2	SA	262	A	O4'-C4'-C3'	6.46	110.46	104.00
2	SA	552	U	O4'-C1'-C2'	6.46	114.06	107.60
2	SA	1364	U	O3'-P-O5'	6.46	113.69	104.00
20	SD	31	CYS	CB-CA-C	-6.46	99.60	110.19
26	LA	119	A	C3'-C2'-C1'	6.46	107.96	101.50
26	LA	362	A	C4'-C3'-C2'	6.46	109.06	102.60
26	LA	971	G	P-O5'-C5'	6.46	130.59	120.90
26	LA	1152	C	C4'-C3'-O3'	-6.46	103.31	113.00
26	LA	2043	C	P-O3'-C3'	6.46	129.89	120.20
2	SA	124	C	C5'-C4'-O4'	6.46	119.49	109.80
3	S1	51	C	P-O5'-C5'	6.46	130.58	120.90
9	SI	28	VAL	N-CA-CB	6.46	120.03	111.64
26	LA	548	G	C3'-C2'-C1'	-6.46	95.04	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1723	G	C2'-C3'-O3'	6.46	123.39	113.70
2	SA	678	U	C5'-C4'-C3'	6.46	125.68	116.00
26	LA	1652	A	C5'-C4'-C3'	-6.46	106.32	116.00
26	LA	2168	G	C4'-C3'-O3'	-6.46	103.32	113.00
26	LA	2254	C	C5'-C4'-O4'	6.46	119.48	109.80
27	LD	255	LYS	N-CA-C	-6.46	101.57	110.35
46	LH	56	GLY	CA-C-N	6.46	129.17	120.65
46	LH	56	GLY	C-N-CA	6.46	129.17	120.65
51	LI	123	ARG	NH1-CZ-NH2	-6.46	110.91	119.30
19	SC	214	GLU	CA-C-N	6.45	129.32	120.67
19	SC	214	GLU	C-N-CA	6.45	129.32	120.67
26	LA	2375	G	C4'-C3'-C2'	-6.45	96.15	102.60
2	SA	849	G	C5'-C4'-C3'	6.45	125.68	116.00
26	LA	418	C	C5'-C4'-C3'	-6.45	106.32	116.00
26	LA	1054	A	P-O5'-C5'	-6.45	111.22	120.90
27	LD	120	ASP	CA-CB-CG	6.45	119.05	112.60
2	SA	173	U	P-O3'-C3'	6.45	129.88	120.20
2	SA	242	G	C3'-C2'-C1'	-6.45	94.85	101.30
2	SA	701	U	C4'-C3'-C2'	-6.45	96.15	102.60
2	SA	1423	G	C4'-C3'-C2'	-6.45	96.15	102.60
16	SP	48	GLU	CA-C-O	6.45	128.31	120.57
24	S3	467	ILE	CB-CA-C	6.45	122.16	112.16
26	LA	1073	A	C4'-C3'-O3'	-6.45	103.32	113.00
26	LA	1088	A	P-O5'-C5'	6.45	130.58	120.90
26	LA	1511	G	O4'-C1'-N9	6.45	118.18	108.50
52	LO	96	ILE	O-C-N	-6.45	116.09	122.93
26	LA	451	U	C4'-C3'-O3'	6.45	119.07	109.40
26	LA	898	C	P-O3'-C3'	6.45	129.87	120.20
26	LA	1645	G	P-O3'-C3'	-6.45	110.53	120.20
26	LA	2220	U	P-O3'-C3'	-6.45	110.53	120.20
26	LA	2564	A	C2'-C3'-O3'	6.45	119.17	109.50
49	LK	37	PHE	CB-CA-C	-6.45	100.09	110.79
4	S2	74	A	C5'-C4'-C3'	-6.45	106.33	116.00
20	SD	188	SER	N-CA-C	6.45	120.41	112.54
26	LA	1428	C	P-O5'-C5'	6.45	130.57	120.90
26	LA	2495	G	P-O5'-C5'	6.45	130.57	120.90
2	SA	1349	A	C5'-C4'-C3'	-6.45	106.33	116.00
26	LA	1321	A	P-O3'-C3'	6.45	129.87	120.20
27	LD	24	HIS	CE1-NE2-CD2	-6.45	102.55	109.00
13	SM	24	VAL	O-C-N	-6.44	116.39	123.03
14	SN	62	ARG	CA-C-N	6.44	129.99	120.90
14	SN	62	ARG	C-N-CA	6.44	129.99	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	683	PHE	CA-CB-CG	-6.44	107.36	113.80
43	L7	24	ARG	NE-CZ-NH2	6.44	125.00	119.20
2	SA	92	U	C4'-C3'-C2'	-6.44	96.16	102.60
2	SA	764	C	C4'-C3'-C2'	-6.44	96.16	102.60
15	SO	43	ALA	N-CA-C	-6.44	104.34	111.36
19	SC	36	PHE	N-CA-C	6.44	117.96	111.07
26	LA	1799	G	C4'-C3'-C2'	-6.44	96.16	102.60
26	LA	2014	A	O4'-C4'-C3'	6.44	110.44	104.00
26	LA	2648	G	C4'-C3'-C2'	-6.44	96.16	102.60
39	L3	22	THR	N-CA-CB	6.44	121.38	110.49
1	SS	56	HIS	CB-CG-CD2	-6.44	122.83	131.20
2	SA	326	G	O3'-P-O5'	-6.44	94.34	104.00
2	SA	1216	A	O4'-C4'-C3'	6.44	110.44	104.00
26	LA	471	A	C5'-C4'-O4'	6.44	119.46	109.80
27	LD	185	ALA	N-CA-CB	-6.44	100.96	110.49
2	SA	565	U	C4'-C3'-C2'	-6.44	96.16	102.60
26	LA	1996	C	O4'-C4'-C3'	6.44	112.54	106.10
2	SA	87	C	P-O3'-C3'	-6.44	110.55	120.20
2	SA	183	C	C2'-C3'-O3'	6.44	119.16	109.50
2	SA	830	G	C5'-C4'-O4'	6.44	119.45	109.80
2	SA	1181	G	C4'-C3'-C2'	-6.44	96.16	102.60
2	SA	1417	G	C2'-C3'-O3'	6.44	123.36	113.70
26	LA	1461	C	O4'-C1'-N1	6.44	118.16	108.50
26	LA	2066	C	P-O5'-C5'	-6.44	111.24	120.90
41	L5	26	ASN	CA-C-O	-6.44	112.83	120.10
26	LA	371	A	C3'-C2'-O2'	-6.44	104.95	114.60
26	LA	1647	U	C3'-C2'-C1'	-6.44	95.06	101.50
2	SA	757	U	C4'-C3'-C2'	-6.43	96.17	102.60
2	SA	1398	A	P-O3'-C3'	-6.43	110.55	120.20
9	SI	97	LEU	CA-C-N	6.43	129.43	120.29
9	SI	97	LEU	C-N-CA	6.43	129.43	120.29
24	S3	283	ASP	CB-CA-C	6.43	120.92	110.95
51	LI	21	VAL	N-CA-C	-6.43	99.10	108.11
1	SS	6	LYS	O-C-N	-6.43	112.69	122.08
2	SA	1470	U	P-O5'-C5'	-6.43	111.25	120.90
22	SF	18	VAL	N-CA-C	6.43	122.77	108.88
26	LA	974	G	P-O5'-C5'	-6.43	111.25	120.90
32	LY	40	ARG	N-CA-C	-6.43	105.44	113.55
38	LE	9	VAL	O-C-N	-6.43	114.53	122.57
2	SA	467	U	O4'-C1'-N1	6.43	118.15	108.50
10	SJ	81	GLU	N-CA-C	6.43	118.29	111.28
26	LA	977	G	C3'-C2'-C1'	6.43	107.73	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1283	G	P-O5'-C5'	-6.43	111.25	120.90
53	LP	119	SER	CA-C-N	6.43	133.82	121.54
53	LP	119	SER	C-N-CA	6.43	133.82	121.54
58	LT	12	HIS	O-C-N	-6.43	115.79	123.31
2	SA	385	C	O4'-C4'-C3'	6.43	110.43	104.00
2	SA	1232	U	C1'-O4'-C4'	-6.43	103.47	109.90
19	SC	54	ILE	N-CA-C	-6.43	98.78	108.17
26	LA	1318	U	P-O5'-C5'	-6.43	111.25	120.90
26	LA	1613	G	P-O3'-C3'	-6.43	110.56	120.20
26	LA	1744	A	P-O3'-C3'	6.43	129.84	120.20
26	LA	2155	U	C2'-C3'-O3'	6.43	123.34	113.70
52	LO	48	ALA	N-CA-C	6.43	119.11	111.33
18	SB	87	ASP	CA-C-O	6.43	127.29	119.38
26	LA	757	G	P-O5'-C5'	6.43	130.54	120.90
26	LA	1648	U	P-O5'-C5'	6.43	130.54	120.90
26	LA	2720	U	P-O5'-C5'	-6.43	111.26	120.90
44	LF	141	MET	CA-C-N	6.43	133.82	121.54
44	LF	141	MET	C-N-CA	6.43	133.82	121.54
2	SA	797	C	C4'-C3'-C2'	-6.43	96.17	102.60
26	LA	138	U	O3'-P-O5'	-6.43	94.36	104.00
26	LA	1827	U	C3'-C2'-C1'	6.43	107.73	101.30
56	LR	49	ILE	N-CA-CB	6.43	121.83	111.23
2	SA	740	U	C5'-C4'-O4'	6.42	119.44	109.80
2	SA	1172	C	C4'-C3'-O3'	-6.42	103.36	113.00
13	SM	24	VAL	CA-C-O	6.42	126.61	120.25
24	S3	236	TYR	N-CA-CB	6.42	119.39	110.07
26	LA	1733	G	O3'-P-O5'	6.42	113.64	104.00
26	LA	1927	A	C2'-C3'-O3'	6.42	123.34	113.70
26	LA	2764	A	O3'-P-O5'	-6.42	94.36	104.00
35	L1	35	VAL	CA-C-O	6.42	127.94	121.64
19	SC	68	HIS	CA-CB-CG	-6.42	107.38	113.80
19	SC	189	HIS	CA-CB-CG	6.42	120.22	113.80
26	LA	1372	U	C5'-C4'-C3'	-6.42	106.37	116.00
26	LA	1914	C	C4'-C3'-C2'	-6.42	96.18	102.60
26	LA	2705	A	C5'-C4'-O4'	-6.42	100.17	109.80
2	SA	292	G	C1'-C2'-O2'	6.42	118.03	108.40
26	LA	1171	G	C4'-C3'-C2'	-6.42	96.18	102.60
37	LC	55	SER	N-CA-C	6.42	118.36	111.36
38	LE	82	PHE	N-CA-CB	6.42	121.24	110.77
54	LM	32	TYR	O-C-N	-6.42	115.88	121.85
3	S1	49	U	C5'-C4'-C3'	6.42	124.83	115.20
26	LA	557	C	C5'-C4'-C3'	6.42	125.63	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	848	C	P-O5'-C5'	-6.42	111.27	120.90
26	LA	859	G	O4'-C1'-N9	6.42	117.83	108.20
26	LA	2114	A	P-O5'-C5'	6.42	130.53	120.90
26	LA	2406	A	C2'-C3'-O3'	6.42	119.13	109.50
26	LA	614	A	C1'-O4'-C4'	-6.42	103.28	109.70
26	LA	780	G	C4'-C3'-C2'	-6.42	96.18	102.60
26	LA	1122	G	O4'-C4'-C3'	-6.42	97.58	104.00
37	LC	145	VAL	CA-C-N	6.42	137.46	121.80
37	LC	145	VAL	C-N-CA	6.42	137.46	121.80
49	LK	124	MET	CA-C-N	6.42	128.78	120.44
49	LK	124	MET	C-N-CA	6.42	128.78	120.44
20	SD	129	VAL	O-C-N	-6.42	116.27	123.20
54	LM	43	ILE	CB-CA-C	-6.42	103.58	111.08
1	SS	33	TRP	N-CA-C	-6.41	103.79	112.26
2	SA	1293	C	C1'-C2'-O2'	6.41	118.02	108.40
26	LA	1005	C	C4'-C3'-C2'	6.41	109.01	102.60
26	LA	1598	A	C5'-C4'-C3'	-6.41	106.38	116.00
26	LA	2505	G	C4'-C3'-C2'	-6.41	96.19	102.60
33	LZ	13	THR	O-C-N	-6.41	115.72	123.29
35	L1	19	HIS	CA-C-O	-6.41	112.22	119.79
2	SA	1002	G	C5'-C4'-C3'	-6.41	106.38	116.00
26	LA	876	C	O3'-P-O5'	-6.41	94.38	104.00
2	SA	559	A	O4'-C4'-C3'	-6.41	99.69	106.10
2	SA	1492	A	P-O3'-C3'	-6.41	110.58	120.20
26	LA	364	C	C2'-C3'-O3'	6.41	123.32	113.70
26	LA	598	U	P-O3'-C3'	-6.41	110.58	120.20
26	LA	1039	A	C3'-C2'-C1'	-6.41	94.89	101.30
26	LA	1840	G	C4'-C3'-O3'	-6.41	103.38	113.00
26	LA	2684	U	C5'-C4'-O4'	6.41	119.41	109.80
46	LH	136	ASP	O-C-N	-6.41	116.03	123.27
2	SA	1132	C	C4'-C3'-C2'	-6.41	96.19	102.60
12	SL	39	THR	N-CA-C	6.41	118.81	109.07
17	SQ	71	SER	N-CA-CB	-6.41	99.66	110.49
24	S3	130	ASN	N-CA-C	6.41	117.93	111.07
29	LV	60	THR	CA-CB-OG1	6.41	119.21	109.60
55	LQ	47	VAL	CA-CB-CG1	-6.41	99.51	110.40
8	SH	48	PHE	CA-CB-CG	6.41	120.21	113.80
10	SJ	15	HIS	ND1-CE1-NE2	6.41	114.81	108.40
10	SJ	86	ALA	CA-C-N	6.41	129.19	120.54
10	SJ	86	ALA	C-N-CA	6.41	129.19	120.54
26	LA	268	C	C1'-O4'-C4'	-6.41	103.49	109.90
45	LG	46	LYS	CA-C-O	6.41	128.92	120.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	502	A	O4'-C1'-C2'	6.40	114.00	107.60
26	LA	2353	G	C5'-C4'-C3'	6.40	125.61	116.00
46	LH	74	MET	N-CA-C	6.40	117.92	111.07
55	LQ	108	ASP	CA-CB-CG	-6.40	106.20	112.60
56	LR	52	ARG	NE-CZ-NH1	-6.40	115.10	121.50
2	SA	765	G	O5'-C5'-C4'	6.40	121.10	111.50
2	SA	1075	U	C5'-C4'-C3'	-6.40	106.40	116.00
2	SA	1173	U	O4'-C4'-C3'	-6.40	97.60	104.00
26	LA	109	C	C4'-C3'-C2'	-6.40	96.20	102.60
26	LA	1694	C	O4'-C1'-N1	6.40	117.80	108.20
41	L5	19	ARG	O-C-N	-6.40	115.33	122.12
26	LA	962	G	O5'-C5'-C4'	6.40	121.10	111.50
26	LA	989	G	O4'-C1'-N9	6.40	117.80	108.20
26	LA	1101	U	P-O5'-C5'	6.40	130.50	120.90
2	SA	561	U	C2'-C3'-O3'	6.40	119.10	109.50
18	SB	133	ALA	CA-C-O	6.40	127.34	119.79
55	LQ	6	ALA	CB-CA-C	6.40	120.93	110.88
2	SA	712	A	O4'-C4'-C3'	-6.40	97.60	104.00
2	SA	812	G	P-O3'-C3'	6.40	129.80	120.20
26	LA	307	G	P-O3'-C3'	6.40	129.79	120.20
44	LF	160	ALA	CA-C-N	6.40	129.37	120.29
44	LF	160	ALA	C-N-CA	6.40	129.37	120.29
2	SA	1455	G	C5'-C4'-C3'	-6.40	106.41	116.00
24	S3	89	PRO	N-CA-C	6.40	120.48	111.33
2	SA	162	A	P-O5'-C5'	6.39	130.49	120.90
12	SL	80	LEU	O-C-N	-6.39	115.71	123.19
26	LA	73	A	P-O5'-C5'	6.39	130.49	120.90
26	LA	401	A	O4'-C1'-N9	6.39	118.09	108.50
26	LA	581	C	C1'-O4'-C4'	-6.39	103.51	109.90
26	LA	931	U	P-O5'-C5'	-6.39	111.31	120.90
42	L6	5	THR	N-CA-C	6.39	118.27	110.41
45	LG	61	GLY	CA-C-N	6.39	133.75	121.54
45	LG	61	GLY	C-N-CA	6.39	133.75	121.54
49	LK	13	ALA	N-CA-C	6.39	119.05	110.35
3	S1	35	G	C4'-C3'-O3'	-6.39	103.41	113.00
26	LA	26	G	C5'-C4'-C3'	6.39	125.59	116.00
26	LA	444	C	C4'-C3'-C2'	-6.39	96.21	102.60
26	LA	1434	A	C5'-C4'-C3'	6.39	125.59	116.00
26	LA	1435	G	O3'-P-O5'	6.39	113.59	104.00
26	LA	1955	U	C1'-O4'-C4'	-6.39	103.31	109.70
26	LA	2095	A	P-O5'-C5'	6.39	130.49	120.90
33	LZ	2	ARG	NE-CZ-NH1	-6.39	115.11	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	730	G	C5'-C4'-C3'	-6.39	106.41	116.00
2	SA	1336	C	P-O3'-C3'	6.39	129.79	120.20
7	SG	47	GLU	CA-C-O	6.39	127.19	120.42
2	SA	100	G	C5'-C4'-C3'	-6.39	106.41	116.00
20	SD	199	ILE	CB-CA-C	-6.39	101.91	112.26
26	LA	1063	G	C1'-C2'-O2'	6.39	117.98	108.40
26	LA	1079	C	O4'-C4'-C3'	-6.39	97.61	104.00
26	LA	1256	G	C4'-C3'-C2'	-6.39	96.21	102.60
26	LA	1860	G	O4'-C4'-C3'	6.39	110.39	104.00
26	LA	2884	U	O4'-C1'-C2'	-6.39	101.21	107.60
2	SA	200	G	C4'-C3'-C2'	-6.39	96.21	102.60
2	SA	1014	A	O3'-P-O5'	-6.39	94.42	104.00
2	SA	1319	A	O4'-C4'-C3'	-6.39	99.71	106.10
26	LA	1106	G	O4'-C4'-C3'	-6.39	97.61	104.00
27	LD	218	THR	CB-CA-C	-6.39	99.56	110.16
33	LZ	75	GLU	CA-C-N	6.39	133.74	121.54
33	LZ	75	GLU	C-N-CA	6.39	133.74	121.54
2	SA	815	A	O5'-C5'-C4'	-6.38	102.12	111.70
9	SI	54	VAL	CA-CB-CG2	6.38	121.25	110.40
24	S3	17	HIS	CA-C-N	6.38	133.46	121.97
24	S3	17	HIS	C-N-CA	6.38	133.46	121.97
24	S3	186	LYS	O-C-N	-6.38	114.41	122.26
26	LA	1502	A	C5'-C4'-C3'	-6.38	106.42	116.00
26	LA	1764	C	O4'-C4'-C3'	-6.38	97.61	104.00
55	LQ	100	HIS	CB-CG-CD2	-6.38	122.90	131.20
2	SA	1484	C	C1'-O4'-C4'	6.38	116.28	109.90
26	LA	1989	G	C5'-C4'-C3'	6.38	125.57	116.00
2	SA	939	G	C5'-C4'-C3'	-6.38	106.43	116.00
26	LA	1369	G	O4'-C4'-C3'	6.38	110.38	104.00
26	LA	2272	U	O4'-C1'-C2'	-6.38	101.22	107.60
27	LD	31	PRO	N-CA-C	-6.38	105.66	114.98
2	SA	51	A	P-O3'-C3'	6.38	129.77	120.20
8	SH	27	PRO	N-CA-C	6.38	121.23	111.15
26	LA	581	C	C4'-C3'-C2'	-6.38	96.22	102.60
2	SA	174	A	C5'-C4'-C3'	-6.38	106.43	116.00
12	SL	62	VAL	CA-C-O	-6.38	115.32	121.63
26	LA	561	G	P-O3'-C3'	6.38	129.77	120.20
26	LA	724	U	P-O3'-C3'	6.38	129.77	120.20
26	LA	1924	C	O4'-C1'-N1	6.38	118.07	108.50
26	LA	2103	C	C3'-C2'-O2'	6.38	120.27	110.70
2	SA	149	A	C4'-C3'-C2'	-6.38	96.22	102.60
2	SA	338	A	O4'-C4'-C3'	-6.38	97.62	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	SJ	67	ILE	CB-CA-C	6.38	119.03	110.42
22	SF	22	ILE	N-CA-CB	6.38	119.21	110.54
26	LA	546	U	P-O3'-C3'	6.38	129.76	120.20
26	LA	853	C	C4'-C3'-C2'	-6.38	96.22	102.60
26	LA	2222	C	C5'-C4'-C3'	-6.38	106.43	116.00
26	LA	2269	G	C3'-C2'-O2'	-6.38	101.14	110.70
26	LA	2682	A	O4'-C4'-C3'	-6.38	97.62	104.00
56	LR	81	ASP	CA-CB-CG	-6.38	106.22	112.60
2	SA	295	C	P-O3'-C3'	-6.38	110.64	120.20
18	SB	187	ASP	N-CA-CB	-6.38	101.49	111.05
26	LA	2356	U	C4'-C3'-O3'	-6.38	103.44	113.00
26	LA	2365	G	C5'-C4'-C3'	-6.38	106.44	116.00
7	SG	147	ASN	CA-C-O	-6.37	112.20	119.78
24	S3	594	LEU	O-C-N	-6.37	114.88	122.15
26	LA	980	A	P-O3'-C3'	6.37	129.76	120.20
26	LA	1485	U	C1'-O4'-C4'	6.37	116.27	109.90
26	LA	2685	G	O3'-P-O5'	-6.37	94.44	104.00
47	LJ	90	ALA	N-CA-C	6.37	117.89	111.07
2	SA	1081	A	O5'-C5'-C4'	-6.37	101.94	111.50
6	SU	69	LEU	N-CA-C	-6.37	106.22	112.97
26	LA	1386	C	P-O3'-C3'	-6.37	110.64	120.20
14	SN	49	THR	CA-C-N	-6.37	112.13	120.09
14	SN	49	THR	C-N-CA	-6.37	112.13	120.09
58	LT	8	GLY	CA-C-O	-6.37	115.36	121.41
1	SS	51	HIS	ND1-CE1-NE2	6.37	114.77	108.40
2	SA	548	G	P-O5'-C5'	6.37	130.45	120.90
2	SA	1148	U	C4'-C3'-C2'	-6.37	96.23	102.60
3	S1	24	A	C4'-C3'-C2'	-6.37	96.23	102.60
6	SU	60	ALA	N-CA-C	6.37	119.03	111.71
8	SH	59	GLU	CA-C-O	6.37	127.24	120.36
19	SC	26	LYS	CA-C-N	6.37	133.05	122.54
19	SC	26	LYS	C-N-CA	6.37	133.05	122.54
26	LA	1083	U	P-O3'-C3'	6.37	129.75	120.20
26	LA	2231	U	P-O3'-C3'	-6.37	110.65	120.20
27	LD	147	PRO	N-CA-C	6.37	125.59	112.47
29	LV	16	VAL	O-C-N	-6.37	114.61	122.57
2	SA	9	G	O4'-C1'-N9	6.37	118.05	108.50
2	SA	561	U	N1-C1'-C2'	-6.37	104.45	114.00
8	SH	66	GLN	CA-C-N	6.37	130.59	122.00
8	SH	66	GLN	C-N-CA	6.37	130.59	122.00
26	LA	1807	G	C5'-C4'-C3'	6.37	125.55	116.00
48	LN	111	ILE	CA-CB-CG2	-6.37	99.68	110.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	15	G	N9-C1'-C2'	6.37	121.55	112.00
13	SM	106	ARG	NE-CZ-NH2	-6.37	113.47	119.20
19	SC	14	VAL	CB-CA-C	6.37	121.73	111.29
26	LA	1239	G	C5'-C4'-O4'	6.37	119.35	109.80
26	LA	2578	G	C2'-C3'-O3'	6.37	123.25	113.70
2	SA	786	G	C5'-C4'-C3'	-6.36	106.45	116.00
20	SD	188	SER	CA-C-O	6.36	127.21	119.38
24	S3	91	ALA	CA-C-N	6.36	131.20	120.64
24	S3	91	ALA	C-N-CA	6.36	131.20	120.64
26	LA	521	U	C1'-C2'-O2'	6.36	117.94	108.40
26	LA	2685	G	P-O3'-C3'	6.36	129.75	120.20
26	LA	2872	A	C5'-C4'-C3'	-6.36	106.46	116.00
27	LD	60	ALA	O-C-N	-6.36	115.75	123.19
2	SA	472	U	P-O3'-C3'	-6.36	110.66	120.20
2	SA	1225	A	P-O5'-C5'	6.36	130.44	120.90
18	SB	3	VAL	CA-C-N	6.36	128.81	120.28
18	SB	3	VAL	C-N-CA	6.36	128.81	120.28
24	S3	44	ASP	N-CA-CB	6.36	121.24	110.49
26	LA	1913	A	C4'-C3'-O3'	6.36	118.94	109.40
26	LA	2480	C	O4'-C1'-C2'	-6.36	101.24	107.60
37	LC	90	ALA	N-CA-C	6.36	120.30	112.54
2	SA	608	A	P-O3'-C3'	6.36	129.74	120.20
2	SA	673	A	P-O5'-C5'	6.36	130.44	120.90
2	SA	724	G	O4'-C4'-C3'	6.36	110.36	104.00
20	SD	165	GLU	CA-C-O	6.36	127.97	120.66
24	S3	385	ILE	CA-CB-CG1	6.36	121.21	110.40
2	SA	1017	U	P-O3'-C3'	-6.36	110.67	120.20
11	SK	45	THR	CA-CB-OG1	6.36	119.13	109.60
24	S3	549	ILE	N-CA-CB	-6.36	106.50	110.50
26	LA	2539	C	P-O3'-C3'	-6.36	110.67	120.20
37	LC	231	ALA	N-CA-C	6.36	124.34	110.80
38	LE	66	GLY	CA-C-O	6.36	127.29	120.30
44	LF	162	ARG	N-CA-C	6.36	117.90	110.97
9	SI	71	ILE	N-CA-C	6.35	116.52	110.42
26	LA	2455	G	C4'-C3'-O3'	-6.35	103.47	113.00
34	L0	45	GLN	OE1-CD-NE2	6.35	128.95	122.60
2	SA	7	A	P-O5'-C5'	6.35	130.43	120.90
2	SA	1379	G	C5'-C4'-C3'	6.35	125.53	116.00
26	LA	580	U	C4'-C3'-C2'	-6.35	96.25	102.60
26	LA	1579	A	C1'-O4'-C4'	-6.35	103.55	109.90
55	LQ	6	ALA	N-CA-CB	-6.35	100.80	110.01
26	LA	516	C	O3'-P-O5'	-6.35	94.47	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1856	U	C2'-C3'-O3'	6.35	123.23	113.70
26	LA	2399	G	C1'-O4'-C4'	-6.35	103.55	109.90
44	LF	163	ASN	CA-CB-CG	-6.35	106.25	112.60
2	SA	1517	G	O4'-C1'-C2'	-6.35	101.25	107.60
26	LA	286	U	C1'-C2'-O2'	6.35	117.93	108.40
26	LA	699	A	C1'-O4'-C4'	-6.35	103.55	109.90
26	LA	827	U	C1'-O4'-C4'	-6.35	103.35	109.70
47	LJ	53	VAL	CB-CA-C	-6.35	101.69	110.96
2	SA	1424	U	C5'-C4'-C3'	6.35	125.52	116.00
14	SN	3	GLN	N-CA-C	-6.35	104.46	111.82
18	SB	162	VAL	CB-CA-C	-6.35	102.37	111.19
22	SF	11	HIS	CE1-NE2-CD2	-6.35	102.65	109.00
26	LA	1978	A	C4'-C3'-C2'	-6.35	96.25	102.60
38	LE	91	THR	N-CA-C	6.35	118.20	111.28
26	LA	2442	C	C5'-C4'-C3'	-6.35	106.48	116.00
2	SA	248	C	P-O5'-C5'	-6.34	111.38	120.90
2	SA	1336	C	C4'-C3'-C2'	-6.34	96.26	102.60
2	SA	1425	U	C4'-C3'-C2'	-6.34	96.25	102.60
2	SA	1504	G	O4'-C1'-N9	6.34	117.72	108.20
26	LA	1880	U	P-O5'-C5'	6.34	130.41	120.90
26	LA	1911	U	C5'-C4'-O4'	6.34	119.32	109.80
27	LD	185	ALA	N-CA-C	6.34	121.16	113.17
18	SB	225	SER	N-CA-CB	6.34	119.58	110.06
39	L3	40	HIS	CA-CB-CG	-6.34	107.46	113.80
51	LI	12	LEU	CA-C-N	6.34	133.84	121.41
51	LI	12	LEU	C-N-CA	6.34	133.84	121.41
2	SA	17	U	C5'-C4'-O4'	6.34	119.31	109.80
2	SA	232	G	O4'-C4'-C3'	-6.34	97.66	104.00
2	SA	1119	C	C1'-C2'-O2'	6.34	117.91	108.40
26	LA	2834	G	C5'-C4'-C3'	-6.34	106.49	116.00
28	LU	102	HIS	CB-CG-CD2	-6.34	122.96	131.20
37	LC	103	GLN	N-CA-C	6.34	117.86	111.07
22	SF	103	VAL	N-CA-C	6.34	116.50	110.42
26	LA	71	A	O4'-C1'-N9	6.34	117.71	108.20
26	LA	1119	U	C5'-C4'-C3'	-6.34	106.49	116.00
26	LA	2463	C	O4'-C1'-N1	6.34	118.01	108.50
26	LA	2781	A	O4'-C4'-C3'	6.34	110.34	104.00
38	LE	66	GLY	CA-C-N	6.34	128.68	120.44
38	LE	66	GLY	C-N-CA	6.34	128.68	120.44
26	LA	554	U	C4'-C3'-C2'	-6.34	96.26	102.60
26	LA	640	C	C3'-C2'-C1'	6.34	107.64	101.30
26	LA	1594	U	P-O3'-C3'	-6.34	110.69	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	LP	102	PHE	CA-CB-CG	-6.34	107.46	113.80
2	SA	534	U	P-O3'-C3'	-6.34	110.70	120.20
26	LA	1180	U	P-O5'-C5'	6.34	130.41	120.90
26	LA	1480	C	O4'-C1'-N1	6.34	118.01	108.50
26	LA	2022	U	C1'-O4'-C4'	-6.34	103.36	109.70
26	LA	2122	U	C5'-C4'-O4'	6.34	119.30	109.80
32	LY	16	GLU	N-CA-C	-6.33	98.75	108.76
22	SF	18	VAL	O-C-N	-6.33	113.88	121.10
22	SF	42	TRP	CE2-CD2-CE3	6.33	125.13	118.80
25	LB	109	A	O3'-P-O5'	-6.33	94.50	104.00
26	LA	114	U	C1'-O4'-C4'	-6.33	103.57	109.90
26	LA	1308	A	C5'-C4'-O4'	6.33	119.30	109.80
26	LA	2641	G	P-O5'-C5'	-6.33	111.40	120.90
28	LU	40	ASN	CA-CB-CG	-6.33	106.27	112.60
30	LW	29	SER	N-CA-C	6.33	118.96	110.35
40	L4	41	VAL	O-C-N	-6.33	115.16	121.94
40	L4	43	ARG	NE-CZ-NH2	-6.33	113.50	119.20
20	SD	2	ARG	N-CA-CB	6.33	119.39	111.79
26	LA	27	G	C4'-C3'-C2'	6.33	108.93	102.60
26	LA	1158	C	C4'-C3'-O3'	-6.33	103.50	113.00
26	LA	1247	A	C5'-C4'-C3'	6.33	124.70	115.20
26	LA	2224	G	C2'-C3'-O3'	6.33	123.20	113.70
47	LJ	72	LYS	CA-C-N	6.33	128.67	120.44
47	LJ	72	LYS	C-N-CA	6.33	128.67	120.44
49	LK	3	LYS	CA-C-N	6.33	130.13	120.13
49	LK	3	LYS	C-N-CA	6.33	130.13	120.13
26	LA	1510	G	N9-C1'-C2'	6.33	121.49	112.00
26	LA	1767	G	O5'-C5'-C4'	6.33	121.00	111.50
26	LA	2354	C	P-O3'-C3'	-6.33	110.70	120.20
28	LU	48	LYS	CA-C-N	6.33	128.76	120.28
28	LU	48	LYS	C-N-CA	6.33	128.76	120.28
32	LY	61	LYS	N-CA-C	6.33	118.71	111.11
2	SA	442	G	C5'-C4'-O4'	6.33	119.29	109.80
26	LA	92	U	C5'-C4'-C3'	6.33	125.49	116.00
26	LA	344	A	C2'-C3'-O3'	6.33	118.99	109.50
26	LA	2291	U	C4'-C3'-O3'	-6.33	103.51	113.00
42	L6	37	THR	N-CA-C	6.33	117.84	111.07
26	LA	102	U	P-O3'-C3'	-6.33	110.71	120.20
37	LC	137	MET	CG-SD-CE	-6.33	86.98	100.90
2	SA	969	A	P-O5'-C5'	-6.33	111.41	120.90
5	ST	69	ASN	OD1-CG-ND2	-6.33	116.27	122.60
24	S3	335	PHE	CA-CB-CG	-6.33	107.47	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	38	A	C4'-C3'-C2'	-6.33	96.27	102.60
26	LA	1570	A	C5'-C4'-O4'	6.33	119.29	109.80
41	L5	24	THR	N-CA-CB	6.33	120.97	110.85
2	SA	112	G	C4'-C3'-C2'	-6.32	96.28	102.60
18	SB	175	ALA	O-C-N	-6.32	115.56	122.07
26	LA	1404	C	P-O5'-C5'	-6.32	111.41	120.90
37	LC	77	VAL	O-C-N	-6.32	116.22	122.99
16	SP	30	GLY	CA-C-N	6.32	133.61	121.54
16	SP	30	GLY	C-N-CA	6.32	133.61	121.54
26	LA	2153	C	O4'-C1'-C2'	-6.32	99.48	105.80
2	SA	149	A	P-O5'-C5'	-6.32	111.42	120.90
2	SA	1004	A	C2'-C3'-O3'	6.32	123.18	113.70
3	S1	43	U	C5'-C4'-C3'	6.32	125.48	116.00
26	LA	226	A	O4'-C1'-C2'	6.32	113.92	107.60
26	LA	1323	C	C5'-C4'-O4'	6.32	118.58	109.10
26	LA	2291	U	C2'-C3'-O3'	6.32	123.18	113.70
26	LA	2572	A	C2'-C3'-O3'	6.32	118.98	109.50
49	LK	116	MET	O-C-N	-6.32	115.47	123.06
26	LA	43	G	N9-C1'-C2'	6.32	121.48	112.00
26	LA	475	C	O4'-C1'-C2'	6.32	113.92	107.60
26	LA	1137	G	C4'-C3'-C2'	-6.32	96.28	102.60
26	LA	2262	U	P-O5'-C5'	-6.32	111.42	120.90
46	LH	126	THR	O-C-N	-6.32	115.53	123.17
2	SA	274	A	O4'-C1'-N9	6.32	117.68	108.20
2	SA	706	A	C4'-C3'-O3'	-6.32	103.52	113.00
26	LA	147	C	C4'-C3'-C2'	-6.32	96.28	102.60
26	LA	2345	G	C5'-C4'-C3'	-6.32	105.72	115.20
2	SA	1051	C	C4'-C3'-C2'	-6.32	96.28	102.60
2	SA	1102	A	C4'-C3'-C2'	-6.32	96.28	102.60
13	SM	116	LYS	N-CA-C	6.32	120.25	112.54
26	LA	2669	G	O4'-C4'-C3'	-6.32	97.69	104.00
37	LC	65	LEU	N-CA-C	6.32	117.66	109.64
26	LA	2333	A	O4'-C4'-C3'	-6.31	99.79	106.10
2	SA	804	U	O4'-C4'-C3'	6.31	110.31	104.00
24	S3	94	PHE	O-C-N	-6.31	114.59	122.35
26	LA	229	C	P-O3'-C3'	-6.31	110.73	120.20
26	LA	2342	C	P-O5'-C5'	6.31	130.37	120.90
40	L4	27	ARG	N-CA-CB	-6.31	99.82	110.49
58	LT	64	VAL	CB-CA-C	6.31	116.56	110.63
4	S2	11	A	C1'-O4'-C4'	-6.31	103.59	109.90
27	LD	81	GLU	CA-C-O	-6.31	113.73	121.11
45	LG	86	CYS	CB-CA-C	-6.31	99.78	110.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1904	G	O4'-C1'-C2'	6.31	113.91	107.60
30	LW	72	PHE	CA-CB-CG	-6.31	107.49	113.80
2	SA	233	C	O3'-P-O5'	-6.31	94.54	104.00
4	S2	53	G	O4'-C4'-C3'	-6.31	97.69	104.00
9	SI	34	LEU	CB-CA-C	6.31	120.90	110.81
26	LA	1475	G	C3'-C2'-O2'	-6.31	105.14	114.60
26	LA	1516	G	C1'-O4'-C4'	-6.31	103.59	109.90
26	LA	1704	C	O4'-C1'-N1	6.31	117.96	108.50
26	LA	2589	A	C1'-O4'-C4'	-6.31	103.59	109.90
2	SA	1483	A	P-O5'-C5'	6.31	130.36	120.90
26	LA	1699	G	C1'-O4'-C4'	-6.31	103.39	109.70
2	SA	414	A	O4'-C4'-C3'	6.30	110.31	104.00
2	SA	666	G	C4'-C3'-C2'	-6.30	96.30	102.60
26	LA	1502	A	C4'-C3'-C2'	-6.30	96.30	102.60
26	LA	2547	A	C5'-C4'-O4'	6.30	119.26	109.80
26	LA	2670	A	O5'-C5'-C4'	6.30	120.96	111.50
38	LE	2	ILE	O-C-N	-6.30	115.95	122.63
26	LA	1702	G	C4'-C3'-C2'	-6.30	96.30	102.60
1	SS	49	ALA	O-C-N	6.30	130.40	123.22
2	SA	404	G	P-O3'-C3'	-6.30	110.75	120.20
24	S3	477	ASN	CA-CB-CG	-6.30	106.30	112.60
26	LA	939	G	P-O5'-C5'	-6.30	111.45	120.90
26	LA	1300	G	C4'-C3'-C2'	-6.30	96.30	102.60
26	LA	1963	U	P-O5'-C5'	6.30	130.35	120.90
26	LA	2849	U	C3'-C2'-O2'	-6.30	105.15	114.60
2	SA	171	A	O3'-P-O5'	-6.30	94.55	104.00
4	S2	38	A	O5'-C5'-C4'	6.30	120.95	111.50
20	SD	48	SER	N-CA-C	-6.30	97.38	110.80
26	LA	144	A	C4'-C3'-C2'	-6.30	96.30	102.60
26	LA	2500	U	C3'-C2'-O2'	6.30	120.15	110.70
27	LD	211	ARG	N-CA-C	6.30	117.81	111.07
56	LR	73	PHE	O-C-N	-6.30	115.84	123.27
57	LS	92	LYS	N-CA-C	-6.30	106.13	113.88
26	LA	1423	G	C3'-C2'-C1'	6.30	107.60	101.30
26	LA	2440	C	C3'-C2'-O2'	6.30	120.15	110.70
26	LA	915	C	O5'-C5'-C4'	6.30	120.94	111.50
26	LA	1240	U	O4'-C4'-C3'	-6.30	97.70	104.00
26	LA	1870	C	O4'-C4'-C3'	6.30	110.30	104.00
2	SA	8	A	P-O5'-C5'	-6.29	111.46	120.90
26	LA	615	U	C4'-C3'-O3'	6.29	118.84	109.40
26	LA	2514	U	C4'-C3'-C2'	-6.29	96.31	102.60
2	SA	250	A	C4'-C3'-C2'	-6.29	96.31	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1060	U	P-O3'-C3'	6.29	129.64	120.20
4	S2	56	U	O4'-C4'-C3'	6.29	110.29	104.00
12	SL	13	ARG	CA-C-N	6.29	133.56	121.54
12	SL	13	ARG	C-N-CA	6.29	133.56	121.54
19	SC	183	TYR	N-CA-CB	-6.29	99.91	110.80
26	LA	1476	U	C4'-C3'-O3'	-6.29	103.56	113.00
37	LC	115	ILE	CA-C-N	6.29	132.12	122.11
37	LC	115	ILE	C-N-CA	6.29	132.12	122.11
48	LN	109	LYS	O-C-N	-6.29	115.05	123.23
2	SA	44	A	C4'-C3'-O3'	-6.29	103.56	113.00
2	SA	506	G	C5'-C4'-C3'	-6.29	106.56	116.00
15	SO	80	LEU	N-CA-C	6.29	118.66	111.11
26	LA	125	A	P-O5'-C5'	6.29	130.34	120.90
26	LA	1793	C	C1'-O4'-C4'	-6.29	103.61	109.90
37	LC	85	GLU	N-CA-C	6.29	118.22	111.36
7	SG	162	SER	N-CA-C	6.29	118.22	111.36
2	SA	1124	G	C1'-O4'-C4'	-6.29	103.41	109.70
10	SJ	6	ILE	CA-CB-CG2	6.29	121.19	110.50
26	LA	296	U	C5'-C4'-O4'	6.29	119.23	109.80
26	LA	301	G	C4'-C3'-C2'	-6.29	96.31	102.60
26	LA	976	G	O4'-C4'-C3'	6.29	110.29	104.00
26	LA	2181	U	C4'-C3'-O3'	-6.29	103.57	113.00
2	SA	74	A	P-O3'-C3'	-6.29	110.77	120.20
2	SA	373	A	C1'-O4'-C4'	-6.29	103.61	109.90
2	SA	488	C	C4'-C3'-C2'	-6.29	96.31	102.60
18	SB	50	ASN	CA-C-N	6.29	128.95	120.65
18	SB	50	ASN	C-N-CA	6.29	128.95	120.65
24	S3	83	ILE	N-CA-CB	6.29	118.53	110.99
25	LB	66	A	O5'-C5'-C4'	6.29	120.93	111.50
26	LA	2793	C	O4'-C1'-N1	6.29	117.93	108.50
50	LL	78	THR	CA-CB-OG1	6.29	119.03	109.60
19	SC	135	ARG	NE-CZ-NH1	6.29	127.79	121.50
26	LA	1192	G	C4'-C3'-O3'	-6.29	103.57	113.00
44	LF	31	VAL	N-CA-C	6.29	116.40	110.30
2	SA	569	C	O4'-C4'-C3'	6.28	110.28	104.00
3	S1	32	U	C4'-C3'-C2'	-6.28	96.32	102.60
26	LA	1189	A	O4'-C4'-C3'	6.28	110.28	104.00
26	LA	1638	C	O4'-C1'-N1	6.28	117.93	108.50
3	S1	14	G	P-O5'-C5'	6.28	130.32	120.90
18	SB	190	SER	O-C-N	-6.28	114.23	122.59
20	SD	3	TYR	N-CA-C	6.28	124.18	110.80
26	LA	38	A	C5'-C4'-C3'	-6.28	106.58	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	LU	73	LYS	O-C-N	-6.28	115.51	123.24
47	LJ	56	ASN	CA-CB-CG	-6.28	106.32	112.60
2	SA	1185	G	O4'-C4'-C3'	-6.28	97.72	104.00
2	SA	1319	A	C3'-C2'-O2'	-6.28	105.18	114.60
17	SQ	17	GLU	N-CA-CB	6.28	119.21	110.17
21	SE	88	HIS	CG-CD2-NE2	6.28	113.48	107.20
25	LB	40	U	O4'-C4'-C3'	-6.28	99.82	106.10
26	LA	46	G	O4'-C4'-C3'	6.28	110.28	104.00
26	LA	1308	A	C5'-C4'-C3'	-6.28	106.58	116.00
26	LA	2462	C	C3'-C2'-O2'	6.28	120.12	110.70
26	LA	2544	G	C3'-C2'-C1'	-6.28	95.02	101.30
29	LV	85	VAL	N-CA-CB	6.28	119.58	111.67
2	SA	677	U	O5'-C5'-C4'	6.28	120.92	111.50
26	LA	1702	G	C1'-O4'-C4'	-6.28	103.62	109.90
26	LA	1947	C	O3'-P-O5'	6.28	113.42	104.00
24	S3	84	ASN	CA-CB-CG	6.28	118.88	112.60
24	S3	564	PRO	N-CA-C	6.28	125.40	112.47
26	LA	848	C	O4'-C1'-C2'	-6.28	101.32	107.60
26	LA	2332	C	P-O5'-C5'	6.28	130.32	120.90
34	L0	6	LEU	CA-C-N	6.28	131.04	122.19
34	L0	6	LEU	C-N-CA	6.28	131.04	122.19
2	SA	1047	G	C5'-C4'-C3'	6.28	125.41	116.00
4	S2	67	C	P-O5'-C5'	6.28	130.31	120.90
18	SB	233	GLU	N-CA-C	6.28	118.12	111.28
26	LA	1641	A	P-O5'-C5'	-6.28	111.49	120.90
2	SA	1318	A	C3'-C2'-C1'	-6.27	95.03	101.30
26	LA	2528	U	P-O3'-C3'	6.27	129.61	120.20
48	LN	9	ALA	N-CA-C	6.27	118.40	110.24
54	LM	63	VAL	CB-CA-C	-6.27	101.00	111.29
2	SA	508	U	O3'-P-O5'	-6.27	94.59	104.00
2	SA	669	G	C4'-C3'-C2'	-6.27	96.33	102.60
2	SA	776	G	O4'-C4'-C3'	-6.27	97.73	104.00
26	LA	108	G	C4'-C3'-C2'	-6.27	96.33	102.60
26	LA	197	A	O4'-C4'-C3'	6.27	110.27	104.00
26	LA	1394	U	C4'-C3'-C2'	-6.27	96.33	102.60
37	LC	226	GLN	OE1-CD-NE2	-6.27	116.33	122.60
57	LS	58	GLN	CB-CG-CD	-6.27	101.94	112.60
2	SA	1109	C	O4'-C4'-C3'	6.27	110.27	104.00
2	SA	35	G	C4'-C3'-C2'	-6.27	96.33	102.60
2	SA	1112	C	C4'-C3'-C2'	-6.27	96.33	102.60
2	SA	1286	U	C5'-C4'-C3'	6.27	125.40	116.00
5	ST	31	ILE	CA-CB-CG1	-6.27	99.74	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	SM	85	TYR	CB-CG-CD1	-6.27	111.39	120.80
26	LA	222	A	C1'-O4'-C4'	-6.27	103.43	109.70
26	LA	1869	G	C5'-C4'-C3'	-6.27	106.60	116.00
56	LR	61	ARG	O-C-N	-6.27	116.19	123.27
1	SS	36	ARG	CA-C-O	6.27	127.19	120.55
2	SA	1232	U	C4'-C3'-C2'	-6.27	96.33	102.60
26	LA	90	U	C5'-C4'-C3'	-6.27	106.60	116.00
26	LA	368	A	C2'-C3'-O3'	6.27	123.10	113.70
26	LA	2167	U	C1'-O4'-C4'	-6.27	103.63	109.90
34	L0	2	LYS	O-C-N	-6.27	115.11	122.32
1	SS	9	PHE	N-CA-C	6.27	119.78	108.69
2	SA	203	G	P-O3'-C3'	6.27	129.60	120.20
2	SA	650	G	C5'-C4'-C3'	-6.26	106.61	116.00
2	SA	819	A	P-O5'-C5'	6.26	130.30	120.90
2	SA	1409	C	C5'-C4'-C3'	-6.26	106.60	116.00
2	SA	1496	C	C2'-C3'-O3'	6.26	123.10	113.70
4	S2	25	U	P-O3'-C3'	6.26	129.60	120.20
7	SG	30	MET	CG-SD-CE	-6.26	87.12	100.90
25	LB	87	U	P-O5'-C5'	6.26	130.30	120.90
26	LA	262	A	C4'-C3'-C2'	-6.26	96.33	102.60
26	LA	348	A	P-O3'-C3'	-6.26	110.80	120.20
38	LE	16	THR	CA-C-N	6.26	133.50	121.54
38	LE	16	THR	C-N-CA	6.26	133.50	121.54
2	SA	946	A	C1'-C2'-O2'	6.26	117.79	108.40
2	SA	366	A	C4'-C3'-C2'	-6.26	96.34	102.60
2	SA	878	A	C5'-C4'-C3'	-6.26	106.61	116.00
18	SB	219	THR	N-CA-C	6.26	118.11	111.28
38	LE	191	GLY	N-CA-C	6.26	122.73	111.34
2	SA	86	G	O4'-C1'-C2'	6.26	112.06	105.80
24	S3	139	PHE	CA-CB-CG	-6.26	107.54	113.80
26	LA	1308	A	P-O5'-C5'	-6.26	111.51	120.90
26	LA	1323	C	C3'-C2'-C1'	6.26	107.76	101.50
26	LA	1384	A	O4'-C1'-N9	6.26	117.89	108.50
26	LA	2345	G	C1'-C2'-O2'	-6.26	102.41	111.80
26	LA	148	U	P-O5'-C5'	6.26	130.29	120.90
8	SH	10	LEU	CA-C-O	6.26	127.18	120.55
26	LA	129	C	C5'-C4'-O4'	6.26	119.19	109.80
26	LA	1101	U	C5'-C4'-C3'	6.26	125.39	116.00
26	LA	1549	A	C4'-C3'-C2'	6.26	108.86	102.60
26	LA	1627	G	C4'-C3'-C2'	-6.26	96.34	102.60
44	LF	128	ALA	CA-C-N	6.26	125.88	119.56
44	LF	128	ALA	C-N-CA	6.26	125.88	119.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	340	U	C5'-C4'-C3'	6.25	125.38	116.00
8	SH	27	PRO	N-CA-CB	6.25	108.75	103.25
36	L2	43	PHE	CA-CB-CG	6.25	120.06	113.80
37	LC	193	LEU	O-C-N	-6.25	115.49	122.12
2	SA	674	G	C5'-C4'-C3'	-6.25	106.62	116.00
2	SA	924	C	C5'-C4'-C3'	-6.25	106.62	116.00
2	SA	1026	G	O3'-P-O5'	-6.25	94.62	104.00
4	S2	60	A	C4'-C3'-C2'	-6.25	96.35	102.60
26	LA	198	C	P-O5'-C5'	6.25	130.28	120.90
26	LA	811	U	P-O3'-C3'	-6.25	110.82	120.20
26	LA	1215	G	C4'-C3'-C2'	-6.25	96.35	102.60
26	LA	1911	U	P-O5'-C5'	6.25	130.28	120.90
26	LA	2368	C	C5'-C4'-C3'	-6.25	106.62	116.00
1	SS	68	HIS	CE1-NE2-CD2	-6.25	102.75	109.00
2	SA	717	U	C2'-C3'-O3'	6.25	123.08	113.70
2	SA	1343	G	P-O3'-C3'	-6.25	110.82	120.20
3	S1	43	U	O5'-C5'-C4'	6.25	120.88	111.50
25	LB	80	U	O3'-P-O5'	6.25	113.38	104.00
26	LA	896	A	P-O3'-C3'	6.25	129.58	120.20
26	LA	1495	A	P-O3'-C3'	-6.25	110.82	120.20
26	LA	2491	U	C5'-C4'-C3'	-6.25	105.82	115.20
26	LA	982	C	C5'-C4'-C3'	6.25	125.38	116.00
26	LA	1174	U	O4'-C4'-C3'	-6.25	97.75	104.00
26	LA	1505	A	C1'-C2'-O2'	6.25	117.78	108.40
26	LA	2294	G	P-O5'-C5'	-6.25	111.53	120.90
45	LG	92	GLY	CA-C-N	6.25	128.66	120.28
45	LG	92	GLY	C-N-CA	6.25	128.66	120.28
58	LT	89	HIS	CB-CG-CD2	-6.25	123.07	131.20
15	SO	67	ASP	CA-C-O	6.25	127.59	120.90
24	S3	326	ASP	CA-C-N	-6.25	113.48	121.04
24	S3	326	ASP	C-N-CA	-6.25	113.48	121.04
26	LA	2105	U	O3'-P-O5'	-6.25	94.63	104.00
45	LG	173	ASP	O-C-N	-6.25	114.28	122.59
2	SA	957	U	P-O3'-C3'	-6.25	110.83	120.20
23	SR	48	ALA	CB-CA-C	-6.25	101.07	110.88
26	LA	443	A	C1'-O4'-C4'	-6.25	103.45	109.70
34	L0	32	ALA	CB-CA-C	-6.25	100.23	110.85
41	L5	23	ALA	N-CA-CB	-6.25	100.94	110.12
55	LQ	100	HIS	O-C-N	6.25	127.64	120.58
26	LA	670	A	C3'-C2'-O2'	-6.25	105.23	114.60
26	LA	908	C	C4'-C3'-C2'	6.25	108.84	102.60
26	LA	1851	U	P-O5'-C5'	-6.25	111.53	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2577	A	P-O3'-C3'	-6.25	110.83	120.20
48	LN	47	ARG	N-CA-C	6.25	118.61	110.43
2	SA	425	G	C1'-C2'-O2'	6.24	117.77	108.40
2	SA	948	C	C1'-C2'-O2'	6.24	117.77	108.40
2	SA	1174	G	O4'-C1'-C2'	-6.24	101.36	107.60
20	SD	69	ARG	CB-CA-C	-6.24	100.43	110.79
26	LA	383	C	O4'-C1'-N1	6.24	117.86	108.50
26	LA	1617	C	O4'-C1'-N1	6.24	117.57	108.20
26	LA	2486	C	O4'-C1'-C2'	6.24	113.84	107.60
26	LA	1562	U	P-O3'-C3'	6.24	129.56	120.20
2	SA	1001	C	O4'-C1'-N1	6.24	117.86	108.50
20	SD	26	ALA	N-CA-C	6.24	118.16	111.36
25	LB	70	C	P-O5'-C5'	-6.24	111.54	120.90
26	LA	372	G	C3'-C2'-O2'	-6.24	105.24	114.60
26	LA	1304	A	P-O5'-C5'	-6.24	111.54	120.90
18	SB	142	LYS	O-C-N	-6.24	115.04	122.15
26	LA	559	G	C3'-C2'-C1'	6.24	107.54	101.30
26	LA	1675	C	O4'-C4'-C3'	-6.24	99.86	106.10
26	LA	1965	C	O5'-C5'-C4'	-6.24	102.14	111.50
28	LU	7	HIS	CE1-NE2-CD2	-6.24	102.76	109.00
45	LG	98	PHE	N-CA-C	-6.24	104.39	111.07
58	LT	37	GLU	O-C-N	-6.24	114.37	122.61
26	LA	1190	G	C5'-C4'-O4'	6.24	119.16	109.80
26	LA	1963	U	C4'-C3'-O3'	-6.24	103.64	113.00
26	LA	2497	A	P-O3'-C3'	6.24	129.56	120.20
2	SA	327	A	C1'-O4'-C4'	-6.24	103.46	109.70
2	SA	533	A	O4'-C4'-C3'	-6.24	99.86	106.10
26	LA	238	C	O4'-C1'-C2'	6.24	113.83	107.60
26	LA	248	G	C4'-C3'-C2'	-6.24	96.36	102.60
26	LA	1482	G	C5'-C4'-C3'	-6.24	106.65	116.00
33	LZ	25	LYS	N-CA-C	6.24	118.83	110.35
2	SA	864	A	C1'-C2'-O2'	6.23	117.75	108.40
25	LB	19	C	C4'-C3'-O3'	-6.23	103.65	113.00
39	L3	22	THR	CA-C-O	6.23	129.42	120.51
2	SA	1499	A	O5'-C5'-C4'	-6.23	102.15	111.50
26	LA	554	U	C5'-C4'-C3'	-6.23	106.65	116.00
26	LA	1996	C	C1'-O4'-C4'	-6.23	103.47	109.70
44	LF	175	ILE	N-CA-CB	-6.23	100.95	111.23
45	LG	154	THR	CB-CA-C	-6.23	101.21	111.68
10	SJ	15	HIS	CE1-NE2-CD2	-6.23	102.77	109.00
23	SR	60	ARG	N-CA-CB	6.23	119.94	109.78
24	S3	654	HIS	CE1-NE2-CD2	-6.23	102.77	109.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	298	G	O3'-P-O5'	-6.23	94.65	104.00
26	LA	1714	U	O5'-C5'-C4'	6.23	120.84	111.50
50	LL	36	LEU	N-CA-CB	-6.23	100.62	110.28
57	LS	107	ALA	O-C-N	-6.23	115.52	122.12
26	LA	887	U	O4'-C1'-N1	6.23	117.84	108.50
47	LJ	33	THR	O-C-N	-6.23	114.31	122.59
2	SA	613	C	C4'-C3'-O3'	-6.23	103.66	113.00
2	SA	837	U	O4'-C1'-N1	6.23	117.84	108.50
26	LA	1656	C	C4'-C3'-C2'	-6.23	96.37	102.60
49	LK	92	PRO	CA-C-N	6.23	133.43	121.54
49	LK	92	PRO	C-N-CA	6.23	133.43	121.54
26	LA	1058	U	C2'-C3'-O3'	6.22	123.04	113.70
26	LA	1636	U	C5'-C4'-C3'	-6.22	106.66	116.00
26	LA	2667	C	P-O3'-C3'	-6.22	110.86	120.20
36	L2	49	ARG	O-C-N	-6.22	115.46	122.93
50	LL	27	ARG	NE-CZ-NH1	6.22	127.72	121.50
2	SA	238	A	C5'-C4'-C3'	6.22	125.33	116.00
2	SA	1052	U	C3'-C2'-O2'	6.22	120.03	110.70
7	SG	80	GLY	N-CA-C	-6.22	106.18	114.95
24	S3	216	GLU	O-C-N	-6.22	115.06	122.15
26	LA	2110	G	C2'-C3'-O3'	6.22	118.83	109.50
26	LA	438	G	C5'-C4'-C3'	-6.22	106.67	116.00
2	SA	1137	C	C3'-C2'-C1'	-6.22	95.28	101.50
2	SA	1206	G	O3'-P-O5'	6.22	113.33	104.00
15	SO	81	ILE	N-CA-C	6.22	118.83	111.05
26	LA	992	C	C5'-C4'-O4'	6.22	119.13	109.80
26	LA	2138	G	P-O5'-C5'	-6.22	111.57	120.90
26	LA	2216	G	C4'-C3'-C2'	-6.22	96.38	102.60
26	LA	2448	A	C5'-C4'-C3'	6.22	124.53	115.20
26	LA	2816	G	P-O3'-C3'	-6.22	110.87	120.20
41	L5	29	GLN	OE1-CD-NE2	-6.22	116.38	122.60
2	SA	697	U	C5'-C4'-C3'	-6.22	106.67	116.00
26	LA	826	U	O4'-C1'-C2'	6.22	113.82	107.60
2	SA	1032	G	P-O5'-C5'	-6.22	111.57	120.90
2	SA	1238	A	P-O3'-C3'	6.22	129.53	120.20
2	SA	1295	U	P-O5'-C5'	6.22	130.22	120.90
2	SA	1493	A	C2'-C3'-O3'	6.22	123.02	113.70
8	SH	10	LEU	CB-CA-C	-6.22	100.47	110.79
26	LA	14	A	C4'-C3'-C2'	-6.22	96.38	102.60
26	LA	1040	A	C4'-C3'-C2'	-6.22	96.38	102.60
26	LA	2249	U	C5'-C4'-C3'	6.22	124.52	115.20
58	LT	44	GLY	N-CA-C	-6.22	105.50	115.08

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	826	C	P-O5'-C5'	-6.21	111.58	120.90
26	LA	143	C	C4'-C3'-O3'	-6.21	103.68	113.00
26	LA	800	A	N9-C1'-C2'	-6.21	104.68	114.00
36	L2	50	ASP	CA-CB-CG	-6.21	106.39	112.60
2	SA	797	C	P-O5'-C5'	-6.21	111.58	120.90
2	SA	885	G	C5'-C4'-C3'	6.21	125.32	116.00
26	LA	343	C	O4'-C1'-N1	6.21	117.82	108.50
26	LA	1369	G	C1'-O4'-C4'	-6.21	103.69	109.90
2	SA	818	G	C1'-O4'-C4'	-6.21	103.69	109.90
24	S3	514	TYR	CA-CB-CG	6.21	125.08	113.90
26	LA	469	G	C5'-C4'-C3'	-6.21	106.68	116.00
26	LA	627	A	C5'-C4'-C3'	-6.21	105.88	115.20
29	LV	29	THR	CA-CB-CG2	6.21	121.06	110.50
26	LA	984	A	P-O3'-C3'	-6.21	110.89	120.20
26	LA	2107	G	O3'-P-O5'	-6.21	94.69	104.00
55	LQ	65	THR	CA-C-O	-6.21	112.22	119.05
17	SQ	74	LEU	N-CA-C	6.21	118.72	109.59
24	S3	369	LYS	CA-C-O	-6.21	114.20	121.46
26	LA	717	C	C5'-C4'-C3'	6.21	125.31	116.00
26	LA	1007	C	P-O5'-C5'	-6.21	111.59	120.90
26	LA	1266	G	C4'-C3'-C2'	-6.21	96.39	102.60
26	LA	2798	U	P-O5'-C5'	6.21	130.21	120.90
2	SA	817	C	P-O5'-C5'	-6.21	111.59	120.90
19	SC	78	LYS	CA-C-O	6.21	125.88	119.05
26	LA	784	G	C5'-C4'-O4'	6.21	119.11	109.80
26	LA	953	G	C5'-C4'-C3'	6.21	125.31	116.00
26	LA	1791	A	C1'-O4'-C4'	-6.21	103.69	109.90
49	LK	7	TYR	O-C-N	-6.21	115.22	122.86
53	LP	24	MET	CA-C-O	-6.21	113.84	120.42
54	LM	102	PRO	N-CA-CB	-6.21	97.79	103.31
58	LT	50	GLY	O-C-N	-6.21	114.63	122.70
2	SA	165	G	O4'-C1'-N9	6.21	117.81	108.50
2	SA	1081	A	C4'-C3'-C2'	-6.21	96.39	102.60
10	SJ	77	VAL	N-CA-C	6.21	116.36	110.53
24	S3	396	LEU	O-C-N	-6.21	116.07	123.27
26	LA	693	A	C5'-C4'-C3'	-6.21	106.69	116.00
2	SA	511	C	C1'-O4'-C4'	-6.20	103.50	109.70
2	SA	647	C	C1'-O4'-C4'	-6.20	103.70	109.90
2	SA	696	A	C1'-O4'-C4'	-6.20	103.70	109.90
2	SA	1101	A	C5'-C4'-C3'	6.20	124.50	115.20
2	SA	1388	C	C4'-C3'-C2'	-6.20	96.40	102.60
26	LA	20	C	O4'-C4'-C3'	-6.20	97.80	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	965	C	O3'-P-O5'	-6.20	94.69	104.00
26	LA	1385	A	P-O5'-C5'	6.20	130.21	120.90
26	LA	2260	C	P-O3'-C3'	-6.20	110.89	120.20
3	S1	58	C	O4'-C1'-N1	6.20	117.50	108.20
26	LA	133	U	O5'-C5'-C4'	-6.20	102.20	111.50
37	LC	10	VAL	O-C-N	6.20	127.99	121.91
37	LC	179	ASP	CA-C-N	6.20	129.68	120.87
37	LC	179	ASP	C-N-CA	6.20	129.68	120.87
15	SO	24	THR	O-C-N	-6.20	115.55	122.12
26	LA	1214	A	C1'-O4'-C4'	6.20	116.10	109.90
26	LA	1734	G	C4'-C3'-C2'	-6.20	96.40	102.60
31	LX	80	HIS	N-CA-CB	-6.20	98.64	110.17
53	LP	80	PHE	N-CA-CB	6.20	120.97	110.49
54	LM	30	ARG	N-CA-CB	6.20	119.31	110.13
11	SK	8	ARG	N-CA-C	6.20	117.94	108.52
21	SE	42	ASN	OD1-CG-ND2	-6.20	116.40	122.60
26	LA	1484	U	P-O5'-C5'	-6.20	111.60	120.90
39	L3	37	HIS	CA-C-N	-6.20	113.94	122.93
39	L3	37	HIS	C-N-CA	-6.20	113.94	122.93
1	SS	40	PHE	CA-CB-CG	-6.20	107.60	113.80
2	SA	1107	C	P-O3'-C3'	-6.20	110.90	120.20
15	SO	45	HIS	ND1-CE1-NE2	6.20	114.60	108.40
26	LA	1577	C	O4'-C1'-C2'	-6.20	101.40	107.60
26	LA	1980	G	C3'-C2'-O2'	-6.20	105.31	114.60
45	LG	113	PHE	CA-CB-CG	-6.20	107.60	113.80
2	SA	218	U	O4'-C1'-N1	6.20	117.79	108.50
4	S2	56	U	C5'-C4'-C3'	-6.20	106.71	116.00
26	LA	308	G	P-O5'-C5'	-6.20	111.61	120.90
26	LA	1008	A	C2'-C3'-O3'	6.20	118.79	109.50
26	LA	1151	A	C4'-C3'-C2'	-6.20	96.41	102.60
26	LA	1757	A	O4'-C4'-C3'	6.20	110.20	104.00
35	L1	49	ALA	N-CA-CB	-6.20	100.97	110.20
37	LC	7	ARG	NH1-CZ-NH2	-6.20	111.25	119.30
48	LN	76	GLU	O-C-N	-6.20	116.08	123.27
2	SA	131	A	C4'-C3'-C2'	-6.19	96.41	102.60
2	SA	178	C	C4'-C3'-C2'	-6.19	96.41	102.60
2	SA	826	C	C4'-C3'-O3'	-6.19	103.71	113.00
2	SA	1292	G	O4'-C1'-C2'	6.19	113.79	107.60
2	SA	1330	U	C2'-C3'-O3'	6.19	122.99	113.70
24	S3	282	ILE	CA-C-O	-6.19	114.61	121.05
24	S3	471	ARG	CG-CD-NE	-6.19	98.38	112.00
26	LA	304	U	P-O3'-C3'	-6.19	110.91	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1386	C	C1'-O4'-C4'	-6.19	103.71	109.90
26	LA	2021	C	P-O3'-C3'	6.19	129.49	120.20
47	LJ	116	LEU	CA-C-O	6.19	127.75	120.69
54	LM	30	ARG	CB-CA-C	-6.19	100.39	110.79
56	LR	76	HIS	CA-CB-CG	-6.19	107.61	113.80
4	S2	20	G	C2'-C3'-O3'	6.19	118.78	109.50
26	LA	2337	G	O4'-C1'-C2'	6.19	113.79	107.60
38	LE	182	ALA	O-C-N	-6.19	115.69	123.12
2	SA	831	A	O4'-C1'-N9	6.19	117.78	108.50
22	SF	4	TYR	N-CA-CB	-6.19	101.43	110.84
27	LD	35	LYS	CA-C-N	6.19	132.50	122.29
27	LD	35	LYS	C-N-CA	6.19	132.50	122.29
32	LY	79	ILE	CA-C-O	-6.19	115.39	121.58
21	SE	28	ARG	NH1-CZ-NH2	-6.19	111.26	119.30
22	SF	88	MET	CA-C-O	-6.19	113.18	120.60
41	L5	18	PHE	N-CA-C	-6.19	97.62	110.80
50	LL	55	ILE	CB-CA-C	-6.19	102.50	110.98
2	SA	465	A	O3'-P-O5'	6.19	113.28	104.00
2	SA	853	C	C5'-C4'-O4'	6.19	119.08	109.80
26	LA	893	C	C1'-C2'-O2'	6.19	117.68	108.40
36	L2	45	THR	CA-C-O	6.19	126.80	119.56
1	SS	36	ARG	NH1-CZ-NH2	-6.18	111.26	119.30
26	LA	1375	U	C3'-C2'-O2'	6.18	119.98	110.70
2	SA	659	U	C2'-C3'-O3'	6.18	122.97	113.70
10	SJ	64	GLN	N-CA-C	6.18	118.48	108.34
15	SO	63	ARG	O-C-N	-6.18	115.57	122.12
17	SQ	49	ASN	OD1-CG-ND2	-6.18	116.42	122.60
26	LA	1776	G	C4'-C3'-O3'	-6.18	103.73	113.00
26	LA	1905	C	C3'-C2'-C1'	6.18	107.48	101.30
26	LA	319	G	C1'-O4'-C4'	-6.18	103.72	109.90
26	LA	1997	C	O4'-C1'-N1	6.18	117.77	108.50
27	LD	146	LYS	O-C-N	-6.18	117.49	121.88
52	LO	81	ARG	CA-C-N	6.18	130.52	121.31
52	LO	81	ARG	C-N-CA	6.18	130.52	121.31
2	SA	108	G	O4'-C4'-C3'	6.18	110.18	104.00
2	SA	360	G	C4'-C3'-C2'	-6.18	96.42	102.60
2	SA	1384	C	O4'-C1'-N1	6.18	117.77	108.50
24	S3	669	LEU	N-CA-C	6.18	118.02	111.28
26	LA	630	G	C4'-C3'-C2'	-6.18	96.42	102.60
26	LA	812	C	C4'-C3'-C2'	-6.18	96.42	102.60
26	LA	1556	C	C4'-C3'-O3'	-6.18	103.73	113.00
26	LA	2682	A	O4'-C1'-C2'	-6.18	101.42	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	103	U	C5'-C4'-O4'	6.18	119.07	109.80
33	LZ	32	LEU	CA-C-O	-6.18	115.07	121.87
2	SA	39	G	C5'-C4'-C3'	6.18	125.27	116.00
2	SA	1363	A	C2'-C3'-O3'	6.18	118.77	109.50
12	SL	85	ARG	NE-CZ-NH2	-6.18	113.64	119.20
24	S3	252	ARG	N-CA-CB	6.18	119.20	110.12
26	LA	964	C	C5'-C4'-O4'	6.18	119.07	109.80
26	LA	1843	C	C5'-C4'-C3'	-6.18	106.73	116.00
51	LI	120	GLY	CA-C-N	6.18	133.09	121.97
51	LI	120	GLY	C-N-CA	6.18	133.09	121.97
2	SA	261	U	C3'-C2'-C1'	6.17	107.47	101.30
20	SD	25	ARG	NE-CZ-NH2	6.17	124.76	119.20
26	LA	216	A	O4'-C1'-N9	6.17	117.76	108.50
26	LA	1405	U	C5'-C4'-C3'	-6.17	106.74	116.00
26	LA	2422	C	C2'-C3'-O3'	6.17	118.76	109.50
26	LA	2748	A	O4'-C4'-C3'	6.17	110.17	104.00
37	LC	171	ILE	N-CA-CB	-6.17	103.89	111.67
46	LH	29	ASN	OD1-CG-ND2	6.17	128.78	122.60
49	LK	126	ARG	NE-CZ-NH2	6.17	124.76	119.20
54	LM	13	ASN	CA-CB-CG	6.17	118.78	112.60
26	LA	2658	C	O3'-P-O5'	-6.17	94.74	104.00
58	LT	92	TRP	O-C-N	-6.17	115.81	122.85
2	SA	423	G	C4'-C3'-C2'	-6.17	96.43	102.60
3	S1	37	G	C4'-C3'-C2'	-6.17	96.43	102.60
11	SK	58	THR	CA-C-N	6.17	126.36	119.32
11	SK	58	THR	C-N-CA	6.17	126.36	119.32
24	S3	684	LEU	CA-C-O	-6.17	113.95	120.55
25	LB	97	C	C4'-C3'-C2'	-6.17	96.43	102.60
26	LA	817	C	C4'-C3'-C2'	-6.17	96.43	102.60
26	LA	2038	G	C4'-C3'-C2'	-6.17	96.43	102.60
26	LA	2680	U	O4'-C4'-C3'	6.17	110.17	104.00
30	LW	102	ILE	CA-CB-CG1	6.17	120.89	110.40
32	LY	29	SER	N-CA-CB	6.17	120.92	110.49
2	SA	377	G	P-O3'-C3'	-6.17	110.95	120.20
26	LA	1096	A	P-O3'-C3'	-6.17	110.95	120.20
26	LA	2737	G	C4'-C3'-C2'	-6.17	96.43	102.60
54	LM	17	ARG	NH1-CZ-NH2	-6.17	111.28	119.30
2	SA	174	A	C1'-O4'-C4'	-6.17	103.73	109.90
2	SA	1338	G	C4'-C3'-C2'	-6.17	96.43	102.60
9	SI	15	ALA	N-CA-C	6.17	118.46	108.41
19	SC	35	ASP	CA-CB-CG	6.17	118.77	112.60
26	LA	95	A	C5'-C4'-C3'	-6.17	106.75	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	114	U	C3'-C2'-C1'	-6.17	95.13	101.30
26	LA	384	A	P-O3'-C3'	6.17	129.45	120.20
26	LA	829	A	P-O5'-C5'	-6.17	111.65	120.90
26	LA	947	A	C1'-O4'-C4'	6.17	116.07	109.90
26	LA	1077	A	O4'-C4'-C3'	-6.17	97.83	104.00
44	LF	159	LEU	N-CA-C	-6.17	105.40	113.17
50	LL	120	ARG	NH1-CZ-NH2	-6.17	111.28	119.30
2	SA	369	G	C4'-C3'-O3'	-6.17	103.75	113.00
14	SN	12	ARG	O-C-N	-6.17	114.69	122.27
26	LA	1189	A	C1'-O4'-C4'	-6.17	103.73	109.90
26	LA	1743	G	C2'-C3'-O3'	6.17	122.95	113.70
26	LA	1747	U	C5'-C4'-C3'	-6.17	106.75	116.00
33	LZ	28	PHE	CB-CA-C	-6.17	100.81	110.74
2	SA	542	G	C5'-C4'-C3'	-6.16	106.76	116.00
2	SA	1038	C	O4'-C1'-N1	6.16	117.74	108.50
26	LA	145	C	P-O3'-C3'	-6.16	110.95	120.20
26	LA	2633	G	C3'-C2'-C1'	6.16	107.46	101.30
37	LC	60	ARG	N-CA-C	-6.16	100.03	109.65
24	S3	69	ALA	N-CA-CB	-6.16	101.82	111.56
26	LA	993	G	O3'-P-O5'	6.16	113.24	104.00
26	LA	1372	U	P-O5'-C5'	6.16	130.14	120.90
26	LA	2102	G	C4'-C3'-C2'	-6.16	96.44	102.60
26	LA	2119	A	C1'-O4'-C4'	6.16	115.86	109.70
2	SA	83	C	O4'-C1'-C2'	-6.16	101.44	107.60
2	SA	96	U	P-O5'-C5'	-6.16	111.66	120.90
2	SA	442	G	O5'-C5'-C4'	-6.16	102.26	111.50
2	SA	669	G	P-O3'-C3'	-6.16	110.96	120.20
2	SA	782	A	P-O3'-C3'	6.16	129.44	120.20
2	SA	875	U	P-O3'-C3'	6.16	129.44	120.20
2	SA	960	U	C4'-C3'-C2'	6.16	108.76	102.60
26	LA	874	G	C4'-C3'-O3'	-6.16	103.76	113.00
26	LA	1298	C	P-O3'-C3'	6.16	129.44	120.20
37	LC	205	LYS	CB-CA-C	6.16	121.13	110.72
45	LG	125	GLY	CA-C-N	6.16	131.50	123.00
45	LG	125	GLY	C-N-CA	6.16	131.50	123.00
2	SA	1309	G	C1'-O4'-C4'	-6.16	103.74	109.90
4	S2	31	G	P-O5'-C5'	6.16	130.14	120.90
9	SI	84	ARG	N-CA-C	6.16	118.78	111.33
26	LA	1374	G	C3'-C2'-C1'	6.16	107.46	101.30
26	LA	2188	U	C5'-C4'-O4'	6.16	119.04	109.80
26	LA	2876	G	P-O5'-C5'	-6.16	111.66	120.90
27	LD	237	ARG	CA-C-O	6.16	127.95	120.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	LL	19	ASP	CA-CB-CG	-6.16	106.44	112.60
50	LL	91	GLU	CA-C-O	-6.16	114.36	120.70
55	LQ	72	ALA	N-CA-CB	-6.16	101.07	110.12
45	LG	126	ASN	O-C-N	-6.16	116.03	123.29
49	LK	65	SER	N-CA-CB	6.16	120.89	110.49
2	SA	1332	A	C5'-C4'-C3'	-6.16	106.77	116.00
19	SC	28	PHE	CA-C-N	6.16	129.03	120.29
19	SC	28	PHE	C-N-CA	6.16	129.03	120.29
24	S3	278	LEU	O-C-N	-6.16	115.60	122.12
26	LA	855	G	C4'-C3'-C2'	-6.16	96.44	102.60
27	LD	52	HIS	CB-CG-CD2	-6.16	123.20	131.20
44	LF	79	ARG	N-CA-C	6.16	117.68	110.97
26	LA	903	C	P-O3'-C3'	-6.15	110.97	120.20
47	LJ	89	GLY	CA-C-O	-6.15	113.75	120.40
25	LB	6	G	C1'-C2'-O2'	6.15	117.63	108.40
26	LA	2016	U	O4'-C4'-C3'	6.15	110.15	104.00
26	LA	2349	G	O4'-C1'-N9	6.15	117.73	108.50
2	SA	808	C	O4'-C1'-N1	6.15	117.72	108.50
26	LA	2148	G	O4'-C4'-C3'	-6.15	97.85	104.00
29	LV	31	VAL	N-CA-C	6.15	116.78	108.17
2	SA	622	A	P-O5'-C5'	-6.15	111.68	120.90
35	L1	37	ARG	O-C-N	-6.15	114.87	123.11
47	LJ	100	LYS	N-CA-CB	-6.15	101.08	110.12
2	SA	568	G	P-O5'-C5'	-6.15	111.68	120.90
2	SA	789	U	C5'-C4'-C3'	-6.15	105.98	115.20
2	SA	873	A	O4'-C4'-C3'	-6.15	99.95	106.10
2	SA	1059	C	C5'-C4'-O4'	6.15	119.02	109.80
26	LA	1078	U	O5'-C5'-C4'	6.15	120.72	111.50
26	LA	2784	U	C5'-C4'-C3'	-6.15	106.78	116.00
34	L0	58	ASN	CA-CB-CG	6.15	118.75	112.60
44	LF	53	THR	CA-C-O	6.15	127.94	120.62
51	LI	42	LYS	N-CA-C	6.15	120.39	113.01
2	SA	618	C	C5'-C4'-O4'	6.14	119.02	109.80
2	SA	793	U	O5'-C5'-C4'	6.14	120.92	111.70
13	SM	76	ILE	CA-C-N	6.14	128.43	120.44
13	SM	76	ILE	C-N-CA	6.14	128.43	120.44
26	LA	1148	U	C1'-C2'-O2'	6.14	117.62	108.40
26	LA	1669	A	O5'-C5'-C4'	6.14	120.72	111.50
26	LA	2661	G	O4'-C4'-C3'	6.14	110.14	104.00
44	LF	64	GLY	N-CA-C	-6.14	98.62	113.18
2	SA	564	C	C4'-C3'-C2'	6.14	108.74	102.60
12	SL	40	THR	CA-C-N	6.14	126.11	120.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	SL	40	THR	C-N-CA	6.14	126.11	120.21
17	SQ	22	VAL	CB-CA-C	6.14	119.49	110.77
17	SQ	30	HIS	CG-CD2-NE2	6.14	113.34	107.20
26	LA	1053	C	P-O5'-C5'	6.14	130.12	120.90
26	LA	1412	U	O4'-C4'-C3'	-6.14	97.86	104.00
26	LA	1528	A	C4'-C3'-C2'	-6.14	96.46	102.60
2	SA	225	C	C5'-C4'-C3'	-6.14	106.79	116.00
2	SA	414	A	C1'-O4'-C4'	-6.14	103.76	109.90
26	LA	784	G	C4'-C3'-O3'	-6.14	103.79	113.00
34	L0	38	GLN	OE1-CD-NE2	-6.14	116.46	122.60
36	L2	17	SER	O-C-N	-6.14	114.42	122.59
26	LA	849	A	C4'-C3'-C2'	-6.14	96.46	102.60
26	LA	1160	G	N9-C1'-C2'	-6.14	102.79	112.00
26	LA	1490	A	C4'-C3'-O3'	-6.14	103.79	113.00
27	LD	40	GLY	O-C-N	-6.14	114.72	122.70
27	LD	44	ASN	N-CA-C	6.14	118.77	111.71
2	SA	1141	C	P-O3'-C3'	-6.14	110.99	120.20
26	LA	686	U	C4'-C3'-O3'	6.14	118.61	109.40
26	LA	1539	U	P-O3'-C3'	-6.14	110.99	120.20
2	SA	380	G	C4'-C3'-C2'	-6.14	96.46	102.60
3	S1	21	U	O5'-C5'-C4'	6.14	120.70	111.50
26	LA	203	A	C4'-C3'-C2'	-6.14	96.46	102.60
26	LA	1599	U	C1'-C2'-O2'	6.14	117.61	108.40
2	SA	196	A	P-O3'-C3'	-6.13	111.00	120.20
2	SA	517	G	C5'-C4'-C3'	-6.13	106.00	115.20
2	SA	576	C	O4'-C1'-N1	6.13	117.40	108.20
2	SA	1308	U	O3'-P-O5'	6.13	113.20	104.00
24	S3	130	ASN	CA-CB-CG	-6.13	106.47	112.60
26	LA	50	U	C4'-C3'-C2'	-6.13	96.47	102.60
26	LA	64	A	O4'-C1'-C2'	6.13	113.73	107.60
26	LA	991	C	C1'-C2'-O2'	6.13	117.60	108.40
34	L0	20	ASN	CA-CB-CG	-6.13	106.47	112.60
43	L7	36	ARG	N-CA-C	6.13	118.81	110.35
4	S2	66	C	O4'-C1'-N1	6.13	117.70	108.50
19	SC	205	GLU	CA-C-O	-6.13	114.14	120.89
26	LA	710	U	C3'-C2'-C1'	-6.13	95.17	101.30
26	LA	843	G	C4'-C3'-O3'	-6.13	103.80	113.00
26	LA	2492	U	C2'-C3'-O3'	6.13	118.70	109.50
2	SA	1152	A	C4'-C3'-C2'	-6.13	96.47	102.60
2	SA	1505	G	O5'-C5'-C4'	6.13	120.70	111.50
26	LA	749	A	P-O3'-C3'	-6.13	111.00	120.20
26	LA	1354	A	C1'-C2'-O2'	6.13	117.60	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2328	A	C5'-C4'-O4'	6.13	119.00	109.80
26	LA	2819	G	C5'-C4'-C3'	-6.13	106.80	116.00
37	LC	115	ILE	N-CA-C	6.13	117.41	108.58
57	LS	6	GLY	O-C-N	-6.13	114.73	122.70
26	LA	1142	A	O4'-C1'-C2'	6.13	111.93	105.80
26	LA	1646	C	O3'-P-O5'	-6.13	94.81	104.00
2	SA	97	G	P-O5'-C5'	6.13	130.09	120.90
2	SA	810	C	O4'-C1'-N1	6.13	117.69	108.50
4	S2	13	C	P-O5'-C5'	6.13	130.09	120.90
4	S2	58	A	C2'-C3'-O3'	6.13	122.89	113.70
26	LA	378	C	C4'-C3'-O3'	-6.13	103.81	113.00
26	LA	1784	A	C2'-C3'-O3'	6.13	118.69	109.50
26	LA	2586	U	P-O5'-C5'	-6.13	111.71	120.90
45	LG	148	VAL	N-CA-CB	-6.13	102.81	110.47
2	SA	280	C	P-O3'-C3'	6.13	129.39	120.20
2	SA	651	C	N1-C1'-C2'	6.13	121.19	112.00
7	SG	34	LYS	CA-C-N	6.13	129.62	120.31
7	SG	34	LYS	C-N-CA	6.13	129.62	120.31
26	LA	750	A	C5'-C4'-C3'	-6.13	106.81	116.00
26	LA	2262	U	O4'-C4'-C3'	6.13	110.13	104.00
26	LA	2426	A	C5'-C4'-C3'	6.13	124.39	115.20
26	LA	2652	C	O4'-C4'-C3'	-6.13	97.87	104.00
37	LC	1	MET	O-C-N	-6.13	113.20	123.00
5	ST	30	PHE	CB-CA-C	6.12	120.50	110.88
26	LA	1680	U	C5'-C4'-O4'	-6.12	100.61	109.80
2	SA	477	C	P-O3'-C3'	-6.12	111.02	120.20
2	SA	521	G	C1'-O4'-C4'	-6.12	103.78	109.90
2	SA	1049	U	C1'-O4'-C4'	-6.12	103.58	109.70
3	S1	26	U	O4'-C1'-N1	6.12	117.69	108.50
6	SU	18	PHE	CA-CB-CG	6.12	119.92	113.80
7	SG	55	LYS	N-CA-CB	-6.12	101.13	110.01
12	SL	38	THR	CA-C-O	6.12	127.85	120.81
24	S3	572	ASP	CA-CB-CG	-6.12	106.48	112.60
26	LA	159	G	C2'-C3'-O3'	6.12	122.89	113.70
26	LA	1063	G	C5'-C4'-C3'	6.12	125.19	116.00
26	LA	2216	G	C5'-C4'-C3'	-6.12	106.82	116.00
2	SA	22	G	C4'-C3'-C2'	-6.12	96.48	102.60
2	SA	604	G	C5'-C4'-C3'	-6.12	106.82	116.00
4	S2	53	G	P-O5'-C5'	6.12	130.08	120.90
4	S2	77	A	O4'-C1'-C2'	-6.12	101.48	107.60
21	SE	139	THR	N-CA-C	-6.12	107.64	114.62
24	S3	145	ARG	NE-CZ-NH2	6.12	124.71	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	294	A	O5'-C5'-C4'	-6.12	102.32	111.50
26	LA	921	C	C3'-C2'-C1'	-6.12	95.18	101.30
2	SA	1154	G	C4'-C3'-C2'	-6.12	96.48	102.60
3	S1	21	U	C5'-C4'-O4'	6.12	118.98	109.80
4	S2	21	U	O4'-C1'-N1	6.12	117.68	108.50
15	SO	45	HIS	CB-CG-CD2	-6.12	123.24	131.20
26	LA	1723	G	C5'-C4'-C3'	-6.12	106.82	116.00
26	LA	2707	U	P-O5'-C5'	6.12	130.08	120.90
34	L0	10	SER	N-CA-C	6.12	118.03	111.36
54	LM	114	LYS	CB-CA-C	-6.12	98.99	110.01
2	SA	840	C	O3'-P-O5'	-6.12	94.82	104.00
2	SA	936	C	O4'-C1'-C2'	-6.12	101.48	107.60
26	LA	757	G	O4'-C1'-C2'	-6.12	101.48	107.60
26	LA	1759	A	O4'-C1'-N9	6.12	117.68	108.50
29	LV	3	ARG	CB-CA-C	6.12	122.60	110.42
55	LQ	100	HIS	CA-CB-CG	-6.12	107.68	113.80
18	SB	21	TYR	CA-CB-CG	6.12	124.91	113.90
26	LA	2362	C	O4'-C1'-C2'	6.12	113.72	107.60
2	SA	920	U	P-O3'-C3'	6.12	129.37	120.20
14	SN	1	ALA	CB-CA-C	-6.12	101.33	110.50
26	LA	748	G	C5'-C4'-O4'	6.12	118.27	109.10
52	LO	135	VAL	N-CA-C	6.12	122.06	109.34
2	SA	545	C	P-O5'-C5'	6.11	130.07	120.90
10	SJ	37	ARG	N-CA-C	-6.11	100.75	108.45
24	S3	368	ASN	N-CA-CB	6.11	120.18	111.19
26	LA	805	G	P-O5'-C5'	-6.11	111.73	120.90
26	LA	1574	C	O4'-C4'-C3'	6.11	110.11	104.00
26	LA	1895	C	O4'-C1'-N1	6.11	117.67	108.50
26	LA	1965	C	N1-C1'-C2'	6.11	121.17	112.00
26	LA	1974	C	C5'-C4'-C3'	6.11	125.17	116.00
27	LD	139	THR	N-CA-C	6.11	123.82	110.80
45	LG	7	TYR	O-C-N	-6.11	115.18	122.15
26	LA	1293	C	C5'-C4'-O4'	6.11	118.97	109.80
54	LM	93	GLN	CA-C-N	6.11	127.48	119.84
54	LM	93	GLN	C-N-CA	6.11	127.48	119.84
2	SA	761	G	C2'-C3'-O3'	-6.11	104.53	113.70
2	SA	1501	C	O5'-C5'-C4'	6.11	120.67	111.50
26	LA	350	G	C5'-C4'-O4'	6.11	118.97	109.80
26	LA	871	U	P-O5'-C5'	6.11	130.07	120.90
26	LA	1270	C	C1'-O4'-C4'	-6.11	103.59	109.70
26	LA	2094	A	P-O3'-C3'	-6.11	111.03	120.20
26	LA	2743	U	C3'-C2'-C1'	6.11	107.41	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	LL	76	HIS	CB-CG-ND1	6.11	131.87	122.70
26	LA	1803	A	P-O3'-C3'	6.11	129.36	120.20
2	SA	395	C	C1'-O4'-C4'	-6.11	103.79	109.90
2	SA	1353	G	C4'-C3'-O3'	-6.11	103.84	113.00
26	LA	479	A	P-O3'-C3'	6.11	129.36	120.20
26	LA	1698	A	P-O5'-C5'	6.11	130.06	120.90
26	LA	2248	C	O4'-C1'-N1	6.11	117.66	108.50
51	LI	68	ARG	N-CA-CB	6.11	118.87	110.01
22	SF	70	VAL	N-CA-CB	6.11	118.38	110.57
26	LA	1401	G	O3'-P-O5'	6.11	113.16	104.00
42	L6	44	ARG	N-CA-C	6.11	121.19	113.25
16	SP	50	THR	O-C-N	-6.10	115.47	123.28
26	LA	1353	A	C4'-C3'-O3'	-6.10	103.84	113.00
26	LA	1777	U	C5'-C4'-C3'	6.10	125.16	116.00
37	LC	148	ASN	O-C-N	-6.10	113.74	121.74
49	LK	70	THR	CA-C-N	6.10	132.40	122.39
49	LK	70	THR	C-N-CA	6.10	132.40	122.39
2	SA	173	U	O5'-C5'-C4'	-6.10	102.55	111.70
2	SA	1132	C	C4'-C3'-O3'	-6.10	103.84	113.00
26	LA	370	G	C2'-C3'-O3'	6.10	118.65	109.50
26	LA	645	C	P-O5'-C5'	6.10	130.05	120.90
26	LA	2760	C	C4'-C3'-C2'	-6.10	96.50	102.60
46	LH	42	VAL	CA-CB-CG2	-6.10	100.03	110.40
2	SA	1200	C	C3'-C2'-O2'	-6.10	105.45	114.60
2	SA	1470	U	O4'-C1'-N1	6.10	117.65	108.50
26	LA	1840	G	C2'-C3'-O3'	6.10	122.85	113.70
26	LA	1889	A	C4'-C3'-C2'	-6.10	96.50	102.60
26	LA	2421	G	C1'-C2'-O2'	6.10	117.55	108.40
34	L0	48	ARG	CD-NE-CZ	-6.10	115.86	124.40
26	LA	2570	G	P-O3'-C3'	-6.10	111.05	120.20
2	SA	107	G	C4'-C3'-C2'	-6.10	96.50	102.60
2	SA	635	A	P-O3'-C3'	6.10	129.34	120.20
19	SC	216	PRO	CA-C-N	6.10	128.95	120.29
19	SC	216	PRO	C-N-CA	6.10	128.95	120.29
26	LA	1953	A	P-O3'-C3'	-6.10	111.05	120.20
49	LK	74	PRO	CA-C-O	-6.10	114.46	121.96
52	LO	123	LYS	N-CA-C	6.10	120.56	113.18
53	LP	65	LEU	O-C-N	-6.10	115.79	122.07
57	LS	13	HIS	CE1-NE2-CD2	-6.10	102.90	109.00
26	LA	2693	G	C2'-C3'-O3'	6.10	122.84	113.70
53	LP	31	HIS	ND1-CE1-NE2	6.10	114.50	108.40
2	SA	49	U	O3'-P-O5'	-6.09	94.86	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	389	A	C5'-C4'-C3'	-6.09	106.86	116.00
4	S2	37	U	C4'-C3'-O3'	-6.09	103.86	113.00
24	S3	546	GLY	N-CA-C	-6.09	107.97	114.67
26	LA	234	U	O4'-C1'-N1	6.09	117.64	108.50
26	LA	1782	U	P-O5'-C5'	-6.09	111.76	120.90
26	LA	2142	A	C5'-C4'-C3'	-6.09	106.86	116.00
26	LA	2363	G	P-O5'-C5'	-6.09	111.76	120.90
45	LG	46	LYS	O-C-N	-6.09	114.43	122.47
49	LK	5	GLN	N-CA-C	6.09	119.06	108.76
2	SA	1105	A	O3'-P-O5'	6.09	113.14	104.00
19	SC	211	ALA	CA-C-O	6.09	129.22	120.51
26	LA	903	C	C4'-C3'-O3'	-6.09	103.86	113.00
26	LA	2585	U	P-O5'-C5'	-6.09	111.76	120.90
50	LL	120	ARG	NE-CZ-NH2	6.09	124.68	119.20
9	SI	105	ARG	NH1-CZ-NH2	-6.09	111.38	119.30
22	SF	4	TYR	CB-CA-C	6.09	119.82	110.62
26	LA	526	A	C5'-C4'-C3'	-6.09	106.86	116.00
26	LA	932	U	P-O3'-C3'	6.09	129.34	120.20
26	LA	2339	C	O3'-P-O5'	-6.09	94.86	104.00
26	LA	2475	C	C5'-C4'-O4'	6.09	118.94	109.80
47	LJ	158	ARG	O-C-N	-6.09	114.78	122.27
55	LQ	68	LYS	CA-C-O	6.09	127.01	120.55
58	LT	37	GLU	CA-C-O	6.09	130.60	122.44
2	SA	1255	G	P-O3'-C3'	6.09	129.34	120.20
4	S2	56	U	C4'-C3'-C2'	-6.09	96.51	102.60
6	SU	65	ARG	O-C-N	-6.09	115.80	122.07
13	SM	104	ASN	CA-CB-CG	-6.09	106.51	112.60
24	S3	279	ASP	N-CA-CB	-6.09	101.18	110.01
26	LA	1457	U	P-O5'-C5'	6.09	130.03	120.90
26	LA	2205	A	O4'-C4'-C3'	6.09	110.09	104.00
26	LA	2714	G	C3'-C2'-O2'	-6.09	101.57	110.70
30	LW	21	ARG	NE-CZ-NH1	6.09	127.59	121.50
34	L0	48	ARG	O-C-N	-6.09	115.21	122.15
37	LC	88	LYS	N-CA-C	6.09	118.89	111.82
52	LO	27	SER	CB-CA-C	-6.09	98.30	110.42
2	SA	65	A	P-O5'-C5'	-6.09	111.77	120.90
2	SA	287	U	P-O5'-C5'	6.09	130.03	120.90
2	SA	1101	A	O4'-C4'-C3'	-6.09	100.01	106.10
26	LA	1060	U	P-O3'-C3'	6.09	129.33	120.20
26	LA	1137	G	O4'-C1'-C2'	-6.09	101.51	107.60
26	LA	423	A	P-O5'-C5'	6.09	130.03	120.90
26	LA	1007	C	P-O3'-C3'	6.09	129.33	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2767	C	C4'-C3'-O3'	-6.09	103.87	113.00
39	L3	30	ASP	CA-CB-CG	-6.09	106.51	112.60
8	SH	110	MET	CA-C-O	-6.08	114.94	121.45
9	SI	46	VAL	CA-CB-CG1	-6.08	100.06	110.40
26	LA	17	G	C2'-C3'-O3'	6.08	122.83	113.70
26	LA	465	G	O3'-P-O5'	6.08	113.12	104.00
26	LA	488	G	C1'-O4'-C4'	-6.08	103.82	109.90
26	LA	727	A	C4'-C3'-O3'	-6.08	103.88	113.00
40	L4	47	ILE	CB-CA-C	-6.08	102.27	111.33
2	SA	765	G	P-O5'-C5'	6.08	130.02	120.90
22	SF	44	ARG	NE-CZ-NH2	-6.08	113.73	119.20
24	S3	686	TYR	CA-CB-CG	-6.08	102.95	113.90
26	LA	201	C	C1'-O4'-C4'	-6.08	103.82	109.90
26	LA	265	A	C5'-C4'-C3'	6.08	125.12	116.00
26	LA	1333	G	C4'-C3'-O3'	-6.08	103.88	113.00
27	LD	140	VAL	O-C-N	-6.08	116.19	122.82
44	LF	61	ARG	CA-C-N	6.08	133.16	121.54
44	LF	61	ARG	C-N-CA	6.08	133.16	121.54
46	LH	29	ASN	N-CA-CB	6.08	120.77	110.49
53	LP	66	ALA	N-CA-C	6.08	117.91	111.28
2	SA	361	G	C4'-C3'-C2'	-6.08	96.52	102.60
24	S3	166	VAL	N-CA-CB	6.08	119.72	111.21
2	SA	664	G	C4'-C3'-O3'	-6.08	103.88	113.00
26	LA	791	C	C3'-C2'-C1'	-6.08	95.42	101.50
26	LA	2601	C	P-O3'-C3'	-6.08	111.08	120.20
2	SA	277	C	P-O3'-C3'	-6.08	111.08	120.20
2	SA	358	U	C5'-C4'-C3'	6.08	125.12	116.00
12	SL	116	TYR	CA-CB-CG	6.08	124.84	113.90
13	SM	90	HIS	ND1-CE1-NE2	6.08	114.48	108.40
37	LC	221	GLY	N-CA-C	6.08	121.81	112.51
11	SK	93	GLU	N-CA-CB	-6.08	102.51	110.59
17	SQ	50	ASN	CA-CB-CG	-6.08	106.52	112.60
26	LA	331	C	P-O3'-C3'	6.08	129.31	120.20
26	LA	436	C	O4'-C1'-N1	6.08	117.61	108.50
2	SA	160	A	P-O5'-C5'	-6.07	111.79	120.90
2	SA	899	C	C1'-C2'-O2'	6.07	117.51	108.40
2	SA	1400	C	C1'-O4'-C4'	-6.07	103.63	109.70
2	SA	1464	U	C5'-C4'-C3'	6.07	125.11	116.00
7	SG	16	LYS	N-CA-C	6.07	117.57	111.07
11	SK	8	ARG	O-C-N	-6.07	117.12	123.56
22	SF	106	LYS	O-C-N	-6.07	115.53	122.09
26	LA	2317	A	C4'-C3'-C2'	-6.07	96.53	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2478	A	P-O3'-C3'	-6.07	111.09	120.20
27	LD	254	LYS	CA-C-N	6.07	129.92	120.75
27	LD	254	LYS	C-N-CA	6.07	129.92	120.75
8	SH	79	ARG	NE-CZ-NH2	6.07	124.67	119.20
26	LA	899	A	C5'-C4'-C3'	6.07	125.11	116.00
26	LA	1203	U	C1'-C2'-O2'	6.07	117.51	108.40
55	LQ	11	ALA	CA-C-N	6.07	130.86	120.72
55	LQ	11	ALA	C-N-CA	6.07	130.86	120.72
2	SA	1536	C	C1'-O4'-C4'	-6.07	103.63	109.70
3	S1	44	U	O4'-C1'-N1	6.07	117.61	108.50
21	SE	11	GLN	CA-C-O	-6.07	114.47	121.15
24	S3	484	LYS	N-CA-CB	6.07	119.61	110.02
26	LA	464	U	P-O5'-C5'	-6.07	111.79	120.90
26	LA	1270	C	C2'-C3'-O3'	6.07	118.61	109.50
28	LU	27	LYS	CA-C-N	6.07	129.38	120.82
28	LU	27	LYS	C-N-CA	6.07	129.38	120.82
37	LC	202	THR	N-CA-C	6.07	119.07	109.96
50	LL	129	GLU	CA-C-N	6.07	133.14	121.54
50	LL	129	GLU	C-N-CA	6.07	133.14	121.54
2	SA	831	A	P-O3'-C3'	-6.07	111.10	120.20
26	LA	1926	U	N1-C1'-C2'	-6.07	102.90	112.00
46	LH	159	LYS	CA-C-O	-6.07	113.81	120.36
50	LL	119	PHE	CB-CA-C	6.07	120.41	110.88
2	SA	1478	U	P-O5'-C5'	6.07	130.00	120.90
4	S2	45	A	O4'-C1'-N9	6.07	117.60	108.50
7	SG	39	GLU	CB-CA-C	-6.07	101.27	110.92
26	LA	2467	C	O3'-P-O5'	-6.07	94.90	104.00
26	LA	2527	C	C4'-C3'-O3'	-6.07	103.90	113.00
26	LA	2568	U	O5'-C5'-C4'	-6.07	102.40	111.50
27	LD	244	VAL	CA-C-O	-6.07	115.62	121.63
2	SA	1040	U	C5'-C4'-C3'	6.07	125.10	116.00
26	LA	2454	G	C1'-O4'-C4'	-6.07	103.83	109.90
49	LK	60	VAL	CA-C-N	6.07	133.12	121.54
49	LK	60	VAL	C-N-CA	6.07	133.12	121.54
2	SA	787	A	O4'-C1'-N9	6.06	117.59	108.50
2	SA	1347	G	P-O3'-C3'	6.06	129.30	120.20
11	SK	11	VAL	CB-CA-C	-6.06	101.34	111.29
22	SF	36	ILE	N-CA-CB	6.06	118.99	111.41
26	LA	1874	C	O4'-C1'-N1	6.06	117.60	108.50
26	LA	2030	U	O4'-C1'-N1	6.06	117.30	108.20
2	SA	28	A	C4'-C3'-C2'	-6.06	96.54	102.60
2	SA	90	C	C4'-C3'-O3'	-6.06	103.91	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	450	G	C4'-C3'-C2'	-6.06	96.54	102.60
2	SA	945	G	O4'-C1'-C2'	6.06	113.66	107.60
17	SQ	15	LYS	N-CA-C	6.06	118.85	111.82
24	S3	326	ASP	CA-CB-CG	-6.06	106.54	112.60
26	LA	62	U	O4'-C1'-N1	6.06	117.59	108.50
26	LA	96	C	P-O5'-C5'	-6.06	111.81	120.90
26	LA	1174	U	C3'-C2'-C1'	6.06	107.36	101.30
26	LA	1721	G	C5'-C4'-C3'	-6.06	106.11	115.20
26	LA	1854	A	C4'-C3'-O3'	-6.06	103.91	113.00
26	LA	1936	A	C2'-C3'-O3'	6.06	118.59	109.50
26	LA	2007	U	O5'-C5'-C4'	-6.06	102.41	111.50
30	LW	73	ASN	CA-CB-CG	6.06	118.66	112.60
46	LH	16	VAL	N-CA-C	6.06	116.34	107.37
54	LM	29	HIS	CB-CA-C	6.06	119.98	111.86
2	SA	328	C	O4'-C4'-C3'	-6.06	100.04	106.10
2	SA	1240	U	C2'-C3'-O3'	6.06	118.59	109.50
11	SK	52	ARG	NE-CZ-NH1	6.06	127.56	121.50
23	SR	30	ASN	CA-CB-CG	-6.06	106.54	112.60
20	SD	128	VAL	CA-C-N	-6.06	114.57	122.99
20	SD	128	VAL	C-N-CA	-6.06	114.57	122.99
25	LB	72	G	P-O5'-C5'	-6.06	111.81	120.90
26	LA	2401	U	O4'-C1'-N1	6.06	117.59	108.50
26	LA	2864	G	C5'-C4'-C3'	-6.06	106.91	116.00
26	LA	2904	U	C4'-C3'-O3'	-6.06	103.91	113.00
40	L4	46	VAL	CA-C-O	-6.06	115.63	121.63
45	LG	154	THR	N-CA-C	6.06	119.37	107.98
2	SA	116	A	P-O3'-C3'	-6.06	111.11	120.20
26	LA	1063	G	O4'-C4'-C3'	6.06	110.06	104.00
53	LP	17	ARG	N-CA-C	6.06	117.55	111.07
26	LA	237	C	C4'-C3'-C2'	-6.06	96.54	102.60
26	LA	327	G	C1'-C2'-O2'	6.06	117.48	108.40
14	SN	72	PHE	N-CA-CB	-6.05	101.60	110.26
26	LA	713	G	C4'-C3'-C2'	-6.05	96.55	102.60
26	LA	846	U	C2'-C3'-O3'	6.05	118.58	109.50
26	LA	1272	A	C1'-O4'-C4'	-6.05	103.85	109.90
45	LG	78	ILE	CA-C-O	6.05	128.35	120.78
2	SA	956	U	O3'-P-O5'	-6.05	94.92	104.00
26	LA	846	U	O4'-C1'-N1	6.05	117.28	108.20
26	LA	2689	U	C1'-O4'-C4'	-6.05	103.65	109.70
30	LW	42	LYS	N-CA-C	-6.05	98.66	108.41
2	SA	1049	U	C1'-C2'-O2'	6.05	120.88	111.80
2	SA	1356	G	P-O5'-C5'	-6.05	111.82	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	SL	38	THR	O-C-N	-6.05	115.49	122.93
25	LB	57	A	C5'-C4'-O4'	6.05	118.88	109.80
26	LA	945	A	P-O3'-C3'	6.05	129.28	120.20
26	LA	973	A	C5'-C4'-C3'	-6.05	106.12	115.20
26	LA	1177	G	C4'-C3'-C2'	-6.05	96.55	102.60
26	LA	1742	U	C4'-C3'-O3'	-6.05	103.92	113.00
26	LA	2084	C	C4'-C3'-O3'	-6.05	103.92	113.00
26	LA	2886	A	O5'-C5'-C4'	-6.05	102.42	111.50
2	SA	727	G	P-O3'-C3'	6.05	129.27	120.20
2	SA	1376	U	P-O5'-C5'	-6.05	111.83	120.90
6	SU	63	ASN	CB-CG-ND2	6.05	125.47	116.40
19	SC	231	ARG	CA-C-N	6.05	132.59	121.70
19	SC	231	ARG	C-N-CA	6.05	132.59	121.70
22	SF	10	VAL	CA-C-O	6.05	127.44	120.67
25	LB	43	C	O5'-C5'-C4'	6.05	120.58	111.50
46	LH	103	ASN	N-CA-C	6.05	118.15	108.41
2	SA	517	G	C2'-C3'-O3'	6.05	118.57	109.50
2	SA	605	U	P-O3'-C3'	6.05	129.27	120.20
26	LA	1199	U	C3'-C2'-O2'	-6.05	101.63	110.70
26	LA	1203	U	C1'-O4'-C4'	-6.05	103.85	109.90
2	SA	56	U	O3'-P-O5'	-6.05	94.93	104.00
2	SA	184	G	P-O3'-C3'	-6.05	111.13	120.20
2	SA	765	G	C2'-C3'-O3'	6.05	122.77	113.70
26	LA	227	A	C3'-C2'-C1'	-6.05	95.45	101.50
26	LA	1677	A	C4'-C3'-O3'	6.05	118.47	109.40
26	LA	2595	G	P-O5'-C5'	6.05	129.97	120.90
4	S2	10	G	O4'-C1'-C2'	-6.04	101.56	107.60
24	S3	97	GLU	CA-C-N	6.04	128.18	120.56
24	S3	97	GLU	C-N-CA	6.04	128.18	120.56
26	LA	1142	A	C2'-C3'-O3'	6.04	118.57	109.50
26	LA	2815	C	C1'-O4'-C4'	-6.04	103.86	109.90
2	SA	174	A	C4'-C3'-C2'	-6.04	96.56	102.60
4	S2	31	G	O5'-C5'-C4'	6.04	120.56	111.50
11	SK	7	ALA	CA-C-O	6.04	129.15	120.51
24	S3	84	ASN	CB-CA-C	-6.04	102.36	111.73
26	LA	785	G	C1'-C2'-O2'	6.04	117.46	108.40
26	LA	1029	A	P-O5'-C5'	6.04	129.97	120.90
26	LA	1306	C	O4'-C1'-N1	6.04	117.56	108.50
26	LA	1671	U	P-O5'-C5'	6.04	129.97	120.90
27	LD	24	HIS	CA-CB-CG	6.04	119.84	113.80
28	LU	102	HIS	CE1-NE2-CD2	-6.04	102.96	109.00
31	LX	43	ASP	CA-CB-CG	6.04	118.64	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	LI	51	ARG	O-C-N	-6.04	115.15	122.22
22	SF	22	ILE	N-CA-C	6.04	116.78	110.62
26	LA	960	A	C3'-C2'-C1'	6.04	107.34	101.30
26	LA	1293	C	C5'-C4'-C3'	-6.04	106.94	116.00
1	SS	48	ILE	CA-C-O	6.04	126.99	120.53
2	SA	650	G	O4'-C4'-C3'	6.04	110.04	104.00
2	SA	915	A	O4'-C1'-C2'	6.04	113.64	107.60
14	SN	70	HIS	ND1-CE1-NE2	6.04	114.44	108.40
26	LA	1901	A	O4'-C4'-C3'	6.04	110.04	104.00
53	LP	73	ASN	CA-CB-CG	-6.04	106.56	112.60
3	S1	21	U	P-O3'-C3'	-6.04	111.14	120.20
21	SE	45	VAL	O-C-N	-6.04	116.90	123.18
22	SF	11	HIS	CG-CD2-NE2	6.04	113.24	107.20
26	LA	694	U	C1'-C2'-O2'	6.04	117.46	108.40
26	LA	1137	G	P-O5'-C5'	-6.04	111.84	120.90
26	LA	1702	G	C1'-C2'-O2'	6.04	117.46	108.40
57	LS	63	ARG	N-CA-CB	6.04	119.20	110.20
2	SA	804	U	P-O5'-C5'	-6.04	111.84	120.90
22	SF	69	GLU	N-CA-C	6.04	117.86	111.28
24	S3	534	GLU	CA-C-O	6.04	127.84	120.60
25	LB	60	C	P-O3'-C3'	-6.04	111.14	120.20
26	LA	2766	A	O3'-P-O5'	-6.04	94.94	104.00
27	LD	247	TRP	CA-C-N	6.04	131.99	122.51
27	LD	247	TRP	C-N-CA	6.04	131.99	122.51
2	SA	270	A	O5'-C5'-C4'	6.04	120.55	111.50
2	SA	1202	U	O3'-P-O5'	-6.04	94.95	104.00
19	SC	164	THR	CA-CB-CG2	6.04	120.76	110.50
20	SD	25	ARG	CA-C-O	6.04	126.73	119.43
26	LA	1608	A	C1'-O4'-C4'	-6.04	103.66	109.70
26	LA	2515	C	C1'-C2'-O2'	6.04	117.45	108.40
27	LD	17	LYS	N-CA-CB	6.04	121.33	110.83
48	LN	114	GLY	O-C-N	-6.04	115.05	123.56
51	LI	102	ALA	CA-C-O	-6.04	112.51	118.97
2	SA	137	U	P-O3'-C3'	-6.03	111.15	120.20
2	SA	524	G	O3'-P-O5'	6.03	113.05	104.00
7	SG	96	ASN	CA-CB-CG	-6.03	106.57	112.60
26	LA	2565	A	P-O3'-C3'	6.03	129.25	120.20
29	LV	55	VAL	O-C-N	-6.03	116.80	123.20
38	LE	91	THR	CA-C-O	-6.03	114.15	120.55
40	L4	13	SER	CA-C-O	6.03	130.52	122.44
57	LS	108	LEU	O-C-N	-6.03	115.72	122.12
2	SA	1210	C	P-O5'-C5'	6.03	129.95	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	LC	109	MET	CA-C-N	6.03	133.06	121.54
37	LC	109	MET	C-N-CA	6.03	133.06	121.54
5	ST	2	ASN	N-CA-CB	-6.03	102.03	111.56
11	SK	96	ILE	N-CA-CB	6.03	118.74	110.54
25	LB	49	C	C3'-C2'-C1'	6.03	107.33	101.30
2	SA	804	U	C5'-C4'-O4'	6.03	118.84	109.80
17	SQ	51	GLU	CA-C-O	6.03	126.35	119.18
26	LA	1101	U	O4'-C4'-C3'	-6.03	97.97	104.00
26	LA	2533	U	C4'-C3'-C2'	-6.03	96.57	102.60
56	LR	50	ARG	NE-CZ-NH1	-6.03	115.47	121.50
2	SA	1137	C	C2'-C3'-O3'	6.03	118.54	109.50
3	S1	43	U	C1'-O4'-C4'	-6.03	103.87	109.90
22	SF	110	ARG	N-CA-CB	-6.03	101.26	110.12
26	LA	146	A	C1'-C2'-O2'	6.03	117.44	108.40
26	LA	883	G	P-O3'-C3'	-6.03	111.16	120.20
26	LA	2541	A	C1'-C2'-O2'	6.03	117.44	108.40
51	LI	125	THR	O-C-N	-6.03	115.75	122.86
51	LI	139	PHE	CA-C-N	-6.03	111.18	121.85
51	LI	139	PHE	C-N-CA	-6.03	111.18	121.85
2	SA	460	A	C4'-C3'-C2'	-6.03	96.58	102.60
2	SA	518	C	C2'-C3'-O3'	6.03	118.54	109.50
4	S2	1	C	C5'-C4'-C3'	-6.03	106.96	116.00
24	S3	126	TRP	CB-CG-CD2	-6.03	118.36	126.80
26	LA	161	A	C5'-C4'-C3'	-6.03	106.96	116.00
26	LA	729	G	C4'-C3'-O3'	-6.03	103.96	113.00
26	LA	1105	U	C1'-O4'-C4'	-6.03	103.88	109.90
26	LA	1143	A	O4'-C1'-C2'	6.03	111.83	105.80
26	LA	1300	G	P-O5'-C5'	-6.03	111.86	120.90
26	LA	2028	U	C3'-C2'-C1'	6.03	107.33	101.30
46	LH	25	ILE	CA-C-N	6.03	132.28	123.12
46	LH	25	ILE	C-N-CA	6.03	132.28	123.12
46	LH	140	ILE	N-CA-C	6.03	116.77	110.62
2	SA	1099	G	N9-C1'-C2'	-6.02	102.96	112.00
26	LA	837	C	O3'-P-O5'	6.02	113.03	104.00
26	LA	1372	U	C4'-C3'-C2'	-6.02	96.58	102.60
2	SA	173	U	O3'-P-O5'	-6.02	94.97	104.00
7	SG	133	ALA	O-C-N	-6.02	114.81	122.34
26	LA	1059	G	O4'-C1'-C2'	6.02	113.62	107.60
27	LD	136	VAL	O-C-N	-6.02	114.99	122.52
26	LA	1313	U	O4'-C1'-C2'	6.02	113.62	107.60
55	LQ	58	ILE	CA-C-O	6.02	126.24	119.92
5	ST	3	ILE	CA-C-O	-6.02	114.15	121.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	759	G	C1'-O4'-C4'	-6.02	103.88	109.90
26	LA	1661	G	O4'-C4'-C3'	6.02	110.02	104.00
26	LA	2219	U	C5'-C4'-C3'	-6.02	106.97	116.00
37	LC	4	LEU	N-CA-C	-6.02	101.28	109.95
50	LL	96	ARG	NE-CZ-NH2	6.02	124.62	119.20
2	SA	128	G	C2'-C3'-O3'	6.02	122.72	113.70
18	SB	162	VAL	N-CA-CB	6.02	119.25	111.67
26	LA	1867	G	O4'-C1'-C2'	6.02	113.62	107.60
33	LZ	2	ARG	NE-CZ-NH2	6.02	124.62	119.20
48	LN	61	LEU	CA-C-N	6.02	126.03	119.89
48	LN	61	LEU	C-N-CA	6.02	126.03	119.89
26	LA	1319	C	O4'-C1'-N1	6.02	117.52	108.50
26	LA	1452	G	C3'-C2'-C1'	-6.02	95.48	101.50
38	LE	126	ASN	CB-CA-C	-6.02	103.45	111.63
51	LI	45	GLU	N-CA-CB	-6.02	101.26	110.16
2	SA	1292	G	C1'-O4'-C4'	-6.01	103.89	109.90
7	SG	158	LEU	N-CA-C	6.01	119.72	112.38
26	LA	333	G	O3'-P-O5'	6.01	113.02	104.00
26	LA	736	C	P-O5'-C5'	-6.01	111.88	120.90
26	LA	1486	U	O4'-C1'-N1	6.01	117.52	108.50
26	LA	2242	G	C2'-C3'-O3'	6.01	122.72	113.70
26	LA	2721	A	P-O3'-C3'	-6.01	111.18	120.20
37	LC	78	PHE	CA-CB-CG	6.01	119.81	113.80
40	L4	4	ILE	CA-C-N	6.01	129.25	120.71
40	L4	4	ILE	C-N-CA	6.01	129.25	120.71
46	LH	96	ALA	CB-CA-C	6.01	120.15	110.29
47	LJ	122	ILE	N-CA-C	6.01	116.76	110.62
49	LK	37	PHE	N-CA-CB	6.01	118.96	110.12
4	S2	12	G	P-O3'-C3'	6.01	129.22	120.20
26	LA	254	G	O4'-C4'-C3'	-6.01	97.99	104.00
42	L6	9	ALA	N-CA-CB	-6.01	101.81	110.65
2	SA	92	U	P-O5'-C5'	6.01	129.92	120.90
8	SH	99	GLY	CA-C-O	-6.01	115.98	122.47
22	SF	120	THR	N-CA-CB	-6.01	101.69	110.53
38	LE	87	GLY	O-C-N	6.01	128.83	122.28
2	SA	385	C	P-O3'-C3'	-6.01	111.19	120.20
2	SA	1530	G	O4'-C1'-N9	6.01	117.51	108.50
25	LB	92	C	P-O5'-C5'	6.01	129.91	120.90
26	LA	1175	A	C1'-O4'-C4'	-6.01	103.89	109.90
26	LA	1921	G	C5'-C4'-C3'	6.01	125.01	116.00
26	LA	2388	A	C4'-C3'-C2'	-6.01	96.59	102.60
30	LW	92	VAL	N-CA-C	-6.01	101.79	109.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	LQ	34	HIS	CE1-NE2-CD2	-6.01	102.99	109.00
19	SC	203	LYS	N-CA-C	-6.01	105.53	112.92
24	S3	279	ASP	CA-C-N	6.01	128.82	120.29
24	S3	279	ASP	C-N-CA	6.01	128.82	120.29
2	SA	1087	G	O5'-C5'-C4'	-6.01	102.49	111.50
13	SM	97	ARG	CG-CD-NE	-6.01	98.79	112.00
24	S3	466	ASP	CA-C-O	-6.01	114.05	120.42
26	LA	2502	G	C3'-C2'-O2'	-6.01	105.59	114.60
26	LA	2697	G	C1'-O4'-C4'	-6.01	103.89	109.90
2	SA	998	C	O4'-C1'-N1	6.00	117.51	108.50
3	S1	21	U	O4'-C1'-C2'	-6.00	101.59	107.60
3	S1	40	G	O4'-C1'-N9	6.00	117.51	108.50
4	S2	72	C	C1'-O4'-C4'	-6.00	103.89	109.90
26	LA	1779	U	O4'-C1'-C2'	6.00	113.61	107.60
44	LF	119	ILE	CA-C-N	6.00	132.78	121.97
44	LF	119	ILE	C-N-CA	6.00	132.78	121.97
2	SA	1244	G	O3'-P-O5'	-6.00	95.00	104.00
7	SG	71	THR	N-CA-C	-6.00	106.61	112.97
25	LB	20	G	N9-C1'-C2'	-6.00	103.00	112.00
25	LB	98	G	C3'-C2'-O2'	6.00	119.70	110.70
37	LC	52	ALA	CB-CA-C	6.00	119.50	111.82
38	LE	200	ASP	CA-CB-CG	-6.00	106.60	112.60
19	SC	222	GLN	N-CA-C	6.00	116.50	109.60
25	LB	87	U	C4'-C3'-C2'	6.00	108.60	102.60
26	LA	139	U	C1'-O4'-C4'	-6.00	103.90	109.90
26	LA	839	U	C5'-C4'-C3'	-6.00	107.00	116.00
26	LA	1398	C	C3'-C2'-C1'	6.00	107.30	101.30
2	SA	1201	A	C1'-C2'-O2'	-6.00	102.80	111.80
2	SA	1539	C	O3'-P-O5'	-6.00	95.00	104.00
16	SP	10	GLY	O-C-N	-6.00	117.04	122.86
26	LA	627	A	O4'-C1'-N9	6.00	117.20	108.20
26	LA	1634	A	C5'-C4'-O4'	6.00	118.10	109.10
26	LA	2841	C	C5'-C4'-O4'	6.00	118.80	109.80
2	SA	367	U	C3'-C2'-O2'	-6.00	105.60	114.60
2	SA	1177	G	P-O5'-C5'	6.00	129.90	120.90
8	SH	94	VAL	N-CA-C	6.00	121.82	109.34
12	SL	71	HIS	CE1-NE2-CD2	-6.00	103.00	109.00
26	LA	592	A	O3'-P-O5'	6.00	113.00	104.00
26	LA	603	A	C5'-C4'-C3'	-6.00	106.20	115.20
26	LA	799	G	C4'-C3'-C2'	-6.00	96.60	102.60
26	LA	1108	U	P-O5'-C5'	-6.00	111.90	120.90
26	LA	1441	G	C1'-O4'-C4'	-6.00	103.90	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1730	C	C2'-C3'-O3'	6.00	118.50	109.50
26	LA	2397	G	C4'-C3'-O3'	-6.00	104.00	113.00
41	L5	4	THR	OG1-CB-CG2	-6.00	97.30	109.30
2	SA	84	U	C4'-C3'-O3'	6.00	118.39	109.40
16	SP	43	ALA	N-CA-CB	-6.00	101.77	110.47
19	SC	126	ARG	N-CA-CB	6.00	120.62	110.49
20	SD	69	ARG	O-C-N	-6.00	115.76	122.12
25	LB	42	C	C1'-O4'-C4'	-6.00	103.90	109.90
26	LA	143	C	C5'-C4'-O4'	6.00	118.79	109.80
26	LA	169	G	C1'-O4'-C4'	-6.00	103.90	109.90
26	LA	614	A	N9-C1'-C2'	-6.00	105.00	114.00
26	LA	2806	C	O4'-C1'-C2'	-6.00	101.60	107.60
31	LX	52	ALA	CA-C-N	-6.00	113.06	121.99
31	LX	52	ALA	C-N-CA	-6.00	113.06	121.99
48	LN	127	VAL	N-CA-C	6.00	117.39	108.46
2	SA	1141	C	O5'-C5'-C4'	6.00	120.49	111.50
24	S3	237	LEU	CA-C-N	6.00	127.63	120.14
24	S3	237	LEU	C-N-CA	6.00	127.63	120.14
26	LA	764	A	O4'-C4'-C3'	-6.00	100.11	106.10
27	LD	38	LYS	N-CA-C	6.00	123.57	110.80
2	SA	290	C	C1'-C2'-O2'	5.99	117.39	108.40
26	LA	268	C	P-O5'-C5'	5.99	129.89	120.90
26	LA	502	A	O4'-C4'-C3'	5.99	109.99	104.00
26	LA	1301	A	O4'-C4'-C3'	-5.99	100.11	106.10
45	LG	11	VAL	N-CA-C	5.99	118.58	111.09
54	LM	61	VAL	CB-CA-C	-5.99	101.10	110.69
10	SJ	36	VAL	CB-CA-C	-5.99	101.46	111.29
26	LA	2600	A	C5'-C4'-C3'	-5.99	107.01	116.00
2	SA	828	U	O5'-C5'-C4'	5.99	120.48	111.50
2	SA	1497	G	C4'-C3'-C2'	-5.99	96.61	102.60
26	LA	1726	C	C4'-C3'-O3'	-5.99	104.01	113.00
2	SA	1116	U	C5'-C4'-C3'	-5.99	107.02	116.00
4	S2	15	G	N9-C1'-C2'	5.99	120.98	112.00
18	SB	158	ASP	CA-CB-CG	-5.99	106.61	112.60
26	LA	989	G	N9-C1'-C2'	-5.99	105.02	114.00
26	LA	1430	G	C4'-C3'-C2'	-5.99	96.61	102.60
26	LA	2544	G	O5'-C5'-C4'	-5.99	102.52	111.50
46	LH	22	VAL	N-CA-CB	-5.99	104.17	111.00
55	LQ	24	THR	CA-C-N	-5.99	114.74	123.00
55	LQ	24	THR	C-N-CA	-5.99	114.74	123.00
58	LT	13	ARG	N-CA-C	-5.99	100.74	110.20
2	SA	634	C	O3'-P-O5'	5.99	112.98	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1491	G	N9-C1'-C2'	-5.99	105.02	114.00
8	SH	8	ASP	N-CA-CB	5.99	118.92	110.12
8	SH	76	ARG	NE-CZ-NH2	5.99	124.59	119.20
26	LA	190	A	C5'-C4'-C3'	-5.99	107.02	116.00
27	LD	36	ASN	CA-CB-CG	-5.99	106.61	112.60
51	LI	40	THR	N-CA-CB	5.99	119.52	110.42
2	SA	64	G	P-O3'-C3'	-5.99	111.22	120.20
2	SA	534	U	C1'-C2'-O2'	5.99	117.38	108.40
2	SA	878	A	P-O5'-C5'	5.99	129.88	120.90
2	SA	884	U	C1'-O4'-C4'	-5.99	103.71	109.70
2	SA	1319	A	P-O5'-C5'	5.99	129.88	120.90
3	S1	40	G	C5'-C4'-C3'	-5.99	107.02	116.00
8	SH	25	THR	CA-CB-OG1	5.99	118.58	109.60
18	SB	51	GLU	N-CA-C	-5.99	104.45	110.97
26	LA	107	G	C4'-C3'-C2'	-5.99	96.61	102.60
26	LA	611	C	O4'-C1'-N1	5.99	117.48	108.50
26	LA	797	G	C4'-C3'-O3'	-5.99	104.02	113.00
26	LA	1047	G	C2'-C3'-O3'	5.99	118.48	109.50
26	LA	1208	C	O4'-C1'-C2'	5.99	113.59	107.60
26	LA	2008	C	C1'-O4'-C4'	-5.99	103.91	109.90
26	LA	2610	C	C1'-O4'-C4'	-5.99	103.71	109.70
38	LE	105	LYS	N-CA-C	-5.99	103.42	112.04
40	L4	8	ILE	CA-C-O	5.99	127.78	121.67
51	LI	83	LYS	N-CA-C	5.99	118.25	110.53
2	SA	1284	C	C4'-C3'-C2'	-5.98	96.62	102.60
7	SG	20	GLU	CB-CG-CD	5.98	122.77	112.60
26	LA	1848	A	C5'-C4'-C3'	5.98	124.97	116.00
2	SA	595	A	C3'-C2'-C1'	-5.98	95.52	101.50
13	SM	108	ARG	N-CA-C	-5.98	104.72	112.68
26	LA	12	U	C5'-C4'-C3'	-5.98	107.03	116.00
26	LA	443	A	C5'-C4'-C3'	-5.98	106.23	115.20
26	LA	704	G	C4'-C3'-C2'	5.98	108.58	102.60
26	LA	1061	U	C1'-O4'-C4'	-5.98	103.72	109.70
26	LA	1470	A	C4'-C3'-O3'	-5.98	104.03	113.00
26	LA	2234	G	C4'-C3'-C2'	-5.98	96.62	102.60
50	LL	132	HIS	N-CA-C	5.98	123.54	110.80
51	LI	7	ASP	CA-C-N	5.98	130.85	120.68
51	LI	7	ASP	C-N-CA	5.98	130.85	120.68
2	SA	444	G	C4'-C3'-O3'	-5.98	104.03	113.00
2	SA	1353	G	O4'-C4'-C3'	-5.98	98.02	104.00
10	SJ	67	ILE	CA-CB-CG1	5.98	120.57	110.40
24	S3	101	SER	N-CA-C	5.98	117.88	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	215	ASN	CB-CG-ND2	-5.98	107.43	116.40
26	LA	1048	A	P-O5'-C5'	5.98	129.87	120.90
26	LA	1285	A	C4'-C3'-C2'	-5.98	96.62	102.60
26	LA	1318	U	O4'-C4'-C3'	5.98	109.98	104.00
26	LA	2147	A	C2'-C3'-O3'	5.98	118.47	109.50
26	LA	2395	C	O4'-C1'-N1	5.98	117.47	108.50
2	SA	1318	A	C4'-C3'-C2'	5.98	108.58	102.60
26	LA	1811	G	O5'-C5'-C4'	5.98	120.47	111.50
2	SA	1515	G	C1'-O4'-C4'	5.98	115.88	109.90
4	S2	17	C	C2'-C3'-O3'	5.98	122.67	113.70
17	SQ	6	THR	CA-C-N	5.98	131.97	122.59
17	SQ	6	THR	C-N-CA	5.98	131.97	122.59
18	SB	9	LEU	CA-C-N	-5.98	112.31	120.44
18	SB	9	LEU	C-N-CA	-5.98	112.31	120.44
18	SB	22	TRP	CE2-CD2-CE3	5.98	124.78	118.80
24	S3	161	LEU	CB-CA-C	5.98	121.01	110.85
25	LB	110	C	C1'-C2'-O2'	5.98	117.37	108.40
26	LA	1426	G	O4'-C4'-C3'	-5.98	98.02	104.00
26	LA	2402	U	C3'-C2'-C1'	-5.98	95.32	101.30
52	LO	81	ARG	NE-CZ-NH2	-5.98	113.82	119.20
57	LS	72	GLY	O-C-N	-5.98	115.95	122.41
48	LN	35	HIS	CB-CG-CD2	-5.98	123.43	131.20
1	SS	32	THR	O-C-N	-5.97	116.24	123.29
2	SA	983	A	P-O3'-C3'	5.97	129.16	120.20
2	SA	1219	A	C5'-C4'-C3'	-5.97	107.04	116.00
13	SM	2	ARG	CA-C-O	5.97	126.94	120.55
24	S3	670	ARG	NE-CZ-NH2	5.97	124.58	119.20
26	LA	391	A	O4'-C4'-C3'	5.97	109.97	104.00
26	LA	464	U	C3'-C2'-C1'	5.97	107.27	101.30
26	LA	745	G	P-O3'-C3'	5.97	129.16	120.20
26	LA	1279	G	C5'-C4'-C3'	-5.97	107.04	116.00
26	LA	2763	G	P-O3'-C3'	5.97	129.16	120.20
2	SA	295	C	O4'-C1'-N1	5.97	117.46	108.50
11	SK	109	ILE	CA-C-O	5.97	128.25	120.78
11	SK	111	ASP	O-C-N	-5.97	115.44	122.96
24	S3	197	GLN	OE1-CD-NE2	5.97	128.57	122.60
26	LA	2874	C	C5'-C4'-C3'	-5.97	107.04	116.00
2	SA	542	G	P-O3'-C3'	5.97	129.16	120.20
26	LA	1376	C	C5'-C4'-C3'	5.97	124.96	116.00
26	LA	2536	G	C5'-C4'-C3'	-5.97	107.04	116.00
2	SA	424	G	C4'-C3'-O3'	-5.97	104.05	113.00
2	SA	1384	C	C1'-C2'-O2'	5.97	117.35	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	S2	75	C	O4'-C1'-N1	5.97	117.45	108.50
7	SG	147	ASN	OD1-CG-ND2	5.97	128.57	122.60
26	LA	20	C	O4'-C1'-N1	5.97	117.45	108.50
26	LA	425	G	C3'-C2'-C1'	-5.97	95.33	101.30
26	LA	1060	U	C4'-C3'-O3'	5.97	118.36	109.40
26	LA	1522	A	C2'-C3'-O3'	5.97	118.45	109.50
50	LL	85	LYS	CA-C-O	-5.97	114.07	120.46
2	SA	1379	G	C4'-C3'-C2'	-5.97	96.63	102.60
26	LA	2539	C	C3'-C2'-C1'	5.97	107.27	101.30
3	S1	25	U	O4'-C1'-N1	5.97	117.45	108.50
5	ST	20	ASN	CA-C-N	5.97	128.27	120.28
5	ST	20	ASN	C-N-CA	5.97	128.27	120.28
26	LA	689	A	P-O3'-C3'	5.97	129.15	120.20
26	LA	723	C	P-O3'-C3'	5.97	129.15	120.20
38	LE	198	GLY	CA-C-O	5.97	125.74	119.06
50	LL	101	ILE	O-C-N	-5.97	115.68	121.83
2	SA	369	G	P-O5'-C5'	-5.96	111.95	120.90
2	SA	965	U	C2'-C3'-O3'	5.96	122.65	113.70
13	SM	19	THR	N-CA-CB	5.96	120.12	110.40
26	LA	256	A	P-O3'-C3'	5.96	129.15	120.20
26	LA	561	G	O4'-C4'-C3'	-5.96	98.04	104.00
26	LA	581	C	O4'-C4'-C3'	5.96	109.97	104.00
26	LA	888	C	P-O3'-C3'	5.96	129.15	120.20
26	LA	2653	U	O4'-C1'-N1	5.96	117.45	108.50
2	SA	831	A	C3'-C2'-O2'	5.96	119.64	110.70
2	SA	1226	C	P-O5'-C5'	-5.96	111.96	120.90
4	S2	22	A	C3'-C2'-C1'	-5.96	95.54	101.50
26	LA	611	C	O4'-C4'-C3'	5.96	109.96	104.00
26	LA	680	C	O3'-P-O5'	5.96	112.94	104.00
26	LA	1044	C	O4'-C1'-C2'	-5.96	101.64	107.60
26	LA	1713	A	C5'-C4'-O4'	5.96	118.05	109.10
26	LA	2118	U	O4'-C1'-C2'	-5.96	99.84	105.80
2	SA	124	C	C5'-C4'-C3'	-5.96	107.06	116.00
2	SA	1510	C	C5'-C4'-C3'	-5.96	107.06	116.00
3	S1	47	C	P-O3'-C3'	5.96	129.14	120.20
4	S2	14	A	O3'-P-O5'	5.96	112.94	104.00
11	SK	64	VAL	N-CA-C	5.96	118.54	111.09
22	SF	12	PRO	CB-CA-C	5.96	121.40	111.56
26	LA	566	U	C4'-C3'-C2'	-5.96	96.64	102.60
26	LA	590	A	C1'-O4'-C4'	-5.96	103.94	109.90
26	LA	1758	U	C1'-O4'-C4'	-5.96	103.94	109.90
26	LA	2297	A	C3'-C2'-C1'	-5.96	95.34	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1488	G	C3'-C2'-C1'	5.96	107.26	101.30
26	LA	2464	G	C5'-C4'-C3'	5.96	124.94	116.00
26	LA	2509	G	C1'-C2'-O2'	5.96	117.34	108.40
49	LK	61	TYR	N-CA-C	-5.96	98.11	110.80
2	SA	509	A	O4'-C4'-C3'	-5.96	100.14	106.10
2	SA	924	C	C1'-O4'-C4'	-5.96	103.94	109.90
20	SD	111	ALA	O-C-N	-5.96	115.80	122.12
26	LA	2410	G	C5'-C4'-C3'	5.96	124.94	116.00
41	L5	2	LYS	N-CA-C	-5.96	102.67	110.53
53	LP	52	ILE	CA-C-N	5.96	128.19	120.44
53	LP	52	ILE	C-N-CA	5.96	128.19	120.44
2	SA	389	A	C5'-C4'-O4'	5.96	118.73	109.80
2	SA	477	C	C2'-C3'-O3'	5.96	122.63	113.70
2	SA	789	U	C2'-C3'-O3'	5.96	118.43	109.50
26	LA	2017	U	C4'-C3'-C2'	-5.96	96.64	102.60
26	LA	2449	U	C4'-C3'-O3'	5.96	118.33	109.40
49	LK	39	LYS	N-CA-C	5.96	117.44	111.07
54	LM	88	ASN	OD1-CG-ND2	-5.96	116.64	122.60
2	SA	1431	A	C1'-C2'-O2'	5.96	117.33	108.40
24	S3	389	ASP	CA-CB-CG	5.96	118.56	112.60
2	SA	946	A	C4'-C3'-C2'	-5.95	96.65	102.60
2	SA	1313	U	P-O5'-C5'	-5.95	111.97	120.90
25	LB	36	C	O4'-C1'-N1	5.95	117.43	108.50
25	LB	66	A	C5'-C4'-C3'	5.95	124.93	116.00
26	LA	323	C	O4'-C1'-N1	5.95	117.13	108.20
26	LA	359	G	C5'-C4'-O4'	5.95	118.73	109.80
26	LA	1278	C	O4'-C1'-N1	5.95	117.43	108.50
26	LA	1551	A	C1'-C2'-O2'	5.95	117.33	108.40
26	LA	1829	A	O4'-C4'-C3'	5.95	109.95	104.00
27	LD	101	ARG	CD-NE-CZ	5.95	132.73	124.40
2	SA	816	A	C3'-C2'-O2'	-5.95	105.67	114.60
18	SB	10	LYS	CA-C-N	5.95	130.65	120.71
18	SB	10	LYS	C-N-CA	5.95	130.65	120.71
26	LA	2096	C	C3'-C2'-C1'	-5.95	95.35	101.30
24	S3	149	ASN	CA-C-N	5.95	128.18	120.44
24	S3	149	ASN	C-N-CA	5.95	128.18	120.44
24	S3	462	GLU	N-CA-C	5.95	117.84	111.36
26	LA	1321	A	C3'-C2'-O2'	-5.95	105.68	114.60
31	LX	59	GLU	O-C-N	-5.95	116.40	123.06
2	SA	212	G	P-O3'-C3'	-5.95	111.28	120.20
2	SA	1049	U	C3'-C2'-C1'	-5.95	95.55	101.50
2	SA	1054	C	O4'-C1'-N1	5.95	117.12	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	58	G	C5'-C4'-C3'	5.95	124.92	116.00
44	LF	183	PHE	CA-CB-CG	-5.95	107.85	113.80
46	LH	148	ARG	NE-CZ-NH2	5.95	124.55	119.20
2	SA	54	C	C5'-C4'-C3'	-5.95	107.08	116.00
20	SD	200	VAL	CA-C-N	5.95	128.74	120.29
20	SD	200	VAL	C-N-CA	5.95	128.74	120.29
26	LA	1117	C	C4'-C3'-C2'	-5.95	96.65	102.60
26	LA	1596	A	C5'-C4'-C3'	5.95	124.92	116.00
26	LA	1763	G	C2'-C3'-O3'	5.95	122.62	113.70
26	LA	1824	G	C4'-C3'-C2'	-5.95	96.65	102.60
2	SA	447	G	P-O5'-C5'	5.95	129.82	120.90
2	SA	601	G	C5'-C4'-C3'	5.95	124.92	116.00
2	SA	1516	G	C4'-C3'-O3'	-5.95	104.08	113.00
26	LA	1637	A	C5'-C4'-C3'	-5.95	107.08	116.00
26	LA	2399	G	C4'-C3'-C2'	-5.95	96.66	102.60
26	LA	2711	A	C3'-C2'-O2'	-5.95	101.78	110.70
26	LA	2096	C	O4'-C4'-C3'	-5.94	98.06	104.00
24	S3	410	PHE	CA-CB-CG	5.94	119.74	113.80
26	LA	810	U	O4'-C4'-C3'	5.94	109.94	104.00
26	LA	1836	C	C4'-C3'-C2'	-5.94	96.66	102.60
26	LA	2434	A	P-O3'-C3'	-5.94	111.29	120.20
42	L6	11	LYS	N-CA-C	-5.94	104.64	112.72
2	SA	1325	C	C5'-C4'-C3'	-5.94	107.09	116.00
20	SD	22	SER	CB-CA-C	-5.94	99.80	110.37
24	S3	205	ASP	CA-CB-CG	-5.94	106.66	112.60
26	LA	1944	U	P-O5'-C5'	-5.94	111.99	120.90
26	LA	2442	C	C4'-C3'-O3'	-5.94	104.09	113.00
2	SA	1276	G	P-O3'-C3'	-5.94	111.29	120.20
14	SN	95	LEU	N-CA-CB	-5.94	100.78	110.11
19	SC	118	SER	N-CA-C	5.94	117.75	111.28
21	SE	20	VAL	CA-C-O	-5.94	115.61	121.67
2	SA	517	G	O4'-C1'-C2'	5.94	111.74	105.80
2	SA	1509	C	C4'-C3'-C2'	-5.94	96.66	102.60
7	SG	139	ASP	CA-C-O	5.94	126.84	120.55
24	S3	618	VAL	O-C-N	-5.94	116.77	123.18
26	LA	1901	A	C1'-O4'-C4'	-5.94	103.96	109.90
51	LI	32	PRO	O-C-N	5.94	130.86	122.37
26	LA	1022	G	P-O5'-C5'	5.94	129.80	120.90
27	LD	79	ARG	O-C-N	-5.94	117.07	123.42
27	LD	239	PHE	CA-CB-CG	5.94	119.74	113.80
47	LJ	60	ARG	CD-NE-CZ	5.94	132.71	124.40
2	SA	69	G	C5'-C4'-C3'	-5.93	107.10	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	733	G	C3'-C2'-C1'	-5.93	95.56	101.50
17	SQ	58	VAL	CA-C-N	5.93	131.84	122.94
17	SQ	58	VAL	C-N-CA	5.93	131.84	122.94
24	S3	284	TYR	CB-CG-CD2	5.93	129.70	120.80
26	LA	2131	U	O4'-C4'-C3'	-5.93	98.06	104.00
46	LH	66	THR	CB-CA-C	-5.93	101.56	110.88
54	LM	38	ILE	O-C-N	-5.93	115.14	122.97
2	SA	144	G	P-O5'-C5'	5.93	129.80	120.90
15	SO	81	ILE	CA-C-O	5.93	126.92	120.57
24	S3	186	LYS	N-CA-C	-5.93	105.35	112.59
26	LA	46	G	O5'-C5'-C4'	5.93	120.40	111.50
26	LA	1635	A	P-O3'-C3'	5.93	129.10	120.20
26	LA	1753	G	O3'-P-O5'	5.93	112.90	104.00
26	LA	2461	A	C2'-C3'-O3'	5.93	122.60	113.70
26	LA	2817	U	C4'-C3'-C2'	-5.93	96.67	102.60
27	LD	107	LYS	CA-C-N	5.93	130.03	121.54
27	LD	107	LYS	C-N-CA	5.93	130.03	121.54
46	LH	91	VAL	CA-C-O	5.93	128.19	120.78
53	LP	51	LEU	N-CA-C	5.93	117.75	111.28
19	SC	32	LEU	CA-C-N	5.93	128.23	120.28
19	SC	32	LEU	C-N-CA	5.93	128.23	120.28
26	LA	1339	G	O4'-C1'-N9	5.93	117.40	108.50
26	LA	1554	U	O3'-P-O5'	-5.93	95.10	104.00
57	LS	12	ARG	NE-CZ-NH2	5.93	124.54	119.20
7	SG	116	ALA	CA-C-N	5.93	128.71	120.29
7	SG	116	ALA	C-N-CA	5.93	128.71	120.29
18	SB	237	VAL	N-CA-C	5.93	116.67	110.62
26	LA	974	G	O3'-P-O5'	-5.93	95.11	104.00
26	LA	1028	A	C1'-C2'-O2'	5.93	117.29	108.40
26	LA	1732	C	C2'-C3'-O3'	5.93	118.39	109.50
26	LA	2846	G	C4'-C3'-C2'	-5.93	96.67	102.60
37	LC	120	ALA	CA-C-N	5.93	132.87	121.54
37	LC	120	ALA	C-N-CA	5.93	132.87	121.54
2	SA	435	A	C1'-C2'-O2'	5.93	117.29	108.40
26	LA	2157	G	C2'-C3'-O3'	5.93	118.39	109.50
26	LA	2604	U	P-O5'-C5'	5.93	129.79	120.90
37	LC	55	SER	CA-C-O	5.93	126.70	120.42
2	SA	1099	G	C5'-C4'-C3'	-5.93	107.11	116.00
26	LA	163	C	C5'-C4'-O4'	-5.93	100.91	109.80
26	LA	1533	C	C5'-C4'-C3'	-5.93	107.11	116.00
26	LA	2342	C	O3'-P-O5'	5.93	112.89	104.00
26	LA	2390	U	C1'-C2'-O2'	5.93	117.29	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2406	A	P-O5'-C5'	-5.93	112.01	120.90
57	LS	107	ALA	N-CA-C	5.93	117.74	111.28
2	SA	1155	A	P-O5'-C5'	5.92	129.79	120.90
19	SC	68	HIS	CG-CD2-NE2	5.92	113.12	107.20
22	SF	79	ARG	CB-CG-CD	5.92	124.93	111.30
26	LA	1532	A	C5'-C4'-O4'	5.92	118.69	109.80
26	LA	2095	A	C5'-C4'-O4'	-5.92	100.91	109.80
2	SA	947	G	O4'-C1'-N9	5.92	117.38	108.50
26	LA	2604	U	O3'-P-O5'	5.92	112.88	104.00
26	LA	2639	A	O4'-C4'-C3'	5.92	109.92	104.00
50	LL	44	TYR	N-CA-CB	-5.92	103.02	111.84
55	LQ	2	ASP	CB-CA-C	-5.92	101.59	111.13
2	SA	523	A	C4'-C3'-C2'	5.92	108.52	102.60
2	SA	1270	G	P-O5'-C5'	-5.92	112.02	120.90
2	SA	1311	A	C1'-O4'-C4'	5.92	115.82	109.90
11	SK	55	ARG	N-CA-C	-5.92	106.10	113.15
18	SB	190	SER	CA-C-O	5.92	128.98	120.51
26	LA	393	C	P-O3'-C3'	5.92	129.08	120.20
26	LA	1506	U	P-O5'-C5'	5.92	129.78	120.90
26	LA	2412	A	C4'-C3'-C2'	-5.92	96.68	102.60
2	SA	10	A	C5'-C4'-C3'	-5.92	107.12	116.00
2	SA	288	A	P-O3'-C3'	-5.92	111.32	120.20
15	SO	76	ARG	CA-C-N	5.92	128.68	120.63
15	SO	76	ARG	C-N-CA	5.92	128.68	120.63
24	S3	669	LEU	CA-C-O	5.92	126.83	120.55
26	LA	2604	U	C5'-C4'-O4'	5.92	118.68	109.80
29	LV	46	ALA	N-CA-C	5.92	118.21	111.11
46	LH	59	ASP	CA-C-N	5.92	133.01	121.41
46	LH	59	ASP	C-N-CA	5.92	133.01	121.41
55	LQ	90	VAL	CB-CA-C	-5.92	101.67	111.32
2	SA	1092	A	C2'-C3'-O3'	5.92	122.58	113.70
2	SA	1175	G	P-O3'-C3'	-5.92	111.32	120.20
19	SC	86	LEU	CA-C-N	5.92	128.80	120.28
19	SC	86	LEU	C-N-CA	5.92	128.80	120.28
21	SE	37	VAL	CB-CA-C	-5.92	102.01	110.83
25	LB	73	A	O4'-C4'-C3'	5.92	109.92	104.00
26	LA	2715	C	O4'-C4'-C3'	5.92	109.92	104.00
27	LD	171	VAL	N-CA-CB	5.92	118.09	110.99
2	SA	629	A	C4'-C3'-C2'	-5.92	96.68	102.60
2	SA	1394	A	O3'-P-O5'	5.92	112.88	104.00
2	SA	1498	U	C5'-C4'-C3'	-5.92	106.32	115.20
26	LA	98	G	C2'-C3'-O3'	5.92	122.57	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	680	C	O5'-C5'-C4'	-5.92	102.63	111.50
37	LC	200	LYS	CA-C-N	5.92	126.38	120.52
37	LC	200	LYS	C-N-CA	5.92	126.38	120.52
26	LA	1727	C	P-O5'-C5'	-5.92	112.03	120.90
26	LA	2860	A	C1'-C2'-O2'	5.92	117.27	108.40
2	SA	650	G	C1'-O4'-C4'	-5.91	103.99	109.90
26	LA	2712	C	C3'-C2'-O2'	-5.91	105.73	114.60
37	LC	157	LYS	N-CA-C	5.91	118.68	111.82
54	LM	52	VAL	CA-C-O	-5.91	115.84	121.64
22	SF	66	ALA	O-C-N	-5.91	115.96	122.17
52	LO	130	PHE	N-CA-C	5.91	118.91	110.10
1	SS	78	THR	N-CA-CB	5.91	119.24	110.49
2	SA	145	G	C5'-C4'-C3'	-5.91	107.13	116.00
2	SA	303	A	P-O3'-C3'	-5.91	111.33	120.20
2	SA	1117	A	O3'-P-O5'	-5.91	95.13	104.00
18	SB	17	HIS	CA-CB-CG	5.91	119.71	113.80
20	SD	200	VAL	O-C-N	-5.91	115.12	121.80
25	LB	6	G	C1'-O4'-C4'	-5.91	103.99	109.90
25	LB	60	C	P-O5'-C5'	5.91	129.77	120.90
26	LA	592	A	C4'-C3'-O3'	-5.91	104.13	113.00
27	LD	119	VAL	CA-C-N	5.91	128.20	120.28
27	LD	119	VAL	C-N-CA	5.91	128.20	120.28
27	LD	196	ASN	O-C-N	-5.91	114.66	122.40
31	LX	55	GLU	CA-C-O	5.91	126.67	119.11
44	LF	186	VAL	CB-CA-C	5.91	119.58	111.31
45	LG	171	ALA	N-CA-C	5.91	119.55	112.93
56	LR	107	ALA	CA-C-N	5.91	128.20	120.28
56	LR	107	ALA	C-N-CA	5.91	128.20	120.28
2	SA	519	C	C1'-O4'-C4'	-5.91	103.99	109.90
2	SA	624	C	C1'-O4'-C4'	-5.91	103.99	109.90
2	SA	1507	A	C4'-C3'-C2'	-5.91	96.69	102.60
13	SM	52	ILE	CA-CB-CG2	-5.91	100.45	110.50
26	LA	700	G	C4'-C3'-C2'	-5.91	96.69	102.60
26	LA	2539	C	C4'-C3'-C2'	-5.91	96.69	102.60
33	LZ	15	ASN	OD1-CG-ND2	5.91	128.51	122.60
37	LC	59	VAL	O-C-N	-5.91	116.64	122.67
47	LJ	30	ARG	NE-CZ-NH2	5.91	124.52	119.20
26	LA	806	C	C4'-C3'-O3'	-5.91	104.14	113.00
12	SL	98	ARG	NH1-CZ-NH2	-5.91	111.62	119.30
20	SD	36	ALA	N-CA-C	-5.91	102.91	108.22
26	LA	627	A	C4'-C3'-O3'	5.91	118.26	109.40
26	LA	1241	A	C4'-C3'-C2'	5.91	108.51	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1850	G	C3'-C2'-O2'	5.91	119.56	110.70
52	LO	100	LYS	O-C-N	-5.91	115.16	123.01
54	LM	97	THR	N-CA-CB	5.91	119.65	110.44
2	SA	52	C	C4'-C3'-C2'	-5.90	96.70	102.60
26	LA	706	A	C5'-C4'-C3'	-5.90	107.14	116.00
26	LA	2250	G	O5'-C5'-C4'	5.90	120.56	111.70
26	LA	2892	G	O3'-P-O5'	-5.90	95.14	104.00
2	SA	122	G	O3'-P-O5'	5.90	112.85	104.00
2	SA	939	G	C2'-C3'-O3'	5.90	122.55	113.70
2	SA	1228	C	P-O3'-C3'	5.90	129.05	120.20
2	SA	1346	A	O3'-P-O5'	-5.90	95.15	104.00
10	SJ	70	HIS	CE1-NE2-CD2	-5.90	103.10	109.00
13	SM	88	LEU	N-CA-CB	5.90	118.80	110.12
18	SB	204	ASP	CA-C-N	5.90	129.49	121.05
18	SB	204	ASP	C-N-CA	5.90	129.49	121.05
24	S3	304	THR	CB-CA-C	-5.90	102.22	110.13
24	S3	361	ARG	NH1-CZ-NH2	-5.90	111.63	119.30
37	LC	137	MET	CA-C-O	-5.90	114.31	120.09
55	LQ	22	GLY	CA-C-N	5.90	131.47	121.14
55	LQ	22	GLY	C-N-CA	5.90	131.47	121.14
57	LS	87	VAL	CB-CA-C	5.90	120.97	111.29
20	SD	145	ARG	CG-CD-NE	-5.90	99.02	112.00
25	LB	62	C	C4'-C3'-C2'	5.90	108.50	102.60
26	LA	17	G	O3'-P-O5'	-5.90	95.15	104.00
26	LA	224	U	P-O5'-C5'	-5.90	112.05	120.90
33	LZ	67	LEU	O-C-N	-5.90	115.99	122.07
42	L6	62	PRO	CB-CA-C	-5.90	105.16	112.89
53	LP	51	LEU	CD1-CG-CD2	-5.90	97.82	110.80
2	SA	331	G	C5'-C4'-O4'	5.90	118.65	109.80
18	SB	174	GLU	CA-C-O	5.90	126.67	120.42
26	LA	336	C	C1'-O4'-C4'	-5.90	104.00	109.90
26	LA	2162	G	C5'-C4'-O4'	-5.90	100.95	109.80
55	LQ	34	HIS	ND1-CE1-NE2	5.90	114.30	108.40
2	SA	263	A	P-O3'-C3'	5.90	129.05	120.20
11	SK	19	VAL	N-CA-C	-5.90	99.99	108.48
15	SO	25	GLU	CA-C-O	5.90	126.80	120.55
24	S3	29	ILE	N-CA-C	5.90	116.64	110.62
12	SL	35	ARG	NE-CZ-NH1	-5.90	115.60	121.50
22	SF	75	GLU	O-C-N	-5.90	115.87	122.12
26	LA	2561	U	P-O3'-C3'	-5.90	111.36	120.20
2	SA	914	A	C4'-C3'-C2'	-5.89	96.70	102.60
13	SM	49	GLU	N-CA-C	5.89	118.49	111.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1418	G	C5'-C4'-C3'	-5.89	107.16	116.00
26	LA	1934	C	P-O5'-C5'	-5.89	112.06	120.90
26	LA	2242	G	C3'-C2'-C1'	5.89	107.19	101.30
26	LA	2765	A	P-O5'-C5'	-5.89	112.06	120.90
46	LH	34	ARG	CA-C-O	5.89	127.90	121.06
2	SA	1090	U	C5'-C4'-C3'	-5.89	107.16	116.00
2	SA	1221	G	C3'-C2'-O2'	5.89	119.54	110.70
7	SG	101	ARG	N-CA-CB	5.89	118.55	110.01
26	LA	2689	U	C3'-C2'-C1'	-5.89	95.61	101.50
26	LA	2835	A	O4'-C1'-N9	5.89	117.04	108.20
51	LI	20	ASN	CA-CB-CG	-5.89	106.71	112.60
55	LQ	29	HIS	ND1-CE1-NE2	5.89	114.29	108.40
2	SA	178	C	C5'-C4'-C3'	-5.89	107.16	116.00
2	SA	614	C	C4'-C3'-C2'	-5.89	96.71	102.60
2	SA	1428	A	C5'-C4'-C3'	5.89	124.84	116.00
12	SL	4	ASN	CA-CB-CG	-5.89	106.71	112.60
2	SA	690	G	C5'-C4'-C3'	-5.89	107.17	116.00
13	SM	85	TYR	CB-CG-CD2	5.89	129.63	120.80
14	SN	15	LEU	CA-C-N	5.89	128.98	120.79
14	SN	15	LEU	C-N-CA	5.89	128.98	120.79
14	SN	20	PHE	CA-C-O	-5.89	112.84	119.79
26	LA	149	A	P-O5'-C5'	-5.89	112.06	120.90
26	LA	700	G	O4'-C1'-N9	5.89	117.33	108.50
26	LA	1157	G	O4'-C4'-C3'	5.89	109.89	104.00
2	SA	1455	G	C1'-C2'-O2'	5.89	117.23	108.40
26	LA	1736	U	C3'-C2'-C1'	5.89	107.19	101.30
2	SA	1089	G	C1'-C2'-O2'	5.89	117.23	108.40
7	SG	5	VAL	CB-CA-C	5.89	118.92	110.33
20	SD	119	HIS	CA-C-N	5.89	131.33	122.68
20	SD	119	HIS	C-N-CA	5.89	131.33	122.68
24	S3	598	ILE	N-CA-CB	-5.89	100.12	110.77
31	LX	2	PHE	CD1-CG-CD2	5.89	127.43	118.60
31	LX	47	VAL	CA-C-O	5.89	125.44	119.20
37	LC	118	PRO	N-CA-C	5.89	123.31	113.78
2	SA	878	A	C5'-C4'-O4'	5.88	118.63	109.80
24	S3	368	ASN	CA-CB-CG	-5.88	106.72	112.60
26	LA	473	G	P-O3'-C3'	-5.88	111.37	120.20
26	LA	1261	C	O4'-C4'-C3'	5.88	109.89	104.00
26	LA	2007	U	P-O5'-C5'	5.88	129.73	120.90
27	LD	61	TYR	N-CA-C	5.88	118.35	110.35
47	LJ	72	LYS	O-C-N	-5.88	114.76	122.59
49	LK	5	GLN	CA-C-N	5.88	129.83	121.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	LK	5	GLN	C-N-CA	5.88	129.83	121.42
7	SG	123	LEU	N-CA-CB	5.88	118.54	110.01
26	LA	102	U	C4'-C3'-C2'	5.88	108.48	102.60
26	LA	1663	G	C5'-C4'-C3'	-5.88	107.17	116.00
26	LA	1881	C	P-O5'-C5'	5.88	129.72	120.90
26	LA	2864	G	P-O5'-C5'	5.88	129.72	120.90
2	SA	1023	U	C5'-C4'-O4'	5.88	118.62	109.80
25	LB	29	A	C1'-C2'-O2'	5.88	117.22	108.40
26	LA	244	A	C5'-C4'-C3'	-5.88	107.18	116.00
26	LA	740	C	O3'-P-O5'	-5.88	95.18	104.00
26	LA	1027	A	P-O5'-C5'	5.88	129.72	120.90
26	LA	1072	C	C5'-C4'-C3'	-5.88	107.18	116.00
26	LA	2060	A	C3'-C2'-C1'	-5.88	95.62	101.50
26	LA	2242	G	O4'-C4'-C3'	5.88	109.88	104.00
26	LA	2812	G	O4'-C1'-N9	5.88	117.32	108.50
26	LA	2873	A	O4'-C1'-C2'	-5.88	99.92	105.80
36	L2	11	GLU	N-CA-C	5.88	119.56	112.38
49	LK	81	LYS	O-C-N	-5.88	115.74	122.09
2	SA	197	A	C5'-C4'-C3'	-5.88	106.38	115.20
2	SA	659	U	P-O5'-C5'	5.88	129.72	120.90
2	SA	716	A	C4'-C3'-C2'	-5.88	96.72	102.60
26	LA	2176	A	P-O3'-C3'	-5.88	111.38	120.20
37	LC	51	ASP	CB-CA-C	5.88	120.19	110.90
48	LN	50	PHE	CA-CB-CG	-5.88	107.92	113.80
2	SA	130	A	C3'-C2'-C1'	5.88	107.18	101.30
26	LA	72	U	O3'-P-O5'	-5.88	95.18	104.00
26	LA	949	G	C5'-C4'-C3'	-5.88	107.18	116.00
26	LA	1165	A	C1'-O4'-C4'	-5.88	104.02	109.90
26	LA	1875	G	P-O5'-C5'	5.88	129.72	120.90
28	LU	4	ILE	CB-CA-C	-5.88	103.62	110.91
47	LJ	49	VAL	O-C-N	-5.88	117.14	123.14
2	SA	300	A	C4'-C3'-O3'	-5.88	104.19	113.00
2	SA	1495	U	C4'-C3'-C2'	-5.88	96.72	102.60
22	SF	114	ASP	CA-CB-CG	-5.88	106.72	112.60
26	LA	1103	A	P-O3'-C3'	5.88	129.02	120.20
26	LA	1713	A	N9-C1'-C2'	-5.88	105.19	114.00
26	LA	2880	C	C5'-C4'-C3'	5.88	124.81	116.00
27	LD	78	GLU	N-CA-C	5.88	117.38	110.97
37	LC	198	LYS	N-CA-C	5.88	117.49	111.14
48	LN	40	SER	CB-CA-C	-5.88	98.18	110.17
2	SA	384	G	C4'-C3'-C2'	-5.88	96.72	102.60
49	LK	35	MET	N-CA-C	5.88	117.36	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	LP	116	VAL	CA-C-O	5.88	127.08	120.85
2	SA	1413	A	C4'-C3'-C2'	-5.87	96.73	102.60
13	SM	89	ARG	NE-CZ-NH2	5.87	124.49	119.20
21	SE	160	VAL	CA-C-O	-5.87	114.13	120.47
24	S3	368	ASN	N-CA-C	-5.87	100.73	109.83
26	LA	2117	A	P-O3'-C3'	-5.87	111.39	120.20
2	SA	1420	U	O3'-P-O5'	5.87	112.81	104.00
8	SH	70	VAL	CB-CA-C	5.87	116.15	110.63
24	S3	606	LYS	CA-C-N	5.87	129.99	120.60
24	S3	606	LYS	C-N-CA	5.87	129.99	120.60
26	LA	935	C	P-O3'-C3'	-5.87	111.39	120.20
26	LA	1474	U	O5'-C5'-C4'	-5.87	102.69	111.50
46	LH	93	TYR	CA-CB-CG	5.87	124.47	113.90
50	LL	8	PRO	CB-CA-C	-5.87	101.87	111.56
18	SB	83	ALA	CA-C-N	5.87	132.75	121.54
18	SB	83	ALA	C-N-CA	5.87	132.75	121.54
22	SF	73	GLU	CA-C-O	-5.87	113.22	119.97
26	LA	792	A	C2'-C3'-O3'	5.87	118.30	109.50
26	LA	2602	A	C2'-C3'-O3'	5.87	118.30	109.50
47	LJ	161	LYS	N-CA-C	5.87	117.76	111.36
57	LS	88	GLU	O-C-N	-5.87	115.59	122.81
2	SA	812	G	O4'-C1'-C2'	-5.87	101.73	107.60
26	LA	913	U	P-O3'-C3'	-5.87	111.40	120.20
13	SM	114	PRO	CA-C-N	5.87	132.53	121.97
13	SM	114	PRO	C-N-CA	5.87	132.53	121.97
24	S3	476	PHE	CA-CB-CG	-5.87	107.94	113.80
26	LA	232	G	O3'-P-O5'	5.87	112.80	104.00
26	LA	566	U	P-O5'-C5'	-5.87	112.10	120.90
26	LA	1150	C	C3'-C2'-C1'	-5.87	95.43	101.30
26	LA	2284	A	O4'-C4'-C3'	-5.87	98.13	104.00
26	LA	2665	A	C1'-O4'-C4'	-5.87	104.03	109.90
2	SA	274	A	C3'-C2'-O2'	-5.86	105.81	114.60
13	SM	101	THR	O-C-N	-5.86	115.38	123.12
24	S3	556	ILE	N-CA-CB	5.86	118.08	110.57
26	LA	1875	G	C5'-C4'-C3'	5.86	124.79	116.00
54	LM	5	GLN	CA-C-N	5.86	130.77	122.09
54	LM	5	GLN	C-N-CA	5.86	130.77	122.09
54	LM	32	TYR	N-CA-CB	-5.86	100.62	110.65
2	SA	348	G	O5'-C5'-C4'	5.86	120.29	111.50
2	SA	779	C	C1'-C2'-O2'	5.86	117.19	108.40
19	SC	43	THR	N-CA-CB	5.86	119.25	110.22
24	S3	470	ASP	O-C-N	-5.86	115.91	122.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	783	A	C1'-O4'-C4'	-5.86	104.04	109.90
26	LA	1081	U	C1'-C2'-O2'	5.86	117.19	108.40
2	SA	263	A	C4'-C3'-O3'	-5.86	104.21	113.00
2	SA	1090	U	C4'-C3'-O3'	-5.86	104.21	113.00
2	SA	1122	U	O4'-C4'-C3'	-5.86	98.14	104.00
25	LB	2	G	C4'-C3'-C2'	-5.86	96.74	102.60
26	LA	159	G	C4'-C3'-O3'	-5.86	104.21	113.00
26	LA	1942	C	C5'-C4'-C3'	-5.86	107.21	116.00
26	LA	1948	G	C4'-C3'-O3'	-5.86	104.21	113.00
26	LA	2323	G	O4'-C1'-C2'	-5.86	101.74	107.60
48	LN	40	SER	CA-CB-OG	-5.86	99.38	111.10
49	LK	120	ASP	N-CA-CB	5.86	120.39	110.49
51	LI	86	ASP	O-C-N	-5.86	115.08	122.17
26	LA	544	C	P-O5'-C5'	5.86	129.69	120.90
38	LE	48	ILE	O-C-N	-5.86	116.93	123.26
41	L5	27	GLY	N-CA-C	5.86	119.76	112.73
2	SA	219	U	P-O3'-C3'	-5.86	111.42	120.20
17	SQ	30	HIS	CA-C-O	-5.86	113.94	119.80
24	S3	302	LYS	CA-C-N	5.86	128.06	120.44
24	S3	302	LYS	C-N-CA	5.86	128.06	120.44
25	LB	72	G	O4'-C1'-N9	5.86	117.29	108.50
26	LA	527	C	C1'-O4'-C4'	-5.86	103.84	109.70
2	SA	1156	G	O3'-P-O5'	-5.86	95.22	104.00
22	SF	98	GLU	CB-CA-C	-5.86	102.43	111.74
26	LA	639	U	C4'-C3'-O3'	-5.86	104.22	113.00
26	LA	1218	G	C4'-C3'-C2'	-5.86	96.74	102.60
26	LA	2776	A	C2'-C3'-O3'	5.86	118.28	109.50
52	LO	6	ARG	N-CA-CB	5.86	120.39	110.49
52	LO	61	GLY	N-CA-C	-5.86	101.38	111.57
2	SA	1086	U	P-O5'-C5'	5.85	129.68	120.90
7	SG	46	LEU	CA-C-O	5.85	126.95	120.63
10	SJ	62	ARG	NH1-CZ-NH2	-5.85	111.69	119.30
2	SA	239	U	C2'-C3'-O3'	5.85	122.48	113.70
2	SA	432	A	O4'-C4'-C3'	5.85	109.85	104.00
2	SA	552	U	O4'-C1'-N1	5.85	117.28	108.50
2	SA	759	A	O3'-P-O5'	5.85	112.78	104.00
25	LB	103	U	C4'-C3'-C2'	-5.85	96.75	102.60
26	LA	629	G	O5'-C5'-C4'	-5.85	102.72	111.50
26	LA	2623	G	C5'-C4'-C3'	5.85	124.78	116.00
33	LZ	61	LYS	O-C-N	-5.85	114.62	122.23
2	SA	21	G	C5'-C4'-O4'	5.85	118.58	109.80
17	SQ	29	LYS	O-C-N	-5.85	116.37	123.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	SC	43	THR	CA-C-O	-5.85	113.49	120.10
26	LA	1275	A	C5'-C4'-O4'	5.85	117.88	109.10
26	LA	1704	C	P-O5'-C5'	5.85	129.68	120.90
2	SA	618	C	P-O5'-C5'	5.85	129.67	120.90
26	LA	1022	G	O4'-C1'-C2'	-5.85	99.95	105.80
26	LA	1109	C	P-O3'-C3'	5.85	128.97	120.20
26	LA	1702	G	C5'-C4'-C3'	-5.85	107.22	116.00
26	LA	2342	C	C4'-C3'-O3'	-5.85	104.23	113.00
26	LA	2590	A	P-O5'-C5'	-5.85	112.13	120.90
26	LA	2765	A	C2'-C3'-O3'	5.85	122.47	113.70
57	LS	35	PHE	CA-C-O	-5.85	114.68	120.82
2	SA	185	U	P-O3'-C3'	-5.85	111.43	120.20
2	SA	664	G	C4'-C3'-C2'	-5.85	96.75	102.60
25	LB	98	G	O4'-C4'-C3'	-5.85	98.15	104.00
26	LA	124	G	C4'-C3'-C2'	5.85	108.45	102.60
26	LA	780	G	C3'-C2'-C1'	5.85	107.15	101.30
26	LA	786	C	O3'-P-O5'	-5.85	95.23	104.00
26	LA	2553	G	C1'-O4'-C4'	-5.85	104.05	109.90
2	SA	1150	A	O4'-C1'-C2'	5.85	113.45	107.60
9	SI	74	GLN	N-CA-CB	5.85	118.55	110.07
26	LA	692	C	C4'-C3'-C2'	-5.85	96.75	102.60
2	SA	405	U	O4'-C1'-N1	5.84	117.27	108.50
26	LA	458	G	P-O3'-C3'	5.84	128.97	120.20
26	LA	1045	C	O4'-C1'-N1	5.84	116.97	108.20
26	LA	1407	G	C2'-C3'-O3'	5.84	122.47	113.70
26	LA	1790	C	C5'-C4'-C3'	-5.84	107.23	116.00
34	L0	46	VAL	CA-C-O	-5.84	113.47	120.78
2	SA	1062	U	P-O5'-C5'	5.84	129.66	120.90
2	SA	1128	C	O4'-C1'-N1	5.84	117.26	108.50
21	SE	133	ILE	O-C-N	-5.84	115.97	121.87
26	LA	1433	A	P-O3'-C3'	5.84	128.96	120.20
26	LA	2756	U	P-O3'-C3'	5.84	128.96	120.20
27	LD	179	GLU	CB-CG-CD	5.84	122.53	112.60
32	LY	56	HIS	CE1-NE2-CD2	-5.84	103.16	109.00
44	LF	61	ARG	NE-CZ-NH1	-5.84	115.66	121.50
2	SA	405	U	C4'-C3'-C2'	5.84	108.44	102.60
2	SA	1073	U	P-O3'-C3'	-5.84	111.44	120.20
2	SA	1273	C	C1'-O4'-C4'	-5.84	104.06	109.90
4	S2	57	C	C2'-C3'-O3'	5.84	118.26	109.50
16	SP	15	PRO	CA-C-N	5.84	131.23	122.99
16	SP	15	PRO	C-N-CA	5.84	131.23	122.99
26	LA	127	A	C4'-C3'-C2'	5.84	108.44	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1547	C	P-O3'-C3'	-5.84	111.44	120.20
26	LA	1753	G	P-O5'-C5'	-5.84	112.14	120.90
26	LA	2481	G	P-O3'-C3'	5.84	128.96	120.20
50	LL	6	ALA	N-CA-CB	5.84	118.63	110.04
2	SA	199	A	P-O3'-C3'	-5.84	111.44	120.20
16	SP	9	HIS	CG-CD2-NE2	5.84	113.04	107.20
18	SB	208	ALA	CB-CA-C	-5.84	101.67	110.90
24	S3	241	GLU	N-CA-C	5.84	118.27	108.23
26	LA	196	A	O5'-C5'-C4'	-5.84	102.94	111.70
26	LA	940	G	P-O3'-C3'	5.84	128.96	120.20
26	LA	1639	C	O4'-C1'-N1	5.84	117.26	108.50
26	LA	2119	A	C3'-C2'-C1'	5.84	107.34	101.50
37	LC	139	ASN	CA-C-O	-5.84	113.96	119.80
40	L4	16	THR	CA-CB-OG1	5.84	118.36	109.60
2	SA	1400	C	O4'-C4'-C3'	5.84	111.94	106.10
4	S2	55	U	C4'-C3'-O3'	-5.84	104.24	113.00
5	ST	62	ALA	N-CA-CB	-5.84	101.54	110.12
10	SJ	5	ARG	N-CA-C	-5.84	105.82	113.12
24	S3	189	ALA	CA-C-O	5.84	127.53	120.99
26	LA	385	C	C4'-C3'-O3'	-5.84	104.24	113.00
2	SA	591	U	C4'-C3'-C2'	-5.84	96.76	102.60
2	SA	1048	G	C3'-C2'-C1'	-5.84	95.46	101.30
2	SA	1444	U	C4'-C3'-O3'	-5.84	104.25	113.00
2	SA	1477	U	C3'-C2'-C1'	5.84	107.14	101.30
19	SC	171	ARG	O-C-N	-5.84	116.38	123.27
24	S3	543	VAL	CA-C-N	5.84	130.92	120.59
24	S3	543	VAL	C-N-CA	5.84	130.92	120.59
26	LA	1926	U	C5'-C4'-O4'	5.84	118.56	109.80
54	LM	80	ASP	N-CA-CB	-5.84	101.97	110.84
26	LA	1626	A	O3'-P-O5'	-5.83	95.25	104.00
9	SI	16	ALA	N-CA-C	5.83	118.24	108.73
17	SQ	43	LEU	CB-CA-C	-5.83	97.80	109.35
26	LA	837	C	C2'-C3'-O3'	5.83	122.45	113.70
26	LA	1738	G	C2'-C3'-O3'	5.83	118.25	109.50
53	LP	110	MET	CG-SD-CE	-5.83	88.07	100.90
2	SA	797	C	N1-C1'-C2'	-5.83	103.25	112.00
2	SA	886	G	P-O3'-C3'	-5.83	111.45	120.20
9	SI	46	VAL	CB-CA-C	5.83	119.44	111.97
19	SC	122	GLN	CA-C-O	-5.83	114.37	120.55
24	S3	548	TYR	N-CA-C	5.83	119.66	112.54
26	LA	699	A	C4'-C3'-C2'	-5.83	96.77	102.60
26	LA	1698	A	O4'-C4'-C3'	-5.83	100.27	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1890	A	C4'-C3'-O3'	-5.83	104.25	113.00
26	LA	2190	G	C1'-C2'-O2'	5.83	117.15	108.40
26	LA	2691	C	P-O3'-C3'	-5.83	111.45	120.20
26	LA	2720	U	C3'-C2'-O2'	-5.83	101.95	110.70
27	LD	261	ARG	NH1-CZ-NH2	-5.83	111.72	119.30
30	LW	52	ASN	CA-C-N	5.83	136.03	121.80
30	LW	52	ASN	C-N-CA	5.83	136.03	121.80
37	LC	233	VAL	CB-CA-C	-5.83	104.27	112.14
45	LG	126	ASN	CA-CB-CG	-5.83	106.77	112.60
2	SA	117	G	P-O3'-C3'	-5.83	111.45	120.20
2	SA	390	U	C1'-O4'-C4'	-5.83	104.07	109.90
2	SA	1070	U	P-O3'-C3'	5.83	128.94	120.20
26	LA	1463	C	C5'-C4'-O4'	5.83	118.55	109.80
26	LA	2132	U	P-O3'-C3'	-5.83	111.45	120.20
2	SA	424	G	O4'-C1'-N9	5.83	117.24	108.50
2	SA	700	G	P-O5'-C5'	5.83	129.64	120.90
4	S2	25	U	O3'-P-O5'	-5.83	95.26	104.00
24	S3	341	VAL	CA-C-O	5.83	126.45	120.39
26	LA	906	U	C4'-C3'-C2'	-5.83	96.77	102.60
26	LA	2777	G	P-O5'-C5'	5.83	129.64	120.90
26	LA	2843	G	O5'-C5'-C4'	5.83	120.24	111.50
27	LD	186	ASP	CA-C-N	5.83	131.38	122.11
27	LD	186	ASP	C-N-CA	5.83	131.38	122.11
19	SC	227	GLN	CA-CB-CG	5.83	125.75	114.10
26	LA	2811	G	O4'-C1'-C2'	-5.83	101.77	107.60
30	LW	35	VAL	O-C-N	-5.83	116.70	122.12
2	SA	401	C	P-O3'-C3'	-5.83	111.46	120.20
2	SA	1358	U	O4'-C1'-C2'	-5.83	101.77	107.60
5	ST	50	PHE	CA-CB-CG	-5.83	107.97	113.80
26	LA	286	U	P-O3'-C3'	5.83	128.94	120.20
26	LA	448	U	C4'-C3'-O3'	5.83	118.14	109.40
26	LA	519	U	P-O3'-C3'	-5.83	111.46	120.20
26	LA	781	A	P-O3'-C3'	5.83	128.94	120.20
26	LA	1599	U	C5'-C4'-C3'	5.83	124.74	116.00
2	SA	214	C	O4'-C1'-N1	5.82	117.23	108.50
7	SG	8	GLN	N-CA-C	5.82	118.27	110.35
12	SL	31	GLY	O-C-N	-5.82	118.14	123.56
15	SO	56	LEU	O-C-N	-5.82	115.41	122.22
26	LA	279	A	C4'-C3'-C2'	-5.82	96.78	102.60
26	LA	1109	C	O5'-C5'-C4'	5.82	120.24	111.50
26	LA	1650	A	O3'-P-O5'	5.82	112.73	104.00
54	LM	121	GLU	CA-C-O	5.82	127.31	120.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	SK	61	ALA	N-CA-C	-5.82	104.89	112.23
25	LB	21	G	C3'-C2'-C1'	5.82	107.12	101.30
26	LA	2679	A	C4'-C3'-C2'	5.82	108.42	102.60
2	SA	475	C	C5'-C4'-C3'	-5.82	107.27	116.00
26	LA	1850	G	P-O5'-C5'	5.82	129.63	120.90
2	SA	1057	G	O3'-P-O5'	5.82	112.73	104.00
5	ST	24	ARG	O-C-N	-5.82	116.08	122.07
5	ST	67	HIS	N-CA-C	5.82	120.02	109.32
18	SB	5	MET	CG-SD-CE	-5.82	88.10	100.90
21	SE	39	GLY	CA-C-O	5.82	127.71	121.37
26	LA	878	A	O4'-C1'-C2'	-5.82	101.78	107.60
26	LA	1105	U	C5'-C4'-C3'	-5.82	107.27	116.00
26	LA	1448	G	O3'-P-O5'	-5.82	95.27	104.00
26	LA	1674	G	C3'-C2'-O2'	-5.82	105.87	114.60
26	LA	1886	U	C4'-C3'-C2'	-5.82	96.78	102.60
28	LU	21	ALA	CA-C-O	5.82	127.12	120.90
44	LF	60	TRP	N-CA-C	5.82	117.62	111.28
2	SA	1294	G	C1'-C2'-O2'	5.82	117.12	108.40
10	SJ	70	HIS	N-CA-C	5.82	118.43	109.07
21	SE	164	LEU	CA-C-O	-5.82	112.76	119.56
26	LA	1418	G	P-O3'-C3'	5.82	128.92	120.20
26	LA	1604	C	O4'-C4'-C3'	5.82	109.82	104.00
31	LX	69	GLU	CA-C-N	5.82	129.55	122.63
31	LX	69	GLU	C-N-CA	5.82	129.55	122.63
38	LE	33	ARG	NE-CZ-NH1	-5.82	115.68	121.50
1	SS	68	HIS	CB-CA-C	-5.81	99.71	113.02
2	SA	110	C	O4'-C1'-N1	5.81	117.22	108.50
2	SA	724	G	P-O5'-C5'	5.81	129.62	120.90
2	SA	823	C	C5'-C4'-O4'	5.81	118.52	109.80
2	SA	1468	A	C3'-C2'-O2'	5.81	119.42	110.70
26	LA	2798	U	C4'-C3'-C2'	-5.81	96.79	102.60
30	LW	91	LYS	CA-C-N	5.81	128.89	120.98
30	LW	91	LYS	C-N-CA	5.81	128.89	120.98
37	LC	46	VAL	N-CA-C	-5.81	99.26	107.75
46	LH	75	VAL	CB-CA-C	-5.81	104.53	111.97
54	LM	29	HIS	CB-CG-CD2	-5.81	123.64	131.20
55	LQ	115	LEU	N-CA-CB	5.81	119.65	110.23
2	SA	472	U	C5'-C4'-C3'	-5.81	107.28	116.00
14	SN	100	TRP	N-CA-CB	5.81	120.38	110.50
15	SO	76	ARG	O-C-N	-5.81	115.96	122.12
26	LA	290	U	C5'-C4'-C3'	-5.81	107.28	116.00
26	LA	1420	A	P-O5'-C5'	5.81	129.62	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2895	G	O4'-C1'-C2'	-5.81	101.79	107.60
34	L0	58	ASN	CA-C-O	5.81	126.34	119.48
39	L3	22	THR	O-C-N	-5.81	114.86	122.59
2	SA	91	U	C4'-C3'-C2'	-5.81	96.79	102.60
26	LA	1533	C	O4'-C1'-N1	5.81	117.22	108.50
26	LA	2832	U	C4'-C3'-C2'	-5.81	96.79	102.60
2	SA	365	U	C1'-O4'-C4'	-5.81	104.09	109.90
2	SA	562	U	C3'-C2'-C1'	-5.81	95.69	101.50
26	LA	2420	C	C4'-C3'-C2'	-5.81	96.79	102.60
27	LD	11	GLY	CA-C-O	5.81	125.49	119.27
45	LG	16	MET	N-CA-C	5.81	117.61	111.28
50	LL	138	GLN	O-C-N	-5.81	115.88	123.02
54	LM	29	HIS	CE1-NE2-CD2	-5.81	103.19	109.00
2	SA	1114	C	C4'-C3'-C2'	-5.81	96.79	102.60
7	SG	26	VAL	N-CA-C	5.81	118.31	111.05
19	SC	161	ILE	CB-CA-C	-5.81	103.93	110.96
23	SR	33	THR	O-C-N	-5.81	114.87	122.59
26	LA	100	U	C3'-C2'-O2'	5.81	119.41	110.70
26	LA	296	U	O4'-C1'-N1	5.81	117.21	108.50
26	LA	302	C	C5'-C4'-C3'	-5.81	107.29	116.00
26	LA	528	A	O4'-C4'-C3'	-5.81	98.19	104.00
26	LA	1117	C	C5'-C4'-O4'	5.81	118.51	109.80
26	LA	1753	G	P-O3'-C3'	-5.81	111.49	120.20
50	LL	32	LEU	O-C-N	-5.81	116.09	122.07
54	LM	32	TYR	CA-C-O	5.81	126.28	118.38
56	LR	100	ARG	CA-C-N	5.81	131.93	122.81
56	LR	100	ARG	C-N-CA	5.81	131.93	122.81
18	SB	196	ASP	CA-C-O	-5.81	114.27	120.42
26	LA	2875	C	C5'-C4'-C3'	-5.81	107.29	116.00
51	LI	84	ALA	O-C-N	-5.81	116.28	123.36
53	LP	113	ILE	O-C-N	-5.81	116.91	123.18
2	SA	626	G	C3'-C2'-C1'	5.80	107.10	101.30
9	SI	117	LEU	O-C-N	-5.80	116.56	123.06
26	LA	919	U	C1'-C2'-O2'	5.80	117.11	108.40
26	LA	1819	A	C5'-C4'-C3'	-5.80	106.49	115.20
29	LV	32	LEU	N-CA-C	5.80	118.67	109.50
35	L1	4	ILE	O-C-N	-5.80	116.49	122.82
2	SA	369	G	P-O3'-C3'	5.80	128.90	120.20
8	SH	79	ARG	CA-C-N	5.80	127.09	119.84
8	SH	79	ARG	C-N-CA	5.80	127.09	119.84
26	LA	2144	G	O4'-C4'-C3'	5.80	109.80	104.00
50	LL	48	VAL	O-C-N	-5.80	116.60	123.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	LR	46	VAL	CB-CA-C	-5.80	103.94	110.96
2	SA	378	G	C4'-C3'-O3'	-5.80	104.30	113.00
4	S2	60	A	P-O3'-C3'	5.80	128.90	120.20
14	SN	10	VAL	CA-CB-CG1	5.80	120.26	110.40
26	LA	549	G	O5'-C5'-C4'	-5.80	103.00	111.70
26	LA	862	G	C4'-C3'-O3'	-5.80	104.30	113.00
26	LA	2112	G	O4'-C1'-N9	5.80	117.20	108.50
26	LA	2815	C	C4'-C3'-O3'	-5.80	104.30	113.00
43	L7	8	LYS	N-CA-CB	5.80	120.41	111.24
45	LG	152	ASP	N-CA-CB	5.80	118.64	109.71
50	LL	53	TYR	N-CA-CB	5.80	119.88	110.42
57	LS	60	TRP	CA-C-O	5.80	126.67	120.70
2	SA	453	G	P-O5'-C5'	-5.80	112.20	120.90
2	SA	782	A	C4'-C3'-C2'	-5.80	96.80	102.60
2	SA	873	A	O5'-C5'-C4'	5.80	120.40	111.70
2	SA	1527	U	C1'-O4'-C4'	5.80	115.70	109.90
21	SE	135	VAL	N-CA-CB	-5.80	102.65	110.54
26	LA	629	G	O3'-P-O5'	5.80	112.70	104.00
26	LA	1916	A	C4'-C3'-C2'	-5.80	96.80	102.60
52	LO	81	ARG	N-CA-C	5.80	118.60	109.96
2	SA	463	U	O4'-C1'-C2'	5.80	113.40	107.60
7	SG	10	LYS	CB-CA-C	-5.80	101.81	110.16
9	SI	9	GLY	CA-C-N	5.80	132.61	121.54
9	SI	9	GLY	C-N-CA	5.80	132.61	121.54
26	LA	1125	G	P-O5'-C5'	-5.80	112.20	120.90
26	LA	1595	C	O4'-C1'-C2'	5.80	113.40	107.60
26	LA	2285	C	C1'-O4'-C4'	-5.80	104.10	109.90
26	LA	2425	A	P-O3'-C3'	-5.80	111.50	120.20
26	LA	2622	U	P-O5'-C5'	-5.80	112.20	120.90
2	SA	378	G	C5'-C4'-C3'	-5.80	107.31	116.00
2	SA	456	A	O4'-C1'-C2'	-5.80	101.80	107.60
7	SG	39	GLU	N-CA-CB	5.80	118.63	109.82
26	LA	1247	A	C3'-C2'-O2'	-5.80	105.91	114.60
26	LA	1632	A	O4'-C4'-C3'	-5.80	98.20	104.00
26	LA	1784	A	C5'-C4'-C3'	5.80	123.89	115.20
26	LA	2765	A	P-O3'-C3'	5.80	128.90	120.20
25	LB	115	A	O4'-C1'-C2'	5.79	113.39	107.60
26	LA	161	A	C4'-C3'-O3'	-5.79	104.31	113.00
27	LD	59	GLN	O-C-N	-5.79	114.88	122.59
41	L5	29	GLN	O-C-N	-5.79	114.56	122.33
2	SA	341	C	C5'-C4'-O4'	5.79	118.49	109.80
2	SA	882	C	P-O3'-C3'	5.79	128.89	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	SI	56	MET	CA-C-O	5.79	126.43	119.59
20	SD	24	VAL	N-CA-C	5.79	121.39	109.34
24	S3	412	GLU	CA-C-O	-5.79	114.89	120.97
26	LA	1734	G	O3'-P-O5'	5.79	112.69	104.00
26	LA	2502	G	P-O5'-C5'	5.79	129.59	120.90
26	LA	2587	A	P-O3'-C3'	5.79	128.89	120.20
32	LY	66	VAL	CA-CB-CG1	5.79	120.25	110.40
46	LH	86	LEU	N-CA-C	-5.79	100.45	109.72
52	LO	95	LEU	N-CA-C	5.79	117.74	108.41
57	LS	63	ARG	CA-CB-CG	5.79	125.69	114.10
2	SA	814	A	O4'-C1'-N9	5.79	117.19	108.50
26	LA	463	G	C5'-C4'-C3'	-5.79	107.31	116.00
26	LA	2758	A	P-O3'-C3'	-5.79	111.51	120.20
58	LT	38	VAL	CA-CB-CG2	5.79	120.25	110.40
2	SA	392	C	O5'-C5'-C4'	5.79	120.19	111.50
2	SA	404	G	C4'-C3'-O3'	-5.79	104.31	113.00
18	SB	91	VAL	N-CA-CB	5.79	120.78	111.23
22	SF	83	ALA	O-C-N	-5.79	114.89	122.59
26	LA	1686	C	C1'-C2'-O2'	5.79	117.08	108.40
39	L3	16	ARG	CA-C-N	5.79	128.31	120.38
39	L3	16	ARG	C-N-CA	5.79	128.31	120.38
2	SA	16	A	P-O3'-C3'	-5.79	111.52	120.20
2	SA	993	G	C2'-C3'-O3'	5.79	118.18	109.50
8	SH	127	TYR	N-CA-CB	5.79	120.11	110.85
26	LA	189	G	O4'-C1'-C2'	-5.79	101.81	107.60
26	LA	2019	A	C2'-C3'-O3'	5.79	122.38	113.70
26	LA	2408	U	P-O3'-C3'	5.79	128.88	120.20
26	LA	2860	A	O5'-C5'-C4'	5.79	120.18	111.50
37	LC	162	ARG	NE-CZ-NH1	5.79	127.29	121.50
2	SA	370	C	C1'-C2'-O2'	5.79	117.08	108.40
14	SN	58	ARG	CG-CD-NE	-5.79	99.27	112.00
24	S3	665	TYR	N-CA-C	5.79	117.26	111.07
26	LA	80	G	C1'-O4'-C4'	-5.79	104.11	109.90
26	LA	2857	G	O3'-P-O5'	5.79	112.68	104.00
34	L0	58	ASN	O-C-N	-5.79	115.19	122.19
57	LS	64	ILE	N-CA-CB	5.79	118.41	110.54
2	SA	487	A	C4'-C3'-O3'	-5.79	104.32	113.00
2	SA	1061	G	C4'-C3'-C2'	-5.79	96.81	102.60
26	LA	24	G	O4'-C4'-C3'	-5.79	98.22	104.00
26	LA	1275	A	O4'-C4'-C3'	-5.79	100.31	106.10
26	LA	1537	G	C3'-C2'-C1'	5.79	107.08	101.30
26	LA	1658	C	P-O3'-C3'	-5.79	111.52	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	LI	3	VAL	N-CA-CB	5.79	120.78	111.23
53	LP	60	VAL	N-CA-CB	5.79	118.41	110.54
56	LR	28	LYS	CB-CA-C	-5.79	100.20	109.75
2	SA	633	G	O3'-P-O5'	-5.78	95.33	104.00
2	SA	1092	A	C3'-C2'-C1'	5.78	107.08	101.30
9	SI	98	ARG	N-CA-CB	5.78	118.72	110.16
26	LA	958	U	O4'-C1'-N1	5.78	116.87	108.20
26	LA	1349	C	P-O5'-C5'	-5.78	112.22	120.90
26	LA	2394	C	P-O5'-C5'	5.78	129.57	120.90
26	LA	2536	G	C4'-C3'-C2'	-5.78	96.82	102.60
31	LX	37	PRO	CA-C-N	5.78	130.89	122.85
31	LX	37	PRO	C-N-CA	5.78	130.89	122.85
33	LZ	17	ARG	NE-CZ-NH1	-5.78	115.72	121.50
49	LK	108	ILE	CB-CA-C	-5.78	104.33	112.14
53	LP	12	ARG	NH1-CZ-NH2	-5.78	111.78	119.30
2	SA	185	U	C2'-C3'-O3'	5.78	122.37	113.70
11	SK	9	LYS	N-CA-C	5.78	117.80	107.80
58	LT	35	PHE	CA-CB-CG	-5.78	108.02	113.80
2	SA	370	C	O4'-C1'-C2'	-5.78	101.82	107.60
3	S1	16	A	C1'-C2'-O2'	5.78	120.47	111.80
24	S3	266	GLY	N-CA-C	5.78	117.97	110.45
26	LA	446	G	C2'-C3'-O3'	5.78	118.17	109.50
26	LA	1250	G	C5'-C4'-O4'	5.78	117.77	109.10
26	LA	1731	G	O4'-C4'-C3'	-5.78	100.32	106.10
27	LD	231	HIS	O-C-N	-5.78	116.11	122.07
47	LJ	106	GLU	CB-CA-C	5.78	118.78	109.07
54	LM	105	ARG	NE-CZ-NH1	5.78	127.28	121.50
26	LA	1868	C	C5'-C4'-O4'	5.78	118.47	109.80
26	LA	2819	G	C3'-C2'-C1'	5.78	107.08	101.30
2	SA	1260	G	O3'-P-O5'	-5.78	95.33	104.00
20	SD	38	GLY	CA-C-N	5.78	129.09	120.31
20	SD	38	GLY	C-N-CA	5.78	129.09	120.31
24	S3	306	ALA	N-CA-CB	-5.78	100.99	110.52
24	S3	701	ARG	CB-CG-CD	5.78	124.59	111.30
26	LA	657	U	C5'-C4'-C3'	5.78	124.67	116.00
26	LA	952	G	O3'-P-O5'	5.78	112.67	104.00
26	LA	1059	G	C4'-C3'-C2'	-5.78	96.82	102.60
26	LA	1916	A	O4'-C4'-C3'	5.78	109.78	104.00
26	LA	2488	G	O4'-C4'-C3'	5.78	109.78	104.00
55	LQ	67	ASN	CA-C-O	-5.78	114.99	121.81
2	SA	595	A	C4'-C3'-C2'	5.78	108.38	102.60
2	SA	737	C	O4'-C4'-C3'	5.78	109.78	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	SB	227	ASP	CA-CB-CG	5.78	118.38	112.60
24	S3	355	ALA	N-CA-CB	-5.78	100.79	111.53
25	LB	97	C	C1'-O4'-C4'	-5.78	104.12	109.90
26	LA	807	U	C5'-C4'-C3'	5.78	124.66	116.00
26	LA	1202	G	P-O5'-C5'	-5.78	112.24	120.90
26	LA	1272	A	C4'-C3'-O3'	-5.78	104.34	113.00
35	L1	5	LYS	CA-C-O	5.78	126.68	120.38
55	LQ	58	ILE	CA-C-N	5.78	130.37	120.72
55	LQ	58	ILE	C-N-CA	5.78	130.37	120.72
2	SA	719	C	O4'-C1'-N1	5.77	116.86	108.20
26	LA	1830	C	P-O3'-C3'	-5.77	111.54	120.20
26	LA	2130	U	O5'-C5'-C4'	5.77	120.16	111.50
26	LA	2308	G	C2'-C3'-O3'	5.77	118.16	109.50
36	L2	2	LYS	CA-C-O	5.77	127.06	120.54
37	LC	172	HIS	CA-C-O	-5.77	114.59	120.71
2	SA	178	C	O4'-C1'-N1	5.77	117.16	108.50
2	SA	924	C	C4'-C3'-O3'	-5.77	104.34	113.00
2	SA	1305	G	C3'-C2'-C1'	5.77	107.07	101.30
26	LA	135	U	C4'-C3'-C2'	-5.77	96.83	102.60
26	LA	379	G	O4'-C4'-C3'	-5.77	98.23	104.00
26	LA	1135	C	C2'-C3'-O3'	5.77	122.36	113.70
26	LA	1150	C	P-O3'-C3'	-5.77	111.54	120.20
26	LA	1936	A	O5'-C5'-C4'	5.77	120.36	111.70
26	LA	2840	C	C4'-C3'-O3'	-5.77	104.34	113.00
28	LU	38	TYR	N-CA-C	5.77	119.63	112.59
35	L1	46	MET	CA-C-O	5.77	126.54	120.42
36	L2	34	LEU	CA-C-N	5.77	132.57	121.54
36	L2	34	LEU	C-N-CA	5.77	132.57	121.54
37	LC	147	PRO	N-CA-C	5.77	124.36	112.47
51	LI	35	LYS	CA-C-O	5.77	126.31	119.56
51	LI	135	HIS	CG-CD2-NE2	5.77	112.97	107.20
56	LR	100	ARG	N-CA-CB	5.77	119.27	110.44
2	SA	944	G	C5'-C4'-C3'	-5.77	107.34	116.00
2	SA	1328	C	C5'-C4'-C3'	-5.77	107.34	116.00
26	LA	154	U	O4'-C1'-N1	5.77	117.16	108.50
26	LA	811	U	C1'-O4'-C4'	-5.77	103.93	109.70
26	LA	2000	C	C4'-C3'-O3'	-5.77	104.34	113.00
55	LQ	4	LYS	N-CA-C	5.77	119.50	112.23
2	SA	545	C	P-O3'-C3'	-5.77	111.55	120.20
2	SA	702	A	C3'-C2'-C1'	-5.77	95.73	101.50
2	SA	1433	A	C2'-C3'-O3'	5.77	122.35	113.70
4	S2	45	A	P-O5'-C5'	5.77	129.55	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	SE	30	PHE	CA-CB-CG	-5.77	108.03	113.80
22	SF	117	ALA	CA-C-O	5.77	128.49	121.68
26	LA	111	A	O3'-P-O5'	5.77	112.65	104.00
26	LA	428	A	C2'-C3'-O3'	5.77	118.15	109.50
56	LR	16	VAL	N-CA-CB	-5.77	103.13	111.21
2	SA	191	G	C1'-O4'-C4'	-5.77	104.13	109.90
2	SA	675	A	O4'-C4'-C3'	-5.77	98.23	104.00
2	SA	816	A	O4'-C1'-C2'	-5.77	100.03	105.80
2	SA	954	G	P-O3'-C3'	-5.77	111.55	120.20
25	LB	25	U	O4'-C4'-C3'	-5.77	100.33	106.10
26	LA	754	U	C5'-C4'-C3'	5.77	124.65	116.00
26	LA	1323	C	C1'-C2'-O2'	-5.77	103.15	111.80
26	LA	1406	U	O4'-C1'-N1	5.77	117.15	108.50
26	LA	1884	G	P-O5'-C5'	-5.77	112.25	120.90
27	LD	216	ARG	CA-C-N	5.77	125.77	119.89
27	LD	216	ARG	C-N-CA	5.77	125.77	119.89
50	LL	23	LYS	O-C-N	-5.77	114.92	122.59
52	LO	66	ARG	NE-CZ-NH1	5.77	127.27	121.50
19	SC	187	GLU	CB-CG-CD	5.77	122.40	112.60
26	LA	1664	A	N9-C1'-C2'	5.77	120.65	112.00
26	LA	2237	G	O4'-C1'-N9	5.77	117.15	108.50
38	LE	123	LYS	CB-CA-C	-5.77	99.60	110.67
2	SA	164	G	O3'-P-O5'	-5.76	95.35	104.00
9	SI	44	ARG	NE-CZ-NH2	-5.76	114.01	119.20
10	SJ	100	ILE	CB-CA-C	-5.76	101.84	111.29
16	SP	5	ARG	N-CA-CB	-5.76	102.03	111.66
17	SQ	2	ASP	CA-C-N	5.76	132.55	121.54
17	SQ	2	ASP	C-N-CA	5.76	132.55	121.54
21	SE	71	ILE	N-CA-CB	5.76	119.12	110.13
26	LA	101	A	C2'-C3'-O3'	5.76	122.35	113.70
26	LA	1435	G	C4'-C3'-C2'	-5.76	96.83	102.60
2	SA	647	C	C4'-C3'-C2'	-5.76	96.84	102.60
12	SL	98	ARG	NE-CZ-NH2	5.76	124.39	119.20
26	LA	1756	G	O3'-P-O5'	-5.76	95.36	104.00
2	SA	235	C	C5'-C4'-O4'	5.76	118.44	109.80
2	SA	709	U	C4'-C3'-C2'	-5.76	96.84	102.60
4	S2	59	A	O4'-C1'-C2'	5.76	111.56	105.80
21	SE	88	HIS	CA-CB-CG	-5.76	108.04	113.80
21	SE	137	ARG	CG-CD-NE	-5.76	99.33	112.00
26	LA	2118	U	C5'-C4'-C3'	5.76	123.84	115.20
26	LA	2132	U	O4'-C1'-C2'	-5.76	101.84	107.60
26	LA	2171	A	C4'-C3'-C2'	-5.76	96.84	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2843	G	O4'-C1'-N9	5.76	117.14	108.50
39	L3	54	ILE	N-CA-C	5.76	116.16	108.27
45	LG	9	ASP	N-CA-C	5.76	117.64	111.36
52	LO	108	VAL	N-CA-C	5.76	112.80	107.56
2	SA	127	G	O3'-P-O5'	5.76	112.64	104.00
2	SA	243	A	C5'-C4'-C3'	-5.76	106.56	115.20
2	SA	415	A	C5'-C4'-O4'	5.76	118.44	109.80
2	SA	1122	U	C3'-C2'-C1'	-5.76	95.54	101.30
2	SA	1127	G	C4'-C3'-C2'	5.76	108.36	102.60
2	SA	1186	G	C5'-C4'-C3'	-5.76	107.36	116.00
2	SA	1347	G	C1'-O4'-C4'	-5.76	103.94	109.70
23	SR	18	GLN	OE1-CD-NE2	-5.76	116.84	122.60
26	LA	1106	G	P-O3'-C3'	-5.76	111.56	120.20
26	LA	1757	A	P-O3'-C3'	5.76	128.84	120.20
26	LA	1906	G	C5'-C4'-C3'	-5.76	107.36	116.00
2	SA	1009	U	O4'-C1'-N1	5.76	117.14	108.50
26	LA	2070	A	C1'-C2'-O2'	5.76	117.04	108.40
1	SS	74	ALA	N-CA-C	5.76	122.53	109.81
2	SA	614	C	C1'-C2'-O2'	5.76	117.03	108.40
10	SJ	60	ASP	CA-CB-CG	5.76	118.36	112.60
24	S3	308	ARG	NE-CZ-NH2	5.76	124.38	119.20
26	LA	215	G	C5'-C4'-C3'	5.76	123.84	115.20
26	LA	1268	A	C4'-C3'-O3'	-5.76	104.36	113.00
26	LA	1575	C	P-O3'-C3'	-5.76	111.56	120.20
54	LM	26	GLY	O-C-N	-5.76	116.60	122.70
2	SA	1058	G	C5'-C4'-O4'	5.75	118.43	109.80
2	SA	1529	G	C3'-C2'-O2'	-5.75	105.97	114.60
26	LA	176	A	C4'-C3'-O3'	-5.75	104.37	113.00
26	LA	570	G	C1'-O4'-C4'	-5.75	103.94	109.70
26	LA	1556	C	O3'-P-O5'	5.75	112.63	104.00
31	LX	76	ASP	N-CA-C	5.75	117.72	110.24
35	L1	46	MET	CB-CA-C	-5.75	101.07	110.85
21	SE	28	ARG	NE-CZ-NH2	5.75	124.38	119.20
23	SR	11	ARG	CA-C-N	5.75	132.53	121.54
23	SR	11	ARG	C-N-CA	5.75	132.53	121.54
26	LA	442	G	O3'-P-O5'	5.75	112.63	104.00
26	LA	571	U	C5'-C4'-C3'	-5.75	107.37	116.00
26	LA	827	U	C3'-C2'-O2'	-5.75	105.97	114.60
26	LA	1622	G	P-O5'-C5'	-5.75	112.27	120.90
47	LJ	38	THR	O-C-N	-5.75	115.59	122.15
56	LR	10	GLU	CA-C-N	5.75	128.56	120.28
56	LR	10	GLU	C-N-CA	5.75	128.56	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	285	C	C5'-C4'-O4'	5.75	118.43	109.80
2	SA	802	A	P-O3'-C3'	-5.75	111.57	120.20
2	SA	995	C	C5'-C4'-C3'	5.75	124.63	116.00
11	SK	10	ARG	NE-CZ-NH2	-5.75	114.02	119.20
26	LA	24	G	C5'-C4'-C3'	5.75	124.63	116.00
26	LA	336	C	O5'-C5'-C4'	-5.75	102.87	111.50
26	LA	864	G	C5'-C4'-O4'	5.75	118.43	109.80
42	L6	13	PHE	CA-C-O	-5.75	114.39	121.06
26	LA	2313	C	O4'-C1'-N1	5.75	117.12	108.50
2	SA	628	G	C5'-C4'-O4'	5.75	118.42	109.80
13	SM	32	ILE	CA-C-O	5.75	126.94	120.85
17	SQ	21	VAL	CB-CA-C	-5.75	103.26	111.31
24	S3	343	ASN	CA-CB-CG	-5.75	106.85	112.60
24	S3	579	PHE	CA-CB-CG	5.75	119.55	113.80
26	LA	465	G	C4'-C3'-C2'	5.75	108.35	102.60
26	LA	808	G	C3'-C2'-C1'	5.75	107.05	101.30
26	LA	1300	G	C5'-C4'-C3'	-5.75	106.58	115.20
44	LF	95	LYS	CA-C-O	-5.75	113.82	120.49
48	LN	142	ILE	CA-C-N	5.75	132.52	121.54
48	LN	142	ILE	C-N-CA	5.75	132.52	121.54
2	SA	1174	G	C5'-C4'-C3'	5.75	124.62	116.00
5	ST	22	SER	N-CA-C	5.75	117.22	111.07
6	SU	36	PHE	CA-CB-CG	-5.75	108.05	113.80
13	SM	15	VAL	N-CA-C	5.75	116.48	110.62
17	SQ	41	THR	CA-C-N	-5.75	114.89	122.99
17	SQ	41	THR	C-N-CA	-5.75	114.89	122.99
17	SQ	53	GLY	O-C-N	-5.75	115.23	122.70
26	LA	681	G	C4'-C3'-C2'	-5.75	96.85	102.60
26	LA	1283	G	P-O3'-C3'	-5.75	111.58	120.20
26	LA	1970	A	C2'-C3'-O3'	5.75	118.12	109.50
2	SA	884	U	O4'-C4'-C3'	5.75	111.84	106.10
2	SA	1179	A	P-O3'-C3'	-5.75	111.58	120.20
26	LA	408	G	C1'-O4'-C4'	-5.75	104.16	109.90
28	LU	46	LEU	O-C-N	-5.75	116.03	122.12
57	LS	78	PHE	N-CA-C	-5.75	104.94	111.14
1	SS	30	LEU	N-CA-C	5.74	117.57	108.67
2	SA	127	G	C1'-C2'-O2'	5.74	117.02	108.40
2	SA	1042	A	P-O5'-C5'	5.74	129.51	120.90
2	SA	1500	A	P-O5'-C5'	5.74	129.52	120.90
7	SG	64	ALA	N-CA-C	5.74	120.85	111.37
22	SF	58	HIS	CE1-NE2-CD2	-5.74	103.26	109.00
26	LA	362	A	P-O5'-C5'	5.74	129.51	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1110	G	C3'-C2'-C1'	-5.74	95.76	101.50
26	LA	1117	C	C5'-C4'-C3'	-5.74	107.38	116.00
26	LA	1721	G	C2'-C3'-O3'	5.74	118.11	109.50
57	LS	89	ILE	O-C-N	-5.74	115.86	121.78
26	LA	94	A	O4'-C1'-N9	5.74	117.11	108.50
26	LA	1382	G	P-O3'-C3'	5.74	128.81	120.20
34	L0	53	VAL	CA-C-N	5.74	127.97	120.28
34	L0	53	VAL	C-N-CA	5.74	127.97	120.28
36	L2	16	CYS	CA-C-O	5.74	127.27	121.07
51	LI	65	ALA	CA-C-N	5.74	127.91	120.44
51	LI	65	ALA	C-N-CA	5.74	127.91	120.44
53	LP	25	ALA	O-C-N	-5.74	114.74	122.43
2	SA	200	G	C4'-C3'-O3'	-5.74	104.39	113.00
2	SA	560	A	C2'-C3'-O3'	5.74	118.11	109.50
2	SA	717	U	O4'-C1'-N1	5.74	117.11	108.50
2	SA	996	A	C5'-C4'-O4'	5.74	118.41	109.80
21	SE	13	LYS	N-CA-CB	-5.74	100.85	111.13
21	SE	95	MET	O-C-N	-5.74	114.96	122.59
25	LB	91	C	O4'-C1'-N1	5.74	117.11	108.50
2	SA	354	G	P-O5'-C5'	5.74	129.51	120.90
26	LA	98	G	P-O5'-C5'	-5.74	112.29	120.90
26	LA	339	U	C4'-C3'-C2'	-5.74	96.86	102.60
26	LA	2165	C	N1-C1'-C2'	-5.74	103.39	112.00
26	LA	2708	G	C4'-C3'-C2'	-5.74	96.86	102.60
3	S1	53	G	C4'-C3'-O3'	5.74	118.00	109.40
13	SM	42	VAL	CB-CA-C	-5.74	103.31	111.40
24	S3	219	GLN	N-CA-C	5.74	117.61	111.36
24	S3	490	ARG	CA-C-O	-5.74	115.09	121.51
24	S3	583	HIS	CA-CB-CG	-5.74	108.06	113.80
26	LA	1174	U	P-O5'-C5'	-5.74	112.30	120.90
44	LF	183	PHE	O-C-N	-5.74	114.96	122.59
55	LQ	10	ARG	CG-CD-NE	-5.74	99.38	112.00
2	SA	182	A	C1'-C2'-O2'	5.73	120.40	111.80
26	LA	2671	G	P-O5'-C5'	5.73	129.50	120.90
36	L2	14	ALA	CA-C-O	5.73	128.71	120.51
2	SA	378	G	P-O5'-C5'	-5.73	112.30	120.90
2	SA	944	G	O4'-C4'-C3'	5.73	109.73	104.00
2	SA	1118	U	C3'-C2'-C1'	5.73	107.03	101.30
7	SG	117	LEU	N-CA-C	5.73	117.61	111.36
26	LA	260	G	P-O5'-C5'	-5.73	112.30	120.90
26	LA	406	G	P-O5'-C5'	5.73	129.50	120.90
26	LA	830	G	C2'-C3'-O3'	5.73	118.10	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1837	C	O4'-C4'-C3'	-5.73	98.27	104.00
37	LC	195	ALA	O-C-N	-5.73	115.62	122.15
48	LN	72	ALA	N-CA-C	5.73	117.53	111.28
52	LO	44	ARG	N-CA-C	-5.73	105.03	111.28
18	SB	27	LYS	CA-C-N	5.73	125.41	119.05
18	SB	27	LYS	C-N-CA	5.73	125.41	119.05
22	SF	78	PHE	CA-CB-CG	-5.73	108.07	113.80
24	S3	538	ASP	O-C-N	-5.73	116.40	122.30
26	LA	32	C	C5'-C4'-C3'	-5.73	107.41	116.00
26	LA	2019	A	C4'-C3'-C2'	-5.73	96.87	102.60
32	LY	9	THR	N-CA-CB	5.73	119.55	110.84
34	L0	44	LYS	O-C-N	-5.73	114.78	122.23
2	SA	478	A	O3'-P-O5'	5.73	112.59	104.00
2	SA	1515	G	C1'-C2'-O2'	5.73	116.99	108.40
18	SB	232	ALA	CA-C-O	-5.73	114.77	120.90
26	LA	299	A	C3'-C2'-C1'	-5.73	95.57	101.30
26	LA	1063	G	C1'-O4'-C4'	-5.73	104.17	109.90
26	LA	1431	A	O4'-C1'-C2'	-5.73	101.87	107.60
26	LA	2457	U	C4'-C3'-C2'	-5.73	96.87	102.60
26	LA	2630	G	C4'-C3'-C2'	-5.73	96.87	102.60
56	LR	52	ARG	N-CA-C	5.73	117.40	109.15
2	SA	178	C	P-O5'-C5'	-5.73	112.31	120.90
2	SA	291	U	C1'-C2'-O2'	5.73	116.99	108.40
2	SA	1283	U	O4'-C1'-N1	5.73	117.09	108.50
6	SU	52	VAL	N-CA-C	5.73	116.46	110.62
24	S3	85	ILE	O-C-N	-5.73	116.22	122.64
26	LA	415	A	O3'-P-O5'	5.73	112.59	104.00
26	LA	489	G	C3'-C2'-C1'	5.73	107.23	101.50
2	SA	1	A	C1'-C2'-O2'	5.73	116.99	108.40
2	SA	1260	G	O4'-C1'-N9	5.73	117.09	108.50
18	SB	120	SER	CA-C-O	5.73	126.81	120.63
26	LA	677	A	C1'-C2'-O2'	-5.73	99.81	108.40
26	LA	2304	G	C5'-C4'-O4'	5.73	117.69	109.10
49	LK	112	LYS	CA-C-O	5.73	126.21	119.28
54	LM	31	ARG	N-CA-C	5.73	119.29	111.39
2	SA	121	U	P-O3'-C3'	-5.72	111.61	120.20
2	SA	175	C	C4'-C3'-C2'	-5.72	96.88	102.60
2	SA	1043	G	C1'-C2'-O2'	5.72	116.99	108.40
2	SA	1512	U	C4'-C3'-O3'	-5.72	104.41	113.00
8	SH	107	LYS	N-CA-CB	-5.72	102.52	110.65
26	LA	1140	C	C4'-C3'-O3'	-5.72	104.41	113.00
26	LA	1766	G	C4'-C3'-C2'	-5.72	96.88	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2895	G	C5'-C4'-O4'	5.72	118.39	109.80
27	LD	243	PRO	CA-C-O	-5.72	115.11	121.23
55	LQ	91	SER	N-CA-CB	5.72	121.36	111.00
2	SA	529	G	C1'-O4'-C4'	-5.72	104.18	109.90
24	S3	4	THR	O-C-N	-5.72	118.05	121.71
24	S3	491	GLU	CA-C-O	5.72	127.87	121.40
26	LA	1190	G	C1'-C2'-O2'	5.72	116.98	108.40
26	LA	2139	U	O4'-C1'-N1	5.72	117.08	108.50
26	LA	2243	U	P-O5'-C5'	5.72	129.48	120.90
26	LA	2531	A	C1'-O4'-C4'	-5.72	104.18	109.90
34	L0	26	PHE	N-CA-C	5.72	117.52	111.28
42	L6	16	THR	CA-C-N	5.72	127.34	120.13
42	L6	16	THR	C-N-CA	5.72	127.34	120.13
7	SG	82	SER	CA-C-N	5.72	129.01	120.31
7	SG	82	SER	C-N-CA	5.72	129.01	120.31
26	LA	956	G	O4'-C1'-C2'	-5.72	101.88	107.60
26	LA	973	A	C4'-C3'-C2'	-5.72	96.88	102.60
26	LA	1792	G	O4'-C1'-C2'	-5.72	101.88	107.60
2	SA	788	U	C2'-C3'-O3'	5.72	118.08	109.50
10	SJ	30	LYS	CB-CA-C	-5.72	101.13	110.85
13	SM	40	GLU	O-C-N	-5.72	114.24	122.36
24	S3	182	VAL	O-C-N	-5.72	117.17	123.18
24	S3	290	ASP	CB-CA-C	-5.72	101.86	110.90
26	LA	1853	A	C4'-C3'-C2'	-5.72	96.88	102.60
26	LA	2355	G	P-O5'-C5'	5.72	129.48	120.90
1	SS	16	LYS	CA-CB-CG	5.72	125.54	114.10
2	SA	1174	G	O4'-C4'-C3'	-5.72	98.28	104.00
4	S2	57	C	C5'-C4'-C3'	5.72	123.78	115.20
24	S3	178	PHE	CA-CB-CG	-5.72	108.08	113.80
26	LA	377	G	O4'-C1'-C2'	-5.72	101.88	107.60
26	LA	2024	G	C3'-C2'-O2'	5.72	119.28	110.70
26	LA	2575	C	C1'-C2'-O2'	5.72	120.38	111.80
26	LA	2790	U	O4'-C1'-C2'	5.72	111.52	105.80
50	LL	132	HIS	ND1-CE1-NE2	5.72	114.12	108.40
51	LI	80	ILE	N-CA-C	5.72	116.35	108.12
4	S2	16	C	C4'-C3'-C2'	-5.72	96.88	102.60
26	LA	250	G	C4'-C3'-O3'	-5.72	104.42	113.00
26	LA	1335	C	O4'-C1'-N1	5.72	117.07	108.50
26	LA	1401	G	C3'-C2'-C1'	-5.72	95.58	101.30
26	LA	1712	U	C4'-C3'-C2'	5.72	108.32	102.60
26	LA	2076	U	P-O3'-C3'	5.72	128.77	120.20
26	LA	2087	G	O3'-P-O5'	5.72	112.57	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2682	A	N9-C1'-C2'	-5.72	103.42	112.00
26	LA	2711	A	C3'-C2'-C1'	5.72	107.02	101.30
26	LA	2749	A	C1'-C2'-O2'	5.72	116.97	108.40
51	LI	2	GLN	OE1-CD-NE2	-5.72	116.88	122.60
56	LR	9	GLN	CA-C-N	5.72	128.22	120.44
56	LR	9	GLN	C-N-CA	5.72	128.22	120.44
23	SR	71	ASP	N-CA-C	5.71	117.59	111.36
26	LA	1074	G	O4'-C1'-C2'	5.71	113.31	107.60
26	LA	1324	G	O4'-C1'-N9	5.71	116.77	108.20
26	LA	1450	G	C1'-O4'-C4'	-5.71	104.19	109.90
26	LA	2143	C	C5'-C4'-O4'	5.71	118.37	109.80
26	LA	2619	C	C5'-C4'-C3'	5.71	124.57	116.00
52	LO	108	VAL	CA-C-O	5.71	122.32	119.12
2	SA	748	G	O5'-C5'-C4'	5.71	120.07	111.50
26	LA	51	G	N9-C1'-C2'	-5.71	105.43	114.00
2	SA	199	A	C5'-C4'-O4'	5.71	118.37	109.80
2	SA	651	C	P-O5'-C5'	-5.71	112.33	120.90
2	SA	1379	G	C1'-O4'-C4'	-5.71	104.19	109.90
7	SG	146	ALA	CA-C-N	-5.71	113.54	122.73
7	SG	146	ALA	C-N-CA	-5.71	113.54	122.73
13	SM	20	SER	N-CA-CB	5.71	118.61	110.16
18	SB	114	LYS	N-CA-CB	5.71	119.87	110.39
26	LA	2121	G	C5'-C4'-C3'	5.71	124.57	116.00
37	LC	92	ALA	CA-C-N	5.71	130.02	122.42
37	LC	92	ALA	C-N-CA	5.71	130.02	122.42
52	LO	50	ARG	O-C-N	-5.71	116.07	122.12
58	LT	36	ALA	N-CA-C	5.71	117.31	111.14
2	SA	1101	A	O3'-P-O5'	5.71	112.57	104.00
18	SB	22	TRP	CB-CA-C	-5.71	101.94	110.16
26	LA	401	A	C3'-C2'-C1'	5.71	107.01	101.30
26	LA	2181	U	P-O5'-C5'	-5.71	112.33	120.90
47	LJ	14	VAL	N-CA-CB	5.71	119.14	110.58
47	LJ	120	SER	CA-C-N	5.71	128.99	120.31
47	LJ	120	SER	C-N-CA	5.71	128.99	120.31
4	S2	17	C	P-O3'-C3'	5.71	128.76	120.20
4	S2	58	A	O3'-P-O5'	-5.71	95.44	104.00
17	SQ	69	THR	N-CA-CB	5.71	122.04	113.65
26	LA	669	G	C2'-C3'-O3'	5.71	122.26	113.70
26	LA	873	C	C1'-O4'-C4'	-5.71	104.19	109.90
26	LA	1020	A	C4'-C3'-C2'	-5.71	96.89	102.60
26	LA	2175	C	O3'-P-O5'	-5.71	95.44	104.00
49	LK	14	ALA	N-CA-CB	-5.71	100.92	110.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	LS	18	LYS	N-CA-CB	5.71	119.13	110.28
7	SG	51	GLN	N-CA-C	-5.71	104.67	111.69
26	LA	109	C	C1'-O4'-C4'	-5.71	104.19	109.90
26	LA	288	U	P-O3'-C3'	-5.71	111.64	120.20
26	LA	367	G	C5'-C4'-C3'	-5.71	107.44	116.00
26	LA	1139	G	C5'-C4'-C3'	5.71	124.56	116.00
26	LA	1234	U	C3'-C2'-C1'	5.71	107.01	101.30
26	LA	1543	G	P-O3'-C3'	5.71	128.76	120.20
26	LA	2655	G	C1'-O4'-C4'	-5.71	103.99	109.70
33	LZ	28	PHE	CA-CB-CG	-5.71	108.09	113.80
6	SU	49	ALA	N-CA-C	5.71	118.23	111.33
14	SN	83	VAL	N-CA-C	5.71	116.44	110.62
26	LA	97	C	C2'-C3'-O3'	5.71	122.26	113.70
26	LA	1036	G	P-O5'-C5'	5.71	129.46	120.90
2	SA	1102	A	O4'-C1'-N9	5.70	117.06	108.50
2	SA	1354	U	P-O3'-C3'	-5.70	111.64	120.20
8	SH	116	ARG	O-C-N	-5.70	115.27	122.17
19	SC	78	LYS	N-CA-CB	-5.70	102.27	110.65
20	SD	9	LYS	O-C-N	-5.70	116.07	122.12
24	S3	14	ILE	N-CA-CB	5.70	117.83	110.99
24	S3	420	GLU	O-C-N	-5.70	115.95	121.94
26	LA	337	C	O3'-P-O5'	-5.70	95.44	104.00
26	LA	1173	U	C4'-C3'-C2'	-5.70	96.90	102.60
26	LA	1917	U	C1'-C2'-O2'	5.70	116.96	108.40
26	LA	2131	U	P-O3'-C3'	-5.70	111.64	120.20
26	LA	2554	U	C1'-O4'-C4'	-5.70	104.20	109.90
46	LH	172	GLU	CA-C-O	5.70	127.33	121.23
51	LI	148	ALA	N-CA-C	5.70	118.72	110.28
2	SA	246	A	C4'-C3'-C2'	-5.70	96.90	102.60
2	SA	1342	C	C3'-C2'-C1'	5.70	107.00	101.30
7	SG	73	GLU	CB-CG-CD	5.70	122.29	112.60
26	LA	2085	U	O4'-C1'-C2'	-5.70	101.90	107.60
26	LA	2304	G	C5'-C4'-C3'	-5.70	106.65	115.20
52	LO	129	THR	O-C-N	-5.70	116.43	123.44
2	SA	1379	G	O5'-C5'-C4'	5.70	120.05	111.50
11	SK	3	ALA	CB-CA-C	5.70	121.40	110.17
14	SN	62	ARG	NE-CZ-NH1	-5.70	115.80	121.50
20	SD	139	ASN	N-CA-C	5.70	117.58	110.91
26	LA	420	C	C5'-C4'-C3'	-5.70	107.45	116.00
26	LA	793	A	C2'-C3'-O3'	5.70	118.05	109.50
26	LA	1018	U	C5'-C4'-O4'	5.70	118.35	109.80
26	LA	1923	U	O3'-P-O5'	-5.70	95.45	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2278	A	O3'-P-O5'	5.70	112.55	104.00
2	SA	176	C	C4'-C3'-O3'	-5.70	104.45	113.00
2	SA	423	G	O4'-C1'-N9	5.70	117.05	108.50
2	SA	692	U	C4'-C3'-O3'	-5.70	104.45	113.00
2	SA	1234	C	C1'-C2'-O2'	-5.70	99.85	108.40
2	SA	1336	C	O4'-C1'-C2'	-5.70	100.10	105.80
2	SA	1393	U	C4'-C3'-O3'	-5.70	104.45	113.00
12	SL	109	ARG	N-CA-CB	5.70	120.12	110.49
26	LA	248	G	C1'-O4'-C4'	-5.70	104.20	109.90
26	LA	472	A	C4'-C3'-C2'	-5.70	96.90	102.60
26	LA	1091	G	C1'-C2'-O2'	5.70	116.95	108.40
26	LA	1492	G	C1'-O4'-C4'	-5.70	104.20	109.90
26	LA	1788	C	P-O5'-C5'	-5.70	112.35	120.90
26	LA	2301	C	C2'-C3'-O3'	5.70	122.25	113.70
26	LA	2893	A	C4'-C3'-O3'	5.70	117.95	109.40
32	LY	57	THR	CB-CA-C	-5.70	100.52	109.70
43	L7	37	GLN	N-CA-C	5.70	119.43	111.74
45	LG	26	GLN	O-C-N	-5.70	116.20	122.07
45	LG	80	GLN	N-CA-CB	-5.70	103.64	112.30
2	SA	681	A	C1'-C2'-O2'	5.70	116.95	108.40
2	SA	1460	C	C3'-C2'-C1'	-5.70	95.60	101.30
26	LA	629	G	P-O3'-C3'	-5.70	111.65	120.20
26	LA	2765	A	C3'-C2'-C1'	5.70	107.00	101.30
38	LE	74	GLU	CB-CA-C	-5.70	100.09	110.63
50	LL	25	LEU	N-CA-C	5.70	117.95	111.11
2	SA	209	U	O4'-C4'-C3'	-5.70	100.41	106.10
2	SA	721	G	N9-C1'-C2'	-5.70	105.46	114.00
2	SA	1061	G	O4'-C1'-C2'	-5.70	101.91	107.60
2	SA	1190	G	P-O3'-C3'	5.70	128.74	120.20
2	SA	1474	U	C1'-O4'-C4'	5.70	115.60	109.90
24	S3	408	MET	N-CA-C	5.70	122.93	110.80
26	LA	135	U	P-O3'-C3'	-5.70	111.66	120.20
26	LA	178	G	P-O5'-C5'	-5.70	112.36	120.90
26	LA	869	G	P-O5'-C5'	5.70	129.44	120.90
26	LA	2082	A	C1'-O4'-C4'	-5.70	104.20	109.90
26	LA	2428	G	C2'-C3'-O3'	-5.70	105.16	113.70
52	LO	95	LEU	CB-CA-C	-5.70	101.41	110.81
2	SA	686	U	O3'-P-O5'	-5.69	95.46	104.00
26	LA	263	G	P-O5'-C5'	5.69	129.44	120.90
26	LA	798	G	P-O3'-C3'	-5.69	111.66	120.20
26	LA	1547	C	P-O5'-C5'	5.69	129.44	120.90
46	LH	89	VAL	N-CA-CB	5.69	119.27	111.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	736	C	C1'-C2'-O2'	5.69	116.94	108.40
10	SJ	3	ASN	CA-C-N	5.69	132.41	121.54
10	SJ	3	ASN	C-N-CA	5.69	132.41	121.54
25	LB	48	U	C5'-C4'-C3'	5.69	124.54	116.00
26	LA	113	U	P-O3'-C3'	-5.69	111.66	120.20
26	LA	925	A	O4'-C1'-N9	5.69	117.04	108.50
26	LA	1228	G	P-O3'-C3'	5.69	128.74	120.20
26	LA	1574	C	C1'-O4'-C4'	-5.69	104.21	109.90
26	LA	2653	U	O4'-C1'-C2'	-5.69	101.91	107.60
26	LA	2852	G	O4'-C4'-C3'	5.69	109.69	104.00
29	LV	91	GLN	N-CA-C	5.69	118.06	109.41
46	LH	55	ASP	CA-CB-CG	5.69	118.29	112.60
7	SG	87	PRO	O-C-N	-5.69	116.14	123.03
24	S3	362	ILE	CA-CB-CG1	5.69	120.07	110.40
26	LA	1044	C	P-O5'-C5'	-5.69	112.36	120.90
26	LA	1106	G	C1'-C2'-O2'	5.69	116.94	108.40
26	LA	1556	C	P-O5'-C5'	5.69	129.44	120.90
26	LA	2731	G	C1'-O4'-C4'	-5.69	104.21	109.90
48	LN	143	GLU	N-CA-CB	-5.69	100.87	110.49
53	LP	41	ALA	N-CA-CB	5.69	118.49	110.12
58	LT	18	GLN	N-CA-C	5.69	118.91	109.46
2	SA	1175	G	C4'-C3'-C2'	-5.69	96.91	102.60
3	S1	21	U	C5'-C4'-C3'	5.69	124.53	116.00
26	LA	1453	A	P-O5'-C5'	5.69	129.43	120.90
27	LD	49	THR	CB-CA-C	-5.69	99.10	110.42
2	SA	1213	A	O4'-C1'-N9	-5.69	99.67	108.20
2	SA	1437	A	C5'-C4'-O4'	5.69	118.33	109.80
11	SK	23	HIS	CE1-NE2-CD2	-5.69	103.31	109.00
26	LA	472	A	C1'-C2'-O2'	5.69	116.93	108.40
26	LA	878	A	C4'-C3'-C2'	-5.69	96.91	102.60
26	LA	997	G	O3'-P-O5'	5.69	112.53	104.00
26	LA	1523	U	P-O3'-C3'	5.69	128.73	120.20
26	LA	1968	G	P-O5'-C5'	-5.69	112.37	120.90
31	LX	72	VAL	CA-CB-CG1	5.69	120.07	110.40
52	LO	17	ASN	CA-C-N	5.69	132.40	121.54
52	LO	17	ASN	C-N-CA	5.69	132.40	121.54
54	LM	112	PHE	CB-CG-CD2	-5.69	111.03	120.70
58	LT	98	ILE	CA-C-O	5.69	127.69	120.75
2	SA	208	U	C4'-C3'-O3'	-5.69	104.47	113.00
2	SA	793	U	P-O3'-C3'	5.69	128.73	120.20
7	SG	171	GLN	O-C-N	-5.69	115.97	121.94
26	LA	111	A	P-O3'-C3'	-5.69	111.67	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	443	A	O5'-C5'-C4'	5.69	120.23	111.70
26	LA	748	G	P-O5'-C5'	-5.69	112.37	120.90
26	LA	1359	A	C1'-O4'-C4'	-5.69	104.21	109.90
26	LA	2271	G	P-O5'-C5'	-5.69	112.37	120.90
2	SA	266	G	C4'-C3'-C2'	-5.68	96.92	102.60
2	SA	811	C	C5'-C4'-C3'	5.68	124.53	116.00
10	SJ	38	GLY	N-CA-C	5.68	119.11	112.23
11	SK	57	SER	CA-C-N	5.68	130.26	122.07
11	SK	57	SER	C-N-CA	5.68	130.26	122.07
26	LA	1537	G	P-O3'-C3'	5.68	128.73	120.20
26	LA	1653	G	P-O5'-C5'	5.68	129.43	120.90
47	LJ	24	ALA	CA-C-N	5.68	130.99	122.75
47	LJ	24	ALA	C-N-CA	5.68	130.99	122.75
49	LK	131	THR	N-CA-CB	5.68	118.31	110.07
2	SA	601	G	C4'-C3'-O3'	-5.68	104.48	113.00
2	SA	765	G	O4'-C1'-C2'	-5.68	101.92	107.60
2	SA	972	C	C4'-C3'-C2'	-5.68	96.92	102.60
20	SD	36	ALA	CA-C-O	-5.68	114.86	120.26
24	S3	369	LYS	N-CA-CB	-5.68	101.99	111.20
26	LA	143	C	C3'-C2'-O2'	5.68	119.22	110.70
26	LA	809	G	C5'-C4'-C3'	5.68	124.52	116.00
43	L7	30	GLU	O-C-N	-5.68	114.79	121.32
46	LH	101	VAL	CB-CA-C	5.68	119.09	110.62
25	LB	43	C	P-O3'-C3'	5.68	128.72	120.20
26	LA	414	C	P-O5'-C5'	-5.68	112.38	120.90
26	LA	758	C	O3'-P-O5'	5.68	112.52	104.00
26	LA	2659	G	C4'-C3'-O3'	-5.68	104.48	113.00
28	LU	16	LYS	CA-C-O	-5.68	113.09	119.79
34	L0	18	LEU	N-CA-C	-5.68	105.00	111.14
2	SA	582	C	C1'-O4'-C4'	-5.68	104.22	109.90
14	SN	92	ILE	N-CA-C	-5.68	100.85	107.61
23	SR	53	GLN	N-CA-C	-5.68	105.01	111.14
26	LA	269	C	P-O5'-C5'	5.68	129.42	120.90
26	LA	890	C	C5'-C4'-C3'	5.68	124.52	116.00
26	LA	1175	A	O4'-C1'-C2'	5.68	113.28	107.60
30	LW	43	LYS	N-CA-C	5.68	118.79	109.76
26	LA	504	A	C2'-C3'-O3'	5.68	118.02	109.50
26	LA	1445	G	P-O5'-C5'	5.68	129.42	120.90
26	LA	2156	G	O4'-C1'-N9	5.68	117.02	108.50
44	LF	53	THR	N-CA-C	5.68	117.33	109.15
56	LR	13	LYS	N-CA-CB	5.68	120.22	110.68
2	SA	131	A	C5'-C4'-C3'	-5.68	107.49	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	597	G	O4'-C4'-C3'	5.68	109.68	104.00
17	SQ	3	LYS	O-C-N	-5.68	115.04	122.59
26	LA	190	A	C1'-O4'-C4'	-5.68	104.22	109.90
26	LA	224	U	C4'-C3'-C2'	-5.68	96.92	102.60
26	LA	1446	C	O5'-C5'-C4'	5.68	120.02	111.50
26	LA	2529	G	C1'-O4'-C4'	5.68	115.58	109.90
37	LC	147	PRO	N-CA-CB	-5.68	97.29	103.25
56	LR	72	VAL	O-C-N	-5.68	116.48	122.67
2	SA	53	A	C5'-C4'-O4'	5.67	118.31	109.80
2	SA	1454	G	C4'-C3'-C2'	-5.67	96.93	102.60
26	LA	87	U	P-O5'-C5'	5.67	129.41	120.90
26	LA	129	C	O4'-C1'-N1	5.67	117.01	108.50
26	LA	448	U	P-O3'-C3'	-5.67	111.69	120.20
26	LA	1156	A	O4'-C4'-C3'	-5.67	100.42	106.10
26	LA	1950	G	C1'-O4'-C4'	-5.67	104.22	109.90
26	LA	2447	G	C2'-C3'-O3'	5.67	118.01	109.50
26	LA	2725	A	C4'-C3'-O3'	5.67	117.91	109.40
27	LD	260	LYS	CA-C-N	5.67	129.68	120.60
27	LD	260	LYS	C-N-CA	5.67	129.68	120.60
43	L7	12	ARG	N-CA-C	5.67	122.89	110.80
49	LK	11	GLN	CB-CG-CD	5.67	122.25	112.60
24	S3	523	PRO	O-C-N	-5.67	116.22	123.14
26	LA	588	U	C4'-C3'-O3'	-5.67	104.49	113.00
26	LA	1484	U	C4'-C3'-O3'	-5.67	104.49	113.00
26	LA	2110	G	C1'-O4'-C4'	-5.67	104.03	109.70
39	L3	4	GLN	O-C-N	-5.67	115.05	122.59
9	SI	44	ARG	O-C-N	-5.67	115.68	122.15
19	SC	194	VAL	N-CA-C	5.67	116.75	108.58
20	SD	9	LYS	CA-C-N	5.67	128.93	120.31
20	SD	9	LYS	C-N-CA	5.67	128.93	120.31
20	SD	111	ALA	CA-C-O	5.67	126.56	120.55
25	LB	70	C	C4'-C3'-C2'	-5.67	96.93	102.60
26	LA	169	G	C4'-C3'-O3'	-5.67	104.49	113.00
26	LA	534	U	C1'-C2'-O2'	5.67	116.91	108.40
26	LA	1772	A	O4'-C1'-C2'	-5.67	101.93	107.60
26	LA	2069	G	P-O3'-C3'	-5.67	111.69	120.20
2	SA	560	A	C3'-C2'-O2'	-5.67	106.09	114.60
26	LA	351	C	O4'-C1'-N1	5.67	117.00	108.50
26	LA	992	C	O4'-C1'-N1	5.67	117.00	108.50
26	LA	1257	C	C4'-C3'-O3'	-5.67	104.49	113.00
26	LA	2067	G	N9-C1'-C2'	-5.67	105.50	114.00
25	LB	100	G	O4'-C4'-C3'	5.67	109.67	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	815	C	C1'-O4'-C4'	-5.67	104.23	109.90
26	LA	1569	A	O4'-C1'-N9	5.67	117.00	108.50
57	LS	42	GLY	CA-C-O	5.67	126.19	119.50
2	SA	602	A	P-O5'-C5'	-5.67	112.40	120.90
24	S3	199	VAL	CA-CB-CG1	5.67	120.03	110.40
26	LA	234	U	C4'-C3'-C2'	-5.67	96.93	102.60
26	LA	296	U	C5'-C4'-C3'	-5.67	107.50	116.00
26	LA	1202	G	O4'-C1'-N9	5.67	117.00	108.50
26	LA	1427	A	P-O5'-C5'	5.67	129.40	120.90
26	LA	1482	G	C5'-C4'-O4'	5.67	118.30	109.80
26	LA	2053	G	C5'-C4'-O4'	5.67	118.30	109.80
26	LA	2155	U	C1'-O4'-C4'	-5.67	104.23	109.90
26	LA	2743	U	O5'-C5'-C4'	-5.67	103.00	111.50
27	LD	133	ASN	CA-CB-CG	-5.67	106.93	112.60
40	L4	41	VAL	CA-C-O	5.67	127.75	121.18
41	L5	13	ASN	N-CA-C	5.67	118.19	111.33
45	LG	139	GLU	O-C-N	-5.67	115.05	122.59
46	LH	46	ASP	O-C-N	-5.67	115.05	122.59
26	LA	625	G	C3'-C2'-C1'	5.67	106.97	101.30
49	LK	47	SER	CA-C-N	5.67	130.87	122.71
49	LK	47	SER	C-N-CA	5.67	130.87	122.71
2	SA	62	U	C1'-C2'-O2'	5.66	116.89	108.40
2	SA	408	A	P-O5'-C5'	-5.66	112.41	120.90
2	SA	978	A	C2'-C3'-O3'	5.66	122.19	113.70
20	SD	106	PHE	N-CA-C	-5.66	106.37	113.28
23	SR	2	ARG	N-CA-CB	-5.66	102.42	110.58
24	S3	426	ASP	CA-C-N	5.66	128.19	120.54
24	S3	426	ASP	C-N-CA	5.66	128.19	120.54
26	LA	531	C	C1'-C2'-O2'	5.66	120.30	111.80
26	LA	2316	G	C4'-C3'-O3'	-5.66	104.50	113.00
45	LG	29	ARG	NE-CZ-NH2	5.66	124.30	119.20
53	LP	62	ASN	OD1-CG-ND2	-5.66	116.94	122.60
58	LT	55	ASP	O-C-N	-5.66	116.14	122.03
26	LA	647	G	P-O5'-C5'	-5.66	112.41	120.90
26	LA	752	A	C1'-O4'-C4'	-5.66	104.04	109.70
48	LN	93	ASN	O-C-N	-5.66	114.65	122.46
53	LP	70	THR	O-C-N	-5.66	115.65	123.12
2	SA	141	G	C2'-C3'-O3'	5.66	122.19	113.70
2	SA	426	U	O3'-P-O5'	-5.66	95.51	104.00
2	SA	847	G	C1'-C2'-O2'	5.66	116.89	108.40
2	SA	1151	A	P-O3'-C3'	5.66	128.69	120.20
10	SJ	27	GLU	CA-C-N	5.66	128.43	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	SJ	27	GLU	C-N-CA	5.66	128.43	120.28
26	LA	301	G	C1'-O4'-C4'	-5.66	104.04	109.70
26	LA	1810	A	O4'-C4'-C3'	-5.66	98.34	104.00
36	L2	57	VAL	CA-C-N	5.66	132.35	121.54
36	L2	57	VAL	C-N-CA	5.66	132.35	121.54
2	SA	929	G	O3'-P-O5'	5.66	112.49	104.00
8	SH	65	PHE	CA-CB-CG	5.66	119.46	113.80
21	SE	112	ALA	O-C-N	-5.66	114.33	122.36
26	LA	126	A	P-O5'-C5'	5.66	129.39	120.90
26	LA	1727	C	O4'-C1'-N1	5.66	116.99	108.50
26	LA	1745	A	P-O5'-C5'	5.66	129.39	120.90
52	LO	38	ARG	O-C-N	-5.66	116.69	123.31
9	SI	121	ARG	O-C-N	-5.66	116.10	122.10
27	LD	131	MET	CA-C-N	5.66	128.12	120.65
27	LD	131	MET	C-N-CA	5.66	128.12	120.65
53	LP	49	GLU	CA-C-O	-5.66	112.85	118.34
1	SS	82	HIS	CE1-NE2-CD2	-5.66	103.34	109.00
2	SA	782	A	C1'-C2'-O2'	5.66	116.88	108.40
18	SB	69	VAL	CB-CA-C	-5.66	103.42	111.34
19	SC	131	ARG	CA-C-N	5.66	127.79	120.44
19	SC	131	ARG	C-N-CA	5.66	127.79	120.44
26	LA	1300	G	C5'-C4'-O4'	5.66	117.58	109.10
26	LA	1324	G	O5'-C5'-C4'	5.66	120.19	111.70
26	LA	1478	G	C4'-C3'-C2'	-5.66	96.94	102.60
26	LA	2407	A	P-O3'-C3'	-5.66	111.72	120.20
26	LA	2845	U	P-O3'-C3'	-5.66	111.72	120.20
57	LS	70	GLN	O-C-N	-5.66	115.60	122.22
2	SA	83	C	O3'-P-O5'	5.65	112.48	104.00
2	SA	305	G	O4'-C1'-N9	5.65	116.68	108.20
2	SA	440	C	C5'-C4'-O4'	5.65	118.28	109.80
21	SE	2	HIS	CE1-NE2-CD2	-5.65	103.35	109.00
26	LA	1548	A	C5'-C4'-O4'	5.65	118.28	109.80
2	SA	912	C	C4'-C3'-O3'	-5.65	104.52	113.00
2	SA	1214	C	C4'-C3'-C2'	5.65	108.25	102.60
9	SI	13	SER	CA-CB-OG	5.65	122.41	111.10
22	SF	104	LYS	N-CA-C	5.65	117.12	111.07
24	S3	514	TYR	N-CA-C	5.65	117.83	110.43
26	LA	830	G	P-O5'-C5'	5.65	129.38	120.90
26	LA	1034	G	P-O5'-C5'	-5.65	112.42	120.90
26	LA	1840	G	O3'-P-O5'	5.65	112.48	104.00
38	LE	124	ARG	CG-CD-NE	-5.65	99.56	112.00
56	LR	3	ILE	CB-CA-C	-5.65	104.61	112.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	LT	13	ARG	CA-C-N	-5.65	114.39	121.96
58	LT	13	ARG	C-N-CA	-5.65	114.39	121.96
13	SM	92	ARG	CA-C-N	5.65	130.10	121.51
13	SM	92	ARG	C-N-CA	5.65	130.10	121.51
26	LA	204	A	C4'-C3'-C2'	-5.65	96.95	102.60
26	LA	1699	G	C4'-C3'-C2'	-5.65	96.95	102.60
45	LG	99	PHE	O-C-N	-5.65	115.07	122.59
51	LI	29	PHE	CA-C-N	-5.65	115.72	122.44
51	LI	29	PHE	C-N-CA	-5.65	115.72	122.44
2	SA	787	A	O5'-C5'-C4'	5.65	119.97	111.50
21	SE	113	VAL	CB-CA-C	-5.65	104.51	112.14
26	LA	1586	A	P-O5'-C5'	5.65	129.37	120.90
27	LD	62	ARG	CA-C-O	5.65	124.90	119.08
47	LJ	108	LYS	N-CA-C	-5.65	104.60	112.45
2	SA	417	G	O4'-C1'-N9	5.65	116.97	108.50
19	SC	171	ARG	N-CA-C	5.65	117.73	108.52
20	SD	189	ASP	CA-CB-CG	-5.65	106.95	112.60
25	LB	45	A	P-O3'-C3'	-5.65	111.73	120.20
26	LA	183	C	C4'-C3'-C2'	-5.65	96.95	102.60
26	LA	517	C	C3'-C2'-O2'	-5.65	102.23	110.70
26	LA	800	A	O4'-C1'-C2'	5.65	111.45	105.80
26	LA	2158	A	C3'-C2'-C1'	-5.65	95.85	101.50
26	LA	2316	G	C2'-C3'-O3'	5.65	122.17	113.70
58	LT	23	GLU	N-CA-C	5.65	117.58	110.24
26	LA	514	A	O4'-C1'-C2'	5.65	113.25	107.60
2	SA	267	C	C4'-C3'-O3'	-5.64	104.53	113.00
2	SA	1231	G	P-O5'-C5'	5.64	129.37	120.90
4	S2	3	C	P-O5'-C5'	5.64	129.37	120.90
6	SU	64	ALA	O-C-N	-5.64	115.72	122.15
26	LA	931	U	C4'-C3'-C2'	5.64	108.24	102.60
26	LA	1386	C	C2'-C3'-O3'	5.64	122.17	113.70
26	LA	1416	G	O4'-C1'-N9	5.64	116.67	108.20
26	LA	1538	G	C5'-C4'-C3'	5.64	124.47	116.00
26	LA	2668	G	C5'-C4'-C3'	5.64	124.47	116.00
30	LW	99	SER	CA-C-N	5.64	131.52	121.75
30	LW	99	SER	C-N-CA	5.64	131.52	121.75
42	L6	9	ALA	CA-C-O	5.64	125.26	119.05
49	LK	47	SER	N-CA-C	-5.64	106.34	113.23
2	SA	1027	C	C5'-C4'-C3'	-5.64	107.54	116.00
6	SU	12	ASP	CA-C-N	5.64	132.13	121.97
6	SU	12	ASP	C-N-CA	5.64	132.13	121.97
25	LB	119	A	P-O5'-C5'	-5.64	112.44	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1702	G	O3'-P-O5'	5.64	112.46	104.00
26	LA	2890	G	C3'-C2'-C1'	5.64	106.94	101.30
28	LU	102	HIS	CA-C-O	-5.64	114.67	120.54
46	LH	67	ALA	CA-C-O	-5.64	114.57	120.55
53	LP	81	ASN	O-C-N	-5.64	115.56	122.11
12	SL	13	ARG	CA-C-O	5.64	127.53	121.44
24	S3	27	GLU	CA-C-N	5.64	127.84	120.28
24	S3	27	GLU	C-N-CA	5.64	127.84	120.28
24	S3	283	ASP	O-C-N	-5.64	115.94	122.03
26	LA	278	A	O4'-C4'-C3'	5.64	109.64	104.00
26	LA	1306	C	O5'-C5'-C4'	5.64	119.96	111.50
26	LA	2025	C	O3'-P-O5'	5.64	112.46	104.00
26	LA	2475	C	C5'-C4'-C3'	-5.64	107.54	116.00
2	SA	502	A	O5'-C5'-C4'	-5.64	103.04	111.50
2	SA	1388	C	P-O3'-C3'	-5.64	111.74	120.20
2	SA	1529	G	C2'-C3'-O3'	5.64	117.96	109.50
26	LA	2261	C	C5'-C4'-C3'	-5.64	107.54	116.00
41	L5	10	LEU	N-CA-CB	5.64	118.41	110.12
48	LN	104	GLN	CB-CA-C	5.64	120.35	111.72
58	LT	38	VAL	N-CA-C	-5.64	100.30	108.87
2	SA	336	A	P-O5'-C5'	-5.64	112.44	120.90
19	SC	7	ASN	CA-C-N	5.64	126.36	119.99
19	SC	7	ASN	C-N-CA	5.64	126.36	119.99
26	LA	1411	U	O3'-P-O5'	-5.64	95.54	104.00
26	LA	2172	U	P-O3'-C3'	5.64	128.66	120.20
26	LA	2212	A	C5'-C4'-C3'	5.64	123.66	115.20
36	L2	53	THR	CA-CB-OG1	5.64	118.06	109.60
2	SA	707	U	C5'-C4'-C3'	-5.64	107.55	116.00
8	SH	61	THR	CA-C-N	5.64	132.31	121.54
8	SH	61	THR	C-N-CA	5.64	132.31	121.54
24	S3	164	ASN	CA-CB-CG	-5.64	106.96	112.60
25	LB	4	C	C3'-C2'-O2'	5.64	119.16	110.70
26	LA	790	U	P-O5'-C5'	5.64	129.35	120.90
26	LA	1316	U	C1'-O4'-C4'	-5.64	104.26	109.90
26	LA	1567	G	C3'-C2'-C1'	-5.64	95.86	101.50
26	LA	1890	A	O5'-C5'-C4'	5.64	119.95	111.50
26	LA	2061	G	P-O5'-C5'	5.64	129.35	120.90
26	LA	2798	U	C2'-C3'-O3'	5.64	117.96	109.50
2	SA	584	G	C5'-C4'-C3'	-5.63	107.55	116.00
2	SA	688	G	C4'-C3'-C2'	-5.63	96.97	102.60
2	SA	1167	A	P-O5'-C5'	-5.63	112.45	120.90
8	SH	49	LYS	CA-C-O	5.63	128.03	121.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	SD	110	ARG	NH1-CZ-NH2	-5.63	111.98	119.30
26	LA	1094	U	O3'-P-O5'	5.63	112.45	104.00
26	LA	1889	A	P-O3'-C3'	5.63	128.65	120.20
52	LO	80	VAL	O-C-N	-5.63	117.11	123.20
2	SA	577	G	O4'-C4'-C3'	5.63	109.63	104.00
26	LA	895	U	C2'-C3'-O3'	5.63	117.95	109.50
26	LA	947	A	O4'-C1'-C2'	-5.63	101.97	107.60
26	LA	1740	G	O4'-C1'-N9	5.63	116.95	108.50
26	LA	2839	G	C3'-C2'-C1'	5.63	106.93	101.30
27	LD	115	ILE	N-CA-C	-5.63	100.50	109.17
2	SA	208	U	O4'-C1'-N1	5.63	116.95	108.50
2	SA	372	C	O4'-C1'-N1	5.63	116.65	108.20
2	SA	1042	A	O4'-C1'-N9	5.63	116.95	108.50
2	SA	1211	U	P-O3'-C3'	5.63	128.65	120.20
24	S3	541	GLY	CA-C-N	5.63	126.08	119.94
24	S3	541	GLY	C-N-CA	5.63	126.08	119.94
26	LA	2413	G	C4'-C3'-C2'	-5.63	96.97	102.60
26	LA	2602	A	O4'-C1'-N9	5.63	116.65	108.20
29	LV	7	LEU	CA-C-O	5.63	125.09	118.90
26	LA	1239	G	C4'-C3'-O3'	-5.63	104.56	113.00
26	LA	2107	G	C4'-C3'-C2'	-5.63	96.97	102.60
56	LR	39	LEU	CA-C-O	-5.63	114.75	121.56
1	SS	35	ARG	N-CA-C	-5.63	106.18	113.16
2	SA	411	A	C1'-C2'-O2'	-5.63	103.36	111.80
2	SA	1052	U	O4'-C1'-N1	5.63	116.94	108.50
3	S1	30	U	C1'-O4'-C4'	-5.63	104.27	109.90
26	LA	496	G	C4'-C3'-C2'	-5.63	96.97	102.60
26	LA	1050	A	C4'-C3'-C2'	-5.63	96.97	102.60
26	LA	1929	G	P-O3'-C3'	-5.63	111.76	120.20
26	LA	2094	A	P-O5'-C5'	5.63	129.34	120.90
2	SA	252	U	O4'-C1'-N1	5.63	116.94	108.50
2	SA	790	A	O5'-C5'-C4'	5.63	120.14	111.70
2	SA	1078	U	P-O3'-C3'	5.63	128.64	120.20
2	SA	1129	C	P-O5'-C5'	-5.63	112.46	120.90
2	SA	1215	G	C1'-C2'-O2'	5.63	116.84	108.40
2	SA	1480	A	C5'-C4'-C3'	5.63	124.44	116.00
4	S2	19	G	O5'-C5'-C4'	-5.63	103.26	111.70
14	SN	7	ALA	CA-C-N	5.63	128.14	120.54
14	SN	7	ALA	C-N-CA	5.63	128.14	120.54
16	SP	19	VAL	O-C-N	-5.63	117.27	123.18
24	S3	274	VAL	O-C-N	-5.63	116.40	121.91
26	LA	1189	A	C5'-C4'-O4'	5.63	118.24	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2004	G	C4'-C3'-C2'	5.63	108.23	102.60
26	LA	2251	U	O5'-C5'-C4'	5.63	119.94	111.50
26	LA	2385	C	O4'-C1'-N1	5.63	116.94	108.50
45	LG	79	ARG	NE-CZ-NH2	5.63	124.27	119.20
13	SM	103	THR	N-CA-CB	5.62	120.00	110.49
26	LA	269	C	O4'-C1'-N1	5.62	116.94	108.50
26	LA	1174	U	C4'-C3'-C2'	-5.62	96.97	102.60
37	LC	44	VAL	CA-C-O	-5.62	114.48	120.39
45	LG	103	ILE	CB-CA-C	5.62	120.52	111.29
49	LK	36	GLU	O-C-N	-5.62	116.16	122.12
50	LL	123	LYS	N-CA-C	-5.62	100.51	109.23
2	SA	152	A	C1'-C2'-O2'	5.62	116.84	108.40
2	SA	1239	A	P-O3'-C3'	5.62	128.63	120.20
22	SF	41	ASP	CB-CA-C	5.62	118.93	109.48
24	S3	150	PHE	N-CA-CB	-5.62	101.86	110.01
26	LA	821	A	N9-C1'-C2'	5.62	120.44	112.00
26	LA	1083	U	C5'-C4'-C3'	-5.62	107.56	116.00
26	LA	2391	G	C4'-C3'-C2'	-5.62	96.98	102.60
37	LC	112	ASP	CA-C-N	5.62	132.09	121.97
37	LC	112	ASP	C-N-CA	5.62	132.09	121.97
43	L7	26	ILE	CA-C-O	-5.62	115.77	121.67
2	SA	36	C	C1'-C2'-O2'	5.62	116.83	108.40
2	SA	1100	C	C5'-C4'-C3'	5.62	124.43	116.00
2	SA	1122	U	P-O5'-C5'	5.62	129.33	120.90
2	SA	1337	G	C1'-O4'-C4'	-5.62	104.28	109.90
11	SK	117	HIS	O-C-N	-5.62	114.65	122.41
21	SE	155	LYS	O-C-N	-5.62	115.08	122.39
24	S3	590	LEU	O-C-N	-5.62	115.64	122.22
26	LA	186	G	C4'-C3'-C2'	-5.62	96.98	102.60
26	LA	214	G	O4'-C1'-N9	5.62	116.93	108.50
26	LA	801	G	P-O5'-C5'	5.62	129.33	120.90
26	LA	2138	G	C5'-C4'-O4'	5.62	118.23	109.80
26	LA	2324	U	O4'-C1'-N1	5.62	116.63	108.20
26	LA	2405	G	C4'-C3'-O3'	-5.62	104.57	113.00
26	LA	2547	A	O5'-C5'-C4'	5.62	119.93	111.50
49	LK	65	SER	CA-C-N	5.62	131.39	122.62
49	LK	65	SER	C-N-CA	5.62	131.39	122.62
2	SA	283	U	C4'-C3'-O3'	-5.62	104.57	113.00
2	SA	841	C	P-O5'-C5'	5.62	129.33	120.90
24	S3	169	GLN	CB-CA-C	-5.62	98.14	110.67
26	LA	98	G	O3'-P-O5'	5.62	112.43	104.00
26	LA	2008	C	C4'-C3'-C2'	-5.62	96.98	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	L6	22	LYS	CA-CB-CG	5.62	125.34	114.10
2	SA	254	G	C2'-C3'-O3'	5.62	122.13	113.70
2	SA	1129	C	O4'-C1'-N1	5.62	116.63	108.20
14	SN	37	ASP	CA-C-N	5.62	132.27	121.54
14	SN	37	ASP	C-N-CA	5.62	132.27	121.54
14	SN	54	SER	CA-C-O	5.62	125.76	119.41
23	SR	5	ARG	N-CA-C	-5.62	100.77	109.14
26	LA	685	A	C3'-C2'-O2'	-5.62	106.17	114.60
2	SA	440	C	P-O5'-C5'	-5.62	112.47	120.90
57	LS	97	ILE	O-C-N	-5.62	114.67	122.31
1	SS	39	ILE	CA-CB-CG1	5.62	119.95	110.40
2	SA	304	U	O3'-P-O5'	-5.62	95.58	104.00
2	SA	723	U	C1'-C2'-O2'	5.62	116.82	108.40
2	SA	1207	G	O5'-C5'-C4'	-5.62	103.08	111.50
3	S1	21	U	C3'-C2'-C1'	5.62	106.92	101.30
10	SJ	16	ARG	CD-NE-CZ	5.62	132.26	124.40
10	SJ	95	GLY	CA-C-N	-5.62	115.86	123.10
10	SJ	95	GLY	C-N-CA	-5.62	115.86	123.10
21	SE	65	LYS	O-C-N	-5.62	114.91	122.43
26	LA	993	G	C2'-C3'-O3'	-5.62	105.28	113.70
26	LA	1164	C	C3'-C2'-C1'	5.62	106.92	101.30
26	LA	2237	G	O4'-C4'-C3'	5.62	109.62	104.00
34	L0	2	LYS	CG-CD-CE	5.62	124.22	111.30
49	LK	39	LYS	CA-C-O	-5.62	114.92	120.82
2	SA	188	C	C3'-C2'-C1'	5.61	106.91	101.30
2	SA	857	C	O4'-C1'-N1	5.61	116.92	108.50
2	SA	1111	A	P-O5'-C5'	-5.61	112.48	120.90
3	S1	45	G	O4'-C1'-N9	5.61	116.92	108.50
9	SI	109	GLN	N-CA-CB	5.61	120.93	110.99
24	S3	362	ILE	CB-CA-C	-5.61	102.26	110.62
26	LA	1448	G	P-O5'-C5'	-5.61	112.48	120.90
30	LW	48	VAL	O-C-N	-5.61	114.70	121.10
31	LX	80	HIS	CA-CB-CG	5.61	119.41	113.80
44	LF	60	TRP	CA-C-N	5.61	132.26	121.54
44	LF	60	TRP	C-N-CA	5.61	132.26	121.54
25	LB	47	C	C5'-C4'-C3'	5.61	124.42	116.00
26	LA	287	G	O4'-C1'-N9	5.61	116.92	108.50
26	LA	1032	A	O3'-P-O5'	-5.61	95.58	104.00
34	L0	58	ASN	CB-CG-OD1	5.61	132.02	120.80
1	SS	49	ALA	CA-C-O	-5.61	114.36	120.36
2	SA	403	C	C5'-C4'-C3'	-5.61	107.58	116.00
2	SA	750	C	O4'-C4'-C3'	5.61	109.61	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1228	C	C4'-C3'-C2'	-5.61	96.99	102.60
2	SA	1260	G	O5'-C5'-C4'	5.61	119.92	111.50
10	SJ	17	LEU	O-C-N	-5.61	115.75	122.15
14	SN	7	ALA	N-CA-C	5.61	117.47	111.36
25	LB	36	C	C1'-O4'-C4'	-5.61	104.29	109.90
26	LA	196	A	P-O3'-C3'	5.61	128.62	120.20
26	LA	855	G	C5'-C4'-C3'	-5.61	107.58	116.00
26	LA	1985	C	O4'-C1'-N1	5.61	116.92	108.50
39	L3	9	ARG	O-C-N	-5.61	114.81	122.33
50	LL	35	ARG	O-C-N	-5.61	116.17	122.12
56	LR	27	VAL	N-CA-C	5.61	116.81	108.23
3	S1	35	G	P-O3'-C3'	5.61	128.61	120.20
9	SI	33	SER	CA-C-O	5.61	127.31	121.31
10	SJ	5	ARG	CA-C-O	5.61	126.57	119.78
16	SP	59	HIS	ND1-CE1-NE2	5.61	114.01	108.40
26	LA	2348	U	P-O3'-C3'	-5.61	111.79	120.20
26	LA	2832	U	C3'-C2'-O2'	-5.61	106.19	114.60
40	L4	7	LYS	CB-CA-C	-5.61	100.27	109.53
2	SA	34	C	P-O5'-C5'	-5.61	112.49	120.90
2	SA	835	U	P-O3'-C3'	-5.61	111.79	120.20
2	SA	951	G	C1'-C2'-O2'	5.61	116.81	108.40
26	LA	212	G	C3'-C2'-C1'	5.61	106.91	101.30
26	LA	2421	G	O4'-C1'-N9	5.61	116.91	108.50
26	LA	2693	G	C4'-C3'-O3'	-5.61	104.59	113.00
26	LA	2802	G	C5'-C4'-O4'	5.61	118.21	109.80
46	LH	100	ASN	CA-CB-CG	-5.61	106.99	112.60
1	SS	80	ARG	CD-NE-CZ	-5.61	116.55	124.40
2	SA	879	C	C4'-C3'-O3'	-5.61	104.59	113.00
2	SA	965	U	O4'-C4'-C3'	5.61	109.61	104.00
2	SA	1162	C	C5'-C4'-C3'	-5.61	107.59	116.00
22	SF	38	ARG	O-C-N	5.61	129.58	122.57
24	S3	346	ASP	CA-C-O	5.61	128.61	121.55
25	LB	85	G	C5'-C4'-C3'	5.61	124.41	116.00
26	LA	1674	G	O5'-C5'-C4'	5.61	120.11	111.70
26	LA	2422	C	P-O3'-C3'	5.61	128.61	120.20
53	LP	98	LEU	N-CA-C	-5.61	99.38	108.52
2	SA	944	G	C5'-C4'-O4'	5.60	118.21	109.80
26	LA	131	A	C4'-C3'-O3'	-5.60	104.59	113.00
26	LA	651	G	C1'-O4'-C4'	-5.60	104.30	109.90
47	LJ	153	THR	CA-C-N	5.60	128.83	120.31
47	LJ	153	THR	C-N-CA	5.60	128.83	120.31
2	SA	421	U	O4'-C4'-C3'	5.60	109.60	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	521	G	O3'-P-O5'	5.60	112.40	104.00
21	SE	85	LYS	CA-C-N	-5.60	114.59	120.31
21	SE	85	LYS	C-N-CA	-5.60	114.59	120.31
24	S3	312	ASP	CA-C-N	5.60	128.06	120.44
24	S3	312	ASP	C-N-CA	5.60	128.06	120.44
26	LA	38	A	O4'-C1'-N9	5.60	116.90	108.50
26	LA	631	A	C5'-C4'-C3'	-5.60	107.59	116.00
26	LA	826	U	O4'-C4'-C3'	5.60	109.60	104.00
53	LP	28	LEU	N-CA-C	5.60	117.06	111.07
2	SA	923	A	C5'-C4'-O4'	5.60	118.20	109.80
2	SA	937	A	C4'-C3'-C2'	-5.60	97.00	102.60
2	SA	1205	U	C3'-C2'-C1'	5.60	106.90	101.30
26	LA	30	G	O3'-P-O5'	5.60	112.40	104.00
26	LA	2553	G	N9-C1'-C2'	-5.60	103.60	112.00
26	LA	2602	A	O4'-C4'-C3'	-5.60	100.50	106.10
2	SA	29	U	C2'-C3'-O3'	5.60	122.10	113.70
2	SA	180	U	O5'-C5'-C4'	-5.60	103.10	111.50
2	SA	342	C	C5'-C4'-C3'	5.60	124.40	116.00
2	SA	1321	U	C5'-C4'-O4'	-5.60	101.40	109.80
7	SG	142	ARG	NE-CZ-NH2	-5.60	114.16	119.20
26	LA	125	A	N9-C1'-C2'	5.60	122.40	114.00
26	LA	879	G	C4'-C3'-C2'	-5.60	97.00	102.60
26	LA	980	A	C3'-C2'-C1'	5.60	106.90	101.30
26	LA	1647	U	C1'-C2'-O2'	5.60	120.20	111.80
26	LA	2352	A	C5'-C4'-C3'	-5.60	107.60	116.00
27	LD	105	ALA	CA-C-N	5.60	126.84	119.84
27	LD	105	ALA	C-N-CA	5.60	126.84	119.84
1	SS	7	GLY	O-C-N	-5.60	116.17	121.77
2	SA	689	C	O4'-C1'-N1	5.60	116.90	108.50
2	SA	1508	A	C4'-C3'-C2'	-5.60	97.00	102.60
3	S1	26	U	C1'-C2'-O2'	5.60	116.80	108.40
11	SK	112	VAL	N-CA-CB	5.60	119.72	112.28
24	S3	565	LEU	N-CA-C	-5.60	106.12	113.12
26	LA	912	C	C1'-O4'-C4'	-5.60	104.30	109.90
26	LA	1318	U	C4'-C3'-C2'	-5.60	97.00	102.60
26	LA	1989	G	O3'-P-O5'	5.60	112.40	104.00
26	LA	2726	A	C3'-C2'-O2'	-5.60	106.20	114.60
56	LR	32	VAL	O-C-N	-5.60	115.57	122.57
26	LA	1608	A	P-O3'-C3'	5.60	128.59	120.20
26	LA	1933	G	O3'-P-O5'	5.60	112.39	104.00
26	LA	2619	C	C4'-C3'-C2'	-5.60	97.00	102.60
54	LM	9	ASN	O-C-N	-5.60	116.67	123.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	132	C	P-O3'-C3'	5.59	128.59	120.20
2	SA	939	G	C3'-C2'-C1'	5.59	106.89	101.30
4	S2	71	G	C4'-C3'-C2'	-5.59	97.00	102.60
18	SB	11	ALA	N-CA-C	5.59	118.22	111.40
21	SE	25	LYS	N-CA-C	5.59	119.20	112.38
25	LB	20	G	C5'-C4'-C3'	-5.59	107.61	116.00
26	LA	2685	G	C5'-C4'-O4'	5.59	118.19	109.80
10	SJ	29	ALA	O-C-N	-5.59	115.77	122.15
22	SF	26	THR	N-CA-C	5.59	117.38	111.28
26	LA	2428	G	O3'-P-O5'	-5.59	95.61	104.00
2	SA	538	G	C4'-C3'-C2'	5.59	108.19	102.60
3	S1	36	U	P-O5'-C5'	5.59	129.29	120.90
13	SM	29	SER	CA-C-O	-5.59	114.62	120.55
21	SE	2	HIS	ND1-CE1-NE2	5.59	113.99	108.40
26	LA	153	U	C1'-O4'-C4'	-5.59	104.31	109.90
26	LA	247	G	C4'-C3'-O3'	-5.59	104.61	113.00
26	LA	558	U	C4'-C3'-C2'	-5.59	97.01	102.60
26	LA	1567	G	C1'-O4'-C4'	-5.59	104.11	109.70
26	LA	1738	G	O4'-C4'-C3'	-5.59	100.51	106.10
26	LA	2773	C	P-O3'-C3'	-5.59	111.81	120.20
32	LY	13	ARG	NE-CZ-NH1	5.59	127.09	121.50
33	LZ	40	GLU	N-CA-C	5.59	119.94	113.18
2	SA	536	C	O4'-C4'-C3'	5.59	109.59	104.00
4	S2	22	A	O4'-C1'-C2'	5.59	111.39	105.80
7	SG	152	HIS	O-C-N	-5.59	115.16	122.59
13	SM	68	LEU	N-CA-CB	5.59	118.12	110.01
14	SN	75	LYS	CB-CG-CD	5.59	124.16	111.30
20	SD	17	ASP	CA-CB-CG	5.59	118.19	112.60
26	LA	313	G	C4'-C3'-O3'	-5.59	104.61	113.00
26	LA	1360	G	C4'-C3'-C2'	-5.59	97.01	102.60
26	LA	1541	C	O4'-C1'-N1	5.59	116.89	108.50
26	LA	2765	A	C5'-C4'-C3'	5.59	124.39	116.00
39	L3	25	THR	CA-C-O	5.59	126.92	120.32
45	LG	138	PRO	CB-CA-C	-5.59	101.72	110.49
49	LK	124	MET	CA-CB-CG	-5.59	102.92	114.10
24	S3	129	ALA	CA-C-O	5.59	126.40	119.97
26	LA	578	G	O3'-P-O5'	-5.59	95.62	104.00
26	LA	1084	A	C3'-C2'-C1'	5.59	106.89	101.30
44	LF	115	GLN	CA-C-N	5.59	130.29	122.36
44	LF	115	GLN	C-N-CA	5.59	130.29	122.36
2	SA	1337	G	P-O5'-C5'	-5.59	112.52	120.90
24	S3	38	LYS	N-CA-CB	5.59	119.93	110.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	449	ASP	CA-CB-CG	5.59	118.19	112.60
26	LA	685	A	P-O3'-C3'	5.59	128.58	120.20
26	LA	987	C	O4'-C4'-C3'	5.59	109.59	104.00
26	LA	1681	G	O5'-C5'-C4'	5.59	120.08	111.70
26	LA	2559	C	C2'-C3'-O3'	5.59	122.08	113.70
26	LA	2780	G	P-O3'-C3'	-5.59	111.82	120.20
27	LD	76	VAL	N-CA-C	5.59	117.80	111.88
32	LY	2	HIS	CE1-NE2-CD2	-5.59	103.41	109.00
33	LZ	72	ALA	O-C-N	-5.59	115.40	122.27
41	L5	34	ARG	CB-CA-C	-5.59	102.11	110.88
51	LI	111	ALA	N-CA-C	5.59	119.41	111.92
2	SA	79	G	O3'-P-O5'	-5.58	95.62	104.00
20	SD	123	MET	CA-C-O	5.58	127.08	120.66
20	SD	192	ALA	CA-C-O	-5.58	112.52	120.51
26	LA	2235	G	C4'-C3'-O3'	-5.58	104.62	113.00
26	LA	2730	C	C5'-C4'-C3'	-5.58	107.62	116.00
2	SA	1193	G	C4'-C3'-O3'	-5.58	104.62	113.00
26	LA	305	C	C1'-O4'-C4'	-5.58	104.32	109.90
26	LA	921	C	C5'-C4'-C3'	5.58	124.38	116.00
26	LA	2624	G	C4'-C3'-C2'	-5.58	97.02	102.60
44	LF	65	THR	O-C-N	-5.58	115.17	122.59
48	LN	101	ILE	CA-CB-CG1	5.58	119.89	110.40
2	SA	253	A	C5'-C4'-O4'	5.58	118.17	109.80
2	SA	1470	U	C3'-C2'-O2'	-5.58	102.33	110.70
20	SD	136	VAL	CB-CA-C	-5.58	104.55	111.08
21	SE	110	MET	N-CA-CB	5.58	118.52	110.20
25	LB	114	C	P-O3'-C3'	-5.58	111.83	120.20
26	LA	308	G	C5'-C4'-C3'	-5.58	107.63	116.00
26	LA	1011	G	C2'-C3'-O3'	5.58	117.87	109.50
26	LA	1768	C	O4'-C1'-N1	5.58	116.87	108.50
26	LA	1925	C	O4'-C1'-N1	5.58	116.87	108.50
26	LA	2855	C	C4'-C3'-C2'	-5.58	97.02	102.60
26	LA	2882	A	C1'-O4'-C4'	-5.58	104.32	109.90
41	L5	1	MET	CA-C-N	5.58	131.13	120.97
41	L5	1	MET	C-N-CA	5.58	131.13	120.97
11	SK	111	ASP	CA-C-O	5.58	127.05	120.58
26	LA	185	G	C4'-C3'-C2'	-5.58	97.02	102.60
26	LA	1012	U	P-O5'-C5'	-5.58	112.53	120.90
26	LA	2059	A	C5'-C4'-C3'	5.58	124.37	116.00
26	LA	2126	A	C1'-O4'-C4'	-5.58	104.12	109.70
26	LA	2535	G	C1'-O4'-C4'	-5.58	104.32	109.90
39	L3	46	GLY	N-CA-C	-5.58	107.62	115.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	LG	126	ASN	OD1-CG-ND2	-5.58	117.02	122.60
47	LJ	43	ALA	CA-C-N	5.58	126.17	119.98
47	LJ	43	ALA	C-N-CA	5.58	126.17	119.98
2	SA	1031	C	O5'-C5'-C4'	-5.58	103.33	111.70
2	SA	1387	G	C1'-O4'-C4'	-5.58	104.32	109.90
26	LA	822	G	C5'-C4'-C3'	-5.58	107.63	116.00
26	LA	989	G	C3'-C2'-O2'	-5.58	106.23	114.60
26	LA	2139	U	C2'-C3'-O3'	5.58	122.07	113.70
26	LA	2743	U	P-O5'-C5'	5.58	129.27	120.90
30	LW	2	ALA	O-C-N	-5.58	116.86	123.22
32	LY	19	ARG	NE-CZ-NH2	5.58	124.22	119.20
45	LG	175	PRO	CA-C-O	-5.58	115.06	121.36
2	SA	1074	G	P-O3'-C3'	-5.58	111.83	120.20
26	LA	743	A	P-O5'-C5'	5.58	129.26	120.90
26	LA	1160	G	C5'-C4'-O4'	5.58	118.17	109.80
26	LA	2679	A	O4'-C1'-C2'	5.58	113.18	107.60
40	L4	10	LEU	CB-CA-C	-5.58	101.04	110.19
2	SA	454	G	P-O3'-C3'	-5.58	111.84	120.20
2	SA	1139	G	P-O3'-C3'	-5.58	111.84	120.20
2	SA	1355	G	C4'-C3'-C2'	-5.58	97.02	102.60
25	LB	75	G	C1'-O4'-C4'	-5.58	104.33	109.90
26	LA	1087	G	C4'-C3'-C2'	-5.58	97.03	102.60
26	LA	1145	C	C5'-C4'-C3'	-5.58	107.64	116.00
32	LY	42	THR	CA-CB-OG1	5.58	117.97	109.60
2	SA	5	U	C2'-C3'-O3'	5.57	122.06	113.70
2	SA	84	U	C3'-C2'-C1'	-5.57	95.93	101.50
2	SA	187	G	P-O3'-C3'	5.57	128.56	120.20
26	LA	653	U	O4'-C1'-C2'	5.57	113.17	107.60
26	LA	1050	A	C5'-C4'-C3'	-5.57	107.64	116.00
26	LA	1273	U	C1'-C2'-O2'	5.57	116.76	108.40
26	LA	2114	A	O4'-C1'-C2'	-5.57	102.03	107.60
26	LA	2129	C	O4'-C4'-C3'	5.57	111.67	106.10
26	LA	2465	C	O4'-C1'-C2'	5.57	113.17	107.60
28	LU	104	THR	O-C-N	-5.57	116.67	123.30
37	LC	76	ALA	CA-C-N	5.57	130.60	123.13
37	LC	76	ALA	C-N-CA	5.57	130.60	123.13
45	LG	62	GLN	CA-C-O	5.57	128.48	120.51
53	LP	100	CYS	O-C-N	-5.57	114.96	122.43
18	SB	22	TRP	N-CA-CB	5.57	118.31	109.51
24	S3	223	GLU	N-CA-CB	5.57	118.31	110.12
24	S3	447	TRP	CA-CB-CG	5.57	124.19	113.60
26	LA	970	U	C5'-C4'-C3'	5.57	124.36	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	779	C	C5'-C4'-O4'	5.57	118.16	109.80
2	SA	1222	G	O4'-C1'-N9	5.57	116.86	108.50
8	SH	87	ARG	NE-CZ-NH2	5.57	124.21	119.20
26	LA	987	C	C1'-C2'-O2'	5.57	116.75	108.40
26	LA	2199	A	C5'-C4'-C3'	-5.57	107.64	116.00
32	LY	68	PHE	N-CA-C	5.57	117.54	108.63
51	LI	33	GLN	N-CA-CB	-5.57	102.02	111.27
2	SA	1097	C	C5'-C4'-C3'	5.57	124.35	116.00
2	SA	1522	U	O4'-C4'-C3'	5.57	109.57	104.00
20	SD	24	VAL	CG1-CB-CG2	-5.57	98.55	110.80
26	LA	2003	A	P-O3'-C3'	5.57	128.55	120.20
26	LA	2883	A	O4'-C1'-C2'	-5.57	102.03	107.60
44	LF	45	ALA	CA-C-N	5.57	130.25	121.56
44	LF	45	ALA	C-N-CA	5.57	130.25	121.56
49	LK	10	LEU	CB-CA-C	5.57	121.80	109.94
1	SS	36	ARG	NE-CZ-NH1	5.57	127.07	121.50
2	SA	332	G	P-O3'-C3'	5.57	128.55	120.20
2	SA	1332	A	C5'-C4'-O4'	5.57	118.15	109.80
9	SI	118	ARG	CD-NE-CZ	5.57	132.19	124.40
21	SE	79	THR	CA-C-O	5.57	127.39	120.54
24	S3	537	ASN	CB-CA-C	-5.57	100.67	109.80
26	LA	600	G	P-O5'-C5'	-5.57	112.55	120.90
26	LA	702	U	O4'-C1'-N1	5.57	116.85	108.50
26	LA	853	C	C1'-O4'-C4'	-5.57	104.33	109.90
26	LA	859	G	C1'-O4'-C4'	-5.57	104.13	109.70
26	LA	1237	A	C1'-O4'-C4'	-5.57	104.13	109.70
42	L6	12	ARG	CA-C-O	5.57	124.64	118.52
2	SA	478	A	O4'-C1'-N9	5.57	116.85	108.50
2	SA	764	C	O4'-C1'-N1	5.57	116.85	108.50
2	SA	1076	U	O4'-C1'-C2'	5.57	113.17	107.60
20	SD	190	LEU	CA-C-N	5.57	132.17	121.54
20	SD	190	LEU	C-N-CA	5.57	132.17	121.54
23	SR	47	ARG	N-CA-CB	5.57	118.19	110.17
24	S3	392	THR	OG1-CB-CG2	-5.57	98.17	109.30
25	LB	31	C	O4'-C1'-N1	5.57	116.85	108.50
25	LB	37	C	O4'-C1'-N1	5.57	116.85	108.50
25	LB	89	U	C1'-C2'-O2'	5.57	116.75	108.40
26	LA	186	G	O4'-C1'-N9	5.57	116.85	108.50
26	LA	570	G	C2'-C3'-O3'	5.57	117.85	109.50
26	LA	621	A	C4'-C3'-C2'	-5.57	97.03	102.60
26	LA	1202	G	P-O3'-C3'	-5.57	111.85	120.20
26	LA	2247	A	C5'-C4'-C3'	-5.57	107.65	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	LN	75	ALA	CA-C-N	5.57	130.85	123.00
48	LN	75	ALA	C-N-CA	5.57	130.85	123.00
13	SM	97	ARG	NE-CZ-NH1	5.56	127.06	121.50
24	S3	49	MET	CA-C-N	5.56	127.73	120.28
24	S3	49	MET	C-N-CA	5.56	127.73	120.28
26	LA	151	C	C5'-C4'-C3'	-5.56	107.65	116.00
26	LA	664	G	C1'-O4'-C4'	-5.56	104.34	109.90
26	LA	2837	A	C4'-C3'-C2'	-5.56	97.04	102.60
2	SA	688	G	P-O5'-C5'	5.56	129.24	120.90
2	SA	1260	G	O4'-C4'-C3'	-5.56	98.44	104.00
12	SL	32	VAL	N-CA-CB	5.56	116.59	110.53
26	LA	2585	U	O5'-C5'-C4'	5.56	119.84	111.50
13	SM	38	ILE	N-CA-C	-5.56	100.47	108.48
26	LA	2270	A	O4'-C1'-N9	5.56	116.84	108.50
2	SA	185	U	C5'-C4'-C3'	-5.56	107.66	116.00
2	SA	236	A	P-O5'-C5'	5.56	129.24	120.90
2	SA	403	C	P-O5'-C5'	-5.56	112.56	120.90
2	SA	1079	G	P-O3'-C3'	-5.56	111.86	120.20
2	SA	1317	C	C4'-C3'-C2'	-5.56	97.04	102.60
4	S2	59	A	C3'-C2'-O2'	-5.56	106.26	114.60
13	SM	95	PRO	CA-C-N	-5.56	111.96	121.97
13	SM	95	PRO	C-N-CA	-5.56	111.96	121.97
25	LB	109	A	O4'-C1'-N9	5.56	116.84	108.50
26	LA	92	U	C1'-C2'-O2'	5.56	116.74	108.40
26	LA	1189	A	C1'-C2'-O2'	5.56	116.74	108.40
26	LA	1351	C	P-O3'-C3'	5.56	128.54	120.20
26	LA	1926	U	P-O3'-C3'	-5.56	111.86	120.20
44	LF	13	THR	N-CA-C	5.56	119.30	109.96
58	LT	54	VAL	CB-CA-C	5.56	117.35	110.73
2	SA	15	G	C3'-C2'-C1'	5.56	106.86	101.30
2	SA	805	C	C1'-O4'-C4'	-5.56	104.34	109.90
20	SD	148	ALA	N-CA-C	5.56	120.17	113.17
25	LB	5	U	P-O3'-C3'	-5.56	111.86	120.20
26	LA	1326	U	C3'-C2'-C1'	5.56	106.86	101.30
26	LA	2352	A	C1'-C2'-O2'	5.56	116.74	108.40
26	LA	2369	A	P-O5'-C5'	-5.56	112.56	120.90
27	LD	215	VAL	O-C-N	-5.56	115.62	122.57
38	LE	163	GLY	N-CA-C	5.56	126.35	113.18
49	LK	77	VAL	N-CA-C	5.56	115.75	110.42
51	LI	77	THR	N-CA-C	5.56	118.41	110.24
55	LQ	65	THR	O-C-N	5.56	129.19	122.35
2	SA	972	C	C1'-C2'-O2'	5.56	116.73	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1149	C	P-O5'-C5'	-5.56	112.57	120.90
2	SA	1311	A	N9-C1'-C2'	-5.56	103.67	112.00
26	LA	1646	C	C5'-C4'-C3'	-5.56	107.67	116.00
28	LU	100	THR	N-CA-C	-5.56	100.62	109.07
37	LC	111	PHE	CA-CB-CG	5.56	119.36	113.80
2	SA	81	A	P-O5'-C5'	5.55	129.23	120.90
2	SA	522	C	O4'-C4'-C3'	5.55	109.55	104.00
2	SA	1196	A	O4'-C4'-C3'	-5.55	100.55	106.10
11	SK	111	ASP	CA-CB-CG	-5.55	107.05	112.60
24	S3	100	ARG	N-CA-C	-5.55	105.31	111.36
24	S3	518	VAL	N-CA-CB	5.55	119.08	111.41
26	LA	473	G	C5'-C4'-C3'	-5.55	107.67	116.00
26	LA	2495	G	C4'-C3'-C2'	-5.55	97.05	102.60
26	LA	2549	G	P-O5'-C5'	5.55	129.23	120.90
26	LA	2595	G	O5'-C5'-C4'	5.55	119.83	111.50
31	LX	47	VAL	O-C-N	-5.55	116.65	122.20
37	LC	119	ASP	CA-C-O	5.55	126.36	119.97
26	LA	1518	C	C5'-C4'-C3'	-5.55	107.67	116.00
26	LA	2085	U	O3'-P-O5'	5.55	112.33	104.00
11	SK	92	ARG	CA-C-O	5.55	127.14	120.92
15	SO	10	ILE	CA-C-O	5.55	126.82	121.05
25	LB	94	A	O4'-C1'-N9	5.55	116.83	108.50
26	LA	219	A	C4'-C3'-O3'	-5.55	104.67	113.00
26	LA	449	A	C5'-C4'-C3'	-5.55	107.67	116.00
26	LA	696	G	C4'-C3'-C2'	-5.55	97.05	102.60
26	LA	773	U	O4'-C4'-C3'	5.55	109.55	104.00
48	LN	15	ALA	N-CA-C	5.55	117.33	111.28
50	LL	138	GLN	N-CA-C	5.55	117.74	109.25
52	LO	132	THR	CA-C-N	5.55	132.15	121.54
52	LO	132	THR	C-N-CA	5.55	132.15	121.54
2	SA	1259	C	C3'-C2'-C1'	5.55	106.85	101.30
6	SU	45	LYS	CA-C-N	5.55	131.35	122.86
6	SU	45	LYS	C-N-CA	5.55	131.35	122.86
6	SU	63	ASN	CA-CB-CG	-5.55	107.05	112.60
25	LB	36	C	C3'-C2'-C1'	-5.55	95.75	101.30
26	LA	1127	A	O4'-C1'-N9	5.55	116.83	108.50
26	LA	1612	C	O4'-C1'-C2'	-5.55	102.05	107.60
50	LL	82	GLY	N-CA-C	-5.55	106.53	115.08
54	LM	84	CYS	O-C-N	-5.55	116.59	123.36
2	SA	114	U	C5'-C4'-C3'	5.55	124.32	116.00
18	SB	23	ASN	CA-C-N	5.55	125.91	119.47
18	SB	23	ASN	C-N-CA	5.55	125.91	119.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	87	C	C4'-C3'-O3'	-5.55	104.68	113.00
2	SA	587	G	C4'-C3'-C2'	-5.55	97.05	102.60
2	SA	848	C	P-O5'-C5'	5.55	129.22	120.90
2	SA	1214	C	P-O3'-C3'	5.55	128.52	120.20
2	SA	1323	G	C3'-C2'-C1'	5.55	106.85	101.30
26	LA	239	C	O5'-C5'-C4'	5.55	119.82	111.50
26	LA	2301	C	P-O3'-C3'	5.55	128.52	120.20
7	SG	8	GLN	OE1-CD-NE2	-5.54	117.06	122.60
26	LA	1668	A	C1'-O4'-C4'	-5.54	104.16	109.70
26	LA	2503	A	C3'-C2'-O2'	-5.54	106.28	114.60
27	LD	161	VAL	CA-C-N	-5.54	115.29	123.05
27	LD	161	VAL	C-N-CA	-5.54	115.29	123.05
43	L7	2	LYS	CA-C-N	5.54	129.92	122.93
43	L7	2	LYS	C-N-CA	5.54	129.92	122.93
19	SC	189	HIS	CB-CG-CD2	-5.54	123.99	131.20
23	SR	72	ARG	CA-C-O	5.54	127.13	120.92
26	LA	389	G	C5'-C4'-C3'	5.54	124.31	116.00
26	LA	1774	C	P-O5'-C5'	5.54	129.22	120.90
49	LK	5	GLN	CA-C-O	5.54	126.47	120.32
26	LA	675	A	O4'-C1'-C2'	5.54	113.14	107.60
26	LA	872	U	C1'-O4'-C4'	-5.54	104.36	109.90
26	LA	1834	U	O4'-C1'-N1	5.54	116.81	108.50
26	LA	2090	A	C3'-C2'-C1'	5.54	106.84	101.30
27	LD	157	ALA	N-CA-C	5.54	118.61	110.30
53	LP	86	ARG	CA-C-N	5.54	132.09	122.56
53	LP	86	ARG	C-N-CA	5.54	132.09	122.56
1	SS	54	ARG	CD-NE-CZ	5.54	132.16	124.40
2	SA	137	U	C5'-C4'-C3'	-5.54	107.69	116.00
2	SA	833	G	C4'-C3'-O3'	-5.54	104.69	113.00
7	SG	14	ASP	CA-C-O	-5.54	114.26	119.80
19	SC	46	LEU	CA-C-O	5.54	126.40	119.59
26	LA	276	U	O5'-C5'-C4'	5.54	119.81	111.50
26	LA	908	C	O4'-C1'-C2'	5.54	113.14	107.60
26	LA	1363	C	O4'-C1'-N1	5.54	116.81	108.50
26	LA	1588	G	C2'-C3'-O3'	5.54	122.01	113.70
2	SA	481	G	O4'-C1'-N9	5.54	116.51	108.20
2	SA	563	A	C4'-C3'-C2'	5.54	108.14	102.60
2	SA	660	C	O4'-C1'-N1	5.54	116.81	108.50
2	SA	788	U	C4'-C3'-C2'	5.54	108.14	102.60
2	SA	804	U	C5'-C4'-C3'	-5.54	107.69	116.00
2	SA	1517	G	C2'-C3'-O3'	-5.54	105.39	113.70
22	SF	110	ARG	N-CA-C	5.54	117.32	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	279	ASP	CA-CB-CG	-5.54	107.06	112.60
26	LA	140	C	O4'-C4'-C3'	-5.54	98.46	104.00
26	LA	1942	C	P-O5'-C5'	-5.54	112.59	120.90
26	LA	2902	C	C4'-C3'-C2'	5.54	108.14	102.60
27	LD	213	ARG	CA-C-O	5.54	127.76	119.23
27	LD	240	GLY	N-CA-C	5.54	122.41	115.21
45	LG	36	ASN	CA-CB-CG	-5.54	107.06	112.60
47	LJ	131	TYR	N-CA-C	5.54	117.76	111.11
55	LQ	78	VAL	CA-C-O	-5.54	114.98	120.85
13	SM	66	GLY	N-CA-C	5.54	119.34	112.64
19	SC	62	SER	O-C-N	-5.54	117.98	123.46
26	LA	339	U	P-O5'-C5'	5.54	129.21	120.90
26	LA	1851	U	C5'-C4'-C3'	-5.54	107.69	116.00
26	LA	2296	U	P-O3'-C3'	-5.54	111.89	120.20
51	LI	44	ILE	CB-CA-C	-5.54	103.29	112.26
2	SA	65	A	C3'-C2'-C1'	5.54	106.83	101.30
2	SA	1271	A	P-O5'-C5'	-5.54	112.60	120.90
2	SA	1431	A	O4'-C4'-C3'	5.54	109.54	104.00
14	SN	14	ALA	N-CA-C	-5.54	105.40	111.82
22	SF	72	ASP	CA-CB-CG	-5.54	107.06	112.60
23	SR	56	ARG	N-CA-CB	5.54	118.86	110.28
26	LA	645	C	C1'-O4'-C4'	-5.54	104.36	109.90
26	LA	845	A	P-O5'-C5'	5.54	129.20	120.90
26	LA	1030	C	C4'-C3'-C2'	-5.54	97.06	102.60
26	LA	1444	G	C5'-C4'-O4'	-5.54	101.50	109.80
26	LA	1764	C	P-O5'-C5'	-5.54	112.60	120.90
26	LA	2459	A	O4'-C4'-C3'	5.54	109.53	104.00
26	LA	2594	C	C5'-C4'-C3'	-5.54	107.70	116.00
55	LQ	23	ALA	N-CA-C	5.54	119.75	112.89
58	LT	15	SER	N-CA-C	5.54	118.28	109.81
2	SA	52	C	P-O3'-C3'	-5.53	111.90	120.20
2	SA	83	C	C3'-C2'-C1'	5.53	106.83	101.30
2	SA	660	C	C5'-C4'-C3'	-5.53	107.70	116.00
2	SA	1446	A	P-O5'-C5'	-5.53	112.60	120.90
14	SN	60	ARG	NE-CZ-NH2	5.53	124.18	119.20
15	SO	21	THR	O-C-N	-5.53	115.23	122.59
26	LA	1908	C	C5'-C4'-C3'	-5.53	107.70	116.00
26	LA	2571	U	P-O3'-C3'	5.53	128.50	120.20
37	LC	89	ALA	N-CA-C	5.53	119.29	112.54
26	LA	450	G	P-O5'-C5'	5.53	129.20	120.90
2	SA	975	A	C5'-C4'-O4'	5.53	118.10	109.80
2	SA	1164	G	P-O3'-C3'	-5.53	111.90	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1197	A	C5'-C4'-C3'	-5.53	107.70	116.00
4	S2	6	G	P-O3'-C3'	-5.53	111.90	120.20
18	SB	167	HIS	CA-C-O	5.53	126.38	120.24
24	S3	86	ILE	CA-C-O	5.53	126.49	120.57
24	S3	231	GLU	CA-C-N	5.53	128.14	120.29
24	S3	231	GLU	C-N-CA	5.53	128.14	120.29
26	LA	765	C	C4'-C3'-C2'	-5.53	97.07	102.60
26	LA	1324	G	C2'-C3'-O3'	5.53	117.80	109.50
26	LA	1610	A	C4'-C3'-C2'	-5.53	97.07	102.60
26	LA	1756	G	C4'-C3'-O3'	-5.53	104.70	113.00
26	LA	2389	G	P-O5'-C5'	-5.53	112.60	120.90
2	SA	1207	G	P-O5'-C5'	-5.53	112.61	120.90
26	LA	2037	A	C5'-C4'-C3'	-5.53	107.71	116.00
53	LP	30	ARG	NH1-CZ-NH2	-5.53	112.11	119.30
21	SE	28	ARG	O-C-N	-5.53	115.37	122.94
26	LA	702	U	C4'-C3'-C2'	-5.53	97.07	102.60
26	LA	2497	A	C2'-C3'-O3'	5.53	117.79	109.50
26	LA	2558	C	P-O5'-C5'	5.53	129.19	120.90
26	LA	2661	G	O4'-C1'-N9	5.53	116.79	108.50
26	LA	2718	G	O4'-C1'-N9	5.53	116.79	108.50
45	LG	97	GLU	O-C-N	-5.53	116.26	122.12
14	SN	34	ASN	N-CA-C	5.53	119.72	112.92
17	SQ	58	VAL	N-CA-CB	5.53	120.25	112.52
26	LA	58	G	O5'-C5'-C4'	5.53	119.79	111.50
26	LA	659	G	O4'-C1'-C2'	5.53	113.12	107.60
26	LA	807	U	O3'-P-O5'	5.53	112.29	104.00
26	LA	829	A	O5'-C5'-C4'	5.53	119.99	111.70
26	LA	970	U	C4'-C3'-C2'	-5.53	97.07	102.60
26	LA	1104	C	C1'-C2'-O2'	5.53	116.69	108.40
26	LA	1160	G	O4'-C4'-C3'	5.53	109.53	104.00
26	LA	1588	G	O4'-C1'-N9	5.53	116.79	108.50
37	LC	46	VAL	CA-C-N	-5.53	113.71	121.72
37	LC	46	VAL	C-N-CA	-5.53	113.71	121.72
37	LC	218	MET	CA-C-O	5.53	125.89	118.38
42	L6	42	HIS	O-C-N	-5.53	114.83	122.46
48	LN	2	ARG	N-CA-CB	5.53	119.83	110.49
2	SA	181	A	P-O3'-C3'	-5.52	111.92	120.20
17	SQ	79	GLU	N-CA-C	-5.52	100.32	108.99
18	SB	127	LYS	CA-C-N	5.52	132.09	121.54
18	SB	127	LYS	C-N-CA	5.52	132.09	121.54
26	LA	107	G	C1'-O4'-C4'	-5.52	104.38	109.90
26	LA	289	G	P-O3'-C3'	-5.52	111.91	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	565	C	C4'-C3'-C2'	-5.52	97.08	102.60
26	LA	937	C	C4'-C3'-C2'	-5.52	97.08	102.60
26	LA	1440	U	O4'-C1'-N1	5.52	116.79	108.50
37	LC	128	GLY	O-C-N	-5.52	115.52	122.70
2	SA	648	A	O5'-C5'-C4'	5.52	119.78	111.50
2	SA	913	A	C5'-C4'-C3'	-5.52	106.92	115.20
2	SA	1237	C	C2'-C3'-O3'	5.52	121.98	113.70
24	S3	184	LEU	CA-C-O	-5.52	113.86	120.10
26	LA	1507	C	P-O3'-C3'	5.52	128.48	120.20
26	LA	1604	C	P-O3'-C3'	-5.52	111.92	120.20
26	LA	2025	C	C4'-C3'-O3'	-5.52	104.72	113.00
26	LA	2069	G	C2'-C3'-O3'	5.52	121.98	113.70
37	LC	192	LEU	N-CA-CB	-5.52	101.98	110.16
38	LE	140	HIS	CA-CB-CG	-5.52	108.28	113.80
20	SD	155	LYS	N-CA-CB	-5.52	102.00	110.12
21	SE	29	ILE	O-C-N	-5.52	115.67	122.57
24	S3	128	GLN	CB-CG-CD	5.52	121.99	112.60
26	LA	757	G	C5'-C4'-C3'	5.52	124.28	116.00
26	LA	1172	C	C1'-C2'-O2'	5.52	116.68	108.40
45	LG	72	SER	N-CA-C	5.52	122.56	110.80
50	LL	113	PRO	N-CA-CB	5.52	109.17	103.15
51	LI	79	THR	CA-CB-CG2	-5.52	101.11	110.50
2	SA	249	U	P-O3'-C3'	-5.52	111.92	120.20
8	SH	123	GLU	N-CA-C	-5.52	100.18	108.96
19	SC	11	LEU	N-CA-CB	5.52	118.01	110.01
24	S3	390	VAL	CA-CB-CG1	-5.52	101.02	110.40
26	LA	286	U	C5'-C4'-C3'	5.52	124.28	116.00
26	LA	379	G	O3'-P-O5'	5.52	112.28	104.00
26	LA	1291	C	O4'-C1'-N1	5.52	116.78	108.50
26	LA	2357	G	C2'-C3'-O3'	5.52	121.98	113.70
27	LD	177	SER	N-CA-C	-5.52	106.55	113.28
44	LF	60	TRP	CB-CG-CD1	5.52	135.18	126.90
44	LF	146	VAL	N-CA-C	5.52	117.52	108.97
2	SA	100	G	C1'-O4'-C4'	-5.52	104.38	109.90
2	SA	232	G	C1'-C2'-O2'	5.52	116.67	108.40
2	SA	381	C	C2'-C3'-O3'	5.52	117.78	109.50
2	SA	494	G	P-O5'-C5'	-5.52	112.62	120.90
2	SA	604	G	P-O5'-C5'	-5.52	112.62	120.90
24	S3	233	MET	N-CA-C	5.52	117.29	111.28
26	LA	205	G	C3'-C2'-C1'	-5.52	95.98	101.50
26	LA	243	U	C4'-C3'-O3'	-5.52	104.72	113.00
26	LA	2432	A	P-O5'-C5'	-5.52	112.62	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	L6	29	ARG	NE-CZ-NH2	5.52	124.17	119.20
46	LH	52	GLY	O-C-N	-5.52	116.25	121.77
52	LO	21	ALA	O-C-N	-5.52	117.10	123.33
57	LS	96	ASP	CA-C-O	5.52	126.31	119.97
2	SA	987	G	C4'-C3'-C2'	-5.52	97.08	102.60
2	SA	1347	G	C4'-C3'-O3'	5.52	117.67	109.40
16	SP	2	VAL	N-CA-C	5.52	120.81	109.34
26	LA	316	C	O5'-C5'-C4'	5.52	119.77	111.50
26	LA	2023	C	C1'-O4'-C4'	-5.52	104.38	109.90
26	LA	2896	C	C4'-C3'-C2'	5.52	108.12	102.60
30	LW	76	THR	CA-C-O	5.52	125.12	119.05
2	SA	648	A	P-O3'-C3'	-5.51	111.93	120.20
2	SA	813	U	C1'-C2'-O2'	5.51	116.67	108.40
5	ST	17	ARG	NE-CZ-NH2	-5.51	114.24	119.20
8	SH	29	SER	N-CA-C	-5.51	100.94	108.38
18	SB	19	THR	CA-C-N	5.51	132.07	121.54
18	SB	19	THR	C-N-CA	5.51	132.07	121.54
18	SB	221	ARG	N-CA-C	5.51	117.37	111.36
24	S3	403	ILE	CA-CB-CG2	5.51	119.88	110.50
26	LA	870	U	O4'-C4'-C3'	5.51	109.52	104.00
26	LA	886	A	C1'-O4'-C4'	-5.51	104.39	109.90
26	LA	2025	C	N1-C1'-C2'	5.51	120.27	112.00
26	LA	2610	C	O4'-C1'-C2'	5.51	111.31	105.80
46	LH	121	THR	CA-CB-CG2	5.51	119.87	110.50
53	LP	20	MET	O-C-N	-5.51	116.14	122.09
2	SA	369	G	O4'-C1'-N9	5.51	116.77	108.50
2	SA	1010	U	C5'-C4'-C3'	-5.51	107.73	116.00
2	SA	1362	A	N9-C1'-C2'	-5.51	105.73	114.00
14	SN	78	LEU	N-CA-C	-5.51	101.12	108.34
16	SP	78	VAL	N-CA-C	5.51	119.76	112.04
18	SB	23	ASN	OD1-CG-ND2	-5.51	117.09	122.60
39	L3	41	HIS	N-CA-C	5.51	117.81	110.53
2	SA	300	A	O4'-C1'-C2'	-5.51	102.09	107.60
2	SA	663	A	P-O5'-C5'	5.51	129.17	120.90
2	SA	743	A	C5'-C4'-C3'	-5.51	107.73	116.00
2	SA	1344	C	C2'-C3'-O3'	5.51	121.97	113.70
8	SH	79	ARG	NE-CZ-NH1	-5.51	115.99	121.50
18	SB	6	ARG	CG-CD-NE	-5.51	99.87	112.00
26	LA	334	C	N1-C1'-C2'	5.51	120.27	112.00
26	LA	896	A	C3'-C2'-C1'	-5.51	95.99	101.50
26	LA	1254	A	C4'-C3'-C2'	5.51	108.11	102.60
26	LA	1604	C	P-O5'-C5'	-5.51	112.63	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2471	A	O4'-C1'-N9	5.51	116.47	108.20
26	LA	2884	U	O4'-C1'-N1	5.51	116.77	108.50
2	SA	335	C	C4'-C3'-O3'	-5.51	104.74	113.00
9	SI	93	LEU	CA-C-N	5.51	127.66	120.28
9	SI	93	LEU	C-N-CA	5.51	127.66	120.28
16	SP	18	GLN	N-CA-CB	5.51	120.97	111.00
26	LA	233	A	O3'-P-O5'	5.51	112.26	104.00
26	LA	621	A	O4'-C4'-C3'	5.51	109.51	104.00
26	LA	852	U	P-O3'-C3'	-5.51	111.94	120.20
26	LA	910	A	P-O3'-C3'	5.51	128.46	120.20
26	LA	1241	A	C5'-C4'-C3'	-5.51	107.74	116.00
26	LA	1827	U	O4'-C1'-N1	5.51	116.76	108.50
26	LA	2551	C	C4'-C3'-C2'	-5.51	97.09	102.60
32	LY	22	VAL	CA-C-N	5.51	129.17	121.24
32	LY	22	VAL	C-N-CA	5.51	129.17	121.24
44	LF	21	ARG	NE-CZ-NH1	-5.51	115.99	121.50
19	SC	103	ALA	CA-C-N	5.51	130.18	120.87
19	SC	103	ALA	C-N-CA	5.51	130.18	120.87
33	LZ	55	MET	CG-SD-CE	-5.51	88.78	100.90
2	SA	1382	C	C1'-C2'-O2'	5.51	116.66	108.40
24	S3	22	LYS	CA-C-N	5.51	127.66	120.28
24	S3	22	LYS	C-N-CA	5.51	127.66	120.28
24	S3	37	HIS	CG-CD2-NE2	5.51	112.71	107.20
24	S3	577	LEU	CA-C-O	5.51	126.79	120.84
25	LB	26	C	C3'-C2'-O2'	5.51	118.96	110.70
26	LA	43	G	C1'-O4'-C4'	-5.51	104.39	109.90
26	LA	331	C	C3'-C2'-O2'	-5.51	106.34	114.60
26	LA	355	U	O3'-P-O5'	-5.51	95.74	104.00
26	LA	358	U	C3'-C2'-C1'	5.51	106.81	101.30
26	LA	795	C	C4'-C3'-C2'	-5.51	97.09	102.60
26	LA	1454	C	C1'-O4'-C4'	-5.51	104.39	109.90
26	LA	2113	U	C1'-O4'-C4'	-5.51	104.39	109.90
27	LD	14	HIS	N-CA-C	5.51	119.62	113.01
44	LF	197	GLU	CA-C-O	-5.51	114.58	120.42
2	SA	1439	G	O4'-C1'-C2'	-5.50	102.09	107.60
4	S2	8	U	C4'-C3'-O3'	5.50	117.66	109.40
26	LA	798	G	C5'-C4'-O4'	5.50	118.06	109.80
26	LA	1999	C	C5'-C4'-C3'	-5.50	107.74	116.00
27	LD	102	TYR	N-CA-CB	-5.50	101.08	110.16
45	LG	117	SER	CA-C-O	5.50	126.65	120.70
2	SA	185	U	C4'-C3'-O3'	-5.50	104.75	113.00
2	SA	197	A	C2'-C3'-O3'	5.50	117.76	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	423	G	C3'-C2'-C1'	5.50	106.80	101.30
4	S2	23	G	C4'-C3'-C2'	-5.50	97.10	102.60
4	S2	38	A	C3'-C2'-O2'	5.50	118.96	110.70
20	SD	132	ALA	CA-C-O	5.50	126.25	120.42
22	SF	89	VAL	CA-C-N	-5.50	113.23	122.92
22	SF	89	VAL	C-N-CA	-5.50	113.23	122.92
26	LA	308	G	C5'-C4'-O4'	5.50	118.06	109.80
26	LA	1929	G	P-O5'-C5'	-5.50	112.65	120.90
26	LA	2273	A	O4'-C4'-C3'	5.50	109.50	104.00
2	SA	322	C	O4'-C1'-N1	5.50	116.75	108.50
2	SA	543	U	O4'-C1'-N1	5.50	116.75	108.50
2	SA	891	U	O4'-C4'-C3'	5.50	109.50	104.00
2	SA	1062	U	C4'-C3'-C2'	-5.50	97.10	102.60
11	SK	13	LYS	N-CA-C	5.50	117.67	107.99
24	S3	365	MET	N-CA-C	5.50	117.71	108.96
26	LA	97	C	C4'-C3'-C2'	5.50	108.10	102.60
26	LA	725	G	N9-C1'-C2'	5.50	120.25	112.00
26	LA	750	A	C2'-C3'-O3'	5.50	121.95	113.70
26	LA	833	A	P-O5'-C5'	-5.50	112.65	120.90
46	LH	19	ASN	N-CA-CB	-5.50	102.03	110.12
2	SA	265	G	P-O5'-C5'	5.50	129.15	120.90
2	SA	510	A	O3'-P-O5'	5.50	112.25	104.00
2	SA	1055	A	O4'-C4'-C3'	5.50	109.50	104.00
26	LA	2223	G	C5'-C4'-C3'	5.50	124.25	116.00
26	LA	2480	C	C3'-C2'-C1'	5.50	106.80	101.30
2	SA	496	A	O4'-C1'-N9	5.50	116.75	108.50
2	SA	1541	U	C1'-O4'-C4'	-5.50	104.40	109.90
9	SI	113	LYS	CA-C-N	5.50	132.04	121.54
9	SI	113	LYS	C-N-CA	5.50	132.04	121.54
15	SO	34	GLN	N-CA-CB	-5.50	102.01	110.20
16	SP	33	ILE	N-CA-C	5.50	116.56	111.45
26	LA	68	G	O4'-C1'-N9	5.50	116.75	108.50
26	LA	1162	G	C2'-C3'-O3'	5.50	121.95	113.70
26	LA	1900	A	O4'-C1'-N9	5.50	116.75	108.50
26	LA	2162	G	C1'-O4'-C4'	-5.50	104.40	109.90
45	LG	27	VAL	CA-CB-CG1	5.50	119.75	110.40
47	LJ	52	ARG	CG-CD-NE	-5.50	99.91	112.00
2	SA	206	C	C4'-C3'-C2'	-5.50	97.10	102.60
2	SA	666	G	C1'-C2'-O2'	5.50	116.64	108.40
2	SA	1356	G	C3'-C2'-C1'	5.50	106.80	101.30
22	SF	25	TYR	CB-CG-CD2	-5.50	112.56	120.80
22	SF	71	ILE	O-C-N	-5.50	116.50	121.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	954	G	P-O5'-C5'	-5.50	112.66	120.90
33	LZ	41	SER	N-CA-C	5.50	116.96	110.97
41	L5	41	ARG	NE-CZ-NH2	5.50	124.15	119.20
44	LF	130	LYS	CA-C-O	5.50	127.38	121.55
45	LG	166	ARG	O-C-N	-5.50	114.78	122.37
48	LN	47	ARG	NE-CZ-NH2	-5.50	114.25	119.20
10	SJ	57	VAL	CA-CB-CG1	5.50	119.74	110.40
20	SD	183	ARG	N-CA-C	5.50	116.49	108.14
23	SR	27	THR	N-CA-CB	5.50	118.20	110.12
24	S3	96	ILE	CA-C-O	5.50	126.63	120.64
26	LA	1485	U	P-O5'-C5'	5.50	129.14	120.90
2	SA	500	G	C2'-C3'-O3'	5.49	121.94	113.70
2	SA	869	G	O3'-P-O5'	5.49	112.24	104.00
2	SA	938	A	P-O3'-C3'	5.49	128.44	120.20
2	SA	1053	G	O4'-C4'-C3'	-5.49	100.61	106.10
22	SF	63	ASN	OD1-CG-ND2	5.49	128.09	122.60
26	LA	726	G	C3'-C2'-C1'	-5.49	96.01	101.50
26	LA	766	U	P-O3'-C3'	5.49	128.44	120.20
26	LA	1990	C	C3'-C2'-C1'	5.49	106.79	101.30
37	LC	207	VAL	CA-C-O	-5.49	116.98	120.66
38	LE	125	TRP	O-C-N	-5.49	114.68	122.15
45	LG	172	PHE	CA-C-N	5.49	132.03	121.54
45	LG	172	PHE	C-N-CA	5.49	132.03	121.54
51	LI	37	VAL	CA-C-N	5.49	125.92	119.99
51	LI	37	VAL	C-N-CA	5.49	125.92	119.99
2	SA	1254	A	C1'-O4'-C4'	-5.49	104.41	109.90
4	S2	1	C	O4'-C1'-N1	5.49	116.74	108.50
20	SD	97	LEU	CB-CA-C	-5.49	100.12	110.67
24	S3	43	HIS	N-CA-C	5.49	118.40	109.06
26	LA	862	G	C5'-C4'-C3'	-5.49	107.76	116.00
26	LA	944	C	P-O5'-C5'	-5.49	112.66	120.90
26	LA	1356	G	C5'-C4'-C3'	-5.49	107.76	116.00
46	LH	41	GLU	CB-CA-C	5.49	119.90	111.39
47	LJ	34	VAL	N-CA-C	5.49	116.22	110.62
2	SA	195	A	O3'-P-O5'	-5.49	95.76	104.00
4	S2	6	G	C4'-C3'-C2'	-5.49	97.11	102.60
4	S2	10	G	C3'-C2'-C1'	5.49	106.79	101.30
18	SB	151	LYS	O-C-N	-5.49	115.29	122.59
19	SC	206	ILE	N-CA-CB	-5.49	102.17	111.23
24	S3	365	MET	CG-SD-CE	-5.49	88.82	100.90
25	LB	92	C	C2'-C3'-O3'	5.49	121.94	113.70
26	LA	18	U	C3'-C2'-C1'	5.49	106.79	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	258	G	P-O3'-C3'	-5.49	111.97	120.20
26	LA	1086	A	C5'-C4'-C3'	5.49	124.24	116.00
26	LA	2142	A	C1'-C2'-O2'	5.49	116.64	108.40
26	LA	2492	U	N1-C1'-C2'	-5.49	105.77	114.00
26	LA	2542	A	C5'-C4'-C3'	-5.49	106.96	115.20
33	LZ	75	GLU	N-CA-CB	-5.49	102.08	110.42
54	LM	55	GLY	O-C-N	-5.49	115.91	122.33
2	SA	15	G	P-O5'-C5'	-5.49	112.67	120.90
2	SA	465	A	C5'-C4'-O4'	5.49	118.03	109.80
2	SA	777	A	P-O5'-C5'	-5.49	112.67	120.90
17	SQ	65	PRO	N-CA-CB	5.49	108.44	103.34
21	SE	49	TYR	N-CA-CB	-5.49	101.93	110.55
26	LA	187	G	C5'-C4'-C3'	-5.49	107.77	116.00
26	LA	287	G	C5'-C4'-C3'	5.49	124.23	116.00
26	LA	1085	A	O3'-P-O5'	5.49	112.23	104.00
26	LA	1951	U	O4'-C1'-N1	5.49	116.73	108.50
26	LA	2116	G	C5'-C4'-O4'	5.49	117.33	109.10
26	LA	2535	G	C4'-C3'-C2'	-5.49	97.11	102.60
39	L3	9	ARG	CA-C-O	5.49	126.27	119.79
47	LJ	158	ARG	CA-C-N	5.49	128.08	120.29
47	LJ	158	ARG	C-N-CA	5.49	128.08	120.29
57	LS	48	ASP	O-C-N	-5.49	114.89	122.46
2	SA	1291	U	C2'-C3'-O3'	5.49	121.93	113.70
21	SE	6	GLN	CB-CG-CD	5.49	121.93	112.60
22	SF	121	ALA	N-CA-C	5.49	117.26	111.28
26	LA	1283	G	C4'-C3'-C2'	-5.49	97.11	102.60
26	LA	1937	A	O3'-P-O5'	5.49	112.23	104.00
26	LA	2550	G	C5'-C4'-C3'	-5.49	107.77	116.00
38	LE	180	VAL	CA-CB-CG1	5.49	119.73	110.40
57	LS	52	ARG	CB-CA-C	-5.49	101.68	110.79
58	LT	3	ALA	CA-C-O	-5.49	115.20	121.40
2	SA	305	G	P-O5'-C5'	5.49	129.13	120.90
2	SA	1242	G	P-O3'-C3'	-5.49	111.97	120.20
3	S1	14	G	C4'-C3'-C2'	-5.49	97.11	102.60
12	SL	83	GLY	O-C-N	-5.49	116.16	122.91
26	LA	1769	U	C3'-C2'-C1'	5.49	106.78	101.30
26	LA	1829	A	C1'-O4'-C4'	-5.49	104.42	109.90
26	LA	2771	C	C5'-C4'-O4'	5.49	118.03	109.80
38	LE	90	PHE	CA-C-N	5.49	127.63	120.28
38	LE	90	PHE	C-N-CA	5.49	127.63	120.28
50	LL	109	LEU	O-C-N	-5.49	115.01	121.32
56	LR	104	GLY	N-CA-C	5.49	117.78	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	108	G	C3'-C2'-C1'	5.48	106.78	101.30
2	SA	849	G	C2'-C3'-O3'	-5.48	105.47	113.70
4	S2	42	C	P-O3'-C3'	-5.48	111.97	120.20
19	SC	226	GLN	CA-C-N	5.48	132.01	121.54
19	SC	226	GLN	C-N-CA	5.48	132.01	121.54
24	S3	568	TYR	CA-C-N	5.48	126.69	119.84
24	S3	568	TYR	C-N-CA	5.48	126.69	119.84
26	LA	2800	A	O3'-P-O5'	5.48	112.23	104.00
46	LH	102	ILE	CA-C-N	-5.48	115.13	122.42
46	LH	102	ILE	C-N-CA	-5.48	115.13	122.42
2	SA	513	C	O4'-C1'-N1	5.48	116.72	108.50
2	SA	1124	G	C5'-C4'-C3'	-5.48	106.98	115.20
13	SM	19	THR	CA-CB-OG1	5.48	117.82	109.60
15	SO	6	ALA	O-C-N	5.48	129.36	122.23
22	SF	83	ALA	CA-C-N	5.48	131.84	121.97
22	SF	83	ALA	C-N-CA	5.48	131.84	121.97
26	LA	263	G	O4'-C4'-C3'	-5.48	98.52	104.00
26	LA	1083	U	O4'-C4'-C3'	5.48	109.48	104.00
26	LA	1609	A	P-O3'-C3'	5.48	128.42	120.20
26	LA	2492	U	O3'-P-O5'	-5.48	95.78	104.00
5	ST	8	LYS	N-CA-C	-5.48	105.32	112.23
12	SL	83	GLY	N-CA-C	5.48	118.23	111.93
19	SC	36	PHE	N-CA-CB	-5.48	102.06	110.01
26	LA	740	C	P-O5'-C5'	-5.48	112.68	120.90
26	LA	832	U	P-O5'-C5'	-5.48	112.68	120.90
26	LA	1203	U	C4'-C3'-O3'	-5.48	104.78	113.00
26	LA	2007	U	C1'-O4'-C4'	-5.48	104.42	109.90
26	LA	2129	C	P-O5'-C5'	-5.48	112.68	120.90
38	LE	124	ARG	NE-CZ-NH1	5.48	126.98	121.50
45	LG	98	PHE	CA-C-O	-5.48	115.06	120.82
7	SG	146	ALA	O-C-N	-5.48	115.11	122.23
21	SE	156	ARG	N-CA-C	-5.48	106.27	113.17
24	S3	398	ASP	O-C-N	-5.48	115.02	121.32
24	S3	552	VAL	O-C-N	-5.48	116.19	121.83
26	LA	1051	G	O5'-C5'-C4'	-5.48	103.28	111.50
26	LA	1543	G	C4'-C3'-O3'	-5.48	104.78	113.00
26	LA	1671	U	C1'-C2'-O2'	-5.48	100.18	108.40
28	LU	51	LEU	O-C-N	-5.48	116.17	122.09
46	LH	104	LEU	CA-C-N	5.48	131.65	121.62
46	LH	104	LEU	C-N-CA	5.48	131.65	121.62
1	SS	36	ARG	N-CA-C	5.48	117.25	111.28
2	SA	219	U	P-O5'-C5'	5.48	129.12	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	S2	36	A	O4'-C1'-C2'	-5.48	102.12	107.60
12	SL	40	THR	N-CA-CB	5.48	118.12	110.07
17	SQ	22	VAL	O-C-N	-5.48	117.39	123.20
23	SR	37	LYS	N-CA-CB	5.48	121.72	111.53
24	S3	8	ARG	NE-CZ-NH2	5.48	124.13	119.20
26	LA	181	A	C4'-C3'-C2'	-5.48	97.12	102.60
26	LA	503	A	P-O3'-C3'	5.48	128.41	120.20
26	LA	1385	A	C3'-C2'-O2'	-5.48	106.39	114.60
26	LA	1548	A	P-O3'-C3'	-5.48	111.98	120.20
26	LA	2522	U	P-O5'-C5'	5.48	129.12	120.90
27	LD	237	ARG	CG-CD-NE	-5.48	99.95	112.00
37	LC	154	LYS	N-CA-C	5.48	117.33	111.36
42	L6	36	ALA	N-CA-C	5.48	118.17	110.23
50	LL	31	GLU	CA-C-N	5.48	127.56	120.44
50	LL	31	GLU	C-N-CA	5.48	127.56	120.44
2	SA	1180	A	O4'-C4'-C3'	5.48	109.48	104.00
26	LA	1650	A	C5'-C4'-C3'	-5.48	107.79	116.00
26	LA	2583	G	C4'-C3'-C2'	5.48	108.08	102.60
2	SA	239	U	O5'-C5'-C4'	5.47	119.71	111.50
27	LD	142	ASN	OD1-CG-ND2	-5.47	117.12	122.60
48	LN	35	HIS	CE1-NE2-CD2	-5.47	103.53	109.00
58	LT	18	GLN	O-C-N	-5.47	116.98	123.22
2	SA	1180	A	C5'-C4'-C3'	-5.47	107.79	116.00
2	SA	1488	G	O4'-C4'-C3'	5.47	109.47	104.00
12	SL	120	ARG	CG-CD-NE	-5.47	99.96	112.00
20	SD	30	LYS	CA-C-N	5.47	130.71	123.05
20	SD	30	LYS	C-N-CA	5.47	130.71	123.05
24	S3	383	ALA	N-CA-C	5.47	118.48	109.72
26	LA	285	G	C1'-O4'-C4'	-5.47	104.43	109.90
26	LA	907	G	O4'-C1'-N9	5.47	116.71	108.50
26	LA	1053	C	O4'-C1'-N1	5.47	116.71	108.50
26	LA	1093	G	C5'-C4'-C3'	-5.47	107.79	116.00
26	LA	1392	A	C4'-C3'-O3'	-5.47	104.79	113.00
31	LX	72	VAL	O-C-N	-5.47	116.98	123.00
54	LM	75	SER	CA-CB-OG	5.47	122.05	111.10
2	SA	712	A	C5'-C4'-C3'	5.47	124.21	116.00
2	SA	958	A	C5'-C4'-C3'	-5.47	107.79	116.00
19	SC	81	GLU	CB-CA-C	-5.47	101.71	110.79
26	LA	614	A	C1'-C2'-O2'	5.47	120.01	111.80
26	LA	852	U	P-O5'-C5'	-5.47	112.69	120.90
31	LX	34	LYS	N-CA-C	5.47	117.32	111.36
55	LQ	38	GLN	OE1-CD-NE2	-5.47	117.13	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	414	A	O4'-C1'-C2'	5.47	113.07	107.60
2	SA	1094	G	C4'-C3'-C2'	-5.47	97.13	102.60
2	SA	1206	G	O4'-C1'-C2'	5.47	113.07	107.60
10	SJ	56	HIS	ND1-CE1-NE2	5.47	113.87	108.40
26	LA	697	G	P-O3'-C3'	5.47	128.41	120.20
26	LA	2423	U	C2'-C3'-O3'	5.47	117.70	109.50
49	LK	92	PRO	O-C-N	5.47	129.52	122.85
58	LT	17	GLY	N-CA-C	-5.47	107.77	115.32
16	SP	23	ASP	N-CA-C	5.47	118.25	110.10
18	SB	138	ARG	CG-CD-NE	-5.47	99.97	112.00
24	S3	91	ALA	N-CA-CB	-5.47	101.25	110.49
2	SA	860	A	C4'-C3'-O3'	-5.47	104.80	113.00
19	SC	62	SER	CA-CB-OG	5.47	122.03	111.10
26	LA	195	A	P-O5'-C5'	5.47	129.10	120.90
26	LA	358	U	O4'-C1'-C2'	-5.47	102.13	107.60
26	LA	617	G	C4'-C3'-C2'	-5.47	97.13	102.60
26	LA	905	A	C4'-C3'-C2'	-5.47	97.13	102.60
26	LA	1073	A	C5'-C4'-O4'	5.47	118.00	109.80
26	LA	1160	G	C4'-C3'-C2'	-5.47	97.13	102.60
26	LA	2647	U	O5'-C5'-C4'	5.47	119.70	111.50
33	LZ	36	ARG	NE-CZ-NH1	-5.47	116.03	121.50
33	LZ	64	ASP	CB-CA-C	5.47	119.97	110.68
53	LP	103	ARG	CA-C-N	5.47	127.88	120.44
53	LP	103	ARG	C-N-CA	5.47	127.88	120.44
54	LM	109	SER	O-C-N	-5.47	116.82	122.94
2	SA	920	U	C5'-C4'-C3'	-5.46	107.80	116.00
17	SQ	69	THR	CA-C-N	-5.46	115.08	122.95
17	SQ	69	THR	C-N-CA	-5.46	115.08	122.95
26	LA	1252	G	C3'-C2'-O2'	-5.46	106.40	114.60
26	LA	1486	U	O3'-P-O5'	-5.46	95.81	104.00
26	LA	2354	C	C5'-C4'-O4'	5.46	118.00	109.80
26	LA	2831	G	O4'-C1'-N9	5.46	116.70	108.50
50	LL	46	PRO	O-C-N	5.46	129.86	122.37
53	LP	17	ARG	CA-C-O	5.46	126.56	120.82
55	LQ	87	ILE	N-CA-C	5.46	115.13	107.37
56	LR	15	ASP	N-CA-C	5.46	119.64	112.92
2	SA	463	U	O3'-P-O5'	5.46	112.19	104.00
2	SA	756	C	C1'-O4'-C4'	-5.46	104.44	109.90
2	SA	812	G	O4'-C1'-N9	5.46	116.69	108.50
2	SA	1230	C	C1'-C2'-O2'	5.46	116.59	108.40
18	SB	216	VAL	N-CA-CB	5.46	117.56	110.57
24	S3	83	ILE	O-C-N	-5.46	116.97	123.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1481	U	C1'-O4'-C4'	-5.46	104.44	109.90
26	LA	1807	G	O4'-C1'-N9	5.46	116.69	108.50
26	LA	2296	U	P-O5'-C5'	5.46	129.09	120.90
2	SA	121	U	C1'-O4'-C4'	-5.46	104.44	109.90
7	SG	95	ARG	CA-C-N	5.46	127.54	120.44
7	SG	95	ARG	C-N-CA	5.46	127.54	120.44
23	SR	62	ARG	NH1-CZ-NH2	-5.46	112.20	119.30
24	S3	293	ALA	N-CA-C	5.46	122.43	110.80
24	S3	640	MET	CA-C-O	5.46	127.00	120.28
26	LA	29	U	C2'-C3'-O3'	5.46	121.89	113.70
26	LA	89	A	C5'-C4'-C3'	-5.46	107.81	116.00
26	LA	1177	G	C5'-C4'-O4'	5.46	117.99	109.80
26	LA	2583	G	O4'-C1'-C2'	5.46	113.06	107.60
45	LG	44	ALA	N-CA-C	5.46	117.99	111.71
51	LI	117	LEU	O-C-N	-5.46	116.44	121.30
26	LA	709	U	O4'-C4'-C3'	5.46	109.46	104.00
26	LA	1302	A	P-O5'-C5'	-5.46	112.71	120.90
26	LA	2471	A	C5'-C4'-C3'	-5.46	107.01	115.20
2	SA	1497	G	P-O3'-C3'	-5.46	112.01	120.20
6	SU	57	LYS	CG-CD-CE	5.46	123.85	111.30
26	LA	604	G	C4'-C3'-O3'	-5.46	104.81	113.00
26	LA	1466	U	C4'-C3'-O3'	-5.46	104.81	113.00
26	LA	1770	G	C5'-C4'-C3'	5.46	124.19	116.00
28	LU	11	ARG	N-CA-C	5.46	119.03	111.55
38	LE	190	LYS	CA-C-O	5.46	127.34	121.55
2	SA	904	U	O5'-C5'-C4'	-5.46	103.32	111.50
2	SA	984	C	C4'-C3'-O3'	-5.46	104.81	113.00
2	SA	1147	C	O4'-C4'-C3'	-5.46	98.54	104.00
2	SA	1519	A	O4'-C4'-C3'	5.46	109.46	104.00
21	SE	136	VAL	O-C-N	-5.46	116.54	121.89
24	S3	608	LYS	CA-C-N	5.46	126.22	120.11
24	S3	608	LYS	C-N-CA	5.46	126.22	120.11
26	LA	437	U	P-O3'-C3'	-5.46	112.02	120.20
26	LA	560	C	O4'-C1'-N1	5.46	116.69	108.50
26	LA	1964	G	C3'-C2'-O2'	-5.46	106.42	114.60
26	LA	1972	G	O3'-P-O5'	5.46	112.18	104.00
26	LA	2373	G	O4'-C1'-N9	5.46	116.69	108.50
2	SA	413	G	P-O3'-C3'	-5.46	112.02	120.20
26	LA	2213	U	C1'-O4'-C4'	-5.46	104.25	109.70
26	LA	2561	U	C4'-C3'-C2'	-5.46	97.14	102.60
26	LA	2661	G	P-O5'-C5'	5.46	129.08	120.90
2	SA	136	C	P-O5'-C5'	5.45	129.08	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	287	U	C4'-C3'-O3'	-5.45	104.82	113.00
2	SA	1055	A	C1'-O4'-C4'	-5.45	104.45	109.90
2	SA	1513	A	C4'-C3'-C2'	-5.45	97.15	102.60
14	SN	60	ARG	NE-CZ-NH1	-5.45	116.05	121.50
18	SB	19	THR	CA-C-O	-5.45	113.70	119.97
21	SE	114	LEU	N-CA-C	5.45	117.98	111.71
25	LB	96	G	C4'-C3'-C2'	-5.45	97.15	102.60
26	LA	263	G	C4'-C3'-O3'	-5.45	104.82	113.00
26	LA	349	U	C5'-C4'-C3'	-5.45	107.82	116.00
26	LA	451	U	C2'-C3'-O3'	5.45	117.68	109.50
44	LF	21	ARG	NE-CZ-NH2	5.45	124.11	119.20
50	LL	35	ARG	N-CA-CB	5.45	118.14	110.12
52	LO	97	GLN	CA-C-O	-5.45	115.48	120.50
2	SA	129	A	C3'-C2'-C1'	-5.45	96.05	101.50
2	SA	484	G	P-O5'-C5'	5.45	129.08	120.90
2	SA	768	A	C3'-C2'-C1'	5.45	106.75	101.30
5	ST	79	THR	CA-CB-CG2	5.45	119.77	110.50
26	LA	66	C	O4'-C1'-N1	5.45	116.68	108.50
26	LA	2815	C	P-O3'-C3'	-5.45	112.02	120.20
2	SA	1404	C	O4'-C1'-N1	5.45	116.67	108.50
7	SG	15	PRO	CA-C-N	5.45	127.53	120.44
7	SG	15	PRO	C-N-CA	5.45	127.53	120.44
19	SC	224	LYS	CA-C-N	5.45	127.53	120.44
19	SC	224	LYS	C-N-CA	5.45	127.53	120.44
22	SF	101	PRO	CA-C-N	5.45	131.10	122.60
22	SF	101	PRO	C-N-CA	5.45	131.10	122.60
24	S3	31	PHE	CA-C-N	-5.45	113.36	120.44
24	S3	31	PHE	C-N-CA	-5.45	113.36	120.44
24	S3	518	VAL	CA-CB-CG2	-5.45	101.13	110.40
25	LB	97	C	O4'-C1'-N1	5.45	116.67	108.50
26	LA	86	G	C1'-C2'-O2'	5.45	116.58	108.40
26	LA	570	G	P-O3'-C3'	-5.45	112.03	120.20
26	LA	704	G	P-O5'-C5'	5.45	129.08	120.90
26	LA	776	G	P-O5'-C5'	5.45	129.07	120.90
26	LA	1339	G	O4'-C4'-C3'	-5.45	98.55	104.00
26	LA	1818	U	C5'-C4'-O4'	5.45	117.28	109.10
26	LA	1839	G	C4'-C3'-C2'	-5.45	97.15	102.60
26	LA	1980	G	P-O5'-C5'	-5.45	112.72	120.90
37	LC	17	ALA	N-CA-C	5.45	122.41	110.80
37	LC	210	LYS	CB-CA-C	-5.45	101.63	110.79
2	SA	1346	A	C4'-C3'-C2'	-5.45	97.15	102.60
10	SJ	12	ALA	N-CA-C	5.45	117.08	108.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	LB	82	U	C4'-C3'-O3'	-5.45	104.83	113.00
26	LA	1944	U	C3'-C2'-C1'	-5.45	96.05	101.50
26	LA	1999	C	O4'-C1'-N1	5.45	116.67	108.50
26	LA	2122	U	O3'-P-O5'	5.45	112.17	104.00
26	LA	2294	G	C4'-C3'-O3'	-5.45	104.83	113.00
37	LC	202	THR	CA-C-O	5.45	127.08	120.81
41	L5	21	ARG	NE-CZ-NH1	-5.45	116.05	121.50
46	LH	72	ASN	CA-C-N	5.45	128.99	120.82
46	LH	72	ASN	C-N-CA	5.45	128.99	120.82
58	LT	12	HIS	CG-CD2-NE2	5.45	112.65	107.20
2	SA	326	G	C4'-C3'-C2'	5.45	108.05	102.60
2	SA	1514	G	O4'-C1'-C2'	-5.45	102.15	107.60
4	S2	72	C	O4'-C4'-C3'	5.45	109.45	104.00
26	LA	1883	U	C3'-C2'-C1'	5.45	106.75	101.30
26	LA	2258	C	C4'-C3'-O3'	5.45	117.57	109.40
1	SS	87	LYS	CG-CD-CE	5.45	123.83	111.30
2	SA	215	C	C1'-O4'-C4'	-5.45	104.45	109.90
2	SA	1399	C	P-O3'-C3'	5.45	128.37	120.20
12	SL	22	ALA	N-CA-C	5.45	122.40	110.80
22	SF	35	LYS	CA-C-N	5.45	130.06	122.93
22	SF	35	LYS	C-N-CA	5.45	130.06	122.93
26	LA	340	A	C3'-C2'-O2'	-5.45	102.53	110.70
26	LA	371	A	O4'-C4'-C3'	-5.45	100.65	106.10
26	LA	556	A	P-O3'-C3'	5.45	128.37	120.20
26	LA	1157	G	C5'-C4'-C3'	-5.45	107.83	116.00
26	LA	1563	U	P-O3'-C3'	-5.45	112.03	120.20
26	LA	1764	C	O4'-C1'-N1	5.45	116.67	108.50
26	LA	2358	A	C4'-C3'-O3'	-5.45	104.83	113.00
37	LC	108	GLU	N-CA-C	5.45	117.96	109.52
22	SF	64	VAL	CA-C-O	5.44	129.08	121.51
26	LA	1311	G	P-O3'-C3'	-5.44	112.03	120.20
26	LA	1713	A	O5'-C5'-C4'	5.44	119.87	111.70
26	LA	2631	G	C4'-C3'-C2'	-5.44	97.16	102.60
26	LA	2893	A	P-O3'-C3'	-5.44	112.03	120.20
2	SA	298	A	N9-C1'-C2'	5.44	120.17	112.00
2	SA	385	C	C3'-C2'-O2'	5.44	118.86	110.70
2	SA	941	G	C1'-C2'-O2'	5.44	116.56	108.40
2	SA	1444	U	O3'-P-O5'	5.44	112.16	104.00
2	SA	1534	A	C5'-C4'-O4'	5.44	117.26	109.10
20	SD	36	ALA	CA-C-N	5.44	125.43	120.21
20	SD	36	ALA	C-N-CA	5.44	125.43	120.21
23	SR	19	GLU	CA-C-N	-5.44	112.17	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	SR	19	GLU	C-N-CA	-5.44	112.17	121.97
26	LA	312	G	C1'-C2'-O2'	5.44	116.56	108.40
26	LA	1151	A	P-O5'-C5'	-5.44	112.74	120.90
26	LA	1328	A	O4'-C4'-C3'	5.44	109.44	104.00
28	LU	36	LEU	CA-C-N	5.44	129.93	120.68
28	LU	36	LEU	C-N-CA	5.44	129.93	120.68
58	LT	17	GLY	CA-C-O	5.44	125.16	119.06
2	SA	1041	G	C4'-C3'-C2'	-5.44	97.16	102.60
12	SL	15	VAL	N-CA-C	5.44	116.31	108.48
20	SD	171	GLU	N-CA-C	-5.44	101.09	109.52
24	S3	404	ILE	N-CA-C	-5.44	101.17	108.35
26	LA	52	A	C4'-C3'-C2'	5.44	108.04	102.60
26	LA	248	G	C3'-C2'-O2'	-5.44	102.54	110.70
26	LA	929	U	O5'-C5'-C4'	-5.44	103.34	111.50
27	LD	43	ASN	CA-C-N	-5.44	112.44	120.28
27	LD	43	ASN	C-N-CA	-5.44	112.44	120.28
38	LE	203	VAL	CB-CA-C	5.44	118.06	110.99
57	LS	22	GLY	N-CA-C	5.44	122.60	115.36
7	SG	155	TRP	CA-C-O	5.44	126.07	119.11
26	LA	754	U	O4'-C4'-C3'	-5.44	98.56	104.00
26	LA	1327	A	O4'-C4'-C3'	5.44	109.44	104.00
26	LA	2292	U	O4'-C4'-C3'	5.44	109.44	104.00
26	LA	2298	A	O4'-C1'-N9	5.44	116.66	108.50
2	SA	84	U	C1'-O4'-C4'	-5.44	104.26	109.70
2	SA	397	A	C1'-O4'-C4'	-5.44	104.46	109.90
2	SA	1412	C	P-O5'-C5'	5.44	129.06	120.90
26	LA	1104	C	C5'-C4'-O4'	5.44	117.95	109.80
26	LA	1361	G	C4'-C3'-O3'	-5.44	104.84	113.00
26	LA	1809	A	P-O5'-C5'	-5.44	112.75	120.90
26	LA	2136	G	P-O3'-C3'	-5.44	112.04	120.20
26	LA	2671	G	C4'-C3'-C2'	5.44	108.04	102.60
38	LE	69	ALA	CA-C-O	5.44	126.30	120.70
54	LM	30	ARG	NE-CZ-NH1	-5.44	116.06	121.50
57	LS	112	ALA	O-C-N	5.44	127.96	122.09
2	SA	671	G	C2'-C3'-O3'	5.44	121.85	113.70
2	SA	1450	U	O4'-C1'-N1	5.44	116.65	108.50
10	SJ	58	ASN	CA-CB-CG	-5.44	107.16	112.60
26	LA	971	G	C5'-C4'-C3'	5.44	124.16	116.00
26	LA	2136	G	O4'-C1'-N9	5.44	116.66	108.50
53	LP	8	ARG	N-CA-CB	-5.44	101.45	110.47
55	LQ	34	HIS	CB-CG-CD2	5.44	138.27	131.20
2	SA	1460	C	O4'-C1'-N1	5.43	116.65	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	SU	3	ILE	O-C-N	-5.43	115.78	122.57
9	SI	89	TYR	CA-C-O	5.43	126.18	120.42
15	SO	59	VAL	CB-CA-C	-5.43	104.90	112.02
18	SB	51	GLU	O-C-N	-5.43	116.38	122.03
26	LA	145	C	C5'-C4'-O4'	5.43	117.95	109.80
26	LA	1358	G	C2'-C3'-O3'	5.43	121.85	113.70
26	LA	1704	C	C5'-C4'-C3'	-5.43	107.85	116.00
26	LA	2577	A	C3'-C2'-C1'	-5.43	95.86	101.30
26	LA	2657	A	P-O3'-C3'	-5.43	112.05	120.20
39	L3	52	LYS	CA-C-O	5.43	127.25	121.16
40	L4	4	ILE	CB-CA-C	-5.43	105.58	110.91
43	L7	24	ARG	CD-NE-CZ	5.43	132.01	124.40
2	SA	452	A	O3'-P-O5'	-5.43	95.85	104.00
2	SA	545	C	O4'-C1'-N1	5.43	116.65	108.50
2	SA	838	G	O4'-C1'-C2'	5.43	113.03	107.60
2	SA	969	A	P-O3'-C3'	-5.43	112.05	120.20
2	SA	1403	C	P-O5'-C5'	5.43	129.05	120.90
10	SJ	80	THR	CA-C-N	5.43	127.56	120.28
10	SJ	80	THR	C-N-CA	5.43	127.56	120.28
14	SN	81	ILE	N-CA-CB	-5.43	104.48	110.51
16	SP	51	ARG	CB-CA-C	-5.43	100.14	109.65
26	LA	788	A	C3'-C2'-O2'	-5.43	106.45	114.60
26	LA	1016	G	C4'-C3'-C2'	-5.43	97.17	102.60
31	LX	38	LEU	N-CA-C	5.43	117.86	107.75
49	LK	8	VAL	CB-CA-C	5.43	118.21	111.15
51	LI	56	ALA	N-CA-C	5.43	117.20	111.28
2	SA	491	G	C4'-C3'-O3'	-5.43	104.85	113.00
2	SA	843	U	O4'-C4'-C3'	5.43	109.43	104.00
11	SK	21	HIS	CA-C-O	5.43	126.35	120.32
26	LA	1623	G	C4'-C3'-C2'	-5.43	97.17	102.60
26	LA	2110	G	O4'-C1'-N9	5.43	116.35	108.20
26	LA	2354	C	O4'-C4'-C3'	5.43	109.43	104.00
26	LA	2904	U	C4'-C3'-C2'	-5.43	97.17	102.60
36	L2	16	CYS	N-CA-C	5.43	117.95	110.35
45	LG	174	PHE	N-CA-CB	-5.43	101.27	110.50
52	LO	78	LEU	N-CA-C	5.43	118.11	110.23
2	SA	6	G	P-O3'-C3'	-5.43	112.06	120.20
2	SA	920	U	P-O5'-C5'	5.43	129.04	120.90
2	SA	946	A	P-O5'-C5'	5.43	129.04	120.90
2	SA	956	U	C3'-C2'-C1'	5.43	106.73	101.30
2	SA	1395	C	C1'-O4'-C4'	-5.43	104.47	109.90
2	SA	1485	U	P-O3'-C3'	-5.43	112.06	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	S1	50	U	P-O3'-C3'	5.43	128.34	120.20
26	LA	626	A	P-O3'-C3'	5.43	128.34	120.20
26	LA	886	A	O4'-C1'-N9	5.43	116.64	108.50
26	LA	1962	C	O3'-P-O5'	5.43	112.14	104.00
26	LA	2020	A	O4'-C4'-C3'	-5.43	98.57	104.00
29	LV	91	GLN	CG-CD-OE1	5.43	131.66	120.80
33	LZ	23	ALA	N-CA-C	5.43	117.75	108.90
2	SA	148	G	C1'-O4'-C4'	5.43	115.33	109.90
7	SG	110	ARG	N-CA-C	5.43	117.20	111.28
26	LA	15	G	O4'-C1'-N9	5.43	116.64	108.50
26	LA	311	A	O5'-C5'-C4'	5.43	119.84	111.70
26	LA	1076	C	O4'-C1'-N1	5.43	116.64	108.50
26	LA	1834	U	O3'-P-O5'	5.43	112.14	104.00
26	LA	2293	G	C4'-C3'-C2'	-5.43	97.17	102.60
2	SA	752	G	O3'-P-O5'	-5.43	95.86	104.00
2	SA	781	A	O5'-C5'-C4'	5.43	119.64	111.50
18	SB	194	GLY	N-CA-C	5.43	123.11	115.30
24	S3	193	ASN	CA-CB-CG	-5.43	107.17	112.60
26	LA	30	G	C4'-C3'-C2'	-5.43	97.17	102.60
26	LA	830	G	C3'-C2'-C1'	-5.43	96.07	101.50
2	SA	438	U	C5'-C4'-C3'	5.42	123.34	115.20
2	SA	462	G	C1'-O4'-C4'	-5.42	104.28	109.70
2	SA	755	G	C2'-C3'-O3'	5.42	121.84	113.70
2	SA	1355	G	P-O5'-C5'	5.42	129.04	120.90
2	SA	1374	A	C4'-C3'-C2'	-5.42	97.17	102.60
4	S2	48	U	C4'-C3'-C2'	-5.42	97.17	102.60
24	S3	412	GLU	CA-C-N	5.42	126.62	119.84
24	S3	412	GLU	C-N-CA	5.42	126.62	119.84
24	S3	665	TYR	O-C-N	-5.42	116.48	122.07
26	LA	225	C	O4'-C4'-C3'	-5.42	98.58	104.00
26	LA	228	C	C1'-O4'-C4'	-5.42	104.28	109.70
26	LA	2055	C	O4'-C1'-N1	5.42	116.64	108.50
26	LA	2198	A	C2'-C3'-O3'	5.42	117.64	109.50
26	LA	2309	A	O3'-P-O5'	5.42	112.14	104.00
26	LA	2759	G	P-O5'-C5'	-5.42	112.76	120.90
26	LA	2839	G	C4'-C3'-C2'	-5.42	97.17	102.60
2	SA	1422	G	O3'-P-O5'	5.42	112.13	104.00
2	SA	410	G	C3'-C2'-O2'	-5.42	102.57	110.70
2	SA	435	A	P-O3'-C3'	5.42	128.33	120.20
2	SA	485	U	O5'-C5'-C4'	5.42	119.83	111.70
2	SA	1404	C	C5'-C4'-O4'	5.42	117.93	109.80
24	S3	24	THR	N-CA-C	5.42	117.19	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	93	ASP	N-CA-CB	-5.42	102.15	110.12
26	LA	388	G	O4'-C1'-C2'	5.42	113.02	107.60
26	LA	1671	U	C4'-C3'-C2'	-5.42	97.18	102.60
26	LA	2225	A	C4'-C3'-C2'	-5.42	97.18	102.60
26	LA	2329	U	C5'-C4'-C3'	-5.42	107.87	116.00
26	LA	2771	C	C5'-C4'-C3'	-5.42	107.87	116.00
35	L1	40	THR	CA-C-O	-5.42	112.73	120.16
45	LG	121	PHE	CA-C-O	-5.42	115.65	121.56
26	LA	1816	C	O4'-C1'-N1	5.42	116.63	108.50
33	LZ	17	ARG	CB-CG-CD	5.42	123.77	111.30
34	L0	31	GLN	CA-C-O	-5.42	115.12	120.70
35	L1	44	ARG	NE-CZ-NH1	-5.42	116.08	121.50
2	SA	366	A	C1'-O4'-C4'	-5.42	104.28	109.70
2	SA	795	C	C4'-C3'-C2'	-5.42	97.18	102.60
2	SA	1093	A	C4'-C3'-C2'	-5.42	97.18	102.60
2	SA	1245	C	C5'-C4'-O4'	5.42	117.93	109.80
7	SG	51	GLN	CA-C-N	5.42	127.98	120.29
7	SG	51	GLN	C-N-CA	5.42	127.98	120.29
11	SK	82	GLU	N-CA-C	-5.42	100.94	109.50
24	S3	138	ALA	CA-C-O	-5.42	115.55	121.89
26	LA	400	G	C2'-C3'-O3'	5.42	121.83	113.70
26	LA	1352	U	C3'-C2'-C1'	5.42	106.72	101.30
26	LA	1945	G	C3'-C2'-O2'	-5.42	102.57	110.70
26	LA	2669	G	C5'-C4'-O4'	-5.42	101.67	109.80
28	LU	4	ILE	O-C-N	-5.42	116.77	122.95
37	LC	17	ALA	CA-C-N	5.42	130.74	122.29
37	LC	17	ALA	C-N-CA	5.42	130.74	122.29
42	L6	42	HIS	CA-C-O	5.42	126.03	119.31
51	LI	67	ALA	CA-C-O	-5.42	115.11	121.07
52	LO	110	GLU	N-CA-C	5.42	117.61	111.11
2	SA	163	C	C4'-C3'-C2'	-5.42	97.18	102.60
2	SA	494	G	O4'-C4'-C3'	5.42	109.42	104.00
2	SA	621	A	O4'-C1'-N9	5.42	116.62	108.50
2	SA	731	G	C5'-C4'-C3'	5.42	124.12	116.00
2	SA	1054	C	C3'-C2'-C1'	-5.42	96.08	101.50
9	SI	104	THR	N-CA-C	5.42	118.08	110.23
12	SL	91	GLY	CA-C-N	-5.42	113.06	121.18
12	SL	91	GLY	C-N-CA	-5.42	113.06	121.18
19	SC	163	ARG	NE-CZ-NH2	-5.42	114.33	119.20
26	LA	1587	G	C4'-C3'-C2'	-5.42	97.18	102.60
26	LA	2142	A	C3'-C2'-C1'	5.42	106.72	101.30
26	LA	2174	C	P-O5'-C5'	-5.42	112.78	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2900	A	O4'-C1'-N9	5.42	116.63	108.50
37	LC	225	ASP	CA-C-N	5.42	131.88	121.54
37	LC	225	ASP	C-N-CA	5.42	131.88	121.54
48	LN	69	ARG	N-CA-CB	5.42	119.64	110.49
50	LL	64	VAL	O-C-N	-5.42	115.80	122.57
50	LL	126	ALA	N-CA-C	5.42	117.19	111.28
2	SA	1411	C	C3'-C2'-C1'	5.42	106.72	101.30
11	SK	5	ILE	CA-CB-CG1	5.42	119.61	110.40
19	SC	120	THR	O-C-N	-5.42	116.38	122.12
26	LA	911	A	O4'-C4'-C3'	5.42	109.42	104.00
30	LW	92	VAL	CA-C-O	5.42	127.21	121.04
2	SA	1339	A	C5'-C4'-C3'	5.41	124.12	116.00
2	SA	1364	U	C2'-C3'-O3'	-5.41	105.58	113.70
12	SL	114	SER	CA-C-O	5.41	126.16	120.42
14	SN	67	GLY	N-CA-C	5.41	122.27	114.10
26	LA	566	U	C5'-C4'-O4'	-5.41	101.68	109.80
26	LA	1302	A	C1'-C2'-O2'	-5.41	103.68	111.80
26	LA	2268	A	P-O5'-C5'	-5.41	112.78	120.90
26	LA	2282	G	C1'-C2'-O2'	-5.41	103.68	111.80
26	LA	2446	G	C4'-C3'-O3'	-5.41	104.88	113.00
26	LA	2533	U	P-O3'-C3'	5.41	128.32	120.20
32	LY	22	VAL	CA-C-O	5.41	126.58	120.95
35	L1	39	ASP	N-CA-CB	-5.41	102.70	110.44
38	LE	2	ILE	N-CA-C	5.41	117.43	109.63
46	LH	31	GLU	CA-CB-CG	5.41	124.93	114.10
2	SA	89	U	O4'-C4'-C3'	-5.41	98.59	104.00
2	SA	1176	A	C1'-O4'-C4'	-5.41	104.49	109.90
24	S3	447	TRP	O-C-N	-5.41	117.08	123.25
24	S3	677	ALA	N-CA-C	5.41	117.67	110.53
26	LA	685	A	C2'-C3'-O3'	5.41	117.62	109.50
26	LA	739	A	C3'-C2'-O2'	-5.41	106.48	114.60
26	LA	800	A	C3'-C2'-C1'	-5.41	96.09	101.50
26	LA	2697	G	O4'-C4'-C3'	5.41	109.41	104.00
27	LD	15	VAL	N-CA-C	5.41	116.68	109.37
31	LX	87	GLN	O-C-N	5.41	129.27	122.23
2	SA	271	C	O5'-C5'-C4'	-5.41	103.38	111.50
2	SA	1157	A	N9-C1'-C2'	-5.41	105.88	114.00
2	SA	1351	U	C1'-O4'-C4'	-5.41	104.49	109.90
24	S3	160	ARG	CG-CD-NE	-5.41	100.10	112.00
26	LA	319	G	N9-C1'-C2'	5.41	120.12	112.00
26	LA	669	G	O4'-C4'-C3'	-5.41	98.59	104.00
26	LA	2283	C	O5'-C5'-C4'	5.41	119.61	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2629	U	C4'-C3'-C2'	5.41	108.01	102.60
26	LA	2644	G	C3'-C2'-O2'	-5.41	102.58	110.70
26	LA	2895	G	C4'-C3'-O3'	-5.41	104.88	113.00
27	LD	228	ASP	O-C-N	-5.41	114.99	122.46
33	LZ	22	ASN	CB-CA-C	-5.41	99.58	109.54
44	LF	52	VAL	O-C-N	-5.41	115.93	122.59
45	LG	73	VAL	CA-CB-CG1	-5.41	101.20	110.40
2	SA	130	A	O4'-C1'-C2'	-5.41	102.19	107.60
2	SA	994	A	C1'-C2'-O2'	5.41	116.51	108.40
8	SH	21	LYS	CA-C-N	5.41	131.87	121.54
8	SH	21	LYS	C-N-CA	5.41	131.87	121.54
11	SK	76	TYR	CA-C-O	-5.41	113.99	120.10
23	SR	61	ALA	O-C-N	-5.41	116.50	122.07
26	LA	48	G	C3'-C2'-C1'	5.41	106.71	101.30
26	LA	813	U	C1'-O4'-C4'	-5.41	104.49	109.90
26	LA	855	G	P-O5'-C5'	-5.41	112.79	120.90
26	LA	1708	C	C5'-C4'-C3'	5.41	124.11	116.00
26	LA	2096	C	P-O3'-C3'	5.41	128.31	120.20
26	LA	2567	G	C1'-O4'-C4'	-5.41	104.49	109.90
46	LH	174	LYS	CB-CA-C	5.41	119.41	111.73
49	LK	101	SER	CA-C-N	5.41	128.07	120.28
49	LK	101	SER	C-N-CA	5.41	128.07	120.28
54	LM	41	ILE	CA-C-O	5.41	126.89	120.72
26	LA	1249	U	P-O3'-C3'	-5.41	112.09	120.20
26	LA	2272	U	C3'-C2'-C1'	5.41	106.71	101.30
26	LA	2696	U	C3'-C2'-C1'	-5.41	95.89	101.30
56	LR	14	GLN	OE1-CD-NE2	-5.41	117.19	122.60
2	SA	17	U	P-O3'-C3'	-5.41	112.09	120.20
2	SA	304	U	C4'-C3'-C2'	5.41	108.01	102.60
2	SA	910	C	C4'-C3'-O3'	-5.41	104.89	113.00
2	SA	1148	U	C5'-C4'-O4'	5.41	117.91	109.80
2	SA	1359	C	C5'-C4'-O4'	5.41	117.91	109.80
10	SJ	32	THR	CA-C-N	5.41	132.00	121.41
10	SJ	32	THR	C-N-CA	5.41	132.00	121.41
21	SE	130	THR	CA-CB-OG1	5.41	117.71	109.60
24	S3	19	ASP	CB-CA-C	5.41	119.77	111.39
26	LA	28	A	P-O5'-C5'	-5.41	112.79	120.90
26	LA	130	C	C5'-C4'-C3'	-5.41	107.89	116.00
26	LA	142	A	C3'-C2'-O2'	5.41	118.81	110.70
26	LA	1238	G	C1'-C2'-O2'	5.41	116.51	108.40
26	LA	1275	A	P-O3'-C3'	-5.41	112.09	120.20
26	LA	1576	U	O4'-C1'-N1	5.41	116.61	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	740	U	C3'-C2'-C1'	5.40	106.70	101.30
26	LA	1084	A	C4'-C3'-C2'	-5.40	97.20	102.60
26	LA	1416	G	C4'-C3'-C2'	-5.40	97.20	102.60
2	SA	139	A	P-O3'-C3'	-5.40	112.10	120.20
2	SA	268	U	O4'-C1'-N1	5.40	116.61	108.50
2	SA	301	G	C1'-O4'-C4'	-5.40	104.50	109.90
2	SA	765	G	C5'-C4'-O4'	5.40	117.90	109.80
3	S1	28	U	O4'-C1'-N1	5.40	116.60	108.50
9	SI	74	GLN	N-CA-C	5.40	116.97	111.14
18	SB	25	LYS	CA-C-O	5.40	126.01	119.31
24	S3	529	ASN	CA-C-O	-5.40	112.76	120.16
26	LA	17	G	C5'-C4'-C3'	-5.40	107.90	116.00
26	LA	1178	C	P-O5'-C5'	5.40	129.00	120.90
26	LA	1460	U	N1-C1'-C2'	5.40	120.10	112.00
26	LA	2132	U	O4'-C1'-N1	5.40	116.61	108.50
39	L3	44	ALA	O-C-N	-5.40	116.00	122.27
54	LM	67	LYS	O-C-N	-5.40	115.40	122.59
2	SA	105	G	C5'-C4'-C3'	5.40	124.10	116.00
2	SA	1115	U	P-O5'-C5'	5.40	129.00	120.90
11	SK	96	ILE	CA-C-N	5.40	127.78	120.38
11	SK	96	ILE	C-N-CA	5.40	127.78	120.38
24	S3	278	LEU	CA-C-O	5.40	126.46	120.63
26	LA	28	A	O4'-C1'-N9	5.40	116.60	108.50
26	LA	1009	A	C4'-C3'-O3'	-5.40	104.90	113.00
26	LA	1040	A	C1'-C2'-O2'	5.40	116.50	108.40
26	LA	1135	C	P-O3'-C3'	5.40	128.30	120.20
26	LA	1162	G	C4'-C3'-C2'	-5.40	97.20	102.60
26	LA	1943	U	C5'-C4'-C3'	-5.40	107.10	115.20
26	LA	2006	C	C4'-C3'-C2'	-5.40	97.20	102.60
26	LA	2519	U	C5'-C4'-O4'	5.40	117.20	109.10
26	LA	2710	C	O4'-C1'-N1	5.40	116.60	108.50
30	LW	21	ARG	NH1-CZ-NH2	-5.40	112.28	119.30
37	LC	9	ARG	NE-CZ-NH2	-5.40	114.34	119.20
2	SA	544	G	O4'-C1'-C2'	-5.40	102.20	107.60
2	SA	690	G	C5'-C4'-O4'	5.40	117.90	109.80
12	SL	95	HIS	ND1-CE1-NE2	5.40	113.80	108.40
26	LA	887	U	O5'-C5'-C4'	5.40	119.60	111.50
26	LA	1098	A	C1'-C2'-O2'	5.40	116.50	108.40
26	LA	2238	G	O3'-P-O5'	-5.40	95.90	104.00
26	LA	2606	C	P-O5'-C5'	5.40	129.00	120.90
33	LZ	47	THR	OG1-CB-CG2	-5.40	98.50	109.30
57	LS	111	LYS	N-CA-C	5.40	116.85	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	233	C	O4'-C1'-N1	5.40	116.60	108.50
2	SA	998	C	O3'-P-O5'	5.40	112.09	104.00
2	SA	1049	U	P-O3'-C3'	5.40	128.30	120.20
18	SB	63	LYS	N-CA-CB	5.40	120.01	111.43
18	SB	70	GLY	CA-C-N	5.40	130.54	122.23
18	SB	70	GLY	C-N-CA	5.40	130.54	122.23
26	LA	245	G	C3'-C2'-C1'	5.40	106.70	101.30
26	LA	1581	G	C3'-C2'-C1'	5.40	106.70	101.30
26	LA	1595	C	C5'-C4'-C3'	5.40	124.10	116.00
26	LA	1725	U	P-O3'-C3'	-5.40	112.11	120.20
26	LA	2242	G	C1'-C2'-O2'	5.40	116.50	108.40
26	LA	2334	U	O5'-C5'-C4'	5.40	119.60	111.50
26	LA	2750	A	C4'-C3'-O3'	5.40	117.50	109.40
38	LE	25	THR	CA-C-N	5.40	130.21	123.14
38	LE	25	THR	C-N-CA	5.40	130.21	123.14
45	LG	11	VAL	CA-CB-CG1	5.40	119.58	110.40
52	LO	40	ARG	NH1-CZ-NH2	-5.40	112.28	119.30
57	LS	93	ILE	O-C-N	-5.40	115.82	122.57
26	LA	249	C	O4'-C4'-C3'	-5.40	100.70	106.10
26	LA	1252	G	C2'-C3'-O3'	5.40	117.59	109.50
26	LA	1688	U	C4'-C3'-O3'	-5.40	104.91	113.00
26	LA	2864	G	C4'-C3'-O3'	-5.40	104.91	113.00
2	SA	505	G	C5'-C4'-O4'	5.39	117.89	109.80
2	SA	611	C	C4'-C3'-O3'	-5.39	104.91	113.00
2	SA	1302	C	O4'-C4'-C3'	5.39	109.39	104.00
2	SA	1519	A	O3'-P-O5'	5.39	112.09	104.00
22	SF	117	ALA	O-C-N	-5.39	115.23	122.94
25	LB	12	C	C5'-C4'-O4'	5.39	117.19	109.10
26	LA	73	A	O4'-C4'-C3'	5.39	109.39	104.00
26	LA	2218	G	P-O5'-C5'	-5.39	112.81	120.90
26	LA	2632	A	C5'-C4'-C3'	-5.39	107.91	116.00
45	LG	134	GLN	CA-C-N	5.39	128.13	120.53
45	LG	134	GLN	C-N-CA	5.39	128.13	120.53
2	SA	835	U	C4'-C3'-C2'	-5.39	97.21	102.60
2	SA	1374	A	O3'-P-O5'	-5.39	95.91	104.00
2	SA	1509	C	O4'-C4'-C3'	5.39	109.39	104.00
12	SL	30	ARG	NE-CZ-NH2	-5.39	114.35	119.20
24	S3	582	TYR	CG-CD1-CE1	-5.39	113.11	121.20
26	LA	622	G	C4'-C3'-O3'	-5.39	104.91	113.00
26	LA	818	G	P-O5'-C5'	5.39	128.99	120.90
26	LA	1627	G	P-O5'-C5'	-5.39	112.81	120.90
26	LA	2113	U	C2'-C3'-O3'	5.39	121.79	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2333	A	C3'-C2'-C1'	5.39	106.89	101.50
26	LA	2829	A	P-O5'-C5'	5.39	128.99	120.90
2	SA	152	A	C4'-C3'-O3'	-5.39	104.91	113.00
11	SK	73	VAL	N-CA-CB	5.39	120.13	111.23
25	LB	14	U	O5'-C5'-C4'	5.39	119.79	111.70
26	LA	797	G	C4'-C3'-C2'	-5.39	97.21	102.60
26	LA	2111	U	C5'-C4'-O4'	5.39	117.89	109.80
26	LA	2415	G	C5'-C4'-O4'	5.39	117.89	109.80
45	LG	159	ALA	CA-C-N	5.39	130.70	122.29
45	LG	159	ALA	C-N-CA	5.39	130.70	122.29
53	LP	118	ARG	N-CA-C	5.39	117.71	109.62
2	SA	10	A	C3'-C2'-C1'	5.39	106.69	101.30
2	SA	389	A	C4'-C3'-O3'	-5.39	104.92	113.00
2	SA	676	A	O4'-C1'-N9	5.39	116.58	108.50
2	SA	1091	U	O5'-C5'-C4'	-5.39	103.42	111.50
2	SA	1532	U	C5'-C4'-O4'	5.39	117.89	109.80
18	SB	145	ASN	N-CA-C	5.39	116.84	111.07
19	SC	41	TYR	CA-CB-CG	-5.39	104.20	113.90
21	SE	4	GLU	O-C-N	-5.39	115.31	122.59
26	LA	877	A	C4'-C3'-O3'	-5.39	104.92	113.00
26	LA	1197	G	C1'-O4'-C4'	-5.39	104.51	109.90
26	LA	1467	U	C1'-O4'-C4'	-5.39	104.51	109.90
26	LA	2590	A	O4'-C1'-C2'	-5.39	102.21	107.60
31	LX	39	ALA	N-CA-C	5.39	118.41	109.46
50	LL	89	PHE	N-CA-CB	-5.39	101.98	110.06
54	LM	45	GLU	N-CA-C	5.39	122.28	110.80
2	SA	1227	A	N9-C1'-C2'	-5.39	105.92	114.00
6	SU	25	ALA	N-CA-C	5.39	116.84	111.07
26	LA	908	C	P-O3'-C3'	5.39	128.28	120.20
2	SA	661	G	P-O5'-C5'	-5.39	112.82	120.90
2	SA	1009	U	C4'-C3'-O3'	-5.39	104.92	113.00
15	SO	27	GLN	OE1-CD-NE2	-5.39	117.21	122.60
21	SE	82	HIS	CA-CB-CG	5.39	119.19	113.80
26	LA	443	A	O4'-C1'-C2'	-5.39	100.41	105.80
26	LA	880	G	O4'-C1'-N9	5.39	116.58	108.50
26	LA	900	A	O3'-P-O5'	-5.39	95.92	104.00
26	LA	907	G	C5'-C4'-C3'	5.39	124.08	116.00
26	LA	2399	G	O4'-C1'-N9	5.39	116.58	108.50
26	LA	2806	C	C2'-C3'-O3'	5.39	121.78	113.70
27	LD	63	ILE	N-CA-C	5.39	120.54	109.34
27	LD	266	ILE	O-C-N	-5.39	116.80	122.83
30	LW	38	ILE	CA-C-O	5.39	126.56	120.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	LZ	49	ARG	CA-C-O	5.39	126.69	120.60
44	LF	90	GLN	OE1-CD-NE2	-5.39	117.21	122.60
45	LG	21	TYR	N-CA-C	5.39	118.49	110.52
2	SA	283	U	C1'-O4'-C4'	-5.38	104.52	109.90
2	SA	576	C	C2'-C3'-O3'	5.38	117.58	109.50
2	SA	1281	C	C2'-C3'-O3'	5.38	117.58	109.50
20	SD	202	LEU	N-CA-C	-5.38	105.49	111.36
24	S3	171	ALA	N-CA-C	5.38	117.47	110.53
26	LA	465	G	C5'-C4'-C3'	5.38	124.08	116.00
26	LA	671	C	C5'-C4'-C3'	5.38	124.08	116.00
26	LA	695	G	O4'-C1'-C2'	-5.38	102.22	107.60
26	LA	1403	A	P-O5'-C5'	-5.38	112.82	120.90
26	LA	2248	C	C3'-C2'-C1'	5.38	106.68	101.30
26	LA	2561	U	P-O5'-C5'	5.38	128.98	120.90
47	LJ	79	THR	N-CA-C	5.38	118.22	108.69
52	LO	18	ARG	NE-CZ-NH1	-5.38	116.12	121.50
53	LP	22	ARG	NE-CZ-NH2	5.38	124.05	119.20
10	SJ	100	ILE	CA-CB-CG1	5.38	119.55	110.40
13	SM	40	GLU	N-CA-CB	-5.38	102.25	110.33
16	SP	14	ARG	NE-CZ-NH1	5.38	126.88	121.50
26	LA	541	A	O4'-C4'-C3'	-5.38	98.62	104.00
26	LA	1585	C	C4'-C3'-C2'	-5.38	97.22	102.60
46	LH	24	THR	CA-C-N	-5.38	116.01	122.90
46	LH	24	THR	C-N-CA	-5.38	116.01	122.90
2	SA	863	U	P-O5'-C5'	5.38	128.97	120.90
2	SA	969	A	O5'-C5'-C4'	5.38	119.77	111.70
2	SA	1394	A	P-O5'-C5'	5.38	128.97	120.90
4	S2	10	G	C4'-C3'-C2'	-5.38	97.22	102.60
26	LA	2676	C	O4'-C1'-C2'	5.38	112.98	107.60
26	LA	2881	U	C5'-C4'-C3'	-5.38	107.93	116.00
37	LC	16	ASP	O-C-N	-5.38	116.09	122.65
45	LG	166	ARG	CG-CD-NE	-5.38	100.16	112.00
53	LP	33	ILE	N-CA-C	-5.38	100.31	108.17
2	SA	1099	G	P-O5'-C5'	-5.38	112.83	120.90
2	SA	1393	U	C4'-C3'-C2'	-5.38	97.22	102.60
2	SA	1527	U	C2'-C3'-O3'	5.38	121.77	113.70
8	SH	55	LYS	N-CA-CB	5.38	119.95	110.37
20	SD	29	THR	N-CA-CB	5.38	119.58	110.49
26	LA	1572	A	C4'-C3'-C2'	-5.38	97.22	102.60
26	LA	2193	G	C4'-C3'-C2'	-5.38	97.22	102.60
26	LA	2503	A	O4'-C1'-N9	5.38	116.27	108.20
26	LA	2833	U	C4'-C3'-C2'	-5.38	97.22	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	LC	214	ILE	O-C-N	-5.38	117.65	123.14
2	SA	1051	C	C2'-C3'-O3'	-5.38	105.63	113.70
26	LA	611	C	C1'-O4'-C4'	-5.38	104.52	109.90
26	LA	1661	G	P-O5'-C5'	-5.38	112.83	120.90
26	LA	2186	G	C4'-C3'-C2'	-5.38	97.22	102.60
26	LA	2376	A	P-O5'-C5'	-5.38	112.83	120.90
26	LA	2654	A	C2'-C3'-O3'	5.38	117.57	109.50
27	LD	94	LEU	N-CA-C	5.38	122.26	110.80
27	LD	242	HIS	CB-CA-C	-5.38	101.07	109.08
2	SA	230	G	P-O5'-C5'	-5.38	112.84	120.90
2	SA	332	G	C1'-O4'-C4'	-5.38	104.52	109.90
2	SA	1483	A	C1'-C2'-O2'	5.38	116.46	108.40
15	SO	8	ALA	O-C-N	-5.38	115.66	122.27
24	S3	490	ARG	NE-CZ-NH1	-5.38	116.12	121.50
25	LB	117	G	O4'-C1'-N9	5.38	116.56	108.50
26	LA	2038	G	C5'-C4'-C3'	-5.38	107.94	116.00
26	LA	2067	G	C2'-C3'-O3'	5.38	117.56	109.50
26	LA	2130	U	C4'-C3'-O3'	-5.38	104.93	113.00
33	LZ	6	VAL	CA-C-O	5.38	126.55	120.85
33	LZ	26	ARG	CA-C-O	5.38	127.15	120.54
37	LC	233	VAL	O-C-N	5.38	127.08	121.87
49	LK	66	PHE	CA-CB-CG	5.38	119.18	113.80
49	LK	133	ARG	CB-CA-C	5.38	119.72	110.79
2	SA	802	A	O4'-C1'-N9	5.38	116.56	108.50
25	LB	11	C	C4'-C3'-C2'	-5.38	97.22	102.60
26	LA	2248	C	C4'-C3'-C2'	-5.38	97.22	102.60
26	LA	2567	G	O4'-C4'-C3'	5.38	109.38	104.00
49	LK	47	SER	N-CA-CB	5.38	121.28	112.63
2	SA	449	G	C1'-O4'-C4'	-5.37	104.53	109.90
2	SA	1222	G	P-O3'-C3'	-5.37	112.14	120.20
24	S3	407	ARG	N-CA-C	5.37	122.25	110.80
25	LB	64	G	C1'-O4'-C4'	-5.37	104.53	109.90
26	LA	327	G	O5'-C5'-C4'	5.37	119.56	111.50
26	LA	824	U	C5'-C4'-C3'	-5.37	107.94	116.00
26	LA	1003	G	C5'-C4'-C3'	5.37	124.06	116.00
37	LC	85	GLU	CB-CG-CD	-5.37	103.46	112.60
37	LC	192	LEU	CA-C-N	5.37	127.48	120.28
37	LC	192	LEU	C-N-CA	5.37	127.48	120.28
2	SA	1210	C	C5'-C4'-O4'	-5.37	101.74	109.80
7	SG	159	ARG	CA-C-O	-5.37	114.28	120.24
12	SL	95	HIS	CA-CB-CG	-5.37	108.43	113.80
18	SB	144	GLU	N-CA-C	5.37	117.22	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	83	ILE	CB-CA-C	-5.37	103.54	110.84
24	S3	499	ASP	N-CA-C	5.37	117.66	108.90
26	LA	789	A	O4'-C4'-C3'	-5.37	100.73	106.10
26	LA	948	C	C5'-C4'-C3'	5.37	124.06	116.00
26	LA	1422	G	P-O5'-C5'	-5.37	112.84	120.90
26	LA	1604	C	O3'-P-O5'	5.37	112.06	104.00
26	LA	1889	A	O5'-C5'-C4'	-5.37	103.44	111.50
26	LA	1922	G	C3'-C2'-C1'	-5.37	95.93	101.30
56	LR	23	ASP	CA-C-N	-5.37	113.13	120.44
56	LR	23	ASP	C-N-CA	-5.37	113.13	120.44
2	SA	147	G	P-O5'-C5'	5.37	128.95	120.90
2	SA	343	U	O4'-C4'-C3'	5.37	109.37	104.00
2	SA	1440	U	C4'-C3'-O3'	-5.37	104.94	113.00
11	SK	17	ASP	O-C-N	5.37	129.40	123.33
26	LA	212	G	P-O3'-C3'	-5.37	112.14	120.20
26	LA	1203	U	C5'-C4'-C3'	-5.37	107.95	116.00
31	LX	59	GLU	CA-C-O	5.37	127.80	121.36
37	LC	63	THR	CA-CB-OG1	-5.37	101.54	109.60
2	SA	334	C	O4'-C1'-N1	5.37	116.55	108.50
26	LA	210	C	C5'-C4'-C3'	-5.37	107.95	116.00
26	LA	2176	A	O4'-C1'-C2'	-5.37	102.23	107.60
27	LD	124	LYS	CB-CA-C	5.37	119.17	109.45
40	L4	8	ILE	N-CA-CB	5.37	120.03	112.52
2	SA	327	A	C4'-C3'-C2'	-5.37	97.23	102.60
2	SA	626	G	P-O5'-C5'	5.37	128.95	120.90
26	LA	243	U	P-O3'-C3'	5.37	128.25	120.20
26	LA	2547	A	O3'-P-O5'	-5.37	95.95	104.00
2	SA	827	U	P-O5'-C5'	5.37	128.95	120.90
2	SA	1288	A	C4'-C3'-C2'	-5.37	97.23	102.60
2	SA	1378	C	O4'-C1'-N1	5.37	116.55	108.50
17	SQ	8	GLN	CB-CG-CD	-5.37	103.48	112.60
26	LA	529	A	P-O5'-C5'	5.37	128.95	120.90
26	LA	594	U	P-O5'-C5'	5.37	128.95	120.90
26	LA	1639	C	O4'-C4'-C3'	5.37	109.37	104.00
26	LA	2160	C	O4'-C4'-C3'	-5.37	98.63	104.00
26	LA	2282	G	C3'-C2'-C1'	5.37	106.87	101.50
56	LR	14	GLN	N-CA-CB	-5.37	102.07	110.44
57	LS	66	ALA	N-CA-CB	-5.37	102.29	110.07
2	SA	34	C	O4'-C1'-N1	5.36	116.55	108.50
2	SA	336	A	C1'-O4'-C4'	-5.36	104.54	109.90
2	SA	348	G	C4'-C3'-C2'	-5.36	97.24	102.60
2	SA	1047	G	P-O3'-C3'	-5.36	112.16	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1075	U	O3'-P-O5'	-5.36	95.96	104.00
2	SA	1166	G	C2'-C3'-O3'	5.36	121.75	113.70
7	SG	40	SER	N-CA-CB	5.36	118.11	110.06
8	SH	64	TYR	N-CA-CB	5.36	118.20	110.37
26	LA	79	C	O4'-C1'-C2'	-5.36	102.24	107.60
26	LA	1023	U	O4'-C1'-N1	5.36	116.55	108.50
26	LA	1075	C	C5'-C4'-C3'	5.36	124.04	116.00
26	LA	1600	C	O4'-C1'-N1	5.36	116.55	108.50
26	LA	2450	A	O4'-C4'-C3'	-5.36	98.64	104.00
26	LA	2607	G	C5'-C4'-C3'	-5.36	107.96	116.00
33	LZ	63	ILE	O-C-N	-5.36	116.63	121.89
47	LJ	89	GLY	CA-C-N	-5.36	113.47	120.44
47	LJ	89	GLY	C-N-CA	-5.36	113.47	120.44
48	LN	80	SER	CA-C-N	5.36	127.41	120.44
48	LN	80	SER	C-N-CA	5.36	127.41	120.44
49	LK	99	LYS	N-CA-C	-5.36	100.92	109.23
2	SA	1155	A	C5'-C4'-O4'	5.36	117.84	109.80
18	SB	71	THR	N-CA-C	5.36	117.92	109.39
26	LA	1179	G	P-O3'-C3'	-5.36	112.16	120.20
26	LA	1761	C	P-O5'-C5'	5.36	128.94	120.90
26	LA	2748	A	C4'-C3'-C2'	-5.36	97.24	102.60
2	SA	124	C	O5'-C5'-C4'	-5.36	103.46	111.50
2	SA	853	C	P-O5'-C5'	5.36	128.94	120.90
25	LB	109	A	O4'-C1'-C2'	-5.36	102.24	107.60
25	LB	115	A	C2'-C3'-O3'	5.36	121.74	113.70
26	LA	764	A	C4'-C3'-C2'	5.36	107.96	102.60
26	LA	1258	U	O3'-P-O5'	5.36	112.04	104.00
26	LA	2055	C	C4'-C3'-C2'	-5.36	97.24	102.60
26	LA	2474	U	O4'-C1'-N1	5.36	116.54	108.50
26	LA	2557	G	O3'-P-O5'	5.36	112.04	104.00
2	SA	1216	A	C5'-C4'-C3'	-5.36	107.96	116.00
9	SI	30	ASN	CA-CB-CG	5.36	117.96	112.60
20	SD	185	PRO	N-CA-C	5.36	119.62	111.15
26	LA	33	C	O4'-C4'-C3'	-5.36	100.74	106.10
26	LA	1624	U	C5'-C4'-C3'	-5.36	107.96	116.00
26	LA	2112	G	C4'-C3'-C2'	-5.36	97.24	102.60
26	LA	2312	U	C5'-C4'-O4'	5.36	117.84	109.80
46	LH	72	ASN	CA-C-O	-5.36	115.18	120.70
2	SA	164	G	C5'-C4'-O4'	5.36	117.84	109.80
2	SA	298	A	O5'-C5'-C4'	5.36	119.54	111.50
3	S1	34	U	C5'-C4'-O4'	5.36	117.84	109.80
20	SD	190	LEU	CA-C-O	-5.36	115.50	121.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	SF	64	VAL	CA-CB-CG1	5.36	119.51	110.40
24	S3	509	GLY	CA-C-O	5.36	126.34	120.66
26	LA	209	C	O4'-C1'-N1	5.36	116.54	108.50
26	LA	265	A	O3'-P-O5'	5.36	112.04	104.00
26	LA	726	G	C2'-C3'-O3'	5.36	117.54	109.50
26	LA	1066	U	C4'-C3'-C2'	-5.36	97.24	102.60
26	LA	2039	U	C1'-C2'-O2'	5.36	116.44	108.40
26	LA	2785	C	C5'-C4'-C3'	5.36	124.04	116.00
27	LD	110	LYS	O-C-N	-5.36	116.94	123.10
28	LU	95	ARG	NH1-CZ-NH2	-5.36	112.33	119.30
29	LV	22	THR	N-CA-CB	5.36	118.55	110.30
2	SA	1013	G	C2'-C3'-O3'	5.36	121.73	113.70
4	S2	11	A	C5'-C4'-C3'	-5.36	107.97	116.00
26	LA	1893	C	O4'-C1'-N1	5.36	116.53	108.50
37	LC	182	ALA	O-C-N	5.36	127.59	122.07
44	LF	67	ARG	O-C-N	-5.36	117.88	123.56
46	LH	50	THR	N-CA-C	5.36	117.63	108.90
55	LQ	28	VAL	O-C-N	-5.36	117.24	122.97
55	LQ	68	LYS	O-C-N	-5.36	116.44	122.12
2	SA	1227	A	O4'-C1'-N9	5.35	116.23	108.20
21	SE	152	VAL	N-CA-CB	5.35	120.06	111.23
26	LA	1649	G	C5'-C4'-C3'	5.35	124.03	116.00
26	LA	2554	U	P-O3'-C3'	-5.35	112.17	120.20
44	LF	27	LEU	CA-C-N	5.35	127.80	120.46
44	LF	27	LEU	C-N-CA	5.35	127.80	120.46
2	SA	198	G	P-O5'-C5'	5.35	128.93	120.90
2	SA	443	C	C5'-C4'-O4'	5.35	117.83	109.80
4	S2	75	C	C1'-C2'-O2'	5.35	116.43	108.40
8	SH	127	TYR	CA-C-O	5.35	127.21	121.16
24	S3	22	LYS	N-CA-CB	-5.35	101.68	109.82
25	LB	8	C	O5'-C5'-C4'	-5.35	103.47	111.50
25	LB	81	G	O4'-C4'-C3'	5.35	109.35	104.00
26	LA	251	A	C3'-C2'-C1'	5.35	106.65	101.30
26	LA	312	G	C2'-C3'-O3'	5.35	121.73	113.70
26	LA	1630	A	C1'-O4'-C4'	-5.35	104.55	109.90
26	LA	2648	G	C1'-O4'-C4'	-5.35	104.55	109.90
26	LA	2779	U	C4'-C3'-C2'	-5.35	97.25	102.60
26	LA	2902	C	P-O5'-C5'	5.35	128.93	120.90
47	LJ	132	GLU	CB-CG-CD	5.35	121.70	112.60
55	LQ	91	SER	CA-C-O	5.35	126.82	120.66
2	SA	1048	G	O4'-C4'-C3'	-5.35	98.65	104.00
4	S2	16	C	C1'-O4'-C4'	-5.35	104.35	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	SJ	83	THR	CA-C-O	-5.35	114.75	120.42
26	LA	207	A	P-O5'-C5'	5.35	128.93	120.90
26	LA	1237	A	O4'-C1'-C2'	5.35	111.15	105.80
26	LA	1428	C	C4'-C3'-O3'	5.35	117.43	109.40
26	LA	1487	U	P-O5'-C5'	5.35	128.93	120.90
53	LP	112	TYR	N-CA-CB	5.35	118.90	110.23
2	SA	564	C	P-O5'-C5'	5.35	128.93	120.90
2	SA	1296	C	C1'-C2'-O2'	5.35	116.42	108.40
17	SQ	32	ILE	N-CA-C	-5.35	107.57	111.90
20	SD	6	PRO	O-C-N	-5.35	115.42	122.64
24	S3	405	LEU	N-CA-CB	5.35	118.55	110.42
25	LB	112	G	P-O5'-C5'	5.35	128.93	120.90
26	LA	597	G	P-O5'-C5'	-5.35	112.88	120.90
26	LA	627	A	C4'-C3'-C2'	-5.35	97.25	102.60
26	LA	655	A	O5'-C5'-C4'	5.35	119.73	111.70
26	LA	1379	U	C3'-C2'-C1'	5.35	106.65	101.30
26	LA	1854	A	C2'-C3'-O3'	5.35	121.72	113.70
26	LA	2364	C	C4'-C3'-C2'	-5.35	97.25	102.60
26	LA	2449	U	P-O3'-C3'	5.35	128.22	120.20
2	SA	404	G	O4'-C1'-C2'	-5.35	102.25	107.60
5	ST	35	TYR	CB-CG-CD1	-5.35	112.78	120.80
19	SC	5	HIS	ND1-CE1-NE2	5.35	113.75	108.40
25	LB	120	U	O4'-C1'-N1	5.35	116.22	108.20
26	LA	235	U	C4'-C3'-C2'	-5.35	97.25	102.60
26	LA	543	G	P-O5'-C5'	5.35	128.92	120.90
26	LA	2615	U	P-O3'-C3'	5.35	128.22	120.20
26	LA	2663	G	C5'-C4'-O4'	5.35	117.82	109.80
38	LE	204	LYS	CA-C-N	5.35	126.52	119.84
38	LE	204	LYS	C-N-CA	5.35	126.52	119.84
2	SA	1272	G	P-O3'-C3'	5.35	128.22	120.20
25	LB	70	C	C4'-C3'-O3'	-5.35	104.98	113.00
26	LA	265	A	C2'-C3'-O3'	5.35	121.72	113.70
26	LA	540	C	P-O3'-C3'	-5.35	112.18	120.20
26	LA	1108	U	C1'-O4'-C4'	-5.35	104.55	109.90
26	LA	2198	A	P-O5'-C5'	5.35	128.92	120.90
26	LA	2431	U	P-O5'-C5'	5.35	128.92	120.90
26	LA	2741	A	C4'-C3'-O3'	-5.35	104.98	113.00
28	LU	61	ASN	O-C-N	-5.35	115.48	122.59
53	LP	21	PHE	CA-CB-CG	-5.35	108.45	113.80
2	SA	84	U	O3'-P-O5'	5.34	112.02	104.00
2	SA	166	U	P-O3'-C3'	-5.34	112.18	120.20
2	SA	255	G	P-O3'-C3'	-5.34	112.18	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1328	C	O4'-C1'-N1	5.34	116.52	108.50
2	SA	1452	C	C1'-C2'-O2'	5.34	116.42	108.40
15	SO	42	PHE	N-CA-CB	-5.34	102.23	110.46
16	SP	31	ARG	CA-C-O	-5.34	112.87	120.51
24	S3	85	ILE	N-CA-C	5.34	115.28	108.12
26	LA	2063	C	C4'-C3'-C2'	-5.34	97.25	102.60
26	LA	2205	A	O5'-C5'-C4'	-5.34	103.48	111.50
26	LA	2841	C	O3'-P-O5'	-5.34	95.98	104.00
37	LC	19	LYS	N-CA-C	5.34	118.34	110.59
38	LE	194	PRO	N-CA-C	5.34	119.62	111.34
43	L7	24	ARG	CA-C-O	-5.34	114.77	120.92
44	LF	181	ILE	CA-C-O	5.34	125.41	119.42
46	LH	21	GLN	CA-C-N	5.34	129.05	122.37
46	LH	21	GLN	C-N-CA	5.34	129.05	122.37
49	LK	105	LEU	N-CA-CB	5.34	118.08	110.06
2	SA	120	A	C5'-C4'-O4'	5.34	117.81	109.80
2	SA	177	G	O4'-C1'-N9	5.34	116.51	108.50
11	SK	31	VAL	CB-CA-C	-5.34	103.18	110.77
20	SD	92	LEU	N-CA-C	-5.34	105.12	111.69
26	LA	196	A	C3'-C2'-C1'	5.34	106.84	101.50
26	LA	673	C	O4'-C1'-C2'	5.34	112.94	107.60
26	LA	878	A	C2'-C3'-O3'	5.34	121.72	113.70
26	LA	1872	A	C5'-C4'-C3'	-5.34	107.99	116.00
53	LP	102	PHE	CB-CA-C	5.34	118.53	109.50
2	SA	146	G	C4'-C3'-C2'	-5.34	97.26	102.60
2	SA	839	C	O5'-C5'-C4'	-5.34	103.49	111.50
2	SA	1115	U	O4'-C4'-C3'	5.34	109.34	104.00
2	SA	1249	C	P-O3'-C3'	-5.34	112.19	120.20
2	SA	1348	U	C3'-C2'-C1'	5.34	106.64	101.30
5	ST	30	PHE	N-CA-C	5.34	116.79	111.07
18	SB	104	LYS	N-CA-CB	-5.34	101.70	109.82
24	S3	588	SER	N-CA-C	5.34	122.18	110.80
26	LA	153	U	C1'-C2'-O2'	5.34	116.41	108.40
26	LA	968	C	C4'-C3'-C2'	-5.34	97.26	102.60
26	LA	1095	A	C1'-C2'-O2'	5.34	119.81	111.80
26	LA	2159	G	C5'-C4'-O4'	5.34	117.81	109.80
26	LA	2841	C	O4'-C4'-C3'	5.34	109.34	104.00
45	LG	80	GLN	OE1-CD-NE2	-5.34	117.26	122.60
56	LR	18	SER	CB-CA-C	-5.34	101.17	109.61
1	SS	30	LEU	CA-C-N	5.34	131.74	121.54
1	SS	30	LEU	C-N-CA	5.34	131.74	121.54
2	SA	11	G	C4'-C3'-C2'	-5.34	97.26	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	205	A	C2'-C3'-O3'	5.34	121.71	113.70
2	SA	786	G	C4'-C3'-C2'	-5.34	97.26	102.60
2	SA	812	G	C5'-C4'-C3'	-5.34	107.99	116.00
2	SA	1230	C	P-O3'-C3'	-5.34	112.19	120.20
8	SH	112	ASP	N-CA-C	5.34	117.10	111.28
19	SC	176	THR	CA-C-N	5.34	127.44	120.28
19	SC	176	THR	C-N-CA	5.34	127.44	120.28
25	LB	75	G	P-O3'-C3'	5.34	128.21	120.20
26	LA	391	A	P-O5'-C5'	5.34	128.91	120.90
26	LA	827	U	N1-C1'-C2'	5.34	122.01	114.00
26	LA	829	A	C5'-C4'-O4'	5.34	117.11	109.10
26	LA	2074	U	C5'-C4'-C3'	-5.34	107.99	116.00
26	LA	2422	C	C4'-C3'-O3'	5.34	117.41	109.40
26	LA	2493	U	C1'-O4'-C4'	-5.34	104.56	109.90
26	LA	2573	C	C4'-C3'-C2'	-5.34	97.26	102.60
44	LF	162	ARG	CB-CA-C	-5.34	102.74	110.96
47	LJ	85	MET	CA-C-N	5.34	131.74	121.54
47	LJ	85	MET	C-N-CA	5.34	131.74	121.54
51	LI	100	ALA	CA-C-O	5.34	125.53	119.18
2	SA	264	C	C4'-C3'-C2'	-5.34	97.26	102.60
2	SA	894	G	C5'-C4'-C3'	-5.34	107.99	116.00
26	LA	2339	C	C5'-C4'-C3'	-5.34	107.99	116.00
26	LA	2887	A	O4'-C1'-N9	5.34	116.51	108.50
33	LZ	48	LEU	N-CA-CB	5.34	119.65	110.68
1	SS	24	SER	CA-C-O	5.34	125.44	119.41
2	SA	95	C	O5'-C5'-C4'	-5.34	103.50	111.50
2	SA	201	G	C1'-C2'-O2'	5.34	116.41	108.40
2	SA	1351	U	C5'-C4'-C3'	5.34	124.00	116.00
10	SJ	37	ARG	O-C-N	-5.34	115.85	122.73
14	SN	26	LEU	N-CA-CB	-5.34	102.01	110.28
15	SO	12	SER	O-C-N	-5.34	116.46	122.12
17	SQ	44	HIS	N-CA-C	5.34	117.41	109.25
24	S3	113	CYS	CA-C-N	5.34	127.69	120.38
24	S3	113	CYS	C-N-CA	5.34	127.69	120.38
26	LA	731	C	O3'-P-O5'	-5.34	96.00	104.00
26	LA	821	A	O5'-C5'-C4'	5.34	119.50	111.50
26	LA	1165	A	C3'-C2'-O2'	5.34	118.70	110.70
26	LA	2377	A	C1'-O4'-C4'	-5.34	104.56	109.90
32	LY	69	GLU	CA-C-O	5.34	128.11	121.81
48	LN	105	ILE	CB-CA-C	-5.34	102.60	110.82
53	LP	70	THR	N-CA-CB	5.34	119.08	110.65
57	LS	105	PHE	O-C-N	-5.34	115.98	122.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	606	G	O4'-C4'-C3'	5.33	109.33	104.00
18	SB	133	ALA	O-C-N	-5.33	115.18	122.33
26	LA	84	A	O3'-P-O5'	5.33	112.00	104.00
26	LA	456	C	C2'-C3'-O3'	5.33	117.50	109.50
26	LA	1625	C	C5'-C4'-C3'	-5.33	108.00	116.00
1	SS	11	ASP	O-C-N	-5.33	115.50	122.59
2	SA	173	U	O4'-C1'-N1	5.33	116.20	108.20
2	SA	231	U	C4'-C3'-C2'	-5.33	97.27	102.60
2	SA	913	A	O4'-C1'-C2'	-5.33	100.47	105.80
19	SC	121	SER	CB-CA-C	-5.33	101.94	110.79
24	S3	10	ARG	N-CA-CB	5.33	118.94	110.84
26	LA	471	A	C2'-C3'-O3'	5.33	121.70	113.70
26	LA	886	A	P-O5'-C5'	5.33	128.90	120.90
26	LA	931	U	O4'-C4'-C3'	-5.33	100.77	106.10
26	LA	1275	A	P-O5'-C5'	5.33	128.90	120.90
26	LA	1451	C	O4'-C4'-C3'	5.33	111.43	106.10
26	LA	1922	G	C1'-O4'-C4'	-5.33	104.57	109.90
26	LA	2150	C	O4'-C1'-N1	5.33	116.50	108.50
26	LA	2160	C	C5'-C4'-C3'	5.33	124.00	116.00
37	LC	15	VAL	N-CA-C	-5.33	100.96	108.27
53	LP	58	ASP	N-CA-CB	5.33	119.50	110.49
2	SA	173	U	C5'-C4'-C3'	-5.33	107.20	115.20
2	SA	571	U	C3'-C2'-C1'	5.33	106.63	101.30
2	SA	687	A	C4'-C3'-O3'	5.33	117.40	109.40
2	SA	966	G	O4'-C4'-C3'	5.33	109.33	104.00
2	SA	1382	C	C5'-C4'-C3'	-5.33	108.00	116.00
8	SH	16	GLY	O-C-N	5.33	129.63	122.70
9	SI	42	THR	N-CA-C	5.33	118.88	112.38
13	SM	16	ILE	N-CA-C	-5.33	105.09	112.50
13	SM	107	THR	CA-CB-CG2	-5.33	101.44	110.50
14	SN	43	ALA	CA-C-O	5.33	124.35	118.65
18	SB	75	ALA	N-CA-C	5.33	120.06	113.50
26	LA	996	A	C3'-C2'-C1'	5.33	106.63	101.30
26	LA	1446	C	O4'-C1'-N1	5.33	116.50	108.50
26	LA	1913	A	C3'-C2'-C1'	-5.33	96.17	101.50
26	LA	2022	U	C3'-C2'-O2'	-5.33	106.60	114.60
26	LA	2491	U	O4'-C4'-C3'	-5.33	100.77	106.10
26	LA	2623	G	O5'-C5'-C4'	5.33	119.50	111.50
26	LA	2670	A	C3'-C2'-C1'	5.33	106.63	101.30
26	LA	2716	C	O4'-C1'-C2'	-5.33	102.27	107.60
26	LA	2830	C	C5'-C4'-O4'	5.33	117.80	109.80
27	LD	57	HIS	CE1-NE2-CD2	-5.33	103.67	109.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	L5	32	ALA	CB-CA-C	-5.33	102.51	110.88
52	LO	97	GLN	O-C-N	-5.33	118.30	121.71
2	SA	762	U	P-O3'-C3'	5.33	128.19	120.20
2	SA	963	G	O4'-C1'-N9	5.33	116.50	108.50
24	S3	35	VAL	CA-C-N	5.33	132.03	122.38
24	S3	35	VAL	C-N-CA	5.33	132.03	122.38
24	S3	464	HIS	CG-CD2-NE2	5.33	112.53	107.20
25	LB	93	C	C4'-C3'-C2'	-5.33	97.27	102.60
26	LA	339	U	O4'-C4'-C3'	5.33	109.33	104.00
26	LA	1383	A	P-O5'-C5'	5.33	128.90	120.90
52	LO	91	TYR	CB-CA-C	5.33	120.53	110.62
2	SA	1256	A	C5'-C4'-O4'	5.33	117.09	109.10
2	SA	1475	G	C5'-C4'-C3'	5.33	123.99	116.00
4	S2	22	A	O4'-C4'-C3'	-5.33	100.77	106.10
11	SK	16	SER	N-CA-CB	5.33	119.50	110.49
22	SF	72	ASP	N-CA-C	5.33	117.17	111.36
26	LA	316	C	P-O5'-C5'	5.33	128.89	120.90
26	LA	1219	U	C5'-C4'-O4'	5.33	117.79	109.80
26	LA	1826	G	C4'-C3'-C2'	-5.33	97.27	102.60
45	LG	37	MET	CA-C-N	5.33	127.03	122.29
45	LG	37	MET	C-N-CA	5.33	127.03	122.29
55	LQ	67	ASN	CA-CB-CG	-5.33	107.27	112.60
26	LA	193	U	C5'-C4'-C3'	-5.33	108.01	116.00
26	LA	1444	G	P-O3'-C3'	5.33	128.19	120.20
30	LW	51	LEU	N-CA-CB	5.33	119.49	110.49
2	SA	1492	A	O4'-C1'-C2'	-5.33	102.28	107.60
17	SQ	38	LYS	N-CA-C	5.33	118.49	109.76
21	SE	53	ARG	NE-CZ-NH2	-5.33	114.41	119.20
24	S3	61	THR	O-C-N	-5.33	116.39	122.89
26	LA	429	A	P-O3'-C3'	-5.33	112.21	120.20
26	LA	588	U	C1'-O4'-C4'	-5.33	104.57	109.90
26	LA	932	U	P-O5'-C5'	-5.33	112.91	120.90
26	LA	2568	U	P-O3'-C3'	-5.33	112.21	120.20
26	LA	2904	U	C1'-C2'-O2'	-5.33	100.41	108.40
27	LD	166	ARG	NE-CZ-NH1	5.33	126.83	121.50
2	SA	385	C	C4'-C3'-C2'	-5.32	97.28	102.60
2	SA	850	U	C4'-C3'-O3'	-5.32	105.01	113.00
2	SA	1494	G	C5'-C4'-C3'	-5.32	108.02	116.00
5	ST	27	MET	CA-C-N	5.32	128.81	120.82
5	ST	27	MET	C-N-CA	5.32	128.81	120.82
9	SI	124	PRO	CA-C-O	-5.32	115.34	121.36
18	SB	10	LYS	CA-CB-CG	5.32	124.75	114.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	296	GLY	CA-C-N	5.32	129.97	123.10
24	S3	296	GLY	C-N-CA	5.32	129.97	123.10
25	LB	46	A	P-O5'-C5'	5.32	128.88	120.90
26	LA	202	U	C3'-C2'-C1'	5.32	106.62	101.30
26	LA	372	G	C1'-O4'-C4'	-5.32	104.38	109.70
26	LA	547	A	C2'-C3'-O3'	5.32	121.69	113.70
26	LA	579	G	C4'-C3'-C2'	-5.32	97.28	102.60
26	LA	813	U	C4'-C3'-C2'	-5.32	97.28	102.60
26	LA	2299	U	C3'-C2'-O2'	-5.32	102.72	110.70
24	S3	414	VAL	N-CA-C	5.32	117.74	111.09
26	LA	1719	G	C2'-C3'-O3'	5.32	121.68	113.70
26	LA	1829	A	C4'-C3'-C2'	-5.32	97.28	102.60
31	LX	14	LYS	N-CA-CB	5.32	117.94	110.12
1	SS	82	HIS	CG-CD2-NE2	5.32	112.52	107.20
2	SA	427	U	C3'-C2'-C1'	5.32	106.62	101.30
12	SL	49	ARG	NE-CZ-NH2	5.32	123.99	119.20
25	LB	13	G	C4'-C3'-C2'	-5.32	97.28	102.60
25	LB	87	U	O3'-P-O5'	-5.32	96.02	104.00
26	LA	48	G	C4'-C3'-C2'	-5.32	97.28	102.60
26	LA	189	G	N9-C1'-C2'	-5.32	104.02	112.00
26	LA	628	G	P-O3'-C3'	-5.32	112.22	120.20
26	LA	701	G	C4'-C3'-C2'	-5.32	97.28	102.60
26	LA	1097	U	C1'-C2'-O2'	5.32	116.38	108.40
26	LA	1441	G	C5'-C4'-C3'	-5.32	108.02	116.00
26	LA	2062	A	C1'-C2'-O2'	-5.32	103.82	111.80
32	LY	53	GLY	CA-C-N	5.32	127.72	120.54
32	LY	53	GLY	C-N-CA	5.32	127.72	120.54
26	LA	575	A	N9-C1'-C2'	5.32	119.98	112.00
31	LX	45	ASP	N-CA-C	-5.32	105.48	111.28
34	L0	15	ASN	O-C-N	5.32	128.21	122.15
44	LF	63	LYS	N-CA-CB	5.32	119.57	111.70
54	LM	112	PHE	N-CA-CB	5.32	118.24	110.47
2	SA	804	U	C1'-C2'-O2'	5.32	116.38	108.40
2	SA	835	U	C5'-C4'-C3'	-5.32	108.02	116.00
2	SA	970	C	P-O5'-C5'	-5.32	112.92	120.90
12	SL	118	VAL	O-C-N	-5.32	117.87	123.03
14	SN	8	ARG	CG-CD-NE	-5.32	100.30	112.00
18	SB	14	HIS	ND1-CE1-NE2	5.32	113.72	108.40
18	SB	123	GLY	O-C-N	-5.32	115.79	122.70
18	SB	236	PHE	O-C-N	-5.32	116.09	122.15
23	SR	63	TYR	N-CA-C	5.32	118.87	112.38
24	S3	230	GLU	CB-CA-C	-5.32	101.81	110.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1685	C	O3'-P-O5'	5.32	111.97	104.00
26	LA	2207	C	O4'-C1'-N1	5.32	116.48	108.50
39	L3	23	ALA	CA-C-O	-5.32	115.91	121.55
48	LN	66	PHE	O-C-N	-5.32	116.70	123.24
2	SA	311	C	C5'-C4'-O4'	5.32	117.77	109.80
2	SA	329	A	P-O5'-C5'	-5.32	112.92	120.90
26	LA	561	G	C3'-C2'-C1'	-5.32	95.98	101.30
26	LA	1625	C	P-O5'-C5'	-5.32	112.93	120.90
26	LA	1678	A	O3'-P-O5'	5.32	111.97	104.00
26	LA	1992	G	C5'-C4'-O4'	-5.32	101.13	109.10
42	L6	39	ARG	CA-CB-CG	-5.32	103.47	114.10
45	LG	129	MET	O-C-N	-5.32	116.33	122.87
56	LR	12	MET	N-CA-C	5.32	117.58	110.35
56	LR	28	LYS	CA-C-O	5.32	126.22	120.43
57	LS	90	ASP	CA-C-N	5.32	131.69	121.54
57	LS	90	ASP	C-N-CA	5.32	131.69	121.54
2	SA	329	A	C3'-C2'-O2'	-5.31	106.63	114.60
14	SN	10	VAL	CA-CB-CG2	-5.31	101.37	110.40
18	SB	102	ASN	CA-CB-CG	5.31	117.91	112.60
24	S3	304	THR	N-CA-CB	5.31	120.26	110.27
26	LA	523	C	C4'-C3'-O3'	-5.31	105.03	113.00
26	LA	1368	G	C1'-O4'-C4'	-5.31	104.59	109.90
26	LA	2050	C	P-O3'-C3'	-5.31	112.23	120.20
26	LA	2740	A	N9-C1'-C2'	5.31	119.97	112.00
31	LX	7	GLU	CB-CA-C	5.31	119.80	109.33
35	L1	26	LEU	N-CA-CB	-5.31	103.23	110.56
57	LS	7	VAL	CA-C-N	-5.31	112.05	120.55
57	LS	7	VAL	C-N-CA	-5.31	112.05	120.55
2	SA	815	A	O4'-C1'-N9	5.31	116.17	108.20
2	SA	965	U	O4'-C1'-C2'	5.31	112.91	107.60
2	SA	1133	G	C4'-C3'-C2'	-5.31	97.29	102.60
10	SJ	55	PRO	N-CA-C	-5.31	107.10	114.27
26	LA	64	A	P-O3'-C3'	-5.31	112.23	120.20
26	LA	73	A	C4'-C3'-C2'	-5.31	97.29	102.60
26	LA	491	G	C5'-C4'-C3'	5.31	123.97	116.00
26	LA	1639	C	C3'-C2'-C1'	5.31	106.61	101.30
26	LA	1837	C	P-O5'-C5'	5.31	128.87	120.90
26	LA	2095	A	O4'-C1'-N9	5.31	116.47	108.50
26	LA	2436	G	P-O5'-C5'	5.31	128.87	120.90
26	LA	2741	A	C4'-C3'-C2'	-5.31	97.29	102.60
39	L3	39	ARG	N-CA-CB	-5.31	101.81	109.83
2	SA	1424	U	C5'-C4'-O4'	-5.31	101.83	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	960	A	C5'-C4'-C3'	-5.31	108.03	116.00
26	LA	1387	A	C1'-C2'-O2'	5.31	116.37	108.40
26	LA	2030	U	C2'-C3'-O3'	5.31	117.47	109.50
26	LA	2403	C	O4'-C1'-N1	5.31	116.47	108.50
46	LH	102	ILE	N-CA-C	5.31	115.50	107.80
2	SA	219	U	C2'-C3'-O3'	5.31	121.66	113.70
2	SA	586	C	O3'-P-O5'	5.31	111.97	104.00
16	SP	14	ARG	CB-CA-C	-5.31	104.26	111.21
24	S3	206	ILE	CA-C-N	5.31	126.48	119.84
24	S3	206	ILE	C-N-CA	5.31	126.48	119.84
24	S3	227	GLU	N-CA-C	5.31	118.86	112.38
26	LA	691	C	C4'-C3'-O3'	-5.31	105.03	113.00
26	LA	1491	G	C3'-C2'-C1'	5.31	106.61	101.30
26	LA	1910	G	O4'-C4'-C3'	-5.31	98.69	104.00
26	LA	1926	U	O4'-C1'-C2'	-5.31	102.29	107.60
26	LA	2582	G	O3'-P-O5'	5.31	111.96	104.00
29	LV	80	TRP	N-CA-CB	5.31	120.53	111.66
37	LC	20	GLN	CB-CG-CD	5.31	121.62	112.60
58	LT	14	VAL	CA-C-O	-5.31	116.50	120.96
2	SA	1128	C	C5'-C4'-C3'	-5.31	108.04	116.00
4	S2	14	A	P-O3'-C3'	5.31	128.16	120.20
12	SL	16	ALA	N-CA-CB	-5.31	101.22	109.87
21	SE	69	ASN	CA-CB-CG	-5.31	107.29	112.60
21	SE	71	ILE	CA-C-O	5.31	126.91	121.23
25	LB	25	U	C2'-C3'-O3'	5.31	117.46	109.50
25	LB	45	A	C4'-C3'-C2'	-5.31	97.29	102.60
26	LA	231	A	C5'-C4'-O4'	5.31	117.76	109.80
26	LA	1235	G	C4'-C3'-C2'	-5.31	97.29	102.60
26	LA	2010	G	C1'-O4'-C4'	-5.31	104.59	109.90
31	LX	52	ALA	O-C-N	-5.31	115.19	122.46
44	LF	78	TRP	N-CA-C	5.31	117.18	110.33
48	LN	107	PHE	CA-C-N	-5.31	115.52	123.00
48	LN	107	PHE	C-N-CA	-5.31	115.52	123.00
2	SA	67	C	P-O5'-C5'	-5.31	112.94	120.90
2	SA	215	C	O3'-P-O5'	5.31	111.96	104.00
2	SA	1465	A	O4'-C4'-C3'	-5.31	98.69	104.00
26	LA	434	U	C1'-O4'-C4'	-5.31	104.39	109.70
26	LA	2221	G	P-O3'-C3'	-5.31	112.24	120.20
26	LA	2474	U	C4'-C3'-C2'	-5.31	97.29	102.60
30	LW	53	GLN	CG-CD-NE2	5.31	124.36	116.40
42	L6	30	HIS	CA-CB-CG	-5.31	108.49	113.80
42	L6	31	ILE	CB-CA-C	5.31	119.99	111.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	LH	162	ARG	N-CA-CB	-5.31	102.27	110.65
47	LJ	137	ARG	CG-CD-NE	-5.31	100.33	112.00
2	SA	252	U	O5'-C5'-C4'	5.30	119.45	111.50
2	SA	533	A	N9-C1'-C2'	-5.30	106.05	114.00
2	SA	818	G	C2'-C3'-O3'	5.30	121.66	113.70
8	SH	79	ARG	O-C-N	-5.30	115.22	121.32
25	LB	50	A	P-O5'-C5'	-5.30	112.94	120.90
26	LA	18	U	O3'-P-O5'	-5.30	96.04	104.00
26	LA	348	A	C1'-C2'-O2'	5.30	116.36	108.40
26	LA	354	A	C5'-C4'-C3'	-5.30	108.05	116.00
26	LA	1144	A	C5'-C4'-O4'	-5.30	101.84	109.80
26	LA	1192	G	O4'-C1'-C2'	-5.30	102.30	107.60
26	LA	1659	G	C5'-C4'-O4'	5.30	117.76	109.80
26	LA	2318	G	O3'-P-O5'	-5.30	96.04	104.00
26	LA	2711	A	C2'-C3'-O3'	5.30	121.66	113.70
38	LE	103	ASP	CA-C-N	5.30	127.81	120.49
38	LE	103	ASP	C-N-CA	5.30	127.81	120.49
2	SA	828	U	C4'-C3'-C2'	-5.30	97.30	102.60
26	LA	106	C	C4'-C3'-C2'	5.30	107.90	102.60
26	LA	208	C	O4'-C1'-C2'	-5.30	102.30	107.60
26	LA	949	G	C4'-C3'-C2'	-5.30	97.30	102.60
26	LA	1979	U	C4'-C3'-O3'	-5.30	105.05	113.00
26	LA	2685	G	C4'-C3'-O3'	-5.30	105.05	113.00
2	SA	189	A	O5'-C5'-C4'	5.30	119.45	111.50
2	SA	277	C	C1'-C2'-O2'	5.30	116.35	108.40
2	SA	666	G	O4'-C1'-C2'	-5.30	102.30	107.60
2	SA	1234	C	O5'-C5'-C4'	5.30	119.45	111.50
2	SA	1448	C	O5'-C5'-C4'	5.30	119.45	111.50
2	SA	1484	C	P-O3'-C3'	5.30	128.15	120.20
9	SI	94	ARG	CD-NE-CZ	5.30	131.82	124.40
26	LA	14	A	O4'-C1'-N9	5.30	116.45	108.50
26	LA	606	U	P-O3'-C3'	5.30	128.15	120.20
26	LA	1439	A	O3'-P-O5'	5.30	111.95	104.00
26	LA	1587	G	O4'-C1'-N9	5.30	116.45	108.50
26	LA	1906	G	O4'-C1'-N9	5.30	116.45	108.50
26	LA	1907	G	P-O5'-C5'	5.30	128.85	120.90
29	LV	3	ARG	NH1-CZ-NH2	-5.30	112.41	119.30
29	LV	11	LEU	O-C-N	-5.30	116.35	122.87
45	LG	169	LEU	O-C-N	-5.30	115.54	122.59
50	LL	16	TYR	CA-C-N	-5.30	116.23	123.12
50	LL	16	TYR	C-N-CA	-5.30	116.23	123.12
1	SS	40	PHE	CB-CA-C	5.30	120.61	110.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	64	G	P-O5'-C5'	-5.30	112.95	120.90
13	SM	57	ASP	CA-CB-CG	-5.30	107.30	112.60
26	LA	19	A	O3'-P-O5'	5.30	111.95	104.00
26	LA	445	C	C4'-C3'-O3'	-5.30	105.05	113.00
26	LA	1194	A	C4'-C3'-C2'	-5.30	97.30	102.60
26	LA	2073	C	C4'-C3'-C2'	-5.30	97.30	102.60
26	LA	2248	C	C3'-C2'-O2'	5.30	118.65	110.70
26	LA	2383	G	P-O5'-C5'	5.30	128.85	120.90
26	LA	2452	C	C4'-C3'-C2'	-5.30	97.30	102.60
26	LA	2512	C	N1-C1'-C2'	5.30	119.95	112.00
26	LA	2587	A	C4'-C3'-O3'	-5.30	105.05	113.00
26	LA	2679	A	P-O3'-C3'	-5.30	112.25	120.20
46	LH	54	ARG	CD-NE-CZ	-5.30	116.98	124.40
50	LL	49	ASP	CA-C-O	-5.30	115.25	120.82
54	LM	28	SER	CA-C-N	5.30	129.71	122.34
54	LM	28	SER	C-N-CA	5.30	129.71	122.34
54	LM	63	VAL	O-C-N	-5.30	115.94	122.57
2	SA	51	A	O4'-C1'-N9	5.30	116.15	108.20
4	S2	64	G	C2'-C3'-O3'	5.30	121.65	113.70
4	S2	67	C	O3'-P-O5'	-5.30	96.05	104.00
18	SB	239	ALA	CA-C-N	5.30	131.24	121.70
18	SB	239	ALA	C-N-CA	5.30	131.24	121.70
26	LA	734	A	O5'-C5'-C4'	5.30	119.45	111.50
26	LA	1286	A	P-O3'-C3'	-5.30	112.25	120.20
26	LA	2152	G	O3'-P-O5'	5.30	111.95	104.00
51	LI	53	GLU	O-C-N	-5.30	116.61	122.07
54	LM	121	GLU	CB-CG-CD	5.30	121.61	112.60
56	LR	6	GLN	N-CA-CB	5.30	118.00	110.16
2	SA	373	A	C4'-C3'-C2'	-5.30	97.30	102.60
2	SA	383	A	P-O3'-C3'	5.30	128.15	120.20
2	SA	1533	C	C4'-C3'-C2'	5.30	107.90	102.60
8	SH	91	LEU	O-C-N	-5.30	115.23	121.32
17	SQ	35	LYS	N-CA-C	5.30	122.08	110.80
24	S3	605	LYS	CG-CD-CE	5.30	123.48	111.30
26	LA	1521	G	C3'-C2'-O2'	-5.30	102.76	110.70
26	LA	1969	A	P-O3'-C3'	5.30	128.14	120.20
26	LA	2085	U	C1'-O4'-C4'	5.30	115.20	109.90
26	LA	2154	A	P-O5'-C5'	-5.30	112.95	120.90
26	LA	2171	A	O5'-C5'-C4'	5.30	119.64	111.70
50	LL	88	THR	CA-C-N	5.30	127.64	120.38
50	LL	88	THR	C-N-CA	5.30	127.64	120.38
50	LL	100	VAL	N-CA-C	5.30	115.51	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	LR	77	SER	CA-C-N	5.30	126.46	119.84
56	LR	77	SER	C-N-CA	5.30	126.46	119.84
7	SG	2	ARG	CA-C-N	5.29	128.11	120.38
7	SG	2	ARG	C-N-CA	5.29	128.11	120.38
24	S3	168	LEU	O-C-N	-5.29	116.51	122.12
2	SA	401	C	C2'-C3'-O3'	5.29	121.64	113.70
2	SA	647	C	C4'-C3'-O3'	-5.29	105.06	113.00
6	SU	16	ARG	CD-NE-CZ	5.29	131.81	124.40
18	SB	159	ALA	N-CA-C	-5.29	101.07	108.96
21	SE	82	HIS	N-CA-CB	5.29	119.79	110.37
24	S3	527	GLY	N-CA-C	-5.29	107.94	115.30
26	LA	185	G	O3'-P-O5'	-5.29	96.06	104.00
26	LA	1278	C	C4'-C3'-O3'	-5.29	105.06	113.00
26	LA	2134	A	C4'-C3'-C2'	-5.29	97.31	102.60
26	LA	2362	C	C4'-C3'-C2'	-5.29	97.31	102.60
26	LA	2491	U	O3'-P-O5'	-5.29	96.06	104.00
30	LW	12	VAL	N-CA-C	-5.29	100.96	108.58
44	LF	194	LYS	O-C-N	-5.29	116.62	122.07
45	LG	160	LYS	CB-CA-C	-5.29	100.78	109.99
48	LN	42	SER	N-CA-C	-5.29	102.21	110.10
51	LI	28	ASN	N-CA-CB	5.29	118.49	110.28
2	SA	541	G	C5'-C4'-C3'	-5.29	108.06	116.00
2	SA	1430	A	C3'-C2'-O2'	5.29	118.64	110.70
24	S3	297	ILE	N-CA-CB	5.29	121.00	111.21
26	LA	826	U	O3'-P-O5'	-5.29	96.06	104.00
26	LA	1834	U	P-O3'-C3'	5.29	128.14	120.20
49	LK	134	SER	CA-C-O	5.29	126.16	120.55
2	SA	1178	G	C4'-C3'-C2'	-5.29	97.31	102.60
2	SA	1351	U	C1'-C2'-O2'	-5.29	100.47	108.40
26	LA	1781	U	O4'-C4'-C3'	-5.29	100.81	106.10
2	SA	170	U	P-O3'-C3'	-5.29	112.27	120.20
2	SA	194	C	C3'-C2'-O2'	5.29	118.63	110.70
2	SA	787	A	C4'-C3'-C2'	-5.29	97.31	102.60
7	SG	30	MET	N-CA-C	5.29	118.11	110.28
13	SM	86	ARG	N-CA-C	5.29	117.46	111.11
18	SB	49	PHE	O-C-N	-5.29	116.12	122.15
20	SD	84	ASN	CA-C-O	-5.29	114.73	120.81
24	S3	503	LYS	N-CA-CB	5.29	119.69	110.81
24	S3	638	ARG	N-CA-CB	5.29	119.43	110.49
26	LA	112	U	C4'-C3'-C2'	-5.29	97.31	102.60
26	LA	490	C	P-O3'-C3'	5.29	128.13	120.20
26	LA	689	A	C5'-C4'-C3'	5.29	123.93	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1133	A	C3'-C2'-O2'	-5.29	106.67	114.60
26	LA	1136	G	C1'-O4'-C4'	-5.29	104.61	109.90
55	LQ	36	TYR	CA-C-O	-5.29	115.13	121.11
55	LQ	37	ALA	O-C-N	-5.29	117.22	123.41
2	SA	765	G	N9-C1'-C2'	-5.29	104.07	112.00
2	SA	804	U	C4'-C3'-C2'	-5.29	97.31	102.60
2	SA	969	A	N9-C1'-C2'	-5.29	106.07	114.00
2	SA	1012	A	N9-C1'-C2'	-5.29	104.07	112.00
2	SA	1086	U	C1'-O4'-C4'	-5.29	104.61	109.90
2	SA	1539	C	O5'-C5'-C4'	5.29	119.43	111.50
25	LB	98	G	C2'-C3'-O3'	-5.29	105.77	113.70
26	LA	1857	G	P-O5'-C5'	-5.29	112.97	120.90
26	LA	2068	U	C4'-C3'-O3'	5.29	120.93	113.00
41	L5	34	ARG	CA-C-N	5.29	127.31	120.44
41	L5	34	ARG	C-N-CA	5.29	127.31	120.44
12	SL	45	ASN	OD1-CG-ND2	5.29	127.89	122.60
15	SO	55	LEU	O-C-N	-5.29	116.63	122.07
22	SF	46	GLN	CA-C-N	5.29	128.98	121.42
22	SF	46	GLN	C-N-CA	5.29	128.98	121.42
24	S3	130	ASN	CB-CG-ND2	5.29	124.33	116.40
25	LB	44	G	O3'-P-O5'	-5.29	96.07	104.00
26	LA	407	G	O4'-C1'-C2'	-5.29	102.31	107.60
26	LA	584	C	C3'-C2'-C1'	5.29	106.58	101.30
26	LA	1045	C	O3'-P-O5'	5.29	111.93	104.00
26	LA	2196	C	O3'-P-O5'	-5.29	96.07	104.00
26	LA	2412	A	C3'-C2'-O2'	-5.29	102.77	110.70
27	LD	251	THR	N-CA-CB	5.29	120.12	111.08
29	LV	93	LEU	CA-C-O	5.29	127.15	121.55
38	LE	206	ALA	N-CA-C	5.29	117.54	110.35
43	L7	26	ILE	CB-CG1-CD1	-5.29	102.70	113.80
48	LN	69	ARG	NE-CZ-NH2	-5.29	114.44	119.20
2	SA	281	G	N9-C1'-C2'	-5.28	106.08	114.00
2	SA	1033	G	O5'-C5'-C4'	-5.28	103.57	111.50
4	S2	32	G	O5'-C5'-C4'	-5.28	103.58	111.50
16	SP	71	VAL	N-CA-CB	5.28	117.73	110.54
26	LA	1465	G	O5'-C5'-C4'	5.28	119.42	111.50
26	LA	2792	A	O3'-P-O5'	5.28	111.93	104.00
46	LH	118	ALA	CA-C-N	5.28	131.77	121.41
46	LH	118	ALA	C-N-CA	5.28	131.77	121.41
2	SA	253	A	C1'-O4'-C4'	-5.28	104.62	109.90
26	LA	700	G	C3'-C2'-O2'	5.28	118.62	110.70
26	LA	1082	U	P-O3'-C3'	5.28	128.12	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1538	G	C4'-C3'-O3'	-5.28	105.08	113.00
26	LA	1801	A	C5'-C4'-C3'	-5.28	107.28	115.20
26	LA	2180	U	O4'-C1'-N1	5.28	116.42	108.50
57	LS	36	GLN	CB-CA-C	-5.28	102.36	110.81
2	SA	697	U	C4'-C3'-C2'	5.28	107.88	102.60
7	SG	26	VAL	CB-CA-C	-5.28	103.97	112.16
15	SO	50	HIS	ND1-CE1-NE2	5.28	113.68	108.40
24	S3	39	ILE	N-CA-C	5.28	117.65	111.05
24	S3	613	GLU	CB-CA-C	5.28	117.16	109.08
26	LA	93	G	O5'-C5'-C4'	5.28	119.42	111.50
26	LA	801	G	C1'-O4'-C4'	-5.28	104.42	109.70
26	LA	2742	G	C3'-C2'-O2'	5.28	118.62	110.70
30	LW	3	LYS	O-C-N	-5.28	115.57	122.59
38	LE	58	ASN	N-CA-CB	5.28	118.13	110.47
55	LQ	109	ALA	N-CA-C	5.28	117.78	111.71
2	SA	685	G	C4'-C3'-O3'	-5.28	105.08	113.00
7	SG	34	LYS	CG-CD-CE	5.28	123.44	111.30
26	LA	1110	G	P-O5'-C5'	5.28	128.82	120.90
26	LA	1452	G	C5'-C4'-C3'	-5.28	107.28	115.20
2	SA	663	A	P-O3'-C3'	-5.28	112.28	120.20
4	S2	61	U	C3'-C2'-O2'	-5.28	106.68	114.60
19	SC	172	VAL	O-C-N	-5.28	115.08	121.10
26	LA	349	U	C1'-O4'-C4'	-5.28	104.62	109.90
26	LA	403	U	O5'-C5'-C4'	5.28	119.42	111.50
26	LA	1926	U	O4'-C1'-N1	5.28	116.42	108.50
26	LA	2901	C	C3'-C2'-O2'	5.28	118.62	110.70
30	LW	35	VAL	CB-CA-C	5.28	120.21	112.03
38	LE	164	GLN	N-CA-CB	-5.28	103.81	112.25
2	SA	464	U	C2'-C3'-O3'	5.28	117.41	109.50
2	SA	1533	C	C3'-C2'-O2'	-5.28	106.69	114.60
11	SK	118	ASN	O-C-N	-5.28	116.63	122.91
26	LA	681	G	C5'-C4'-C3'	5.28	123.91	116.00
26	LA	838	C	P-O5'-C5'	5.28	128.81	120.90
26	LA	1189	A	C3'-C2'-O2'	-5.28	102.79	110.70
26	LA	1750	G	P-O5'-C5'	-5.28	112.99	120.90
26	LA	1970	A	N9-C1'-C2'	5.28	121.91	114.00
26	LA	2363	G	O3'-P-O5'	-5.28	96.09	104.00
26	LA	2554	U	C5'-C4'-O4'	5.28	117.71	109.80
38	LE	85	ALA	N-CA-C	5.28	118.99	112.24
44	LF	148	ILE	CA-C-N	-5.28	116.28	122.93
44	LF	148	ILE	C-N-CA	-5.28	116.28	122.93
47	LJ	163	ALA	CB-CA-C	-5.28	102.47	111.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	247	G	C4'-C3'-C2'	-5.27	97.33	102.60
2	SA	1104	G	C5'-C4'-C3'	5.27	123.91	116.00
13	SM	110	GLY	O-C-N	-5.27	116.50	121.77
26	LA	56	A	O3'-P-O5'	5.27	111.91	104.00
26	LA	713	G	O4'-C1'-C2'	-5.27	102.33	107.60
26	LA	1277	G	C2'-C3'-O3'	-5.27	105.79	113.70
26	LA	1588	G	O5'-C5'-C4'	-5.27	103.59	111.50
26	LA	2563	U	C4'-C3'-O3'	-5.27	105.09	113.00
58	LT	12	HIS	CE1-NE2-CD2	-5.27	103.73	109.00
2	SA	809	G	O5'-C5'-C4'	-5.27	103.59	111.50
2	SA	875	U	O4'-C1'-C2'	5.27	112.87	107.60
2	SA	1429	A	C2'-C3'-O3'	5.27	121.61	113.70
4	S2	72	C	C4'-C3'-C2'	-5.27	97.33	102.60
15	SO	37	HIS	ND1-CE1-NE2	5.27	113.67	108.40
18	SB	178	LEU	O-C-N	-5.27	114.59	122.39
25	LB	56	G	C5'-C4'-C3'	5.27	123.11	115.20
26	LA	60	G	C2'-C3'-O3'	5.27	117.41	109.50
26	LA	268	C	O4'-C1'-N1	5.27	116.41	108.50
26	LA	815	C	O4'-C4'-C3'	5.27	109.27	104.00
26	LA	1906	G	N9-C1'-C2'	-5.27	104.09	112.00
26	LA	2222	C	P-O3'-C3'	-5.27	112.29	120.20
26	LA	2340	A	C4'-C3'-O3'	-5.27	105.09	113.00
34	L0	2	LYS	CB-CA-C	-5.27	101.17	111.03
37	LC	120	ALA	CB-CA-C	5.27	119.65	110.79
45	LG	111	ARG	CA-C-N	5.27	131.61	121.54
45	LG	111	ARG	C-N-CA	5.27	131.61	121.54
46	LH	126	THR	N-CA-CB	5.27	120.87	111.69
49	LK	11	GLN	O-C-N	-5.27	116.53	123.28
50	LL	41	LYS	O-C-N	-5.27	116.51	122.68
58	LT	13	ARG	NE-CZ-NH1	5.27	126.77	121.50
10	SJ	15	HIS	CA-CB-CG	5.27	119.07	113.80
14	SN	100	TRP	CB-CG-CD2	-5.27	119.42	126.80
24	S3	274	VAL	N-CA-C	5.27	115.48	110.42
26	LA	2203	U	C5'-C4'-O4'	5.27	117.71	109.80
26	LA	2653	U	P-O5'-C5'	5.27	128.81	120.90
2	SA	463	U	C5'-C4'-O4'	5.27	117.70	109.80
2	SA	1020	G	C5'-C4'-O4'	5.27	117.70	109.80
2	SA	1427	C	C4'-C3'-C2'	-5.27	97.33	102.60
7	SG	163	HIS	N-CA-C	5.27	119.98	113.50
21	SE	87	VAL	N-CA-C	5.27	115.71	108.12
24	S3	518	VAL	CA-CB-CG1	5.27	119.36	110.40
26	LA	1490	A	C3'-C2'-C1'	5.27	106.57	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2047	C	C5'-C4'-C3'	-5.27	108.09	116.00
26	LA	2457	U	P-O5'-C5'	-5.27	113.00	120.90
26	LA	2837	A	O4'-C1'-C2'	5.27	112.87	107.60
27	LD	67	LYS	CB-CA-C	5.27	119.15	110.88
27	LD	224	MET	CG-SD-CE	-5.27	89.31	100.90
32	LY	9	THR	CB-CA-C	-5.27	102.66	110.62
37	LC	64	VAL	CA-CB-CG1	5.27	119.36	110.40
2	SA	110	C	N1-C1'-C2'	-5.27	104.10	112.00
2	SA	825	A	O3'-P-O5'	5.27	111.90	104.00
2	SA	1128	C	O4'-C1'-C2'	-5.27	102.33	107.60
2	SA	1534	A	O5'-C5'-C4'	5.27	119.60	111.70
4	S2	45	A	P-O3'-C3'	5.27	128.10	120.20
6	SU	40	PRO	CB-CA-C	5.27	121.06	112.26
21	SE	50	GLY	N-CA-C	5.27	118.97	111.12
21	SE	54	GLU	O-C-N	-5.27	117.25	123.41
22	SF	92	THR	N-CA-C	5.27	117.93	111.82
26	LA	590	A	O4'-C4'-C3'	5.27	109.27	104.00
26	LA	1810	A	C1'-C2'-O2'	5.27	116.30	108.40
26	LA	2238	G	P-O5'-C5'	5.27	128.80	120.90
2	SA	793	U	C1'-O4'-C4'	-5.27	104.43	109.70
2	SA	1118	U	P-O5'-C5'	5.27	128.80	120.90
26	LA	2776	A	C4'-C3'-C2'	-5.27	97.33	102.60
2	SA	433	G	C5'-C4'-C3'	-5.26	108.10	116.00
2	SA	723	U	C2'-C3'-O3'	5.26	121.60	113.70
2	SA	1047	G	O5'-C5'-C4'	5.26	119.40	111.50
2	SA	1355	G	O4'-C4'-C3'	5.26	109.26	104.00
2	SA	1451	U	C5'-C4'-C3'	5.26	123.10	115.20
9	SI	12	LYS	CG-CD-CE	5.26	123.41	111.30
26	LA	280	U	C5'-C4'-O4'	5.26	117.70	109.80
26	LA	708	G	P-O3'-C3'	5.26	128.10	120.20
26	LA	812	C	P-O3'-C3'	-5.26	112.30	120.20
26	LA	1253	A	P-O5'-C5'	5.26	128.80	120.90
26	LA	2246	G	C3'-C2'-C1'	-5.26	96.04	101.30
26	LA	2691	C	O3'-P-O5'	5.26	111.90	104.00
27	LD	45	ASN	CA-C-O	-5.26	114.94	120.63
45	LG	127	TYR	CB-CG-CD1	-5.26	112.90	120.80
47	LJ	85	MET	N-CA-CB	-5.26	102.36	110.20
2	SA	59	A	C4'-C3'-C2'	-5.26	97.34	102.60
2	SA	447	G	O3'-P-O5'	5.26	111.89	104.00
5	ST	68	LYS	N-CA-CB	-5.26	101.59	110.49
26	LA	312	G	P-O5'-C5'	-5.26	113.01	120.90
26	LA	858	G	C4'-C3'-C2'	-5.26	97.34	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2222	C	C4'-C3'-C2'	-5.26	97.34	102.60
26	LA	2295	C	C5'-C4'-C3'	-5.26	108.11	116.00
2	SA	188	C	O4'-C1'-N1	5.26	116.39	108.50
2	SA	583	A	O5'-C5'-C4'	5.26	119.39	111.50
2	SA	1458	G	O3'-P-O5'	-5.26	96.11	104.00
11	SK	110	THR	N-CA-CB	5.26	118.36	109.94
21	SE	76	ASN	O-C-N	-5.26	117.17	123.06
24	S3	492	THR	CA-C-N	5.26	128.22	120.91
24	S3	492	THR	C-N-CA	5.26	128.22	120.91
24	S3	581	SER	CB-CA-C	-5.26	100.83	110.62
26	LA	51	G	P-O5'-C5'	5.26	128.79	120.90
26	LA	173	A	C4'-C3'-O3'	-5.26	105.11	113.00
26	LA	1709	U	O4'-C4'-C3'	5.26	109.26	104.00
27	LD	155	ARG	N-CA-CB	5.26	118.00	111.00
31	LX	21	ARG	NE-CZ-NH1	5.26	126.76	121.50
45	LG	157	THR	CA-CB-OG1	-5.26	101.71	109.60
46	LH	87	GLN	OE1-CD-NE2	-5.26	117.34	122.60
55	LQ	49	VAL	O-C-N	-5.26	118.14	123.19
55	LQ	60	GLU	CA-C-O	-5.26	113.92	119.97
2	SA	769	G	O4'-C1'-N9	5.26	116.39	108.50
2	SA	807	A	C5'-C4'-O4'	5.26	117.69	109.80
2	SA	814	A	C5'-C4'-C3'	5.26	123.89	116.00
2	SA	851	G	O4'-C4'-C3'	5.26	109.26	104.00
2	SA	1020	G	C1'-C2'-O2'	5.26	116.29	108.40
2	SA	1335	U	P-O5'-C5'	5.26	128.79	120.90
5	ST	82	ILE	CA-C-O	5.26	126.74	121.27
18	SB	37	VAL	O-C-N	-5.26	117.20	123.04
25	LB	79	G	C4'-C3'-C2'	-5.26	97.34	102.60
25	LB	108	A	P-O5'-C5'	-5.26	113.01	120.90
26	LA	1317	G	C1'-O4'-C4'	-5.26	104.64	109.90
26	LA	2483	C	C4'-C3'-O3'	-5.26	105.11	113.00
26	LA	2602	A	P-O5'-C5'	5.26	128.79	120.90
26	LA	2675	A	P-O3'-C3'	5.26	128.09	120.20
26	LA	2713	U	C5'-C4'-C3'	-5.26	107.31	115.20
47	LJ	64	GLU	CB-CA-C	5.26	119.21	110.90
2	SA	173	U	C4'-C3'-O3'	5.26	117.29	109.40
2	SA	1291	U	O4'-C1'-C2'	-5.26	102.34	107.60
17	SQ	68	LYS	CG-CD-CE	5.26	123.39	111.30
24	S3	626	ASN	CA-C-N	5.26	128.71	120.82
24	S3	626	ASN	C-N-CA	5.26	128.71	120.82
26	LA	41	C	C5'-C4'-C3'	-5.26	108.11	116.00
26	LA	2008	C	O5'-C5'-C4'	5.26	119.39	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	LF	131	THR	CA-CB-CG2	-5.26	101.56	110.50
54	LM	65	THR	N-CA-C	5.26	116.70	109.29
2	SA	758	C	C5'-C4'-C3'	5.26	123.89	116.00
2	SA	1000	A	C3'-C2'-O2'	5.26	118.58	110.70
19	SC	167	TYR	O-C-N	-5.26	116.97	123.44
24	S3	261	ILE	CA-C-O	5.26	126.26	120.48
24	S3	464	HIS	ND1-CE1-NE2	5.26	113.66	108.40
26	LA	262	A	C3'-C2'-C1'	5.26	106.56	101.30
26	LA	1383	A	C4'-C3'-O3'	5.26	117.28	109.40
26	LA	2409	G	P-O5'-C5'	5.26	128.78	120.90
26	LA	2489	U	O4'-C1'-C2'	5.26	112.86	107.60
26	LA	2524	G	C4'-C3'-C2'	-5.26	97.34	102.60
54	LM	22	ILE	CA-C-O	-5.26	114.21	120.78
56	LR	49	ILE	CA-CB-CG2	-5.26	101.56	110.50
2	SA	738	C	C1'-C2'-O2'	5.25	116.28	108.40
2	SA	1203	C	C4'-C3'-O3'	-5.25	105.12	113.00
2	SA	1345	U	P-O3'-C3'	5.25	128.08	120.20
18	SB	223	GLY	CA-C-N	5.25	127.75	120.29
18	SB	223	GLY	C-N-CA	5.25	127.75	120.29
26	LA	557	C	O3'-P-O5'	5.25	111.88	104.00
26	LA	2401	U	C1'-O4'-C4'	5.25	115.16	109.90
47	LJ	41	ARG	NE-CZ-NH1	5.25	126.75	121.50
2	SA	258	G	C4'-C3'-C2'	-5.25	97.35	102.60
2	SA	575	G	C3'-C2'-C1'	-5.25	96.25	101.50
2	SA	590	U	P-O5'-C5'	5.25	128.78	120.90
2	SA	781	A	O4'-C1'-N9	5.25	116.38	108.50
2	SA	919	A	O4'-C1'-C2'	-5.25	102.35	107.60
2	SA	921	U	C5'-C4'-C3'	-5.25	108.12	116.00
5	ST	42	ASP	N-CA-CB	5.25	117.62	109.48
7	SG	153	TYR	N-CA-CB	-5.25	101.57	110.50
12	SL	24	GLU	CB-CG-CD	-5.25	103.67	112.60
24	S3	9	TYR	CA-C-O	-5.25	115.03	120.70
24	S3	173	GLY	O-C-N	-5.25	117.08	122.60
26	LA	1062	G	C2'-C3'-O3'	5.25	121.58	113.70
26	LA	1141	U	O4'-C1'-C2'	5.25	111.05	105.80
26	LA	1262	A	C4'-C3'-O3'	-5.25	105.12	113.00
26	LA	2095	A	O3'-P-O5'	-5.25	96.12	104.00
42	L6	32	LEU	N-CA-CB	-5.25	102.21	110.46
48	LN	47	ARG	NH1-CZ-NH2	5.25	126.13	119.30
57	LS	39	ILE	CB-CA-C	5.25	118.69	111.97
2	SA	861	G	O4'-C1'-C2'	-5.25	102.35	107.60
8	SH	49	LYS	O-C-N	-5.25	116.32	123.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	SF	37	HIS	CA-CB-CG	-5.25	108.55	113.80
26	LA	1016	G	C3'-C2'-C1'	5.25	106.55	101.30
26	LA	2807	U	C2'-C3'-O3'	5.25	121.58	113.70
26	LA	2891	U	C3'-C2'-C1'	5.25	106.55	101.30
47	LJ	82	ALA	N-CA-CB	5.25	119.18	110.52
49	LK	136	GLY	CA-C-N	5.25	129.39	122.30
49	LK	136	GLY	C-N-CA	5.25	129.39	122.30
26	LA	323	C	P-O3'-C3'	-5.25	112.33	120.20
26	LA	2680	U	P-O5'-C5'	-5.25	113.03	120.90
43	L7	19	ARG	CB-CG-CD	5.25	123.38	111.30
2	SA	435	A	O4'-C1'-N9	5.25	116.37	108.50
2	SA	1074	G	C4'-C3'-C2'	-5.25	97.35	102.60
8	SH	32	LYS	N-CA-CB	-5.25	102.41	110.12
20	SD	193	ASP	N-CA-CB	5.25	117.91	110.46
26	LA	713	G	N9-C1'-C2'	5.25	119.87	112.00
26	LA	1040	A	P-O3'-C3'	-5.25	112.33	120.20
26	LA	1123	C	P-O5'-C5'	5.25	128.77	120.90
26	LA	1412	U	C5'-C4'-C3'	-5.25	108.13	116.00
26	LA	2204	G	O5'-C5'-C4'	-5.25	103.63	111.50
26	LA	2835	A	O4'-C4'-C3'	-5.25	100.85	106.10
32	LY	35	ILE	N-CA-CB	5.25	117.29	110.57
2	SA	634	C	O4'-C1'-N1	5.25	116.37	108.50
26	LA	445	C	O4'-C1'-N1	5.25	116.37	108.50
26	LA	1697	G	O3'-P-O5'	-5.25	96.13	104.00
26	LA	1916	A	O3'-P-O5'	-5.25	96.13	104.00
26	LA	1930	G	C5'-C4'-C3'	5.25	123.87	116.00
26	LA	2094	A	C4'-C3'-C2'	-5.25	97.35	102.60
26	LA	2391	G	O4'-C1'-C2'	-5.25	100.55	105.80
26	LA	2409	G	O4'-C1'-N9	5.25	116.37	108.50
26	LA	2506	U	C1'-O4'-C4'	-5.25	104.65	109.90
26	LA	2748	A	C3'-C2'-C1'	5.25	106.55	101.30
26	LA	2855	C	C4'-C3'-O3'	-5.25	105.13	113.00
29	LV	47	VAL	CB-CA-C	-5.25	102.69	111.29
38	LE	35	THR	CB-CA-C	-5.25	103.72	111.70
56	LR	18	SER	O-C-N	-5.25	116.83	123.12
2	SA	1038	C	C5'-C4'-C3'	5.25	123.87	116.00
24	S3	531	LYS	CB-CG-CD	5.25	123.36	111.30
46	LH	45	ALA	N-CA-C	5.25	119.49	107.48
2	SA	1310	G	C4'-C3'-C2'	-5.24	97.36	102.60
2	SA	1324	A	C1'-C2'-O2'	5.24	116.27	108.40
20	SD	66	VAL	CA-C-N	-5.24	113.60	122.67
20	SD	66	VAL	C-N-CA	-5.24	113.60	122.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	578	HIS	CE1-NE2-CD2	-5.24	103.76	109.00
24	S3	688	GLU	CA-C-O	5.24	127.11	121.55
26	LA	870	U	C2'-C3'-O3'	5.24	121.57	113.70
26	LA	1427	A	C5'-C4'-C3'	-5.24	107.34	115.20
26	LA	1668	A	C2'-C3'-O3'	5.24	117.36	109.50
26	LA	1752	C	P-O3'-C3'	-5.24	112.34	120.20
26	LA	2067	G	O4'-C1'-N9	5.24	116.07	108.20
26	LA	2701	U	C3'-C2'-C1'	5.24	106.54	101.30
27	LD	51	ARG	CD-NE-CZ	5.24	131.74	124.40
38	LE	161	MET	CA-C-O	-5.24	114.88	120.75
49	LK	37	PHE	N-CA-C	-5.24	105.56	111.28
2	SA	945	G	P-O3'-C3'	-5.24	112.34	120.20
2	SA	1419	G	O4'-C1'-N9	5.24	116.36	108.50
2	SA	1457	G	C4'-C3'-O3'	-5.24	105.14	113.00
26	LA	2076	U	C2'-C3'-O3'	5.24	121.56	113.70
28	LU	63	GLY	CA-C-O	5.24	129.69	120.57
2	SA	599	C	C5'-C4'-C3'	-5.24	108.14	116.00
2	SA	647	C	C5'-C4'-C3'	-5.24	108.14	116.00
2	SA	1498	U	C3'-C2'-C1'	5.24	106.74	101.50
10	SJ	17	LEU	N-CA-C	5.24	117.07	111.36
17	SQ	71	SER	CA-C-N	5.24	128.31	120.87
17	SQ	71	SER	C-N-CA	5.24	128.31	120.87
18	SB	109	SER	N-CA-CB	5.24	118.94	110.40
24	S3	255	VAL	CA-CB-CG2	-5.24	101.49	110.40
24	S3	321	PHE	O-C-N	-5.24	115.34	122.36
26	LA	159	G	C1'-O4'-C4'	-5.24	104.66	109.90
26	LA	204	A	C2'-C3'-O3'	5.24	117.36	109.50
26	LA	527	C	C4'-C3'-C2'	-5.24	97.36	102.60
26	LA	1339	G	C2'-C3'-O3'	5.24	121.56	113.70
26	LA	1634	A	C3'-C2'-C1'	-5.24	96.26	101.50
26	LA	1874	C	C4'-C3'-C2'	-5.24	97.36	102.60
26	LA	2612	C	P-O5'-C5'	-5.24	113.04	120.90
35	L1	24	LEU	CA-C-N	5.24	126.69	120.14
35	L1	24	LEU	C-N-CA	5.24	126.69	120.14
57	LS	30	VAL	O-C-N	-5.24	116.97	123.10
2	SA	677	U	P-O3'-C3'	5.24	128.06	120.20
4	S2	37	U	P-O5'-C5'	-5.24	113.04	120.90
4	S2	46	G	C2'-C3'-O3'	5.24	121.56	113.70
9	SI	32	ARG	O-C-N	-5.24	116.13	122.68
16	SP	24	SER	CA-C-O	-5.24	114.56	120.43
26	LA	179	C	O4'-C1'-N1	5.24	116.36	108.50
26	LA	1640	A	O4'-C4'-C3'	-5.24	98.76	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2044	C	C5'-C4'-O4'	-5.24	101.94	109.80
26	LA	2068	U	C5'-C4'-O4'	5.24	117.66	109.80
26	LA	2115	G	C3'-C2'-C1'	-5.24	96.06	101.30
37	LC	1	MET	CG-SD-CE	-5.24	89.38	100.90
45	LG	177	ARG	NE-CZ-NH2	-5.24	114.48	119.20
46	LH	40	VAL	CA-C-N	5.24	130.28	122.74
46	LH	40	VAL	C-N-CA	5.24	130.28	122.74
26	LA	16	C	C3'-C2'-C1'	5.24	106.54	101.30
26	LA	188	G	C5'-C4'-C3'	5.24	123.86	116.00
26	LA	304	U	C4'-C3'-C2'	-5.24	97.36	102.60
26	LA	1457	U	O4'-C1'-N1	5.24	116.36	108.50
2	SA	372	C	O4'-C1'-C2'	5.24	111.04	105.80
2	SA	522	C	C4'-C3'-C2'	-5.24	97.36	102.60
2	SA	535	A	C4'-C3'-C2'	5.24	107.84	102.60
2	SA	578	C	C5'-C4'-O4'	5.24	117.65	109.80
2	SA	656	G	O4'-C1'-C2'	-5.24	102.36	107.60
13	SM	78	ARG	NE-CZ-NH2	5.24	123.91	119.20
26	LA	204	A	O4'-C1'-C2'	5.24	111.04	105.80
26	LA	1177	G	C5'-C4'-C3'	-5.24	108.14	116.00
26	LA	2896	C	P-O5'-C5'	5.24	128.75	120.90
45	LG	96	TRP	CE3-CZ3-CH2	5.24	127.91	121.10
47	LJ	110	ALA	O-C-N	-5.24	116.84	123.17
54	LM	15	GLY	N-CA-C	-5.24	107.31	114.64
2	SA	390	U	O4'-C1'-N1	5.23	116.35	108.50
2	SA	1538	C	O4'-C1'-N1	5.23	116.35	108.50
14	SN	96	LYS	N-CA-C	5.23	117.88	110.50
26	LA	570	G	C5'-C4'-O4'	5.23	116.95	109.10
26	LA	1092	C	O4'-C1'-N1	5.23	116.35	108.50
56	LR	75	THR	CA-CB-OG1	5.23	117.45	109.60
2	SA	69	G	P-O5'-C5'	-5.23	113.05	120.90
5	ST	74	HIS	N-CA-C	5.23	116.67	111.07
6	SU	51	ALA	CB-CA-C	-5.23	101.95	110.85
26	LA	292	U	C2'-C3'-O3'	-5.23	105.85	113.70
26	LA	1025	G	O3'-P-O5'	5.23	111.85	104.00
26	LA	2020	A	O5'-C5'-C4'	5.23	119.35	111.50
26	LA	2549	G	C1'-O4'-C4'	-5.23	104.67	109.90
26	LA	2573	C	C1'-O4'-C4'	-5.23	104.67	109.90
27	LD	108	GLY	N-CA-C	5.23	121.09	112.30
34	L0	36	GLN	N-CA-CB	5.23	120.42	112.47
36	L2	28	VAL	CA-C-O	5.23	126.07	119.48
51	LI	73	ASN	N-CA-C	5.23	118.92	112.54
2	SA	1128	C	P-O5'-C5'	5.23	128.75	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	SB	175	ALA	CA-C-O	5.23	126.31	120.82
24	S3	268	ALA	N-CA-C	-5.23	105.66	111.36
25	LB	28	C	C4'-C3'-O3'	-5.23	105.15	113.00
26	LA	898	C	O3'-P-O5'	-5.23	96.16	104.00
26	LA	1160	G	C3'-C2'-C1'	5.23	106.53	101.30
26	LA	1213	A	P-O5'-C5'	-5.23	113.06	120.90
26	LA	1918	A	P-O5'-C5'	5.23	128.75	120.90
26	LA	2197	U	O3'-P-O5'	-5.23	96.16	104.00
50	LL	136	GLN	OE1-CD-NE2	-5.23	117.37	122.60
58	LT	89	HIS	CA-C-O	-5.23	115.14	120.89
2	SA	826	C	C5'-C4'-C3'	-5.23	108.16	116.00
20	SD	55	ARG	NH1-CZ-NH2	-5.23	112.50	119.30
26	LA	931	U	C2'-C3'-O3'	5.23	117.34	109.50
26	LA	963	U	C1'-O4'-C4'	-5.23	104.67	109.90
38	LE	4	LEU	O-C-N	-5.23	117.10	123.27
24	S3	46	ALA	N-CA-C	5.23	119.14	112.87
24	S3	594	LEU	CA-C-O	5.23	125.96	120.42
26	LA	115	C	C1'-O4'-C4'	-5.23	104.67	109.90
26	LA	433	C	P-O5'-C5'	-5.23	113.06	120.90
26	LA	679	C	C1'-O4'-C4'	-5.23	104.67	109.90
26	LA	1252	G	C4'-C3'-C2'	-5.23	97.37	102.60
26	LA	1292	G	P-O5'-C5'	-5.23	113.06	120.90
26	LA	1552	A	C4'-C3'-C2'	-5.23	97.37	102.60
26	LA	1686	C	C4'-C3'-C2'	-5.23	97.37	102.60
26	LA	2366	A	C5'-C4'-C3'	5.23	123.84	116.00
26	LA	2491	U	C3'-C2'-O2'	-5.23	106.76	114.60
26	LA	2540	C	C4'-C3'-O3'	-5.23	105.16	113.00
26	LA	2585	U	P-O3'-C3'	5.23	128.04	120.20
26	LA	2633	G	O3'-P-O5'	-5.23	96.16	104.00
36	L2	30	HIS	CG-CD2-NE2	5.23	112.43	107.20
26	LA	1416	G	C2'-C3'-O3'	5.23	117.34	109.50
28	LU	9	HIS	CA-CB-CG	5.23	119.03	113.80
29	LV	69	ARG	CA-C-O	-5.23	116.01	121.55
34	L0	1	MET	CG-SD-CE	-5.23	89.40	100.90
2	SA	456	A	P-O5'-C5'	5.22	128.74	120.90
2	SA	904	U	C3'-C2'-C1'	5.22	106.52	101.30
2	SA	912	C	O5'-C5'-C4'	5.22	119.34	111.50
20	SD	80	ARG	NE-CZ-NH2	5.22	123.90	119.20
24	S3	430	MET	N-CA-C	-5.22	105.67	111.36
26	LA	178	G	C3'-C2'-C1'	5.22	106.53	101.30
26	LA	252	G	C5'-C4'-C3'	5.22	123.84	116.00
26	LA	601	C	C2'-C3'-O3'	5.22	121.54	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1765	U	O3'-P-O5'	-5.22	96.16	104.00
26	LA	1963	U	C2'-C3'-O3'	5.22	121.54	113.70
46	LH	110	HIS	N-CA-C	5.22	117.18	109.50
52	LO	13	HIS	CA-C-O	5.22	127.98	120.51
57	LS	74	SER	O-C-N	-5.22	116.44	122.87
2	SA	51	A	C2'-C3'-O3'	5.22	117.33	109.50
2	SA	63	C	O4'-C4'-C3'	5.22	109.22	104.00
2	SA	757	U	O4'-C4'-C3'	5.22	109.22	104.00
2	SA	1044	A	O5'-C5'-C4'	5.22	119.33	111.50
2	SA	1091	U	C2'-C3'-O3'	5.22	121.53	113.70
2	SA	1193	G	O5'-C5'-C4'	-5.22	103.67	111.50
10	SJ	101	SER	N-CA-CB	5.22	119.32	110.49
19	SC	102	ILE	N-CA-CB	5.22	117.26	110.99
24	S3	24	THR	O-C-N	-5.22	116.58	122.12
24	S3	353	LYS	CA-C-N	5.22	131.52	121.54
24	S3	353	LYS	C-N-CA	5.22	131.52	121.54
26	LA	548	G	C5'-C4'-O4'	5.22	116.93	109.10
26	LA	911	A	P-O5'-C5'	-5.22	113.07	120.90
34	L0	41	HIS	CE1-NE2-CD2	-5.22	103.78	109.00
37	LC	215	SER	CA-C-N	5.22	132.25	122.74
37	LC	215	SER	C-N-CA	5.22	132.25	122.74
2	SA	69	G	C5'-C4'-O4'	5.22	117.63	109.80
19	SC	61	LYS	CB-CA-C	5.22	119.42	111.80
24	S3	696	ALA	CA-C-N	5.22	129.49	121.19
24	S3	696	ALA	C-N-CA	5.22	129.49	121.19
26	LA	186	G	C3'-C2'-C1'	5.22	106.52	101.30
26	LA	400	G	C3'-C2'-C1'	5.22	106.52	101.30
26	LA	2681	C	C1'-O4'-C4'	-5.22	104.48	109.70
28	LU	64	ALA	CA-C-N	5.22	131.51	121.54
28	LU	64	ALA	C-N-CA	5.22	131.51	121.54
53	LP	70	THR	CB-CA-C	-5.22	102.33	110.74
2	SA	331	G	O4'-C1'-C2'	5.22	112.82	107.60
2	SA	355	C	O5'-C5'-C4'	-5.22	103.67	111.50
2	SA	371	A	O4'-C1'-N9	5.22	116.33	108.50
2	SA	865	A	P-O5'-C5'	5.22	128.73	120.90
2	SA	977	A	C5'-C4'-O4'	5.22	116.93	109.10
2	SA	1071	C	O4'-C1'-N1	5.22	116.33	108.50
2	SA	1466	C	O4'-C1'-N1	5.22	116.33	108.50
9	SI	42	THR	CA-C-O	5.22	125.81	119.49
11	SK	28	ASN	CA-C-N	-5.22	114.27	122.73
11	SK	28	ASN	C-N-CA	-5.22	114.27	122.73
18	SB	169	HIS	CA-C-O	5.22	126.00	120.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	544	ILE	N-CA-CB	5.22	115.37	109.99
25	LB	83	G	C5'-C4'-C3'	-5.22	108.17	116.00
26	LA	1704	C	C1'-O4'-C4'	-5.22	104.68	109.90
54	LM	101	GLY	O-C-N	-5.22	116.55	121.77
2	SA	271	C	O3'-P-O5'	5.22	111.83	104.00
2	SA	440	C	O3'-P-O5'	5.22	111.83	104.00
2	SA	1377	A	C4'-C3'-C2'	-5.22	97.38	102.60
15	SO	86	LEU	N-CA-C	5.22	117.42	110.53
19	SC	138	GLN	N-CA-C	-5.22	105.49	111.07
26	LA	1566	A	C3'-C2'-O2'	-5.22	106.77	114.60
26	LA	1922	G	P-O5'-C5'	-5.22	113.07	120.90
26	LA	2064	C	N1-C1'-C2'	5.22	119.83	112.00
51	LI	32	PRO	CA-C-O	-5.22	111.01	118.89
2	SA	1130	A	C5'-C4'-C3'	-5.22	108.17	116.00
7	SG	135	LYS	CA-C-O	5.22	126.08	120.55
24	S3	74	MET	N-CA-C	5.22	117.64	111.33
24	S3	121	GLN	OE1-CD-NE2	-5.22	117.38	122.60
26	LA	994	C	O4'-C1'-N1	5.22	116.32	108.50
26	LA	1277	G	C5'-C4'-C3'	5.22	123.83	116.00
26	LA	1385	A	C4'-C3'-C2'	-5.22	97.38	102.60
26	LA	1851	U	C3'-C2'-C1'	5.22	106.52	101.30
26	LA	2752	C	C4'-C3'-C2'	-5.22	97.38	102.60
26	LA	2865	U	C2'-C3'-O3'	5.22	121.52	113.70
32	LY	16	GLU	CA-C-O	5.22	126.63	120.89
2	SA	26	A	O5'-C5'-C4'	5.21	119.32	111.50
2	SA	47	C	C4'-C3'-C2'	-5.21	97.39	102.60
2	SA	94	G	P-O3'-C3'	-5.21	112.38	120.20
2	SA	503	C	C1'-O4'-C4'	5.21	115.11	109.90
19	SC	107	LYS	CA-C-N	5.21	125.02	119.28
19	SC	107	LYS	C-N-CA	5.21	125.02	119.28
26	LA	61	C	C1'-O4'-C4'	-5.21	104.69	109.90
26	LA	464	U	O4'-C1'-C2'	-5.21	102.39	107.60
28	LU	97	LEU	CB-CA-C	-5.21	101.51	110.22
31	LX	74	ALA	N-CA-C	5.21	117.41	110.53
2	SA	1233	G	C4'-C3'-C2'	-5.21	97.39	102.60
26	LA	801	G	C3'-C2'-O2'	-5.21	106.78	114.60
26	LA	942	G	C3'-C2'-C1'	5.21	106.51	101.30
26	LA	2302	U	C3'-C2'-C1'	-5.21	96.09	101.30
26	LA	2765	A	O4'-C1'-N9	5.21	116.32	108.50
58	LT	28	ALA	N-CA-CB	-5.21	103.23	111.05
2	SA	712	A	C1'-O4'-C4'	5.21	115.11	109.90
2	SA	993	G	C1'-C2'-O2'	5.21	119.62	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1119	C	C1'-O4'-C4'	-5.21	104.69	109.90
12	SL	47	ALA	CA-C-N	-5.21	115.61	122.85
12	SL	47	ALA	C-N-CA	-5.21	115.61	122.85
15	SO	16	ARG	CA-C-O	-5.21	115.57	121.25
24	S3	349	LEU	O-C-N	-5.21	117.14	123.29
24	S3	416	SER	CB-CA-C	-5.21	99.06	109.33
26	LA	45	G	O5'-C5'-C4'	5.21	119.32	111.50
26	LA	371	A	O5'-C5'-C4'	5.21	119.52	111.70
26	LA	601	C	O4'-C1'-N1	5.21	116.32	108.50
26	LA	749	A	O4'-C1'-N9	5.21	116.32	108.50
26	LA	2408	U	C5'-C4'-C3'	-5.21	108.18	116.00
26	LA	2461	A	O4'-C4'-C3'	5.21	109.21	104.00
26	LA	2602	A	C1'-C2'-O2'	-5.21	103.98	111.80
26	LA	2684	U	C5'-C4'-C3'	-5.21	108.18	116.00
51	LI	39	ALA	O-C-N	-5.21	117.64	123.48
51	LI	114	GLU	CB-CG-CD	5.21	121.46	112.60
54	LM	31	ARG	O-C-N	-5.21	116.09	122.55
58	LT	35	PHE	N-CA-C	5.21	117.14	108.02
2	SA	855	U	C5'-C4'-C3'	-5.21	108.19	116.00
2	SA	1530	G	C3'-C2'-O2'	5.21	118.52	110.70
26	LA	1412	U	P-O3'-C3'	-5.21	112.39	120.20
26	LA	2650	U	C5'-C4'-O4'	5.21	117.61	109.80
26	LA	2853	C	C2'-C3'-O3'	5.21	121.52	113.70
49	LK	58	ILE	O-C-N	-5.21	117.83	123.14
2	SA	344	A	C2'-C3'-O3'	5.21	117.31	109.50
2	SA	1105	A	P-O5'-C5'	-5.21	113.09	120.90
2	SA	1542	A	C3'-C2'-C1'	5.21	106.51	101.30
24	S3	389	ASP	CA-C-N	5.21	127.59	120.35
24	S3	389	ASP	C-N-CA	5.21	127.59	120.35
26	LA	163	C	P-O5'-C5'	-5.21	113.09	120.90
26	LA	893	C	C4'-C3'-C2'	-5.21	97.39	102.60
26	LA	1919	A	O4'-C1'-N9	5.21	116.31	108.50
26	LA	2472	G	C5'-C4'-C3'	-5.21	108.19	116.00
26	LA	2532	G	C5'-C4'-O4'	5.21	117.61	109.80
45	LG	70	ARG	N-CA-C	5.21	117.36	111.11
2	SA	1516	G	P-O3'-C3'	-5.21	112.39	120.20
15	SO	82	GLU	CA-CB-CG	5.21	124.51	114.10
18	SB	85	SER	O-C-N	-5.21	116.86	122.79
24	S3	463	LEU	CA-C-O	5.21	126.07	120.55
25	LB	87	U	C4'-C3'-O3'	-5.21	101.59	109.40
26	LA	532	A	N9-C1'-C2'	-5.21	106.19	114.00
26	LA	743	A	C5'-C4'-C3'	5.21	123.81	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	872	U	C4'-C3'-O3'	-5.21	105.19	113.00
26	LA	1058	U	O5'-C5'-C4'	-5.21	103.69	111.50
26	LA	1271	G	O3'-P-O5'	5.21	111.81	104.00
26	LA	1884	G	C1'-O4'-C4'	5.21	115.11	109.90
44	LF	188	MET	N-CA-C	5.21	121.89	110.80
2	SA	81	A	C5'-C4'-C3'	-5.21	108.19	116.00
11	SK	83	VAL	CA-C-O	5.21	126.49	120.76
26	LA	476	G	P-O5'-C5'	-5.21	113.09	120.90
26	LA	938	G	P-O5'-C5'	5.21	128.71	120.90
26	LA	2246	G	P-O3'-C3'	5.21	128.01	120.20
26	LA	2291	U	C1'-C2'-O2'	5.21	116.21	108.40
26	LA	2536	G	P-O3'-C3'	5.21	128.01	120.20
27	LD	200	MET	O-C-N	-5.21	115.45	122.43
46	LH	84	LYS	CB-CG-CD	5.21	123.27	111.30
2	SA	1453	G	O4'-C4'-C3'	5.20	109.20	104.00
12	SL	3	VAL	CA-CB-CG1	-5.20	101.55	110.40
24	S3	480	ALA	CA-C-O	5.20	127.10	121.06
25	LB	49	C	P-O5'-C5'	5.20	128.71	120.90
26	LA	340	A	O3'-P-O5'	-5.20	96.19	104.00
26	LA	1783	A	O4'-C1'-C2'	-5.20	102.40	107.60
26	LA	2476	A	C2'-C3'-O3'	5.20	121.51	113.70
26	LA	2494	G	C4'-C3'-O3'	-5.20	105.19	113.00
26	LA	2573	C	C2'-C3'-O3'	5.20	121.50	113.70
39	L3	35	GLU	N-CA-C	5.20	117.43	110.35
47	LJ	160	ALA	CA-C-N	5.20	127.68	120.29
47	LJ	160	ALA	C-N-CA	5.20	127.68	120.29
2	SA	246	A	C1'-O4'-C4'	-5.20	104.50	109.70
26	LA	415	A	P-O3'-C3'	5.20	128.00	120.20
26	LA	1008	A	P-O5'-C5'	-5.20	113.10	120.90
26	LA	1863	G	O4'-C1'-N9	5.20	116.30	108.50
26	LA	1871	A	O3'-P-O5'	-5.20	96.20	104.00
26	LA	2053	G	C2'-C3'-O3'	5.20	121.50	113.70
2	SA	490	C	P-O3'-C3'	5.20	128.00	120.20
2	SA	819	A	C1'-O4'-C4'	-5.20	104.70	109.90
23	SR	26	ALA	CA-C-N	5.20	127.25	120.28
23	SR	26	ALA	C-N-CA	5.20	127.25	120.28
24	S3	431	GLY	O-C-N	-5.20	117.15	122.19
26	LA	161	A	O4'-C1'-C2'	5.20	112.80	107.60
26	LA	588	U	O4'-C1'-C2'	5.20	112.80	107.60
26	LA	1903	G	C2'-C3'-O3'	5.20	121.50	113.70
26	LA	2364	C	O4'-C1'-C2'	-5.20	102.40	107.60
26	LA	2885	G	C1'-C2'-O2'	5.20	116.20	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	L0	40	SER	CA-C-O	5.20	125.98	120.10
35	L1	56	VAL	CG1-CB-CG2	5.20	122.24	110.80
45	LG	66	ILE	CA-C-N	5.20	130.02	121.39
45	LG	66	ILE	C-N-CA	5.20	130.02	121.39
58	LT	82	HIS	O-C-N	-5.20	113.66	122.03
1	SS	77	ARG	O-C-N	-5.20	117.09	122.96
2	SA	242	G	C4'-C3'-O3'	-5.20	105.20	113.00
2	SA	514	C	C3'-C2'-C1'	5.20	106.50	101.30
2	SA	1279	G	C3'-C2'-C1'	5.20	106.50	101.30
2	SA	1477	U	O4'-C1'-N1	5.20	116.30	108.50
21	SE	12	GLU	O-C-N	-5.20	117.23	123.31
26	LA	1282	U	C1'-C2'-O2'	5.20	116.20	108.40
26	LA	1631	G	P-O5'-C5'	5.20	128.70	120.90
26	LA	1640	A	O4'-C1'-C2'	-5.20	102.40	107.60
26	LA	2614	A	C1'-O4'-C4'	-5.20	104.50	109.70
37	LC	38	PHE	CA-CB-CG	5.20	119.00	113.80
52	LO	93	VAL	CA-C-O	5.20	125.85	120.39
2	SA	109	A	P-O3'-C3'	-5.20	112.41	120.20
2	SA	632	U	C4'-C3'-C2'	-5.20	97.40	102.60
2	SA	1112	C	O4'-C1'-C2'	-5.20	102.40	107.60
7	SG	130	LYS	N-CA-C	-5.20	106.62	113.17
14	SN	76	PHE	N-CA-C	5.20	119.75	113.41
14	SN	98	ALA	O-C-N	-5.20	117.12	122.94
26	LA	460	A	C4'-C3'-C2'	-5.20	97.40	102.60
26	LA	889	C	C4'-C3'-C2'	-5.20	97.40	102.60
26	LA	2016	U	P-O3'-C3'	-5.20	112.41	120.20
26	LA	2120	G	C5'-C4'-C3'	-5.20	108.20	116.00
51	LI	128	HIS	N-CA-CB	5.20	119.61	111.56
55	LQ	29	HIS	CG-CD2-NE2	5.20	112.40	107.20
2	SA	52	C	O4'-C1'-N1	5.20	116.29	108.50
2	SA	522	C	O4'-C1'-N1	5.20	116.29	108.50
2	SA	1013	G	O5'-C5'-C4'	5.20	119.29	111.50
17	SQ	5	ARG	N-CA-C	5.20	118.03	108.58
26	LA	543	G	O4'-C1'-C2'	5.20	112.80	107.60
26	LA	857	G	P-O5'-C5'	5.20	128.69	120.90
26	LA	1589	U	C1'-O4'-C4'	-5.20	104.70	109.90
26	LA	1843	C	C5'-C4'-O4'	5.20	117.59	109.80
26	LA	2270	A	P-O3'-C3'	-5.20	112.41	120.20
26	LA	2475	C	C1'-O4'-C4'	-5.20	104.70	109.90
26	LA	2691	C	O4'-C4'-C3'	5.20	109.19	104.00
26	LA	2873	A	O3'-P-O5'	-5.20	96.21	104.00
27	LD	21	PRO	N-CA-CB	5.20	108.58	102.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	LC	222	VAL	N-CA-CB	5.20	120.37	112.06
41	L5	25	LYS	N-CA-CB	5.20	117.72	109.82
1	SS	88	ALA	CA-C-N	5.19	131.04	121.85
1	SS	88	ALA	C-N-CA	5.19	131.04	121.85
5	ST	8	LYS	CA-C-N	5.19	127.19	120.44
5	ST	8	LYS	C-N-CA	5.19	127.19	120.44
9	SI	41	GLU	N-CA-C	5.19	121.86	110.80
16	SP	51	ARG	O-C-N	-5.19	117.02	123.36
42	L6	13	PHE	CA-CB-CG	5.19	118.99	113.80
48	LN	25	SER	CA-C-N	5.19	130.37	121.07
48	LN	25	SER	C-N-CA	5.19	130.37	121.07
50	LL	37	ARG	NE-CZ-NH1	5.19	126.69	121.50
2	SA	138	G	O4'-C1'-N9	5.19	116.29	108.50
2	SA	229	U	C4'-C3'-C2'	-5.19	97.41	102.60
2	SA	976	G	P-O5'-C5'	-5.19	113.11	120.90
7	SG	89	GLU	N-CA-C	5.19	117.75	109.96
10	SJ	43	PRO	N-CA-CB	5.19	108.70	103.25
17	SQ	29	LYS	CG-CD-CE	5.19	123.24	111.30
19	SC	106	ARG	NE-CZ-NH2	-5.19	114.53	119.20
24	S3	407	ARG	CG-CD-NE	-5.19	100.58	112.00
25	LB	2	G	C1'-O4'-C4'	-5.19	104.71	109.90
26	LA	22	C	P-O5'-C5'	-5.19	113.11	120.90
26	LA	354	A	C4'-C3'-C2'	-5.19	97.41	102.60
28	LU	105	VAL	N-CA-C	-5.19	101.00	108.53
31	LX	73	LYS	CA-C-O	5.19	126.31	120.70
47	LJ	158	ARG	NE-CZ-NH1	5.19	126.69	121.50
50	LL	69	ARG	NE-CZ-NH2	5.19	123.87	119.20
55	LQ	95	SER	CA-C-O	5.19	127.94	120.51
2	SA	132	C	O3'-P-O5'	-5.19	96.21	104.00
2	SA	1058	G	P-O3'-C3'	-5.19	112.41	120.20
4	S2	33	C	C5'-C4'-C3'	-5.19	108.21	116.00
15	SO	25	GLU	O-C-N	-5.19	116.62	122.12
24	S3	166	VAL	CA-CB-CG2	-5.19	101.58	110.40
26	LA	502	A	C4'-C3'-C2'	5.19	107.79	102.60
26	LA	735	A	P-O5'-C5'	-5.19	113.11	120.90
26	LA	2031	A	P-O5'-C5'	5.19	128.68	120.90
26	LA	2895	G	C5'-C4'-C3'	-5.19	108.21	116.00
34	L0	8	GLU	N-CA-C	5.19	116.75	111.14
38	LE	104	VAL	CA-C-O	5.19	127.35	121.28
48	LN	80	SER	CB-CA-C	-5.19	102.51	110.81
54	LM	77	ILE	CA-C-O	5.19	127.27	120.78
58	LT	51	VAL	O-C-N	-5.19	115.18	121.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2202	U	C1'-C2'-O2'	5.19	116.18	108.40
27	LD	144	GLU	N-CA-CB	-5.19	102.40	110.29
48	LN	49	GLY	CA-C-N	-5.19	115.84	123.00
48	LN	49	GLY	C-N-CA	-5.19	115.84	123.00
50	LL	105	VAL	CA-C-N	5.19	127.19	120.44
50	LL	105	VAL	C-N-CA	5.19	127.19	120.44
2	SA	862	C	C4'-C3'-C2'	-5.19	97.41	102.60
2	SA	1163	A	C4'-C3'-C2'	-5.19	97.41	102.60
2	SA	1502	A	O4'-C1'-N9	5.19	115.98	108.20
4	S2	38	A	P-O5'-C5'	-5.19	113.12	120.90
4	S2	39	A	O5'-C5'-C4'	5.19	119.28	111.50
7	SG	168	SER	N-CA-C	5.19	117.96	110.28
15	SO	81	ILE	O-C-N	-5.19	116.63	121.87
19	SC	164	THR	CA-C-O	5.19	127.02	121.16
22	SF	96	VAL	N-CA-CB	5.19	119.79	111.23
24	S3	616	MET	CB-CA-C	-5.19	100.73	109.50
26	LA	471	A	C5'-C4'-C3'	-5.19	108.22	116.00
26	LA	519	U	C5'-C4'-C3'	5.19	123.78	116.00
26	LA	1171	G	C5'-C4'-O4'	5.19	117.58	109.80
26	LA	1257	C	C3'-C2'-O2'	-5.19	102.92	110.70
26	LA	2705	A	P-O3'-C3'	5.19	127.98	120.20
49	LK	78	LEU	N-CA-CB	5.19	118.21	110.22
53	LP	63	ARG	N-CA-C	-5.19	105.71	111.36
54	LM	47	ILE	N-CA-CB	5.19	118.47	111.21
2	SA	1073	U	C4'-C3'-C2'	-5.19	97.41	102.60
26	LA	1061	U	C5'-C4'-C3'	5.19	122.98	115.20
26	LA	2804	U	C5'-C4'-C3'	-5.19	108.22	116.00
38	LE	55	LYS	N-CA-CB	5.19	119.77	110.80
40	L4	29	LYS	N-CA-CB	5.19	117.82	111.23
2	SA	489	C	C4'-C3'-O3'	-5.18	105.22	113.00
2	SA	797	C	C5'-C4'-C3'	-5.18	108.22	116.00
13	SM	83	GLY	N-CA-C	-5.18	100.89	113.18
19	SC	105	VAL	CB-CA-C	-5.18	103.44	110.90
26	LA	922	C	C1'-O4'-C4'	-5.18	104.72	109.90
26	LA	931	U	C3'-C2'-O2'	-5.18	106.82	114.60
33	LZ	37	PHE	CA-CB-CG	-5.18	108.62	113.80
37	LC	39	VAL	N-CA-CB	5.18	119.79	111.23
49	LK	23	VAL	CA-C-O	-5.18	114.65	120.25
56	LR	76	HIS	CG-CD2-NE2	5.18	112.39	107.20
2	SA	164	G	P-O5'-C5'	-5.18	113.13	120.90
2	SA	514	C	C5'-C4'-C3'	5.18	123.77	116.00
18	SB	191	ASP	CB-CA-C	5.18	117.10	109.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	680	THR	N-CA-CB	5.18	120.71	111.69
26	LA	259	G	C3'-C2'-C1'	5.18	106.48	101.30
26	LA	2708	G	P-O3'-C3'	-5.18	112.42	120.20
26	LA	2743	U	O4'-C1'-N1	5.18	116.27	108.50
26	LA	2841	C	O5'-C5'-C4'	-5.18	103.73	111.50
49	LK	59	THR	CA-C-N	-5.18	116.35	123.14
49	LK	59	THR	C-N-CA	-5.18	116.35	123.14
11	SK	45	THR	CA-C-O	-5.18	115.71	121.51
24	S3	327	PRO	CB-CA-C	5.18	116.26	109.89
26	LA	1105	U	P-O5'-C5'	5.18	128.67	120.90
26	LA	2252	G	O4'-C1'-C2'	5.18	110.98	105.80
2	SA	7	A	O5'-C5'-C4'	5.18	119.27	111.50
2	SA	112	G	C3'-C2'-C1'	5.18	106.48	101.30
2	SA	259	G	C4'-C3'-O3'	-5.18	105.23	113.00
2	SA	858	G	C4'-C3'-O3'	-5.18	105.23	113.00
2	SA	1123	U	P-O5'-C5'	5.18	128.67	120.90
4	S2	5	G	P-O3'-C3'	-5.18	112.43	120.20
4	S2	51	U	O4'-C1'-N1	5.18	116.27	108.50
24	S3	631	ILE	N-CA-C	5.18	115.39	110.42
25	LB	25	U	C4'-C3'-O3'	5.18	117.17	109.40
26	LA	44	A	P-O3'-C3'	-5.18	112.43	120.20
26	LA	44	A	C1'-O4'-C4'	-5.18	104.72	109.90
26	LA	1932	A	C3'-C2'-C1'	-5.18	96.12	101.30
26	LA	2305	U	C3'-C2'-C1'	5.18	106.48	101.30
26	LA	2642	G	O5'-C5'-C4'	-5.18	103.73	111.50
38	LE	33	ARG	NH1-CZ-NH2	5.18	126.03	119.30
53	LP	98	LEU	CB-CA-C	5.18	118.68	110.19
6	SU	29	ALA	O-C-N	-5.18	115.49	122.43
9	SI	29	ILE	N-CA-CB	5.18	118.42	111.90
9	SI	82	ILE	CB-CA-C	5.18	119.37	112.22
20	SD	85	THR	N-CA-C	5.18	117.00	111.36
24	S3	244	GLU	N-CA-C	5.18	117.67	111.71
26	LA	1269	A	C1'-O4'-C4'	-5.18	104.72	109.90
2	SA	142	G	O4'-C1'-N9	5.18	116.27	108.50
2	SA	210	C	C5'-C4'-O4'	5.18	116.86	109.10
2	SA	1081	A	O4'-C1'-N9	5.18	116.27	108.50
18	SB	1	ALA	O-C-N	-5.18	114.72	123.00
26	LA	124	G	C5'-C4'-C3'	-5.18	108.24	116.00
26	LA	181	A	C3'-C2'-O2'	5.18	118.46	110.70
26	LA	198	C	P-O3'-C3'	-5.18	112.44	120.20
26	LA	890	C	O4'-C1'-N1	5.18	116.27	108.50
26	LA	1510	G	C5'-C4'-O4'	5.18	117.56	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1812	U	O4'-C1'-N1	5.18	116.27	108.50
26	LA	2472	G	C5'-C4'-O4'	5.18	117.56	109.80
26	LA	2827	C	C3'-C2'-C1'	5.18	106.48	101.30
27	LD	215	VAL	CA-C-O	5.18	127.25	120.78
30	LW	45	GLN	CB-CA-C	5.18	118.58	110.19
32	LY	19	ARG	CA-C-O	-5.18	113.11	120.51
40	L4	16	THR	N-CA-C	5.18	121.82	110.80
44	LF	102	ARG	CG-CD-NE	-5.18	100.61	112.00
49	LK	76	ALA	CA-C-O	5.18	126.04	120.55
54	LM	95	ILE	CB-CA-C	-5.18	104.35	111.65
2	SA	236	A	P-O3'-C3'	-5.17	112.44	120.20
2	SA	1348	U	O4'-C1'-N1	5.17	116.26	108.50
12	SL	19	ASN	N-CA-CB	5.17	119.10	110.41
25	LB	65	U	C4'-C3'-C2'	-5.17	97.43	102.60
26	LA	788	A	O4'-C1'-N9	5.17	115.96	108.20
26	LA	2820	A	P-O5'-C5'	-5.17	113.14	120.90
47	LJ	122	ILE	N-CA-CB	5.17	117.58	110.54
52	LO	37	GLY	N-CA-C	-5.17	103.19	110.75
54	LM	29	HIS	ND1-CE1-NE2	5.17	113.58	108.40
56	LR	27	VAL	CA-C-O	-5.17	114.60	120.65
2	SA	567	G	O5'-C5'-C4'	5.17	119.26	111.50
2	SA	713	G	O4'-C4'-C3'	-5.17	98.83	104.00
9	SI	12	LYS	CB-CA-C	-5.17	110.59	116.54
20	SD	187	ARG	CA-C-N	5.17	129.36	120.72
20	SD	187	ARG	C-N-CA	5.17	129.36	120.72
26	LA	2015	A	O3'-P-O5'	5.17	111.76	104.00
26	LA	2276	G	C1'-C2'-O2'	5.17	116.16	108.40
26	LA	2463	C	C1'-C2'-O2'	5.17	116.16	108.40
2	SA	180	U	O4'-C1'-C2'	5.17	112.77	107.60
2	SA	240	G	C4'-C3'-C2'	-5.17	97.43	102.60
2	SA	577	G	C3'-C2'-C1'	5.17	106.47	101.30
16	SP	21	VAL	N-CA-C	-5.17	100.32	108.23
24	S3	126	TRP	N-CA-C	5.17	116.60	111.07
26	LA	64	A	C5'-C4'-C3'	5.17	123.76	116.00
26	LA	390	U	O4'-C1'-N1	5.17	115.96	108.20
26	LA	979	A	C4'-C3'-C2'	-5.17	97.43	102.60
26	LA	1206	G	N9-C1'-C2'	-5.17	104.24	112.00
26	LA	1317	G	O4'-C1'-C2'	5.17	112.77	107.60
26	LA	1343	G	O3'-P-O5'	5.17	111.76	104.00
26	LA	1368	G	C3'-C2'-O2'	-5.17	102.94	110.70
26	LA	2799	A	C1'-O4'-C4'	-5.17	104.73	109.90
31	LX	67	GLY	O-C-N	-5.17	116.45	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	LF	98	LYS	CA-C-O	5.17	125.90	120.42
2	SA	1458	G	O4'-C4'-C3'	5.17	109.17	104.00
25	LB	92	C	O3'-P-O5'	-5.17	96.24	104.00
26	LA	607	U	C4'-C3'-C2'	-5.17	97.43	102.60
26	LA	1878	G	C2'-C3'-O3'	5.17	121.46	113.70
26	LA	2740	A	C3'-C2'-O2'	5.17	118.45	110.70
35	L1	2	LYS	CA-C-O	5.17	126.81	120.92
1	SS	32	THR	OG1-CB-CG2	-5.17	98.96	109.30
2	SA	559	A	P-O3'-C3'	5.17	127.95	120.20
2	SA	1078	U	P-O5'-C5'	-5.17	113.15	120.90
19	SC	184	ASN	OD1-CG-ND2	-5.17	117.43	122.60
24	S3	583	HIS	CE1-NE2-CD2	-5.17	103.83	109.00
26	LA	1439	A	C5'-C4'-C3'	-5.17	108.25	116.00
26	LA	1867	G	O3'-P-O5'	-5.17	96.25	104.00
26	LA	2669	G	N9-C1'-C2'	-5.17	104.25	112.00
38	LE	150	GLN	CB-CA-C	-5.17	100.14	110.42
50	LL	125	TYR	CA-C-N	5.17	127.21	120.28
50	LL	125	TYR	C-N-CA	5.17	127.21	120.28
2	SA	230	G	O4'-C1'-N9	5.17	116.25	108.50
2	SA	698	G	C1'-C2'-O2'	5.17	116.15	108.40
2	SA	1280	A	C5'-C4'-C3'	-5.17	107.45	115.20
2	SA	1346	A	C3'-C2'-O2'	-5.17	106.85	114.60
2	SA	1455	G	C4'-C3'-C2'	-5.17	97.43	102.60
12	SL	40	THR	OG1-CB-CG2	-5.17	98.97	109.30
15	SO	62	ARG	CG-CD-NE	-5.17	100.63	112.00
21	SE	129	SER	O-C-N	-5.17	116.14	123.01
23	SR	48	ALA	N-CA-C	5.17	116.60	111.07
26	LA	224	U	C1'-C2'-O2'	5.17	116.15	108.40
26	LA	791	C	O4'-C1'-C2'	5.17	110.97	105.80
26	LA	837	C	O4'-C1'-C2'	-5.17	102.43	107.60
26	LA	916	G	C1'-O4'-C4'	-5.17	104.73	109.90
26	LA	1007	C	C4'-C3'-C2'	-5.17	97.43	102.60
26	LA	1009	A	C5'-C4'-O4'	5.17	117.55	109.80
26	LA	1173	U	O4'-C1'-N1	5.17	116.25	108.50
26	LA	1371	G	C1'-O4'-C4'	-5.17	104.73	109.90
26	LA	2078	C	C5'-C4'-O4'	5.17	117.55	109.80
26	LA	2713	U	C1'-O4'-C4'	-5.17	104.53	109.70
32	LY	21	GLY	CA-C-N	5.17	127.54	120.46
32	LY	21	GLY	C-N-CA	5.17	127.54	120.46
35	L1	41	PRO	CA-CB-CG	-5.17	94.68	104.50
37	LC	166	ASP	CB-CA-C	5.17	120.70	110.42
52	LO	86	LYS	CB-CA-C	-5.17	101.14	109.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	LS	58	GLN	N-CA-C	5.17	117.31	111.11
11	SK	8	ARG	CB-CA-C	-5.17	101.67	109.99
26	LA	531	C	O4'-C1'-C2'	-5.17	100.64	105.80
47	LJ	118	PRO	CA-C-N	5.17	127.46	120.38
47	LJ	118	PRO	C-N-CA	5.17	127.46	120.38
49	LK	30	GLN	CB-CG-CD	-5.17	103.82	112.60
2	SA	176	C	C4'-C3'-C2'	-5.16	97.44	102.60
2	SA	594	U	O4'-C1'-C2'	-5.16	102.44	107.60
26	LA	774	G	C1'-O4'-C4'	-5.16	104.54	109.70
26	LA	1594	U	C5'-C4'-C3'	-5.16	108.26	116.00
26	LA	2609	U	N1-C1'-C2'	5.16	121.75	114.00
26	LA	2626	C	P-O3'-C3'	-5.16	112.45	120.20
53	LP	15	SER	O-C-N	-5.16	116.65	122.12
57	LS	31	TYR	CA-C-N	5.16	127.15	120.44
57	LS	31	TYR	C-N-CA	5.16	127.15	120.44
11	SK	63	GLN	CB-CG-CD	5.16	121.38	112.60
26	LA	982	C	C4'-C3'-O3'	-5.16	105.26	113.00
30	LW	26	ASN	OD1-CG-ND2	5.16	127.76	122.60
30	LW	93	ARG	NH1-CZ-NH2	-5.16	112.59	119.30
50	LL	117	ALA	O-C-N	-5.16	115.92	122.27
2	SA	1048	G	P-O3'-C3'	-5.16	112.46	120.20
4	S2	9	G	C2'-C3'-O3'	5.16	117.24	109.50
9	SI	23	GLY	N-CA-C	-5.16	100.95	113.18
26	LA	229	C	C1'-C2'-O2'	5.16	116.14	108.40
26	LA	278	A	C1'-C2'-O2'	5.16	116.14	108.40
26	LA	283	G	O3'-P-O5'	-5.16	96.26	104.00
26	LA	322	A	C3'-C2'-C1'	-5.16	96.34	101.50
26	LA	617	G	C5'-C4'-C3'	-5.16	108.26	116.00
26	LA	646	U	C3'-C2'-C1'	5.16	106.46	101.30
26	LA	1778	U	C4'-C3'-O3'	5.16	117.14	109.40
27	LD	75	ALA	CA-C-O	-5.16	115.59	121.58
53	LP	42	LYS	N-CA-CB	5.16	117.80	110.16
2	SA	27	G	C5'-C4'-C3'	-5.16	108.26	116.00
2	SA	764	C	C4'-C3'-O3'	5.16	120.74	113.00
2	SA	1163	A	C1'-C2'-O2'	5.16	116.14	108.40
11	SK	26	PHE	CA-CB-CG	-5.16	108.64	113.80
14	SN	16	ALA	CA-C-N	-5.16	113.42	120.44
14	SN	16	ALA	C-N-CA	-5.16	113.42	120.44
26	LA	1763	G	C5'-C4'-O4'	5.16	117.54	109.80
26	LA	2274	A	P-O3'-C3'	5.16	127.94	120.20
37	LC	77	VAL	CA-C-N	5.16	129.28	122.42
37	LC	77	VAL	C-N-CA	5.16	129.28	122.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	LF	117	ARG	NE-CZ-NH1	5.16	126.66	121.50
2	SA	572	A	C1'-O4'-C4'	-5.16	104.74	109.90
16	SP	2	VAL	CA-CB-CG2	-5.16	101.63	110.40
24	S3	43	HIS	CE1-NE2-CD2	-5.16	103.84	109.00
26	LA	631	A	P-O3'-C3'	-5.16	112.46	120.20
26	LA	1763	G	C4'-C3'-O3'	-5.16	105.26	113.00
26	LA	2229	U	C3'-C2'-C1'	-5.16	96.14	101.30
56	LR	13	LYS	O-C-N	-5.16	117.16	123.30
2	SA	793	U	C4'-C3'-O3'	5.16	117.13	109.40
2	SA	841	C	O3'-P-O5'	5.16	111.73	104.00
2	SA	929	G	C3'-C2'-O2'	5.16	118.43	110.70
9	SI	126	PHE	CA-CB-CG	5.16	118.96	113.80
12	SL	121	PRO	CB-CA-C	5.16	116.09	111.40
14	SN	65	GLN	N-CA-CB	-5.16	101.78	110.49
15	SO	23	SER	O-C-N	-5.16	116.78	122.86
24	S3	538	ASP	N-CA-CB	-5.16	102.40	111.42
26	LA	128	C	C4'-C3'-O3'	-5.16	105.27	113.00
26	LA	1250	G	P-O3'-C3'	-5.16	112.47	120.20
26	LA	1264	A	O3'-P-O5'	-5.16	96.27	104.00
26	LA	1321	A	C2'-C3'-O3'	5.16	117.23	109.50
26	LA	1508	A	P-O5'-C5'	5.16	128.63	120.90
26	LA	1522	A	C4'-C3'-O3'	5.16	117.13	109.40
26	LA	1970	A	O5'-C5'-C4'	-5.16	103.97	111.70
26	LA	2100	G	O5'-C5'-C4'	5.16	119.23	111.50
26	LA	2611	C	N1-C1'-C2'	5.16	119.73	112.00
34	L0	29	ARG	NE-CZ-NH2	5.16	123.84	119.20
44	LF	123	LYS	CG-CD-CE	5.16	123.16	111.30
47	LJ	103	ALA	N-CA-CB	5.16	120.56	111.49
58	LT	53	PHE	N-CA-C	5.16	121.78	110.80
58	LT	91	GLN	N-CA-C	5.16	117.77	110.50
21	SE	143	LEU	N-CA-C	-5.15	105.67	112.94
26	LA	83	A	P-O3'-C3'	5.15	127.93	120.20
26	LA	472	A	O4'-C4'-C3'	-5.15	98.85	104.00
26	LA	2414	G	C4'-C3'-C2'	-5.15	97.45	102.60
2	SA	183	C	C1'-O4'-C4'	-5.15	104.55	109.70
2	SA	414	A	P-O5'-C5'	-5.15	113.17	120.90
2	SA	1360	A	O4'-C1'-N9	5.15	116.23	108.50
2	SA	1400	C	C4'-C3'-C2'	-5.15	97.45	102.60
7	SG	83	THR	CA-C-N	5.15	130.61	122.78
7	SG	83	THR	C-N-CA	5.15	130.61	122.78
26	LA	667	U	C4'-C3'-C2'	5.15	107.75	102.60
26	LA	783	A	C5'-C4'-O4'	-5.15	102.07	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1092	C	O4'-C4'-C3'	-5.15	98.85	104.00
26	LA	1938	A	C1'-O4'-C4'	-5.15	104.55	109.70
26	LA	2579	C	O4'-C4'-C3'	-5.15	98.85	104.00
38	LE	162	ALA	CA-C-N	5.15	131.51	121.41
38	LE	162	ALA	C-N-CA	5.15	131.51	121.41
52	LO	98	PRO	N-CA-CB	5.15	108.66	103.25
2	SA	891	U	P-O5'-C5'	-5.15	113.17	120.90
12	SL	9	LYS	N-CA-C	5.15	116.18	108.76
17	SQ	56	ASP	CA-CB-CG	5.15	117.75	112.60
26	LA	830	G	P-O3'-C3'	-5.15	112.47	120.20
26	LA	1145	C	O5'-C5'-C4'	5.15	119.22	111.50
26	LA	2390	U	O5'-C5'-C4'	5.15	119.23	111.50
26	LA	2471	A	C4'-C3'-C2'	-5.15	97.45	102.60
26	LA	2644	G	O4'-C1'-N9	5.15	116.22	108.50
48	LN	57	LEU	O-C-N	-5.15	116.19	122.22
51	LI	94	ILE	CB-CG1-CD1	5.15	124.62	113.80
2	SA	16	A	C2'-C3'-O3'	5.15	121.42	113.70
2	SA	353	A	O4'-C1'-N9	5.15	116.22	108.50
2	SA	498	A	C5'-C4'-C3'	-5.15	108.28	116.00
2	SA	590	U	C5'-C4'-C3'	-5.15	108.28	116.00
4	S2	23	G	O4'-C4'-C3'	5.15	109.15	104.00
26	LA	762	U	O3'-P-O5'	-5.15	96.28	104.00
26	LA	1393	A	C3'-C2'-C1'	5.15	106.45	101.30
26	LA	1886	U	C1'-C2'-O2'	5.15	116.12	108.40
26	LA	2576	G	O3'-P-O5'	-5.15	96.28	104.00
2	SA	388	G	C2'-C3'-O3'	5.15	117.22	109.50
2	SA	593	U	O4'-C1'-C2'	-5.15	102.45	107.60
2	SA	985	C	O4'-C1'-N1	5.15	116.22	108.50
2	SA	1120	C	O4'-C1'-N1	5.15	116.22	108.50
2	SA	1357	A	C2'-C3'-O3'	5.15	121.42	113.70
4	S2	47	A	O5'-C5'-C4'	5.15	119.22	111.50
13	SM	22	TYR	CB-CG-CD1	-5.15	113.08	120.80
24	S3	37	HIS	ND1-CE1-NE2	5.15	113.55	108.40
26	LA	366	C	O4'-C1'-N1	5.15	116.22	108.50
26	LA	1133	A	C5'-C4'-O4'	5.15	116.82	109.10
26	LA	1880	U	N1-C1'-C2'	5.15	119.72	112.00
26	LA	2579	C	C3'-C2'-C1'	-5.15	96.15	101.30
47	LJ	35	ASP	N-CA-C	5.15	117.30	111.02
53	LP	91	ALA	N-CA-CB	-5.15	104.25	110.53
26	LA	110	G	C2'-C3'-O3'	-5.15	105.98	113.70
26	LA	386	G	C4'-C3'-O3'	5.15	117.12	109.40
28	LU	85	ILE	CA-CB-CG1	-5.15	101.65	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	LO	2	LEU	O-C-N	-5.15	116.48	122.96
2	SA	793	U	C2'-C3'-O3'	5.14	117.22	109.50
2	SA	1243	C	P-O3'-C3'	-5.14	112.48	120.20
2	SA	1268	G	C4'-C3'-O3'	-5.14	105.28	113.00
15	SO	51	SER	CA-C-O	5.14	125.69	119.31
18	SB	129	THR	N-CA-CB	5.14	119.19	110.49
24	S3	209	ASP	O-C-N	-5.14	116.48	121.93
24	S3	321	PHE	CA-C-O	5.14	125.05	119.24
24	S3	647	GLU	CB-CG-CD	5.14	121.34	112.60
25	LB	21	G	O4'-C1'-C2'	-5.14	102.45	107.60
26	LA	85	G	C3'-C2'-C1'	-5.14	96.16	101.30
26	LA	547	A	P-O5'-C5'	5.14	128.62	120.90
26	LA	1755	A	P-O3'-C3'	5.14	127.92	120.20
26	LA	1827	U	O4'-C1'-C2'	-5.14	102.46	107.60
26	LA	2261	C	O4'-C4'-C3'	-5.14	98.86	104.00
26	LA	2369	A	C1'-C2'-O2'	5.14	116.12	108.40
37	LC	50	ILE	N-CA-C	-5.14	100.34	107.80
45	LG	170	ALA	N-CA-CB	-5.14	102.40	111.04
54	LM	37	ASP	CA-CB-CG	-5.14	107.46	112.60
2	SA	1101	A	C3'-C2'-C1'	-5.14	96.36	101.50
2	SA	1446	A	C5'-C4'-C3'	-5.14	108.29	116.00
10	SJ	50	THR	N-CA-C	-5.14	100.65	109.24
18	SB	216	VAL	CB-CA-C	-5.14	105.28	112.02
20	SD	24	VAL	O-C-N	-5.14	116.14	122.57
26	LA	1054	A	C4'-C3'-O3'	-5.14	105.28	113.00
26	LA	1250	G	C3'-C2'-O2'	-5.14	106.89	114.60
26	LA	1644	C	P-O3'-C3'	-5.14	112.48	120.20
32	LY	58	LEU	CA-C-O	5.14	125.96	120.46
38	LE	52	THR	N-CA-CB	5.14	117.58	110.17
48	LN	99	ASN	N-CA-C	5.14	118.49	111.39
2	SA	1262	C	C5'-C4'-O4'	5.14	117.51	109.80
22	SF	11	HIS	CA-CB-CG	5.14	118.94	113.80
26	LA	1112	G	C4'-C3'-C2'	-5.14	97.46	102.60
27	LD	113	ASP	O-C-N	-5.14	116.55	123.23
41	L5	29	GLN	CB-CG-CD	-5.14	103.86	112.60
2	SA	64	G	C3'-C2'-C1'	-5.14	96.36	101.50
2	SA	451	A	P-O5'-C5'	-5.14	113.19	120.90
2	SA	841	C	C4'-C3'-O3'	5.14	117.11	109.40
2	SA	907	A	C4'-C3'-C2'	-5.14	97.46	102.60
2	SA	1076	U	C1'-O4'-C4'	-5.14	104.76	109.90
4	S2	70	C	P-O5'-C5'	5.14	128.61	120.90
6	SU	53	LYS	CA-C-O	5.14	125.91	120.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	SJ	23	ALA	N-CA-CB	-5.14	102.57	110.12
24	S3	384	ALA	N-CA-C	-5.14	102.17	110.14
26	LA	1085	A	O4'-C1'-N9	5.14	116.21	108.50
26	LA	1097	U	C2'-C3'-O3'	5.14	121.41	113.70
26	LA	1273	U	O4'-C1'-C2'	5.14	112.74	107.60
26	LA	1414	C	C4'-C3'-C2'	-5.14	97.46	102.60
26	LA	1423	G	C1'-O4'-C4'	-5.14	104.76	109.90
26	LA	1747	U	O4'-C1'-N1	5.14	116.21	108.50
26	LA	1786	A	O4'-C4'-C3'	-5.14	100.96	106.10
26	LA	1794	A	C5'-C4'-O4'	5.14	117.51	109.80
26	LA	2438	U	C3'-C2'-C1'	5.14	106.44	101.30
26	LA	2804	U	P-O5'-C5'	-5.14	113.19	120.90
44	LF	19	PHE	CB-CG-CD1	5.14	129.44	120.70
45	LG	59	ILE	O-C-N	-5.14	116.14	122.57
45	LG	121	PHE	N-CA-CB	5.14	117.57	110.17
49	LK	127	SER	O-C-N	5.14	128.59	122.27
2	SA	433	G	O4'-C4'-C3'	5.14	109.14	104.00
2	SA	1349	A	P-O3'-C3'	5.14	127.91	120.20
2	SA	1491	G	C2'-C3'-O3'	5.14	117.21	109.50
26	LA	1488	C	C2'-C3'-O3'	5.14	121.41	113.70
26	LA	2176	A	C4'-C3'-C2'	-5.14	97.46	102.60
26	LA	2345	G	C1'-O4'-C4'	-5.14	104.56	109.70
26	LA	2656	U	C1'-C2'-O2'	5.14	116.11	108.40
26	LA	2843	G	C5'-C4'-C3'	5.14	123.71	116.00
2	SA	307	C	O5'-C5'-C4'	5.14	119.20	111.50
2	SA	429	U	O4'-C1'-C2'	-5.14	100.66	105.80
2	SA	476	U	C4'-C3'-C2'	-5.14	97.46	102.60
2	SA	496	A	O4'-C4'-C3'	-5.14	98.86	104.00
2	SA	565	U	P-O3'-C3'	5.14	127.91	120.20
2	SA	611	C	C2'-C3'-O3'	5.14	121.41	113.70
16	SP	59	HIS	CA-C-N	5.14	127.12	120.44
16	SP	59	HIS	C-N-CA	5.14	127.12	120.44
17	SQ	64	ARG	CB-CA-C	5.14	120.29	110.17
19	SC	125	ARG	N-CA-C	-5.14	106.79	113.16
26	LA	1378	A	C2'-C3'-O3'	5.14	117.20	109.50
26	LA	1443	U	C4'-C3'-O3'	-5.14	105.29	113.00
26	LA	2039	U	C5'-C4'-C3'	-5.14	108.30	116.00
26	LA	2161	C	C2'-C3'-O3'	5.14	121.41	113.70
26	LA	2195	U	P-O3'-C3'	-5.14	112.50	120.20
29	LV	19	LYS	N-CA-C	5.14	119.85	111.37
37	LC	183	ASP	CA-C-N	5.14	127.16	120.28
37	LC	183	ASP	C-N-CA	5.14	127.16	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	LL	7	LYS	CA-C-N	5.14	126.26	119.84
50	LL	7	LYS	C-N-CA	5.14	126.26	119.84
2	SA	1083	U	C4'-C3'-O3'	-5.13	105.30	113.00
23	SR	52	ARG	NE-CZ-NH2	5.13	123.82	119.20
24	S3	415	ILE	CA-C-O	5.13	126.41	120.76
26	LA	231	A	C5'-C4'-C3'	-5.13	108.30	116.00
26	LA	621	A	P-O5'-C5'	-5.13	113.20	120.90
26	LA	1663	G	C5'-C4'-O4'	5.13	117.50	109.80
28	LU	31	GLN	N-CA-CB	-5.13	102.62	110.07
28	LU	78	GLU	N-CA-C	5.13	116.55	109.15
54	LM	47	ILE	CA-C-O	-5.13	113.07	119.95
2	SA	674	G	P-O3'-C3'	-5.13	112.50	120.20
2	SA	1095	U	C4'-C3'-C2'	-5.13	97.47	102.60
2	SA	1475	G	O5'-C5'-C4'	5.13	119.20	111.50
26	LA	116	C	P-O5'-C5'	-5.13	113.20	120.90
26	LA	1672	A	O4'-C4'-C3'	5.13	109.13	104.00
26	LA	2812	G	P-O5'-C5'	-5.13	113.20	120.90
2	SA	961	U	C2'-C3'-O3'	5.13	121.40	113.70
2	SA	1189	U	C3'-C2'-C1'	5.13	106.43	101.30
2	SA	1199	U	C3'-C2'-C1'	5.13	106.43	101.30
2	SA	1416	G	C4'-C3'-O3'	-5.13	105.30	113.00
5	ST	41	GLY	O-C-N	5.13	127.99	122.65
12	SL	76	HIS	CA-CB-CG	-5.13	108.67	113.80
13	SM	3	ILE	CB-CA-C	5.13	118.62	111.08
19	SC	14	VAL	N-CA-C	5.13	120.01	109.34
21	SE	83	PRO	CA-N-CD	-5.13	104.81	112.00
24	S3	78	TYR	CB-CA-C	5.13	120.63	110.42
26	LA	777	G	C4'-C3'-O3'	-5.13	105.30	113.00
26	LA	932	U	C5'-C4'-C3'	5.13	123.70	116.00
47	LJ	132	GLU	N-CA-CB	-5.13	102.57	110.16
49	LK	79	LEU	N-CA-CB	-5.13	102.63	110.07
53	LP	119	SER	CA-C-O	-5.13	115.43	121.07
2	SA	239	U	C1'-O4'-C4'	-5.13	104.77	109.90
2	SA	767	A	P-O3'-C3'	5.13	127.89	120.20
2	SA	1019	A	O5'-C5'-C4'	-5.13	103.81	111.50
21	SE	110	MET	N-CA-C	-5.13	105.38	111.69
26	LA	1569	A	O4'-C4'-C3'	-5.13	98.87	104.00
26	LA	1780	A	P-O3'-C3'	5.13	127.89	120.20
26	LA	1924	C	C4'-C3'-O3'	-5.13	105.30	113.00
26	LA	2266	A	C5'-C4'-C3'	-5.13	107.50	115.20
2	SA	244	U	P-O3'-C3'	-5.13	112.51	120.20
2	SA	370	C	O5'-C5'-C4'	-5.13	103.81	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	374	A	P-O3'-C3'	-5.13	112.51	120.20
2	SA	720	C	C4'-C3'-O3'	-5.13	105.31	113.00
2	SA	873	A	C5'-C4'-C3'	5.13	122.89	115.20
4	S2	68	C	O4'-C1'-N1	5.13	116.19	108.50
9	SI	46	VAL	CA-C-O	-5.13	115.73	121.17
26	LA	800	A	C1'-O4'-C4'	-5.13	104.57	109.70
26	LA	1762	A	O4'-C1'-N9	5.13	116.19	108.50
26	LA	2126	A	C3'-C2'-C1'	5.13	106.63	101.50
26	LA	2219	U	C3'-C2'-C1'	5.13	106.43	101.30
26	LA	2280	G	P-O5'-C5'	-5.13	113.21	120.90
26	LA	2544	G	C1'-C2'-O2'	5.13	116.09	108.40
30	LW	37	GLY	CA-C-N	5.13	127.70	120.42
30	LW	37	GLY	C-N-CA	5.13	127.70	120.42
58	LT	49	ILE	CB-CA-C	5.13	119.70	111.29
2	SA	1539	C	C2'-C3'-O3'	-5.13	106.01	113.70
13	SM	67	ASP	O-C-N	-5.13	115.47	122.19
26	LA	1216	G	P-O3'-C3'	-5.13	112.51	120.20
26	LA	1331	G	C1'-O4'-C4'	-5.13	104.77	109.90
26	LA	1958	C	O4'-C1'-N1	5.13	116.19	108.50
2	SA	6	G	C1'-C2'-O2'	5.12	116.09	108.40
2	SA	481	G	P-O5'-C5'	-5.12	113.21	120.90
2	SA	817	C	C4'-C3'-C2'	-5.12	97.47	102.60
2	SA	1191	A	C4'-C3'-C2'	5.12	107.72	102.60
26	LA	2067	G	P-O3'-C3'	-5.12	112.51	120.20
33	LZ	68	ALA	O-C-N	-5.12	115.97	122.27
2	SA	1080	A	P-O3'-C3'	5.12	127.89	120.20
2	SA	1495	U	P-O5'-C5'	-5.12	113.22	120.90
12	SL	81	ILE	CA-C-N	5.12	131.18	122.37
12	SL	81	ILE	C-N-CA	5.12	131.18	122.37
24	S3	325	THR	CA-CB-CG2	5.12	119.21	110.50
26	LA	503	A	C1'-O4'-C4'	-5.12	104.58	109.70
26	LA	1216	G	C4'-C3'-O3'	-5.12	105.31	113.00
26	LA	1420	A	C3'-C2'-C1'	5.12	106.42	101.30
26	LA	2189	U	C5'-C4'-O4'	5.12	117.48	109.80
26	LA	2381	A	C4'-C3'-C2'	-5.12	97.48	102.60
26	LA	2748	A	C1'-O4'-C4'	-5.12	104.78	109.90
26	LA	2887	A	C5'-C4'-O4'	5.12	117.49	109.80
26	LA	2899	A	C4'-C3'-O3'	-5.12	105.31	113.00
27	LD	101	ARG	NE-CZ-NH1	5.12	126.62	121.50
42	L6	21	PHE	O-C-N	-5.12	115.77	122.43
48	LN	115	GLU	CA-C-N	5.12	131.19	121.97
48	LN	115	GLU	C-N-CA	5.12	131.19	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	LI	124	THR	O-C-N	-5.12	117.13	123.33
2	SA	89	U	C3'-C2'-C1'	-5.12	96.18	101.30
2	SA	207	C	O4'-C1'-N1	5.12	116.18	108.50
2	SA	413	G	C1'-O4'-C4'	-5.12	104.58	109.70
2	SA	543	U	O4'-C4'-C3'	5.12	109.12	104.00
2	SA	603	U	C4'-C3'-C2'	-5.12	97.48	102.60
2	SA	1402	C	O4'-C1'-N1	5.12	116.18	108.50
17	SQ	19	SER	CA-C-O	-5.12	115.98	121.56
26	LA	806	C	P-O3'-C3'	-5.12	112.52	120.20
26	LA	2623	G	O4'-C4'-C3'	5.12	109.12	104.00
30	LW	58	VAL	N-CA-C	-5.12	100.19	107.77
48	LN	97	ALA	CA-C-O	5.12	125.98	120.55
48	LN	128	THR	CA-C-O	-5.12	115.77	121.81
2	SA	239	U	O4'-C1'-N1	5.12	116.18	108.50
2	SA	411	A	C2'-C3'-O3'	5.12	117.18	109.50
26	LA	1154	G	O3'-P-O5'	-5.12	96.32	104.00
26	LA	1228	G	O4'-C1'-N9	5.12	116.18	108.50
57	LS	100	PHE	CA-C-O	-5.12	115.44	120.82
57	LS	110	GLU	CA-C-O	5.12	125.98	120.55
2	SA	260	G	O4'-C1'-N9	5.12	116.18	108.50
2	SA	1331	G	O3'-P-O5'	-5.12	96.32	104.00
2	SA	1529	G	O4'-C4'-C3'	-5.12	100.98	106.10
13	SM	10	ASP	N-CA-C	5.12	115.80	108.74
13	SM	87	GLY	N-CA-C	5.12	120.23	113.37
24	S3	54	GLN	O-C-N	5.12	127.34	122.07
24	S3	670	ARG	N-CA-CB	5.12	117.64	110.12
26	LA	251	A	P-O5'-C5'	5.12	128.58	120.90
26	LA	437	U	O5'-C5'-C4'	-5.12	103.82	111.50
26	LA	1154	G	C5'-C4'-C3'	-5.12	108.32	116.00
26	LA	1872	A	C4'-C3'-O3'	-5.12	105.32	113.00
26	LA	2084	C	C2'-C3'-O3'	5.12	121.38	113.70
26	LA	2250	G	C4'-C3'-C2'	-5.12	97.48	102.60
33	LZ	53	LYS	N-CA-CB	5.12	119.14	110.49
47	LJ	72	LYS	N-CA-CB	5.12	119.14	110.49
53	LP	57	THR	N-CA-C	5.12	117.64	111.40
24	S3	328	PHE	CA-CB-CG	5.12	118.92	113.80
26	LA	147	C	C2'-C3'-O3'	5.12	121.38	113.70
26	LA	984	A	O4'-C1'-N9	-5.12	100.82	108.50
26	LA	1600	C	P-O5'-C5'	5.12	128.57	120.90
34	L0	12	GLU	O-C-N	-5.12	115.14	122.41
1	SS	3	SER	N-CA-C	5.12	121.69	110.80
3	S1	38	G	C4'-C3'-C2'	-5.12	97.48	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	S1	41	A	C5'-C4'-C3'	-5.12	107.53	115.20
19	SC	213	VAL	O-C-N	-5.12	116.17	122.57
19	SC	217	GLU	N-CA-CB	-5.12	102.59	110.16
20	SD	195	ASN	CA-C-N	5.12	131.31	121.54
20	SD	195	ASN	C-N-CA	5.12	131.31	121.54
24	S3	100	ARG	NH1-CZ-NH2	5.12	125.95	119.30
24	S3	263	VAL	N-CA-C	5.12	115.95	108.53
24	S3	436	ARG	N-CA-CB	5.12	117.64	110.12
26	LA	1462	C	P-O3'-C3'	-5.12	112.53	120.20
26	LA	1497	U	O4'-C1'-N1	5.12	115.87	108.20
26	LA	1773	A	P-O5'-C5'	-5.12	113.23	120.90
26	LA	2350	C	O5'-C5'-C4'	5.12	119.17	111.50
26	LA	2416	C	P-O5'-C5'	5.12	128.57	120.90
2	SA	156	C	P-O3'-C3'	5.11	127.87	120.20
2	SA	347	G	C5'-C4'-C3'	5.11	123.67	116.00
4	S2	19	G	O3'-P-O5'	-5.11	96.33	104.00
13	SM	69	ARG	CD-NE-CZ	5.11	131.56	124.40
26	LA	1595	C	O4'-C1'-N1	5.11	116.17	108.50
26	LA	2313	C	P-O3'-C3'	-5.11	112.53	120.20
26	LA	2338	C	C3'-C2'-O2'	5.11	118.37	110.70
26	LA	2859	G	N9-C1'-C2'	-5.11	104.33	112.00
28	LU	60	HIS	CE1-NE2-CD2	-5.11	103.89	109.00
28	LU	78	GLU	O-C-N	-5.11	115.87	122.77
37	LC	232	SER	CA-C-O	-5.11	115.44	121.07
53	LP	39	PRO	CB-CA-C	5.11	120.80	112.26
55	LQ	51	ALA	N-CA-CB	-5.11	102.74	110.77
57	LS	92	LYS	CB-CA-C	5.11	117.31	109.03
2	SA	988	G	O4'-C1'-N9	5.11	116.17	108.50
10	SJ	99	GLN	CB-CA-C	5.11	118.47	110.19
24	S3	182	VAL	CA-C-O	5.11	125.90	120.48
44	LF	16	GLU	O-C-N	-5.11	116.32	122.15
49	LK	46	ASP	O-C-N	-5.11	116.96	122.79
2	SA	165	G	C4'-C3'-O3'	-5.11	105.33	113.00
2	SA	554	A	C5'-C4'-C3'	-5.11	108.33	116.00
7	SG	133	ALA	N-CA-C	-5.11	106.73	113.17
11	SK	125	LYS	CA-C-N	-5.11	116.20	122.84
11	SK	125	LYS	C-N-CA	-5.11	116.20	122.84
18	SB	30	ILE	O-C-N	-5.11	116.13	122.52
25	LB	43	C	O4'-C1'-C2'	-5.11	102.49	107.60
26	LA	57	C	P-O5'-C5'	5.11	128.57	120.90
26	LA	88	G	C1'-O4'-C4'	-5.11	104.79	109.90
26	LA	113	U	C2'-C3'-O3'	-5.11	106.03	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	405	U	O4'-C1'-N1	5.11	116.17	108.50
26	LA	637	A	C3'-C2'-O2'	-5.11	106.93	114.60
26	LA	968	C	O4'-C1'-N1	5.11	116.17	108.50
26	LA	1955	U	P-O3'-C3'	5.11	127.87	120.20
26	LA	2003	A	C1'-O4'-C4'	-5.11	104.79	109.90
26	LA	2099	U	P-O5'-C5'	5.11	128.57	120.90
34	L0	24	GLU	N-CA-CB	5.11	117.63	110.12
17	SQ	47	ASP	N-CA-C	-5.11	102.96	110.52
18	SB	122	ASP	CA-CB-CG	-5.11	107.49	112.60
20	SD	155	LYS	CA-C-N	5.11	127.55	120.29
20	SD	155	LYS	C-N-CA	5.11	127.55	120.29
24	S3	96	ILE	CA-C-N	5.11	127.55	120.29
24	S3	96	ILE	C-N-CA	5.11	127.55	120.29
25	LB	53	A	O4'-C1'-N9	5.11	116.16	108.50
27	LD	48	ILE	CA-C-O	5.11	126.69	121.58
27	LD	141	HIS	CA-CB-CG	5.11	118.91	113.80
50	LL	13	ARG	N-CA-C	5.11	118.64	111.74
2	SA	562	U	C2'-C3'-O3'	5.11	117.16	109.50
2	SA	1125	U	C1'-O4'-C4'	-5.11	104.59	109.70
2	SA	1295	U	C4'-C3'-C2'	5.11	107.71	102.60
4	S2	70	C	C1'-C2'-O2'	5.11	116.06	108.40
23	SR	13	THR	N-CA-C	-5.11	106.64	112.92
26	LA	69	C	C4'-C3'-O3'	-5.11	105.34	113.00
26	LA	545	U	P-O3'-C3'	5.11	127.86	120.20
26	LA	1316	U	C4'-C3'-C2'	-5.11	97.49	102.60
26	LA	2093	G	O5'-C5'-C4'	5.11	119.16	111.50
26	LA	2646	C	C3'-C2'-O2'	5.11	118.36	110.70
29	LV	88	LYS	N-CA-C	5.11	117.97	111.69
32	LY	68	PHE	CA-CB-CG	-5.11	108.69	113.80
54	LM	50	GLY	CA-C-O	5.11	129.46	120.57
2	SA	42	G	O4'-C4'-C3'	-5.11	98.89	104.00
2	SA	1514	G	C4'-C3'-C2'	-5.11	97.49	102.60
3	S1	21	U	O4'-C4'-C3'	-5.11	98.89	104.00
15	SO	19	ASN	O-C-N	5.11	129.38	122.59
19	SC	106	ARG	N-CA-CB	5.11	119.12	110.49
25	LB	35	C	C4'-C3'-C2'	5.11	107.71	102.60
26	LA	255	A	P-O5'-C5'	-5.11	113.24	120.90
26	LA	545	U	O4'-C1'-N1	5.11	116.16	108.50
26	LA	961	C	P-O5'-C5'	5.11	128.56	120.90
26	LA	1237	A	C5'-C4'-C3'	-5.11	107.54	115.20
26	LA	1885	A	C5'-C4'-C3'	-5.11	108.34	116.00
26	LA	2396	G	C4'-C3'-O3'	-5.11	105.34	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	LW	102	ILE	CA-C-O	-5.11	116.64	121.64
34	L0	3	ALA	N-CA-C	5.11	119.22	112.89
45	LG	177	ARG	CA-C-O	-5.11	114.55	120.62
54	LM	47	ILE	CA-C-N	-5.11	113.46	119.84
54	LM	47	ILE	C-N-CA	-5.11	113.46	119.84
57	LS	54	ARG	NE-CZ-NH2	-5.11	114.61	119.20
18	SB	180	ILE	CA-C-N	5.10	126.22	119.84
18	SB	180	ILE	C-N-CA	5.10	126.22	119.84
26	LA	189	G	C1'-O4'-C4'	5.10	115.00	109.90
26	LA	496	G	C5'-C4'-C3'	5.10	123.66	116.00
26	LA	706	A	C5'-C4'-O4'	5.10	117.46	109.80
37	LC	38	PHE	CB-CG-CD1	5.10	129.38	120.70
1	SS	47	THR	CA-CB-CG2	5.10	119.17	110.50
2	SA	214	C	P-O3'-C3'	5.10	127.86	120.20
2	SA	335	C	C1'-O4'-C4'	-5.10	104.80	109.90
18	SB	185	ILE	CA-C-N	5.10	129.68	123.10
18	SB	185	ILE	C-N-CA	5.10	129.68	123.10
20	SD	164	ARG	NE-CZ-NH1	5.10	126.60	121.50
20	SD	188	SER	O-C-N	-5.10	115.59	122.43
21	SE	9	GLU	N-CA-CB	5.10	119.11	110.49
26	LA	288	U	C1'-O4'-C4'	-5.10	104.80	109.90
26	LA	644	A	P-O5'-C5'	-5.10	113.25	120.90
27	LD	52	HIS	N-CA-CB	-5.10	104.21	111.00
45	LG	50	ASP	N-CA-C	-5.10	105.80	111.36
26	LA	2135	A	P-O5'-C5'	5.10	128.55	120.90
2	SA	31	G	C3'-C2'-C1'	-5.10	96.40	101.50
21	SE	92	ARG	CA-C-O	-5.10	114.84	120.30
26	LA	276	U	C4'-C3'-O3'	5.10	120.65	113.00
26	LA	1077	A	P-O5'-C5'	5.10	128.55	120.90
26	LA	2068	U	O5'-C5'-C4'	-5.10	103.85	111.50
26	LA	2571	U	C4'-C3'-C2'	-5.10	97.50	102.60
28	LU	89	ALA	N-CA-C	5.10	121.66	110.80
38	LE	156	PHE	N-CA-C	5.10	117.70	110.10
45	LG	76	PHE	CA-C-N	5.10	131.28	121.54
45	LG	76	PHE	C-N-CA	5.10	131.28	121.54
45	LG	94	ARG	CG-CD-NE	-5.10	100.78	112.00
2	SA	422	C	P-O3'-C3'	5.10	127.85	120.20
2	SA	757	U	C3'-C2'-O2'	-5.10	103.05	110.70
2	SA	1044	A	P-O5'-C5'	-5.10	113.25	120.90
2	SA	1380	U	C5'-C4'-C3'	5.10	122.85	115.20
16	SP	16	PHE	N-CA-C	-5.10	100.59	108.90
20	SD	117	VAL	CA-C-N	5.10	127.11	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	SD	117	VAL	C-N-CA	5.10	127.11	120.28
24	S3	285	LEU	N-CA-CB	5.10	117.73	110.03
24	S3	375	GLU	CB-CA-C	-5.10	101.18	111.17
26	LA	98	G	C4'-C3'-O3'	-5.10	105.35	113.00
26	LA	1604	C	O4'-C1'-N1	5.10	116.15	108.50
26	LA	1651	G	O3'-P-O5'	5.10	111.65	104.00
26	LA	1886	U	C5'-C4'-C3'	-5.10	108.35	116.00
26	LA	2367	G	O3'-P-O5'	5.10	111.65	104.00
30	LW	17	ASP	O-C-N	-5.10	117.25	123.16
41	L5	9	VAL	CA-C-O	-5.10	113.41	119.58
49	LK	35	MET	CA-C-N	5.10	127.11	120.28
49	LK	35	MET	C-N-CA	5.10	127.11	120.28
50	LL	141	ASP	CA-C-N	5.10	130.87	121.70
50	LL	141	ASP	C-N-CA	5.10	130.87	121.70
58	LT	85	LYS	CG-CD-CE	5.10	123.03	111.30
2	SA	491	G	O4'-C1'-C2'	5.10	112.70	107.60
2	SA	920	U	C4'-C3'-C2'	5.10	107.70	102.60
22	SF	79	ARG	NE-CZ-NH2	-5.10	114.61	119.20
24	S3	598	ILE	CA-C-N	5.10	127.11	120.28
24	S3	598	ILE	C-N-CA	5.10	127.11	120.28
24	S3	621	GLU	O-C-N	-5.10	117.31	123.27
26	LA	20	C	P-O5'-C5'	5.10	128.54	120.90
26	LA	267	C	C3'-C2'-C1'	-5.10	96.20	101.30
26	LA	687	C	C5'-C4'-C3'	5.10	123.64	116.00
26	LA	874	G	P-O5'-C5'	-5.10	113.26	120.90
26	LA	1103	A	C5'-C4'-O4'	5.10	117.44	109.80
26	LA	2414	G	P-O3'-C3'	-5.10	112.56	120.20
51	LI	2	GLN	CB-CG-CD	5.10	121.26	112.60
55	LQ	30	ARG	CA-CB-CG	5.10	124.29	114.10
2	SA	420	U	O3'-P-O5'	5.09	111.64	104.00
2	SA	572	A	P-O5'-C5'	-5.09	113.26	120.90
2	SA	856	C	P-O5'-C5'	5.09	128.54	120.90
2	SA	1041	G	O3'-P-O5'	5.09	111.64	104.00
17	SQ	79	GLU	CA-C-O	5.09	126.70	120.99
19	SC	11	LEU	CA-C-O	5.09	126.17	120.82
24	S3	336	ARG	NH1-CZ-NH2	-5.09	112.68	119.30
25	LB	70	C	O3'-P-O5'	5.09	111.64	104.00
26	LA	264	C	C5'-C4'-O4'	5.09	117.44	109.80
26	LA	484	C	C2'-C3'-O3'	5.09	121.34	113.70
26	LA	539	G	C1'-C2'-O2'	5.09	116.04	108.40
26	LA	893	C	O4'-C1'-N1	5.09	116.14	108.50
26	LA	924	G	C2'-C3'-O3'	5.09	121.34	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1086	A	P-O5'-C5'	5.09	128.54	120.90
26	LA	1214	A	O4'-C4'-C3'	-5.09	98.91	104.00
26	LA	1679	A	C4'-C3'-C2'	-5.09	97.50	102.60
26	LA	1702	G	P-O5'-C5'	-5.09	113.26	120.90
26	LA	2304	G	P-O5'-C5'	-5.09	113.26	120.90
26	LA	2712	C	O4'-C1'-N1	5.09	115.84	108.20
27	LD	134	ILE	N-CA-CB	5.09	118.34	111.21
36	L2	11	GLU	N-CA-CB	-5.09	101.66	110.32
38	LE	95	SER	N-CA-CB	5.09	119.10	110.49
44	LF	22	ASP	N-CA-CB	-5.09	102.48	109.97
44	LF	116	ASP	CB-CA-C	5.09	119.12	111.89
44	LF	168	ASP	CA-CB-CG	-5.09	107.51	112.60
48	LN	18	ARG	NE-CZ-NH2	-5.09	114.61	119.20
51	LI	122	LEU	N-CA-C	5.09	121.65	110.80
2	SA	1290	G	P-O3'-C3'	-5.09	112.56	120.20
21	SE	38	VAL	CB-CA-C	-5.09	102.66	110.50
25	LB	57	A	P-O5'-C5'	-5.09	113.26	120.90
26	LA	215	G	O4'-C1'-N9	5.09	115.84	108.20
26	LA	286	U	O5'-C5'-C4'	5.09	119.14	111.50
26	LA	932	U	C2'-C3'-O3'	5.09	121.34	113.70
26	LA	1672	A	P-O5'-C5'	-5.09	113.26	120.90
26	LA	2375	G	P-O5'-C5'	5.09	128.54	120.90
41	L5	41	ARG	CG-CD-NE	-5.09	100.80	112.00
45	LG	87	LYS	N-CA-C	5.09	121.65	110.80
2	SA	872	A	N9-C1'-C2'	-5.09	106.36	114.00
2	SA	1300	G	C3'-C2'-O2'	-5.09	106.96	114.60
2	SA	1382	C	O4'-C1'-N1	5.09	116.14	108.50
4	S2	17	C	P-O5'-C5'	5.09	128.54	120.90
18	SB	24	PRO	CA-N-CD	-5.09	104.87	112.00
26	LA	31	C	C1'-C2'-O2'	5.09	116.04	108.40
26	LA	772	C	P-O5'-C5'	-5.09	113.26	120.90
26	LA	943	A	P-O5'-C5'	5.09	128.54	120.90
26	LA	975	A	O3'-P-O5'	5.09	111.64	104.00
26	LA	1552	A	P-O5'-C5'	5.09	128.54	120.90
26	LA	1554	U	O4'-C1'-C2'	5.09	110.89	105.80
26	LA	1904	G	C1'-O4'-C4'	-5.09	104.81	109.90
26	LA	2575	C	C4'-C3'-C2'	-5.09	97.51	102.60
47	LJ	140	ALA	N-CA-C	5.09	116.83	111.28
52	LO	123	LYS	CB-CG-CD	5.09	123.01	111.30
55	LQ	98	GLN	CA-C-O	5.09	126.95	121.55
2	SA	426	U	P-O3'-C3'	5.09	127.84	120.20
2	SA	1205	U	C2'-C3'-O3'	5.09	121.34	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	1229	A	C4'-C3'-C2'	-5.09	97.51	102.60
11	SK	31	VAL	CA-CB-CG1	5.09	119.05	110.40
11	SK	118	ASN	N-CA-C	5.09	118.15	111.28
12	SL	78	VAL	N-CA-C	5.09	115.91	108.58
18	SB	17	HIS	ND1-CE1-NE2	5.09	113.49	108.40
26	LA	849	A	O4'-C1'-N9	5.09	116.13	108.50
26	LA	1337	G	O4'-C1'-C2'	-5.09	102.51	107.60
26	LA	2390	U	N1-C1'-C2'	5.09	119.64	112.00
28	LU	77	ASP	CB-CA-C	-5.09	99.36	109.79
34	L0	29	ARG	NE-CZ-NH1	-5.09	116.41	121.50
45	LG	104	THR	CB-CA-C	-5.09	105.09	115.27
50	LL	37	ARG	NH1-CZ-NH2	-5.09	112.68	119.30
2	SA	1465	A	P-O5'-C5'	-5.09	113.27	120.90
26	LA	33	C	O3'-P-O5'	-5.09	96.37	104.00
26	LA	1094	U	P-O3'-C3'	-5.09	112.57	120.20
26	LA	1395	A	C2'-C3'-O3'	5.09	117.13	109.50
26	LA	1558	C	P-O3'-C3'	-5.09	112.57	120.20
26	LA	2060	A	C2'-C3'-O3'	5.09	117.13	109.50
28	LU	104	THR	CA-C-O	5.09	125.86	120.36
38	LE	20	VAL	N-CA-C	-5.09	100.32	107.75
38	LE	83	ARG	NE-CZ-NH1	-5.09	116.41	121.50
2	SA	80	A	O3'-P-O5'	-5.09	96.37	104.00
2	SA	587	G	C5'-C4'-O4'	5.09	116.73	109.10
2	SA	1110	A	P-O3'-C3'	5.09	127.83	120.20
13	SM	92	ARG	N-CA-C	-5.09	106.92	113.23
19	SC	182	ASP	CA-CB-CG	-5.09	107.51	112.60
26	LA	58	G	C5'-C4'-O4'	-5.09	102.17	109.80
26	LA	821	A	C3'-C2'-C1'	5.09	106.39	101.30
26	LA	1732	C	C5'-C4'-C3'	-5.09	107.57	115.20
26	LA	2240	U	C4'-C3'-O3'	-5.09	105.37	113.00
32	LY	76	ARG	O-C-N	-5.09	117.02	123.17
37	LC	63	THR	CA-C-N	5.09	131.12	121.97
37	LC	63	THR	C-N-CA	5.09	131.12	121.97
50	LL	34	ARG	NE-CZ-NH2	-5.09	114.62	119.20
51	LI	17	ASP	N-CA-CB	-5.09	103.17	110.44
54	LM	52	VAL	CB-CA-C	-5.09	102.53	110.52
2	SA	657	U	C5'-C4'-C3'	-5.08	108.37	116.00
4	S2	10	G	C3'-C2'-O2'	-5.08	103.07	110.70
26	LA	431	U	C1'-O4'-C4'	-5.08	104.81	109.90
26	LA	1311	G	C1'-O4'-C4'	5.08	114.78	109.70
26	LA	1870	C	O4'-C1'-C2'	5.08	112.69	107.60
28	LU	18	ARG	CA-C-N	5.08	127.05	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	LU	18	ARG	C-N-CA	5.08	127.05	120.44
44	LF	94	GLN	O-C-N	-5.08	117.36	123.31
55	LQ	5	SER	N-CA-C	-5.08	105.65	111.14
55	LQ	85	LYS	N-CA-C	-5.08	107.05	113.20
57	LS	3	VAL	CB-CA-C	-5.08	104.68	110.73
1	SS	7	GLY	N-CA-C	-5.08	101.97	112.34
2	SA	290	C	C4'-C3'-C2'	-5.08	97.52	102.60
2	SA	747	A	C5'-C4'-C3'	-5.08	108.38	116.00
3	S1	45	G	P-O5'-C5'	5.08	128.53	120.90
13	SM	39	ALA	CA-C-O	5.08	127.81	121.81
15	SO	77	TYR	N-CA-C	-5.08	105.39	111.03
24	S3	210	MET	O-C-N	5.08	128.17	122.22
26	LA	877	A	O3'-P-O5'	5.08	111.63	104.00
26	LA	918	A	C5'-C4'-C3'	-5.08	108.38	116.00
26	LA	1259	G	O4'-C1'-N9	5.08	116.13	108.50
26	LA	1309	G	O4'-C4'-C3'	5.08	109.08	104.00
26	LA	1351	C	C5'-C4'-O4'	5.08	117.42	109.80
26	LA	1367	A	C2'-C3'-O3'	5.08	121.33	113.70
26	LA	1818	U	C1'-O4'-C4'	5.08	114.78	109.70
26	LA	2541	A	P-O5'-C5'	-5.08	113.28	120.90
26	LA	2600	A	O5'-C5'-C4'	5.08	119.12	111.50
26	LA	2797	U	C1'-C2'-O2'	5.08	116.03	108.40
2	SA	46	G	C5'-C4'-C3'	-5.08	108.38	116.00
18	SB	113	LEU	O-C-N	-5.08	116.60	122.09
24	S3	258	ASN	CA-CB-CG	5.08	117.68	112.60
26	LA	1261	C	C3'-C2'-C1'	5.08	106.38	101.30
26	LA	2199	A	C5'-C4'-O4'	5.08	117.42	109.80
27	LD	68	ARG	NE-CZ-NH2	-5.08	114.63	119.20
34	L0	16	THR	CB-CA-C	-5.08	102.90	110.88
36	L2	6	HIS	CA-C-N	5.08	124.69	119.56
36	L2	6	HIS	C-N-CA	5.08	124.69	119.56
27	LD	176	ARG	N-CA-C	5.08	116.82	111.28
50	LL	53	TYR	CA-CB-CG	-5.08	104.76	113.90
2	SA	288	A	O3'-P-O5'	-5.08	96.38	104.00
2	SA	488	C	C4'-C3'-O3'	-5.08	105.38	113.00
2	SA	676	A	P-O3'-C3'	-5.08	112.58	120.20
2	SA	1395	C	C3'-C2'-O2'	-5.08	103.08	110.70
8	SH	36	ALA	CA-C-O	-5.08	114.36	120.10
16	SP	72	ALA	CA-C-O	5.08	125.84	120.10
20	SD	46	ARG	N-CA-CB	5.08	117.68	110.16
21	SE	82	HIS	ND1-CE1-NE2	5.08	113.48	108.40
26	LA	1960	A	C3'-C2'-C1'	5.08	106.38	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2741	A	C1'-O4'-C4'	-5.08	104.82	109.90
26	LA	2903	U	O4'-C1'-N1	5.08	116.12	108.50
40	L4	28	THR	O-C-N	-5.08	116.33	122.48
54	LM	24	VAL	CB-CA-C	-5.08	103.64	111.31
55	LQ	69	ASP	O-C-N	-5.08	116.02	122.27
26	LA	2455	G	C2'-C3'-O3'	5.08	121.31	113.70
26	LA	2785	C	P-O5'-C5'	5.08	128.52	120.90
30	LW	64	ILE	O-C-N	-5.08	117.20	123.09
38	LE	68	PHE	O-C-N	-5.08	116.03	122.27
45	LG	82	TYR	CA-C-N	5.08	124.84	119.76
45	LG	82	TYR	C-N-CA	5.08	124.84	119.76
50	LL	17	VAL	CA-C-O	5.08	125.96	120.53
2	SA	312	C	O4'-C1'-C2'	5.08	112.67	107.60
2	SA	1021	A	C5'-C4'-C3'	-5.08	108.39	116.00
2	SA	1537	U	C2'-C3'-O3'	5.08	117.11	109.50
4	S2	61	U	P-O3'-C3'	-5.08	112.59	120.20
5	ST	81	GLN	N-CA-C	-5.08	105.45	111.69
10	SJ	61	ALA	N-CA-CB	-5.08	102.66	110.12
20	SD	177	MET	CG-SD-CE	-5.08	89.73	100.90
24	S3	583	HIS	ND1-CE1-NE2	5.08	113.48	108.40
26	LA	219	A	O5'-C5'-C4'	5.08	119.11	111.50
26	LA	222	A	C1'-C2'-O2'	5.08	119.41	111.80
26	LA	587	C	N1-C1'-C2'	-5.08	106.39	114.00
26	LA	2118	U	O4'-C1'-N1	5.08	115.81	108.20
28	LU	106	VAL	N-CA-CB	5.08	118.72	111.82
32	LY	74	LYS	O-C-N	-5.08	115.84	122.59
33	LZ	63	ILE	CA-CB-CG1	5.08	119.03	110.40
38	LE	197	THR	OG1-CB-CG2	-5.08	99.15	109.30
46	LH	144	ALA	N-CA-C	5.08	116.81	111.28
2	SA	93	U	C5'-C4'-C3'	5.07	123.61	116.00
2	SA	495	A	P-O5'-C5'	5.07	128.51	120.90
2	SA	1236	A	O4'-C1'-N9	5.07	116.11	108.50
2	SA	1487	G	P-O3'-C3'	5.07	127.81	120.20
24	S3	104	VAL	CA-CB-CG2	-5.07	101.78	110.40
26	LA	133	U	C1'-O4'-C4'	-5.07	104.83	109.90
26	LA	724	U	O4'-C1'-C2'	5.07	112.67	107.60
26	LA	798	G	O4'-C4'-C3'	5.07	109.07	104.00
26	LA	1763	G	C5'-C4'-C3'	-5.07	108.39	116.00
26	LA	2366	A	C4'-C3'-C2'	-5.07	97.53	102.60
26	LA	2899	A	C2'-C3'-O3'	5.07	121.31	113.70
45	LG	78	ILE	N-CA-C	5.07	119.89	109.34
2	SA	871	U	P-O3'-C3'	5.07	127.81	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SA	987	G	C3'-C2'-O2'	5.07	118.31	110.70
2	SA	1105	A	C1'-C2'-O2'	5.07	116.01	108.40
26	LA	953	G	O4'-C4'-C3'	-5.07	98.93	104.00
26	LA	2840	C	C5'-C4'-C3'	-5.07	108.39	116.00
37	LC	211	LYS	CA-C-N	5.07	129.48	123.19
37	LC	211	LYS	C-N-CA	5.07	129.48	123.19
51	LI	40	THR	CA-C-O	-5.07	115.95	121.89
2	SA	29	U	C4'-C3'-O3'	-5.07	105.39	113.00
2	SA	227	G	O3'-P-O5'	-5.07	96.39	104.00
2	SA	565	U	C5'-C4'-O4'	-5.07	102.20	109.80
2	SA	985	C	C5'-C4'-O4'	5.07	117.41	109.80
2	SA	1517	G	O4'-C1'-N9	5.07	116.11	108.50
10	SJ	64	GLN	CA-C-N	5.07	130.77	122.81
10	SJ	64	GLN	C-N-CA	5.07	130.77	122.81
13	SM	8	ILE	CB-CA-C	5.07	115.28	110.16
25	LB	46	A	O4'-C1'-C2'	5.07	112.67	107.60
26	LA	130	C	C4'-C3'-C2'	-5.07	97.53	102.60
26	LA	1520	U	O4'-C1'-N1	5.07	116.11	108.50
26	LA	1818	U	C4'-C3'-C2'	5.07	107.67	102.60
26	LA	2334	U	C5'-C4'-C3'	-5.07	108.39	116.00
31	LX	61	LEU	CA-C-O	5.07	126.18	120.70
34	L0	58	ASN	OD1-CG-ND2	-5.07	117.53	122.60
2	SA	1187	G	P-O5'-C5'	-5.07	113.30	120.90
26	LA	600	G	C4'-C3'-C2'	-5.07	97.53	102.60
26	LA	2702	G	O4'-C1'-N9	5.07	116.10	108.50
29	LV	74	ILE	N-CA-C	5.07	114.91	108.12
2	SA	176	C	C2'-C3'-O3'	5.07	121.30	113.70
2	SA	295	C	P-O5'-C5'	5.07	128.50	120.90
2	SA	1441	A	O4'-C1'-N9	5.07	116.10	108.50
18	SB	46	VAL	N-CA-C	5.07	119.83	108.88
23	SR	54	LEU	N-CA-C	5.07	116.80	111.28
24	S3	692	ASN	CB-CA-C	-5.07	102.24	110.85
26	LA	2535	G	O5'-C5'-C4'	5.07	119.10	111.50
26	LA	2821	A	C5'-C4'-C3'	-5.07	108.40	116.00
26	LA	2878	U	P-O3'-C3'	5.07	127.80	120.20
46	LH	148	ARG	CG-CD-NE	-5.07	100.85	112.00
51	LI	12	LEU	N-CA-CB	5.07	119.23	111.22
2	SA	135	C	C4'-C3'-C2'	-5.07	97.53	102.60
2	SA	170	U	O5'-C5'-C4'	5.07	119.10	111.50
2	SA	1196	A	P-O5'-C5'	5.07	128.50	120.90
2	SA	1238	A	C5'-C4'-C3'	-5.07	108.40	116.00
7	SG	169	SER	O-C-N	-5.07	115.85	122.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	SJ	29	ALA	CA-C-O	5.07	125.79	120.42
18	SB	89	PHE	N-CA-C	-5.07	101.90	109.95
26	LA	26	G	O4'-C4'-C3'	5.07	109.07	104.00
26	LA	1046	A	O4'-C4'-C3'	-5.07	101.03	106.10
26	LA	1967	C	O4'-C4'-C3'	-5.07	98.94	104.00
26	LA	2146	C	C1'-C2'-O2'	-5.07	104.20	111.80
26	LA	2211	A	O3'-P-O5'	5.07	111.60	104.00
26	LA	2392	A	O4'-C4'-C3'	5.07	109.06	104.00
26	LA	2393	U	P-O3'-C3'	-5.07	112.60	120.20
33	LZ	41	SER	O-C-N	-5.07	116.76	122.03
48	LN	111	ILE	CB-CA-C	-5.07	102.80	110.95
49	LK	102	ARG	CA-C-N	5.07	127.07	120.28
49	LK	102	ARG	C-N-CA	5.07	127.07	120.28
49	LK	141	ASP	CB-CA-C	5.07	119.72	110.10
50	LL	34	ARG	N-CA-C	-5.07	105.65	111.07
54	LM	119	ALA	O-C-N	-5.07	115.50	121.32
2	SA	98	A	O4'-C1'-N9	5.06	116.10	108.50
2	SA	579	A	O4'-C1'-N9	5.06	116.10	108.50
2	SA	1162	C	O4'-C1'-N1	5.06	116.09	108.50
24	S3	133	LYS	CB-CA-C	5.06	118.65	111.86
26	LA	1750	G	C3'-C2'-C1'	-5.06	96.24	101.30
26	LA	1805	A	C4'-C3'-C2'	-5.06	97.54	102.60
26	LA	2196	C	O4'-C1'-N1	5.06	116.10	108.50
32	LY	5	ALA	N-CA-C	5.06	116.50	108.96
37	LC	215	SER	N-CA-CB	5.06	120.17	111.00
39	L3	52	LYS	CG-CD-CE	5.06	122.95	111.30
52	LO	116	ALA	O-C-N	-5.06	116.30	122.22
2	SA	1028	C	C4'-C3'-C2'	-5.06	97.54	102.60
2	SA	1090	U	C5'-C4'-O4'	5.06	117.39	109.80
2	SA	1293	C	P-O5'-C5'	5.06	128.50	120.90
3	S1	50	U	C5'-C4'-C3'	-5.06	108.41	116.00
9	SI	19	PHE	N-CA-C	5.06	116.86	108.20
19	SC	79	LYS	N-CA-C	5.06	115.22	108.38
20	SD	89	LEU	CA-C-N	5.06	127.06	120.28
20	SD	89	LEU	C-N-CA	5.06	127.06	120.28
24	S3	515	GLY	N-CA-C	-5.06	101.18	113.18
24	S3	546	GLY	O-C-N	-5.06	116.97	122.84
25	LB	77	U	O3'-P-O5'	-5.06	96.41	104.00
26	LA	573	U	O4'-C1'-C2'	-5.06	100.74	105.80
26	LA	1313	U	O4'-C1'-N1	5.06	116.09	108.50
26	LA	1582	C	O3'-P-O5'	-5.06	96.41	104.00
26	LA	1869	G	C4'-C3'-C2'	-5.06	97.54	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2171	A	C5'-C4'-C3'	-5.06	107.61	115.20
48	LN	101	ILE	N-CA-CB	5.06	117.78	112.21
50	LL	131	ASN	CA-CB-CG	-5.06	107.54	112.60
2	SA	65	A	O4'-C1'-N9	5.06	116.09	108.50
2	SA	1454	G	N9-C1'-C2'	-5.06	104.41	112.00
26	LA	1649	G	C1'-O4'-C4'	-5.06	104.84	109.90
26	LA	1781	U	O3'-P-O5'	-5.06	96.41	104.00
26	LA	1964	G	O5'-C5'-C4'	5.06	119.29	111.70
26	LA	2175	C	O4'-C4'-C3'	-5.06	98.94	104.00
26	LA	2714	G	C5'-C4'-C3'	5.06	123.59	116.00
2	SA	37	U	C5'-C4'-O4'	5.06	117.39	109.80
2	SA	66	A	C4'-C3'-C2'	5.06	107.66	102.60
2	SA	372	C	C2'-C3'-O3'	5.06	117.09	109.50
2	SA	401	C	C4'-C3'-C2'	-5.06	97.54	102.60
18	SB	6	ARG	CB-CA-C	-5.06	102.25	110.85
23	SR	44	THR	CA-C-O	5.06	125.76	119.79
24	S3	555	GLY	N-CA-C	5.06	119.25	112.77
26	LA	140	C	C4'-C3'-O3'	5.06	120.59	113.00
26	LA	242	G	C2'-C3'-O3'	5.06	117.09	109.50
26	LA	581	C	O3'-P-O5'	5.06	111.59	104.00
26	LA	1410	G	C3'-C2'-O2'	5.06	118.29	110.70
26	LA	1612	C	O4'-C1'-N1	5.06	116.09	108.50
35	L1	3	THR	CA-CB-OG1	5.06	117.19	109.60
2	SA	285	C	O4'-C1'-C2'	5.06	112.66	107.60
4	S2	21	U	P-O3'-C3'	-5.06	112.61	120.20
11	SK	25	SER	CA-C-N	5.06	127.76	120.38
11	SK	25	SER	C-N-CA	5.06	127.76	120.38
16	SP	18	GLN	CA-C-N	-5.06	116.92	123.19
16	SP	18	GLN	C-N-CA	-5.06	116.92	123.19
26	LA	660	C	O4'-C4'-C3'	5.06	109.06	104.00
26	LA	2364	C	P-O3'-C3'	-5.06	112.61	120.20
26	LA	2667	C	O4'-C1'-N1	5.06	116.09	108.50
42	L6	58	ILE	O-C-N	5.06	126.98	121.87
50	LL	100	VAL	CA-CB-CG2	-5.06	101.80	110.40
50	LL	120	ARG	O-C-N	-5.06	115.86	122.59
1	SS	18	VAL	CA-C-N	5.06	127.56	120.28
1	SS	18	VAL	C-N-CA	5.06	127.56	120.28
10	SJ	45	ARG	NH1-CZ-NH2	5.06	125.87	119.30
20	SD	68	GLU	CB-CG-CD	5.06	121.19	112.60
25	LB	84	G	C4'-C3'-C2'	-5.06	97.54	102.60
26	LA	125	A	C5'-C4'-C3'	-5.06	107.61	115.20
26	LA	2765	A	C1'-C2'-O2'	-5.06	100.82	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	LF	33	VAL	N-CA-C	-5.06	105.61	110.72
2	SA	556	C	O4'-C1'-N1	5.05	116.08	108.50
2	SA	804	U	C2'-C3'-O3'	5.05	121.28	113.70
2	SA	1118	U	O4'-C1'-N1	5.05	116.08	108.50
5	ST	28	ARG	NE-CZ-NH2	-5.05	114.65	119.20
11	SK	14	GLN	N-CA-CB	5.05	117.40	109.97
18	SB	14	HIS	N-CA-C	5.05	121.57	110.80
26	LA	1556	C	C5'-C4'-C3'	-5.05	108.42	116.00
26	LA	2112	G	C5'-C4'-O4'	5.05	117.38	109.80
26	LA	2413	G	P-O3'-C3'	-5.05	112.62	120.20
26	LA	2620	C	O5'-C5'-C4'	-5.05	103.92	111.50
26	LA	2873	A	C4'-C3'-O3'	5.05	116.98	109.40
30	LW	65	GLN	CA-C-N	5.05	127.38	120.46
30	LW	65	GLN	C-N-CA	5.05	127.38	120.46
37	LC	173	THR	CB-CA-C	-5.05	99.67	109.68
38	LE	14	ILE	N-CA-CB	5.05	117.54	110.56
50	LL	84	ILE	CA-C-N	-5.05	115.93	123.11
50	LL	84	ILE	C-N-CA	-5.05	115.93	123.11
55	LQ	90	VAL	N-CA-C	5.05	116.91	109.63
57	LS	65	ASN	N-CA-C	5.05	117.17	111.11
9	SI	106	ASP	CA-CB-CG	5.05	117.65	112.60
26	LA	602	A	C4'-C3'-C2'	-5.05	97.55	102.60
32	LY	45	HIS	CB-CG-CD2	-5.05	124.63	131.20
1	SS	52	ASN	CB-CG-ND2	-5.05	108.82	116.40
2	SA	230	G	O3'-P-O5'	-5.05	96.42	104.00
2	SA	449	G	C5'-C4'-O4'	5.05	117.38	109.80
2	SA	1422	G	N9-C1'-C2'	-5.05	104.42	112.00
25	LB	111	U	O4'-C4'-C3'	5.05	109.05	104.00
26	LA	912	C	O5'-C5'-C4'	-5.05	103.92	111.50
26	LA	1580	A	C4'-C3'-C2'	-5.05	97.55	102.60
48	LN	54	GLN	OE1-CD-NE2	-5.05	117.55	122.60
2	SA	422	C	C5'-C4'-C3'	5.05	122.78	115.20
2	SA	447	G	O4'-C1'-N9	5.05	116.07	108.50
2	SA	911	U	O3'-P-O5'	-5.05	96.43	104.00
2	SA	1078	U	C4'-C3'-C2'	-5.05	97.55	102.60
2	SA	1251	A	O5'-C5'-C4'	-5.05	103.93	111.50
4	S2	62	C	C5'-C4'-C3'	5.05	123.57	116.00
12	SL	8	ARG	CA-C-N	5.05	127.07	122.37
12	SL	8	ARG	C-N-CA	5.05	127.07	122.37
24	S3	613	GLU	CA-C-O	-5.05	115.46	120.66
25	LB	115	A	C5'-C4'-C3'	5.05	123.58	116.00
26	LA	133	U	O4'-C4'-C3'	5.05	109.05	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1180	U	C4'-C3'-O3'	-5.05	105.43	113.00
26	LA	1330	C	O4'-C4'-C3'	-5.05	98.95	104.00
26	LA	1404	C	C4'-C3'-C2'	-5.05	97.55	102.60
26	LA	1449	G	O4'-C1'-N9	5.05	116.08	108.50
26	LA	1607	C	C5'-C4'-O4'	5.05	116.68	109.10
26	LA	1687	G	C4'-C3'-O3'	-5.05	105.43	113.00
26	LA	2085	U	P-O5'-C5'	5.05	128.47	120.90
26	LA	2277	G	C4'-C3'-O3'	-5.05	105.42	113.00
30	LW	84	PHE	N-CA-C	5.05	116.62	108.34
37	LC	83	ASN	CA-C-N	5.05	127.05	120.28
37	LC	83	ASN	C-N-CA	5.05	127.05	120.28
46	LH	108	PHE	N-CA-CB	-5.05	101.96	110.49
54	LM	25	LEU	O-C-N	-5.05	116.98	122.84
2	SA	361	G	P-O3'-C3'	-5.05	112.63	120.20
2	SA	564	C	C1'-O4'-C4'	5.05	114.95	109.90
2	SA	993	G	C5'-C4'-O4'	5.05	116.67	109.10
2	SA	1181	G	O4'-C1'-C2'	-5.05	100.75	105.80
44	LF	88	ARG	CB-CA-C	5.05	120.11	110.17
48	LN	78	ARG	CB-CA-C	5.05	118.14	109.51
2	SA	1022	A	P-O3'-C3'	-5.05	112.63	120.20
2	SA	1258	G	C5'-C4'-C3'	5.05	123.57	116.00
15	SO	35	ILE	N-CA-C	5.05	115.77	110.62
18	SB	164	ASP	CA-CB-CG	-5.05	107.55	112.60
25	LB	117	G	C4'-C3'-O3'	-5.05	105.43	113.00
26	LA	578	G	O4'-C4'-C3'	5.05	109.05	104.00
26	LA	1267	U	C5'-C4'-O4'	-5.05	102.23	109.80
26	LA	1431	A	C4'-C3'-O3'	-5.05	105.43	113.00
26	LA	1669	A	N9-C1'-C2'	5.05	119.57	112.00
26	LA	2395	C	C5'-C4'-C3'	5.05	123.57	116.00
26	LA	2459	A	C4'-C3'-O3'	-5.05	105.43	113.00
30	LW	3	LYS	CA-C-N	5.05	127.26	120.50
30	LW	3	LYS	C-N-CA	5.05	127.26	120.50
40	L4	39	ASP	N-CA-C	-5.05	100.72	109.15
2	SA	195	A	C4'-C3'-O3'	-5.04	105.43	113.00
2	SA	246	A	C3'-C2'-O2'	-5.04	107.03	114.60
2	SA	1085	U	O4'-C1'-C2'	5.04	110.84	105.80
7	SG	61	PHE	CA-C-N	5.04	127.54	120.28
7	SG	61	PHE	C-N-CA	5.04	127.54	120.28
8	SH	76	ARG	NH1-CZ-NH2	-5.04	112.74	119.30
13	SM	24	VAL	N-CA-CB	5.04	119.46	111.99
20	SD	187	ARG	CB-CG-CD	5.04	122.90	111.30
24	S3	289	VAL	O-C-N	-5.04	116.78	121.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	297	G	C4'-C3'-O3'	-5.04	105.43	113.00
26	LA	963	U	O4'-C1'-N1	5.04	116.07	108.50
26	LA	1640	A	C3'-C2'-C1'	5.04	106.34	101.30
26	LA	2388	A	C1'-O4'-C4'	-5.04	104.86	109.90
36	L2	16	CYS	O-C-N	-5.04	117.07	123.12
58	LT	71	LYS	O-C-N	-5.04	116.60	122.96
2	SA	198	G	O4'-C1'-C2'	-5.04	102.56	107.60
2	SA	747	A	C4'-C3'-C2'	-5.04	97.56	102.60
2	SA	761	G	N9-C1'-C2'	-5.04	104.43	112.00
2	SA	945	G	C5'-C4'-C3'	-5.04	108.44	116.00
2	SA	1152	A	O4'-C1'-N9	5.04	116.07	108.50
2	SA	1261	A	C3'-C2'-C1'	5.04	106.34	101.30
9	SI	15	ALA	CA-C-O	5.04	125.70	120.30
11	SK	14	GLN	CG-CD-OE1	5.04	130.88	120.80
12	SL	94	TYR	O-C-N	-5.04	117.07	123.17
25	LB	111	U	C4'-C3'-C2'	-5.04	97.56	102.60
26	LA	133	U	C4'-C3'-O3'	-5.04	105.43	113.00
26	LA	374	A	O4'-C4'-C3'	-5.04	98.96	104.00
26	LA	402	A	C1'-C2'-O2'	5.04	115.97	108.40
26	LA	1128	G	C5'-C4'-C3'	-5.04	107.63	115.20
26	LA	1547	C	C1'-O4'-C4'	-5.04	104.86	109.90
26	LA	1829	A	C2'-C3'-O3'	5.04	121.27	113.70
26	LA	2092	U	C1'-O4'-C4'	-5.04	104.66	109.70
31	LX	19	ARG	CA-C-N	5.04	127.30	120.44
31	LX	19	ARG	C-N-CA	5.04	127.30	120.44
46	LH	31	GLU	N-CA-C	5.04	117.21	110.35
55	LQ	35	ILE	O-C-N	5.04	128.71	123.26
2	SA	670	G	P-O5'-C5'	5.04	128.46	120.90
2	SA	784	A	C5'-C4'-C3'	-5.04	108.44	116.00
2	SA	1028	C	O4'-C1'-N1	5.04	116.06	108.50
2	SA	1065	U	C1'-O4'-C4'	-5.04	104.66	109.70
2	SA	1521	C	P-O3'-C3'	-5.04	112.64	120.20
26	LA	1352	U	O5'-C5'-C4'	-5.04	103.94	111.50
26	LA	1514	G	C4'-C3'-O3'	-5.04	105.44	113.00
29	LV	41	ALA	CA-C-O	-5.04	115.51	120.70
31	LX	14	LYS	O-C-N	5.04	127.47	122.12
37	LC	183	ASP	CB-CA-C	5.04	118.79	110.88
2	SA	30	U	C2'-C3'-O3'	5.04	117.06	109.50
2	SA	97	G	O4'-C1'-N9	5.04	116.06	108.50
2	SA	256	U	C5'-C4'-O4'	5.04	117.36	109.80
2	SA	763	G	C1'-C2'-O2'	5.04	115.96	108.40
2	SA	1371	G	O3'-P-O5'	-5.04	96.44	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	SP	61	VAL	CA-C-O	-5.04	115.51	120.85
26	LA	390	U	O5'-C5'-C4'	-5.04	104.14	111.70
26	LA	2476	A	O4'-C1'-C2'	5.04	112.64	107.60
2	SA	36	C	C5'-C4'-C3'	-5.04	108.44	116.00
2	SA	127	G	P-O3'-C3'	-5.04	112.64	120.20
2	SA	360	G	O4'-C4'-C3'	5.04	109.04	104.00
2	SA	386	C	O4'-C1'-N1	5.04	116.06	108.50
2	SA	387	U	C2'-C3'-O3'	-5.04	106.14	113.70
2	SA	1126	U	O4'-C1'-C2'	5.04	110.84	105.80
2	SA	1242	G	P-O5'-C5'	5.04	128.46	120.90
2	SA	1478	U	O4'-C1'-N1	5.04	116.06	108.50
12	SL	79	ILE	CB-CA-C	-5.04	102.89	110.55
16	SP	34	GLU	N-CA-CB	5.04	120.25	111.13
23	SR	47	ARG	CA-C-N	5.04	126.99	120.44
23	SR	47	ARG	C-N-CA	5.04	126.99	120.44
24	S3	145	ARG	CB-CA-C	5.04	118.64	109.62
24	S3	210	MET	CA-C-N	5.04	131.04	121.97
24	S3	210	MET	C-N-CA	5.04	131.04	121.97
24	S3	329	VAL	O-C-N	-5.04	116.27	122.57
26	LA	201	C	O4'-C1'-N1	5.04	116.06	108.50
26	LA	1037	G	C1'-C2'-O2'	5.04	115.96	108.40
26	LA	1283	G	O5'-C5'-C4'	5.04	119.06	111.50
26	LA	1693	U	C5'-C4'-C3'	-5.04	107.64	115.20
26	LA	1802	A	O5'-C5'-C4'	5.04	119.06	111.50
46	LH	4	ALA	CA-C-O	5.04	125.56	119.11
46	LH	157	LYS	CA-C-O	5.04	124.48	118.69
50	LL	73	VAL	N-CA-C	5.04	116.89	109.63
2	SA	420	U	C4'-C3'-O3'	-5.04	105.44	113.00
2	SA	779	C	P-O3'-C3'	-5.04	112.64	120.20
24	S3	119	GLN	CA-C-N	5.04	125.06	119.32
24	S3	119	GLN	C-N-CA	5.04	125.06	119.32
24	S3	469	VAL	O-C-N	-5.04	116.97	121.91
27	LD	137	GLY	N-CA-C	-5.04	108.66	115.36
52	LO	51	ARG	NE-CZ-NH1	-5.04	116.46	121.50
52	LO	112	LEU	O-C-N	-5.04	116.41	122.15
2	SA	790	A	C2'-C3'-O3'	5.04	117.05	109.50
2	SA	899	C	O4'-C4'-C3'	5.04	109.04	104.00
14	SN	86	ALA	O-C-N	-5.04	116.41	122.15
26	LA	95	A	C1'-C2'-O2'	5.04	115.95	108.40
26	LA	266	G	C4'-C3'-C2'	-5.04	97.56	102.60
26	LA	1743	G	O4'-C4'-C3'	5.04	109.04	104.00
26	LA	2410	G	P-O3'-C3'	5.04	127.75	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2572	A	C1'-O4'-C4'	-5.04	104.66	109.70
41	L5	41	ARG	NH1-CZ-NH2	-5.04	112.75	119.30
42	L6	43	LEU	N-CA-C	5.04	116.85	111.36
42	L6	57	VAL	O-C-N	-5.04	116.11	121.80
47	LJ	113	GLU	CB-CA-C	5.04	120.44	110.42
49	LK	38	CYS	N-CA-C	5.04	116.58	111.14
56	LR	90	ALA	N-CA-C	5.04	117.73	110.28
57	LS	55	GLN	OE1-CD-NE2	-5.04	117.56	122.60
57	LS	78	PHE	CA-CB-CG	5.04	118.84	113.80
2	SA	182	A	O3'-P-O5'	-5.03	96.45	104.00
2	SA	617	G	C4'-C3'-O3'	-5.03	105.45	113.00
2	SA	924	C	C4'-C3'-C2'	-5.03	97.57	102.60
2	SA	1494	G	O5'-C5'-C4'	5.03	119.05	111.50
15	SO	16	ARG	CD-NE-CZ	5.03	131.45	124.40
20	SD	112	GLU	N-CA-CB	5.03	117.31	110.01
24	S3	634	LEU	N-CA-CB	5.03	117.52	110.12
26	LA	162	U	C5'-C4'-O4'	5.03	116.65	109.10
26	LA	282	A	C4'-C3'-C2'	-5.03	97.57	102.60
26	LA	548	G	O4'-C4'-C3'	-5.03	101.07	106.10
26	LA	748	G	O3'-P-O5'	-5.03	96.45	104.00
26	LA	1149	G	C1'-O4'-C4'	-5.03	104.87	109.90
26	LA	1539	U	C5'-C4'-O4'	5.03	117.35	109.80
26	LA	1775	U	O4'-C1'-C2'	-5.03	102.57	107.60
39	L3	35	GLU	O-C-N	-5.03	116.62	122.81
44	LF	84	THR	CA-C-O	5.03	125.57	119.38
48	LN	69	ARG	NE-CZ-NH1	5.03	126.53	121.50
48	LN	94	THR	N-CA-C	-5.03	105.98	111.82
51	LI	91	PHE	N-CA-CB	5.03	118.14	110.44
2	SA	429	U	C3'-C2'-C1'	-5.03	96.47	101.50
2	SA	1436	U	C4'-C3'-C2'	-5.03	97.57	102.60
21	SE	88	HIS	CB-CA-C	-5.03	102.39	110.14
23	SR	63	TYR	CA-CB-CG	-5.03	104.84	113.90
26	LA	1901	A	C4'-C3'-C2'	-5.03	97.57	102.60
26	LA	2086	U	P-O3'-C3'	5.03	127.75	120.20
51	LI	77	THR	CB-CA-C	-5.03	102.29	109.84
1	SS	10	ILE	CA-CB-CG1	5.03	118.95	110.40
2	SA	298	A	P-O3'-C3'	-5.03	112.65	120.20
2	SA	322	C	C5'-C4'-C3'	-5.03	108.46	116.00
2	SA	637	C	C2'-C3'-O3'	5.03	121.25	113.70
2	SA	1339	A	O4'-C1'-N9	5.03	116.05	108.50
7	SG	162	SER	O-C-N	-5.03	116.42	122.15
9	SI	48	ARG	N-CA-CB	-5.03	102.04	110.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	652	LYS	N-CA-C	-5.03	100.26	108.76
25	LB	23	G	C2'-C3'-O3'	5.03	121.24	113.70
25	LB	102	G	O4'-C1'-N9	5.03	116.05	108.50
26	LA	1207	C	O3'-P-O5'	-5.03	96.45	104.00
26	LA	1976	U	O4'-C4'-C3'	5.03	109.03	104.00
26	LA	2073	C	P-O3'-C3'	5.03	127.75	120.20
26	LA	2143	C	C4'-C3'-O3'	-5.03	105.45	113.00
26	LA	2159	G	C1'-O4'-C4'	-5.03	104.87	109.90
26	LA	2253	G	C1'-C2'-O2'	5.03	115.95	108.40
26	LA	2315	G	O3'-P-O5'	-5.03	96.45	104.00
26	LA	2731	G	C5'-C4'-C3'	-5.03	108.45	116.00
26	LA	2904	U	C3'-C2'-C1'	5.03	106.33	101.30
29	LV	52	GLU	O-C-N	5.03	129.28	122.59
46	LH	32	LEU	CA-C-N	5.03	130.25	123.11
46	LH	32	LEU	C-N-CA	5.03	130.25	123.11
50	LL	117	ALA	CA-C-O	5.03	125.75	119.97
24	S3	503	LYS	CA-C-N	5.03	130.14	122.65
24	S3	503	LYS	C-N-CA	5.03	130.14	122.65
26	LA	2494	G	N9-C1'-C2'	5.03	119.54	112.00
54	LM	56	ASP	CA-C-N	-5.03	116.46	122.90
54	LM	56	ASP	C-N-CA	-5.03	116.46	122.90
2	SA	25	C	C1'-C2'-O2'	5.03	115.94	108.40
2	SA	674	G	C3'-C2'-C1'	5.03	106.33	101.30
2	SA	941	G	C5'-C4'-C3'	-5.03	108.46	116.00
2	SA	1062	U	O4'-C1'-N1	5.03	116.04	108.50
2	SA	1150	A	C3'-C2'-C1'	5.03	106.33	101.30
2	SA	1226	C	O4'-C1'-C2'	5.03	110.83	105.80
2	SA	1317	C	O3'-P-O5'	5.03	111.54	104.00
14	SN	31	SER	CA-C-N	5.03	131.14	121.54
14	SN	31	SER	C-N-CA	5.03	131.14	121.54
18	SB	76	SER	CA-C-N	5.03	127.02	120.28
18	SB	76	SER	C-N-CA	5.03	127.02	120.28
19	SC	53	ARG	CA-C-N	5.03	130.04	122.75
19	SC	53	ARG	C-N-CA	5.03	130.04	122.75
22	SF	112	ARG	N-CA-CB	5.03	118.86	110.41
25	LB	71	C	O4'-C1'-N1	5.03	116.04	108.50
26	LA	90	U	C3'-C2'-C1'	5.03	106.33	101.30
26	LA	494	G	C1'-O4'-C4'	-5.03	104.87	109.90
26	LA	750	A	P-O5'-C5'	-5.03	113.36	120.90
26	LA	1804	C	C4'-C3'-C2'	-5.03	97.57	102.60
26	LA	1982	U	P-O5'-C5'	5.03	128.44	120.90
26	LA	2047	C	C1'-C2'-O2'	5.03	115.94	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	2213	U	P-O5'-C5'	-5.03	113.36	120.90
26	LA	2700	A	C5'-C4'-C3'	-5.03	108.46	116.00
26	LA	2775	G	C2'-C3'-O3'	5.03	121.24	113.70
26	LA	2830	C	P-O3'-C3'	-5.03	112.66	120.20
28	LU	7	HIS	CG-CD2-NE2	5.03	112.23	107.20
33	LZ	47	THR	CA-CB-OG1	-5.03	102.06	109.60
39	L3	27	LEU	N-CA-C	5.03	121.51	110.80
48	LN	63	LYS	CB-CA-C	-5.03	101.03	109.53
51	LI	46	PHE	N-CA-CB	5.03	117.60	110.06
1	SS	5	LYS	N-CA-C	5.03	117.33	110.24
1	SS	91	LYS	N-CA-CB	5.03	119.04	110.50
2	SA	316	C	O3'-P-O5'	-5.03	96.46	104.00
2	SA	1162	C	P-O5'-C5'	-5.03	113.36	120.90
2	SA	1423	G	O4'-C1'-C2'	-5.03	102.57	107.60
26	LA	361	G	O4'-C1'-N9	5.03	116.04	108.50
26	LA	1080	A	O3'-P-O5'	-5.03	96.46	104.00
26	LA	1149	G	O4'-C1'-C2'	5.03	112.63	107.60
26	LA	1369	G	C5'-C4'-C3'	-5.03	108.46	116.00
26	LA	1489	C	O4'-C1'-C2'	5.03	112.63	107.60
26	LA	2355	G	C3'-C2'-O2'	-5.03	103.16	110.70
26	LA	2894	G	C4'-C3'-O3'	-5.03	105.46	113.00
37	LC	217	THR	N-CA-CB	5.03	117.46	110.07
41	L5	41	ARG	CA-C-N	-5.03	113.55	120.28
41	L5	41	ARG	C-N-CA	-5.03	113.55	120.28
53	LP	85	PRO	N-CA-C	5.03	120.37	113.84
2	SA	119	A	O4'-C1'-N9	-5.02	100.66	108.20
8	SH	19	ALA	CA-C-N	5.02	129.25	122.07
8	SH	19	ALA	C-N-CA	5.02	129.25	122.07
16	SP	68	SER	N-CA-C	5.02	116.59	110.41
24	S3	608	LYS	N-CA-CB	5.02	119.31	110.37
26	LA	1847	A	C4'-C3'-C2'	-5.02	97.58	102.60
37	LC	160	GLN	N-CA-CB	5.02	117.93	110.49
1	SS	50	VAL	N-CA-CB	5.02	117.69	111.41
2	SA	222	C	C5'-C4'-C3'	-5.02	108.47	116.00
2	SA	376	G	C1'-C2'-O2'	5.02	115.93	108.40
2	SA	388	G	P-O5'-C5'	-5.02	113.36	120.90
2	SA	846	G	P-O5'-C5'	5.02	128.43	120.90
2	SA	933	G	O4'-C1'-N9	5.02	116.03	108.50
2	SA	1025	U	C5'-C4'-C3'	-5.02	107.67	115.20
12	SL	82	ARG	NH1-CZ-NH2	-5.02	112.77	119.30
24	S3	128	GLN	OE1-CD-NE2	-5.02	117.58	122.60
24	S3	220	ASN	OD1-CG-ND2	5.02	127.62	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1356	G	C4'-C3'-O3'	-5.02	105.47	113.00
26	LA	1541	C	C4'-C3'-C2'	-5.02	97.58	102.60
26	LA	2539	C	C5'-C4'-O4'	5.02	117.33	109.80
26	LA	2798	U	C4'-C3'-O3'	5.02	116.93	109.40
34	L0	23	ARG	CA-C-O	5.02	129.34	120.80
38	LE	141	ARG	CG-CD-NE	-5.02	100.95	112.00
41	L5	6	GLN	O-C-N	-5.02	115.54	121.32
57	LS	82	LEU	N-CA-CB	5.02	117.59	110.16
2	SA	471	U	C1'-O4'-C4'	-5.02	104.88	109.90
2	SA	740	U	P-O3'-C3'	-5.02	112.67	120.20
26	LA	264	C	O4'-C1'-N1	5.02	116.03	108.50
26	LA	566	U	C4'-C3'-O3'	-5.02	105.47	113.00
26	LA	1738	G	O3'-P-O5'	-5.02	96.47	104.00
26	LA	2198	A	O3'-P-O5'	-5.02	96.47	104.00
36	L2	8	LYS	CA-C-O	-5.02	115.89	121.51
47	LJ	12	ALA	N-CA-C	5.02	116.75	111.28
47	LJ	37	MET	N-CA-C	5.02	116.83	111.36
49	LK	10	LEU	O-C-N	-5.02	117.66	123.33
2	SA	641	U	C2'-C3'-O3'	5.02	117.03	109.50
2	SA	646	G	P-O5'-C5'	-5.02	113.37	120.90
7	SG	6	ILE	CA-CB-CG1	5.02	118.93	110.40
19	SC	36	PHE	CA-CB-CG	-5.02	108.78	113.80
19	SC	195	ILE	O-C-N	-5.02	117.54	122.76
26	LA	170	U	P-O5'-C5'	-5.02	113.37	120.90
26	LA	600	G	O4'-C1'-C2'	-5.02	102.58	107.60
26	LA	1680	U	C4'-C3'-O3'	5.02	120.53	113.00
26	LA	2361	G	P-O5'-C5'	5.02	128.43	120.90
26	LA	2500	U	C3'-C2'-C1'	-5.02	96.28	101.30
26	LA	2763	G	C4'-C3'-O3'	-5.02	105.47	113.00
37	LC	202	THR	O-C-N	-5.02	116.76	122.93
47	LJ	122	ILE	CA-C-N	5.02	127.51	120.28
47	LJ	122	ILE	C-N-CA	5.02	127.51	120.28
55	LQ	39	VAL	O-C-N	-5.02	117.46	123.03
2	SA	163	C	C5'-C4'-C3'	5.02	123.53	116.00
2	SA	464	U	C4'-C3'-O3'	5.02	116.93	109.40
2	SA	980	C	P-O5'-C5'	-5.02	113.37	120.90
19	SC	177	LEU	N-CA-C	5.02	116.75	111.28
22	SF	117	ALA	N-CA-C	5.02	117.49	109.81
24	S3	255	VAL	O-C-N	5.02	126.83	121.91
26	LA	1166	G	C1'-O4'-C4'	-5.02	104.88	109.90
26	LA	1677	A	O5'-C5'-C4'	5.02	119.22	111.70
37	LC	23	ILE	N-CA-C	5.02	115.24	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	LH	109	SER	N-CA-C	5.02	116.44	111.07
51	LI	97	ARG	CG-CD-NE	-5.02	100.96	112.00
53	LP	73	ASN	N-CA-CB	5.02	117.86	110.33
2	SA	59	A	C5'-C4'-O4'	5.02	117.32	109.80
2	SA	145	G	C4'-C3'-O3'	-5.02	105.48	113.00
2	SA	251	G	P-O5'-C5'	5.02	128.43	120.90
2	SA	293	G	P-O5'-C5'	-5.02	113.38	120.90
2	SA	476	U	C4'-C3'-O3'	-5.02	105.47	113.00
13	SM	54	THR	N-CA-C	5.02	117.48	111.71
26	LA	4	U	O4'-C1'-N1	5.02	116.02	108.50
26	LA	1338	G	C5'-C4'-C3'	-5.02	108.48	116.00
26	LA	1475	G	C5'-C4'-C3'	-5.02	107.68	115.20
2	SA	221	C	C4'-C3'-C2'	-5.01	97.59	102.60
2	SA	680	C	O4'-C4'-C3'	5.01	109.01	104.00
2	SA	888	G	C4'-C3'-C2'	-5.01	97.59	102.60
2	SA	1051	C	P-O3'-C3'	-5.01	112.68	120.20
2	SA	1195	C	O5'-C5'-C4'	5.01	119.02	111.50
26	LA	596	U	C4'-C3'-C2'	-5.01	97.59	102.60
26	LA	1203	U	O4'-C4'-C3'	5.01	109.02	104.00
26	LA	1340	U	N1-C1'-C2'	5.01	119.52	112.00
26	LA	1840	G	C5'-C4'-O4'	5.01	117.32	109.80
26	LA	1911	U	C4'-C3'-C2'	5.01	107.61	102.60
26	LA	1937	A	P-O5'-C5'	-5.01	113.38	120.90
26	LA	1952	A	C2'-C3'-O3'	5.01	117.02	109.50
26	LA	2629	U	O3'-P-O5'	5.01	111.52	104.00
29	LV	87	LEU	N-CA-C	5.01	118.39	109.96
39	L3	25	THR	N-CA-C	5.01	118.98	112.86
44	LF	31	VAL	O-C-N	-5.01	116.78	121.94
45	LG	2	LYS	N-CA-C	5.01	116.83	111.36
46	LH	12	ALA	O-C-N	-5.01	115.92	122.59
57	LS	73	ILE	CB-CA-C	5.01	117.19	110.42
2	SA	37	U	C1'-O4'-C4'	-5.01	104.89	109.90
2	SA	884	U	C4'-C3'-C2'	-5.01	97.59	102.60
2	SA	1383	C	O4'-C1'-N1	5.01	116.02	108.50
18	SB	57	ASN	OD1-CG-ND2	-5.01	117.59	122.60
19	SC	185	THR	CA-CB-OG1	5.01	117.12	109.60
26	LA	575	A	O5'-C5'-C4'	5.01	119.02	111.50
26	LA	932	U	C4'-C3'-C2'	-5.01	97.59	102.60
36	L2	25	ARG	CB-CG-CD	5.01	122.83	111.30
49	LK	55	PRO	N-CD-CG	5.01	110.72	103.20
2	SA	19	A	P-O5'-C5'	-5.01	113.38	120.90
17	SQ	12	VAL	N-CA-C	5.01	117.71	112.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	S3	488	ALA	N-CA-C	5.01	121.47	110.80
26	LA	151	C	C4'-C3'-O3'	-5.01	105.48	113.00
26	LA	424	G	O5'-C5'-C4'	-5.01	103.98	111.50
26	LA	536	G	P-O5'-C5'	5.01	128.42	120.90
26	LA	659	G	O3'-P-O5'	-5.01	96.48	104.00
26	LA	1806	C	O5'-C5'-C4'	-5.01	103.98	111.50
51	LI	1	MET	CG-SD-CE	-5.01	89.87	100.90
57	LS	40	LYS	N-CA-C	5.01	116.74	111.28
1	SS	60	PHE	CA-CB-CG	5.01	118.81	113.80
2	SA	184	G	C4'-C3'-C2'	-5.01	97.59	102.60
2	SA	912	C	O3'-P-O5'	-5.01	96.49	104.00
5	ST	45	ALA	CB-CA-C	-5.01	101.05	110.67
7	SG	37	THR	N-CA-C	-5.01	105.29	111.40
14	SN	74	ARG	NH1-CZ-NH2	-5.01	112.79	119.30
18	SB	42	LEU	CB-CA-C	-5.01	102.80	110.81
19	SC	34	SER	CA-C-O	5.01	125.73	120.42
26	LA	914	G	O4'-C4'-C3'	5.01	109.01	104.00
26	LA	1159	U	C5'-C4'-C3'	-5.01	108.49	116.00
26	LA	1845	G	O4'-C1'-N9	5.01	116.01	108.50
26	LA	2125	G	O5'-C5'-C4'	5.01	119.02	111.50
26	LA	2167	U	N1-C1'-C2'	5.01	119.51	112.00
26	LA	2285	C	P-O5'-C5'	5.01	128.41	120.90
28	LU	34	ASP	CA-C-O	-5.01	115.54	120.70
48	LN	113	ALA	N-CA-CB	5.01	118.95	110.49
58	LT	64	VAL	N-CA-C	-5.01	108.95	113.71
22	SF	46	GLN	CB-CG-CD	-5.01	104.09	112.60
26	LA	1334	G	O4'-C1'-C2'	5.01	112.61	107.60
26	LA	1911	U	N1-C1'-C2'	5.01	119.51	112.00
26	LA	2372	U	P-O5'-C5'	5.01	128.41	120.90
26	LA	2402	U	C3'-C2'-O2'	5.01	118.21	110.70
2	SA	361	G	O3'-P-O5'	-5.01	96.49	104.00
2	SA	555	U	O4'-C1'-N1	5.01	116.01	108.50
2	SA	566	G	C1'-O4'-C4'	-5.01	104.69	109.70
2	SA	609	A	O4'-C1'-N9	5.01	115.71	108.20
2	SA	917	G	C4'-C3'-C2'	5.01	107.61	102.60
2	SA	1302	C	C1'-O4'-C4'	-5.01	104.89	109.90
4	S2	4	G	P-O3'-C3'	-5.01	112.69	120.20
12	SL	85	ARG	O-C-N	-5.01	117.33	122.94
24	S3	370	ARG	NE-CZ-NH2	-5.01	114.69	119.20
26	LA	404	A	O4'-C4'-C3'	-5.01	101.09	106.10
26	LA	1264	A	C5'-C4'-O4'	5.01	117.31	109.80
26	LA	1388	G	C1'-C2'-O2'	5.01	115.91	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	LA	1699	G	P-O5'-C5'	-5.01	113.39	120.90
27	LD	257	ARG	NE-CZ-NH2	-5.01	114.69	119.20
30	LW	23	LYS	CA-C-O	5.01	126.61	120.60
32	LY	65	LYS	O-C-N	-5.01	117.34	123.30
37	LC	28	ALA	CA-C-O	5.01	125.73	119.97
38	LE	170	VAL	CA-CB-CG1	5.01	118.91	110.40
41	L5	29	GLN	N-CA-C	-5.01	105.92	112.23
48	LN	33	ARG	CA-CB-CG	5.01	124.11	114.10
50	LL	9	GLU	CA-C-O	5.01	124.69	119.03
56	LR	55	HIS	ND1-CE1-NE2	5.01	113.41	108.40
2	SA	373	A	P-O5'-C5'	-5.00	113.39	120.90
9	SI	108	ARG	CA-C-N	5.00	130.95	121.69
9	SI	108	ARG	C-N-CA	5.00	130.95	121.69
26	LA	2818	U	O5'-C5'-C4'	5.00	119.01	111.50
27	LD	169	ALA	CA-C-N	5.00	129.06	122.30
27	LD	169	ALA	C-N-CA	5.00	129.06	122.30
27	LD	206	LYS	O-C-N	-5.00	118.06	123.42
38	LE	164	GLN	O-C-N	-5.00	117.01	122.67
44	LF	40	ARG	CA-C-O	5.00	126.56	120.81
2	SA	29	U	P-O3'-C3'	-5.00	112.69	120.20
2	SA	261	U	C4'-C3'-C2'	-5.00	97.60	102.60
2	SA	278	G	O3'-P-O5'	-5.00	96.50	104.00
2	SA	394	G	C4'-C3'-O3'	-5.00	105.50	113.00
2	SA	941	G	O5'-C5'-C4'	5.00	119.01	111.50
2	SA	1267	C	C1'-O4'-C4'	-5.00	104.90	109.90
2	SA	1330	U	P-O5'-C5'	5.00	128.41	120.90
2	SA	1512	U	C5'-C4'-O4'	5.00	117.31	109.80
25	LB	50	A	C2'-C3'-O3'	5.00	121.21	113.70
26	LA	352	A	C3'-C2'-O2'	-5.00	103.19	110.70
26	LA	681	G	C3'-C2'-C1'	5.00	106.30	101.30
26	LA	2275	C	C5'-C4'-O4'	-5.00	102.30	109.80
26	LA	2825	G	O4'-C1'-N9	5.00	116.01	108.50
27	LD	5	CYS	N-CA-C	5.00	117.50	110.14
50	LL	16	TYR	CA-CB-CG	-5.00	104.89	113.90
53	LP	116	VAL	CA-C-N	5.00	126.94	120.44
53	LP	116	VAL	C-N-CA	5.00	126.94	120.44
54	LM	116	ILE	N-CA-CB	5.00	116.55	110.95
2	SA	363	A	O4'-C1'-C2'	-5.00	102.60	107.60
2	SA	508	U	C2'-C3'-O3'	5.00	117.00	109.50
2	SA	1022	A	C1'-C2'-O2'	5.00	115.90	108.40
18	SB	29	PHE	CA-C-O	5.00	125.48	119.43
19	SC	40	GLN	CB-CA-C	-5.00	102.49	110.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	SD	84	ASN	CB-CG-ND2	5.00	123.90	116.40
24	S3	443	SER	CA-C-O	-5.00	114.22	119.97
26	LA	204	A	C4'-C3'-O3'	5.00	116.90	109.40
26	LA	802	A	P-O3'-C3'	-5.00	112.70	120.20
26	LA	1317	G	P-O3'-C3'	5.00	127.70	120.20
26	LA	1854	A	P-O5'-C5'	-5.00	113.40	120.90
27	LD	198	GLU	O-C-N	-5.00	115.56	122.46
33	LZ	60	LYS	CA-C-O	5.00	125.69	119.79

All (5) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
26	LA	2451	A	C1'
26	LA	2503	A	C2'
26	LA	2504	U	C3',C2'
26	LA	2575	C	C4'

All (3608) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
34	L0	52	ARG	Sidechain
34	L0	7	ARG	Sidechain
35	L1	15	ARG	Sidechain
35	L1	33	HIS	Sidechain
35	L1	44	ARG	Sidechain
36	L2	19	GLY	Peptide
36	L2	24	ILE	Peptide
36	L2	41	HIS	Sidechain
36	L2	43	PHE	Peptide
36	L2	49	ARG	Sidechain
36	L2	51	VAL	Peptide
36	L2	56	ARG	Sidechain
36	L2	63	ARG	Sidechain
36	L2	9	TYR	Sidechain
39	L3	15	ARG	Sidechain
39	L3	36	LYS	Mainchain
39	L3	40	HIS	Sidechain
39	L3	47	TYR	Sidechain
39	L3	49	ARG	Sidechain
40	L4	20	TYR	Sidechain
40	L4	27	ARG	Sidechain
40	L4	49	LYS	Peptide

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Mol	Chain	Res	Type	Group
40	L4	50	GLU	Peptide
41	L5	19	ARG	Sidechain
41	L5	28	ARG	Sidechain
41	L5	3	ARG	Sidechain
41	L5	34	ARG	Sidechain
41	L5	35	ARG	Sidechain
41	L5	39	ARG	Sidechain
41	L5	6	GLN	Peptide
42	L6	31	ILE	Peptide
42	L6	7	ARG	Sidechain
43	L7	12	ARG	Sidechain
43	L7	19	ARG	Sidechain
43	L7	31	PRO	Peptide
43	L7	36	ARG	Sidechain
26	LA	10	A	Sidechain
26	LA	1000	A	Sidechain
26	LA	1001	A	Sidechain
26	LA	1002	G	Sidechain
26	LA	1003	G	Sidechain
26	LA	1004	U	Sidechain
26	LA	1005	C	Sidechain
26	LA	1006	C	Sidechain
26	LA	1007	C	Sidechain
26	LA	1008	A	Sidechain
26	LA	1009	A	Sidechain
26	LA	101	A	Sidechain
26	LA	1010	A	Sidechain
26	LA	1011	G	Sidechain
26	LA	1012	U	Sidechain
26	LA	1013	C	Sidechain
26	LA	1016	G	Sidechain
26	LA	1017	G	Sidechain
26	LA	1019	U	Sidechain
26	LA	1021	A	Sidechain
26	LA	1022	G	Sidechain
26	LA	1023	U	Sidechain
26	LA	1024	G	Sidechain
26	LA	1025	G	Sidechain
26	LA	1026	G	Sidechain
26	LA	1027	A	Sidechain
26	LA	1028	A	Sidechain
26	LA	1029	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1030	C	Sidechain
26	LA	1031	G	Sidechain
26	LA	1032	A	Sidechain
26	LA	1033	U	Sidechain
26	LA	1034	G	Sidechain
26	LA	1035	U	Sidechain
26	LA	1036	G	Sidechain
26	LA	1037	G	Sidechain
26	LA	104	A	Sidechain
26	LA	1044	C	Sidechain
26	LA	1045	C	Sidechain
26	LA	1046	A	Sidechain
26	LA	1047	G	Sidechain
26	LA	1048	A	Sidechain
26	LA	1049	C	Sidechain
26	LA	1051	G	Sidechain
26	LA	1052	C	Sidechain
26	LA	1054	A	Sidechain
26	LA	1055	G	Sidechain
26	LA	1056	G	Sidechain
26	LA	1057	A	Sidechain
26	LA	1058	U	Sidechain
26	LA	1059	G	Sidechain
26	LA	106	C	Sidechain
26	LA	1060	U	Sidechain
26	LA	1061	U	Sidechain
26	LA	1063	G	Sidechain
26	LA	1065	U	Sidechain
26	LA	1066	U	Sidechain
26	LA	1068	G	Sidechain
26	LA	1072	C	Sidechain
26	LA	1074	G	Sidechain
26	LA	1076	C	Sidechain
26	LA	1077	A	Sidechain
26	LA	1080	A	Sidechain
26	LA	1082	U	Sidechain
26	LA	1083	U	Sidechain
26	LA	1084	A	Sidechain
26	LA	1085	A	Sidechain
26	LA	1086	A	Sidechain
26	LA	1087	G	Sidechain
26	LA	1090	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1091	G	Sidechain
26	LA	1094	U	Sidechain
26	LA	1095	A	Sidechain
26	LA	1096	A	Sidechain
26	LA	1097	U	Sidechain
26	LA	1099	G	Sidechain
26	LA	11	C	Sidechain
26	LA	110	G	Sidechain
26	LA	1101	U	Sidechain
26	LA	1104	C	Sidechain
26	LA	1105	U	Sidechain
26	LA	1107	G	Sidechain
26	LA	1109	C	Sidechain
26	LA	1110	G	Sidechain
26	LA	1112	G	Sidechain
26	LA	1114	C	Sidechain
26	LA	1116	G	Sidechain
26	LA	1117	C	Sidechain
26	LA	1118	C	Sidechain
26	LA	112	U	Sidechain
26	LA	1123	C	Sidechain
26	LA	1125	G	Sidechain
26	LA	1126	A	Sidechain
26	LA	1128	G	Sidechain
26	LA	113	U	Sidechain
26	LA	1131	G	Sidechain
26	LA	1132	U	Sidechain
26	LA	1134	A	Sidechain
26	LA	1135	C	Sidechain
26	LA	1136	G	Sidechain
26	LA	1137	G	Sidechain
26	LA	1138	G	Sidechain
26	LA	1139	G	Sidechain
26	LA	114	U	Sidechain
26	LA	1140	C	Sidechain
26	LA	1141	U	Sidechain
26	LA	1143	A	Sidechain
26	LA	1144	A	Sidechain
26	LA	1147	A	Sidechain
26	LA	1148	U	Sidechain
26	LA	115	C	Sidechain
26	LA	1150	C	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1152	C	Sidechain
26	LA	1154	G	Sidechain
26	LA	1155	A	Sidechain
26	LA	1158	C	Sidechain
26	LA	1159	U	Sidechain
26	LA	1162	G	Sidechain
26	LA	1163	G	Sidechain
26	LA	1164	C	Sidechain
26	LA	1165	A	Sidechain
26	LA	1166	G	Sidechain
26	LA	1169	A	Sidechain
26	LA	117	G	Sidechain
26	LA	1171	G	Sidechain
26	LA	1172	C	Sidechain
26	LA	1173	U	Sidechain
26	LA	1174	U	Sidechain
26	LA	1177	G	Sidechain
26	LA	118	A	Sidechain
26	LA	1180	U	Sidechain
26	LA	1182	G	Sidechain
26	LA	1183	U	Sidechain
26	LA	1184	U	Sidechain
26	LA	1186	G	Sidechain
26	LA	1188	U	Sidechain
26	LA	1189	A	Sidechain
26	LA	1191	G	Sidechain
26	LA	1192	G	Sidechain
26	LA	1193	G	Sidechain
26	LA	1194	A	Sidechain
26	LA	1195	G	Sidechain
26	LA	1197	G	Sidechain
26	LA	1198	U	Sidechain
26	LA	1199	U	Sidechain
26	LA	12	U	Sidechain
26	LA	120	U	Sidechain
26	LA	1201	U	Sidechain
26	LA	1202	G	Sidechain
26	LA	1203	U	Sidechain
26	LA	1204	A	Sidechain
26	LA	1206	G	Sidechain
26	LA	1207	C	Sidechain
26	LA	1209	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	121	G	Sidechain
26	LA	1210	G	Sidechain
26	LA	1211	C	Sidechain
26	LA	1212	G	Sidechain
26	LA	1213	A	Sidechain
26	LA	1214	A	Sidechain
26	LA	1215	G	Sidechain
26	LA	1216	G	Sidechain
26	LA	1217	U	Sidechain
26	LA	122	G	Sidechain
26	LA	1222	U	Sidechain
26	LA	1223	G	Sidechain
26	LA	1224	U	Sidechain
26	LA	1225	G	Sidechain
26	LA	1227	G	Sidechain
26	LA	1229	C	Sidechain
26	LA	1231	U	Sidechain
26	LA	1232	G	Sidechain
26	LA	1233	C	Sidechain
26	LA	1234	U	Sidechain
26	LA	1235	G	Sidechain
26	LA	124	G	Sidechain
26	LA	1240	U	Sidechain
26	LA	1241	A	Sidechain
26	LA	1242	U	Sidechain
26	LA	1243	C	Sidechain
26	LA	1245	G	Sidechain
26	LA	1247	A	Sidechain
26	LA	1249	U	Sidechain
26	LA	125	A	Sidechain
26	LA	1250	G	Sidechain
26	LA	1251	C	Sidechain
26	LA	1252	G	Sidechain
26	LA	1253	A	Sidechain
26	LA	1257	C	Sidechain
26	LA	1258	U	Sidechain
26	LA	1259	G	Sidechain
26	LA	126	A	Sidechain
26	LA	1260	A	Sidechain
26	LA	1261	C	Sidechain
26	LA	1262	A	Sidechain
26	LA	1265	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1267	U	Sidechain
26	LA	1268	A	Sidechain
26	LA	1269	A	Sidechain
26	LA	1270	C	Sidechain
26	LA	1271	G	Sidechain
26	LA	1273	U	Sidechain
26	LA	1274	A	Sidechain
26	LA	1275	A	Sidechain
26	LA	1276	A	Sidechain
26	LA	1277	G	Sidechain
26	LA	1278	C	Sidechain
26	LA	1280	G	Sidechain
26	LA	1281	G	Sidechain
26	LA	1282	U	Sidechain
26	LA	1284	A	Sidechain
26	LA	1285	A	Sidechain
26	LA	1286	A	Sidechain
26	LA	1288	G	Sidechain
26	LA	1289	C	Sidechain
26	LA	129	C	Sidechain
26	LA	1291	C	Sidechain
26	LA	1292	G	Sidechain
26	LA	1293	C	Sidechain
26	LA	1294	U	Sidechain
26	LA	1295	C	Sidechain
26	LA	1296	G	Sidechain
26	LA	1298	C	Sidechain
26	LA	1299	G	Sidechain
26	LA	13	A	Sidechain
26	LA	1302	A	Sidechain
26	LA	1304	A	Sidechain
26	LA	1307	A	Sidechain
26	LA	1310	G	Sidechain
26	LA	1311	G	Sidechain
26	LA	1312	U	Sidechain
26	LA	1315	C	Sidechain
26	LA	132	G	Sidechain
26	LA	1322	A	Sidechain
26	LA	1323	C	Sidechain
26	LA	1324	G	Sidechain
26	LA	1325	U	Sidechain
26	LA	1326	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1327	A	Sidechain
26	LA	1329	U	Sidechain
26	LA	133	U	Sidechain
26	LA	1330	C	Sidechain
26	LA	1331	G	Sidechain
26	LA	1332	G	Sidechain
26	LA	1335	C	Sidechain
26	LA	1337	G	Sidechain
26	LA	1339	G	Sidechain
26	LA	134	G	Sidechain
26	LA	1342	A	Sidechain
26	LA	1343	G	Sidechain
26	LA	1344	U	Sidechain
26	LA	1346	G	Sidechain
26	LA	1349	C	Sidechain
26	LA	135	U	Sidechain
26	LA	1350	C	Sidechain
26	LA	1351	C	Sidechain
26	LA	1352	U	Sidechain
26	LA	1353	A	Sidechain
26	LA	1354	A	Sidechain
26	LA	1355	G	Sidechain
26	LA	1357	C	Sidechain
26	LA	1358	G	Sidechain
26	LA	136	G	Sidechain
26	LA	1360	G	Sidechain
26	LA	1361	G	Sidechain
26	LA	1362	C	Sidechain
26	LA	1363	C	Sidechain
26	LA	1364	G	Sidechain
26	LA	1366	A	Sidechain
26	LA	1368	G	Sidechain
26	LA	1371	G	Sidechain
26	LA	1372	U	Sidechain
26	LA	1373	A	Sidechain
26	LA	1374	G	Sidechain
26	LA	1376	C	Sidechain
26	LA	1377	G	Sidechain
26	LA	1378	A	Sidechain
26	LA	1379	U	Sidechain
26	LA	138	U	Sidechain
26	LA	1380	G	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1381	G	Sidechain
26	LA	1383	A	Sidechain
26	LA	1384	A	Sidechain
26	LA	1385	A	Sidechain
26	LA	1387	A	Sidechain
26	LA	1388	G	Sidechain
26	LA	1389	G	Sidechain
26	LA	139	U	Sidechain
26	LA	1390	U	Sidechain
26	LA	1393	A	Sidechain
26	LA	1394	U	Sidechain
26	LA	1399	C	Sidechain
26	LA	14	A	Sidechain
26	LA	140	C	Sidechain
26	LA	1402	U	Sidechain
26	LA	1405	U	Sidechain
26	LA	1406	U	Sidechain
26	LA	1407	G	Sidechain
26	LA	1408	G	Sidechain
26	LA	1409	U	Sidechain
26	LA	141	G	Sidechain
26	LA	1410	G	Sidechain
26	LA	1411	U	Sidechain
26	LA	1413	A	Sidechain
26	LA	1415	U	Sidechain
26	LA	1418	G	Sidechain
26	LA	1419	A	Sidechain
26	LA	142	A	Sidechain
26	LA	1421	G	Sidechain
26	LA	1422	G	Sidechain
26	LA	1423	G	Sidechain
26	LA	1424	G	Sidechain
26	LA	1425	G	Sidechain
26	LA	1426	G	Sidechain
26	LA	1427	A	Sidechain
26	LA	1429	G	Sidechain
26	LA	1432	G	Sidechain
26	LA	1433	A	Sidechain
26	LA	1434	A	Sidechain
26	LA	1435	G	Sidechain
26	LA	1436	G	Sidechain
26	LA	1438	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1439	A	Sidechain
26	LA	144	A	Sidechain
26	LA	1440	U	Sidechain
26	LA	1441	G	Sidechain
26	LA	1442	U	Sidechain
26	LA	1443	U	Sidechain
26	LA	1445	G	Sidechain
26	LA	1447	C	Sidechain
26	LA	1448	G	Sidechain
26	LA	1450	G	Sidechain
26	LA	1452	G	Sidechain
26	LA	1453	A	Sidechain
26	LA	1454	C	Sidechain
26	LA	1455	G	Sidechain
26	LA	1456	G	Sidechain
26	LA	1457	U	Sidechain
26	LA	1458	U	Sidechain
26	LA	1459	G	Sidechain
26	LA	146	A	Sidechain
26	LA	1461	C	Sidechain
26	LA	1463	C	Sidechain
26	LA	1464	G	Sidechain
26	LA	1465	G	Sidechain
26	LA	1467	U	Sidechain
26	LA	1469	A	Sidechain
26	LA	1471	G	Sidechain
26	LA	1473	G	Sidechain
26	LA	1474	U	Sidechain
26	LA	1475	G	Sidechain
26	LA	1476	U	Sidechain
26	LA	1477	A	Sidechain
26	LA	1483	G	Sidechain
26	LA	1484	U	Sidechain
26	LA	1485	U	Sidechain
26	LA	1487	U	Sidechain
26	LA	1489	C	Sidechain
26	LA	1490	A	Sidechain
26	LA	1491	G	Sidechain
26	LA	1495	A	Sidechain
26	LA	1498	C	Sidechain
26	LA	15	G	Sidechain
26	LA	1500	G	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1502	A	Sidechain
26	LA	1503	A	Sidechain
26	LA	1505	A	Sidechain
26	LA	1509	A	Sidechain
26	LA	1510	G	Sidechain
26	LA	1511	G	Sidechain
26	LA	1513	U	Sidechain
26	LA	1514	G	Sidechain
26	LA	1515	A	Sidechain
26	LA	1516	G	Sidechain
26	LA	152	A	Sidechain
26	LA	1520	U	Sidechain
26	LA	1521	G	Sidechain
26	LA	1522	A	Sidechain
26	LA	1528	A	Sidechain
26	LA	153	U	Sidechain
26	LA	1530	G	Sidechain
26	LA	1531	C	Sidechain
26	LA	1532	A	Sidechain
26	LA	1534	U	Sidechain
26	LA	1535	A	Sidechain
26	LA	1537	G	Sidechain
26	LA	1538	G	Sidechain
26	LA	1539	U	Sidechain
26	LA	154	U	Sidechain
26	LA	1540	G	Sidechain
26	LA	1541	C	Sidechain
26	LA	1542	U	Sidechain
26	LA	1544	A	Sidechain
26	LA	1545	A	Sidechain
26	LA	1546	G	Sidechain
26	LA	1548	A	Sidechain
26	LA	155	A	Sidechain
26	LA	1550	C	Sidechain
26	LA	1552	A	Sidechain
26	LA	1554	U	Sidechain
26	LA	1555	G	Sidechain
26	LA	1557	C	Sidechain
26	LA	1558	C	Sidechain
26	LA	1559	U	Sidechain
26	LA	1560	G	Sidechain
26	LA	1562	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1564	C	Sidechain
26	LA	1565	C	Sidechain
26	LA	1567	G	Sidechain
26	LA	1568	G	Sidechain
26	LA	1569	A	Sidechain
26	LA	157	C	Sidechain
26	LA	1571	A	Sidechain
26	LA	1573	G	Sidechain
26	LA	1574	C	Sidechain
26	LA	1576	U	Sidechain
26	LA	1577	C	Sidechain
26	LA	158	U	Sidechain
26	LA	1580	A	Sidechain
26	LA	1582	C	Sidechain
26	LA	1587	G	Sidechain
26	LA	1588	G	Sidechain
26	LA	159	G	Sidechain
26	LA	1590	A	Sidechain
26	LA	1594	U	Sidechain
26	LA	1595	C	Sidechain
26	LA	1597	A	Sidechain
26	LA	160	A	Sidechain
26	LA	1603	A	Sidechain
26	LA	1607	C	Sidechain
26	LA	1608	A	Sidechain
26	LA	161	A	Sidechain
26	LA	1610	A	Sidechain
26	LA	1612	C	Sidechain
26	LA	1613	G	Sidechain
26	LA	1618	C	Sidechain
26	LA	162	U	Sidechain
26	LA	1620	G	Sidechain
26	LA	1623	G	Sidechain
26	LA	1627	G	Sidechain
26	LA	1628	G	Sidechain
26	LA	1629	U	Sidechain
26	LA	1630	A	Sidechain
26	LA	1631	G	Sidechain
26	LA	1632	A	Sidechain
26	LA	1633	G	Sidechain
26	LA	1634	A	Sidechain
26	LA	1636	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1638	C	Sidechain
26	LA	1639	C	Sidechain
26	LA	1641	A	Sidechain
26	LA	1642	G	Sidechain
26	LA	1643	G	Sidechain
26	LA	1644	C	Sidechain
26	LA	1646	C	Sidechain
26	LA	1647	U	Sidechain
26	LA	1648	U	Sidechain
26	LA	1649	G	Sidechain
26	LA	1651	G	Sidechain
26	LA	1653	G	Sidechain
26	LA	1654	A	Sidechain
26	LA	1655	A	Sidechain
26	LA	1656	C	Sidechain
26	LA	1658	C	Sidechain
26	LA	1659	G	Sidechain
26	LA	166	U	Sidechain
26	LA	1660	G	Sidechain
26	LA	1661	G	Sidechain
26	LA	1662	U	Sidechain
26	LA	1663	G	Sidechain
26	LA	1664	A	Sidechain
26	LA	1666	G	Sidechain
26	LA	1667	G	Sidechain
26	LA	1668	A	Sidechain
26	LA	167	A	Sidechain
26	LA	1671	U	Sidechain
26	LA	1674	G	Sidechain
26	LA	1675	C	Sidechain
26	LA	1676	A	Sidechain
26	LA	1677	A	Sidechain
26	LA	1678	A	Sidechain
26	LA	1680	U	Sidechain
26	LA	1681	G	Sidechain
26	LA	1683	U	Sidechain
26	LA	1685	C	Sidechain
26	LA	1686	C	Sidechain
26	LA	1687	G	Sidechain
26	LA	1688	U	Sidechain
26	LA	1689	A	Sidechain
26	LA	1692	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1694	C	Sidechain
26	LA	1695	G	Sidechain
26	LA	1696	G	Sidechain
26	LA	1697	G	Sidechain
26	LA	1698	A	Sidechain
26	LA	1699	G	Sidechain
26	LA	17	G	Sidechain
26	LA	170	U	Sidechain
26	LA	1701	A	Sidechain
26	LA	1702	G	Sidechain
26	LA	1703	G	Sidechain
26	LA	1705	A	Sidechain
26	LA	1706	C	Sidechain
26	LA	1707	G	Sidechain
26	LA	1708	C	Sidechain
26	LA	1709	U	Sidechain
26	LA	171	U	Sidechain
26	LA	1710	G	Sidechain
26	LA	1711	A	Sidechain
26	LA	1713	A	Sidechain
26	LA	1714	U	Sidechain
26	LA	1715	G	Sidechain
26	LA	1717	A	Sidechain
26	LA	1718	G	Sidechain
26	LA	1719	G	Sidechain
26	LA	1720	U	Sidechain
26	LA	1723	G	Sidechain
26	LA	1724	G	Sidechain
26	LA	1726	C	Sidechain
26	LA	1727	C	Sidechain
26	LA	173	A	Sidechain
26	LA	1730	C	Sidechain
26	LA	1731	G	Sidechain
26	LA	1732	C	Sidechain
26	LA	1736	U	Sidechain
26	LA	1737	G	Sidechain
26	LA	1738	G	Sidechain
26	LA	174	U	Sidechain
26	LA	1741	C	Sidechain
26	LA	1742	U	Sidechain
26	LA	1743	G	Sidechain
26	LA	1744	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1745	A	Sidechain
26	LA	1746	A	Sidechain
26	LA	1747	U	Sidechain
26	LA	1748	C	Sidechain
26	LA	1751	U	Sidechain
26	LA	1752	C	Sidechain
26	LA	1753	G	Sidechain
26	LA	1754	A	Sidechain
26	LA	1755	A	Sidechain
26	LA	1758	U	Sidechain
26	LA	1759	A	Sidechain
26	LA	176	A	Sidechain
26	LA	1760	C	Sidechain
26	LA	1762	A	Sidechain
26	LA	1763	G	Sidechain
26	LA	1765	U	Sidechain
26	LA	1766	G	Sidechain
26	LA	1768	C	Sidechain
26	LA	1769	U	Sidechain
26	LA	1770	G	Sidechain
26	LA	1771	C	Sidechain
26	LA	1775	U	Sidechain
26	LA	1776	G	Sidechain
26	LA	1777	U	Sidechain
26	LA	1779	U	Sidechain
26	LA	178	G	Sidechain
26	LA	1781	U	Sidechain
26	LA	1782	U	Sidechain
26	LA	1783	A	Sidechain
26	LA	1784	A	Sidechain
26	LA	1785	A	Sidechain
26	LA	1786	A	Sidechain
26	LA	1787	A	Sidechain
26	LA	179	C	Sidechain
26	LA	1790	C	Sidechain
26	LA	1791	A	Sidechain
26	LA	1792	G	Sidechain
26	LA	1794	A	Sidechain
26	LA	1796	U	Sidechain
26	LA	1798	U	Sidechain
26	LA	1799	G	Sidechain
26	LA	180	G	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1800	C	Sidechain
26	LA	1802	A	Sidechain
26	LA	1804	C	Sidechain
26	LA	1805	A	Sidechain
26	LA	1807	G	Sidechain
26	LA	1808	A	Sidechain
26	LA	1809	A	Sidechain
26	LA	181	A	Sidechain
26	LA	1810	A	Sidechain
26	LA	1811	G	Sidechain
26	LA	1812	U	Sidechain
26	LA	1813	G	Sidechain
26	LA	1814	G	Sidechain
26	LA	1816	C	Sidechain
26	LA	1817	G	Sidechain
26	LA	1818	U	Sidechain
26	LA	1819	A	Sidechain
26	LA	182	A	Sidechain
26	LA	1821	A	Sidechain
26	LA	1822	C	Sidechain
26	LA	1824	G	Sidechain
26	LA	1825	U	Sidechain
26	LA	1826	G	Sidechain
26	LA	1827	U	Sidechain
26	LA	1828	G	Sidechain
26	LA	1829	A	Sidechain
26	LA	183	C	Sidechain
26	LA	1830	C	Sidechain
26	LA	1831	G	Sidechain
26	LA	1833	C	Sidechain
26	LA	1834	U	Sidechain
26	LA	1835	G	Sidechain
26	LA	1836	C	Sidechain
26	LA	1837	C	Sidechain
26	LA	1838	C	Sidechain
26	LA	1839	G	Sidechain
26	LA	1840	G	Sidechain
26	LA	1841	U	Sidechain
26	LA	1845	G	Sidechain
26	LA	1846	G	Sidechain
26	LA	1847	A	Sidechain
26	LA	1848	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1849	G	Sidechain
26	LA	185	G	Sidechain
26	LA	1850	G	Sidechain
26	LA	1851	U	Sidechain
26	LA	1852	U	Sidechain
26	LA	1853	A	Sidechain
26	LA	1854	A	Sidechain
26	LA	1855	U	Sidechain
26	LA	1856	U	Sidechain
26	LA	1857	G	Sidechain
26	LA	1859	U	Sidechain
26	LA	186	G	Sidechain
26	LA	1861	G	Sidechain
26	LA	1863	G	Sidechain
26	LA	1864	U	Sidechain
26	LA	1865	U	Sidechain
26	LA	1866	A	Sidechain
26	LA	1867	G	Sidechain
26	LA	1869	G	Sidechain
26	LA	1872	A	Sidechain
26	LA	1873	G	Sidechain
26	LA	1875	G	Sidechain
26	LA	1876	A	Sidechain
26	LA	1878	G	Sidechain
26	LA	188	G	Sidechain
26	LA	1881	C	Sidechain
26	LA	1882	U	Sidechain
26	LA	1883	U	Sidechain
26	LA	1884	G	Sidechain
26	LA	1885	A	Sidechain
26	LA	1886	U	Sidechain
26	LA	1888	G	Sidechain
26	LA	1889	A	Sidechain
26	LA	189	G	Sidechain
26	LA	1890	A	Sidechain
26	LA	1891	G	Sidechain
26	LA	1893	C	Sidechain
26	LA	1894	C	Sidechain
26	LA	1896	G	Sidechain
26	LA	1897	G	Sidechain
26	LA	1898	U	Sidechain
26	LA	1899	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	19	A	Sidechain
26	LA	190	A	Sidechain
26	LA	1900	A	Sidechain
26	LA	1902	C	Sidechain
26	LA	1904	G	Sidechain
26	LA	1906	G	Sidechain
26	LA	1907	G	Sidechain
26	LA	1909	C	Sidechain
26	LA	191	A	Sidechain
26	LA	1910	G	Sidechain
26	LA	1914	C	Sidechain
26	LA	1915	C	Sidechain
26	LA	1916	A	Sidechain
26	LA	1917	U	Sidechain
26	LA	1919	A	Sidechain
26	LA	192	C	Sidechain
26	LA	1921	G	Sidechain
26	LA	1922	G	Sidechain
26	LA	1923	U	Sidechain
26	LA	1924	C	Sidechain
26	LA	1926	U	Sidechain
26	LA	1927	A	Sidechain
26	LA	1928	A	Sidechain
26	LA	1929	G	Sidechain
26	LA	193	U	Sidechain
26	LA	1930	G	Sidechain
26	LA	1931	U	Sidechain
26	LA	1932	A	Sidechain
26	LA	1933	G	Sidechain
26	LA	1935	G	Sidechain
26	LA	1936	A	Sidechain
26	LA	1939	U	Sidechain
26	LA	194	G	Sidechain
26	LA	1941	C	Sidechain
26	LA	1945	G	Sidechain
26	LA	1946	U	Sidechain
26	LA	1947	C	Sidechain
26	LA	1948	G	Sidechain
26	LA	1949	G	Sidechain
26	LA	195	A	Sidechain
26	LA	1950	G	Sidechain
26	LA	1951	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	1952	A	Sidechain
26	LA	1953	A	Sidechain
26	LA	1954	G	Sidechain
26	LA	1955	U	Sidechain
26	LA	1956	U	Sidechain
26	LA	1957	C	Sidechain
26	LA	196	A	Sidechain
26	LA	1960	A	Sidechain
26	LA	1961	C	Sidechain
26	LA	1962	C	Sidechain
26	LA	1963	U	Sidechain
26	LA	1964	G	Sidechain
26	LA	1966	A	Sidechain
26	LA	1968	G	Sidechain
26	LA	197	A	Sidechain
26	LA	1971	U	Sidechain
26	LA	1972	G	Sidechain
26	LA	1973	G	Sidechain
26	LA	1975	G	Sidechain
26	LA	1976	U	Sidechain
26	LA	1977	A	Sidechain
26	LA	1978	A	Sidechain
26	LA	1979	U	Sidechain
26	LA	198	C	Sidechain
26	LA	1981	A	Sidechain
26	LA	1982	U	Sidechain
26	LA	1983	G	Sidechain
26	LA	1984	G	Sidechain
26	LA	1985	C	Sidechain
26	LA	1988	G	Sidechain
26	LA	1990	C	Sidechain
26	LA	1992	G	Sidechain
26	LA	1993	U	Sidechain
26	LA	1996	C	Sidechain
26	LA	1997	C	Sidechain
26	LA	1998	A	Sidechain
26	LA	1999	C	Sidechain
26	LA	2	G	Sidechain
26	LA	200	U	Sidechain
26	LA	2000	C	Sidechain
26	LA	2001	C	Sidechain
26	LA	2004	G	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2005	A	Sidechain
26	LA	2006	C	Sidechain
26	LA	2008	C	Sidechain
26	LA	2010	G	Sidechain
26	LA	2011	U	Sidechain
26	LA	2014	A	Sidechain
26	LA	2015	A	Sidechain
26	LA	2016	U	Sidechain
26	LA	2017	U	Sidechain
26	LA	2018	G	Sidechain
26	LA	2019	A	Sidechain
26	LA	202	U	Sidechain
26	LA	2022	U	Sidechain
26	LA	2023	C	Sidechain
26	LA	2024	G	Sidechain
26	LA	2025	C	Sidechain
26	LA	2030	U	Sidechain
26	LA	2031	A	Sidechain
26	LA	2032	G	Sidechain
26	LA	2033	A	Sidechain
26	LA	2034	U	Sidechain
26	LA	2035	G	Sidechain
26	LA	2036	C	Sidechain
26	LA	2037	A	Sidechain
26	LA	2038	G	Sidechain
26	LA	2039	U	Sidechain
26	LA	204	A	Sidechain
26	LA	2041	U	Sidechain
26	LA	2042	A	Sidechain
26	LA	2044	C	Sidechain
26	LA	2045	C	Sidechain
26	LA	2046	G	Sidechain
26	LA	2047	C	Sidechain
26	LA	2048	G	Sidechain
26	LA	2049	G	Sidechain
26	LA	205	G	Sidechain
26	LA	2050	C	Sidechain
26	LA	2053	G	Sidechain
26	LA	2055	C	Sidechain
26	LA	2056	G	Sidechain
26	LA	2057	G	Sidechain
26	LA	2059	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	206	U	Sidechain
26	LA	2060	A	Sidechain
26	LA	2061	G	Sidechain
26	LA	2062	A	Sidechain
26	LA	2064	C	Sidechain
26	LA	2065	C	Sidechain
26	LA	2066	C	Sidechain
26	LA	2068	U	Sidechain
26	LA	2070	A	Sidechain
26	LA	2071	A	Sidechain
26	LA	2072	C	Sidechain
26	LA	2074	U	Sidechain
26	LA	2077	A	Sidechain
26	LA	2079	U	Sidechain
26	LA	2083	G	Sidechain
26	LA	2084	C	Sidechain
26	LA	2085	U	Sidechain
26	LA	2086	U	Sidechain
26	LA	2087	G	Sidechain
26	LA	2088	A	Sidechain
26	LA	2089	C	Sidechain
26	LA	209	C	Sidechain
26	LA	2090	A	Sidechain
26	LA	2091	C	Sidechain
26	LA	2093	G	Sidechain
26	LA	2094	A	Sidechain
26	LA	2096	C	Sidechain
26	LA	2097	A	Sidechain
26	LA	2098	U	Sidechain
26	LA	2099	U	Sidechain
26	LA	2100	G	Sidechain
26	LA	2107	G	Sidechain
26	LA	2108	A	Sidechain
26	LA	211	C	Sidechain
26	LA	2110	G	Sidechain
26	LA	2111	U	Sidechain
26	LA	2112	G	Sidechain
26	LA	2115	G	Sidechain
26	LA	2116	G	Sidechain
26	LA	2117	A	Sidechain
26	LA	2118	U	Sidechain
26	LA	2119	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	212	G	Sidechain
26	LA	2120	G	Sidechain
26	LA	2122	U	Sidechain
26	LA	2123	G	Sidechain
26	LA	2124	G	Sidechain
26	LA	2125	G	Sidechain
26	LA	2127	G	Sidechain
26	LA	2128	G	Sidechain
26	LA	2129	C	Sidechain
26	LA	213	A	Sidechain
26	LA	2130	U	Sidechain
26	LA	2131	U	Sidechain
26	LA	2132	U	Sidechain
26	LA	2133	G	Sidechain
26	LA	2135	A	Sidechain
26	LA	2136	G	Sidechain
26	LA	2138	G	Sidechain
26	LA	2139	U	Sidechain
26	LA	214	G	Sidechain
26	LA	2140	G	Sidechain
26	LA	2141	G	Sidechain
26	LA	2142	A	Sidechain
26	LA	2143	C	Sidechain
26	LA	2144	G	Sidechain
26	LA	2145	C	Sidechain
26	LA	2146	C	Sidechain
26	LA	2147	A	Sidechain
26	LA	2148	G	Sidechain
26	LA	2149	U	Sidechain
26	LA	215	G	Sidechain
26	LA	2151	U	Sidechain
26	LA	2152	G	Sidechain
26	LA	2154	A	Sidechain
26	LA	2156	G	Sidechain
26	LA	2159	G	Sidechain
26	LA	216	A	Sidechain
26	LA	2160	C	Sidechain
26	LA	2161	C	Sidechain
26	LA	2164	C	Sidechain
26	LA	2165	C	Sidechain
26	LA	2168	G	Sidechain
26	LA	2169	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2171	A	Sidechain
26	LA	2172	U	Sidechain
26	LA	2173	A	Sidechain
26	LA	2174	C	Sidechain
26	LA	2175	C	Sidechain
26	LA	2179	C	Sidechain
26	LA	218	A	Sidechain
26	LA	2182	U	Sidechain
26	LA	2183	A	Sidechain
26	LA	2184	A	Sidechain
26	LA	2185	U	Sidechain
26	LA	2186	G	Sidechain
26	LA	2187	U	Sidechain
26	LA	2188	U	Sidechain
26	LA	219	A	Sidechain
26	LA	2190	G	Sidechain
26	LA	2192	U	Sidechain
26	LA	2193	G	Sidechain
26	LA	2194	U	Sidechain
26	LA	2195	U	Sidechain
26	LA	2197	U	Sidechain
26	LA	2198	A	Sidechain
26	LA	2199	A	Sidechain
26	LA	22	C	Sidechain
26	LA	220	G	Sidechain
26	LA	2200	C	Sidechain
26	LA	2201	G	Sidechain
26	LA	2202	U	Sidechain
26	LA	2204	G	Sidechain
26	LA	2208	C	Sidechain
26	LA	2210	U	Sidechain
26	LA	2211	A	Sidechain
26	LA	2212	A	Sidechain
26	LA	2213	U	Sidechain
26	LA	2219	U	Sidechain
26	LA	222	A	Sidechain
26	LA	2220	U	Sidechain
26	LA	2221	G	Sidechain
26	LA	2222	C	Sidechain
26	LA	2223	G	Sidechain
26	LA	2224	G	Sidechain
26	LA	2226	C	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2227	A	Sidechain
26	LA	2228	G	Sidechain
26	LA	2229	U	Sidechain
26	LA	2230	G	Sidechain
26	LA	2231	U	Sidechain
26	LA	2233	U	Sidechain
26	LA	2234	G	Sidechain
26	LA	2235	G	Sidechain
26	LA	2236	U	Sidechain
26	LA	2238	G	Sidechain
26	LA	2239	G	Sidechain
26	LA	224	U	Sidechain
26	LA	2241	A	Sidechain
26	LA	2242	G	Sidechain
26	LA	2244	U	Sidechain
26	LA	2245	U	Sidechain
26	LA	2247	A	Sidechain
26	LA	225	C	Sidechain
26	LA	2250	G	Sidechain
26	LA	2251	U	Sidechain
26	LA	2252	G	Sidechain
26	LA	2253	G	Sidechain
26	LA	2254	C	Sidechain
26	LA	2255	G	Sidechain
26	LA	2256	G	Sidechain
26	LA	2259	U	Sidechain
26	LA	226	A	Sidechain
26	LA	2262	U	Sidechain
26	LA	2264	C	Sidechain
26	LA	2266	A	Sidechain
26	LA	2267	A	Sidechain
26	LA	2269	G	Sidechain
26	LA	227	A	Sidechain
26	LA	2270	A	Sidechain
26	LA	2271	G	Sidechain
26	LA	2272	U	Sidechain
26	LA	2273	A	Sidechain
26	LA	2274	A	Sidechain
26	LA	2275	C	Sidechain
26	LA	2277	G	Sidechain
26	LA	2278	A	Sidechain
26	LA	2280	G	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2281	A	Sidechain
26	LA	2282	G	Sidechain
26	LA	2283	C	Sidechain
26	LA	2287	A	Sidechain
26	LA	2288	A	Sidechain
26	LA	2289	G	Sidechain
26	LA	229	C	Sidechain
26	LA	2290	G	Sidechain
26	LA	2291	U	Sidechain
26	LA	2292	U	Sidechain
26	LA	2293	G	Sidechain
26	LA	2294	G	Sidechain
26	LA	2295	C	Sidechain
26	LA	2296	U	Sidechain
26	LA	2297	A	Sidechain
26	LA	230	G	Sidechain
26	LA	2300	C	Sidechain
26	LA	2301	C	Sidechain
26	LA	2302	U	Sidechain
26	LA	2303	G	Sidechain
26	LA	2304	G	Sidechain
26	LA	2305	U	Sidechain
26	LA	2306	C	Sidechain
26	LA	2307	G	Sidechain
26	LA	2308	G	Sidechain
26	LA	2309	A	Sidechain
26	LA	2311	A	Sidechain
26	LA	2312	U	Sidechain
26	LA	2314	A	Sidechain
26	LA	2315	G	Sidechain
26	LA	2316	G	Sidechain
26	LA	2318	G	Sidechain
26	LA	2319	G	Sidechain
26	LA	2321	U	Sidechain
26	LA	2322	A	Sidechain
26	LA	2325	G	Sidechain
26	LA	2326	C	Sidechain
26	LA	2327	A	Sidechain
26	LA	2328	A	Sidechain
26	LA	2329	U	Sidechain
26	LA	2331	G	Sidechain
26	LA	2332	C	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2333	A	Sidechain
26	LA	2335	A	Sidechain
26	LA	2336	A	Sidechain
26	LA	2337	G	Sidechain
26	LA	234	U	Sidechain
26	LA	2340	A	Sidechain
26	LA	2343	U	Sidechain
26	LA	2344	U	Sidechain
26	LA	2345	G	Sidechain
26	LA	2346	A	Sidechain
26	LA	2349	G	Sidechain
26	LA	235	U	Sidechain
26	LA	2353	G	Sidechain
26	LA	2355	G	Sidechain
26	LA	2356	U	Sidechain
26	LA	2357	G	Sidechain
26	LA	2358	A	Sidechain
26	LA	236	C	Sidechain
26	LA	2360	G	Sidechain
26	LA	2361	G	Sidechain
26	LA	2362	C	Sidechain
26	LA	2363	G	Sidechain
26	LA	2364	C	Sidechain
26	LA	2365	G	Sidechain
26	LA	2367	G	Sidechain
26	LA	2368	C	Sidechain
26	LA	2369	A	Sidechain
26	LA	237	C	Sidechain
26	LA	2370	G	Sidechain
26	LA	2371	G	Sidechain
26	LA	2375	G	Sidechain
26	LA	2377	A	Sidechain
26	LA	2378	A	Sidechain
26	LA	2379	G	Sidechain
26	LA	238	C	Sidechain
26	LA	2380	C	Sidechain
26	LA	2381	A	Sidechain
26	LA	2382	G	Sidechain
26	LA	2383	G	Sidechain
26	LA	2385	C	Sidechain
26	LA	2386	A	Sidechain
26	LA	2387	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2389	G	Sidechain
26	LA	239	C	Sidechain
26	LA	2390	U	Sidechain
26	LA	2391	G	Sidechain
26	LA	2392	A	Sidechain
26	LA	2393	U	Sidechain
26	LA	2395	C	Sidechain
26	LA	2396	G	Sidechain
26	LA	2398	U	Sidechain
26	LA	24	G	Sidechain
26	LA	2401	U	Sidechain
26	LA	2404	U	Sidechain
26	LA	2405	G	Sidechain
26	LA	2407	A	Sidechain
26	LA	2410	G	Sidechain
26	LA	2411	A	Sidechain
26	LA	2412	A	Sidechain
26	LA	2415	G	Sidechain
26	LA	2417	C	Sidechain
26	LA	2419	U	Sidechain
26	LA	242	G	Sidechain
26	LA	2420	C	Sidechain
26	LA	2421	G	Sidechain
26	LA	2422	C	Sidechain
26	LA	2423	U	Sidechain
26	LA	2424	C	Sidechain
26	LA	2425	A	Sidechain
26	LA	2426	A	Sidechain
26	LA	2427	C	Sidechain
26	LA	2429	G	Sidechain
26	LA	243	U	Sidechain
26	LA	2430	A	Sidechain
26	LA	2433	A	Sidechain
26	LA	2435	A	Sidechain
26	LA	2436	G	Sidechain
26	LA	2437	G	Sidechain
26	LA	2438	U	Sidechain
26	LA	2441	U	Sidechain
26	LA	2443	C	Sidechain
26	LA	2444	G	Sidechain
26	LA	2445	G	Sidechain
26	LA	2446	G	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2447	G	Sidechain
26	LA	2448	A	Sidechain
26	LA	2449	U	Sidechain
26	LA	245	G	Sidechain
26	LA	2450	A	Sidechain
26	LA	2451	A	Sidechain
26	LA	2453	A	Sidechain
26	LA	2454	G	Sidechain
26	LA	2455	G	Sidechain
26	LA	2456	C	Sidechain
26	LA	2457	U	Sidechain
26	LA	246	C	Sidechain
26	LA	2460	U	Sidechain
26	LA	2461	A	Sidechain
26	LA	2464	G	Sidechain
26	LA	2465	C	Sidechain
26	LA	2466	C	Sidechain
26	LA	2469	A	Sidechain
26	LA	247	G	Sidechain
26	LA	2470	G	Sidechain
26	LA	2471	A	Sidechain
26	LA	2472	G	Sidechain
26	LA	2473	U	Sidechain
26	LA	2474	U	Sidechain
26	LA	2477	U	Sidechain
26	LA	2478	A	Sidechain
26	LA	2479	U	Sidechain
26	LA	248	G	Sidechain
26	LA	2480	C	Sidechain
26	LA	2481	G	Sidechain
26	LA	2482	A	Sidechain
26	LA	2483	C	Sidechain
26	LA	2486	C	Sidechain
26	LA	2487	G	Sidechain
26	LA	2489	U	Sidechain
26	LA	2490	G	Sidechain
26	LA	2494	G	Sidechain
26	LA	2495	G	Sidechain
26	LA	2499	C	Sidechain
26	LA	25	U	Sidechain
26	LA	250	G	Sidechain
26	LA	2502	G	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2503	A	Sidechain
26	LA	2504	U	Sidechain
26	LA	2505	G	Sidechain
26	LA	2506	U	Sidechain
26	LA	2508	G	Sidechain
26	LA	2509	G	Sidechain
26	LA	251	A	Sidechain
26	LA	2512	C	Sidechain
26	LA	2513	A	Sidechain
26	LA	2517	C	Sidechain
26	LA	2518	A	Sidechain
26	LA	2519	U	Sidechain
26	LA	252	G	Sidechain
26	LA	2520	C	Sidechain
26	LA	2521	C	Sidechain
26	LA	2523	G	Sidechain
26	LA	2524	G	Sidechain
26	LA	2525	G	Sidechain
26	LA	2526	G	Sidechain
26	LA	2528	U	Sidechain
26	LA	2529	G	Sidechain
26	LA	2531	A	Sidechain
26	LA	2532	G	Sidechain
26	LA	2536	G	Sidechain
26	LA	2537	U	Sidechain
26	LA	2538	C	Sidechain
26	LA	2539	C	Sidechain
26	LA	254	G	Sidechain
26	LA	2542	A	Sidechain
26	LA	2544	G	Sidechain
26	LA	2545	G	Sidechain
26	LA	2546	U	Sidechain
26	LA	2547	A	Sidechain
26	LA	2551	C	Sidechain
26	LA	2552	U	Sidechain
26	LA	2553	G	Sidechain
26	LA	2554	U	Sidechain
26	LA	2555	U	Sidechain
26	LA	2556	C	Sidechain
26	LA	2557	G	Sidechain
26	LA	2559	C	Sidechain
26	LA	2561	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2562	U	Sidechain
26	LA	2563	U	Sidechain
26	LA	2567	G	Sidechain
26	LA	2568	U	Sidechain
26	LA	2569	G	Sidechain
26	LA	257	C	Sidechain
26	LA	2570	G	Sidechain
26	LA	2571	U	Sidechain
26	LA	2572	A	Sidechain
26	LA	2574	G	Sidechain
26	LA	2575	C	Sidechain
26	LA	2577	A	Sidechain
26	LA	2578	G	Sidechain
26	LA	2579	C	Sidechain
26	LA	2580	U	Sidechain
26	LA	2581	G	Sidechain
26	LA	2582	G	Sidechain
26	LA	2583	G	Sidechain
26	LA	2584	U	Sidechain
26	LA	2585	U	Sidechain
26	LA	2587	A	Sidechain
26	LA	2588	G	Sidechain
26	LA	2589	A	Sidechain
26	LA	259	G	Sidechain
26	LA	2591	C	Sidechain
26	LA	2592	G	Sidechain
26	LA	2593	U	Sidechain
26	LA	2595	G	Sidechain
26	LA	2596	U	Sidechain
26	LA	2597	G	Sidechain
26	LA	2598	A	Sidechain
26	LA	260	G	Sidechain
26	LA	2600	A	Sidechain
26	LA	2603	G	Sidechain
26	LA	2604	U	Sidechain
26	LA	2606	C	Sidechain
26	LA	2607	G	Sidechain
26	LA	2608	G	Sidechain
26	LA	261	G	Sidechain
26	LA	2610	C	Sidechain
26	LA	2612	C	Sidechain
26	LA	2613	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2615	U	Sidechain
26	LA	2616	C	Sidechain
26	LA	2617	U	Sidechain
26	LA	2618	G	Sidechain
26	LA	262	A	Sidechain
26	LA	2620	C	Sidechain
26	LA	2621	G	Sidechain
26	LA	2622	U	Sidechain
26	LA	2623	G	Sidechain
26	LA	2624	G	Sidechain
26	LA	2626	C	Sidechain
26	LA	2627	G	Sidechain
26	LA	2628	C	Sidechain
26	LA	2633	G	Sidechain
26	LA	2635	A	Sidechain
26	LA	2637	U	Sidechain
26	LA	2638	G	Sidechain
26	LA	2639	A	Sidechain
26	LA	264	C	Sidechain
26	LA	2640	G	Sidechain
26	LA	2641	G	Sidechain
26	LA	2642	G	Sidechain
26	LA	2643	G	Sidechain
26	LA	2644	G	Sidechain
26	LA	2645	G	Sidechain
26	LA	2646	C	Sidechain
26	LA	2647	U	Sidechain
26	LA	2648	G	Sidechain
26	LA	265	A	Sidechain
26	LA	2650	U	Sidechain
26	LA	2651	C	Sidechain
26	LA	2652	C	Sidechain
26	LA	2653	U	Sidechain
26	LA	2654	A	Sidechain
26	LA	2655	G	Sidechain
26	LA	2656	U	Sidechain
26	LA	2657	A	Sidechain
26	LA	2658	C	Sidechain
26	LA	2659	G	Sidechain
26	LA	2660	A	Sidechain
26	LA	2661	G	Sidechain
26	LA	2662	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2663	G	Sidechain
26	LA	2664	G	Sidechain
26	LA	2665	A	Sidechain
26	LA	2666	C	Sidechain
26	LA	2667	C	Sidechain
26	LA	2668	G	Sidechain
26	LA	2669	G	Sidechain
26	LA	267	C	Sidechain
26	LA	2670	A	Sidechain
26	LA	2672	U	Sidechain
26	LA	2673	G	Sidechain
26	LA	2674	G	Sidechain
26	LA	2675	A	Sidechain
26	LA	2677	G	Sidechain
26	LA	2679	A	Sidechain
26	LA	268	C	Sidechain
26	LA	2680	U	Sidechain
26	LA	2681	C	Sidechain
26	LA	2682	A	Sidechain
26	LA	2683	C	Sidechain
26	LA	2686	G	Sidechain
26	LA	2688	G	Sidechain
26	LA	2689	U	Sidechain
26	LA	2690	U	Sidechain
26	LA	2691	C	Sidechain
26	LA	2692	G	Sidechain
26	LA	2694	G	Sidechain
26	LA	2695	U	Sidechain
26	LA	2696	U	Sidechain
26	LA	2698	U	Sidechain
26	LA	2699	C	Sidechain
26	LA	27	G	Sidechain
26	LA	270	A	Sidechain
26	LA	2701	U	Sidechain
26	LA	2702	G	Sidechain
26	LA	2704	C	Sidechain
26	LA	2705	A	Sidechain
26	LA	2707	U	Sidechain
26	LA	2708	G	Sidechain
26	LA	2709	G	Sidechain
26	LA	2710	C	Sidechain
26	LA	2711	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2712	C	Sidechain
26	LA	2713	U	Sidechain
26	LA	2714	G	Sidechain
26	LA	2718	G	Sidechain
26	LA	2719	G	Sidechain
26	LA	2720	U	Sidechain
26	LA	2722	G	Sidechain
26	LA	2724	U	Sidechain
26	LA	2725	A	Sidechain
26	LA	2726	A	Sidechain
26	LA	2727	A	Sidechain
26	LA	2728	U	Sidechain
26	LA	2729	G	Sidechain
26	LA	2731	G	Sidechain
26	LA	2733	A	Sidechain
26	LA	2736	A	Sidechain
26	LA	2737	G	Sidechain
26	LA	2738	A	Sidechain
26	LA	2739	U	Sidechain
26	LA	2740	A	Sidechain
26	LA	2741	A	Sidechain
26	LA	2742	G	Sidechain
26	LA	2746	U	Sidechain
26	LA	275	C	Sidechain
26	LA	2750	A	Sidechain
26	LA	2751	G	Sidechain
26	LA	2752	C	Sidechain
26	LA	2754	U	Sidechain
26	LA	2755	C	Sidechain
26	LA	2756	U	Sidechain
26	LA	2758	A	Sidechain
26	LA	276	U	Sidechain
26	LA	2760	C	Sidechain
26	LA	2763	G	Sidechain
26	LA	2764	A	Sidechain
26	LA	2765	A	Sidechain
26	LA	2766	A	Sidechain
26	LA	2767	C	Sidechain
26	LA	2768	U	Sidechain
26	LA	2769	U	Sidechain
26	LA	2772	C	Sidechain
26	LA	2778	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2779	U	Sidechain
26	LA	278	A	Sidechain
26	LA	2780	G	Sidechain
26	LA	2781	A	Sidechain
26	LA	2782	G	Sidechain
26	LA	2783	U	Sidechain
26	LA	2784	U	Sidechain
26	LA	2785	C	Sidechain
26	LA	2787	C	Sidechain
26	LA	2789	C	Sidechain
26	LA	279	A	Sidechain
26	LA	2790	U	Sidechain
26	LA	2791	G	Sidechain
26	LA	2793	C	Sidechain
26	LA	2794	C	Sidechain
26	LA	2796	U	Sidechain
26	LA	2797	U	Sidechain
26	LA	2798	U	Sidechain
26	LA	2799	A	Sidechain
26	LA	280	U	Sidechain
26	LA	2800	A	Sidechain
26	LA	2802	G	Sidechain
26	LA	2803	G	Sidechain
26	LA	2804	U	Sidechain
26	LA	2806	C	Sidechain
26	LA	2807	U	Sidechain
26	LA	2808	G	Sidechain
26	LA	2809	A	Sidechain
26	LA	281	C	Sidechain
26	LA	2812	G	Sidechain
26	LA	2813	A	Sidechain
26	LA	2815	C	Sidechain
26	LA	2816	G	Sidechain
26	LA	2817	U	Sidechain
26	LA	2819	G	Sidechain
26	LA	2820	A	Sidechain
26	LA	2822	G	Sidechain
26	LA	2823	A	Sidechain
26	LA	2826	A	Sidechain
26	LA	2831	G	Sidechain
26	LA	2832	U	Sidechain
26	LA	2833	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2834	G	Sidechain
26	LA	2838	G	Sidechain
26	LA	2839	G	Sidechain
26	LA	2843	G	Sidechain
26	LA	2844	G	Sidechain
26	LA	2845	U	Sidechain
26	LA	2847	U	Sidechain
26	LA	2848	G	Sidechain
26	LA	2849	U	Sidechain
26	LA	2850	A	Sidechain
26	LA	2852	G	Sidechain
26	LA	2854	G	Sidechain
26	LA	2859	G	Sidechain
26	LA	2860	A	Sidechain
26	LA	2861	U	Sidechain
26	LA	2862	G	Sidechain
26	LA	2864	G	Sidechain
26	LA	2865	U	Sidechain
26	LA	2866	U	Sidechain
26	LA	2867	G	Sidechain
26	LA	2868	A	Sidechain
26	LA	2869	G	Sidechain
26	LA	287	G	Sidechain
26	LA	2871	U	Sidechain
26	LA	2872	A	Sidechain
26	LA	2874	C	Sidechain
26	LA	2875	C	Sidechain
26	LA	2876	G	Sidechain
26	LA	2877	G	Sidechain
26	LA	2878	U	Sidechain
26	LA	2879	A	Sidechain
26	LA	288	U	Sidechain
26	LA	2880	C	Sidechain
26	LA	2881	U	Sidechain
26	LA	2882	A	Sidechain
26	LA	2884	U	Sidechain
26	LA	2885	G	Sidechain
26	LA	2886	A	Sidechain
26	LA	289	G	Sidechain
26	LA	2892	G	Sidechain
26	LA	2893	A	Sidechain
26	LA	2894	G	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	2895	G	Sidechain
26	LA	2896	C	Sidechain
26	LA	2897	U	Sidechain
26	LA	2899	A	Sidechain
26	LA	29	U	Sidechain
26	LA	290	U	Sidechain
26	LA	2900	A	Sidechain
26	LA	2901	C	Sidechain
26	LA	2902	C	Sidechain
26	LA	2903	U	Sidechain
26	LA	291	G	Sidechain
26	LA	292	U	Sidechain
26	LA	293	U	Sidechain
26	LA	294	A	Sidechain
26	LA	296	U	Sidechain
26	LA	298	G	Sidechain
26	LA	299	A	Sidechain
26	LA	300	A	Sidechain
26	LA	303	G	Sidechain
26	LA	305	C	Sidechain
26	LA	306	U	Sidechain
26	LA	307	G	Sidechain
26	LA	308	G	Sidechain
26	LA	31	C	Sidechain
26	LA	310	A	Sidechain
26	LA	311	A	Sidechain
26	LA	312	G	Sidechain
26	LA	317	G	Sidechain
26	LA	319	G	Sidechain
26	LA	321	U	Sidechain
26	LA	325	G	Sidechain
26	LA	326	G	Sidechain
26	LA	328	U	Sidechain
26	LA	329	G	Sidechain
26	LA	33	C	Sidechain
26	LA	330	A	Sidechain
26	LA	333	G	Sidechain
26	LA	335	C	Sidechain
26	LA	336	C	Sidechain
26	LA	337	C	Sidechain
26	LA	339	U	Sidechain
26	LA	34	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	340	A	Sidechain
26	LA	345	A	Sidechain
26	LA	347	A	Sidechain
26	LA	348	A	Sidechain
26	LA	349	U	Sidechain
26	LA	35	G	Sidechain
26	LA	350	G	Sidechain
26	LA	352	A	Sidechain
26	LA	353	C	Sidechain
26	LA	354	A	Sidechain
26	LA	356	G	Sidechain
26	LA	359	G	Sidechain
26	LA	36	G	Sidechain
26	LA	360	U	Sidechain
26	LA	361	G	Sidechain
26	LA	362	A	Sidechain
26	LA	363	G	Sidechain
26	LA	364	C	Sidechain
26	LA	365	U	Sidechain
26	LA	366	C	Sidechain
26	LA	368	A	Sidechain
26	LA	369	U	Sidechain
26	LA	37	C	Sidechain
26	LA	370	G	Sidechain
26	LA	371	A	Sidechain
26	LA	372	G	Sidechain
26	LA	373	U	Sidechain
26	LA	375	G	Sidechain
26	LA	377	G	Sidechain
26	LA	379	G	Sidechain
26	LA	382	A	Sidechain
26	LA	383	C	Sidechain
26	LA	386	G	Sidechain
26	LA	388	G	Sidechain
26	LA	389	G	Sidechain
26	LA	39	G	Sidechain
26	LA	390	U	Sidechain
26	LA	392	U	Sidechain
26	LA	393	C	Sidechain
26	LA	395	U	Sidechain
26	LA	397	U	Sidechain
26	LA	398	C	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	399	U	Sidechain
26	LA	4	U	Sidechain
26	LA	40	U	Sidechain
26	LA	400	G	Sidechain
26	LA	403	U	Sidechain
26	LA	404	A	Sidechain
26	LA	405	U	Sidechain
26	LA	407	G	Sidechain
26	LA	410	G	Sidechain
26	LA	411	G	Sidechain
26	LA	414	C	Sidechain
26	LA	415	A	Sidechain
26	LA	417	C	Sidechain
26	LA	418	C	Sidechain
26	LA	420	C	Sidechain
26	LA	423	A	Sidechain
26	LA	424	G	Sidechain
26	LA	426	C	Sidechain
26	LA	427	U	Sidechain
26	LA	430	A	Sidechain
26	LA	431	U	Sidechain
26	LA	432	A	Sidechain
26	LA	433	C	Sidechain
26	LA	434	U	Sidechain
26	LA	435	C	Sidechain
26	LA	437	U	Sidechain
26	LA	442	G	Sidechain
26	LA	443	A	Sidechain
26	LA	445	C	Sidechain
26	LA	446	G	Sidechain
26	LA	447	A	Sidechain
26	LA	448	U	Sidechain
26	LA	449	A	Sidechain
26	LA	451	U	Sidechain
26	LA	452	G	Sidechain
26	LA	453	A	Sidechain
26	LA	454	A	Sidechain
26	LA	455	C	Sidechain
26	LA	458	G	Sidechain
26	LA	459	U	Sidechain
26	LA	46	G	Sidechain
26	LA	460	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	461	C	Sidechain
26	LA	463	G	Sidechain
26	LA	464	U	Sidechain
26	LA	465	G	Sidechain
26	LA	467	G	Sidechain
26	LA	468	G	Sidechain
26	LA	471	A	Sidechain
26	LA	472	A	Sidechain
26	LA	473	G	Sidechain
26	LA	474	G	Sidechain
26	LA	475	C	Sidechain
26	LA	476	G	Sidechain
26	LA	479	A	Sidechain
26	LA	48	G	Sidechain
26	LA	481	G	Sidechain
26	LA	482	A	Sidechain
26	LA	483	A	Sidechain
26	LA	485	C	Sidechain
26	LA	487	C	Sidechain
26	LA	488	G	Sidechain
26	LA	489	G	Sidechain
26	LA	49	A	Sidechain
26	LA	491	G	Sidechain
26	LA	492	A	Sidechain
26	LA	493	G	Sidechain
26	LA	495	G	Sidechain
26	LA	496	G	Sidechain
26	LA	497	A	Sidechain
26	LA	499	U	Sidechain
26	LA	50	U	Sidechain
26	LA	500	G	Sidechain
26	LA	501	A	Sidechain
26	LA	504	A	Sidechain
26	LA	506	G	Sidechain
26	LA	507	A	Sidechain
26	LA	508	A	Sidechain
26	LA	509	C	Sidechain
26	LA	51	G	Sidechain
26	LA	510	C	Sidechain
26	LA	511	U	Sidechain
26	LA	512	G	Sidechain
26	LA	513	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	514	A	Sidechain
26	LA	516	C	Sidechain
26	LA	517	C	Sidechain
26	LA	518	G	Sidechain
26	LA	52	A	Sidechain
26	LA	521	U	Sidechain
26	LA	525	U	Sidechain
26	LA	528	A	Sidechain
26	LA	530	G	Sidechain
26	LA	533	G	Sidechain
26	LA	536	G	Sidechain
26	LA	538	A	Sidechain
26	LA	539	G	Sidechain
26	LA	54	G	Sidechain
26	LA	541	A	Sidechain
26	LA	543	G	Sidechain
26	LA	546	U	Sidechain
26	LA	547	A	Sidechain
26	LA	548	G	Sidechain
26	LA	549	G	Sidechain
26	LA	550	C	Sidechain
26	LA	551	G	Sidechain
26	LA	552	U	Sidechain
26	LA	555	G	Sidechain
26	LA	556	A	Sidechain
26	LA	561	G	Sidechain
26	LA	562	U	Sidechain
26	LA	563	A	Sidechain
26	LA	564	C	Sidechain
26	LA	565	C	Sidechain
26	LA	566	U	Sidechain
26	LA	567	U	Sidechain
26	LA	568	U	Sidechain
26	LA	569	U	Sidechain
26	LA	57	C	Sidechain
26	LA	570	G	Sidechain
26	LA	571	U	Sidechain
26	LA	572	A	Sidechain
26	LA	573	U	Sidechain
26	LA	574	A	Sidechain
26	LA	575	A	Sidechain
26	LA	576	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	577	G	Sidechain
26	LA	578	G	Sidechain
26	LA	579	G	Sidechain
26	LA	58	G	Sidechain
26	LA	580	U	Sidechain
26	LA	581	C	Sidechain
26	LA	582	A	Sidechain
26	LA	584	C	Sidechain
26	LA	585	G	Sidechain
26	LA	587	C	Sidechain
26	LA	588	U	Sidechain
26	LA	591	U	Sidechain
26	LA	592	A	Sidechain
26	LA	593	U	Sidechain
26	LA	594	U	Sidechain
26	LA	595	C	Sidechain
26	LA	596	U	Sidechain
26	LA	597	G	Sidechain
26	LA	598	U	Sidechain
26	LA	599	A	Sidechain
26	LA	6	A	Sidechain
26	LA	60	G	Sidechain
26	LA	600	G	Sidechain
26	LA	602	A	Sidechain
26	LA	603	A	Sidechain
26	LA	605	G	Sidechain
26	LA	606	U	Sidechain
26	LA	608	A	Sidechain
26	LA	609	A	Sidechain
26	LA	611	C	Sidechain
26	LA	612	G	Sidechain
26	LA	613	A	Sidechain
26	LA	614	A	Sidechain
26	LA	615	U	Sidechain
26	LA	616	A	Sidechain
26	LA	617	G	Sidechain
26	LA	618	G	Sidechain
26	LA	619	G	Sidechain
26	LA	62	U	Sidechain
26	LA	621	A	Sidechain
26	LA	623	C	Sidechain
26	LA	624	C	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	625	G	Sidechain
26	LA	627	A	Sidechain
26	LA	63	A	Sidechain
26	LA	630	G	Sidechain
26	LA	633	A	Sidechain
26	LA	634	C	Sidechain
26	LA	635	C	Sidechain
26	LA	636	G	Sidechain
26	LA	640	C	Sidechain
26	LA	642	U	Sidechain
26	LA	644	A	Sidechain
26	LA	646	U	Sidechain
26	LA	648	G	Sidechain
26	LA	649	G	Sidechain
26	LA	65	U	Sidechain
26	LA	651	G	Sidechain
26	LA	652	U	Sidechain
26	LA	654	A	Sidechain
26	LA	655	A	Sidechain
26	LA	656	G	Sidechain
26	LA	662	G	Sidechain
26	LA	664	G	Sidechain
26	LA	665	U	Sidechain
26	LA	667	U	Sidechain
26	LA	668	A	Sidechain
26	LA	669	G	Sidechain
26	LA	670	A	Sidechain
26	LA	675	A	Sidechain
26	LA	676	A	Sidechain
26	LA	679	C	Sidechain
26	LA	680	C	Sidechain
26	LA	681	G	Sidechain
26	LA	682	G	Sidechain
26	LA	686	U	Sidechain
26	LA	687	C	Sidechain
26	LA	688	U	Sidechain
26	LA	69	C	Sidechain
26	LA	690	G	Sidechain
26	LA	692	C	Sidechain
26	LA	695	G	Sidechain
26	LA	698	C	Sidechain
26	LA	699	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	7	G	Sidechain
26	LA	700	G	Sidechain
26	LA	701	G	Sidechain
26	LA	703	U	Sidechain
26	LA	704	G	Sidechain
26	LA	705	A	Sidechain
26	LA	706	A	Sidechain
26	LA	707	G	Sidechain
26	LA	709	U	Sidechain
26	LA	71	A	Sidechain
26	LA	710	U	Sidechain
26	LA	711	G	Sidechain
26	LA	712	G	Sidechain
26	LA	713	G	Sidechain
26	LA	715	A	Sidechain
26	LA	717	C	Sidechain
26	LA	718	A	Sidechain
26	LA	719	C	Sidechain
26	LA	72	U	Sidechain
26	LA	721	A	Sidechain
26	LA	723	C	Sidechain
26	LA	724	U	Sidechain
26	LA	725	G	Sidechain
26	LA	726	G	Sidechain
26	LA	727	A	Sidechain
26	LA	728	G	Sidechain
26	LA	729	G	Sidechain
26	LA	730	A	Sidechain
26	LA	732	C	Sidechain
26	LA	733	G	Sidechain
26	LA	734	A	Sidechain
26	LA	736	C	Sidechain
26	LA	738	G	Sidechain
26	LA	739	A	Sidechain
26	LA	74	A	Sidechain
26	LA	741	U	Sidechain
26	LA	742	A	Sidechain
26	LA	745	G	Sidechain
26	LA	746	U	Sidechain
26	LA	747	U	Sidechain
26	LA	748	G	Sidechain
26	LA	749	A	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	75	G	Sidechain
26	LA	750	A	Sidechain
26	LA	751	A	Sidechain
26	LA	753	A	Sidechain
26	LA	754	U	Sidechain
26	LA	755	U	Sidechain
26	LA	756	A	Sidechain
26	LA	757	G	Sidechain
26	LA	758	C	Sidechain
26	LA	759	G	Sidechain
26	LA	76	C	Sidechain
26	LA	761	A	Sidechain
26	LA	762	U	Sidechain
26	LA	763	G	Sidechain
26	LA	764	A	Sidechain
26	LA	765	C	Sidechain
26	LA	766	U	Sidechain
26	LA	768	G	Sidechain
26	LA	77	G	Sidechain
26	LA	771	G	Sidechain
26	LA	772	C	Sidechain
26	LA	773	U	Sidechain
26	LA	774	G	Sidechain
26	LA	776	G	Sidechain
26	LA	777	G	Sidechain
26	LA	778	G	Sidechain
26	LA	779	U	Sidechain
26	LA	78	U	Sidechain
26	LA	780	G	Sidechain
26	LA	781	A	Sidechain
26	LA	783	A	Sidechain
26	LA	784	G	Sidechain
26	LA	785	G	Sidechain
26	LA	787	C	Sidechain
26	LA	788	A	Sidechain
26	LA	789	A	Sidechain
26	LA	79	C	Sidechain
26	LA	790	U	Sidechain
26	LA	792	A	Sidechain
26	LA	793	A	Sidechain
26	LA	795	C	Sidechain
26	LA	797	G	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	798	G	Sidechain
26	LA	799	G	Sidechain
26	LA	80	G	Sidechain
26	LA	800	A	Sidechain
26	LA	801	G	Sidechain
26	LA	802	A	Sidechain
26	LA	803	U	Sidechain
26	LA	804	A	Sidechain
26	LA	805	G	Sidechain
26	LA	808	G	Sidechain
26	LA	810	U	Sidechain
26	LA	813	U	Sidechain
26	LA	814	C	Sidechain
26	LA	816	C	Sidechain
26	LA	818	G	Sidechain
26	LA	819	A	Sidechain
26	LA	820	A	Sidechain
26	LA	824	U	Sidechain
26	LA	826	U	Sidechain
26	LA	827	U	Sidechain
26	LA	828	U	Sidechain
26	LA	829	A	Sidechain
26	LA	83	A	Sidechain
26	LA	831	G	Sidechain
26	LA	832	U	Sidechain
26	LA	833	A	Sidechain
26	LA	834	G	Sidechain
26	LA	835	C	Sidechain
26	LA	837	C	Sidechain
26	LA	838	C	Sidechain
26	LA	839	U	Sidechain
26	LA	84	A	Sidechain
26	LA	840	C	Sidechain
26	LA	841	G	Sidechain
26	LA	842	U	Sidechain
26	LA	844	A	Sidechain
26	LA	847	U	Sidechain
26	LA	849	A	Sidechain
26	LA	85	G	Sidechain
26	LA	850	U	Sidechain
26	LA	851	C	Sidechain
26	LA	853	C	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	856	G	Sidechain
26	LA	858	G	Sidechain
26	LA	859	G	Sidechain
26	LA	86	G	Sidechain
26	LA	860	U	Sidechain
26	LA	861	A	Sidechain
26	LA	862	G	Sidechain
26	LA	864	G	Sidechain
26	LA	866	A	Sidechain
26	LA	868	U	Sidechain
26	LA	869	G	Sidechain
26	LA	870	U	Sidechain
26	LA	872	U	Sidechain
26	LA	874	G	Sidechain
26	LA	875	G	Sidechain
26	LA	877	A	Sidechain
26	LA	88	G	Sidechain
26	LA	880	G	Sidechain
26	LA	881	G	Sidechain
26	LA	882	G	Sidechain
26	LA	884	U	Sidechain
26	LA	885	C	Sidechain
26	LA	89	A	Sidechain
26	LA	891	G	Sidechain
26	LA	892	A	Sidechain
26	LA	893	C	Sidechain
26	LA	894	U	Sidechain
26	LA	895	U	Sidechain
26	LA	896	A	Sidechain
26	LA	899	A	Sidechain
26	LA	90	U	Sidechain
26	LA	900	A	Sidechain
26	LA	901	C	Sidechain
26	LA	902	C	Sidechain
26	LA	904	G	Sidechain
26	LA	906	U	Sidechain
26	LA	907	G	Sidechain
26	LA	908	C	Sidechain
26	LA	909	A	Sidechain
26	LA	91	A	Sidechain
26	LA	911	A	Sidechain
26	LA	912	C	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	913	U	Sidechain
26	LA	914	G	Sidechain
26	LA	915	C	Sidechain
26	LA	916	G	Sidechain
26	LA	917	A	Sidechain
26	LA	919	U	Sidechain
26	LA	92	U	Sidechain
26	LA	920	A	Sidechain
26	LA	922	C	Sidechain
26	LA	923	G	Sidechain
26	LA	924	G	Sidechain
26	LA	925	A	Sidechain
26	LA	926	G	Sidechain
26	LA	927	A	Sidechain
26	LA	929	U	Sidechain
26	LA	930	G	Sidechain
26	LA	932	U	Sidechain
26	LA	933	A	Sidechain
26	LA	934	U	Sidechain
26	LA	935	C	Sidechain
26	LA	936	A	Sidechain
26	LA	938	G	Sidechain
26	LA	939	G	Sidechain
26	LA	94	A	Sidechain
26	LA	940	G	Sidechain
26	LA	941	A	Sidechain
26	LA	942	G	Sidechain
26	LA	944	C	Sidechain
26	LA	945	A	Sidechain
26	LA	946	C	Sidechain
26	LA	947	A	Sidechain
26	LA	948	C	Sidechain
26	LA	949	G	Sidechain
26	LA	950	G	Sidechain
26	LA	951	C	Sidechain
26	LA	952	G	Sidechain
26	LA	953	G	Sidechain
26	LA	954	G	Sidechain
26	LA	955	U	Sidechain
26	LA	956	G	Sidechain
26	LA	957	C	Sidechain
26	LA	958	U	Sidechain

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Mol	Chain	Res	Type	Group
26	LA	959	A	Sidechain
26	LA	960	A	Sidechain
26	LA	962	G	Sidechain
26	LA	963	U	Sidechain
26	LA	966	G	Sidechain
26	LA	967	U	Sidechain
26	LA	968	C	Sidechain
26	LA	969	G	Sidechain
26	LA	970	U	Sidechain
26	LA	973	A	Sidechain
26	LA	975	A	Sidechain
26	LA	976	G	Sidechain
26	LA	977	G	Sidechain
26	LA	98	G	Sidechain
26	LA	980	A	Sidechain
26	LA	982	C	Sidechain
26	LA	983	A	Sidechain
26	LA	984	A	Sidechain
26	LA	985	C	Sidechain
26	LA	988	A	Sidechain
26	LA	989	G	Sidechain
26	LA	99	U	Sidechain
26	LA	991	C	Sidechain
26	LA	992	C	Sidechain
26	LA	993	G	Sidechain
26	LA	994	C	Sidechain
26	LA	995	C	Sidechain
26	LA	997	G	Sidechain
26	LA	998	C	Sidechain
26	LA	999	U	Sidechain
25	LB	10	G	Sidechain
25	LB	100	G	Sidechain
25	LB	102	G	Sidechain
25	LB	105	G	Sidechain
25	LB	106	G	Sidechain
25	LB	108	A	Sidechain
25	LB	109	A	Sidechain
25	LB	11	C	Sidechain
25	LB	111	U	Sidechain
25	LB	114	C	Sidechain
25	LB	116	G	Sidechain
25	LB	117	G	Sidechain

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Mol	Chain	Res	Type	Group
25	LB	119	A	Sidechain
25	LB	15	A	Sidechain
25	LB	17	C	Sidechain
25	LB	18	G	Sidechain
25	LB	19	C	Sidechain
25	LB	2	G	Sidechain
25	LB	21	G	Sidechain
25	LB	22	U	Sidechain
25	LB	23	G	Sidechain
25	LB	25	U	Sidechain
25	LB	26	C	Sidechain
25	LB	27	C	Sidechain
25	LB	3	C	Sidechain
25	LB	32	U	Sidechain
25	LB	33	G	Sidechain
25	LB	34	A	Sidechain
25	LB	38	C	Sidechain
25	LB	42	C	Sidechain
25	LB	43	C	Sidechain
25	LB	45	A	Sidechain
25	LB	47	C	Sidechain
25	LB	49	C	Sidechain
25	LB	50	A	Sidechain
25	LB	52	A	Sidechain
25	LB	53	A	Sidechain
25	LB	54	G	Sidechain
25	LB	58	A	Sidechain
25	LB	6	G	Sidechain
25	LB	60	C	Sidechain
25	LB	61	G	Sidechain
25	LB	62	C	Sidechain
25	LB	64	G	Sidechain
25	LB	65	U	Sidechain
25	LB	66	A	Sidechain
25	LB	67	G	Sidechain
25	LB	7	G	Sidechain
25	LB	73	A	Sidechain
25	LB	74	U	Sidechain
25	LB	75	G	Sidechain
25	LB	77	U	Sidechain
25	LB	79	G	Sidechain
25	LB	80	U	Sidechain

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Mol	Chain	Res	Type	Group
25	LB	81	G	Sidechain
25	LB	82	U	Sidechain
25	LB	83	G	Sidechain
25	LB	84	G	Sidechain
25	LB	85	G	Sidechain
25	LB	89	U	Sidechain
25	LB	9	G	Sidechain
25	LB	90	C	Sidechain
25	LB	92	C	Sidechain
25	LB	94	A	Sidechain
25	LB	95	U	Sidechain
25	LB	97	C	Sidechain
25	LB	98	G	Sidechain
25	LB	99	A	Sidechain
37	LC	12	ARG	Sidechain
37	LC	131	LEU	Peptide
37	LC	132	GLY	Peptide
37	LC	134	ARG	Sidechain
37	LC	162	ARG	Sidechain
37	LC	163	TYR	Sidechain
37	LC	172	HIS	Sidechain
37	LC	208	TYR	Sidechain
37	LC	21	TYR	Sidechain
37	LC	228	GLY	Peptide
37	LC	231	ALA	Peptide
37	LC	37	LYS	Peptide
37	LC	49	GLY	Peptide
37	LC	53	ARG	Sidechain
37	LC	7	ARG	Sidechain
37	LC	73	VAL	Peptide
37	LC	75	VAL	Peptide
27	LD	10	PRO	Peptide
27	LD	111	ALA	Peptide
27	LD	14	HIS	Sidechain
27	LD	160	TYR	Sidechain
27	LD	170	TYR	Sidechain
27	LD	176	ARG	Sidechain
27	LD	184	GLU	Peptide
27	LD	188	ARG	Sidechain
27	LD	199	HIS	Sidechain
27	LD	20	ASN	Peptide
27	LD	211	ARG	Sidechain

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Mol	Chain	Res	Type	Group
27	LD	213	ARG	Sidechain
27	LD	237	ARG	Sidechain
27	LD	252	LYS	Peptide
27	LD	258	SER	Peptide
27	LD	27	LYS	Peptide
27	LD	270	ARG	Sidechain
27	LD	47	ARG	Sidechain
27	LD	50	THR	Peptide
27	LD	6	LYS	Peptide
27	LD	62	ARG	Sidechain
27	LD	68	ARG	Sidechain
27	LD	86	ARG	Sidechain
27	LD	92	LEU	Peptide
38	LE	118	PHE	Sidechain
38	LE	128	ARG	Sidechain
38	LE	13	ARG	Sidechain
38	LE	140	HIS	Sidechain
38	LE	151	THR	Peptide
38	LE	163	GLY	Peptide
38	LE	173	GLN	Peptide
38	LE	184	ARG	Sidechain
38	LE	38	LYS	Peptide
38	LE	41	ALA	Peptide
38	LE	45	TYR	Sidechain
38	LE	46	ARG	Sidechain
38	LE	59	ARG	Peptide
38	LE	83	ARG	Sidechain
38	LE	90	PHE	Sidechain
44	LF	102	ARG	Sidechain
44	LF	117	ARG	Sidechain
44	LF	162	ARG	Sidechain
44	LF	166	LYS	Peptide
44	LF	23	PHE	Sidechain
44	LF	40	ARG	Sidechain
44	LF	44	ARG	Sidechain
44	LF	45	ALA	Peptide
44	LF	67	ARG	Sidechain
44	LF	88	ARG	Sidechain
45	LG	101	ARG	Sidechain
45	LG	103	ILE	Peptide
45	LG	111	ARG	Sidechain
45	LG	120	SER	Peptide

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Mol	Chain	Res	Type	Group
45	LG	127	TYR	Sidechain
45	LG	142	TYR	Sidechain
45	LG	166	ARG	Sidechain
45	LG	25	MET	Peptide
45	LG	29	ARG	Sidechain
45	LG	71	LYS	Peptide
45	LG	74	ALA	Peptide
45	LG	85	GLY	Peptide
45	LG	91	ARG	Sidechain
45	LG	94	ARG	Sidechain
45	LG	99	PHE	Sidechain
46	LH	113	ASP	Peptide
46	LH	148	ARG	Sidechain
46	LH	151	ARG	Sidechain
46	LH	152	ARG	Sidechain
46	LH	162	ARG	Sidechain
46	LH	19	ASN	Peptide
46	LH	28	LYS	Peptide
46	LH	34	ARG	Sidechain
46	LH	6	ALA	Peptide
46	LH	68	ARG	Sidechain
46	LH	92	GLY	Peptide
46	LH	93	TYR	Sidechain
46	LH	94	ARG	Sidechain
51	LI	22	LYS	Peptide
51	LI	29	PHE	Sidechain
51	LI	47	PHE	Sidechain
51	LI	50	ARG	Sidechain
51	LI	51	ARG	Sidechain
51	LI	70	GLU	Peptide
51	LI	97	ARG	Sidechain
47	LJ	105	PHE	Peptide
47	LJ	106	GLU	Peptide
47	LJ	22	LEU	Peptide
47	LJ	41	ARG	Sidechain
47	LJ	45	ARG	Sidechain
47	LJ	52	ARG	Sidechain
47	LJ	55	ARG	Sidechain
47	LJ	72	LYS	Peptide
47	LJ	87	HIS	Peptide
47	LJ	98	PHE	Sidechain
49	LK	11	GLN	Peptide

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Mol	Chain	Res	Type	Group
49	LK	126	ARG	Sidechain
49	LK	128	ILE	Mainchain
49	LK	133	ARG	Sidechain
49	LK	139	VAL	Peptide
49	LK	20	SER	Peptide
49	LK	53	PRO	Peptide
49	LK	62	ALA	Peptide
49	LK	66	PHE	Peptide
49	LK	7	TYR	Sidechain
50	LL	20	ALA	Peptide
50	LL	34	ARG	Sidechain
50	LL	7	LYS	Peptide
50	LL	74	TYR	Sidechain
50	LL	75	TYR	Sidechain
54	LM	100	PHE	Sidechain
54	LM	105	ARG	Sidechain
54	LM	112	PHE	Sidechain
54	LM	18	ARG	Sidechain
54	LM	2	ILE	Peptide
54	LM	32	TYR	Sidechain
54	LM	47	ILE	Peptide
54	LM	49	ARG	Sidechain
54	LM	64	ARG	Sidechain
48	LN	104	GLN	Peptide
48	LN	107	PHE	Sidechain
48	LN	123	ARG	Sidechain
48	LN	125	LEU	Peptide
48	LN	132	ARG	Sidechain
48	LN	2	ARG	Sidechain,Peptide
48	LN	4	ASN	Peptide
48	LN	51	GLU	Peptide
48	LN	52	GLY	Peptide
48	LN	67	THR	Peptide
48	LN	8	PRO	Peptide
52	LO	114	ARG	Sidechain
52	LO	16	ARG	Sidechain
52	LO	24	THR	Peptide
52	LO	40	ARG	Sidechain
52	LO	44	ARG	Sidechain
52	LO	55	ARG	Sidechain
52	LO	6	ARG	Sidechain
52	LO	70	ASP	Peptide

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Mol	Chain	Res	Type	Group
53	LP	103	ARG	Sidechain
53	LP	112	TYR	Sidechain
53	LP	17	ARG	Sidechain
53	LP	2	ARG	Sidechain
53	LP	30	ARG	Sidechain
53	LP	45	ARG	Sidechain
53	LP	67	PHE	Sidechain
53	LP	71	ARG	Sidechain
53	LP	80	PHE	Sidechain
53	LP	96	ARG	Sidechain
55	LQ	100	HIS	Sidechain
55	LQ	102	ARG	Sidechain
55	LQ	115	LEU	Peptide
55	LQ	15	ARG	Sidechain
55	LQ	16	ARG	Sidechain
55	LQ	2	ASP	Peptide
55	LQ	25	ARG	Sidechain
55	LQ	30	ARG	Sidechain
55	LQ	33	ARG	Sidechain
55	LQ	41	ALA	Peptide
55	LQ	64	TYR	Peptide
55	LQ	70	ALA	Mainchain
55	LQ	86	GLY	Peptide
55	LQ	9	ARG	Sidechain
56	LR	102	ARG	Sidechain
56	LR	108	ARG	Peptide
56	LR	110	LYS	Peptide
56	LR	112	ARG	Sidechain,Peptide
56	LR	19	PHE	Sidechain
56	LR	50	ARG	Peptide
56	LR	52	ARG	Sidechain
56	LR	61	ARG	Sidechain
56	LR	71	ARG	Sidechain
56	LR	98	TYR	Sidechain
57	LS	10	ARG	Sidechain
57	LS	100	PHE	Sidechain
57	LS	24	TYR	Sidechain
57	LS	29	ARG	Sidechain
57	LS	35	PHE	Sidechain
57	LS	44	TYR	Sidechain
57	LS	46	TYR	Sidechain
57	LS	54	ARG	Sidechain

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Mol	Chain	Res	Type	Group
57	LS	56	PHE	Sidechain
57	LS	57	ARG	Sidechain
57	LS	75	TYR	Sidechain
57	LS	91	ARG	Sidechain
58	LT	13	ARG	Sidechain
58	LT	2	TYR	Sidechain,Peptide
58	LT	21	ARG	Sidechain
58	LT	49	ILE	Peptide
58	LT	78	ARG	Sidechain
58	LT	79	ARG	Sidechain
58	LT	84	ARG	Sidechain
28	LU	102	HIS	Sidechain
28	LU	60	HIS	Sidechain,Peptide
28	LU	8	ARG	Sidechain
28	LU	88	ARG	Sidechain
28	LU	9	HIS	Sidechain
28	LU	92	ARG	Sidechain
28	LU	95	ARG	Sidechain
29	LV	13	ALA	Peptide
29	LV	3	ARG	Sidechain
29	LV	6	ARG	Sidechain
29	LV	69	ARG	Sidechain
29	LV	84	TYR	Sidechain
30	LW	2	ALA	Peptide
30	LW	48	VAL	Peptide
30	LW	63	ALA	Peptide
30	LW	80	ASP	Peptide
30	LW	81	ARG	Peptide
30	LW	84	PHE	Sidechain
30	LW	85	ARG	Sidechain
30	LW	93	ARG	Sidechain
31	LX	31	TYR	Sidechain
31	LX	80	HIS	Peptide
31	LX	83	LYS	Peptide
31	LX	9	ARG	Sidechain
31	LX	93	ARG	Peptide
32	LY	13	ARG	Sidechain
32	LY	23	LYS	Peptide
32	LY	25	PHE	Sidechain
32	LY	38	ARG	Sidechain
32	LY	39	GLN	Peptide
32	LY	44	PHE	Sidechain

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Mol	Chain	Res	Type	Group
32	LY	76	ARG	Sidechain
32	LY	78	PHE	Sidechain
33	LZ	10	ARG	Sidechain
33	LZ	17	ARG	Peptide
33	LZ	19	HIS	Sidechain
33	LZ	27	ARG	Sidechain
33	LZ	28	PHE	Sidechain
33	LZ	44	ARG	Sidechain
33	LZ	77	TYR	Sidechain
3	S1	14	G	Sidechain
3	S1	16	A	Sidechain
3	S1	17	U	Sidechain
3	S1	18	A	Sidechain
3	S1	19	A	Sidechain
3	S1	20	G	Sidechain
3	S1	23	C	Sidechain
3	S1	25	U	Sidechain
3	S1	27	A	Sidechain
3	S1	28	U	Sidechain
3	S1	29	G	Sidechain
3	S1	30	U	Sidechain
3	S1	31	U	Sidechain
3	S1	32	U	Sidechain
3	S1	34	U	Sidechain
3	S1	35	G	Sidechain
3	S1	36	U	Sidechain
3	S1	37	G	Sidechain
3	S1	38	G	Sidechain
3	S1	39	U	Sidechain
3	S1	40	G	Sidechain
3	S1	41	A	Sidechain
3	S1	42	U	Sidechain
3	S1	44	U	Sidechain
3	S1	45	G	Sidechain
3	S1	46	C	Sidechain
3	S1	47	C	Sidechain
3	S1	49	U	Sidechain
3	S1	50	U	Sidechain
3	S1	52	U	Sidechain
3	S1	53	G	Sidechain
3	S1	54	U	Sidechain
3	S1	55	A	Sidechain

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Mol	Chain	Res	Type	Group
3	S1	56	G	Sidechain
3	S1	58	C	Sidechain
3	S1	59	A	Sidechain
4	S2	10	G	Sidechain
4	S2	11	A	Sidechain
4	S2	12	G	Sidechain
4	S2	14	A	Sidechain
4	S2	15	G	Sidechain
4	S2	2	G	Sidechain
4	S2	20	G	Sidechain
4	S2	21	U	Sidechain
4	S2	25	U	Sidechain
4	S2	3	C	Sidechain
4	S2	30	G	Sidechain
4	S2	32	G	Sidechain
4	S2	34	U	Sidechain
4	S2	35	C	Sidechain
4	S2	38	A	Sidechain
4	S2	39	A	Sidechain
4	S2	4	G	Sidechain
4	S2	40	C	Sidechain
4	S2	41	C	Sidechain
4	S2	42	C	Sidechain
4	S2	44	A	Sidechain
4	S2	46	G	Sidechain
4	S2	47	A	Sidechain
4	S2	48	U	Sidechain
4	S2	5	G	Sidechain
4	S2	50	G	Sidechain
4	S2	51	U	Sidechain
4	S2	52	C	Sidechain
4	S2	53	G	Sidechain
4	S2	54	G	Sidechain
4	S2	57	C	Sidechain
4	S2	58	A	Sidechain
4	S2	60	A	Sidechain
4	S2	61	U	Sidechain
4	S2	64	G	Sidechain
4	S2	65	G	Sidechain
4	S2	66	C	Sidechain
4	S2	67	C	Sidechain
4	S2	68	C	Sidechain

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Mol	Chain	Res	Type	Group
4	S2	70	C	Sidechain
4	S2	71	G	Sidechain
4	S2	73	A	Sidechain
4	S2	74	A	Sidechain
4	S2	75	C	Sidechain
4	S2	76	C	Sidechain
4	S2	77	A	Sidechain
4	S2	8	U	Sidechain
4	S2	9	G	Sidechain
24	S3	10	ARG	Sidechain
24	S3	103	ARG	Sidechain
24	S3	136	ARG	Sidechain
24	S3	145	ARG	Sidechain
24	S3	18	ILE	Peptide
24	S3	199	VAL	Peptide
24	S3	2	ARG	Peptide
24	S3	201	PHE	Sidechain
24	S3	252	ARG	Sidechain
24	S3	28	ARG	Sidechain
24	S3	283	ASP	Peptide
24	S3	290	ASP	Peptide
24	S3	3	THR	Peptide
24	S3	308	ARG	Peptide
24	S3	326	ASP	Peptide
24	S3	33	THR	Peptide
24	S3	334	PHE	Sidechain
24	S3	338	TYR	Sidechain
24	S3	346	ASP	Peptide
24	S3	358	ARG	Sidechain
24	S3	359	PHE	Sidechain
24	S3	361	ARG	Mainchain
24	S3	401	ALA	Peptide
24	S3	407	ARG	Sidechain
24	S3	448	THR	Peptide
24	S3	490	ARG	Sidechain
24	S3	496	LYS	Peptide
24	S3	499	ASP	Peptide
24	S3	524	LEU	Peptide
24	S3	543	VAL	Peptide
24	S3	548	TYR	Sidechain
24	S3	568	TYR	Sidechain
24	S3	576	ARG	Sidechain

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Mol	Chain	Res	Type	Group
24	S3	604	PHE	Sidechain
24	S3	665	TYR	Sidechain
24	S3	683	PHE	Sidechain
24	S3	686	TYR	Sidechain
24	S3	78	TYR	Sidechain
2	SA	1	A	Sidechain
2	SA	1000	A	Sidechain
2	SA	1002	G	Sidechain
2	SA	1004	A	Sidechain
2	SA	1007	U	Sidechain
2	SA	1009	U	Sidechain
2	SA	101	A	Sidechain
2	SA	1010	U	Sidechain
2	SA	1012	A	Sidechain
2	SA	1013	G	Sidechain
2	SA	1017	U	Sidechain
2	SA	1018	G	Sidechain
2	SA	102	G	Sidechain
2	SA	1020	G	Sidechain
2	SA	1021	A	Sidechain
2	SA	1022	A	Sidechain
2	SA	1023	U	Sidechain
2	SA	1024	G	Sidechain
2	SA	1027	C	Sidechain
2	SA	1028	C	Sidechain
2	SA	1029	U	Sidechain
2	SA	1030	U	Sidechain
2	SA	1033	G	Sidechain
2	SA	1034	G	Sidechain
2	SA	1035	A	Sidechain
2	SA	1036	A	Sidechain
2	SA	1037	C	Sidechain
2	SA	1039	G	Sidechain
2	SA	104	G	Sidechain
2	SA	1040	U	Sidechain
2	SA	1042	A	Sidechain
2	SA	1044	A	Sidechain
2	SA	1045	C	Sidechain
2	SA	1047	G	Sidechain
2	SA	105	G	Sidechain
2	SA	1050	G	Sidechain
2	SA	1051	C	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	1052	U	Sidechain
2	SA	1057	G	Sidechain
2	SA	1058	G	Sidechain
2	SA	106	C	Sidechain
2	SA	1060	U	Sidechain
2	SA	1062	U	Sidechain
2	SA	1064	G	Sidechain
2	SA	1065	U	Sidechain
2	SA	1066	C	Sidechain
2	SA	107	G	Sidechain
2	SA	1071	C	Sidechain
2	SA	1072	G	Sidechain
2	SA	1073	U	Sidechain
2	SA	1076	U	Sidechain
2	SA	1077	G	Sidechain
2	SA	108	G	Sidechain
2	SA	1080	A	Sidechain
2	SA	1081	A	Sidechain
2	SA	1082	A	Sidechain
2	SA	1084	G	Sidechain
2	SA	1085	U	Sidechain
2	SA	1086	U	Sidechain
2	SA	1089	G	Sidechain
2	SA	109	A	Sidechain
2	SA	1090	U	Sidechain
2	SA	1091	U	Sidechain
2	SA	1092	A	Sidechain
2	SA	1094	G	Sidechain
2	SA	1095	U	Sidechain
2	SA	1097	C	Sidechain
2	SA	1098	C	Sidechain
2	SA	1099	G	Sidechain
2	SA	11	G	Sidechain
2	SA	110	C	Sidechain
2	SA	1101	A	Sidechain
2	SA	1102	A	Sidechain
2	SA	1103	C	Sidechain
2	SA	1104	G	Sidechain
2	SA	1106	G	Sidechain
2	SA	1108	G	Sidechain
2	SA	111	G	Sidechain
2	SA	1111	A	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	1112	C	Sidechain
2	SA	1113	C	Sidechain
2	SA	1115	U	Sidechain
2	SA	1116	U	Sidechain
2	SA	1117	A	Sidechain
2	SA	1118	U	Sidechain
2	SA	1119	C	Sidechain
2	SA	1120	C	Sidechain
2	SA	1122	U	Sidechain
2	SA	1123	U	Sidechain
2	SA	1124	G	Sidechain
2	SA	1126	U	Sidechain
2	SA	1131	G	Sidechain
2	SA	1132	C	Sidechain
2	SA	1133	G	Sidechain
2	SA	1134	G	Sidechain
2	SA	1137	C	Sidechain
2	SA	1138	G	Sidechain
2	SA	1140	C	Sidechain
2	SA	1141	C	Sidechain
2	SA	1142	G	Sidechain
2	SA	1143	G	Sidechain
2	SA	1144	G	Sidechain
2	SA	1148	U	Sidechain
2	SA	115	G	Sidechain
2	SA	1152	A	Sidechain
2	SA	1153	G	Sidechain
2	SA	1154	G	Sidechain
2	SA	1155	A	Sidechain
2	SA	1156	G	Sidechain
2	SA	1157	A	Sidechain
2	SA	1158	C	Sidechain
2	SA	1161	C	Sidechain
2	SA	1162	C	Sidechain
2	SA	1163	A	Sidechain
2	SA	1168	U	Sidechain
2	SA	1169	A	Sidechain
2	SA	117	G	Sidechain
2	SA	1170	A	Sidechain
2	SA	1174	G	Sidechain
2	SA	1175	G	Sidechain
2	SA	1177	G	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	1178	G	Sidechain
2	SA	118	U	Sidechain
2	SA	1180	A	Sidechain
2	SA	1181	G	Sidechain
2	SA	1182	G	Sidechain
2	SA	1184	G	Sidechain
2	SA	1185	G	Sidechain
2	SA	1186	G	Sidechain
2	SA	1187	G	Sidechain
2	SA	1188	A	Sidechain
2	SA	119	A	Sidechain
2	SA	1190	G	Sidechain
2	SA	1191	A	Sidechain
2	SA	1192	C	Sidechain
2	SA	1193	G	Sidechain
2	SA	1194	U	Sidechain
2	SA	1195	C	Sidechain
2	SA	1196	A	Sidechain
2	SA	12	U	Sidechain
2	SA	120	A	Sidechain
2	SA	1200	C	Sidechain
2	SA	1201	A	Sidechain
2	SA	1203	C	Sidechain
2	SA	1204	A	Sidechain
2	SA	1205	U	Sidechain
2	SA	1207	G	Sidechain
2	SA	1208	C	Sidechain
2	SA	1209	C	Sidechain
2	SA	1210	C	Sidechain
2	SA	1211	U	Sidechain
2	SA	1212	U	Sidechain
2	SA	1213	A	Sidechain
2	SA	1216	A	Sidechain
2	SA	1217	C	Sidechain
2	SA	1218	C	Sidechain
2	SA	1220	G	Sidechain
2	SA	1221	G	Sidechain
2	SA	1222	G	Sidechain
2	SA	1223	C	Sidechain
2	SA	1225	A	Sidechain
2	SA	1227	A	Sidechain
2	SA	1230	C	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	1231	G	Sidechain
2	SA	1234	C	Sidechain
2	SA	1236	A	Sidechain
2	SA	1238	A	Sidechain
2	SA	1240	U	Sidechain
2	SA	1241	G	Sidechain
2	SA	1242	G	Sidechain
2	SA	1244	G	Sidechain
2	SA	1246	A	Sidechain
2	SA	1248	A	Sidechain
2	SA	1249	C	Sidechain
2	SA	1250	A	Sidechain
2	SA	1251	A	Sidechain
2	SA	1253	G	Sidechain
2	SA	1255	G	Sidechain
2	SA	1256	A	Sidechain
2	SA	1258	G	Sidechain
2	SA	1260	G	Sidechain
2	SA	1261	A	Sidechain
2	SA	1262	C	Sidechain
2	SA	1263	C	Sidechain
2	SA	1264	U	Sidechain
2	SA	1266	G	Sidechain
2	SA	1267	C	Sidechain
2	SA	1268	G	Sidechain
2	SA	1269	A	Sidechain
2	SA	127	G	Sidechain
2	SA	1271	A	Sidechain
2	SA	1272	G	Sidechain
2	SA	1273	C	Sidechain
2	SA	1274	A	Sidechain
2	SA	1275	A	Sidechain
2	SA	1277	C	Sidechain
2	SA	1278	G	Sidechain
2	SA	1279	G	Sidechain
2	SA	1280	A	Sidechain
2	SA	1282	C	Sidechain
2	SA	1283	U	Sidechain
2	SA	1284	C	Sidechain
2	SA	1285	A	Sidechain
2	SA	1287	A	Sidechain
2	SA	1289	A	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	129	A	Sidechain
2	SA	1293	C	Sidechain
2	SA	1294	G	Sidechain
2	SA	1297	G	Sidechain
2	SA	1298	U	Sidechain
2	SA	1299	A	Sidechain
2	SA	13	U	Sidechain
2	SA	130	A	Sidechain
2	SA	1300	G	Sidechain
2	SA	1302	C	Sidechain
2	SA	1303	C	Sidechain
2	SA	1304	G	Sidechain
2	SA	1305	G	Sidechain
2	SA	1306	A	Sidechain
2	SA	1307	U	Sidechain
2	SA	1308	U	Sidechain
2	SA	1310	G	Sidechain
2	SA	1311	A	Sidechain
2	SA	1312	G	Sidechain
2	SA	1313	U	Sidechain
2	SA	1315	U	Sidechain
2	SA	1316	G	Sidechain
2	SA	1317	C	Sidechain
2	SA	1318	A	Sidechain
2	SA	1320	C	Sidechain
2	SA	1321	U	Sidechain
2	SA	1322	C	Sidechain
2	SA	1323	G	Sidechain
2	SA	1326	U	Sidechain
2	SA	1327	C	Sidechain
2	SA	1328	C	Sidechain
2	SA	1329	A	Sidechain
2	SA	1332	A	Sidechain
2	SA	1334	G	Sidechain
2	SA	1335	U	Sidechain
2	SA	1336	C	Sidechain
2	SA	1337	G	Sidechain
2	SA	1338	G	Sidechain
2	SA	1339	A	Sidechain
2	SA	134	G	Sidechain
2	SA	1340	A	Sidechain
2	SA	1343	G	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	1344	C	Sidechain
2	SA	1345	U	Sidechain
2	SA	1346	A	Sidechain
2	SA	1348	U	Sidechain
2	SA	1349	A	Sidechain
2	SA	135	C	Sidechain
2	SA	1350	A	Sidechain
2	SA	1351	U	Sidechain
2	SA	1352	C	Sidechain
2	SA	1353	G	Sidechain
2	SA	1357	A	Sidechain
2	SA	1358	U	Sidechain
2	SA	1359	C	Sidechain
2	SA	1360	A	Sidechain
2	SA	1362	A	Sidechain
2	SA	1363	A	Sidechain
2	SA	1365	G	Sidechain
2	SA	1366	C	Sidechain
2	SA	1367	C	Sidechain
2	SA	1368	A	Sidechain
2	SA	1370	G	Sidechain
2	SA	1371	G	Sidechain
2	SA	1372	U	Sidechain
2	SA	1374	A	Sidechain
2	SA	1375	A	Sidechain
2	SA	1378	C	Sidechain
2	SA	1379	G	Sidechain
2	SA	1380	U	Sidechain
2	SA	1381	U	Sidechain
2	SA	1382	C	Sidechain
2	SA	1384	C	Sidechain
2	SA	1385	G	Sidechain
2	SA	1386	G	Sidechain
2	SA	1387	G	Sidechain
2	SA	1388	C	Sidechain
2	SA	139	A	Sidechain
2	SA	1390	U	Sidechain
2	SA	1393	U	Sidechain
2	SA	1395	C	Sidechain
2	SA	1396	A	Sidechain
2	SA	1399	C	Sidechain
2	SA	14	U	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	1400	C	Sidechain
2	SA	1401	G	Sidechain
2	SA	1403	C	Sidechain
2	SA	1405	G	Sidechain
2	SA	1406	U	Sidechain
2	SA	1407	C	Sidechain
2	SA	141	G	Sidechain
2	SA	1411	C	Sidechain
2	SA	1412	C	Sidechain
2	SA	1413	A	Sidechain
2	SA	1416	G	Sidechain
2	SA	1417	G	Sidechain
2	SA	1418	A	Sidechain
2	SA	142	G	Sidechain
2	SA	1420	U	Sidechain
2	SA	1422	G	Sidechain
2	SA	1423	G	Sidechain
2	SA	1424	U	Sidechain
2	SA	1425	U	Sidechain
2	SA	1429	A	Sidechain
2	SA	1430	A	Sidechain
2	SA	1431	A	Sidechain
2	SA	1432	G	Sidechain
2	SA	1433	A	Sidechain
2	SA	1434	A	Sidechain
2	SA	1435	G	Sidechain
2	SA	1436	U	Sidechain
2	SA	1437	A	Sidechain
2	SA	1439	G	Sidechain
2	SA	144	G	Sidechain
2	SA	1440	U	Sidechain
2	SA	1441	A	Sidechain
2	SA	1442	G	Sidechain
2	SA	1444	U	Sidechain
2	SA	1445	U	Sidechain
2	SA	1447	A	Sidechain
2	SA	1448	C	Sidechain
2	SA	1449	C	Sidechain
2	SA	145	G	Sidechain
2	SA	1450	U	Sidechain
2	SA	1451	U	Sidechain
2	SA	1453	G	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	1454	G	Sidechain
2	SA	1455	G	Sidechain
2	SA	1456	A	Sidechain
2	SA	1459	G	Sidechain
2	SA	1463	U	Sidechain
2	SA	1464	U	Sidechain
2	SA	1465	A	Sidechain
2	SA	1467	C	Sidechain
2	SA	1469	C	Sidechain
2	SA	147	G	Sidechain
2	SA	1471	U	Sidechain
2	SA	1472	U	Sidechain
2	SA	1473	G	Sidechain
2	SA	1474	U	Sidechain
2	SA	1476	A	Sidechain
2	SA	1477	U	Sidechain
2	SA	148	G	Sidechain
2	SA	1480	A	Sidechain
2	SA	1482	G	Sidechain
2	SA	1485	U	Sidechain
2	SA	1486	G	Sidechain
2	SA	1487	G	Sidechain
2	SA	1488	G	Sidechain
2	SA	1489	G	Sidechain
2	SA	1491	G	Sidechain
2	SA	1492	A	Sidechain
2	SA	1493	A	Sidechain
2	SA	1494	G	Sidechain
2	SA	1495	U	Sidechain
2	SA	1496	C	Sidechain
2	SA	1497	G	Sidechain
2	SA	1498	U	Sidechain
2	SA	1500	A	Sidechain
2	SA	1501	C	Sidechain
2	SA	1502	A	Sidechain
2	SA	1504	G	Sidechain
2	SA	1505	G	Sidechain
2	SA	1508	A	Sidechain
2	SA	151	A	Sidechain
2	SA	1511	G	Sidechain
2	SA	1512	U	Sidechain
2	SA	1513	A	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	1514	G	Sidechain
2	SA	1515	G	Sidechain
2	SA	1516	G	Sidechain
2	SA	1518	A	Sidechain
2	SA	1519	A	Sidechain
2	SA	152	A	Sidechain
2	SA	1521	C	Sidechain
2	SA	1522	U	Sidechain
2	SA	1524	C	Sidechain
2	SA	1525	G	Sidechain
2	SA	1528	U	Sidechain
2	SA	1529	G	Sidechain
2	SA	153	C	Sidechain
2	SA	1531	A	Sidechain
2	SA	1532	U	Sidechain
2	SA	1533	C	Sidechain
2	SA	1537	U	Sidechain
2	SA	154	U	Sidechain
2	SA	1540	U	Sidechain
2	SA	158	G	Sidechain
2	SA	159	G	Sidechain
2	SA	16	A	Sidechain
2	SA	160	A	Sidechain
2	SA	162	A	Sidechain
2	SA	164	G	Sidechain
2	SA	165	G	Sidechain
2	SA	167	A	Sidechain
2	SA	168	G	Sidechain
2	SA	17	U	Sidechain
2	SA	170	U	Sidechain
2	SA	171	A	Sidechain
2	SA	175	C	Sidechain
2	SA	176	C	Sidechain
2	SA	177	G	Sidechain
2	SA	178	C	Sidechain
2	SA	18	C	Sidechain
2	SA	180	U	Sidechain
2	SA	181	A	Sidechain
2	SA	182	A	Sidechain
2	SA	184	G	Sidechain
2	SA	186	C	Sidechain
2	SA	187	G	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	189	A	Sidechain
2	SA	19	A	Sidechain
2	SA	192	A	Sidechain
2	SA	193	C	Sidechain
2	SA	194	C	Sidechain
2	SA	195	A	Sidechain
2	SA	196	A	Sidechain
2	SA	197	A	Sidechain
2	SA	200	G	Sidechain
2	SA	205	A	Sidechain
2	SA	207	C	Sidechain
2	SA	208	U	Sidechain
2	SA	209	U	Sidechain
2	SA	21	G	Sidechain
2	SA	211	G	Sidechain
2	SA	213	G	Sidechain
2	SA	214	C	Sidechain
2	SA	217	C	Sidechain
2	SA	219	U	Sidechain
2	SA	220	G	Sidechain
2	SA	222	C	Sidechain
2	SA	223	A	Sidechain
2	SA	224	U	Sidechain
2	SA	225	C	Sidechain
2	SA	226	G	Sidechain
2	SA	227	G	Sidechain
2	SA	229	U	Sidechain
2	SA	230	G	Sidechain
2	SA	231	U	Sidechain
2	SA	234	C	Sidechain
2	SA	235	C	Sidechain
2	SA	239	U	Sidechain
2	SA	24	U	Sidechain
2	SA	240	G	Sidechain
2	SA	241	G	Sidechain
2	SA	243	A	Sidechain
2	SA	244	U	Sidechain
2	SA	247	G	Sidechain
2	SA	249	U	Sidechain
2	SA	250	A	Sidechain
2	SA	253	A	Sidechain
2	SA	254	G	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	255	G	Sidechain
2	SA	256	U	Sidechain
2	SA	258	G	Sidechain
2	SA	26	A	Sidechain
2	SA	261	U	Sidechain
2	SA	262	A	Sidechain
2	SA	264	C	Sidechain
2	SA	266	G	Sidechain
2	SA	267	C	Sidechain
2	SA	268	U	Sidechain
2	SA	270	A	Sidechain
2	SA	271	C	Sidechain
2	SA	274	A	Sidechain
2	SA	276	G	Sidechain
2	SA	277	C	Sidechain
2	SA	279	A	Sidechain
2	SA	280	C	Sidechain
2	SA	281	G	Sidechain
2	SA	288	A	Sidechain
2	SA	289	G	Sidechain
2	SA	29	U	Sidechain
2	SA	293	G	Sidechain
2	SA	297	G	Sidechain
2	SA	299	G	Sidechain
2	SA	300	A	Sidechain
2	SA	302	G	Sidechain
2	SA	304	U	Sidechain
2	SA	305	G	Sidechain
2	SA	306	A	Sidechain
2	SA	307	C	Sidechain
2	SA	310	G	Sidechain
2	SA	311	C	Sidechain
2	SA	313	A	Sidechain
2	SA	317	U	Sidechain
2	SA	318	G	Sidechain
2	SA	32	A	Sidechain
2	SA	320	A	Sidechain
2	SA	321	A	Sidechain
2	SA	322	C	Sidechain
2	SA	324	G	Sidechain
2	SA	326	G	Sidechain
2	SA	327	A	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	33	A	Sidechain
2	SA	331	G	Sidechain
2	SA	332	G	Sidechain
2	SA	335	C	Sidechain
2	SA	336	A	Sidechain
2	SA	337	G	Sidechain
2	SA	338	A	Sidechain
2	SA	339	C	Sidechain
2	SA	340	U	Sidechain
2	SA	341	C	Sidechain
2	SA	343	U	Sidechain
2	SA	344	A	Sidechain
2	SA	345	C	Sidechain
2	SA	346	G	Sidechain
2	SA	347	G	Sidechain
2	SA	348	G	Sidechain
2	SA	349	A	Sidechain
2	SA	35	G	Sidechain
2	SA	350	G	Sidechain
2	SA	352	C	Sidechain
2	SA	353	A	Sidechain
2	SA	354	G	Sidechain
2	SA	355	C	Sidechain
2	SA	356	A	Sidechain
2	SA	357	G	Sidechain
2	SA	358	U	Sidechain
2	SA	359	G	Sidechain
2	SA	360	G	Sidechain
2	SA	361	G	Sidechain
2	SA	362	G	Sidechain
2	SA	363	A	Sidechain
2	SA	364	A	Sidechain
2	SA	365	U	Sidechain
2	SA	366	A	Sidechain
2	SA	367	U	Sidechain
2	SA	368	U	Sidechain
2	SA	37	U	Sidechain
2	SA	371	A	Sidechain
2	SA	372	C	Sidechain
2	SA	373	A	Sidechain
2	SA	374	A	Sidechain
2	SA	375	U	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	376	G	Sidechain
2	SA	380	G	Sidechain
2	SA	382	A	Sidechain
2	SA	384	G	Sidechain
2	SA	386	C	Sidechain
2	SA	388	G	Sidechain
2	SA	389	A	Sidechain
2	SA	39	G	Sidechain
2	SA	390	U	Sidechain
2	SA	391	G	Sidechain
2	SA	394	G	Sidechain
2	SA	398	U	Sidechain
2	SA	399	G	Sidechain
2	SA	4	U	Sidechain
2	SA	40	C	Sidechain
2	SA	402	G	Sidechain
2	SA	405	U	Sidechain
2	SA	406	G	Sidechain
2	SA	409	U	Sidechain
2	SA	41	G	Sidechain
2	SA	411	A	Sidechain
2	SA	414	A	Sidechain
2	SA	416	G	Sidechain
2	SA	42	G	Sidechain
2	SA	420	U	Sidechain
2	SA	421	U	Sidechain
2	SA	423	G	Sidechain
2	SA	424	G	Sidechain
2	SA	425	G	Sidechain
2	SA	426	U	Sidechain
2	SA	427	U	Sidechain
2	SA	428	G	Sidechain
2	SA	429	U	Sidechain
2	SA	430	A	Sidechain
2	SA	432	A	Sidechain
2	SA	433	G	Sidechain
2	SA	434	U	Sidechain
2	SA	437	U	Sidechain
2	SA	440	C	Sidechain
2	SA	441	A	Sidechain
2	SA	442	G	Sidechain
2	SA	444	G	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	445	G	Sidechain
2	SA	446	G	Sidechain
2	SA	448	A	Sidechain
2	SA	449	G	Sidechain
2	SA	45	G	Sidechain
2	SA	450	G	Sidechain
2	SA	451	A	Sidechain
2	SA	452	A	Sidechain
2	SA	453	G	Sidechain
2	SA	454	G	Sidechain
2	SA	458	U	Sidechain
2	SA	459	A	Sidechain
2	SA	46	G	Sidechain
2	SA	460	A	Sidechain
2	SA	461	A	Sidechain
2	SA	462	G	Sidechain
2	SA	463	U	Sidechain
2	SA	464	U	Sidechain
2	SA	465	A	Sidechain
2	SA	466	A	Sidechain
2	SA	468	A	Sidechain
2	SA	469	C	Sidechain
2	SA	47	C	Sidechain
2	SA	471	U	Sidechain
2	SA	473	U	Sidechain
2	SA	474	G	Sidechain
2	SA	476	U	Sidechain
2	SA	478	A	Sidechain
2	SA	479	U	Sidechain
2	SA	48	C	Sidechain
2	SA	480	U	Sidechain
2	SA	481	G	Sidechain
2	SA	483	C	Sidechain
2	SA	484	G	Sidechain
2	SA	485	U	Sidechain
2	SA	486	U	Sidechain
2	SA	487	A	Sidechain
2	SA	488	C	Sidechain
2	SA	489	C	Sidechain
2	SA	49	U	Sidechain
2	SA	490	C	Sidechain
2	SA	491	G	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	493	A	Sidechain
2	SA	494	G	Sidechain
2	SA	495	A	Sidechain
2	SA	497	G	Sidechain
2	SA	499	A	Sidechain
2	SA	5	U	Sidechain
2	SA	501	C	Sidechain
2	SA	502	A	Sidechain
2	SA	503	C	Sidechain
2	SA	504	C	Sidechain
2	SA	505	G	Sidechain
2	SA	506	G	Sidechain
2	SA	51	A	Sidechain
2	SA	510	A	Sidechain
2	SA	511	C	Sidechain
2	SA	513	C	Sidechain
2	SA	515	G	Sidechain
2	SA	516	U	Sidechain
2	SA	517	G	Sidechain
2	SA	518	C	Sidechain
2	SA	519	C	Sidechain
2	SA	52	C	Sidechain
2	SA	521	G	Sidechain
2	SA	522	C	Sidechain
2	SA	523	A	Sidechain
2	SA	524	G	Sidechain
2	SA	527	G	Sidechain
2	SA	528	C	Sidechain
2	SA	53	A	Sidechain
2	SA	531	U	Sidechain
2	SA	532	A	Sidechain
2	SA	533	A	Sidechain
2	SA	534	U	Sidechain
2	SA	54	C	Sidechain
2	SA	541	G	Sidechain
2	SA	544	G	Sidechain
2	SA	546	A	Sidechain
2	SA	549	C	Sidechain
2	SA	55	A	Sidechain
2	SA	550	G	Sidechain
2	SA	551	U	Sidechain
2	SA	552	U	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	553	A	Sidechain
2	SA	556	C	Sidechain
2	SA	557	G	Sidechain
2	SA	558	G	Sidechain
2	SA	559	A	Sidechain
2	SA	56	U	Sidechain
2	SA	560	A	Sidechain
2	SA	561	U	Sidechain
2	SA	562	U	Sidechain
2	SA	563	A	Sidechain
2	SA	564	C	Sidechain
2	SA	565	U	Sidechain
2	SA	566	G	Sidechain
2	SA	568	G	Sidechain
2	SA	57	G	Sidechain
2	SA	570	G	Sidechain
2	SA	571	U	Sidechain
2	SA	572	A	Sidechain
2	SA	573	A	Sidechain
2	SA	575	G	Sidechain
2	SA	577	G	Sidechain
2	SA	578	C	Sidechain
2	SA	579	A	Sidechain
2	SA	58	C	Sidechain
2	SA	581	G	Sidechain
2	SA	583	A	Sidechain
2	SA	585	G	Sidechain
2	SA	593	U	Sidechain
2	SA	594	U	Sidechain
2	SA	596	A	Sidechain
2	SA	597	G	Sidechain
2	SA	6	G	Sidechain
2	SA	60	A	Sidechain
2	SA	602	A	Sidechain
2	SA	605	U	Sidechain
2	SA	606	G	Sidechain
2	SA	609	A	Sidechain
2	SA	61	G	Sidechain
2	SA	610	U	Sidechain
2	SA	611	C	Sidechain
2	SA	616	G	Sidechain
2	SA	617	G	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	619	U	Sidechain
2	SA	62	U	Sidechain
2	SA	623	C	Sidechain
2	SA	624	C	Sidechain
2	SA	625	U	Sidechain
2	SA	626	G	Sidechain
2	SA	630	A	Sidechain
2	SA	632	U	Sidechain
2	SA	635	A	Sidechain
2	SA	636	U	Sidechain
2	SA	638	U	Sidechain
2	SA	64	G	Sidechain
2	SA	640	A	Sidechain
2	SA	641	U	Sidechain
2	SA	642	A	Sidechain
2	SA	644	U	Sidechain
2	SA	645	G	Sidechain
2	SA	646	G	Sidechain
2	SA	649	A	Sidechain
2	SA	65	A	Sidechain
2	SA	650	G	Sidechain
2	SA	651	C	Sidechain
2	SA	652	U	Sidechain
2	SA	653	U	Sidechain
2	SA	654	G	Sidechain
2	SA	655	A	Sidechain
2	SA	659	U	Sidechain
2	SA	66	A	Sidechain
2	SA	660	C	Sidechain
2	SA	661	G	Sidechain
2	SA	663	A	Sidechain
2	SA	665	A	Sidechain
2	SA	666	G	Sidechain
2	SA	670	G	Sidechain
2	SA	671	G	Sidechain
2	SA	672	U	Sidechain
2	SA	673	A	Sidechain
2	SA	674	G	Sidechain
2	SA	676	A	Sidechain
2	SA	678	U	Sidechain
2	SA	68	G	Sidechain
2	SA	680	C	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	682	G	Sidechain
2	SA	683	G	Sidechain
2	SA	685	G	Sidechain
2	SA	686	U	Sidechain
2	SA	687	A	Sidechain
2	SA	688	G	Sidechain
2	SA	689	C	Sidechain
2	SA	690	G	Sidechain
2	SA	691	G	Sidechain
2	SA	692	U	Sidechain
2	SA	693	G	Sidechain
2	SA	694	A	Sidechain
2	SA	695	A	Sidechain
2	SA	696	A	Sidechain
2	SA	697	U	Sidechain
2	SA	699	C	Sidechain
2	SA	7	A	Sidechain
2	SA	701	U	Sidechain
2	SA	703	G	Sidechain
2	SA	704	A	Sidechain
2	SA	705	G	Sidechain
2	SA	707	U	Sidechain
2	SA	711	G	Sidechain
2	SA	712	A	Sidechain
2	SA	714	G	Sidechain
2	SA	715	A	Sidechain
2	SA	716	A	Sidechain
2	SA	717	U	Sidechain
2	SA	719	C	Sidechain
2	SA	72	A	Sidechain
2	SA	721	G	Sidechain
2	SA	722	G	Sidechain
2	SA	723	U	Sidechain
2	SA	725	G	Sidechain
2	SA	727	G	Sidechain
2	SA	729	A	Sidechain
2	SA	73	C	Sidechain
2	SA	730	G	Sidechain
2	SA	731	G	Sidechain
2	SA	733	G	Sidechain
2	SA	734	G	Sidechain
2	SA	735	C	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	740	U	Sidechain
2	SA	742	G	Sidechain
2	SA	743	A	Sidechain
2	SA	745	G	Sidechain
2	SA	746	A	Sidechain
2	SA	747	A	Sidechain
2	SA	749	A	Sidechain
2	SA	75	G	Sidechain
2	SA	750	C	Sidechain
2	SA	751	U	Sidechain
2	SA	752	G	Sidechain
2	SA	754	C	Sidechain
2	SA	755	G	Sidechain
2	SA	757	U	Sidechain
2	SA	76	G	Sidechain
2	SA	761	G	Sidechain
2	SA	762	U	Sidechain
2	SA	763	G	Sidechain
2	SA	764	C	Sidechain
2	SA	765	G	Sidechain
2	SA	766	A	Sidechain
2	SA	768	A	Sidechain
2	SA	769	G	Sidechain
2	SA	771	G	Sidechain
2	SA	772	U	Sidechain
2	SA	773	G	Sidechain
2	SA	778	G	Sidechain
2	SA	780	A	Sidechain
2	SA	782	A	Sidechain
2	SA	785	G	Sidechain
2	SA	786	G	Sidechain
2	SA	787	A	Sidechain
2	SA	79	G	Sidechain
2	SA	791	G	Sidechain
2	SA	792	A	Sidechain
2	SA	793	U	Sidechain
2	SA	794	A	Sidechain
2	SA	795	C	Sidechain
2	SA	798	U	Sidechain
2	SA	799	G	Sidechain
2	SA	80	A	Sidechain
2	SA	800	G	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	803	G	Sidechain
2	SA	806	C	Sidechain
2	SA	808	C	Sidechain
2	SA	81	A	Sidechain
2	SA	810	C	Sidechain
2	SA	811	C	Sidechain
2	SA	812	G	Sidechain
2	SA	813	U	Sidechain
2	SA	814	A	Sidechain
2	SA	815	A	Sidechain
2	SA	816	A	Sidechain
2	SA	818	G	Sidechain
2	SA	819	A	Sidechain
2	SA	820	U	Sidechain
2	SA	821	G	Sidechain
2	SA	822	U	Sidechain
2	SA	823	C	Sidechain
2	SA	824	G	Sidechain
2	SA	825	A	Sidechain
2	SA	826	C	Sidechain
2	SA	827	U	Sidechain
2	SA	830	G	Sidechain
2	SA	832	G	Sidechain
2	SA	833	G	Sidechain
2	SA	834	U	Sidechain
2	SA	835	U	Sidechain
2	SA	837	U	Sidechain
2	SA	838	G	Sidechain
2	SA	84	U	Sidechain
2	SA	841	C	Sidechain
2	SA	843	U	Sidechain
2	SA	844	G	Sidechain
2	SA	845	A	Sidechain
2	SA	846	G	Sidechain
2	SA	847	G	Sidechain
2	SA	848	C	Sidechain
2	SA	849	G	Sidechain
2	SA	85	U	Sidechain
2	SA	850	U	Sidechain
2	SA	851	G	Sidechain
2	SA	852	G	Sidechain
2	SA	855	U	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	856	C	Sidechain
2	SA	857	C	Sidechain
2	SA	858	G	Sidechain
2	SA	859	G	Sidechain
2	SA	86	G	Sidechain
2	SA	861	G	Sidechain
2	SA	862	C	Sidechain
2	SA	864	A	Sidechain
2	SA	865	A	Sidechain
2	SA	867	G	Sidechain
2	SA	87	C	Sidechain
2	SA	873	A	Sidechain
2	SA	877	G	Sidechain
2	SA	878	A	Sidechain
2	SA	879	C	Sidechain
2	SA	88	U	Sidechain
2	SA	880	C	Sidechain
2	SA	883	C	Sidechain
2	SA	884	U	Sidechain
2	SA	885	G	Sidechain
2	SA	888	G	Sidechain
2	SA	890	G	Sidechain
2	SA	891	U	Sidechain
2	SA	892	A	Sidechain
2	SA	894	G	Sidechain
2	SA	898	G	Sidechain
2	SA	899	C	Sidechain
2	SA	90	C	Sidechain
2	SA	900	A	Sidechain
2	SA	901	A	Sidechain
2	SA	902	G	Sidechain
2	SA	904	U	Sidechain
2	SA	908	A	Sidechain
2	SA	909	A	Sidechain
2	SA	91	U	Sidechain
2	SA	910	C	Sidechain
2	SA	911	U	Sidechain
2	SA	912	C	Sidechain
2	SA	913	A	Sidechain
2	SA	914	A	Sidechain
2	SA	917	G	Sidechain
2	SA	918	A	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	920	U	Sidechain
2	SA	921	U	Sidechain
2	SA	922	G	Sidechain
2	SA	924	C	Sidechain
2	SA	925	G	Sidechain
2	SA	926	G	Sidechain
2	SA	927	G	Sidechain
2	SA	928	G	Sidechain
2	SA	930	C	Sidechain
2	SA	933	G	Sidechain
2	SA	935	A	Sidechain
2	SA	939	G	Sidechain
2	SA	94	G	Sidechain
2	SA	941	G	Sidechain
2	SA	942	G	Sidechain
2	SA	943	U	Sidechain
2	SA	944	G	Sidechain
2	SA	945	G	Sidechain
2	SA	946	A	Sidechain
2	SA	947	G	Sidechain
2	SA	95	C	Sidechain
2	SA	950	U	Sidechain
2	SA	951	G	Sidechain
2	SA	952	U	Sidechain
2	SA	953	G	Sidechain
2	SA	954	G	Sidechain
2	SA	956	U	Sidechain
2	SA	958	A	Sidechain
2	SA	959	A	Sidechain
2	SA	96	U	Sidechain
2	SA	960	U	Sidechain
2	SA	961	U	Sidechain
2	SA	962	C	Sidechain
2	SA	963	G	Sidechain
2	SA	964	A	Sidechain
2	SA	965	U	Sidechain
2	SA	966	G	Sidechain
2	SA	967	C	Sidechain
2	SA	969	A	Sidechain
2	SA	97	G	Sidechain
2	SA	970	C	Sidechain
2	SA	971	G	Sidechain

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Mol	Chain	Res	Type	Group
2	SA	973	G	Sidechain
2	SA	975	A	Sidechain
2	SA	976	G	Sidechain
2	SA	977	A	Sidechain
2	SA	978	A	Sidechain
2	SA	98	A	Sidechain
2	SA	983	A	Sidechain
2	SA	984	C	Sidechain
2	SA	986	U	Sidechain
2	SA	987	G	Sidechain
2	SA	988	G	Sidechain
2	SA	99	C	Sidechain
2	SA	992	U	Sidechain
2	SA	993	G	Sidechain
2	SA	994	A	Sidechain
2	SA	995	C	Sidechain
2	SA	996	A	Sidechain
2	SA	999	C	Sidechain
18	SB	136	ARG	Sidechain
18	SB	14	HIS	Sidechain
18	SB	158	ASP	Peptide
18	SB	183	PHE	Sidechain
18	SB	207	ARG	Sidechain
18	SB	21	TYR	Sidechain
18	SB	212	TYR	Sidechain
18	SB	221	ARG	Sidechain
18	SB	224	ARG	Sidechain
18	SB	29	PHE	Peptide
18	SB	3	VAL	Peptide
18	SB	44	LYS	Peptide
18	SB	94	ARG	Sidechain
19	SC	126	ARG	Peptide
19	SC	142	ARG	Sidechain
19	SC	155	ARG	Sidechain
19	SC	158	GLY	Peptide
19	SC	160	GLU	Peptide
19	SC	168	ARG	Sidechain
19	SC	206	ILE	Peptide
19	SC	228	ARG	Sidechain
19	SC	41	TYR	Peptide
19	SC	5	HIS	Peptide
19	SC	96	VAL	Peptide

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Mol	Chain	Res	Type	Group
20	SD	106	PHE	Peptide
20	SD	110	ARG	Sidechain
20	SD	12	ARG	Sidechain
20	SD	13	ARG	Sidechain
20	SD	134	TYR	Sidechain
20	SD	14	GLU	Peptide
20	SD	169	TRP	Peptide
20	SD	185	PRO	Peptide
20	SD	187	ARG	Sidechain
20	SD	2	ARG	Peptide
20	SD	24	VAL	Peptide
20	SD	31	CYS	Peptide
20	SD	46	ARG	Sidechain
20	SD	55	ARG	Sidechain
20	SD	61	ARG	Sidechain
20	SD	64	TYR	Sidechain
20	SD	75	TYR	Sidechain
20	SD	80	ARG	Sidechain
21	SE	120	HIS	Sidechain
21	SE	122	VAL	Peptide
21	SE	127	TYR	Sidechain
21	SE	147	ASN	Peptide
21	SE	162	GLU	Peptide
21	SE	20	VAL	Peptide
21	SE	30	PHE	Sidechain
21	SE	43	GLY	Peptide
21	SE	78	GLY	Peptide
21	SE	92	ARG	Sidechain,Peptide
22	SF	101	PRO	Peptide
22	SF	116	PHE	Sidechain
22	SF	119	GLU	Peptide
22	SF	24	ARG	Sidechain
22	SF	25	TYR	Sidechain
22	SF	44	ARG	Sidechain
22	SF	49	TYR	Sidechain
22	SF	58	HIS	Peptide
22	SF	59	TYR	Sidechain
22	SF	64	VAL	Peptide
22	SF	78	PHE	Sidechain
22	SF	8	PHE	Sidechain
7	SG	1	PRO	Peptide
7	SG	108	ARG	Sidechain

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Mol	Chain	Res	Type	Group
7	SG	110	ARG	Sidechain
7	SG	133	ALA	Peptide
7	SG	137	ARG	Sidechain
7	SG	146	ALA	Peptide
7	SG	150	PHE	Sidechain
7	SG	154	ARG	Sidechain
7	SG	163	HIS	Sidechain
7	SG	2	ARG	Sidechain
7	SG	25	PHE	Sidechain
7	SG	3	ARG	Sidechain
7	SG	4	ARG	Sidechain
7	SG	69	ARG	Sidechain
7	SG	72	VAL	Peptide
7	SG	77	ARG	Sidechain,Peptide
7	SG	84	TYR	Sidechain
7	SG	9	ARG	Sidechain
8	SH	127	TYR	Sidechain
8	SH	44	PHE	Sidechain
8	SH	50	VAL	Peptide
8	SH	54	THR	Peptide
8	SH	71	VAL	Peptide
8	SH	73	SER	Peptide
8	SH	78	SER	Peptide
8	SH	83	ARG	Sidechain
8	SH	87	ARG	Sidechain
8	SH	91	LEU	Peptide
9	SI	112	ARG	Sidechain
9	SI	121	ARG	Sidechain
9	SI	44	ARG	Sidechain
9	SI	6	TYR	Sidechain
9	SI	89	TYR	Sidechain,Peptide
9	SI	93	LEU	Mainchain
10	SJ	31	ARG	Sidechain
10	SJ	45	ARG	Sidechain
10	SJ	5	ARG	Sidechain
10	SJ	62	ARG	Sidechain
10	SJ	63	ASP	Peptide
10	SJ	72	ARG	Sidechain
10	SJ	74	VAL	Peptide
10	SJ	9	ARG	Sidechain
10	SJ	93	ALA	Peptide
11	SK	10	ARG	Sidechain

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Mol	Chain	Res	Type	Group
11	SK	12	ARG	Sidechain
11	SK	126	ARG	Sidechain
11	SK	52	ARG	Sidechain
11	SK	58	THR	Peptide
11	SK	76	TYR	Sidechain
11	SK	97	ARG	Sidechain
12	SL	11	ARG	Sidechain
12	SL	121	PRO	Peptide
12	SL	49	ARG	Sidechain
12	SL	53	ARG	Sidechain
12	SL	65	TYR	Sidechain
12	SL	8	ARG	Sidechain
12	SL	85	ARG	Peptide
12	SL	9	LYS	Peptide
12	SL	94	TYR	Sidechain
12	SL	98	ARG	Sidechain
13	SM	106	ARG	Sidechain
13	SM	111	PRO	Peptide
13	SM	2	ARG	Sidechain
13	SM	70	ARG	Sidechain
13	SM	78	ARG	Sidechain
13	SM	85	TYR	Sidechain
13	SM	89	ARG	Sidechain
13	SM	90	HIS	Sidechain
14	SN	19	TYR	Sidechain
14	SN	23	ARG	Sidechain
14	SN	52	ARG	Sidechain
14	SN	58	ARG	Sidechain
14	SN	60	ARG	Sidechain
14	SN	62	ARG	Sidechain
14	SN	74	ARG	Sidechain
14	SN	76	PHE	Sidechain
14	SN	80	ARG	Sidechain
14	SN	89	ARG	Sidechain
14	SN	97	LYS	Peptide
15	SO	16	ARG	Sidechain
15	SO	45	HIS	Peptide
15	SO	62	ARG	Sidechain
15	SO	63	ARG	Sidechain
15	SO	77	TYR	Sidechain
15	SO	83	ARG	Sidechain
15	SO	88	ARG	Sidechain

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Mol	Chain	Res	Type	Group
16	SP	13	LYS	Peptide
16	SP	14	ARG	Sidechain
16	SP	17	TYR	Sidechain
16	SP	28	ARG	Sidechain
16	SP	29	ASN	Peptide
16	SP	35	ARG	Sidechain
16	SP	5	ARG	Sidechain
16	SP	56	ARG	Sidechain
16	SP	59	HIS	Sidechain
17	SQ	10	ARG	Sidechain
17	SQ	18	LYS	Peptide
17	SQ	39	ARG	Sidechain
17	SQ	5	ARG	Sidechain
17	SQ	64	ARG	Sidechain
17	SQ	76	ARG	Sidechain
23	SR	22	TYR	Sidechain
23	SR	3	TYR	Sidechain
23	SR	31	TYR	Sidechain
23	SR	5	ARG	Sidechain
23	SR	50	TYR	Sidechain
23	SR	56	ARG	Sidechain
23	SR	63	TYR	Sidechain
23	SR	69	TYR	Sidechain
23	SR	72	ARG	Sidechain
1	SS	1	PRO	Peptide
1	SS	10	ILE	Peptide
1	SS	13	HIS	Sidechain
1	SS	2	ARG	Sidechain
1	SS	21	ALA	Peptide
1	SS	28	LYS	Peptide
1	SS	3	SER	Peptide
1	SS	36	ARG	Sidechain
1	SS	56	HIS	Sidechain
1	SS	67	GLY	Peptide
1	SS	8	PRO	Peptide
5	ST	28	ARG	Sidechain
5	ST	30	PHE	Sidechain
5	ST	40	ALA	Peptide
5	ST	73	ARG	Sidechain
5	ST	85	LEU	Peptide
6	SU	11	PHE	Peptide
6	SU	17	ARG	Sidechain

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Mol	Chain	Res	Type	Group
6	SU	26	GLY	Peptide
6	SU	34	ARG	Sidechain
6	SU	35	GLU	Peptide
6	SU	44	ARG	Sidechain
6	SU	6	ARG	Sidechain
6	SU	65	ARG	Sidechain
6	SU	68	ARG	Sidechain
6	SU	69	LEU	Peptide
6	SU	70	TYR	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	SS	727	0	769	10	0
2	SA	33076	0	16190	635	0
3	S1	993	0	496	16	0
4	S2	1639	0	816	32	0
5	ST	670	0	722	2	0
6	SU	590	0	631	6	0
7	SG	1400	0	1449	13	0
8	SH	979	0	1034	5	0
9	SI	1036	0	1084	9	0
10	SJ	825	0	865	10	0
11	SK	965	0	997	14	0
12	SL	955	0	1019	12	0
13	SM	910	0	981	10	0
14	SN	805	0	847	5	0
15	SO	716	0	742	5	0
16	SP	649	0	666	3	0
17	SQ	672	0	716	4	0
18	SB	1872	0	1885	15	0
19	SC	1822	0	1913	14	0
20	SD	1643	0	1710	23	0
21	SE	1225	0	1273	22	0
22	SF	1101	0	1050	11	0
23	SR	626	0	651	6	0
24	S3	5431	0	5403	50	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	LB	2566	0	1269	48	0
26	LA	62330	0	30424	1512	0
27	LD	2092	0	2170	22	0
28	LU	857	0	922	6	0
29	LV	787	0	846	6	0
30	LW	789	0	847	8	0
31	LX	753	0	780	4	0
32	LY	634	0	656	18	0
33	LZ	625	0	655	4	0
34	L0	509	0	543	5	0
35	L1	449	0	491	4	0
36	L2	549	0	552	5	0
37	LC	1733	0	1824	19	0
38	LE	1565	0	1616	22	0
39	L3	444	0	461	9	0
40	L4	441	0	485	3	0
41	L5	377	0	418	8	0
42	L6	504	0	574	4	0
43	L7	302	0	343	4	0
44	LF	1552	0	1619	18	0
45	LG	1420	0	1460	17	0
46	LH	1323	0	1374	6	0
47	LJ	1233	0	1283	6	0
48	LN	1053	0	1129	8	0
49	LK	1032	0	1088	4	0
50	LL	1129	0	1162	9	0
51	LI	1111	0	1148	8	0
52	LO	1074	0	1157	18	0
53	LP	1008	0	1045	11	0
54	LM	947	0	1023	11	0
55	LQ	900	0	935	9	0
56	LR	917	0	965	6	0
57	LS	947	0	1022	17	0
58	LT	816	0	839	7	0
59	S3	32	0	12	0	0
All	All	156127	0	107046	2656	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 10.

All (2656) 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)
21:SE:123:LEU:HD13	21:SE:124:ALA:H	1.44	0.83
2:SA:1381:U:H1'	7:SG:152:HIS:CE1	2.16	0.80
26:LA:1853:A:H61	26:LA:2087:G:H1'	1.47	0.80
26:LA:1965:C:C2	26:LA:1966:A:H2'	2.18	0.78
2:SA:803:G:C5	2:SA:804:U:C4	2.72	0.78
10:SJ:8:ILE:HG12	10:SJ:100:ILE:HG22	1.67	0.76
26:LA:877:A:H62	26:LA:900:A:H61	1.33	0.76
24:S3:583:HIS:CD2	24:S3:585:VAL:H	2.04	0.76
2:SA:900:A:C2	2:SA:901:A:C2	2.76	0.74
26:LA:1570:A:H2'	26:LA:1571:A:C8	2.25	0.72
50:LL:35:ARG:HA	50:LL:40:HIS:CE1	2.25	0.72
26:LA:190:A:C4	26:LA:207:A:C2	2.78	0.71
26:LA:250:G:C6	26:LA:251:A:C2	2.77	0.71
25:LB:78:A:C2	25:LB:99:A:C4	2.78	0.71
24:S3:362:ILE:HD13	24:S3:362:ILE:H	1.55	0.71
2:SA:998:C:H42	2:SA:1043:G:H1	1.39	0.71
2:SA:1226:C:H5'	13:SM:92:ARG:HH22	1.55	0.71
26:LA:2809:A:C2	26:LA:2810:A:C4	2.78	0.71
26:LA:45:G:H4'	26:LA:46:G:H5'	1.73	0.70
26:LA:513:A:C6	26:LA:514:A:C6	2.80	0.69
26:LA:948:C:C2	26:LA:984:A:C2	2.80	0.69
26:LA:1689:A:C6	26:LA:1700:A:C2	2.80	0.69
18:SB:14:HIS:CD2	18:SB:202:ASN:HD22	2.11	0.69
26:LA:2210:U:C6	26:LA:2212:A:C2	2.80	0.68
26:LA:1707:G:C5	26:LA:1756:G:C6	2.81	0.68
26:LA:2816:G:C4	26:LA:2817:U:C5	2.81	0.68
4:S2:1:C:C2	4:S2:75:C:C6	2.82	0.68
26:LA:910:A:C5	52:LO:13:HIS:CD2	2.82	0.68
26:LA:2210:U:C5	26:LA:2212:A:C2	2.82	0.68
26:LA:2502:G:H3'	26:LA:2503:A:H5'	1.76	0.67
27:LD:115:ILE:HD13	27:LD:116:GLN:H	1.60	0.67
26:LA:2657:A:C8	26:LA:2658:C:C6	2.81	0.67
45:LG:130:GLY:HA2	45:LG:152:ASP:HA	1.75	0.67
26:LA:2233:U:H2'	26:LA:2234:G:C8	2.30	0.67
26:LA:1544:A:C5	26:LA:1545:A:C5	2.83	0.67
26:LA:196:A:C6	26:LA:805:G:C6	2.83	0.67
2:SA:726:C:H2'	2:SA:727:G:C8	2.30	0.67
26:LA:544:C:H3'	26:LA:545:U:H5"	1.76	0.67
26:LA:1770:G:C6	26:LA:1983:G:C6	2.83	0.67
26:LA:1378:A:C5	26:LA:1380:G:C5	2.83	0.66
26:LA:2214:C:C5	26:LA:2215:C:C5	2.82	0.66
26:LA:1851:U:C5	26:LA:1852:U:C4	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2249:U:H3'	26:LA:2250:G:C5'	2.24	0.66
26:LA:747:U:C5	26:LA:2613:U:C5	2.84	0.66
26:LA:2437:G:C5	26:LA:2438:U:C5	2.84	0.66
26:LA:455:C:C4	26:LA:472:A:C5	2.83	0.66
26:LA:1977:A:C6	26:LA:1978:A:C5	2.83	0.66
26:LA:1825:U:H2'	26:LA:1826:G:C8	2.31	0.66
48:LN:123:ARG:NH1	48:LN:144:GLU:H	1.94	0.66
26:LA:1276:A:C2	26:LA:1277:G:C5	2.84	0.66
2:SA:718:A:C8	2:SA:719:C:C5	2.84	0.65
26:LA:1550:C:H2'	26:LA:1551:A:C8	2.31	0.65
2:SA:842:U:C4	2:SA:846:G:C4	2.84	0.65
26:LA:123:G:C6	26:LA:124:G:C5	2.85	0.65
26:LA:81:G:C6	26:LA:82:U:C2	2.84	0.65
26:LA:2468:A:C2	26:LA:2481:G:C2	2.85	0.65
26:LA:811:U:C5	26:LA:1251:C:C5	2.85	0.65
2:SA:990:C:H2'	2:SA:991:U:C6	2.31	0.64
4:S2:2:G:C5	4:S2:73:A:C2	2.86	0.64
30:LW:85:ARG:HE	30:LW:86:PHE:H	1.45	0.64
26:LA:1916:A:C5	26:LA:1917:U:H6	2.15	0.64
26:LA:774:G:H5"	27:LD:47:ARG:HH22	1.62	0.64
26:LA:1022:G:C6	26:LA:1141:U:C5	2.86	0.64
26:LA:2869:G:C5	26:LA:2870:C:C4	2.85	0.64
32:LY:45:HIS:CE1	32:LY:49:ASN:HB3	2.32	0.64
2:SA:500:G:C6	2:SA:501:C:C4	2.86	0.64
26:LA:85:G:C6	26:LA:86:G:C5	2.86	0.63
26:LA:2551:C:C5	26:LA:2552:U:C4	2.85	0.63
2:SA:730:G:N2	2:SA:765:G:H5"	2.12	0.63
2:SA:367:U:H5"	2:SA:394:G:H21	1.63	0.63
26:LA:136:G:C6	26:LA:137:U:C4	2.87	0.63
26:LA:1312:U:C2	26:LA:1603:A:C2	2.86	0.63
2:SA:704:A:C4	2:SA:705:G:C8	2.87	0.63
26:LA:199:A:C4	26:LA:2433:A:N1	2.66	0.63
26:LA:1144:A:C5	26:LA:1145:C:C5	2.87	0.63
26:LA:2063:C:C5	26:LA:2064:C:C5	2.87	0.63
26:LA:457:A:H61	26:LA:470:A:H3'	1.64	0.62
26:LA:1965:C:H6	26:LA:1965:C:H5"	1.64	0.62
2:SA:826:C:C2	2:SA:827:U:C5	2.87	0.62
2:SA:1225:A:H2'	2:SA:1226:C:C5	2.34	0.62
5:ST:67:HIS:CG	5:ST:68:LYS:H	2.15	0.62
26:LA:2004:G:C6	26:LA:2005:A:C4	2.87	0.62
2:SA:690:G:C5	2:SA:691:G:C5	2.86	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2273:A:C2	26:LA:2274:A:C6	2.87	0.62
42:L6:20:GLY:HA3	42:L6:48:MET:HE1	1.79	0.62
2:SA:1219:A:H2'	2:SA:1220:G:C8	2.33	0.62
56:LR:63:ILE:HG22	56:LR:68:GLY:H	1.65	0.62
26:LA:83:A:C5	26:LA:101:A:C5	2.87	0.62
26:LA:647:G:C6	26:LA:648:G:C5	2.88	0.62
26:LA:659:G:H2'	26:LA:660:C:C6	2.35	0.62
26:LA:1213:A:C2	26:LA:1214:A:C4	2.87	0.62
26:LA:2251:U:C5	26:LA:2252:G:C5	2.88	0.62
26:LA:792:A:H1'	26:LA:793:A:C2	2.35	0.62
26:LA:2339:C:H2'	26:LA:2340:A:C8	2.35	0.62
26:LA:2249:U:H3'	26:LA:2250:G:H5"	1.82	0.62
2:SA:11:G:C5	2:SA:12:U:C5	2.87	0.62
57:LS:60:TRP:CE2	57:LS:93:ILE:HD13	2.35	0.62
2:SA:1518:A:H2'	2:SA:1519:A:C8	2.35	0.61
10:SJ:42:LEU:HD12	10:SJ:73:LEU:HD11	1.81	0.61
26:LA:2209:G:C5	26:LA:2210:U:C4	2.88	0.61
2:SA:892:A:C6	2:SA:907:A:C8	2.88	0.61
19:SC:173:PRO:HD2	19:SC:202:PHE:CE1	2.35	0.61
26:LA:72:U:C4	26:LA:112:U:H4'	2.36	0.61
26:LA:1773:A:C2	26:LA:1829:A:C2	2.88	0.61
2:SA:1391:U:H2'	2:SA:1392:G:C8	2.35	0.61
26:LA:1507:C:H2'	26:LA:1508:A:H5"	1.81	0.61
26:LA:2674:G:C6	26:LA:2675:A:C5	2.89	0.61
29:LV:1:MET:HE2	29:LV:3:ARG:O	2.01	0.61
52:LO:111:GLU:CD	52:LO:111:GLU:H	2.09	0.61
26:LA:1365:A:C2	26:LA:1366:A:C4	2.89	0.61
2:SA:76:G:C2	2:SA:77:A:H1'	2.36	0.61
2:SA:642:A:C5	2:SA:643:C:C5	2.89	0.61
26:LA:604:G:C6	26:LA:605:G:C6	2.88	0.61
26:LA:2868:A:C4	26:LA:2869:G:C8	2.89	0.61
26:LA:28:A:C5	26:LA:29:U:C5	2.88	0.61
26:LA:1978:A:C8	26:LA:1979:U:C5	2.89	0.61
26:LA:2532:G:C5	26:LA:2533:U:C2	2.89	0.61
2:SA:439:U:C5	2:SA:440:C:C5	2.89	0.61
26:LA:1924:C:C5	26:LA:1925:C:C5	2.88	0.61
53:LP:38:LEU:HB3	53:LP:39:PRO:HD3	1.83	0.61
24:S3:647:GLU:HG2	24:S3:648:VAL:H	1.66	0.60
26:LA:1453:A:H1'	53:LP:77:ALA:HB2	1.82	0.60
26:LA:2516:A:H2'	26:LA:2517:C:C6	2.35	0.60
36:L2:11:GLU:CD	36:L2:11:GLU:H	2.08	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:470:A:H2'	26:LA:471:A:C8	2.36	0.60
26:LA:563:A:C5	26:LA:564:C:C5	2.89	0.60
26:LA:1274:A:C6	26:LA:1302:A:C2	2.90	0.60
38:LE:24:VAL:HG11	38:LE:188:LEU:HD23	1.81	0.60
44:LF:84:THR:HG23	44:LF:85:PHE:CD2	2.35	0.60
2:SA:359:G:C6	2:SA:360:G:C5	2.90	0.60
2:SA:629:A:C2	2:SA:630:A:C4	2.90	0.60
4:S2:2:G:C6	4:S2:73:A:C2	2.90	0.60
4:S2:59:A:C2	4:S2:62:C:C6	2.89	0.60
18:SB:67:LEU:HD11	18:SB:91:VAL:HG23	1.84	0.60
26:LA:1684:G:C2	26:LA:1705:A:C2	2.89	0.60
2:SA:406:G:C8	2:SA:495:A:C4	2.89	0.60
26:LA:2443:C:H2'	26:LA:2444:G:C8	2.36	0.60
27:LD:209:ALA:HA	27:LD:212:TRP:CE2	2.36	0.60
4:S2:19:G:H1	4:S2:56:U:H3	1.48	0.60
9:SI:29:ILE:HD11	9:SI:66:VAL:HG11	1.84	0.60
2:SA:1371:G:C5	2:SA:1372:U:C4	2.89	0.60
26:LA:2235:G:C6	26:LA:2236:U:C4	2.89	0.60
2:SA:22:G:C5	2:SA:23:C:C5	2.89	0.60
26:LA:2829:A:C5	26:LA:2830:C:C5	2.90	0.60
38:LE:4:LEU:HD12	38:LE:101:PHE:CE1	2.37	0.60
2:SA:781:A:C5	2:SA:802:A:C2	2.90	0.60
26:LA:2488:G:C4	26:LA:2489:U:C5	2.90	0.60
26:LA:355:U:H2'	26:LA:356:G:C8	2.37	0.60
26:LA:470:A:H2'	26:LA:471:A:H8	1.67	0.60
26:LA:717:C:H3'	26:LA:718:A:H5"	1.82	0.60
26:LA:1028:A:C2	26:LA:1029:A:C5	2.90	0.60
26:LA:1915:C:H2'	26:LA:1916:A:C8	2.37	0.60
26:LA:2080:A:H2'	26:LA:2081:U:H6	1.67	0.60
26:LA:719:C:C5	26:LA:720:U:C5	2.90	0.59
26:LA:2683:C:C5	26:LA:2684:U:C5	2.90	0.59
25:LB:30:C:C6	25:LB:31:C:C6	2.90	0.59
26:LA:796:C:H2'	26:LA:797:G:C8	2.38	0.59
2:SA:1517:G:C6	2:SA:1518:A:C5	2.90	0.59
26:LA:2100:G:C5	26:LA:2190:G:C2	2.90	0.59
26:LA:2120:G:H2'	26:LA:2121:G:C8	2.36	0.59
26:LA:2493:U:C5	26:LA:2494:G:C8	2.90	0.59
2:SA:1394:A:C2	2:SA:1501:C:H4'	2.38	0.59
12:SL:97:VAL:HG23	12:SL:100:ALA:HB3	1.85	0.59
2:SA:17:U:H2'	2:SA:18:C:C6	2.37	0.59
26:LA:1779:U:C4	26:LA:1783:A:C8	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LB:30:C:C6	25:LB:31:C:C5	2.90	0.59
26:LA:1783:A:C2	26:LA:2587:A:N7	2.71	0.59
4:S2:57:C:C5	26:LA:2169:A:C8	2.90	0.59
26:LA:10:A:C2	26:LA:2800:A:H5'	2.37	0.59
26:LA:470:A:C2	26:LA:471:A:C4	2.91	0.59
26:LA:1689:A:C5	26:LA:1700:A:C2	2.90	0.59
26:LA:2209:G:C5	26:LA:2210:U:C5	2.91	0.59
2:SA:730:G:H21	2:SA:765:G:H5"	1.67	0.59
25:LB:39:A:C2	25:LB:44:G:C2	2.90	0.59
26:LA:2450:A:C6	26:LA:2451:A:C2	2.90	0.59
26:LA:2519:U:C4	26:LA:2542:A:C5	2.91	0.59
55:LQ:62:LEU:HD22	55:LQ:62:LEU:H	1.67	0.59
2:SA:5:U:H4'	2:SA:7:A:H61	1.67	0.59
26:LA:1055:G:H4'	47:LJ:33:THR:HA	1.85	0.59
57:LS:60:TRP:CZ3	57:LS:93:ILE:HB	2.38	0.59
2:SA:718:A:C5	11:SK:117:HIS:CD2	2.91	0.58
2:SA:1117:A:C2	2:SA:1184:G:C6	2.91	0.58
26:LA:948:C:O2	26:LA:984:A:C4	2.55	0.58
26:LA:1107:G:C6	26:LA:1108:U:C4	2.91	0.58
2:SA:255:G:C5	2:SA:256:U:C5	2.92	0.58
2:SA:399:G:C6	2:SA:400:C:C4	2.90	0.58
2:SA:611:C:C5	2:SA:612:C:C5	2.91	0.58
26:LA:2126:A:C6	26:LA:2173:A:C6	2.91	0.58
26:LA:2575:C:H2'	38:LE:149:ASN:OD1	2.03	0.58
26:LA:753:A:C2	26:LA:754:U:C2	2.91	0.58
26:LA:1055:G:C6	26:LA:1056:G:C4	2.91	0.58
45:LG:77:LYS:HB3	45:LG:78:ILE:HG23	1.84	0.58
2:SA:573:A:C6	2:SA:574:A:N1	2.71	0.58
26:LA:188:G:C6	26:LA:189:G:C4	2.92	0.58
26:LA:1431:A:C2	26:LA:1432:G:C4	2.91	0.58
26:LA:1242:U:C4	26:LA:1243:C:C4	2.91	0.58
3:S1:43:U:H3'	3:S1:45:G:H1	1.68	0.58
26:LA:1797:G:C6	26:LA:1798:U:C4	2.91	0.58
26:LA:2197:U:C6	26:LA:2224:G:C6	2.91	0.58
2:SA:1153:G:H1'	19:SC:218:LYS:HE2	1.84	0.58
26:LA:346:A:C6	26:LA:347:A:C4	2.92	0.58
26:LA:877:A:N6	26:LA:900:A:H61	1.99	0.58
26:LA:878:A:C2	26:LA:879:G:C4	2.92	0.58
26:LA:1505:A:H2'	26:LA:1506:U:C6	2.38	0.58
25:LB:78:A:C2	25:LB:99:A:C5	2.92	0.58
26:LA:1871:A:H2'	26:LA:1872:A:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:SB:37:VAL:HG12	18:SB:38:HIS:H	1.68	0.58
26:LA:825:A:C2	26:LA:833:A:C2	2.92	0.58
2:SA:474:G:C5	2:SA:475:C:C4	2.90	0.58
8:SH:63:LYS:HE2	8:SH:70:VAL:HG11	1.86	0.58
26:LA:878:A:C2	26:LA:900:A:C6	2.92	0.58
45:LG:73:VAL:HG23	45:LG:74:ALA:H	1.68	0.58
2:SA:1004:A:C2	2:SA:1005:A:C4	2.91	0.57
26:LA:182:A:C2	26:LA:183:C:C2	2.92	0.57
2:SA:160:A:C6	2:SA:344:A:H1'	2.39	0.57
2:SA:213:G:C2	2:SA:214:C:H1'	2.39	0.57
26:LA:2568:U:C2	26:LA:2569:G:C8	2.92	0.57
2:SA:608:A:C6	2:SA:609:A:C5	2.91	0.57
25:LB:39:A:C2	25:LB:40:U:O4	2.57	0.57
26:LA:544:C:H3'	26:LA:545:U:C5'	2.34	0.57
26:LA:1928:A:C5	26:LA:1929:G:C5	2.91	0.57
2:SA:666:G:C5	2:SA:741:G:C6	2.91	0.57
26:LA:532:A:H2'	26:LA:532:A:N3	2.18	0.57
26:LA:1338:G:C4	26:LA:1339:G:C8	2.92	0.57
26:LA:2124:G:C5	26:LA:2125:G:H1'	2.39	0.57
2:SA:1005:A:C5	2:SA:1006:G:H1'	2.39	0.57
2:SA:1313:U:C4	2:SA:1314:C:C5	2.92	0.57
26:LA:322:A:H5'	26:LA:340:A:H1'	1.84	0.57
26:LA:2097:A:H2'	26:LA:2098:U:C6	2.40	0.57
37:LC:40:GLU:O	37:LC:178:VAL:HG13	2.03	0.57
2:SA:389:A:C6	2:SA:390:U:H1'	2.39	0.57
2:SA:1417:G:C5	2:SA:1482:G:C6	2.93	0.57
26:LA:819:A:C6	26:LA:820:A:C5	2.91	0.57
26:LA:1284:A:C6	26:LA:1285:A:C6	2.92	0.57
26:LA:1973:G:C6	26:LA:1974:C:C4	2.93	0.57
26:LA:2415:G:C6	26:LA:2416:C:C4	2.92	0.57
27:LD:209:ALA:HA	27:LD:212:TRP:CD2	2.40	0.57
2:SA:254:G:N3	17:SQ:16:MET:HE2	2.20	0.57
2:SA:550:G:C6	2:SA:551:U:C4	2.93	0.57
2:SA:587:G:C6	2:SA:755:G:C6	2.92	0.57
26:LA:1202:G:C5	26:LA:1203:U:C5	2.93	0.57
26:LA:2702:G:C5	26:LA:2703:C:C5	2.92	0.57
2:SA:513:C:C4	2:SA:514:C:C4	2.93	0.57
2:SA:1501:C:C5	2:SA:1504:G:C5	2.93	0.57
26:LA:58:G:C6	26:LA:59:U:C4	2.92	0.57
26:LA:447:A:C5	26:LA:473:G:C5	2.93	0.57
26:LA:1933:G:C6	26:LA:1934:C:C4	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:L0:21:LEU:C	34:L0:23:ARG:HA	2.29	0.57
26:LA:1654:A:H4'	38:LE:118:PHE:CZ	2.40	0.57
26:LA:1866:A:C4	26:LA:1876:A:C5	2.93	0.57
26:LA:2248:C:H2'	26:LA:2249:U:H5'	1.85	0.57
26:LA:2721:A:C2	26:LA:2873:A:C6	2.92	0.57
44:LF:5:LEU:HD11	44:LF:12:LEU:HD22	1.86	0.57
2:SA:46:G:C5	2:SA:366:A:C2	2.92	0.57
2:SA:49:U:C4	2:SA:364:A:C6	2.92	0.57
2:SA:690:G:C6	2:SA:691:G:C6	2.93	0.57
26:LA:877:A:H62	26:LA:900:A:N6	2.01	0.57
26:LA:2004:G:C6	26:LA:2005:A:C5	2.93	0.57
2:SA:46:G:C6	2:SA:366:A:H2	2.22	0.56
2:SA:552:U:H4'	12:SL:83:GLY:O	2.04	0.56
2:SA:803:G:C5	2:SA:804:U:C5	2.93	0.56
26:LA:627:A:C2	26:LA:637:A:C4	2.92	0.56
26:LA:2104:C:C2	26:LA:2186:G:C2	2.93	0.56
26:LA:2415:G:C5	26:LA:2416:C:C5	2.93	0.56
26:LA:1027:A:C5	26:LA:1126:A:C2	2.93	0.56
26:LA:1242:U:C5	26:LA:1243:C:C5	2.93	0.56
26:LA:1897:G:C2	26:LA:1898:U:C2	2.92	0.56
25:LB:7:G:C5	25:LB:8:C:C5	2.93	0.56
26:LA:322:A:C5	26:LA:340:A:C2	2.93	0.56
57:LS:91:ARG:NH2	58:LT:11:GLN:H	2.03	0.56
2:SA:693:G:C5	2:SA:694:A:C8	2.93	0.56
2:SA:706:A:C6	2:SA:707:U:C4	2.94	0.56
2:SA:815:A:C2	2:SA:1529:G:C8	2.94	0.56
7:SG:17:PHE:CZ	7:SG:57:GLU:HB2	2.40	0.56
26:LA:1763:G:H3'	26:LA:1764:C:H5"	1.86	0.56
26:LA:2133:G:H3'	26:LA:2134:A:H4'	1.87	0.56
26:LA:2209:G:C6	26:LA:2210:U:C4	2.93	0.56
26:LA:2718:G:C6	26:LA:2719:G:C4	2.93	0.56
26:LA:780:G:C5	26:LA:782:A:C6	2.93	0.56
26:LA:1378:A:C6	26:LA:1380:G:C4	2.93	0.56
26:LA:2644:G:C6	26:LA:2645:G:C2	2.94	0.56
26:LA:2788:C:H2'	26:LA:2789:C:C6	2.40	0.56
26:LA:989:G:C8	35:L1:13:ILE:HD11	2.40	0.56
26:LA:1911:U:C5	26:LA:1918:A:C6	2.93	0.56
2:SA:622:A:C6	2:SA:623:C:H1'	2.40	0.56
2:SA:803:G:C6	2:SA:804:U:C4	2.93	0.56
2:SA:1004:A:C6	2:SA:1026:G:H1'	2.41	0.56
26:LA:573:U:O2'	26:LA:574:A:H3'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1268:A:C2	26:LA:2013:A:C5	2.94	0.56
26:LA:2469:A:C2	26:LA:2482:A:H1'	2.40	0.56
26:LA:2631:G:C2	26:LA:2632:A:C4	2.94	0.56
26:LA:2657:A:H8	26:LA:2658:C:C6	2.19	0.56
39:L3:48:TYR:HB3	39:L3:53:VAL:HG21	1.88	0.56
26:LA:572:A:C6	26:LA:573:U:C5	2.94	0.56
26:LA:651:G:H2'	26:LA:652:U:C5	2.41	0.56
26:LA:2478:A:C2	26:LA:2529:G:H2'	2.41	0.56
26:LA:2710:C:H2'	26:LA:2711:A:C8	2.41	0.56
26:LA:123:G:C6	26:LA:124:G:C6	2.94	0.56
26:LA:2520:C:C5	26:LA:2567:G:C5	2.94	0.56
2:SA:704:A:C6	2:SA:705:G:C4	2.94	0.56
26:LA:311:A:C5	26:LA:328:U:O4	2.59	0.56
26:LA:567:U:C5	26:LA:568:U:C2	2.94	0.56
26:LA:1430:G:C2	26:LA:1431:A:C4	2.94	0.56
36:L2:34:LEU:HG	36:L2:35:ASP:N	2.21	0.56
50:LL:28:LEU:HD23	50:LL:28:LEU:C	2.31	0.56
2:SA:171:A:H2'	2:SA:172:A:C8	2.41	0.55
13:SM:13:HIS:CD2	13:SM:15:VAL:HG12	2.42	0.55
26:LA:362:A:C4	26:LA:363:G:C8	2.94	0.55
26:LA:2180:U:C4	26:LA:2181:U:C4	2.94	0.55
2:SA:64:G:C5	2:SA:99:C:C4	2.94	0.55
2:SA:1142:G:C6	2:SA:1143:G:H1'	2.41	0.55
2:SA:1251:A:H2'	2:SA:1252:A:C8	2.42	0.55
25:LB:34:A:C2	25:LB:49:C:C2	2.94	0.55
26:LA:17:G:C5	26:LA:18:U:C4	2.94	0.55
26:LA:55:G:H2'	26:LA:56:A:C8	2.41	0.55
26:LA:705:A:C2	26:LA:706:A:C4	2.94	0.55
26:LA:152:A:H2'	26:LA:153:U:C6	2.41	0.55
2:SA:542:G:C2	2:SA:543:U:C5	2.94	0.55
2:SA:1514:G:C6	2:SA:1515:G:C5	2.93	0.55
26:LA:485:C:H2'	26:LA:486:C:C6	2.42	0.55
26:LA:1191:G:C6	26:LA:1192:G:C5	2.93	0.55
26:LA:1486:U:H2'	26:LA:1487:U:C6	2.41	0.55
27:LD:64:VAL:HG21	27:LD:90:ILE:HD12	1.87	0.55
2:SA:505:G:H2'	2:SA:506:G:C8	2.40	0.55
26:LA:77:G:C6	26:LA:78:U:C4	2.94	0.55
26:LA:666:A:C5	26:LA:667:U:C4	2.94	0.55
37:LC:27:ILE:HD13	37:LC:185:LEU:HD12	1.88	0.55
26:LA:1879:C:C4	26:LA:1880:U:C4	2.94	0.55
26:LA:2721:A:C2	26:LA:2873:A:C5	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2903:U:H3'	26:LA:2904:U:H5"	1.89	0.55
2:SA:35:G:C6	2:SA:36:C:C4	2.94	0.55
2:SA:184:G:C5	2:SA:185:U:C5	2.95	0.55
26:LA:464:U:O2	26:LA:788:A:C4	2.59	0.55
26:LA:1392:A:N7	26:LA:1393:A:C6	2.75	0.55
26:LA:1654:A:H1'	38:LE:118:PHE:CD2	2.41	0.55
26:LA:1908:C:H2'	26:LA:1909:C:C6	2.42	0.55
26:LA:2186:G:C6	26:LA:2187:U:C4	2.95	0.55
26:LA:2251:U:C5	26:LA:2252:G:C6	2.95	0.55
26:LA:2630:G:C5	26:LA:2894:G:C6	2.95	0.55
27:LD:65:ASP:CG	27:LD:101:ARG:HE	2.14	0.55
2:SA:354:G:C2	2:SA:355:C:C6	2.94	0.55
26:LA:1171:G:H2'	26:LA:1172:C:C6	2.42	0.55
26:LA:1741:C:H2'	26:LA:1742:U:C6	2.42	0.55
26:LA:1770:G:C5	26:LA:1983:G:C6	2.95	0.55
26:LA:1911:U:C6	26:LA:1918:A:C6	2.94	0.55
26:LA:2394:C:C5	26:LA:2395:C:C4	2.95	0.55
38:LE:5:VAL:HG21	38:LE:80:TRP:CE3	2.42	0.55
2:SA:174:A:C5	2:SA:175:C:C5	2.94	0.55
2:SA:1226:C:C5'	13:SM:92:ARG:HH22	2.20	0.55
22:SF:18:VAL:CG1	22:SF:126:ALA:HB2	2.37	0.55
25:LB:6:G:H2'	25:LB:7:G:C8	2.42	0.55
26:LA:221:A:C2	26:LA:233:A:C5	2.95	0.55
26:LA:729:G:C4	26:LA:1775:U:O2	2.60	0.55
26:LA:1777:U:C2	26:LA:1778:U:C5	2.95	0.55
26:LA:2377:A:H2'	26:LA:2378:A:C8	2.42	0.55
38:LE:2:ILE:H	38:LE:2:ILE:HD12	1.72	0.55
52:LO:105:MET:HE2	52:LO:117:PHE:CE2	2.42	0.55
26:LA:1241:A:C2	26:LA:1242:U:C4	2.95	0.54
26:LA:1365:A:C6	26:LA:1366:A:C5	2.94	0.54
26:LA:2069:G:C2	26:LA:2070:A:C8	2.95	0.54
20:SD:94:GLU:CD	20:SD:103:ARG:HE	2.15	0.54
26:LA:582:A:C6	26:LA:583:G:C6	2.95	0.54
26:LA:662:G:H2'	26:LA:663:G:C8	2.43	0.54
26:LA:1202:G:C4	26:LA:1203:U:C5	2.96	0.54
26:LA:1952:A:C6	26:LA:1953:A:N1	2.75	0.54
2:SA:299:G:C6	2:SA:300:A:C6	2.96	0.54
2:SA:690:G:C6	2:SA:691:G:C5	2.96	0.54
11:SK:32:THR:HG23	11:SK:43:TRP:HB3	1.90	0.54
26:LA:49:A:C5	26:LA:177:G:C6	2.95	0.54
26:LA:827:U:C5	26:LA:2430:A:C5	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1786:A:C5	26:LA:1938:A:C2	2.95	0.54
26:LA:1853:A:H61	26:LA:2087:G:C1'	2.16	0.54
26:LA:2047:C:H2'	26:LA:2048:G:C8	2.43	0.54
27:LD:34:GLU:HG2	27:LD:35:LYS:H	1.72	0.54
6:SU:6:ARG:HD2	11:SK:96:ILE:HD11	1.90	0.54
24:S3:516:HIS:CE1	24:S3:579:PHE:CZ	2.95	0.54
26:LA:10:A:N3	26:LA:2800:A:H5'	2.23	0.54
26:LA:105:C:H2'	26:LA:106:C:C5	2.43	0.54
26:LA:954:G:C5	26:LA:955:U:C4	2.96	0.54
26:LA:2352:A:C2	32:LY:30:VAL:HG11	2.43	0.54
26:LA:2519:U:C5	26:LA:2542:A:C5	2.96	0.54
2:SA:299:G:C5	2:SA:300:A:C5	2.96	0.54
2:SA:310:G:C6	2:SA:311:C:C5	2.96	0.54
2:SA:344:A:H62	2:SA:347:G:N2	2.05	0.54
2:SA:434:U:H2'	2:SA:435:A:C8	2.43	0.54
2:SA:523:A:C6	12:SL:86:VAL:CG2	2.91	0.54
2:SA:1028:C:C4	2:SA:1029:U:C4	2.96	0.54
2:SA:1154:G:N2	2:SA:1155:A:H1'	2.23	0.54
18:SB:14:HIS:CE1	18:SB:202:ASN:HB2	2.43	0.54
24:S3:464:HIS:CE1	24:S3:468:ILE:HG13	2.43	0.54
2:SA:519:C:H2'	2:SA:520:A:C8	2.43	0.54
2:SA:696:A:C6	2:SA:697:U:O4	2.60	0.54
2:SA:1143:G:C2	2:SA:1144:G:C5	2.96	0.54
3:S1:54:U:H3'	3:S1:55:A:H5"	1.89	0.54
19:SC:11:LEU:HD22	19:SC:17:TRP:CD1	2.42	0.54
26:LA:910:A:C5	52:LO:13:HIS:NE2	2.76	0.54
26:LA:1658:C:OP1	38:LE:140:HIS:CE1	2.61	0.54
26:LA:2028:U:H2'	26:LA:2029:G:C8	2.43	0.54
2:SA:56:U:H2'	2:SA:57:G:C8	2.43	0.54
2:SA:373:A:C6	2:SA:482:A:C4	2.96	0.54
26:LA:242:G:H3'	42:L6:63:TYR:CD2	2.43	0.54
26:LA:1286:A:C5	26:LA:1329:U:C4	2.95	0.54
26:LA:1830:C:H2'	26:LA:1831:G:H8	1.73	0.54
26:LA:2570:G:C5	26:LA:2571:U:C5	2.95	0.54
26:LA:2796:U:C2'	26:LA:2798:U:H3	2.20	0.54
2:SA:259:G:C6	2:SA:260:G:C5	2.96	0.54
11:SK:42:GLY:HA3	11:SK:76:TYR:CZ	2.43	0.54
20:SD:49:ASP:HA	20:SD:52:VAL:HG12	1.90	0.54
26:LA:1638:C:C4	26:LA:1639:C:C5	2.96	0.54
26:LA:1689:A:C8	26:LA:1700:A:C6	2.95	0.54
26:LA:1851:U:C5	26:LA:1852:U:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2513:A:C6	26:LA:2514:U:C4	2.96	0.54
32:LY:33:GLY:H	32:LY:59:PHE:HA	1.73	0.54
2:SA:693:G:C6	2:SA:694:A:C5	2.96	0.54
2:SA:1312:G:C2	2:SA:1326:U:C4	2.96	0.54
20:SD:89:LEU:HD13	20:SD:199:ILE:HD11	1.90	0.54
26:LA:632:A:C2	26:LA:633:A:C4	2.96	0.54
26:LA:1486:U:H2'	26:LA:1487:U:H6	1.72	0.54
26:LA:1550:C:H2'	26:LA:1551:A:H8	1.73	0.54
26:LA:2214:C:C5	26:LA:2215:C:C4	2.96	0.54
7:SG:148:LYS:HB3	11:SK:60:PHE:CD2	2.43	0.53
23:SR:70:THR:H	23:SR:73:HIS:CE1	2.25	0.53
26:LA:1343:G:C4	26:LA:1344:U:C5	2.95	0.53
26:LA:1570:A:H2'	26:LA:1571:A:H8	1.73	0.53
26:LA:1838:C:C5	26:LA:1899:A:N7	2.75	0.53
26:LA:1879:C:C6	26:LA:1880:U:C5	2.95	0.53
26:LA:2544:G:C6	26:LA:2545:G:C5	2.95	0.53
26:LA:2720:U:C2	26:LA:2872:A:C5	2.96	0.53
45:LG:43:ILE:HG22	45:LG:47:LYS:H	1.72	0.53
26:LA:2864:G:C5	26:LA:2865:U:C4	2.96	0.53
2:SA:46:G:C6	2:SA:366:A:C2	2.96	0.53
2:SA:88:U:C4	2:SA:89:U:C4	2.97	0.53
2:SA:1535:C:C5	6:SU:50:SER:HA	2.42	0.53
26:LA:528:A:N7	26:LA:2042:A:C6	2.76	0.53
26:LA:604:G:C6	26:LA:605:G:C5	2.96	0.53
26:LA:657:U:H2'	26:LA:658:U:C6	2.43	0.53
26:LA:1000:A:H2'	26:LA:1001:A:C8	2.44	0.53
26:LA:1355:G:C2	26:LA:1356:G:C5	2.97	0.53
26:LA:1725:U:C5	26:LA:1726:C:H5	2.26	0.53
26:LA:639:U:H2'	26:LA:640:C:C6	2.43	0.53
2:SA:714:G:H2'	2:SA:715:A:C8	2.44	0.53
2:SA:822:U:C4	2:SA:823:C:C5	2.96	0.53
26:LA:675:A:C5	26:LA:804:A:C2	2.96	0.53
26:LA:1057:A:C6	26:LA:1086:A:C2	2.96	0.53
26:LA:1725:U:C4	26:LA:1726:C:C5	2.97	0.53
26:LA:2839:G:C5	26:LA:2840:C:C5	2.96	0.53
2:SA:131:A:H2'	2:SA:132:C:C6	2.44	0.53
2:SA:210:C:C4'	2:SA:211:G:H21	2.22	0.53
2:SA:519:C:C4	2:SA:520:A:C6	2.96	0.53
2:SA:1433:A:C4	2:SA:1468:A:C2	2.97	0.53
24:S3:516:HIS:HE1	24:S3:579:PHE:CZ	2.26	0.53
24:S3:583:HIS:CG	24:S3:584:ASP:N	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1057:A:C5	26:LA:1058:U:C5	2.97	0.53
26:LA:2337:G:C6	26:LA:2338:C:C4	2.96	0.53
2:SA:149:A:C2	2:SA:174:A:C2	2.97	0.53
2:SA:153:C:C4	2:SA:154:U:C4	2.97	0.53
2:SA:236:A:H2'	2:SA:237:G:C8	2.43	0.53
2:SA:1255:G:C6	2:SA:1279:G:C8	2.97	0.53
25:LB:97:C:H2'	25:LB:98:G:H5'	1.91	0.53
26:LA:809:G:C6	26:LA:810:U:C4	2.97	0.53
26:LA:939:G:C6	26:LA:940:G:C5	2.97	0.53
26:LA:2024:G:C5	26:LA:2040:G:C2	2.97	0.53
26:LA:2214:C:C6	26:LA:2215:C:C5	2.97	0.53
2:SA:309:A:C2	2:SA:310:G:C5	2.96	0.53
2:SA:476:U:H2'	2:SA:477:C:C6	2.44	0.53
2:SA:1501:C:C4	2:SA:1504:G:C5	2.97	0.53
24:S3:157:ILE:HA	24:S3:161:LEU:HD13	1.90	0.53
26:LA:199:A:C4	26:LA:2433:A:C2	2.97	0.53
26:LA:1166:G:C6	26:LA:1167:C:C4	2.96	0.53
26:LA:1821:A:C6	26:LA:1822:C:C4	2.97	0.53
27:LD:90:ILE:HG21	27:LD:102:TYR:CD2	2.44	0.53
55:LQ:56:LYS:H	55:LQ:56:LYS:HD3	1.73	0.53
2:SA:1501:C:C5	2:SA:1504:G:C4	2.97	0.53
26:LA:96:C:H2'	26:LA:97:C:C6	2.43	0.53
26:LA:970:U:C2	26:LA:971:G:C8	2.97	0.53
46:LH:120:ILE:HD11	46:LH:143:VAL:HG21	1.91	0.53
2:SA:1472:U:H2'	2:SA:1473:G:C8	2.43	0.53
2:SA:1508:A:C6	2:SA:1509:C:C4	2.97	0.53
4:S2:1:C:C6	4:S2:75:C:C5	2.97	0.53
26:LA:14:A:C5	26:LA:526:A:N1	2.77	0.53
26:LA:447:A:C4	26:LA:473:G:C8	2.96	0.53
26:LA:464:U:C4	26:LA:465:G:C5	2.97	0.53
26:LA:491:G:C6	26:LA:492:A:C5	2.97	0.53
26:LA:1048:A:C8	26:LA:1111:A:C6	2.97	0.53
26:LA:1879:C:C5	26:LA:1880:U:C4	2.96	0.53
26:LA:2097:A:C4	26:LA:2098:U:C5	2.96	0.53
55:LQ:35:ILE:H	55:LQ:53:THR:HG22	1.74	0.53
10:SJ:100:ILE:HD13	10:SJ:100:ILE:H	1.74	0.52
22:SF:8:PHE:CE1	22:SF:60:VAL:HG11	2.44	0.52
25:LB:102:G:C6	25:LB:103:U:C4	2.97	0.52
26:LA:709:U:H2'	26:LA:710:U:C6	2.44	0.52
26:LA:961:C:H4'	26:LA:962:G:OP2	2.09	0.52
26:LA:2142:A:C8	26:LA:2143:C:C6	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2495:G:C5	26:LA:2496:C:C5	2.97	0.52
2:SA:113:G:C6	2:SA:114:U:C4	2.98	0.52
26:LA:819:A:C2	26:LA:820:A:C4	2.98	0.52
26:LA:1268:A:C2	26:LA:2013:A:C4	2.97	0.52
26:LA:2034:U:C5	26:LA:2035:G:N7	2.78	0.52
26:LA:2900:A:C5	26:LA:2901:C:C5	2.97	0.52
45:LG:116:LEU:HD23	45:LG:177:ARG:HG3	1.92	0.52
2:SA:302:G:C6	2:SA:303:A:C5	2.97	0.52
2:SA:1149:C:H2'	2:SA:1150:A:C8	2.44	0.52
2:SA:1293:C:H2'	2:SA:1294:G:C8	2.44	0.52
26:LA:68:G:H2'	26:LA:69:C:H6	1.73	0.52
26:LA:1247:A:C6	26:LA:1249:U:C4	2.97	0.52
26:LA:1467:U:C4	26:LA:1546:G:C2	2.98	0.52
26:LA:2051:A:C6	26:LA:2614:A:C5	2.98	0.52
26:LA:2051:A:C4	26:LA:2614:A:C6	2.97	0.52
26:LA:2588:G:C6	26:LA:2589:A:C5	2.98	0.52
2:SA:105:G:C6	2:SA:106:C:C4	2.98	0.52
3:S1:54:U:C1'	20:SD:103:ARG:HH11	2.22	0.52
26:LA:77:G:C5	26:LA:78:U:C4	2.97	0.52
26:LA:415:A:C4	26:LA:416:U:C5	2.98	0.52
26:LA:1680:U:C4	26:LA:1681:G:C4	2.98	0.52
26:LA:1821:A:H2'	26:LA:1822:C:C6	2.45	0.52
26:LA:1910:G:C5	26:LA:1921:G:C2	2.97	0.52
26:LA:2824:C:C4	26:LA:2825:G:C4	2.97	0.52
2:SA:260:G:H2'	2:SA:261:U:C6	2.45	0.52
2:SA:269:C:H2'	2:SA:270:A:C8	2.44	0.52
26:LA:2358:A:H8	26:LA:2358:A:OP1	1.92	0.52
40:L4:12:SER:HA	40:L4:48:TYR:HA	1.91	0.52
26:LA:45:G:C4'	26:LA:46:G:H5'	2.40	0.52
26:LA:870:U:C4	26:LA:871:U:C4	2.98	0.52
26:LA:1028:A:C2	26:LA:1029:A:C4	2.98	0.52
26:LA:1570:A:C2	26:LA:1571:A:C4	2.98	0.52
26:LA:1866:A:C6	26:LA:1876:A:C8	2.98	0.52
26:LA:2448:A:H3'	26:LA:2449:U:H2'	1.91	0.52
2:SA:104:G:C2	2:SA:105:G:C8	2.98	0.52
2:SA:796:C:H4'	3:S1:30:U:H2'	1.92	0.52
2:SA:1005:A:C6	2:SA:1006:G:H1'	2.45	0.52
24:S3:489:TYR:HB2	24:S3:568:TYR:CE1	2.45	0.52
26:LA:126:A:C5	41:L5:18:PHE:CE2	2.97	0.52
26:LA:242:G:H3'	42:L6:63:TYR:CE2	2.45	0.52
26:LA:319:G:C5	26:LA:320:A:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:401:A:C2	26:LA:402:A:C4	2.98	0.52
26:LA:646:U:C6	26:LA:647:G:C8	2.98	0.52
26:LA:1998:A:C4	26:LA:1999:C:C5	2.98	0.52
26:LA:2014:A:C2	26:LA:2015:A:N1	2.78	0.52
26:LA:2027:G:C6	26:LA:2028:U:C4	2.98	0.52
26:LA:2414:G:C2	26:LA:2415:G:C8	2.98	0.52
26:LA:2709:G:C5	26:LA:2710:C:C5	2.98	0.52
50:LL:41:LYS:HZ3	50:LL:52:ASP:CG	2.18	0.52
50:LL:76:HIS:CE1	50:LL:85:LYS:HB2	2.44	0.52
2:SA:81:A:C2	2:SA:89:U:O2	2.63	0.52
2:SA:767:A:C2	2:SA:768:A:C4	2.98	0.52
3:S1:24:A:H4'	6:SU:16:ARG:CZ	2.39	0.52
9:SI:51:LEU:HA	9:SI:54:VAL:HG22	1.92	0.52
26:LA:1787:A:C2	26:LA:1788:C:C6	2.98	0.52
26:LA:1906:G:C8	26:LA:1929:G:C5	2.98	0.52
26:LA:1916:A:C5	26:LA:1917:U:C6	2.97	0.52
26:LA:2051:A:C5	26:LA:2614:A:C6	2.98	0.52
26:LA:2219:U:C4	26:LA:2220:U:C4	2.97	0.52
2:SA:1144:G:N2	2:SA:1146:A:H62	2.07	0.52
4:S2:71:G:C5	4:S2:72:C:C5	2.98	0.52
11:SK:15:VAL:HG13	11:SK:17:ASP:H	1.74	0.52
24:S3:214:ALA:O	24:S3:218:HIS:HB2	2.10	0.52
26:LA:927:A:H2'	26:LA:928:A:C8	2.45	0.52
26:LA:2524:G:C6	26:LA:2525:G:C5	2.98	0.52
26:LA:2766:A:C5	26:LA:2767:C:C5	2.98	0.52
32:LY:2:HIS:HB2	32:LY:3:LYS:HB3	1.92	0.52
2:SA:581:G:H1'	2:SA:761:G:H22	1.75	0.52
2:SA:803:G:C4	2:SA:804:U:C5	2.98	0.52
2:SA:1163:A:C2	2:SA:1174:G:C2	2.97	0.52
2:SA:1518:A:C2	2:SA:1519:A:C5	2.98	0.52
24:S3:642:LYS:HE2	24:S3:642:LYS:HA	1.92	0.52
26:LA:464:U:C5	26:LA:465:G:C4	2.97	0.52
26:LA:699:A:C6	26:LA:734:A:C8	2.98	0.52
26:LA:1410:G:C2	26:LA:1593:A:C4	2.98	0.52
26:LA:1697:G:C6	26:LA:1698:A:C6	2.98	0.52
26:LA:2051:A:C5	26:LA:2614:A:C5	2.98	0.52
26:LA:2158:A:O2'	26:LA:2159:G:H5'	2.10	0.52
26:LA:2495:G:C4	26:LA:2496:C:C5	2.98	0.52
26:LA:2499:C:C5	26:LA:2500:U:C4	2.98	0.52
26:LA:2556:C:C4	26:LA:2557:G:C4	2.98	0.52
37:LC:43:ASP:O	37:LC:214:ILE:HA	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SA:502:A:C6	2:SA:544:G:C6	2.98	0.51
22:SF:42:TRP:HE1	22:SF:106:LYS:HB2	1.75	0.51
26:LA:792:A:C6	26:LA:2440:C:C6	2.98	0.51
26:LA:1364:G:C2	26:LA:1368:G:C5	2.98	0.51
26:LA:1467:U:C5	26:LA:1468:U:C4	2.99	0.51
26:LA:1936:A:C5	26:LA:1945:G:C2	2.99	0.51
26:LA:2124:G:C4	26:LA:2125:G:H1'	2.45	0.51
26:LA:2277:G:C6	26:LA:2278:A:N7	2.78	0.51
26:LA:2731:G:C5	26:LA:2732:G:C6	2.98	0.51
39:L3:17:SER:OG	39:L3:18:HIS:CE1	2.63	0.51
2:SA:59:A:C4	2:SA:331:G:N2	2.78	0.51
2:SA:192:A:C6	2:SA:193:C:C4	2.98	0.51
2:SA:538:G:H2'	2:SA:539:A:C8	2.45	0.51
2:SA:754:C:C5'	15:SO:71:ARG:HH22	2.23	0.51
2:SA:785:G:C2	2:SA:786:G:C8	2.98	0.51
2:SA:872:A:C2	2:SA:874:G:C6	2.99	0.51
2:SA:1368:A:C5	2:SA:1369:C:C5	2.98	0.51
26:LA:160:A:C8	26:LA:167:A:C2	2.98	0.51
26:LA:255:A:C6	26:LA:256:A:C5	2.98	0.51
2:SA:61:G:C5	2:SA:107:G:C2	2.97	0.51
2:SA:1476:A:C6	2:SA:1477:U:C4	2.98	0.51
26:LA:139:U:C6	26:LA:141:G:C8	2.98	0.51
26:LA:188:G:C6	26:LA:189:G:C5	2.98	0.51
26:LA:288:U:C4	26:LA:289:G:N7	2.78	0.51
26:LA:1879:C:C5	26:LA:1880:U:C5	2.99	0.51
26:LA:1891:G:C5	26:LA:1892:C:C5	2.98	0.51
26:LA:2007:U:H4'	26:LA:2824:C:H4'	1.93	0.51
26:LA:2126:A:C2	26:LA:2173:A:C4	2.99	0.51
26:LA:2136:G:H2'	26:LA:2137:U:C6	2.44	0.51
51:LI:80:ILE:HG21	51:LI:94:ILE:HG12	1.92	0.51
2:SA:1442:G:H1	2:SA:1460:C:N4	2.07	0.51
9:SI:20:ILE:HG22	9:SI:62:LEU:CD2	2.41	0.51
25:LB:54:G:C5	25:LB:55:U:C5	2.99	0.51
26:LA:465:G:C2	26:LA:466:A:C6	2.99	0.51
26:LA:947:A:C2	26:LA:971:G:C2	2.98	0.51
26:LA:1205:A:C6	44:LF:165:HIS:CE1	2.98	0.51
26:LA:2100:G:C4	26:LA:2190:G:C2	2.98	0.51
26:LA:2328:A:H2'	26:LA:2329:U:C6	2.46	0.51
2:SA:19:A:C2	2:SA:917:G:C6	2.98	0.51
2:SA:32:A:C2	2:SA:553:A:C2	2.99	0.51
2:SA:59:A:C6	2:SA:354:G:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SA:372:C:H42	2:SA:389:A:H62	1.57	0.51
26:LA:92:U:C4	26:LA:93:G:C6	2.98	0.51
26:LA:347:A:H2'	26:LA:348:A:C8	2.45	0.51
26:LA:2547:A:C2	26:LA:2562:U:C2	2.97	0.51
26:LA:2735:G:C6	26:LA:2736:A:C5	2.99	0.51
50:LL:3:THR:HG22	57:LS:60:TRP:HE1	1.76	0.51
1:SS:80:ARG:NE	1:SS:80:ARG:H	2.09	0.51
2:SA:228:A:C2	2:SA:229:U:C2	2.99	0.51
2:SA:1442:G:H1	2:SA:1460:C:H42	1.59	0.51
6:SU:6:ARG:HA	6:SU:14:ALA:HB2	1.92	0.51
16:SP:60:TRP:CE3	16:SP:60:TRP:HA	2.46	0.51
24:S3:10:ARG:HG3	24:S3:282:ILE:HA	1.92	0.51
24:S3:17:HIS:CD2	24:S3:122:SER:HA	2.46	0.51
26:LA:123:G:C5	26:LA:124:G:C5	2.99	0.51
26:LA:847:U:C5	26:LA:848:C:C5	2.99	0.51
26:LA:969:G:C6	26:LA:970:U:C4	2.98	0.51
26:LA:1897:G:C5	26:LA:1898:U:C4	2.99	0.51
26:LA:1965:C:C6	26:LA:1965:C:OP1	2.63	0.51
29:LV:72:GLN:HG2	29:LV:73:ARG:H	1.76	0.51
2:SA:967:C:C4	2:SA:968:A:C5	2.99	0.51
26:LA:26:G:C2	26:LA:27:G:N2	2.79	0.51
26:LA:809:G:C5	26:LA:810:U:C4	2.98	0.51
26:LA:1274:A:C8	26:LA:1297:C:H1'	2.45	0.51
26:LA:1866:A:C4	26:LA:1876:A:C6	2.98	0.51
26:LA:1866:A:C2	26:LA:1876:A:C4	2.99	0.51
26:LA:1906:G:C6	26:LA:1907:G:N7	2.79	0.51
26:LA:2248:C:C2'	26:LA:2249:U:H5'	2.40	0.51
26:LA:2868:A:C6	26:LA:2869:G:C6	2.99	0.51
52:LO:96:ILE:C	52:LO:96:ILE:HD12	2.36	0.51
2:SA:174:A:C6	2:SA:175:C:C5	2.99	0.51
2:SA:718:A:C8	2:SA:719:C:C6	2.99	0.51
2:SA:1223:C:C5	2:SA:1224:U:C5	2.99	0.51
2:SA:1228:C:H2'	2:SA:1229:A:C8	2.45	0.51
26:LA:28:A:C4	26:LA:29:U:C6	2.99	0.51
26:LA:157:C:H2'	26:LA:158:U:O4'	2.10	0.51
26:LA:863:A:C2	26:LA:864:G:C4	2.99	0.51
26:LA:1048:A:C5	26:LA:1049:C:C5	2.99	0.51
26:LA:1165:A:C2	26:LA:1185:G:C4	2.98	0.51
26:LA:1327:A:N6	26:LA:1328:A:C2	2.78	0.51
26:LA:1821:A:C5	26:LA:1822:C:C4	2.98	0.51
26:LA:2570:G:C5	26:LA:2571:U:C4	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SA:219:U:H2'	2:SA:220:G:C8	2.46	0.51
2:SA:242:G:C2	2:SA:245:U:C5	2.99	0.51
2:SA:332:G:C5	2:SA:333:U:C5	2.98	0.51
2:SA:966:G:C2	2:SA:967:C:C2	2.98	0.51
26:LA:68:G:N2	26:LA:74:A:C4	2.79	0.51
26:LA:136:G:C5	26:LA:137:U:C5	2.98	0.51
26:LA:463:G:C2	26:LA:467:G:C6	2.99	0.51
26:LA:778:G:C2	26:LA:787:C:C2	2.99	0.51
26:LA:959:A:C2	26:LA:960:A:C2	2.99	0.51
26:LA:959:A:C2	26:LA:960:A:N3	2.79	0.51
26:LA:1169:A:C6	26:LA:1170:C:C4	2.99	0.51
26:LA:1190:G:C2	26:LA:1191:G:C5	2.99	0.51
26:LA:2100:G:C6	26:LA:2101:A:C4	2.99	0.51
26:LA:2100:G:C6	26:LA:2190:G:C4	2.98	0.51
26:LA:2113:U:O4	26:LA:2169:A:C5	2.64	0.51
26:LA:2618:G:C6	26:LA:2619:C:C4	2.99	0.51
26:LA:2796:U:H2'	26:LA:2798:U:H3	1.74	0.51
26:LA:2851:A:C4	26:LA:2852:G:C8	2.98	0.51
2:SA:670:G:C2	2:SA:671:G:C5	2.99	0.51
2:SA:950:U:H2'	2:SA:951:G:C8	2.46	0.51
26:LA:980:A:N6	26:LA:981:A:C2	2.79	0.51
26:LA:1077:A:H5"	49:LK:94:LYS:HD3	1.92	0.51
26:LA:1809:A:N7	26:LA:1810:A:C5	2.79	0.51
26:LA:1833:C:C4	26:LA:1834:U:C4	2.99	0.51
26:LA:1899:A:C2	26:LA:1903:G:C5	2.99	0.51
26:LA:2080:A:H2'	26:LA:2081:U:C6	2.45	0.51
26:LA:2331:G:C5	26:LA:2332:C:C4	2.99	0.51
2:SA:74:A:C2	2:SA:75:G:C4	2.98	0.50
2:SA:523:A:C6	12:SL:86:VAL:HG21	2.46	0.50
2:SA:782:A:C8	2:SA:783:C:C5	2.99	0.50
2:SA:926:G:C8	2:SA:1505:G:C2	2.98	0.50
2:SA:952:U:H2'	2:SA:953:G:C8	2.46	0.50
7:SG:72:VAL:HG11	7:SG:144:ALA:HB2	1.92	0.50
26:LA:131:A:H2'	26:LA:132:G:C8	2.46	0.50
26:LA:226:A:C6	26:LA:227:A:C6	3.00	0.50
26:LA:548:G:H4'	26:LA:549:G:H4'	1.94	0.50
26:LA:1867:G:H2'	26:LA:1868:C:C6	2.46	0.50
26:LA:2291:U:H2'	26:LA:2292:U:C6	2.46	0.50
26:LA:2556:C:C5	26:LA:2557:G:C5	2.99	0.50
26:LA:2812:G:C6	26:LA:2813:A:C6	3.00	0.50
32:LY:37:VAL:HG13	32:LY:38:ARG:HG3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:S3:55:GLU:HG3	24:S3:61:THR:HA	1.93	0.50
26:LA:14:A:C6	26:LA:526:A:C2	3.00	0.50
26:LA:1684:G:H2'	26:LA:1685:C:C6	2.46	0.50
26:LA:2233:U:H2'	26:LA:2234:G:H8	1.76	0.50
26:LA:2442:C:H2'	26:LA:2443:C:C6	2.46	0.50
26:LA:2705:A:C6	26:LA:2706:A:C5	2.99	0.50
3:S1:23:C:H1'	3:S1:24:A:C5'	2.41	0.50
3:S1:45:G:H1'	21:SE:55:VAL:HG11	1.92	0.50
26:LA:2064:C:H2'	26:LA:2065:C:C6	2.47	0.50
26:LA:2453:A:H2'	26:LA:2454:G:C8	2.47	0.50
26:LA:2850:A:H2'	26:LA:2851:A:C8	2.46	0.50
56:LR:33:GLU:HG2	56:LR:34:GLY:H	1.76	0.50
2:SA:74:A:C2	2:SA:75:G:C5	2.99	0.50
2:SA:215:C:C4	2:SA:216:U:C5	2.99	0.50
2:SA:830:G:C6	2:SA:831:A:C5	3.00	0.50
2:SA:1014:A:H2'	2:SA:1015:G:C8	2.46	0.50
2:SA:1138:G:H2'	2:SA:1140:C:C6	2.46	0.50
26:LA:382:A:C6	26:LA:383:C:C5	3.00	0.50
26:LA:687:C:C5	26:LA:688:U:C5	2.99	0.50
26:LA:1171:G:C2	26:LA:1179:G:C4	2.99	0.50
26:LA:1430:G:C4	26:LA:1431:A:C8	3.00	0.50
26:LA:2070:A:H2'	26:LA:2071:A:H8	1.76	0.50
26:LA:2230:G:C4	26:LA:2231:U:C5	3.00	0.50
33:LZ:58:ILE:HG21	51:LI:1:MET:HE1	1.92	0.50
44:LF:143:LEU:HD13	44:LF:146:VAL:HG11	1.93	0.50
2:SA:113:G:H2'	2:SA:114:U:C6	2.47	0.50
2:SA:474:G:C6	2:SA:475:C:N3	2.80	0.50
2:SA:722:G:C8	2:SA:724:G:H1'	2.47	0.50
3:S1:47:C:C2	20:SD:49:ASP:HB2	2.46	0.50
24:S3:539:ILE:HD11	24:S3:549:ILE:HD11	1.93	0.50
26:LA:1540:G:C5	26:LA:1541:C:C5	3.00	0.50
26:LA:2209:G:C4	26:LA:2210:U:C5	2.99	0.50
42:L6:49:VAL:HG22	42:L6:50:SER:H	1.75	0.50
45:LG:11:VAL:HG13	45:LG:15:LEU:HD13	1.94	0.50
2:SA:1083:U:C5	2:SA:1084:G:C5	3.00	0.50
2:SA:1288:A:C2	2:SA:1289:A:C4	3.00	0.50
23:SR:70:THR:HG22	23:SR:73:HIS:CE1	2.46	0.50
26:LA:111:A:C2	26:LA:112:U:H1'	2.46	0.50
26:LA:1172:C:C4	26:LA:1173:U:C2	2.99	0.50
26:LA:1247:A:C5	26:LA:1249:U:C4	3.00	0.50
27:LD:43:ASN:H	27:LD:49:THR:CG2	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SA:628:G:C6	2:SA:629:A:C6	3.00	0.50
2:SA:639:G:H2'	2:SA:640:A:C8	2.47	0.50
4:S2:21:U:H2'	4:S2:22:A:C5'	2.42	0.50
26:LA:533:G:C6	26:LA:561:G:C2	2.99	0.50
26:LA:783:A:N6	26:LA:785:G:C5	2.79	0.50
26:LA:1159:U:H2'	26:LA:1160:G:H8	1.77	0.50
26:LA:1407:G:H2'	26:LA:1408:G:C8	2.46	0.50
26:LA:1544:A:C6	26:LA:1545:A:C5	3.00	0.50
26:LA:2119:A:C5	26:LA:2171:A:C2	2.99	0.50
26:LA:2292:U:H2'	26:LA:2293:G:C8	2.47	0.50
26:LA:2610:C:H2'	26:LA:2610:C:O2	2.11	0.50
26:LA:2824:C:C5	26:LA:2825:G:C4	3.00	0.50
2:SA:271:C:H3'	2:SA:272:C:H5"	1.93	0.50
2:SA:934:C:C5	2:SA:1344:C:H3'	2.47	0.50
2:SA:942:G:C6	2:SA:943:U:C4	3.00	0.50
26:LA:646:U:H6	26:LA:647:G:C8	2.29	0.50
26:LA:784:G:C2	26:LA:792:A:C6	3.00	0.50
26:LA:1395:A:H4'	26:LA:1397:U:C5	2.47	0.50
26:LA:1573:G:C8	26:LA:1574:C:C5	2.99	0.50
26:LA:1786:A:C6	26:LA:1938:A:C2	2.99	0.50
26:LA:1936:A:H8	26:LA:1961:C:H42	1.58	0.50
26:LA:2041:U:H2'	26:LA:2042:A:C8	2.46	0.50
26:LA:2337:G:C5	26:LA:2338:C:C5	3.00	0.50
50:LL:15:TRP:CZ2	50:LL:53:TYR:CD2	2.99	0.50
2:SA:777:A:C6	2:SA:778:G:C5	3.00	0.50
2:SA:880:C:H2'	2:SA:881:G:H8	1.75	0.50
4:S2:72:C:C2	4:S2:73:A:C8	3.00	0.50
26:LA:415:A:C6	26:LA:416:U:C4	3.00	0.50
26:LA:1322:A:H2'	26:LA:1322:A:N3	2.27	0.50
26:LA:1623:G:O6	26:LA:1624:U:C4	2.65	0.50
26:LA:1697:G:H4'	26:LA:1978:A:H5"	1.94	0.50
26:LA:2796:U:C4	26:LA:2798:U:C4	3.00	0.50
37:LC:113:VAL:HG22	37:LC:114:VAL:H	1.77	0.50
1:SS:32:THR:HG22	1:SS:51:HIS:H	1.77	0.49
2:SA:59:A:C5	2:SA:331:G:C2	3.00	0.49
2:SA:149:A:H2'	2:SA:150:U:C6	2.47	0.49
2:SA:792:A:C6	2:SA:794:A:C2	3.00	0.49
19:SC:27:GLU:H	19:SC:27:GLU:CD	2.20	0.49
26:LA:920:A:C6	26:LA:921:C:C4	2.99	0.49
26:LA:975:A:C2	26:LA:990:A:C8	3.00	0.49
26:LA:1532:A:C2	26:LA:1540:G:C2	2.99	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2186:G:C5	26:LA:2187:U:C5	3.00	0.49
26:LA:2543:G:C2	26:LA:2544:G:C4	2.99	0.49
2:SA:765:G:N3	2:SA:812:G:C6	2.80	0.49
21:SE:73:VAL:HG21	21:SE:143:LEU:HD13	1.94	0.49
26:LA:318:C:H2'	26:LA:319:G:H8	1.77	0.49
26:LA:415:A:C5	26:LA:416:U:C5	3.00	0.49
26:LA:452:G:C6	26:LA:453:A:C5	3.00	0.49
26:LA:538:A:C6	26:LA:539:G:C5	3.00	0.49
26:LA:640:C:H2'	26:LA:641:U:C5	2.48	0.49
26:LA:871:U:H4'	52:LO:68:PHE:CD1	2.46	0.49
26:LA:1441:G:C4	26:LA:1442:U:C5	3.00	0.49
26:LA:1535:A:H3'	26:LA:1536:C:C6	2.47	0.49
26:LA:1776:G:N2	26:LA:1789:A:H1'	2.26	0.49
26:LA:1830:C:H2'	26:LA:1831:G:C8	2.46	0.49
26:LA:2271:G:N7	26:LA:2272:U:C2	2.80	0.49
30:LW:12:VAL:HA	30:LW:69:VAL:HG12	1.93	0.49
47:LJ:18:ALA:HB1	47:LJ:68:PHE:CG	2.47	0.49
48:LN:92:LEU:HD23	48:LN:92:LEU:H	1.77	0.49
24:S3:21:GLY:HA3	24:S3:141:ASN:HD22	1.77	0.49
26:LA:10:A:C2	26:LA:2799:A:H3'	2.47	0.49
26:LA:536:G:C6	26:LA:537:G:C4	3.00	0.49
26:LA:557:C:H2'	26:LA:558:U:C6	2.47	0.49
26:LA:774:G:C5'	27:LD:47:ARG:HH22	2.23	0.49
26:LA:1159:U:H2'	26:LA:1160:G:C8	2.48	0.49
26:LA:1274:A:C5	26:LA:1302:A:C2	3.01	0.49
26:LA:2884:U:O4	26:LA:2886:A:C4	2.65	0.49
58:LT:47:VAL:HG13	58:LT:49:ILE:H	1.75	0.49
2:SA:286:C:H2'	2:SA:287:U:C6	2.48	0.49
2:SA:391:G:C5	2:SA:392:C:C5	3.01	0.49
2:SA:468:A:H3'	2:SA:469:C:C6	2.48	0.49
2:SA:474:G:C6	2:SA:475:C:C4	3.00	0.49
4:S2:29:C:H2'	4:S2:30:G:C8	2.48	0.49
12:SL:36:VAL:HG22	12:SL:52:CYS:HB3	1.95	0.49
26:LA:85:G:C5	26:LA:98:G:C6	3.00	0.49
26:LA:160:A:C5	26:LA:167:A:C2	3.01	0.49
26:LA:460:A:C2	26:LA:470:A:C5	3.00	0.49
26:LA:747:U:C5	26:LA:2613:U:C4	2.99	0.49
26:LA:952:G:C6	26:LA:953:G:C5	3.01	0.49
26:LA:1605:C:C5	26:LA:1606:C:C4	3.00	0.49
26:LA:1776:G:C4	26:LA:1777:U:C5	3.00	0.49
44:LF:119:ILE:HD12	44:LF:187:VAL:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SA:1051:C:C2	2:SA:1052:U:C5	3.00	0.49
2:SA:1148:U:C5	2:SA:1149:C:C4	3.00	0.49
2:SA:1309:G:C2	2:SA:1310:G:C4	3.01	0.49
25:LB:5:U:O2'	25:LB:6:G:H5'	2.13	0.49
26:LA:118:A:C8	26:LA:119:A:C8	3.01	0.49
26:LA:120:U:C5	26:LA:149:A:C2	3.00	0.49
26:LA:186:G:C2	26:LA:211:C:C2	3.01	0.49
26:LA:1524:G:C6	26:LA:1525:A:C5	3.00	0.49
26:LA:2254:C:H5	26:LA:2255:G:C4	2.30	0.49
43:L7:14:CYS:HG	43:L7:27:CYS:HG	1.60	0.49
53:LP:21:PHE:CZ	53:LP:43:GLU:HB3	2.47	0.49
57:LS:98:ALA:HA	57:LS:105:PHE:HB2	1.93	0.49
2:SA:1527:U:C4	2:SA:1528:U:C4	3.01	0.49
10:SJ:53:ILE:HG21	10:SJ:63:ASP:HB3	1.94	0.49
26:LA:126:A:C8	41:L5:18:PHE:CZ	3.00	0.49
26:LA:384:A:C5	26:LA:385:C:C5	3.01	0.49
26:LA:491:G:C6	26:LA:492:A:C4	3.01	0.49
26:LA:1893:C:C5	26:LA:1894:C:C5	3.00	0.49
26:LA:2841:C:H2'	26:LA:2842:G:C8	2.47	0.49
2:SA:329:A:C5	2:SA:332:G:C6	3.01	0.49
7:SG:159:ARG:O	7:SG:163:HIS:HB2	2.12	0.49
25:LB:75:G:H21	31:LX:88:HIS:CE1	2.30	0.49
26:LA:223:A:C6	26:LA:422:A:C5	3.01	0.49
26:LA:297:G:C2	26:LA:342:A:C2	3.01	0.49
26:LA:371:A:H5'	26:LA:423:A:C2	2.48	0.49
26:LA:577:G:C2	26:LA:578:G:C5	3.00	0.49
26:LA:2722:G:C6	26:LA:2723:C:C4	3.01	0.49
2:SA:27:G:C5	2:SA:557:G:N2	2.81	0.49
2:SA:402:G:C5	2:SA:403:C:C5	3.01	0.49
2:SA:1319:A:C2	2:SA:1323:G:H1'	2.48	0.49
4:S2:2:G:C6	4:S2:73:A:C4	3.01	0.49
26:LA:622:G:C5	26:LA:623:C:C5	3.00	0.49
26:LA:2133:G:H3'	26:LA:2134:A:C4'	2.42	0.49
46:LH:51:PHE:HB2	46:LH:61:TRP:CD2	2.48	0.49
2:SA:148:G:C2	2:SA:149:A:C4	3.01	0.49
2:SA:540:G:C6	2:SA:541:G:C5	3.01	0.49
2:SA:1125:U:C5	2:SA:1127:G:C5	3.01	0.49
3:S1:47:C:C5	20:SD:49:ASP:O	2.66	0.49
4:S2:63:C:H2'	4:S2:64:G:C8	2.48	0.49
9:SI:4:GLN:HE21	9:SI:4:GLN:HA	1.78	0.49
26:LA:300:A:P	30:LW:81:ARG:HH12	2.35	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:536:G:O6	26:LA:537:G:C4	2.66	0.49
26:LA:738:G:N2	26:LA:759:G:C4	2.81	0.49
26:LA:910:A:C4	52:LO:13:HIS:CE1	3.01	0.49
26:LA:1370:C:H2'	26:LA:1371:G:C8	2.48	0.49
26:LA:2289:G:C6	26:LA:2290:G:C5	3.00	0.49
26:LA:2889:C:C4	26:LA:2890:G:C6	3.01	0.49
37:LC:44:VAL:HG21	37:LC:189:LEU:HD22	1.95	0.49
57:LS:46:TYR:CE1	57:LS:50:ARG:HD3	2.47	0.49
57:LS:63:ARG:HH21	57:LS:96:ASP:CG	2.21	0.49
2:SA:582:C:C2	2:SA:760:G:N1	2.81	0.49
2:SA:907:A:C2	2:SA:908:A:C4	3.01	0.49
2:SA:939:G:H2'	2:SA:940:C:C6	2.48	0.49
2:SA:1028:C:C5	2:SA:1029:U:C4	3.01	0.49
26:LA:757:G:H2'	26:LA:758:C:H5'	1.94	0.49
26:LA:1156:A:C8	57:LS:50:ARG:HB3	2.48	0.49
26:LA:1445:G:C6	26:LA:1446:C:C4	3.01	0.49
26:LA:2686:G:C5	26:LA:2687:U:C4	3.01	0.49
26:LA:2821:A:H5"	38:LE:115:GLY:HA3	1.94	0.49
2:SA:1501:C:C4	2:SA:1504:G:C6	3.02	0.48
20:SD:16:THR:HG23	20:SD:17:ASP:H	1.77	0.48
25:LB:39:A:H2'	25:LB:40:U:C6	2.48	0.48
26:LA:64:A:H2'	26:LA:65:U:C6	2.48	0.48
26:LA:799:G:C6	26:LA:800:A:C6	3.01	0.48
26:LA:1186:G:C6	26:LA:1187:G:C4	3.00	0.48
26:LA:1444:G:H2'	26:LA:1445:G:C8	2.47	0.48
26:LA:2538:C:H2'	26:LA:2539:C:C6	2.48	0.48
26:LA:2822:G:P	38:LE:117:GLY:H	2.36	0.48
37:LC:226:GLN:H	37:LC:226:GLN:CD	2.19	0.48
2:SA:59:A:C5	2:SA:354:G:C6	3.00	0.48
24:S3:545:PRO:HD3	24:S3:582:TYR:HB3	1.94	0.48
26:LA:792:A:C6	26:LA:2440:C:C5	3.01	0.48
26:LA:1989:G:C8	26:LA:1990:C:C5	3.01	0.48
26:LA:2499:C:C5	26:LA:2500:U:C5	3.01	0.48
26:LA:2677:G:C2	26:LA:2678:C:C2	3.01	0.48
50:LL:15:TRP:CE2	50:LL:53:TYR:CD2	3.02	0.48
2:SA:373:A:C2	2:SA:482:A:C6	3.02	0.48
2:SA:399:G:C5	2:SA:400:C:C4	3.01	0.48
26:LA:529:A:C8	26:LA:2023:C:C4	3.01	0.48
26:LA:608:A:C6	26:LA:609:A:C6	3.01	0.48
26:LA:1862:G:C2	26:LA:1863:G:C5	3.01	0.48
2:SA:665:A:H2'	2:SA:732:C:O2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SA:1270:G:C6	2:SA:1271:A:C5	3.02	0.48
13:SM:32:ILE:HD13	13:SM:62:PHE:CE1	2.48	0.48
26:LA:101:A:H1'	26:LA:102:U:H5'	1.94	0.48
26:LA:311:A:C6	26:LA:328:U:C4	3.01	0.48
26:LA:778:G:C6	26:LA:779:U:N3	2.81	0.48
26:LA:1281:G:C6	26:LA:1282:U:O4	2.66	0.48
26:LA:1570:A:C2	26:LA:1571:A:C5	3.02	0.48
26:LA:1632:A:N7	26:LA:1633:G:C4	2.81	0.48
26:LA:1906:G:C8	26:LA:1929:G:C6	3.01	0.48
26:LA:1924:C:C4	26:LA:1925:C:C4	3.01	0.48
26:LA:2318:G:C6	26:LA:2319:G:C6	3.01	0.48
26:LA:2488:G:C5	26:LA:2489:U:C5	3.02	0.48
34:L0:7:ARG:NH2	34:L0:56:LEU:H	2.11	0.48
2:SA:747:A:C5	2:SA:748:G:N7	2.81	0.48
2:SA:898:G:N2	2:SA:902:G:C5	2.82	0.48
2:SA:978:A:C6	2:SA:1318:A:C5	3.02	0.48
4:S2:75:C:C4	4:S2:76:C:N3	2.81	0.48
21:SE:65:LYS:HA	21:SE:68:ARG:HE	1.79	0.48
25:LB:30:C:H3'	25:LB:31:C:C6	2.48	0.48
26:LA:124:G:C6	41:L5:19:ARG:NH1	2.81	0.48
26:LA:410:G:H5"	26:LA:411:G:H5'	1.94	0.48
26:LA:623:C:C2	26:LA:624:C:C5	3.01	0.48
26:LA:785:G:C4	26:LA:786:C:C5	3.02	0.48
26:LA:846:U:C2	26:LA:847:U:C5	3.02	0.48
26:LA:945:A:H1'	26:LA:2448:A:H2	1.78	0.48
26:LA:1589:U:H2'	26:LA:1590:A:C8	2.49	0.48
26:LA:1815:A:C5	26:LA:1817:G:C6	3.01	0.48
26:LA:1899:A:C2	26:LA:1903:G:C6	3.02	0.48
26:LA:2293:G:C2	26:LA:2340:A:C2	3.01	0.48
44:LF:88:ARG:CB	44:LF:89:PRO:CD	2.92	0.48
57:LS:60:TRP:CH2	57:LS:93:ILE:HB	2.48	0.48
2:SA:78:A:C8	2:SA:78:A:O5'	2.66	0.48
4:S2:43:G:H2'	4:S2:44:A:C8	2.48	0.48
18:SB:26:MET:SD	18:SB:188:THR:HA	2.54	0.48
25:LB:53:A:C2	25:LB:54:G:H1'	2.49	0.48
26:LA:42:A:C2	26:LA:438:G:C2	3.02	0.48
26:LA:85:G:O6	26:LA:86:G:C6	2.66	0.48
26:LA:222:A:C6	26:LA:224:U:C2	3.02	0.48
26:LA:301:G:C6	26:LA:317:G:C5	3.02	0.48
26:LA:322:A:OP2	44:LF:163:ASN:HB2	2.13	0.48
26:LA:1177:G:C5	26:LA:1178:C:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1378:A:C2	26:LA:1380:G:C8	3.02	0.48
26:LA:2502:G:H3'	26:LA:2503:A:C5'	2.43	0.48
26:LA:2828:G:H2'	26:LA:2829:A:H8	1.78	0.48
2:SA:232:G:C5	2:SA:233:C:C5	3.02	0.48
2:SA:363:A:C5	2:SA:364:A:C5	3.02	0.48
2:SA:469:C:C4	2:SA:470:C:C4	3.01	0.48
2:SA:754:C:H5'	15:SO:71:ARG:HH22	1.79	0.48
2:SA:1014:A:C6	2:SA:1015:G:C6	3.01	0.48
20:SD:64:TYR:CE2	20:SD:93:LEU:HB3	2.49	0.48
24:S3:11:ASN:HD21	24:S3:381:ILE:CD1	2.27	0.48
26:LA:98:G:N7	26:LA:99:U:C5	2.81	0.48
26:LA:948:C:H1'	26:LA:984:A:C6	2.48	0.48
26:LA:1927:A:N1	26:LA:1928:A:C2	2.82	0.48
26:LA:2134:A:C6	26:LA:2135:A:C5	3.02	0.48
26:LA:2661:G:H2'	26:LA:2662:A:C8	2.49	0.48
26:LA:2820:A:C5	53:LP:4:ARG:HD3	2.49	0.48
2:SA:89:U:C6	2:SA:89:U:H3'	2.48	0.48
2:SA:255:G:C6	2:SA:256:U:C4	3.02	0.48
2:SA:754:C:P	15:SO:71:ARG:HH12	2.36	0.48
2:SA:989:U:H2'	2:SA:990:C:C6	2.49	0.48
9:SI:20:ILE:HG22	9:SI:62:LEU:HG	1.96	0.48
11:SK:78:ILE:CD1	11:SK:81:LEU:HD21	2.44	0.48
20:SD:183:ARG:HH12	20:SD:189:ASP:CG	2.21	0.48
25:LB:21:G:C5	25:LB:22:U:C5	3.01	0.48
26:LA:142:A:C6	26:LA:143:C:C4	3.02	0.48
26:LA:763:G:N3	26:LA:765:C:C2	2.82	0.48
26:LA:764:A:C2	26:LA:781:A:C2	3.02	0.48
26:LA:856:G:H2'	26:LA:857:G:C8	2.49	0.48
26:LA:917:A:C6	26:LA:918:A:C5	3.02	0.48
26:LA:2101:A:H2'	26:LA:2102:G:C8	2.49	0.48
26:LA:2107:G:C6	26:LA:2108:A:C6	3.02	0.48
26:LA:2450:A:C5	26:LA:2451:A:C2	3.02	0.48
26:LA:2795:C:C2	26:LA:2802:G:C2	3.01	0.48
31:LX:2:PHE:HB2	31:LX:61:LEU:CD1	2.44	0.48
57:LS:60:TRP:CZ2	57:LS:93:ILE:HD13	2.48	0.48
2:SA:652:U:C5	2:SA:752:G:C4	3.02	0.48
2:SA:1058:G:C5	2:SA:1059:C:C5	3.01	0.48
2:SA:1283:U:H2'	2:SA:1284:C:C6	2.48	0.48
25:LB:42:C:C5	25:LB:43:C:C6	3.02	0.48
26:LA:408:G:C2	26:LA:409:G:C4	3.01	0.48
26:LA:1494:A:C6	26:LA:1495:A:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1505:A:H2'	26:LA:1506:U:H6	1.79	0.48
26:LA:2391:G:N2	26:LA:2424:C:C2	2.81	0.48
2:SA:414:A:C5	2:SA:431:A:C2	3.02	0.48
2:SA:887:G:H2'	2:SA:888:G:H5'	1.96	0.48
2:SA:1218:C:H2'	2:SA:1219:A:C8	2.48	0.48
2:SA:1382:C:H2'	2:SA:1383:C:C6	2.49	0.48
3:S1:30:U:H4'	3:S1:31:U:OP2	2.13	0.48
25:LB:110:C:C4	25:LB:111:U:C4	3.02	0.48
26:LA:103:A:C5	26:LA:104:A:C8	3.01	0.48
26:LA:492:A:C6	26:LA:493:G:C4	3.01	0.48
26:LA:577:G:N1	26:LA:578:G:C6	2.81	0.48
26:LA:756:A:C2	26:LA:757:G:C4	3.02	0.48
26:LA:782:A:H5'	26:LA:783:A:C2	2.49	0.48
26:LA:1422:G:C2	26:LA:1423:G:C4	3.02	0.48
26:LA:1676:A:H2'	26:LA:1677:A:H4'	1.94	0.48
26:LA:1787:A:C2	26:LA:1788:C:C2	3.02	0.48
26:LA:2055:C:H5"	26:LA:2056:G:H5'	1.96	0.48
26:LA:2373:G:C2	26:LA:2381:A:C2	3.01	0.48
2:SA:312:C:H2'	2:SA:313:A:C8	2.49	0.47
4:S2:38:A:C2	4:S2:39:A:C4	3.02	0.47
18:SB:100:LEU:CD2	18:SB:175:ALA:HA	2.44	0.47
24:S3:184:LEU:HD21	24:S3:217:TRP:HB3	1.95	0.47
26:LA:838:C:H2'	26:LA:839:U:C6	2.49	0.47
26:LA:1654:A:H4'	38:LE:118:PHE:CE2	2.48	0.47
26:LA:1770:G:C6	26:LA:1983:G:C5	3.02	0.47
26:LA:1965:C:C6	26:LA:1966:A:H3'	2.49	0.47
26:LA:2060:A:OP1	44:LF:64:GLY:HA2	2.14	0.47
26:LA:2119:A:C6	26:LA:2171:A:C6	3.02	0.47
26:LA:2271:G:C8	26:LA:2272:U:C2	3.02	0.47
26:LA:2290:G:C4	26:LA:2291:U:C5	3.01	0.47
26:LA:2544:G:H2'	26:LA:2545:G:O4'	2.14	0.47
26:LA:2899:A:H2'	26:LA:2900:A:C8	2.49	0.47
39:L3:37:HIS:CD2	39:L3:43:THR:HG22	2.48	0.47
51:LI:119:ASN:HB3	51:LI:131:SER:H	1.79	0.47
2:SA:404:G:C6	2:SA:405:U:C4	3.02	0.47
2:SA:679:C:C2	2:SA:680:C:C5	3.01	0.47
2:SA:771:G:C5	2:SA:772:U:C4	3.02	0.47
2:SA:778:G:C2	2:SA:779:C:C2	3.02	0.47
20:SD:167:PRO:HG2	20:SD:170:LEU:HG	1.96	0.47
25:LB:18:G:C2	25:LB:67:G:C6	3.02	0.47
26:LA:190:A:C5	26:LA:207:A:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1668:A:C5	26:LA:1674:G:C6	3.01	0.47
26:LA:1900:A:C8	26:LA:1970:A:H2'	2.49	0.47
26:LA:2465:C:H2'	26:LA:2466:C:H6	1.78	0.47
32:LY:45:HIS:CE1	32:LY:49:ASN:CB	2.97	0.47
37:LC:11:ILE:CG2	37:LC:220:ALA:HB2	2.45	0.47
10:SJ:100:ILE:H	10:SJ:100:ILE:CD1	2.27	0.47
26:LA:6:A:H2'	26:LA:7:G:C8	2.49	0.47
26:LA:54:G:H2'	26:LA:55:G:O4'	2.15	0.47
26:LA:168:G:C6	26:LA:169:G:C5	3.03	0.47
26:LA:197:A:C5	26:LA:198:C:C6	3.02	0.47
26:LA:866:A:C6	26:LA:914:G:C8	3.03	0.47
26:LA:1139:G:C6	26:LA:1140:C:C5	3.01	0.47
26:LA:1216:G:C2	26:LA:1234:U:O2	2.66	0.47
26:LA:1343:G:H2'	26:LA:1343:G:N3	2.30	0.47
26:LA:1441:G:C6	26:LA:1442:U:C4	3.02	0.47
26:LA:1675:C:H1'	26:LA:1676:A:N6	2.28	0.47
26:LA:2413:G:C6	26:LA:2414:G:C5	3.03	0.47
26:LA:2663:G:C6	26:LA:2664:G:C5	3.02	0.47
26:LA:2704:C:C5	26:LA:2705:A:N7	2.82	0.47
54:LM:21:CYS:SG	54:LM:39:ILE:HG23	2.53	0.47
2:SA:118:U:C4	2:SA:288:A:C2	3.02	0.47
2:SA:642:A:C4	2:SA:643:C:C6	3.03	0.47
2:SA:765:G:O4'	2:SA:812:G:C2	2.68	0.47
2:SA:872:A:C6	2:SA:874:G:C4	3.02	0.47
17:SQ:14:ASP:HA	17:SQ:20:ILE:HD12	1.96	0.47
23:SR:70:THR:N	23:SR:73:HIS:CE1	2.82	0.47
25:LB:109:A:C2	25:LB:110:C:N3	2.82	0.47
26:LA:265:A:C8	26:LA:428:A:C6	3.03	0.47
26:LA:643:A:N7	26:LA:644:A:C5	2.82	0.47
26:LA:877:A:H3'	26:LA:878:A:C8	2.49	0.47
26:LA:1783:A:H2	26:LA:2587:A:N7	2.11	0.47
26:LA:2119:A:C2	26:LA:2170:A:C5	3.02	0.47
26:LA:2816:G:O4'	39:L3:40:HIS:CE1	2.67	0.47
49:LK:79:LEU:HD13	49:LK:135:MET:HE3	1.95	0.47
2:SA:46:G:C5	2:SA:366:A:H2	2.32	0.47
2:SA:153:C:C5	2:SA:154:U:C4	3.02	0.47
2:SA:153:C:C5	2:SA:154:U:C5	3.02	0.47
2:SA:521:G:N1	2:SA:522:C:C4	2.83	0.47
2:SA:1063:C:H3'	2:SA:1064:G:C8	2.49	0.47
12:SL:93:ARG:HB2	12:SL:94:TYR:CE1	2.49	0.47
26:LA:14:A:C6	26:LA:526:A:N1	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:662:G:H5"	48:LN:16:GLY:HA2	1.96	0.47
26:LA:757:G:H2'	26:LA:758:C:C5'	2.44	0.47
26:LA:952:G:C6	26:LA:966:G:C6	3.02	0.47
26:LA:1091:G:H1'	43:L7:12:ARG:HE	1.80	0.47
26:LA:1305:C:C4	26:LA:1306:C:C5	3.03	0.47
26:LA:1495:A:C6	26:LA:1496:A:C5	3.02	0.47
26:LA:1677:A:H2'	26:LA:1678:A:C5	2.49	0.47
26:LA:1723:G:H3'	26:LA:1724:G:H8	1.80	0.47
26:LA:2064:C:H1'	26:LA:2450:A:C6	2.49	0.47
26:LA:2488:G:C6	26:LA:2489:U:C4	3.02	0.47
26:LA:2544:G:C2	26:LA:2545:G:C4	3.02	0.47
26:LA:2761:A:C6	26:LA:2762:C:C5	3.02	0.47
2:SA:53:A:C2	2:SA:54:C:H1'	2.50	0.47
2:SA:59:A:C5	2:SA:354:G:C5	3.02	0.47
2:SA:152:A:C8	2:SA:153:C:C5	3.03	0.47
2:SA:621:A:C6	2:SA:622:A:C5	3.02	0.47
2:SA:713:G:H3'	2:SA:713:G:C8	2.50	0.47
2:SA:1108:G:H2'	2:SA:1109:C:C6	2.50	0.47
2:SA:1439:G:C2	2:SA:1463:U:O2	2.67	0.47
24:S3:119:GLN:OE1	24:S3:121:GLN:HB3	2.14	0.47
26:LA:541:A:C2	26:LA:553:G:C2	3.02	0.47
26:LA:1024:G:C6	26:LA:1025:G:C6	3.03	0.47
26:LA:1456:G:C5	26:LA:1457:U:C4	3.02	0.47
26:LA:1965:C:N3	26:LA:1966:A:H2'	2.29	0.47
26:LA:2283:C:C2	26:LA:2389:G:C2	3.03	0.47
26:LA:2519:U:O4	26:LA:2542:A:C4	2.68	0.47
26:LA:2630:G:C4	26:LA:2894:G:C6	3.02	0.47
26:LA:2815:C:O2	39:L3:40:HIS:HE1	1.97	0.47
2:SA:126:G:C2	2:SA:236:A:C2	3.03	0.47
2:SA:241:G:C2	2:SA:242:G:C5	3.03	0.47
2:SA:769:G:C5	2:SA:770:C:C5	3.03	0.47
2:SA:858:G:O6	2:SA:869:G:C8	2.68	0.47
2:SA:886:G:C6	2:SA:887:G:C4	3.03	0.47
2:SA:892:A:C4	2:SA:907:A:C5	3.03	0.47
2:SA:907:A:C6	2:SA:908:A:C6	3.03	0.47
4:S2:19:G:C5	4:S2:58:A:C2	3.03	0.47
13:SM:115:ILE:HG23	13:SM:117:LYS:H	1.78	0.47
14:SN:30:ILE:HD12	14:SN:30:ILE:HA	1.86	0.47
20:SD:101:VAL:HG23	20:SD:113:ALA:HB1	1.97	0.47
26:LA:126:A:C8	41:L5:18:PHE:CE1	3.03	0.47
26:LA:324:A:C6	26:LA:325:G:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:524:G:H2'	26:LA:525:U:H6	1.80	0.47
26:LA:604:G:O6	26:LA:605:G:C6	2.67	0.47
26:LA:675:A:H2'	26:LA:676:A:C8	2.49	0.47
26:LA:831:G:C5	26:LA:832:U:C5	3.02	0.47
26:LA:900:A:N6	26:LA:901:C:C4	2.82	0.47
26:LA:969:G:C5	26:LA:970:U:C5	3.03	0.47
26:LA:1036:G:C6	26:LA:1120:G:C6	3.02	0.47
26:LA:1208:C:C2	26:LA:1239:G:C2	3.03	0.47
26:LA:1361:G:C6	26:LA:1371:G:C2	3.03	0.47
26:LA:1469:A:H2'	26:LA:1470:A:C8	2.50	0.47
26:LA:1850:G:N7	26:LA:1851:U:C4	2.82	0.47
26:LA:2092:U:H4'	26:LA:2093:G:H5'	1.96	0.47
26:LA:2121:G:C5	26:LA:2122:U:C5	3.02	0.47
26:LA:2123:G:C2	26:LA:2176:A:H1'	2.50	0.47
26:LA:2142:A:C8	26:LA:2143:C:C5	3.03	0.47
26:LA:2453:A:C2	26:LA:2454:G:C5	3.03	0.47
26:LA:2510:C:C4	26:LA:2511:U:C4	3.02	0.47
26:LA:2823:A:OP2	38:LE:118:PHE:CD2	2.68	0.47
30:LW:85:ARG:HE	30:LW:86:PHE:N	2.10	0.47
38:LE:186:LEU:HD21	56:LR:3:ILE:HG21	1.96	0.47
2:SA:507:C:C2	2:SA:508:U:H5	2.33	0.47
3:S1:54:U:H3'	3:S1:55:A:C5'	2.44	0.47
18:SB:59:ILE:HD12	18:SB:183:PHE:CZ	2.49	0.47
25:LB:47:C:C5	25:LB:48:U:C5	3.03	0.47
26:LA:10:A:C4	26:LA:2799:A:C8	3.03	0.47
26:LA:45:G:H5'	26:LA:46:G:C5'	2.44	0.47
26:LA:1040:A:C2	26:LA:1116:G:C2	3.03	0.47
26:LA:1107:G:H4'	47:LJ:78:PRO:HA	1.96	0.47
26:LA:1419:A:N6	26:LA:1494:A:H62	2.13	0.47
26:LA:1530:G:C2	26:LA:1542:U:O2	2.67	0.47
26:LA:1620:G:C5	26:LA:1621:U:C5	3.03	0.47
26:LA:1628:G:C5	26:LA:1629:U:C4	3.02	0.47
26:LA:1789:A:H2'	26:LA:1790:C:C6	2.50	0.47
26:LA:1952:A:C5	26:LA:1953:A:N1	2.82	0.47
26:LA:2903:U:C3'	26:LA:2904:U:H5"	2.44	0.47
54:LM:12:ASP:CG	54:LM:14:SER:H	2.22	0.47
2:SA:1382:C:H2'	2:SA:1383:C:H6	1.80	0.47
2:SA:1449:C:C2	2:SA:1455:G:C2	3.03	0.47
21:SE:73:VAL:CG2	21:SE:143:LEU:HD13	2.45	0.47
25:LB:6:G:H1	25:LB:114:C:H42	1.62	0.47
26:LA:406:G:C2	26:LA:407:G:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:715:A:H2'	26:LA:716:A:O4'	2.14	0.47
26:LA:846:U:C2	26:LA:847:U:C6	3.03	0.47
26:LA:857:G:C6	26:LA:858:G:C6	3.03	0.47
26:LA:1270:C:H5"	26:LA:1271:G:H5'	1.96	0.47
26:LA:1331:G:C6	26:LA:1333:G:C5	3.02	0.47
26:LA:1906:G:N1	26:LA:1907:G:C5	2.83	0.47
26:LA:2536:G:C6	26:LA:2537:U:C4	3.03	0.47
29:LV:12:ARG:HE	29:LV:35:ALA:HB2	1.80	0.47
48:LN:48:ARG:HD3	48:LN:48:ARG:H	1.80	0.47
2:SA:253:A:N6	2:SA:254:G:C6	2.83	0.47
2:SA:313:A:C5	2:SA:314:C:C5	3.03	0.47
2:SA:363:A:C4	12:SL:26:CYS:SG	3.07	0.47
2:SA:556:C:H2'	2:SA:557:G:O4'	2.15	0.47
2:SA:777:A:C6	2:SA:778:G:C4	3.03	0.47
2:SA:1063:C:C4	2:SA:1064:G:C5	3.03	0.47
26:LA:123:G:N1	26:LA:124:G:C4	2.83	0.47
26:LA:244:A:C2	26:LA:255:A:C4	3.03	0.47
26:LA:593:U:H2'	26:LA:594:U:C6	2.49	0.47
26:LA:1433:A:H2'	26:LA:1434:A:H1'	1.97	0.47
26:LA:2239:G:C6	26:LA:2240:U:C5	3.03	0.47
26:LA:2314:A:C6	26:LA:2315:G:C5	3.03	0.47
26:LA:2336:A:H3'	26:LA:2337:G:H8	1.81	0.47
26:LA:2540:C:C4	26:LA:2541:A:C5	3.03	0.47
2:SA:1012:A:N6	2:SA:1013:G:C6	2.83	0.46
2:SA:1288:A:H2'	2:SA:1289:A:C8	2.50	0.46
9:SI:20:ILE:HG22	9:SI:62:LEU:CG	2.45	0.46
23:SR:70:THR:HG22	23:SR:73:HIS:HE1	1.81	0.46
26:LA:627:A:C4	26:LA:637:A:C5	3.03	0.46
26:LA:765:C:C4	26:LA:766:U:C5	3.03	0.46
26:LA:868:U:C4	26:LA:869:G:N7	2.84	0.46
26:LA:1247:A:C4	26:LA:1249:U:C5	3.02	0.46
26:LA:2838:G:C6	26:LA:2839:G:C5	3.03	0.46
52:LO:111:GLU:CD	52:LO:111:GLU:N	2.73	0.46
56:LR:30:TRP:CE2	56:LR:32:VAL:HA	2.49	0.46
2:SA:18:C:H2'	2:SA:19:A:O4'	2.15	0.46
2:SA:158:G:C4	2:SA:159:G:C8	3.02	0.46
2:SA:374:A:C5	2:SA:375:U:C5	3.03	0.46
2:SA:382:A:H2'	2:SA:383:A:C8	2.49	0.46
2:SA:1142:G:C5	2:SA:1143:G:H1'	2.50	0.46
3:S1:59:A:C2	20:SD:24:VAL:HA	2.50	0.46
16:SP:51:ARG:C	16:SP:52:LEU:HG	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:346:A:N1	26:LA:347:A:C5	2.83	0.46
26:LA:639:U:C4	26:LA:640:C:N4	2.83	0.46
26:LA:684:G:N1	26:LA:774:G:C2	2.83	0.46
26:LA:875:G:C5	26:LA:876:C:C4	3.04	0.46
26:LA:1916:A:C6	26:LA:1917:U:C6	3.03	0.46
26:LA:2007:U:H2'	26:LA:2008:C:C6	2.50	0.46
26:LA:2024:G:C6	26:LA:2025:C:C4	3.03	0.46
26:LA:2071:A:C2	26:LA:2072:C:C2	3.03	0.46
26:LA:2133:G:OP1	26:LA:2134:A:H1'	2.15	0.46
26:LA:2824:C:C4	26:LA:2825:G:C5	3.03	0.46
2:SA:76:G:C6	2:SA:77:A:C4	3.04	0.46
2:SA:537:G:C2	2:SA:538:G:C5	3.04	0.46
2:SA:715:A:H2'	2:SA:716:A:C8	2.50	0.46
2:SA:1077:G:N2	2:SA:1081:A:C4	2.83	0.46
2:SA:1157:A:C4	2:SA:1181:G:C6	3.03	0.46
26:LA:316:C:O5'	26:LA:316:C:H6	1.98	0.46
26:LA:432:A:C5	26:LA:433:C:C5	3.04	0.46
26:LA:569:U:O4	26:LA:570:G:C5	2.68	0.46
26:LA:974:G:C4	26:LA:1186:G:C2	3.03	0.46
26:LA:1036:G:C2	26:LA:1120:G:C4	3.03	0.46
26:LA:1179:G:C6	26:LA:1180:U:C4	3.03	0.46
26:LA:1268:A:N1	26:LA:2013:A:C8	2.84	0.46
26:LA:1383:A:C8	26:LA:1384:A:C4	3.03	0.46
26:LA:1635:A:C6	26:LA:1636:U:C2	3.04	0.46
26:LA:2273:A:C2	26:LA:2274:A:C5	3.03	0.46
26:LA:2665:A:H2'	26:LA:2666:C:H5'	1.98	0.46
26:LA:2835:A:C6	26:LA:2879:A:C4	3.03	0.46
2:SA:538:G:H2'	2:SA:539:A:H8	1.80	0.46
2:SA:842:U:C2	2:SA:846:G:C2	3.04	0.46
2:SA:1147:C:H2'	2:SA:1148:U:C6	2.51	0.46
2:SA:1422:G:N2	2:SA:1423:G:C4	2.83	0.46
3:S1:52:U:H3'	3:S1:53:G:H5"	1.98	0.46
19:SC:155:ARG:HH21	19:SC:160:GLU:CD	2.23	0.46
24:S3:114:ALA:HA	24:S3:153:VAL:HG21	1.97	0.46
26:LA:38:A:C2	26:LA:442:G:C2	3.04	0.46
26:LA:217:A:H2'	26:LA:218:A:C8	2.51	0.46
26:LA:384:A:C6	26:LA:385:C:C4	3.03	0.46
26:LA:945:A:H1'	26:LA:2448:A:C2	2.49	0.46
26:LA:1284:A:H2'	26:LA:1285:A:C8	2.50	0.46
26:LA:1599:U:C4	26:LA:1600:C:C4	3.04	0.46
26:LA:1827:U:P	27:LD:220:ARG:HH21	2.37	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2571:U:C4	26:LA:2574:G:C8	3.03	0.46
26:LA:2803:G:C5	26:LA:2804:U:C5	3.03	0.46
46:LH:35:THR:C	46:LH:36:LEU:HD12	2.40	0.46
2:SA:790:A:O3'	2:SA:791:G:H4'	2.15	0.46
2:SA:885:G:C2	2:SA:913:A:N1	2.84	0.46
2:SA:1130:A:H5'	9:SI:19:PHE:CD1	2.50	0.46
2:SA:1133:G:N2	2:SA:1142:G:C4	2.83	0.46
2:SA:1513:A:C5	2:SA:1523:G:O6	2.69	0.46
4:S2:48:U:H3'	4:S2:48:U:H6	1.80	0.46
14:SN:31:SER:OG	14:SN:44:VAL:HG11	2.15	0.46
24:S3:647:GLU:HG2	24:S3:648:VAL:N	2.30	0.46
26:LA:311:A:C5	26:LA:328:U:C4	3.03	0.46
26:LA:374:A:C2	26:LA:401:A:C2	3.04	0.46
26:LA:422:A:C6	26:LA:423:A:C6	3.04	0.46
26:LA:819:A:N1	26:LA:820:A:C4	2.83	0.46
26:LA:1082:U:H2'	26:LA:1083:U:H5'	1.96	0.46
26:LA:1204:A:N1	26:LA:1241:A:C2	2.83	0.46
26:LA:1369:G:C5	26:LA:1370:C:C5	3.03	0.46
26:LA:1467:U:C4	26:LA:1468:U:C4	3.04	0.46
26:LA:1676:A:N6	26:LA:1677:A:C2	2.83	0.46
26:LA:2171:A:O2'	26:LA:2172:U:C5	2.62	0.46
2:SA:66:A:H4'	2:SA:173:U:C5	2.51	0.46
2:SA:253:A:C6	2:SA:254:G:C5	3.04	0.46
2:SA:507:C:C2	2:SA:508:U:C5	3.04	0.46
2:SA:584:G:C2	2:SA:585:G:C4	3.03	0.46
2:SA:704:A:C5	2:SA:705:G:C8	3.03	0.46
2:SA:993:G:C2	2:SA:1046:A:C2	3.04	0.46
24:S3:104:VAL:HG21	24:S3:321:PHE:CG	2.51	0.46
26:LA:930:G:H2'	26:LA:933:A:C2	2.50	0.46
26:LA:954:G:C6	26:LA:955:U:N3	2.84	0.46
26:LA:964:C:O2'	26:LA:2273:A:H1'	2.15	0.46
26:LA:1429:G:H1'	26:LA:1568:G:H1'	1.97	0.46
26:LA:1688:U:N3	26:LA:1698:A:C2	2.84	0.46
26:LA:2323:G:C8	26:LA:2324:U:C5	3.04	0.46
26:LA:2333:A:C2	26:LA:2335:A:C6	3.04	0.46
26:LA:2789:C:C2	26:LA:2893:A:C8	3.03	0.46
26:LA:2889:C:H2'	26:LA:2890:G:C8	2.51	0.46
37:LC:67:HIS:CD2	37:LC:184:LYS:HG2	2.50	0.46
2:SA:580:C:C5	2:SA:581:G:C5	3.03	0.46
2:SA:1254:A:C2	2:SA:1255:G:C4	3.04	0.46
26:LA:503:A:C6	26:LA:506:G:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1157:G:N3	26:LA:1158:C:C6	2.84	0.46
26:LA:1681:G:C4	26:LA:1762:A:C8	3.04	0.46
26:LA:1826:G:C6	26:LA:1827:U:C4	3.04	0.46
26:LA:2178:C:O2	26:LA:2179:C:C5	2.69	0.46
26:LA:2235:G:C6	26:LA:2236:U:C5	3.04	0.46
26:LA:2592:G:C5	26:LA:2593:U:C5	3.04	0.46
2:SA:714:G:C6	2:SA:715:A:C6	3.04	0.46
26:LA:399:U:O4	26:LA:400:G:C6	2.69	0.46
26:LA:836:G:C8	26:LA:837:C:C5	3.04	0.46
26:LA:1483:G:C6	26:LA:1484:U:C4	3.04	0.46
26:LA:1815:A:C6	26:LA:1817:G:O6	2.68	0.46
26:LA:1966:A:H1'	26:LA:2593:U:H5'	1.97	0.46
26:LA:2050:C:H1'	38:LE:161:MET:HE1	1.96	0.46
26:LA:2080:A:C2	26:LA:2241:A:C2	3.04	0.46
26:LA:2373:G:C6	26:LA:2374:C:C4	3.03	0.46
26:LA:2394:C:H5	26:LA:2395:C:C4	2.34	0.46
26:LA:2868:A:C6	26:LA:2869:G:C5	3.04	0.46
2:SA:13:U:C4	2:SA:916:U:O4	2.68	0.46
2:SA:250:A:H1'	2:SA:252:U:C2	2.51	0.46
2:SA:763:G:C4	2:SA:764:C:C5	3.03	0.46
2:SA:866:C:H2'	2:SA:867:G:O4'	2.16	0.46
25:LB:33:G:C6	25:LB:34:A:C5	3.04	0.46
26:LA:301:G:C6	26:LA:317:G:C6	3.04	0.46
26:LA:822:G:C4	26:LA:823:C:C5	3.03	0.46
26:LA:879:G:C6	26:LA:880:G:C4	3.03	0.46
26:LA:910:A:N7	52:LO:13:HIS:CD2	2.84	0.46
26:LA:1501:G:C2	26:LA:1502:A:C8	3.04	0.46
26:LA:1900:A:N7	26:LA:1970:A:C4	2.83	0.46
26:LA:2042:A:H4'	26:LA:2043:C:OP1	2.16	0.46
26:LA:2077:A:C8	26:LA:2435:A:C4	3.03	0.46
26:LA:2150:C:H4'	37:LC:3:LYS:HA	1.98	0.46
26:LA:2499:C:C4	26:LA:2500:U:C4	3.04	0.46
26:LA:2513:A:C5	26:LA:2574:G:C6	3.04	0.46
37:LC:34:ALA:HB1	37:LC:178:VAL:HG11	1.97	0.46
2:SA:97:G:C6	2:SA:98:A:H1'	2.50	0.46
2:SA:255:G:C5	2:SA:256:U:C4	3.04	0.46
2:SA:621:A:C6	2:SA:622:A:C6	3.04	0.46
2:SA:1350:A:C2	2:SA:1351:U:C2	3.04	0.46
2:SA:1431:A:C2	2:SA:1432:G:N2	2.84	0.46
19:SC:25:THR:HA	19:SC:28:PHE:HB2	1.98	0.46
24:S3:362:ILE:H	24:S3:362:ILE:CD1	2.25	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:S3:612:LEU:HD13	24:S3:686:TYR:HB3	1.97	0.46
26:LA:23:G:H2'	26:LA:24:G:C8	2.51	0.46
26:LA:828:U:H2'	26:LA:829:A:C8	2.51	0.46
26:LA:1301:A:H2'	26:LA:1301:A:N3	2.31	0.46
26:LA:1588:G:C5	26:LA:1589:U:C5	3.04	0.46
26:LA:1854:A:N6	26:LA:1888:G:C8	2.84	0.46
26:LA:1966:A:H1'	26:LA:2593:U:C5'	2.46	0.46
26:LA:2352:A:N1	32:LY:30:VAL:HG11	2.31	0.46
26:LA:2702:G:C5	26:LA:2703:C:C4	3.03	0.46
26:LA:2903:U:H3'	26:LA:2904:U:C5'	2.45	0.46
35:L1:46:MET:O	35:L1:50:VAL:HG22	2.15	0.46
36:L2:6:HIS:CD2	45:LG:62:GLN:HG3	2.51	0.46
2:SA:131:A:H2'	2:SA:132:C:H6	1.82	0.45
2:SA:477:C:H2'	2:SA:478:A:C8	2.50	0.45
2:SA:615:G:C6	2:SA:616:G:C5	3.04	0.45
11:SK:78:ILE:C	11:SK:78:ILE:HD12	2.41	0.45
22:SF:8:PHE:HB2	22:SF:86:ARG:O	2.16	0.45
24:S3:297:ILE:HB	24:S3:404:ILE:HG23	1.98	0.45
26:LA:98:G:N7	26:LA:99:U:C6	2.84	0.45
26:LA:452:G:C5	26:LA:453:A:N7	2.84	0.45
26:LA:545:U:C5	26:LA:550:C:C2	3.03	0.45
26:LA:572:A:N6	26:LA:2033:A:C6	2.85	0.45
26:LA:1392:A:C5	29:LV:19:LYS:HD2	2.52	0.45
26:LA:1727:C:C4	26:LA:1728:C:C4	3.03	0.45
26:LA:1924:C:C6	26:LA:1925:C:C5	3.03	0.45
26:LA:2123:G:N1	26:LA:2176:A:H1'	2.31	0.45
26:LA:2468:A:C2	26:LA:2481:G:N3	2.84	0.45
26:LA:2766:A:C6	26:LA:2767:C:C5	3.04	0.45
35:L1:19:HIS:CD2	35:L1:19:HIS:N	2.83	0.45
38:LE:106:LYS:HB2	38:LE:206:ALA:HB2	1.98	0.45
2:SA:9:G:C2	2:SA:26:A:C2	3.04	0.45
2:SA:55:A:C5	2:SA:56:U:C6	3.04	0.45
2:SA:798:U:C4	2:SA:799:G:N7	2.85	0.45
2:SA:1004:A:C2	2:SA:1026:G:N3	2.84	0.45
2:SA:1227:A:O2'	2:SA:1228:C:C6	2.69	0.45
2:SA:1322:C:H4'	2:SA:1323:G:OP1	2.17	0.45
4:S2:77:A:H1'	26:LA:2432:A:N3	2.31	0.45
26:LA:89:A:C6	26:LA:90:U:O4	2.69	0.45
26:LA:415:A:C5	26:LA:416:U:C4	3.04	0.45
26:LA:716:A:H2'	26:LA:717:C:H5'	1.98	0.45
26:LA:785:G:C2	26:LA:786:C:C2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:852:U:C4	26:LA:853:C:C4	3.04	0.45
26:LA:1057:A:H2'	26:LA:1057:A:N3	2.31	0.45
26:LA:1494:A:C6	26:LA:1495:A:C6	3.04	0.45
26:LA:1791:A:C8	26:LA:1792:G:C8	3.05	0.45
26:LA:1855:U:H2'	26:LA:1856:U:C6	2.51	0.45
26:LA:2016:U:C5	26:LA:2017:U:C4	3.03	0.45
26:LA:2543:G:C2	26:LA:2765:A:N7	2.84	0.45
26:LA:2640:G:C2	26:LA:2641:G:C8	3.04	0.45
26:LA:2644:G:N2	26:LA:2733:A:H62	2.13	0.45
26:LA:2711:A:C4	26:LA:2714:G:H1'	2.51	0.45
44:LF:84:THR:HG23	44:LF:85:PHE:CG	2.50	0.45
45:LG:11:VAL:CG1	45:LG:15:LEU:HD13	2.46	0.45
55:LQ:6:ALA:HB1	55:LQ:10:ARG:HH12	1.81	0.45
2:SA:151:A:C2	2:SA:152:A:H1'	2.51	0.45
2:SA:602:A:C5	2:SA:603:U:C4	3.05	0.45
2:SA:717:U:H4'	11:SK:118:ASN:HD22	1.81	0.45
2:SA:725:G:C2	2:SA:726:C:C6	3.04	0.45
2:SA:934:C:C4	2:SA:1345:U:C5	3.04	0.45
2:SA:949:A:C2	2:SA:1233:G:C2	3.05	0.45
2:SA:1022:A:C5	2:SA:1023:U:C5	3.05	0.45
2:SA:1261:A:C5	2:SA:1262:C:C5	3.04	0.45
2:SA:1379:G:C6	2:SA:1380:U:C4	3.05	0.45
12:SL:97:VAL:CG2	12:SL:100:ALA:HB3	2.46	0.45
26:LA:201:C:C4	26:LA:202:U:C5	3.04	0.45
26:LA:360:U:H2'	26:LA:361:G:O4'	2.17	0.45
26:LA:539:G:C6	26:LA:540:C:C4	3.04	0.45
26:LA:822:G:C6	26:LA:823:C:C4	3.04	0.45
26:LA:1169:A:C5	26:LA:1170:C:C4	3.05	0.45
26:LA:2150:C:C5	26:LA:2151:U:C4	3.04	0.45
26:LA:2162:G:H2'	26:LA:2163:A:H5'	1.97	0.45
26:LA:2194:U:C2	26:LA:2195:U:C6	3.04	0.45
26:LA:2869:G:C6	26:LA:2870:C:C4	3.04	0.45
47:LJ:27:ALA:HB3	47:LJ:80:LEU:HD22	1.97	0.45
2:SA:164:G:H3'	2:SA:165:G:H8	1.81	0.45
2:SA:550:G:C5	2:SA:551:U:C5	3.05	0.45
2:SA:1344:C:C2'	2:SA:1345:U:OP1	2.64	0.45
2:SA:1476:A:C5	2:SA:1477:U:C5	3.04	0.45
24:S3:695:GLN:NE2	24:S3:695:GLN:H	2.14	0.45
25:LB:35:C:H2'	25:LB:36:C:C6	2.51	0.45
26:LA:28:A:C4	26:LA:29:U:C5	3.04	0.45
26:LA:584:C:H2'	26:LA:585:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1048:A:C5	26:LA:1111:A:C4	3.04	0.45
26:LA:1557:C:H2'	26:LA:1558:C:C5	2.52	0.45
26:LA:2107:G:N1	26:LA:2108:A:C6	2.84	0.45
26:LA:2239:G:O6	26:LA:2240:U:C4	2.70	0.45
26:LA:2461:A:C2	26:LA:2462:C:C2	3.05	0.45
26:LA:2523:G:N3	26:LA:2765:A:C2	2.85	0.45
26:LA:2705:A:C6	26:LA:2706:A:C6	3.05	0.45
26:LA:2886:A:C4	26:LA:2887:A:C8	3.04	0.45
26:LA:2886:A:C6	26:LA:2887:A:C5	3.04	0.45
32:LY:30:VAL:HG22	32:LY:61:LYS:O	2.17	0.45
2:SA:109:A:C5	2:SA:326:G:C5	3.04	0.45
2:SA:128:G:H2'	2:SA:129:A:C8	2.52	0.45
2:SA:1141:C:C6	10:SJ:1:MET:HE1	2.51	0.45
25:LB:9:G:C2	25:LB:112:G:C5	3.04	0.45
26:LA:149:A:C2	26:LA:150:U:C2	3.04	0.45
26:LA:253:C:N4	26:LA:254:G:C5	2.85	0.45
26:LA:465:G:C2	26:LA:466:A:N1	2.85	0.45
26:LA:871:U:H4'	52:LO:68:PHE:CE1	2.52	0.45
26:LA:1262:A:C2	26:LA:1263:U:C2	3.04	0.45
26:LA:1532:A:N3	26:LA:1540:G:C2	2.84	0.45
26:LA:1680:U:C5	26:LA:1681:G:C5	3.04	0.45
26:LA:1839:G:C6	26:LA:1927:A:C5	3.04	0.45
2:SA:118:U:H2'	2:SA:119:A:H5"	1.98	0.45
2:SA:175:C:C2	2:SA:176:C:C6	3.05	0.45
2:SA:298:A:H2'	2:SA:299:G:O4'	2.16	0.45
2:SA:570:G:C6	2:SA:873:A:N1	2.85	0.45
2:SA:1083:U:C5	2:SA:1084:G:C6	3.05	0.45
2:SA:1134:G:H2'	2:SA:1135:U:H5'	1.98	0.45
2:SA:1153:G:C2	2:SA:1154:G:H1'	2.52	0.45
2:SA:1175:G:O6	2:SA:1176:A:C5	2.70	0.45
2:SA:1442:G:C6	2:SA:1443:C:C4	3.04	0.45
4:S2:4:G:C2	4:S2:5:G:C4	3.05	0.45
8:SH:85:TYR:N	8:SH:85:TYR:CD1	2.83	0.45
25:LB:75:G:H2'	25:LB:76:G:C8	2.52	0.45
26:LA:63:A:H2'	26:LA:64:A:C8	2.51	0.45
26:LA:513:A:C6	26:LA:514:A:C5	3.04	0.45
26:LA:1042:G:C6	26:LA:1043:C:C2	3.05	0.45
26:LA:1436:G:C6	26:LA:1437:C:C4	3.05	0.45
26:LA:1899:A:C2	26:LA:1902:C:N4	2.84	0.45
26:LA:2394:C:H2'	26:LA:2395:C:C6	2.51	0.45
26:LA:2663:G:H2'	26:LA:2664:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:LD:263:ASP:C	27:LD:265:PHE:H	2.24	0.45
46:LH:152:ARG:HB3	46:LH:153:PRO:HD2	1.98	0.45
2:SA:101:A:C6	2:SA:102:G:C5	3.04	0.45
2:SA:781:A:C6	2:SA:802:A:N3	2.84	0.45
2:SA:992:U:H1'	2:SA:993:G:C2	2.51	0.45
2:SA:1148:U:C4	2:SA:1149:C:C2	3.05	0.45
2:SA:1267:C:H41	2:SA:1327:C:C1'	2.30	0.45
3:S1:57:C:H42	20:SD:160:LEU:CD2	2.30	0.45
20:SD:64:TYR:CZ	20:SD:93:LEU:HB3	2.51	0.45
26:LA:661:A:C6	26:LA:662:G:C5	3.05	0.45
26:LA:1206:G:C6	26:LA:1207:C:C4	3.04	0.45
26:LA:1374:G:C6	26:LA:1375:U:C4	3.05	0.45
32:LY:40:ARG:NH1	32:LY:56:HIS:CE1	2.84	0.45
2:SA:272:C:H4'	2:SA:272:C:OP1	2.17	0.45
2:SA:1213:A:C5	2:SA:1215:G:C4	3.05	0.45
2:SA:1244:G:H2'	2:SA:1245:C:C6	2.52	0.45
21:SE:70:MET:HA	21:SE:70:MET:HE3	1.99	0.45
26:LA:7:G:H2'	26:LA:8:C:C6	2.52	0.45
26:LA:362:A:H5"	26:LA:362:A:C8	2.51	0.45
26:LA:721:A:C5	26:LA:722:A:N7	2.85	0.45
26:LA:875:G:C6	26:LA:876:C:C4	3.04	0.45
26:LA:910:A:C8	52:LO:13:HIS:CG	3.05	0.45
26:LA:1022:G:C5	26:LA:1140:C:C4	3.05	0.45
26:LA:1307:A:C6	26:LA:1308:A:C5	3.05	0.45
26:LA:1770:G:C2	26:LA:1983:G:C4	3.05	0.45
26:LA:2040:G:C5	26:LA:2041:U:C4	3.04	0.45
26:LA:2194:U:C2	26:LA:2195:U:C5	3.05	0.45
26:LA:2372:U:H3	26:LA:2381:A:H61	1.64	0.45
26:LA:2399:G:C4	26:LA:2418:A:C2	3.05	0.45
57:LS:50:ARG:N	57:LS:50:ARG:HH11	2.15	0.45
2:SA:293:G:C6	2:SA:294:U:C4	3.05	0.45
2:SA:363:A:C6	2:SA:364:A:C6	3.05	0.45
2:SA:541:G:C6	2:SA:542:G:C5	3.04	0.45
2:SA:1255:G:C6	2:SA:1279:G:N7	2.85	0.45
18:SB:70:GLY:CA	18:SB:163:ILE:HG22	2.47	0.45
21:SE:94:PHE:O	21:SE:124:ALA:HB3	2.17	0.45
26:LA:954:G:C6	26:LA:955:U:C4	3.05	0.45
26:LA:1028:A:C2	26:LA:1029:A:C6	3.05	0.45
26:LA:1165:A:H2'	26:LA:1166:G:C8	2.52	0.45
26:LA:1186:G:C6	26:LA:1187:G:C5	3.05	0.45
26:LA:1713:A:H1'	26:LA:1715:G:H4'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2020:A:C6	26:LA:2022:U:C2	3.04	0.45
26:LA:2090:A:C6	26:LA:2091:C:C4	3.05	0.45
26:LA:2236:U:C4	26:LA:2237:G:C5	3.05	0.45
26:LA:2513:A:C6	26:LA:2574:G:C6	3.05	0.45
26:LA:2834:G:H21	26:LA:2883:A:H62	1.64	0.45
38:LE:115:GLY:O	53:LP:3:HIS:CE1	2.70	0.45
50:LL:38:GLY:O	50:LL:40:HIS:N	2.50	0.45
1:SS:65:MET:HA	1:SS:73:PHE:CZ	2.52	0.45
2:SA:64:G:C8	2:SA:99:C:C5	3.05	0.45
2:SA:201:G:C6	2:SA:202:G:C4	3.05	0.45
2:SA:767:A:C6	2:SA:768:A:C5	3.05	0.45
18:SB:37:VAL:HG12	18:SB:38:HIS:N	2.30	0.45
21:SE:19:ARG:HB3	21:SE:32:PHE:CE2	2.52	0.45
26:LA:716:A:H2'	26:LA:717:C:C5'	2.47	0.45
26:LA:1107:G:C5	26:LA:1108:U:C4	3.04	0.45
26:LA:1115:G:C2	26:LA:1116:G:C4	3.05	0.45
26:LA:1318:U:H2'	26:LA:1319:C:C6	2.52	0.45
26:LA:1761:C:C2	26:LA:1762:A:C2	3.05	0.45
26:LA:2589:A:C2	26:LA:2606:C:N4	2.84	0.45
26:LA:2625:G:H2'	26:LA:2626:C:C6	2.52	0.45
26:LA:2657:A:C5	26:LA:2665:A:C2	3.05	0.45
26:LA:2702:G:C6	26:LA:2703:C:C4	3.05	0.45
32:LY:18:LYS:O	32:LY:19:ARG:HB2	2.16	0.45
32:LY:49:ASN:HD21	32:LY:81:ILE:N	2.15	0.45
51:LI:117:LEU:HD23	51:LI:131:SER:HB3	1.99	0.45
52:LO:14:LYS:HE2	52:LO:14:LYS:HA	1.98	0.45
2:SA:509:A:H3'	20:SD:46:ARG:HH21	1.82	0.44
2:SA:610:U:O2	2:SA:611:C:C5	2.70	0.44
2:SA:620:C:C2	2:SA:621:A:C8	3.05	0.44
2:SA:721:G:C5	2:SA:733:G:C2	3.05	0.44
2:SA:1313:U:C5	2:SA:1314:C:C5	3.04	0.44
2:SA:1416:G:C2	2:SA:1485:U:O2	2.70	0.44
19:SC:178:ARG:HH21	19:SC:207:LEU:HG	1.82	0.44
25:LB:69:G:C5	25:LB:70:C:C6	3.04	0.44
26:LA:973:A:C4	26:LA:1188:U:O4	2.70	0.44
26:LA:1218:G:C6	26:LA:1219:U:C4	3.05	0.44
26:LA:2040:G:H2'	26:LA:2041:U:C6	2.52	0.44
26:LA:2170:A:H2'	26:LA:2171:A:H5'	1.99	0.44
26:LA:2412:A:C6	26:LA:2413:G:C4	3.05	0.44
26:LA:2631:G:N1	26:LA:2632:A:C5	2.85	0.44
26:LA:2819:G:C6	26:LA:2821:A:C2	3.04	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L1:23:LEU:HG	35:L1:53:MET:HE3	1.98	0.44
38:LE:115:GLY:O	53:LP:3:HIS:HE1	2.00	0.44
1:SS:64:GLU:HA	36:L2:37:CYS:SG	2.57	0.44
1:SS:89:LYS:HD3	2:SA:958:A:OP2	2.17	0.44
2:SA:232:G:C5	2:SA:233:C:C6	3.06	0.44
2:SA:1256:A:H4'	2:SA:1258:G:C8	2.52	0.44
2:SA:1288:A:C2	2:SA:1289:A:C5	3.06	0.44
15:SO:16:ARG:HE	15:SO:17:ASP:CG	2.25	0.44
20:SD:154:VAL:HG13	20:SD:177:MET:HE1	1.99	0.44
26:LA:792:A:H1'	26:LA:793:A:H2	1.80	0.44
26:LA:812:C:H1'	26:LA:1250:G:C2	2.52	0.44
26:LA:873:C:N3	26:LA:905:A:C2	2.85	0.44
26:LA:1283:G:N2	26:LA:1286:A:C8	2.86	0.44
26:LA:1532:A:N1	26:LA:1533:C:C2	2.85	0.44
26:LA:1744:A:H2'	26:LA:1745:A:O4'	2.17	0.44
26:LA:1776:G:C2	26:LA:1777:U:C4	3.05	0.44
26:LA:1842:G:C4	26:LA:1901:A:C2	3.06	0.44
26:LA:2077:A:C4	26:LA:2435:A:C8	3.05	0.44
26:LA:2332:C:H1'	26:LA:2336:A:N7	2.32	0.44
26:LA:2653:U:H5	26:LA:2654:A:HO2'	1.62	0.44
26:LA:2657:A:C4	26:LA:2665:A:C6	3.05	0.44
2:SA:262:A:H2'	2:SA:263:A:C8	2.53	0.44
2:SA:947:G:H2'	2:SA:948:C:O4'	2.17	0.44
2:SA:1125:U:C2	10:SJ:42:LEU:HD21	2.53	0.44
2:SA:1434:A:C6	2:SA:1435:G:C6	3.06	0.44
24:S3:344:SER:HB3	24:S3:361:ARG:HE	1.83	0.44
25:LB:2:G:C6	25:LB:3:C:C4	3.05	0.44
26:LA:253:C:C4	26:LA:254:G:C5	3.06	0.44
26:LA:649:G:C6	26:LA:650:C:N3	2.85	0.44
26:LA:684:G:H5"	41:L5:16:HIS:HE1	1.82	0.44
26:LA:796:C:H2'	26:LA:797:G:H8	1.82	0.44
26:LA:1367:A:H2'	26:LA:1368:G:H5'	2.00	0.44
26:LA:1436:G:C6	26:LA:1437:C:C5	3.05	0.44
26:LA:1445:G:C5	26:LA:1446:C:C5	3.06	0.44
26:LA:1532:A:C2	26:LA:1533:C:C2	3.05	0.44
26:LA:1628:G:C6	26:LA:1629:U:C4	3.06	0.44
26:LA:2037:A:H2'	26:LA:2038:G:C8	2.53	0.44
26:LA:2331:G:H4'	32:LY:40:ARG:H	1.82	0.44
26:LA:2415:G:C4	26:LA:2416:C:C6	3.05	0.44
26:LA:2603:G:C5	26:LA:2604:U:C6	3.05	0.44
26:LA:2796:U:C2	26:LA:2798:U:N3	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2849:U:H4'	26:LA:2850:A:H5'	1.98	0.44
1:SS:33:TRP:CE2	2:SA:1014:A:C5	3.06	0.44
2:SA:260:G:C2	2:SA:261:U:C4	3.06	0.44
2:SA:265:G:C8	2:SA:267:C:C5	3.05	0.44
2:SA:359:G:C6	2:SA:360:G:C4	3.06	0.44
2:SA:658:C:H2'	2:SA:659:U:C6	2.53	0.44
2:SA:880:C:H2'	2:SA:881:G:C8	2.52	0.44
2:SA:881:G:C6	2:SA:882:C:C4	3.06	0.44
2:SA:1374:A:H2'	2:SA:1375:A:C8	2.52	0.44
16:SP:21:VAL:HG21	16:SP:60:TRP:CD1	2.52	0.44
20:SD:187:ARG:HA	20:SD:187:ARG:HE	1.83	0.44
21:SE:123:LEU:HD13	21:SE:124:ALA:N	2.23	0.44
24:S3:7:ALA:C	24:S3:9:TYR:H	2.25	0.44
25:LB:30:C:H1'	25:LB:57:A:H61	1.82	0.44
26:LA:61:C:C2	26:LA:94:A:C2	3.06	0.44
26:LA:222:A:C5	26:LA:224:U:C2	3.06	0.44
26:LA:432:A:C6	26:LA:433:C:C4	3.06	0.44
26:LA:495:G:C4	26:LA:496:G:C8	3.06	0.44
26:LA:559:G:H2'	26:LA:560:C:C6	2.53	0.44
26:LA:756:A:C6	26:LA:757:G:C5	3.06	0.44
26:LA:1057:A:C4	26:LA:1058:U:C5	3.05	0.44
26:LA:1087:G:C5	26:LA:1089:A:C4	3.05	0.44
26:LA:1166:G:C5	26:LA:1167:C:C5	3.05	0.44
26:LA:1277:G:C5	26:LA:1278:C:C5	3.06	0.44
26:LA:1469:A:C2	26:LA:1470:A:C4	3.05	0.44
26:LA:1955:U:C5	26:LA:2552:U:H1'	2.52	0.44
26:LA:2052:A:C4	26:LA:2053:G:C8	3.05	0.44
26:LA:2092:U:H4'	26:LA:2093:G:C5'	2.47	0.44
26:LA:2138:G:C6	26:LA:2154:A:N6	2.85	0.44
26:LA:2370:G:H2'	26:LA:2371:G:C8	2.52	0.44
26:LA:2437:G:C4	26:LA:2438:U:C5	3.06	0.44
26:LA:2700:A:C2	26:LA:2708:G:C2	3.05	0.44
26:LA:2829:A:C4	26:LA:2830:C:C6	3.06	0.44
55:LQ:64:TYR:CG	55:LQ:65:THR:N	2.85	0.44
2:SA:131:A:C2	2:SA:232:G:C4	3.06	0.44
2:SA:138:G:C5	2:SA:226:G:C2	3.06	0.44
2:SA:216:U:H1'	2:SA:465:A:C6	2.52	0.44
2:SA:579:A:C2	2:SA:580:C:C2	3.05	0.44
2:SA:683:G:C5	2:SA:684:U:C5	3.06	0.44
2:SA:931:C:H2'	2:SA:932:C:C6	2.53	0.44
7:SG:158:LEU:O	7:SG:158:LEU:HG	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:SJ:6:ILE:HG23	10:SJ:8:ILE:H	1.83	0.44
18:SB:20:ARG:HB2	18:SB:22:TRP:CZ3	2.52	0.44
18:SB:48:MET:O	18:SB:51:GLU:HB3	2.17	0.44
19:SC:46:LEU:HD12	19:SC:46:LEU:O	2.18	0.44
19:SC:68:HIS:HB2	19:SC:103:ALA:HB3	1.99	0.44
20:SD:36:ALA:HB3	20:SD:41:GLY:HA2	2.00	0.44
22:SF:90:MET:SD	23:SR:22:TYR:CE1	3.11	0.44
26:LA:477:A:C2	26:LA:478:A:C4	3.06	0.44
26:LA:974:G:C6	26:LA:1186:G:C5	3.06	0.44
26:LA:991:C:H1'	26:LA:1185:G:C2	2.53	0.44
26:LA:1069:A:C5	26:LA:1073:A:C2	3.05	0.44
26:LA:1414:C:C4	26:LA:1415:U:C5	3.06	0.44
26:LA:1513:U:H2'	26:LA:1514:G:C8	2.53	0.44
26:LA:1805:A:C2	26:LA:1806:C:C2	3.05	0.44
26:LA:1910:G:C6	26:LA:1911:U:N3	2.85	0.44
26:LA:2121:G:C5	26:LA:2122:U:C4	3.05	0.44
26:LA:2343:U:H2'	26:LA:2344:U:C6	2.53	0.44
26:LA:2588:G:C2	26:LA:2589:A:C8	3.06	0.44
26:LA:2591:C:H2'	26:LA:2592:G:H8	1.82	0.44
2:SA:27:G:C4	2:SA:557:G:N2	2.85	0.44
2:SA:573:A:C5	2:SA:574:A:N1	2.85	0.44
2:SA:767:A:H2'	2:SA:768:A:O4'	2.18	0.44
2:SA:934:C:C5	2:SA:1345:U:C5	3.06	0.44
2:SA:1181:G:C2	2:SA:1182:G:C2	3.06	0.44
2:SA:1236:A:H4'	2:SA:1304:G:H4'	1.99	0.44
2:SA:1371:G:C5	2:SA:1372:U:C5	3.05	0.44
2:SA:1381:U:H1'	7:SG:152:HIS:NE2	2.33	0.44
26:LA:3:U:C4	26:LA:4:U:C4	3.05	0.44
26:LA:743:A:H2'	26:LA:744:U:C6	2.53	0.44
26:LA:851:C:H2'	26:LA:852:U:C6	2.53	0.44
26:LA:855:G:O6	26:LA:856:G:C6	2.71	0.44
26:LA:2038:G:C6	26:LA:2039:U:C4	3.06	0.44
30:LW:95:PHE:CZ	30:LW:102:ILE:HB	2.53	0.44
37:LC:96:GLY:O	37:LC:100:LEU:HD23	2.18	0.44
38:LE:124:ARG:HD3	38:LE:162:ALA:O	2.16	0.44
2:SA:6:G:H2'	2:SA:298:A:H5'	2.00	0.44
2:SA:1160:G:C6	2:SA:1181:G:C6	3.05	0.44
26:LA:61:C:C4	26:LA:62:U:C4	3.05	0.44
26:LA:72:U:O4	26:LA:112:U:H4'	2.17	0.44
26:LA:85:G:C6	26:LA:98:G:O6	2.71	0.44
26:LA:197:A:C4	26:LA:198:C:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:495:G:C5	26:LA:496:G:C8	3.05	0.44
26:LA:572:A:C5	26:LA:573:U:C5	3.06	0.44
26:LA:622:G:C6	26:LA:623:C:C4	3.05	0.44
26:LA:1057:A:C6	26:LA:1058:U:C4	3.06	0.44
26:LA:1252:G:C5	26:LA:1253:A:C6	3.06	0.44
26:LA:1265:A:C5	26:LA:1267:U:O4	2.70	0.44
26:LA:1350:C:C4	26:LA:1351:C:C5	3.06	0.44
26:LA:1383:A:N7	26:LA:1384:A:C6	2.86	0.44
26:LA:1444:G:C6	26:LA:1445:G:C6	3.06	0.44
26:LA:1910:G:C4	26:LA:1921:G:C2	3.06	0.44
26:LA:2040:G:C2	26:LA:2041:U:C2	3.05	0.44
26:LA:2122:U:C4	37:LC:133:PRO:HG3	2.52	0.44
26:LA:2339:C:H2'	26:LA:2340:A:H8	1.82	0.44
39:L3:53:VAL:HG11	53:LP:98:LEU:HG	1.99	0.44
2:SA:49:U:C4	2:SA:364:A:C5	3.05	0.44
2:SA:282:A:N7	2:SA:283:U:C5	2.86	0.44
2:SA:444:G:C5	2:SA:491:G:C2	3.06	0.44
2:SA:514:C:H2'	2:SA:515:G:C8	2.53	0.44
2:SA:542:G:C4	2:SA:543:U:C5	3.06	0.44
2:SA:1327:C:H2'	2:SA:1328:C:C6	2.53	0.44
21:SE:44:ARG:HH12	21:SE:70:MET:C	2.26	0.44
22:SF:78:PHE:HA	22:SF:81:ASN:HD22	1.83	0.44
24:S3:673:THR:HG21	24:S3:677:ALA:HB2	1.99	0.44
26:LA:45:G:H5'	26:LA:46:G:H5'	2.00	0.44
26:LA:134:G:H2'	26:LA:135:U:C6	2.53	0.44
26:LA:372:G:C8	33:LZ:56:ARG:HB3	2.53	0.44
26:LA:785:G:C6	26:LA:786:C:C4	3.06	0.44
26:LA:878:A:C6	26:LA:879:G:C6	3.06	0.44
26:LA:1019:U:H2'	26:LA:1020:A:H5'	2.00	0.44
26:LA:1406:U:H2'	26:LA:1407:G:C8	2.53	0.44
26:LA:1410:G:N3	26:LA:1593:A:C2	2.86	0.44
26:LA:1444:G:C2	26:LA:1548:A:C2	3.06	0.44
26:LA:1663:G:N1	26:LA:1998:A:C6	2.86	0.44
26:LA:1965:C:HO2'	26:LA:1966:A:H2	1.65	0.44
26:LA:2049:G:N2	26:LA:2620:C:C2	2.86	0.44
26:LA:2140:G:C2	26:LA:2152:G:C8	3.06	0.44
26:LA:2336:A:H61	32:LY:40:ARG:HG2	1.83	0.44
26:LA:2392:A:C2	48:LN:55:MET:HE3	2.53	0.44
26:LA:2397:G:C2	26:LA:2420:C:C2	3.05	0.44
26:LA:2403:C:H2'	26:LA:2404:U:C6	2.53	0.44
26:LA:2557:G:C5	26:LA:2558:C:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2567:G:H2'	26:LA:2568:U:C6	2.53	0.44
26:LA:2692:G:C5	26:LA:2718:G:C2	3.06	0.44
30:LW:85:ARG:NE	30:LW:86:PHE:H	2.14	0.44
2:SA:234:C:H2'	2:SA:235:C:C6	2.53	0.44
2:SA:369:G:C2	2:SA:393:A:C2	3.06	0.44
2:SA:670:G:C2	2:SA:671:G:C4	3.06	0.44
2:SA:898:G:C2	2:SA:902:G:C6	3.06	0.44
25:LB:99:A:C4	25:LB:100:G:C8	3.05	0.44
26:LA:407:G:C6	26:LA:408:G:N7	2.86	0.44
26:LA:560:C:H2'	26:LA:561:G:O4'	2.17	0.44
26:LA:783:A:C8	26:LA:783:A:H3'	2.52	0.44
26:LA:811:U:H5	26:LA:1251:C:C5	2.32	0.44
26:LA:1439:A:N6	26:LA:1552:A:C8	2.86	0.44
26:LA:1451:C:N4	26:LA:1459:G:C8	2.86	0.44
26:LA:1598:A:C6	26:LA:1599:U:C2	3.05	0.44
26:LA:2077:A:C2	26:LA:2078:C:C4	3.05	0.44
26:LA:2222:C:H41	51:LI:114:GLU:CD	2.26	0.44
26:LA:2809:A:H2'	26:LA:2810:A:C8	2.53	0.44
55:LQ:27:VAL:HG21	55:LQ:40:ILE:HD11	1.98	0.44
2:SA:483:C:H2'	2:SA:484:G:C8	2.52	0.43
2:SA:1013:G:C2	2:SA:1015:G:C8	3.06	0.43
10:SJ:40:ILE:HB	10:SJ:73:LEU:HD22	2.00	0.43
20:SD:158:LEU:HD21	20:SD:177:MET:HE3	2.00	0.43
21:SE:111:ARG:HH12	21:SE:115:GLU:CD	2.26	0.43
24:S3:232:LEU:HD13	24:S3:250:ALA:HB2	1.99	0.43
25:LB:109:A:C2	25:LB:110:C:C4	3.06	0.43
26:LA:20:C:H2'	26:LA:21:A:C8	2.53	0.43
26:LA:83:A:C6	26:LA:101:A:C4	3.06	0.43
26:LA:160:A:C6	26:LA:161:A:C6	3.06	0.43
26:LA:358:U:H2'	26:LA:359:G:C8	2.53	0.43
26:LA:527:C:O4'	26:LA:528:A:C2	2.71	0.43
26:LA:947:A:C2	26:LA:971:G:N2	2.86	0.43
26:LA:950:G:C6	26:LA:951:C:C4	3.06	0.43
26:LA:1067:A:N7	26:LA:1068:G:C6	2.86	0.43
26:LA:1332:G:O6	26:LA:1616:A:C2	2.70	0.43
26:LA:1923:U:H2'	26:LA:1924:C:C6	2.53	0.43
26:LA:2162:G:H2'	26:LA:2163:A:C5'	2.47	0.43
26:LA:2393:U:C5	26:LA:2394:C:C4	3.06	0.43
26:LA:2631:G:C6	26:LA:2632:A:C5	3.06	0.43
26:LA:2654:A:H4'	26:LA:2655:G:H5'	2.00	0.43
26:LA:2837:A:H2'	26:LA:2838:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:LG:66:ILE:HD12	45:LG:83:PRO:HB3	2.00	0.43
50:LL:15:TRP:CD2	50:LL:135:GLN:HB3	2.53	0.43
2:SA:948:C:H2'	2:SA:949:A:C8	2.53	0.43
11:SK:56:LYS:HA	11:SK:65:ALA:HB2	2.00	0.43
22:SF:18:VAL:HG11	22:SF:126:ALA:HB2	1.99	0.43
26:LA:123:G:H2'	26:LA:124:G:C8	2.53	0.43
26:LA:310:A:C2	26:LA:330:A:C5	3.06	0.43
26:LA:447:A:C4	26:LA:473:G:N7	2.87	0.43
26:LA:860:U:C4	26:LA:2268:A:C4	3.05	0.43
26:LA:927:A:C6	26:LA:928:A:C6	3.06	0.43
26:LA:939:G:C6	26:LA:940:G:N7	2.86	0.43
26:LA:1336:A:C4	26:LA:1337:G:C8	3.06	0.43
26:LA:1697:G:C6	26:LA:1698:A:C5	3.06	0.43
26:LA:1731:G:C6	26:LA:1733:G:C6	3.06	0.43
26:LA:1907:G:C5	26:LA:1908:C:C5	3.06	0.43
26:LA:1937:A:H2'	26:LA:1938:A:H5'	2.00	0.43
26:LA:2134:A:C2	26:LA:2156:G:C2	3.06	0.43
26:LA:2331:G:H2'	26:LA:2332:C:C6	2.53	0.43
26:LA:2795:C:H2'	26:LA:2796:U:C6	2.53	0.43
54:LM:30:ARG:HH12	54:LM:37:ASP:CG	2.26	0.43
2:SA:98:A:C2	2:SA:99:C:C2	3.06	0.43
2:SA:194:C:O2'	2:SA:195:A:H5'	2.18	0.43
2:SA:527:G:C5	2:SA:528:C:C5	3.07	0.43
2:SA:646:G:C5	2:SA:647:C:C5	3.06	0.43
2:SA:650:G:C5	2:SA:651:C:C5	3.06	0.43
2:SA:767:A:C2	2:SA:768:A:N3	2.86	0.43
2:SA:892:A:C5	2:SA:907:A:N7	2.86	0.43
2:SA:1035:A:C6	2:SA:1036:A:C5	3.06	0.43
2:SA:1144:G:N2	2:SA:1147:C:H42	2.16	0.43
4:S2:77:A:C8	4:S2:77:A:H3'	2.53	0.43
12:SL:1:ALA:HB1	12:SL:5:GLN:OE1	2.18	0.43
24:S3:70:PHE:CE1	24:S3:82:ARG:HB2	2.53	0.43
26:LA:821:A:C8	26:LA:946:C:C5	3.07	0.43
26:LA:943:A:C2	26:LA:944:C:C2	3.06	0.43
26:LA:980:A:N7	26:LA:981:A:C5	2.87	0.43
26:LA:1165:A:C2	26:LA:1185:G:C5	3.06	0.43
26:LA:1205:A:C5	44:LF:165:HIS:CE1	3.05	0.43
26:LA:1429:G:C2	26:LA:1430:G:C8	3.06	0.43
26:LA:1620:G:C5	26:LA:1621:U:C4	3.07	0.43
26:LA:1711:A:C6	26:LA:1712:U:C4	3.06	0.43
26:LA:1793:C:H2'	26:LA:1794:A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1935:G:H2'	26:LA:1935:G:N3	2.33	0.43
26:LA:1937:A:C2'	26:LA:1938:A:H5'	2.48	0.43
26:LA:2327:A:C2	26:LA:2328:A:C4	3.06	0.43
26:LA:2865:U:H3'	26:LA:2866:U:H2'	2.01	0.43
27:LD:57:HIS:CD2	27:LD:58:LYS:H	2.35	0.43
44:LF:88:ARG:HB2	44:LF:89:PRO:HD2	2.00	0.43
2:SA:144:G:C2	2:SA:179:A:C4	3.05	0.43
2:SA:376:G:C2	2:SA:389:A:C2	3.07	0.43
2:SA:411:A:C5	2:SA:429:U:C5	3.06	0.43
2:SA:830:G:C5	2:SA:831:A:C8	3.06	0.43
2:SA:1152:A:H2'	2:SA:1153:G:H8	1.83	0.43
2:SA:1379:G:C5	2:SA:1380:U:C5	3.07	0.43
2:SA:1412:C:H2'	2:SA:1413:A:C8	2.53	0.43
21:SE:40:ASP:CG	21:SE:44:ARG:H	2.26	0.43
25:LB:15:A:C2	25:LB:109:A:C2	3.06	0.43
26:LA:96:C:H5'	34:L0:41:HIS:CD2	2.53	0.43
26:LA:98:G:H3'	26:LA:99:U:H5"	2.00	0.43
26:LA:131:A:C2	26:LA:132:G:C5	3.07	0.43
26:LA:627:A:C6	48:LN:111:ILE:HD12	2.52	0.43
26:LA:847:U:C5	26:LA:848:C:C6	3.07	0.43
26:LA:899:A:C2	26:LA:900:A:N7	2.86	0.43
26:LA:1419:A:C2	26:LA:1421:G:H1'	2.54	0.43
26:LA:1553:A:C5	26:LA:1555:G:C5	3.06	0.43
26:LA:1636:U:H2'	26:LA:1637:A:H8	1.83	0.43
26:LA:1797:G:C5	26:LA:1798:U:C5	3.05	0.43
26:LA:2537:U:H2'	26:LA:2538:C:C6	2.53	0.43
26:LA:2841:C:C2	26:LA:2877:G:N2	2.87	0.43
26:LA:2851:A:C5	26:LA:2852:G:C5	3.07	0.43
40:L4:4:ILE:CG2	40:L4:27:ARG:HG2	2.47	0.43
2:SA:142:G:C2	2:SA:143:A:C4	3.07	0.43
2:SA:153:C:C6	2:SA:154:U:C5	3.06	0.43
2:SA:679:C:N3	2:SA:680:C:C5	2.87	0.43
2:SA:1480:A:C8	2:SA:1481:U:C5	3.06	0.43
4:S2:9:G:C8	4:S2:46:G:C4	3.06	0.43
14:SN:92:ILE:HG21	14:SN:95:LEU:HD22	2.00	0.43
26:LA:570:G:H1	26:LA:2499:C:H5'	1.82	0.43
26:LA:1166:G:C5	26:LA:1167:C:C4	3.06	0.43
26:LA:1220:G:C6	26:LA:1230:A:C6	3.07	0.43
26:LA:1571:A:H2'	26:LA:1572:A:C8	2.54	0.43
26:LA:1845:G:C2	26:LA:1896:G:C6	3.06	0.43
26:LA:1941:C:H41	26:LA:1965:C:C1'	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2040:G:C6	26:LA:2041:U:C4	3.06	0.43
26:LA:2051:A:C6	26:LA:2614:A:C4	3.06	0.43
26:LA:2666:C:O2	26:LA:2667:C:C5	2.71	0.43
1:SS:10:ILE:H	1:SS:10:ILE:HD13	1.84	0.43
2:SA:687:A:C2	2:SA:704:A:C4	3.07	0.43
2:SA:1437:A:H2'	2:SA:1438:G:C8	2.53	0.43
8:SH:45:ILE:H	8:SH:45:ILE:HG23	1.54	0.43
26:LA:85:G:C5	26:LA:98:G:O6	2.71	0.43
26:LA:190:A:C6	26:LA:207:A:N3	2.86	0.43
26:LA:197:A:C2	26:LA:198:C:H1'	2.54	0.43
26:LA:460:A:C2	26:LA:470:A:C6	3.07	0.43
26:LA:845:A:C2	26:LA:847:U:C2	3.06	0.43
26:LA:868:U:C5	26:LA:869:G:N7	2.86	0.43
26:LA:1194:A:C2	26:LA:1195:G:C4	3.06	0.43
26:LA:1651:G:H2'	26:LA:1652:A:C8	2.53	0.43
26:LA:1809:A:N6	26:LA:1810:A:N1	2.65	0.43
26:LA:2597:G:N7	26:LA:2598:A:C6	2.86	0.43
36:L2:56:ARG:H	36:L2:56:ARG:NH1	2.17	0.43
54:LM:21:CYS:HA	54:LM:41:ILE:HD12	2.00	0.43
54:LM:73:ASP:C	54:LM:75:SER:H	2.26	0.43
2:SA:41:G:C2	2:SA:42:G:C4	3.07	0.43
2:SA:1039:G:H2'	2:SA:1040:U:C6	2.53	0.43
2:SA:1057:G:H5'	19:SC:154:GLY:HA3	2.00	0.43
2:SA:1209:C:H2'	2:SA:1210:C:C6	2.53	0.43
2:SA:1465:A:C2	2:SA:1466:C:C2	3.07	0.43
4:S2:57:C:H5	26:LA:2169:A:C8	2.36	0.43
18:SB:202:ASN:H	18:SB:212:TYR:HE2	1.60	0.43
25:LB:23:G:N1	25:LB:61:G:C6	2.87	0.43
26:LA:35:G:C4	26:LA:454:A:C2	3.07	0.43
26:LA:216:A:C4	26:LA:432:A:C2	3.06	0.43
26:LA:255:A:C4	26:LA:256:A:C8	3.06	0.43
26:LA:422:A:C2	26:LA:423:A:C4	3.06	0.43
26:LA:497:A:C6	26:LA:498:G:C5	3.06	0.43
26:LA:957:C:C4	26:LA:959:A:C5	3.07	0.43
26:LA:1169:A:C2	26:LA:1170:C:C2	3.07	0.43
26:LA:1245:G:H4'	44:LF:33:VAL:HG23	2.00	0.43
26:LA:1361:G:H2'	26:LA:1362:C:C6	2.54	0.43
26:LA:1430:G:H2'	26:LA:1431:A:H8	1.84	0.43
26:LA:1445:G:H2'	26:LA:1446:C:H6	1.84	0.43
26:LA:1473:G:C5	26:LA:1519:G:C2	3.06	0.43
26:LA:1587:G:C6	26:LA:1588:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1959:G:C2	26:LA:1960:A:C4	3.07	0.43
26:LA:2107:G:C2	26:LA:2108:A:C4	3.06	0.43
26:LA:2627:G:C5	26:LA:2628:C:C5	3.07	0.43
26:LA:2828:G:C2	26:LA:2829:A:C8	3.06	0.43
39:L3:29:VAL:HA	39:L3:36:LYS:HA	2.00	0.43
44:LF:102:ARG:HB3	44:LF:102:ARG:CZ	2.48	0.43
47:LJ:119:ALA:HA	47:LJ:122:ILE:HB	2.01	0.43
2:SA:41:G:C6	2:SA:402:G:C6	3.07	0.43
2:SA:364:A:C2	2:SA:365:U:O4	2.72	0.43
2:SA:415:A:H3'	2:SA:416:G:C8	2.54	0.43
2:SA:500:G:H2'	2:SA:501:C:C6	2.54	0.43
2:SA:645:G:C6	2:SA:646:G:N7	2.87	0.43
2:SA:720:C:N4	2:SA:721:G:C6	2.87	0.43
2:SA:1287:A:C6	2:SA:1288:A:C6	3.06	0.43
2:SA:1521:C:C4	2:SA:1522:U:C4	3.06	0.43
7:SG:77:ARG:HB3	7:SG:152:HIS:CE1	2.54	0.43
18:SB:5:MET:SD	18:SB:46:VAL:HG21	2.58	0.43
21:SE:15:ILE:HG22	21:SE:35:LEU:O	2.18	0.43
26:LA:106:C:H2'	26:LA:107:G:C8	2.54	0.43
26:LA:854:C:O2	26:LA:924:G:C2	2.71	0.43
26:LA:1152:C:H2'	26:LA:1153:C:C6	2.53	0.43
26:LA:1224:U:C5	26:LA:1225:G:O6	2.72	0.43
26:LA:1536:C:H4'	26:LA:1537:G:H5"	2.01	0.43
26:LA:2055:C:H5"	26:LA:2056:G:C5'	2.49	0.43
26:LA:2217:G:C6	26:LA:2218:G:N7	2.87	0.43
26:LA:2422:C:O2	26:LA:2424:C:C5	2.72	0.43
26:LA:2423:U:O2	26:LA:2425:A:C5	2.71	0.43
26:LA:2742:G:OP1	43:L7:36:ARG:NH1	2.51	0.43
26:LA:2816:G:C4	26:LA:2817:U:C4	3.06	0.43
26:LA:2862:G:H2'	26:LA:2863:C:C6	2.54	0.43
38:LE:109:VAL:CG1	38:LE:201:LEU:HD22	2.49	0.43
2:SA:22:G:C6	2:SA:23:C:C4	3.06	0.43
2:SA:126:G:C6	2:SA:127:G:C5	3.07	0.43
2:SA:704:A:C5	2:SA:705:G:C5	3.06	0.43
2:SA:900:A:N3	2:SA:901:A:C2	2.87	0.43
2:SA:1455:G:C5	2:SA:1456:A:C5	3.06	0.43
25:LB:52:A:C6	25:LB:53:A:C4	3.07	0.43
26:LA:77:G:C5	26:LA:78:U:C5	3.07	0.43
26:LA:649:G:C5	26:LA:650:C:C4	3.07	0.43
26:LA:1085:A:C4'	26:LA:1105:U:H4'	2.48	0.43
26:LA:1205:A:C5	44:LF:165:HIS:NE2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1218:G:C5	26:LA:1219:U:C5	3.07	0.43
26:LA:1878:G:C6	26:LA:1879:C:C4	3.07	0.43
26:LA:2014:A:OP1	28:LU:95:ARG:NH2	2.48	0.43
26:LA:2256:G:C2	26:LA:2257:U:H1'	2.53	0.43
26:LA:2371:G:C6	26:LA:2372:U:C5	3.07	0.43
26:LA:2829:A:C6	26:LA:2830:C:C4	3.07	0.43
26:LA:2856:A:N6	26:LA:2857:G:C6	2.87	0.43
44:LF:118:LEU:HD13	44:LF:186:VAL:HG13	1.99	0.43
54:LM:108:ARG:HH12	54:LM:123:LEU:C	2.27	0.43
2:SA:15:G:H2'	2:SA:16:A:C8	2.54	0.43
2:SA:372:C:N4	2:SA:389:A:H62	2.16	0.43
2:SA:424:G:H2'	2:SA:425:G:C8	2.54	0.43
2:SA:1097:C:C5	2:SA:1098:C:C5	3.07	0.43
2:SA:1267:C:C5	2:SA:1327:C:H4'	2.54	0.43
2:SA:1340:A:C2	2:SA:1341:U:H1'	2.54	0.43
2:SA:1488:G:H2'	2:SA:1489:G:H8	1.84	0.43
3:S1:25:U:C6	7:SG:158:LEU:HD22	2.54	0.43
3:S1:57:C:H42	20:SD:160:LEU:HD23	1.83	0.43
7:SG:72:VAL:CG1	7:SG:144:ALA:HB2	2.49	0.43
10:SJ:53:ILE:HG21	10:SJ:63:ASP:CB	2.48	0.43
11:SK:83:VAL:HG13	11:SK:109:ILE:HA	2.00	0.43
24:S3:416:SER:HA	24:S3:458:ALA:HA	2.00	0.43
24:S3:430:MET:SD	24:S3:434:LEU:HD12	2.58	0.43
25:LB:8:C:H5'	55:LQ:27:VAL:HG11	2.00	0.43
25:LB:97:C:C2'	25:LB:98:G:H5'	2.49	0.43
26:LA:3:U:H2'	26:LA:4:U:C6	2.53	0.43
26:LA:68:G:C6	26:LA:69:C:C4	3.07	0.43
26:LA:287:G:C2	26:LA:288:U:N3	2.87	0.43
26:LA:449:A:C6	26:LA:450:G:C4	3.07	0.43
26:LA:470:A:C4	26:LA:471:A:C8	3.07	0.43
26:LA:647:G:N1	26:LA:648:G:C4	2.87	0.43
26:LA:784:G:C2	26:LA:792:A:C5	3.06	0.43
26:LA:812:C:H4'	57:LS:12:ARG:NH2	2.33	0.43
26:LA:869:G:C5	26:LA:870:U:C6	3.06	0.43
26:LA:1171:G:C6	26:LA:1179:G:C6	3.07	0.43
26:LA:1188:U:C2	26:LA:1189:A:C8	3.07	0.43
26:LA:1299:G:H4'	26:LA:1300:G:H5'	2.01	0.43
26:LA:1439:A:C2	26:LA:1553:A:C5	3.07	0.43
26:LA:1711:A:C5	26:LA:1712:U:C5	3.07	0.43
26:LA:1831:G:C4	26:LA:1832:C:C5	3.07	0.43
26:LA:1973:G:C5	26:LA:1974:C:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2124:G:N7	26:LA:2125:G:C4	2.86	0.43
26:LA:2407:A:C6	26:LA:2408:U:C4	3.07	0.43
26:LA:2459:A:N6	26:LA:2494:G:C2	2.87	0.43
26:LA:2643:G:C2	26:LA:2772:C:C2	3.06	0.43
26:LA:2706:A:C2	26:LA:2707:U:C6	3.07	0.43
26:LA:2803:G:C6	26:LA:2804:U:C4	3.07	0.43
37:LC:46:VAL:HA	37:LC:211:LYS:O	2.19	0.43
49:LK:78:LEU:HD13	49:LK:78:LEU:HA	1.94	0.43
51:LI:122:LEU:HD12	51:LI:122:LEU:H	1.84	0.43
54:LM:19:VAL:HG12	54:LM:43:ILE:HA	2.01	0.43
2:SA:19:A:C6	2:SA:20:U:C4	3.07	0.42
2:SA:32:A:C2	2:SA:553:A:N1	2.86	0.42
2:SA:260:G:C6	2:SA:261:U:O4	2.72	0.42
2:SA:265:G:H3'	2:SA:267:C:H5	1.84	0.42
2:SA:575:G:C6	2:SA:881:G:C6	3.07	0.42
2:SA:613:C:H2'	2:SA:614:C:C6	2.53	0.42
2:SA:640:A:C6	2:SA:641:U:C4	3.06	0.42
2:SA:722:G:C5	2:SA:724:G:C4	3.07	0.42
2:SA:1207:G:H3'	2:SA:1208:C:C6	2.55	0.42
11:SK:47:GLY:C	11:SK:50:GLY:H	2.26	0.42
13:SM:102:LYS:HG2	13:SM:103:THR:H	1.84	0.42
17:SQ:37:ILE:C	17:SQ:37:ILE:HD12	2.44	0.42
26:LA:160:A:C4	26:LA:167:A:C2	3.07	0.42
26:LA:528:A:C8	26:LA:2042:A:N1	2.87	0.42
26:LA:1085:A:C4	26:LA:1086:A:N7	2.87	0.42
26:LA:1707:G:C2	26:LA:1708:C:H1'	2.54	0.42
26:LA:1998:A:H2'	26:LA:1999:C:C6	2.54	0.42
26:LA:2033:A:C6	26:LA:2036:C:C2	3.07	0.42
26:LA:2048:G:C4	26:LA:2621:G:N2	2.87	0.42
26:LA:2126:A:H2'	37:LC:111:PHE:CE1	2.54	0.42
26:LA:2128:G:H2'	26:LA:2129:C:C5	2.54	0.42
26:LA:2308:G:H2'	26:LA:2308:G:N3	2.34	0.42
26:LA:2547:A:C2	26:LA:2562:U:O2	2.72	0.42
26:LA:2895:G:C2	26:LA:2896:C:C2	3.07	0.42
52:LO:33:LEU:HG	52:LO:128:THR:HB	2.01	0.42
57:LS:88:GLU:CD	57:LS:89:ILE:H	2.26	0.42
2:SA:764:C:C6	2:SA:812:G:O6	2.71	0.42
2:SA:854:U:H2'	2:SA:855:U:C6	2.55	0.42
2:SA:1321:U:H6	2:SA:1322:C:H2'	1.84	0.42
12:SL:69:GLU:CD	12:SL:69:GLU:H	2.27	0.42
21:SE:96:GLN:HA	21:SE:97:PRO:HD3	1.89	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:S3:281:VAL:CG2	24:S3:285:LEU:HD12	2.49	0.42
26:LA:426:C:N3	26:LA:427:U:C5	2.88	0.42
26:LA:1779:U:C2	26:LA:1783:A:C5	3.07	0.42
26:LA:2013:A:N6	26:LA:2014:A:C6	2.88	0.42
26:LA:2631:G:C4	26:LA:2632:A:C8	3.07	0.42
26:LA:2659:G:N2	26:LA:2663:G:C6	2.87	0.42
26:LA:2700:A:C4	26:LA:2701:U:C5	3.07	0.42
26:LA:2740:A:C2	26:LA:2741:A:C4	3.07	0.42
28:LU:95:ARG:HH21	28:LU:95:ARG:HG3	1.83	0.42
37:LC:19:LYS:HG2	37:LC:20:GLN:H	1.84	0.42
41:L5:7:PRO:O	41:L5:8:SER:C	2.62	0.42
46:LH:51:PHE:HB2	46:LH:61:TRP:CE3	2.54	0.42
53:LP:74:GLU:O	53:LP:77:ALA:HB3	2.19	0.42
57:LS:79:ILE:HA	57:LS:82:LEU:HG	2.01	0.42
2:SA:399:G:C5	2:SA:400:C:C5	3.08	0.42
2:SA:620:C:C4	2:SA:621:A:C5	3.07	0.42
2:SA:642:A:N7	2:SA:643:C:C5	2.87	0.42
2:SA:777:A:C4	2:SA:778:G:C8	3.07	0.42
2:SA:1370:G:O2'	2:SA:1371:G:H5'	2.19	0.42
26:LA:153:U:C5	26:LA:154:U:C5	3.06	0.42
26:LA:376:G:H2'	26:LA:377:G:H8	1.84	0.42
26:LA:1087:G:C6	26:LA:1089:A:C2	3.08	0.42
26:LA:1410:G:C6	26:LA:1411:U:O4	2.72	0.42
26:LA:1468:U:O2	26:LA:1525:A:C2	2.72	0.42
26:LA:1540:G:C5	26:LA:1541:C:C6	3.07	0.42
26:LA:1631:G:N2	26:LA:1633:G:C8	2.87	0.42
26:LA:1676:A:H3'	26:LA:1676:A:C8	2.55	0.42
26:LA:1779:U:N3	26:LA:1783:A:C8	2.87	0.42
26:LA:2048:G:C6	26:LA:2621:G:C2	3.07	0.42
26:LA:2080:A:C6	26:LA:2081:U:C4	3.06	0.42
26:LA:2423:U:O2	26:LA:2425:A:C4	2.72	0.42
26:LA:2513:A:C6	26:LA:2574:G:C5	3.07	0.42
26:LA:2520:C:C5	26:LA:2567:G:C4	3.07	0.42
26:LA:2634:A:H2'	26:LA:2635:A:C8	2.54	0.42
26:LA:2730:C:H2'	26:LA:2731:G:C8	2.54	0.42
26:LA:2758:A:C5	26:LA:2759:G:C8	3.08	0.42
37:LC:131:LEU:O	37:LC:135:GLY:HA2	2.20	0.42
43:L7:1:MET:HE2	43:L7:1:MET:HA	2.00	0.42
44:LF:4:VAL:HG13	44:LF:4:VAL:O	2.19	0.42
54:LM:1:MET:H1	54:LM:4:GLU:CD	2.26	0.42
56:LR:40:GLN:CD	56:LR:40:GLN:C	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SA:300:A:H2'	2:SA:301:G:H5'	2.02	0.42
2:SA:1057:G:C4	2:SA:1204:A:C2	3.07	0.42
2:SA:1163:A:C2	2:SA:1174:G:N3	2.87	0.42
2:SA:1430:A:C5	2:SA:1431:A:N7	2.87	0.42
2:SA:1441:A:H61	2:SA:1461:G:C2'	2.32	0.42
18:SB:213:LEU:O	18:SB:217:ALA:HB3	2.19	0.42
24:S3:277:MET:SD	24:S3:277:MET:C	3.02	0.42
25:LB:92:C:H2'	25:LB:93:C:C6	2.55	0.42
26:LA:60:G:C4	26:LA:74:A:C2	3.08	0.42
26:LA:202:U:H2'	26:LA:203:A:C8	2.55	0.42
26:LA:627:A:C2	26:LA:637:A:C5	3.08	0.42
26:LA:747:U:C4	26:LA:2613:U:C4	3.07	0.42
26:LA:777:G:N2	26:LA:778:G:C4	2.87	0.42
26:LA:876:C:HO2'	26:LA:877:A:H8	1.62	0.42
26:LA:1242:U:C4	26:LA:1243:C:C5	3.08	0.42
26:LA:1488:C:C2	26:LA:1502:A:C2	3.07	0.42
26:LA:1697:G:C5	26:LA:1698:A:C5	3.07	0.42
26:LA:2046:G:C5	26:LA:2047:C:C5	3.07	0.42
26:LA:2067:G:C2	26:LA:2069:G:C4	3.07	0.42
26:LA:2081:U:C4	26:LA:2237:G:C2	3.08	0.42
26:LA:2100:G:C6	26:LA:2190:G:C2	3.07	0.42
26:LA:2452:C:H2'	26:LA:2453:A:H8	1.85	0.42
26:LA:2550:G:C2	26:LA:2559:C:O2	2.73	0.42
26:LA:2657:A:C2	26:LA:2665:A:C5	3.06	0.42
41:L5:34:ARG:HE	41:L5:39:ARG:HD2	1.84	0.42
52:LO:65:ILE:HG22	52:LO:67:VAL:H	1.85	0.42
2:SA:92:U:H2'	2:SA:93:U:H6	1.84	0.42
2:SA:565:U:O4	2:SA:566:G:C2	2.72	0.42
2:SA:877:G:H2'	2:SA:878:A:C8	2.54	0.42
26:LA:5:A:N1	26:LA:6:A:C5	2.88	0.42
26:LA:24:G:C6	26:LA:25:U:C4	3.08	0.42
26:LA:226:A:C5	26:LA:227:A:C5	3.07	0.42
26:LA:280:U:C4	26:LA:281:C:C4	3.07	0.42
26:LA:495:G:H1'	28:LU:57:ASN:CG	2.45	0.42
26:LA:528:A:C8	26:LA:2042:A:C6	3.07	0.42
26:LA:954:G:N1	26:LA:964:C:C2	2.87	0.42
26:LA:1851:U:C4	26:LA:1852:U:C4	3.07	0.42
26:LA:1873:G:C5	26:LA:1874:C:C5	3.07	0.42
26:LA:1914:C:H1'	26:LA:1915:C:N4	2.35	0.42
26:LA:1921:G:C6	26:LA:1922:G:C5	3.07	0.42
26:LA:2311:A:C8	45:LG:76:PHE:CE2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2455:G:H2'	26:LA:2456:C:C6	2.55	0.42
2:SA:98:A:H2'	2:SA:99:C:C6	2.55	0.42
2:SA:223:A:C5	2:SA:224:U:C5	3.07	0.42
2:SA:246:A:C2	2:SA:282:A:C6	3.08	0.42
2:SA:942:G:H2'	2:SA:943:U:H6	1.84	0.42
2:SA:1286:U:H3'	2:SA:1286:U:H6	1.85	0.42
4:S2:2:G:C6	4:S2:73:A:N3	2.88	0.42
8:SH:44:PHE:CZ	8:SH:128:VAL:HG12	2.54	0.42
21:SE:36:THR:HG21	21:SE:63:MET:HG2	2.01	0.42
24:S3:62:ILE:HD12	24:S3:63:THR:HB	2.02	0.42
25:LB:109:A:H2'	25:LB:110:C:C6	2.55	0.42
25:LB:115:A:H2'	25:LB:116:G:C8	2.54	0.42
26:LA:721:A:C4	26:LA:722:A:C8	3.07	0.42
26:LA:725:G:C5	26:LA:726:G:N1	2.88	0.42
26:LA:822:G:C6	26:LA:836:G:C2	3.08	0.42
26:LA:875:G:C5	26:LA:876:C:C5	3.08	0.42
26:LA:1061:U:C2	26:LA:1097:U:N3	2.87	0.42
26:LA:1252:G:C2	26:LA:1253:A:C2	3.07	0.42
26:LA:1310:G:N2	26:LA:1313:U:C5	2.88	0.42
26:LA:1507:C:C2'	26:LA:1508:A:H5"	2.47	0.42
26:LA:1620:G:C6	26:LA:1621:U:C4	3.07	0.42
26:LA:1661:G:C5	26:LA:1662:U:C5	3.08	0.42
26:LA:1838:C:C5	26:LA:1899:A:C5	3.08	0.42
26:LA:2413:G:O6	26:LA:2414:G:C6	2.72	0.42
26:LA:2776:A:C6	26:LA:2782:G:H1'	2.54	0.42
45:LG:122:ASP:C	45:LG:124:ARG:H	2.28	0.42
52:LO:33:LEU:HD12	52:LO:33:LEU:HA	1.77	0.42
54:LM:87:LEU:CD1	54:LM:94:PRO:HD3	2.49	0.42
2:SA:560:A:N7	21:SE:127:TYR:CE1	2.88	0.42
2:SA:616:G:H2'	2:SA:617:G:C8	2.54	0.42
2:SA:994:A:C8	2:SA:1216:A:H4'	2.54	0.42
11:SK:5:ILE:HG22	26:LA:2143:C:C6	2.54	0.42
25:LB:30:C:H3'	25:LB:31:C:H6	1.84	0.42
26:LA:96:C:H4'	34:L0:41:HIS:CG	2.54	0.42
26:LA:195:A:C4	26:LA:198:C:N4	2.88	0.42
26:LA:533:G:C4	26:LA:561:G:N2	2.88	0.42
26:LA:1012:U:N3	26:LA:1143:A:N7	2.67	0.42
26:LA:1187:G:H5"	58:LT:83:TYR:CZ	2.54	0.42
26:LA:1668:A:C4	26:LA:1674:G:O6	2.73	0.42
26:LA:1727:C:C2	26:LA:1734:G:C2	3.07	0.42
26:LA:1744:A:H3'	26:LA:1745:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1885:A:C8	26:LA:1886:U:C6	3.07	0.42
26:LA:2058:A:C6	26:LA:2059:A:N1	2.87	0.42
26:LA:2147:A:H4'	26:LA:2148:G:C8	2.55	0.42
26:LA:2197:U:C5	26:LA:2224:G:C6	3.07	0.42
26:LA:2249:U:H3'	26:LA:2250:G:H5'	1.97	0.42
26:LA:2311:A:C8	45:LG:76:PHE:CD2	3.08	0.42
26:LA:2825:G:C5	26:LA:2826:A:C4	3.08	0.42
51:LI:144:VAL:HG12	51:LI:145:ASN:N	2.34	0.42
2:SA:28:A:C5	2:SA:29:U:C5	3.08	0.42
2:SA:80:A:C2	2:SA:81:A:C4	3.08	0.42
2:SA:324:G:C2	2:SA:326:G:C8	3.08	0.42
2:SA:540:G:C2	2:SA:541:G:C4	3.08	0.42
2:SA:584:G:N2	2:SA:585:G:C4	2.87	0.42
2:SA:777:A:C5	2:SA:778:G:C5	3.08	0.42
2:SA:922:G:C2	2:SA:923:A:C4	3.07	0.42
2:SA:1004:A:C2	2:SA:1005:A:C5	3.08	0.42
2:SA:1300:G:C6	2:SA:1334:G:C5	3.08	0.42
2:SA:1421:G:C4	2:SA:1480:A:C2	3.07	0.42
2:SA:1480:A:N7	2:SA:1481:U:C5	2.88	0.42
2:SA:1514:G:N1	2:SA:1515:G:C4	2.87	0.42
21:SE:20:VAL:HG21	21:SE:51:LYS:HE2	2.02	0.42
21:SE:152:VAL:HG22	21:SE:153:ALA:H	1.85	0.42
24:S3:465:LEU:HD23	24:S3:465:LEU:HA	1.93	0.42
24:S3:504:HIS:HB3	24:S3:515:GLY:H	1.84	0.42
26:LA:21:A:C2	26:LA:520:G:C2	3.08	0.42
26:LA:539:G:C5	26:LA:540:C:C5	3.07	0.42
26:LA:643:A:N7	26:LA:644:A:C4	2.88	0.42
26:LA:768:G:C6	26:LA:769:U:C4	3.08	0.42
26:LA:777:G:H2'	26:LA:778:G:H8	1.85	0.42
26:LA:980:A:N7	26:LA:981:A:C6	2.87	0.42
26:LA:1050:A:H2'	26:LA:1051:G:H8	1.85	0.42
26:LA:1277:G:C6	26:LA:1278:C:C4	3.07	0.42
26:LA:1332:G:C5	26:LA:1609:A:C8	3.08	0.42
26:LA:1336:A:N3	26:LA:1337:G:C8	2.88	0.42
26:LA:1356:G:C5	26:LA:1357:C:C5	3.08	0.42
26:LA:1477:A:C2	26:LA:1515:A:C2	3.08	0.42
26:LA:2002:G:N1	26:LA:2003:A:C5	2.88	0.42
26:LA:2013:A:C6	26:LA:2014:A:C5	3.08	0.42
26:LA:2286:G:H4'	26:LA:2287:A:C4	2.54	0.42
26:LA:2407:A:C4	26:LA:2408:U:C5	3.08	0.42
26:LA:2643:G:C6	26:LA:2644:G:N7	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:LX:82:TYR:CD2	52:LO:36:VAL:HG13	2.55	0.42
32:LY:55:ASP:CG	32:LY:57:THR:H	2.27	0.42
54:LM:28:SER:C	54:LM:29:HIS:CD2	2.98	0.42
2:SA:59:A:C4	2:SA:354:G:C2	3.08	0.42
2:SA:441:A:H61	2:SA:493:A:N6	2.18	0.42
2:SA:642:A:C5	8:SH:106:SER:HA	2.55	0.42
2:SA:901:A:C8	2:SA:902:G:H1'	2.55	0.42
2:SA:927:G:C2	2:SA:928:G:C8	3.08	0.42
2:SA:1306:A:C2	2:SA:1332:A:C4	3.07	0.42
4:S2:1:C:C5	4:S2:73:A:N1	2.88	0.42
13:SM:12:LYS:HD3	13:SM:16:ILE:HD11	2.01	0.42
22:SF:22:ILE:HG21	22:SF:125:GLU:O	2.20	0.42
24:S3:516:HIS:CE1	24:S3:579:PHE:CE1	3.07	0.42
26:LA:202:U:N3	26:LA:203:A:C5	2.88	0.42
26:LA:263:G:H2'	26:LA:264:C:O4'	2.20	0.42
26:LA:273:G:C6	26:LA:274:C:C4	3.07	0.42
26:LA:381:G:C2	26:LA:382:A:C8	3.08	0.42
26:LA:846:U:N3	26:LA:847:U:C5	2.88	0.42
26:LA:966:G:C6	26:LA:967:U:C4	3.07	0.42
26:LA:1002:G:C6	26:LA:1003:G:C5	3.08	0.42
26:LA:1067:A:C2'	26:LA:1068:G:OP1	2.67	0.42
26:LA:1356:G:C2	26:LA:1376:C:O2	2.73	0.42
26:LA:1471:G:C5	26:LA:1472:C:C4	3.08	0.42
26:LA:1570:A:N1	26:LA:1571:A:C6	2.87	0.42
26:LA:1710:G:N1	26:LA:1749:A:C2	2.88	0.42
26:LA:1820:U:OP1	27:LD:176:ARG:NE	2.53	0.42
26:LA:2290:G:C5	26:LA:2291:U:C5	3.07	0.42
26:LA:2509:G:C6	26:LA:2510:C:C5	3.07	0.42
26:LA:2643:G:C4	26:LA:2644:G:C8	3.08	0.42
26:LA:2645:G:H4'	26:LA:2646:C:OP2	2.20	0.42
32:LY:55:ASP:O	32:LY:56:HIS:CG	2.73	0.42
37:LC:42:VAL:HG22	37:LC:178:VAL:HG12	2.01	0.42
2:SA:323:U:C4	2:SA:324:G:C5	3.08	0.42
2:SA:770:C:H4'	2:SA:900:A:H2	1.84	0.42
2:SA:887:G:C2'	2:SA:888:G:H5'	2.50	0.42
17:SQ:63:CYS:HB2	17:SQ:73:THR:HG22	2.02	0.42
26:LA:6:A:C2	26:LA:2898:U:O2	2.73	0.42
26:LA:25:U:C5	26:LA:26:G:C6	3.07	0.42
26:LA:31:C:H42	26:LA:474:G:H1	1.68	0.42
26:LA:116:C:H2'	26:LA:117:G:C5'	2.50	0.42
26:LA:149:A:C6	26:LA:150:U:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:374:A:C8	26:LA:375:G:C8	3.08	0.42
26:LA:590:A:H2'	26:LA:591:U:C6	2.54	0.42
26:LA:1392:A:N7	26:LA:1393:A:C5	2.88	0.42
26:LA:1549:A:H2'	26:LA:1550:C:O4'	2.20	0.42
26:LA:1797:G:C5	26:LA:1798:U:C4	3.07	0.42
26:LA:1955:U:H5'	26:LA:1956:U:C5	2.54	0.42
26:LA:2087:G:C2	26:LA:2088:A:C5	3.08	0.42
26:LA:2377:A:C6	26:LA:2378:A:C6	3.08	0.42
26:LA:2554:U:H2'	26:LA:2555:U:C2	2.55	0.42
26:LA:2801:G:C6	26:LA:2802:G:N7	2.88	0.42
30:LW:4:ILE:H	30:LW:4:ILE:HG22	1.47	0.42
34:L0:31:GLN:HG3	34:L0:37:LEU:HB2	2.02	0.42
57:LS:68:ALA:HB1	57:LS:73:ILE:HG23	2.02	0.42
2:SA:112:G:C6	2:SA:330:C:C4	3.08	0.41
2:SA:189:A:C6	2:SA:190:A:C6	3.08	0.41
2:SA:575:G:C5	2:SA:881:G:C2	3.08	0.41
2:SA:1074:G:C2	2:SA:1102:A:C2	3.07	0.41
2:SA:1079:G:C6	2:SA:1080:A:C6	3.07	0.41
2:SA:1285:A:N6	2:SA:1355:G:H4'	2.35	0.41
21:SE:29:ILE:HG23	21:SE:29:ILE:O	2.20	0.41
22:SF:2:ARG:HD2	22:SF:92:THR:HG21	2.02	0.41
26:LA:283:G:C5	26:LA:284:U:C2	3.08	0.41
26:LA:518:G:H2'	26:LA:519:U:C6	2.55	0.41
26:LA:617:G:N1	26:LA:618:G:C5	2.87	0.41
26:LA:838:C:C2	26:LA:839:U:C5	3.07	0.41
26:LA:1019:U:H4'	26:LA:1121:C:O2'	2.20	0.41
26:LA:1087:G:C5	26:LA:1089:A:C5	3.08	0.41
26:LA:1168:G:N2	26:LA:1182:G:H1'	2.35	0.41
26:LA:1233:C:C4	26:LA:1234:U:C4	3.08	0.41
26:LA:1323:C:OP2	28:LU:84:ARG:NH2	2.52	0.41
26:LA:1391:U:C6	26:LA:1391:U:H3'	2.55	0.41
26:LA:1460:U:C6	26:LA:1460:U:H5"	2.55	0.41
26:LA:1531:C:C2	26:LA:1532:A:C8	3.08	0.41
26:LA:1797:G:C4	26:LA:1798:U:C5	3.08	0.41
26:LA:1813:G:O6	26:LA:1814:G:C2	2.73	0.41
26:LA:2574:G:N3	26:LA:2574:G:H2'	2.34	0.41
26:LA:2887:A:C5	26:LA:2888:C:C5	3.08	0.41
30:LW:48:VAL:H	30:LW:53:GLN:HG3	1.85	0.41
46:LH:25:ILE:HG21	46:LH:75:VAL:HA	2.02	0.41
58:LT:68:ARG:HD2	58:LT:92:TRP:CZ2	2.55	0.41
2:SA:61:G:C4	2:SA:107:G:N2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SA:204:G:O6	2:SA:468:A:C5	2.73	0.41
2:SA:696:A:C5	2:SA:697:U:O4	2.74	0.41
2:SA:773:G:C6	2:SA:774:G:C5	3.08	0.41
2:SA:1267:C:H41	2:SA:1327:C:H1'	1.85	0.41
2:SA:1319:A:H5"	2:SA:1319:A:C8	2.56	0.41
23:SR:20:ILE:HG13	23:SR:21:ASP:H	1.85	0.41
24:S3:110:MET:HB3	24:S3:112:TYR:CE2	2.55	0.41
26:LA:144:A:C6	26:LA:145:C:C4	3.08	0.41
26:LA:855:G:C6	26:LA:856:G:C5	3.07	0.41
26:LA:860:U:O4	26:LA:2268:A:C4	2.73	0.41
26:LA:1324:G:OP2	28:LU:84:ARG:NH1	2.53	0.41
26:LA:1413:A:C2	26:LA:1590:A:C2	3.08	0.41
26:LA:1558:C:C5	26:LA:1560:G:C4	3.09	0.41
26:LA:1572:A:C2	26:LA:1573:G:C4	3.08	0.41
26:LA:1727:C:C5	26:LA:1728:C:C4	3.08	0.41
26:LA:1848:A:C8	26:LA:1848:A:H3'	2.55	0.41
26:LA:1914:C:H1'	26:LA:1915:C:C4	2.55	0.41
26:LA:1936:A:C6	26:LA:1945:G:N2	2.88	0.41
26:LA:2532:G:C6	26:LA:2533:U:O2	2.73	0.41
33:LZ:51:SER:C	33:LZ:52:ALA:O	2.61	0.41
39:L3:30:ASP:CG	39:L3:31:LYS:N	2.78	0.41
57:LS:24:TYR:CD2	57:LS:24:TYR:C	2.98	0.41
2:SA:55:A:C4	2:SA:56:U:C6	3.08	0.41
2:SA:158:G:C6	2:SA:159:G:C5	3.08	0.41
2:SA:741:G:C6	2:SA:742:G:C5	3.08	0.41
2:SA:847:G:C6	2:SA:848:C:C4	3.08	0.41
2:SA:919:A:C6	2:SA:920:U:C4	3.08	0.41
2:SA:1088:G:C6	2:SA:1089:G:C5	3.09	0.41
2:SA:1145:A:N7	19:SC:230:GLY:HA2	2.35	0.41
2:SA:1295:U:H2'	2:SA:1296:C:C6	2.54	0.41
2:SA:1417:G:C6	2:SA:1482:G:C6	3.08	0.41
15:SO:70:LYS:HB3	15:SO:77:TYR:CG	2.54	0.41
18:SB:14:HIS:CE1	18:SB:40:ILE:HG12	2.55	0.41
24:S3:29:ILE:HG23	24:S3:278:LEU:HD11	2.03	0.41
24:S3:49:MET:HG2	24:S3:55:GLU:HG2	2.03	0.41
25:LB:11:C:C6	25:LB:12:C:C5	3.08	0.41
26:LA:684:G:H5"	41:L5:16:HIS:CE1	2.54	0.41
26:LA:858:G:C6	26:LA:2268:A:C2	3.09	0.41
26:LA:1017:G:C6	26:LA:1018:U:C4	3.09	0.41
26:LA:1410:G:C5	26:LA:1411:U:C5	3.08	0.41
26:LA:1678:A:C6	26:LA:1679:A:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2024:G:C6	26:LA:2040:G:N1	2.88	0.41
26:LA:2126:A:C5	26:LA:2173:A:C6	3.08	0.41
26:LA:2145:C:H3'	26:LA:2146:C:H4'	2.01	0.41
26:LA:2395:C:H2'	26:LA:2396:G:C8	2.54	0.41
26:LA:2502:G:H8	26:LA:2502:G:H2'	1.74	0.41
26:LA:2504:U:H3'	26:LA:2505:G:H5"	2.01	0.41
26:LA:2559:C:H2'	26:LA:2560:A:C8	2.55	0.41
26:LA:2656:U:C5	26:LA:2664:G:N1	2.89	0.41
26:LA:2812:G:H2'	26:LA:2813:A:C8	2.55	0.41
27:LD:103:ILE:HG23	27:LD:103:ILE:O	2.20	0.41
33:LZ:40:GLU:H	33:LZ:40:GLU:CD	2.28	0.41
37:LC:146:THR:HG23	37:LC:152:ALA:HA	2.02	0.41
38:LE:96:ILE:HA	38:LE:99:GLU:OE1	2.20	0.41
55:LQ:11:ALA:HB1	55:LQ:15:ARG:HD2	2.02	0.41
1:SS:2:ARG:NH1	2:SA:1323:G:C8	2.89	0.41
2:SA:236:A:C5	2:SA:237:G:N7	2.88	0.41
2:SA:457:G:O6	2:SA:475:C:N4	2.53	0.41
2:SA:572:A:H4'	2:SA:917:G:H5'	2.02	0.41
2:SA:910:C:C2	2:SA:911:U:C5	3.08	0.41
2:SA:1146:A:C6	2:SA:1147:C:C2	3.08	0.41
19:SC:56:ILE:HD11	19:SC:65:VAL:HG13	2.02	0.41
26:LA:160:A:N9	26:LA:167:A:C2	2.89	0.41
26:LA:196:A:C5	26:LA:805:G:C6	3.09	0.41
26:LA:199:A:C2	26:LA:2434:A:C2	3.09	0.41
26:LA:221:A:N1	26:LA:233:A:C5	2.88	0.41
26:LA:774:G:H5"	27:LD:47:ARG:NH2	2.31	0.41
26:LA:847:U:H5	26:LA:848:C:C5	2.38	0.41
26:LA:1024:G:H21	26:LA:1144:A:C4'	2.34	0.41
26:LA:1042:G:N1	26:LA:1114:C:C2	2.89	0.41
26:LA:1172:C:O5'	26:LA:1172:C:H6	2.03	0.41
26:LA:1279:G:C4	26:LA:1280:G:C8	3.09	0.41
26:LA:1452:G:H8	26:LA:1452:G:H2'	1.74	0.41
26:LA:1933:G:C5	26:LA:1934:C:C5	3.08	0.41
26:LA:1978:A:N7	26:LA:1979:U:C5	2.88	0.41
26:LA:1989:G:C8	26:LA:1990:C:C6	3.09	0.41
26:LA:2265:U:C5	26:LA:2266:A:C5	3.09	0.41
26:LA:2415:G:C6	26:LA:2416:C:C5	3.09	0.41
26:LA:2443:C:H2'	26:LA:2444:G:H8	1.81	0.41
26:LA:2476:A:C2	26:LA:2477:U:C2	3.08	0.41
26:LA:2752:C:C4	26:LA:2753:A:C5	3.07	0.41
31:LX:2:PHE:HB2	31:LX:61:LEU:HD12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:LG:128:SER:HB3	45:LG:154:THR:HG22	2.02	0.41
52:LO:105:MET:SD	52:LO:117:PHE:CZ	3.14	0.41
58:LT:9:GLY:O	58:LT:10:LYS:HG3	2.20	0.41
2:SA:160:A:C2	2:SA:161:A:C4	3.09	0.41
2:SA:276:G:C6	2:SA:277:C:C4	3.09	0.41
2:SA:502:A:N1	2:SA:544:G:C6	2.89	0.41
2:SA:571:U:H3'	2:SA:572:A:H5"	2.02	0.41
2:SA:1329:A:H5"	13:SM:25:GLY:H	1.84	0.41
2:SA:1443:C:C5	2:SA:1444:U:C5	3.08	0.41
24:S3:683:PHE:CD1	24:S3:683:PHE:C	2.98	0.41
25:LB:57:A:C2	45:LG:25:MET:HB3	2.54	0.41
26:LA:84:A:C2	26:LA:98:G:N3	2.88	0.41
26:LA:123:G:C2	26:LA:124:G:C4	3.08	0.41
26:LA:131:A:H2'	26:LA:132:G:H8	1.85	0.41
26:LA:554:U:C4	26:LA:555:G:C6	3.08	0.41
26:LA:930:G:C2	26:LA:933:A:C6	3.09	0.41
26:LA:975:A:C4	26:LA:990:A:C5	3.08	0.41
26:LA:1263:U:C5	26:LA:1264:A:N6	2.88	0.41
26:LA:1455:G:C6	26:LA:1456:G:C5	3.08	0.41
26:LA:1907:G:C5	26:LA:1908:C:C6	3.09	0.41
26:LA:1939:U:H4'	26:LA:2603:G:H22	1.85	0.41
26:LA:2516:A:C5	26:LA:2517:C:C4	3.09	0.41
26:LA:2585:U:C6	26:LA:2585:U:OP1	2.74	0.41
39:L3:48:TYR:CG	39:L3:49:ARG:N	2.89	0.41
2:SA:279:A:H5"	2:SA:280:C:H3'	2.02	0.41
2:SA:282:A:C6	2:SA:283:U:C2	3.07	0.41
2:SA:787:A:N6	2:SA:788:U:C2	2.89	0.41
2:SA:815:A:N1	2:SA:1529:G:C8	2.89	0.41
2:SA:1306:A:C6	2:SA:1307:U:C2	3.09	0.41
2:SA:1426:G:C6	2:SA:1427:C:C4	3.08	0.41
4:S2:67:C:N3	4:S2:68:C:C5	2.89	0.41
25:LB:67:G:N2	25:LB:68:C:H1'	2.36	0.41
26:LA:164:C:C5	26:LA:165:A:C8	3.09	0.41
26:LA:374:A:C6	26:LA:401:A:C8	3.09	0.41
26:LA:422:A:C6	26:LA:423:A:C5	3.09	0.41
26:LA:524:G:C6	26:LA:525:U:C4	3.08	0.41
26:LA:1395:A:C6	26:LA:1398:C:C2	3.08	0.41
26:LA:1504:A:C2	26:LA:1505:A:C4	3.08	0.41
26:LA:1900:A:H1'	26:LA:1970:A:H2'	2.01	0.41
26:LA:1901:A:C6	26:LA:1902:C:N4	2.88	0.41
26:LA:2024:G:C6	26:LA:2040:G:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2349:G:C6	26:LA:2369:A:C6	3.09	0.41
26:LA:2520:C:N3	26:LA:2521:C:C5	2.88	0.41
26:LA:2547:A:N7	26:LA:2566:A:C8	2.89	0.41
26:LA:2627:G:C8	26:LA:2628:C:C5	3.08	0.41
26:LA:2722:G:C6	26:LA:2723:C:N3	2.89	0.41
26:LA:2789:C:C5	26:LA:2893:A:C6	3.08	0.41
29:LV:50:LEU:HD12	29:LV:50:LEU:HA	1.99	0.41
45:LG:76:PHE:CD2	45:LG:76:PHE:N	2.89	0.41
58:LT:52:PRO:O	58:LT:53:PHE:CD1	2.74	0.41
2:SA:184:G:C5	2:SA:185:U:C4	3.09	0.41
2:SA:550:G:H2'	2:SA:551:U:C6	2.56	0.41
2:SA:1261:A:C4	2:SA:1275:A:C2	3.08	0.41
2:SA:1530:G:O2'	2:SA:1531:A:H5'	2.20	0.41
13:SM:99:GLN:H	13:SM:99:GLN:CD	2.25	0.41
19:SC:120:THR:CG2	19:SC:188:ALA:HB2	2.51	0.41
20:SD:96:ARG:O	20:SD:100:VAL:HG23	2.21	0.41
24:S3:516:HIS:O	24:S3:516:HIS:CD2	2.74	0.41
26:LA:93:G:H2'	26:LA:94:A:O4'	2.21	0.41
26:LA:190:A:C6	26:LA:191:A:C6	3.09	0.41
26:LA:191:A:C2	26:LA:192:C:N3	2.89	0.41
26:LA:843:G:H2'	26:LA:844:A:C8	2.56	0.41
26:LA:1054:A:C2	26:LA:1106:G:C5	3.08	0.41
26:LA:1369:G:C6	26:LA:1370:C:C4	3.08	0.41
26:LA:2058:A:C5	26:LA:2059:A:N1	2.88	0.41
26:LA:2121:G:C6	26:LA:2122:U:C4	3.09	0.41
26:LA:2187:U:H2'	26:LA:2188:U:C6	2.56	0.41
26:LA:2416:C:N3	26:LA:2417:C:C5	2.89	0.41
26:LA:2718:G:C6	26:LA:2719:G:C5	3.09	0.41
27:LD:229:HIS:CD2	27:LD:229:HIS:C	2.96	0.41
48:LN:121:THR:HA	48:LN:141:LYS:O	2.20	0.41
52:LO:115:GLU:OE2	52:LO:115:GLU:HA	2.21	0.41
53:LP:100:CYS:H	53:LP:111:ALA:HA	1.85	0.41
2:SA:179:A:C5	2:SA:180:U:C4	3.09	0.41
2:SA:391:G:C6	2:SA:392:C:C4	3.09	0.41
2:SA:500:G:C2	2:SA:501:C:C2	3.09	0.41
2:SA:787:A:H3'	2:SA:788:U:H5"	2.03	0.41
2:SA:834:U:H2'	2:SA:835:U:C6	2.55	0.41
2:SA:945:G:H5'	2:SA:1338:G:H22	1.84	0.41
2:SA:1063:C:C4	2:SA:1064:G:C6	3.09	0.41
2:SA:1124:G:C4	2:SA:1145:A:H2	2.39	0.41
2:SA:1239:A:C5	2:SA:1298:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SA:1339:A:C8	2:SA:1340:A:C8	3.09	0.41
2:SA:1422:G:C2	2:SA:1423:G:C5	3.08	0.41
2:SA:1528:U:H4'	2:SA:1529:G:H5"	2.03	0.41
4:S2:38:A:H3'	4:S2:39:A:C8	2.56	0.41
19:SC:84:GLU:CD	19:SC:87:ARG:HE	2.29	0.41
21:SE:123:LEU:CD1	21:SE:124:ALA:H	2.24	0.41
26:LA:253:C:C4	26:LA:254:G:C8	3.08	0.41
26:LA:387:U:C2	26:LA:388:G:C6	3.09	0.41
26:LA:570:G:C6	26:LA:2030:U:N3	2.89	0.41
26:LA:597:G:C2	26:LA:661:A:C2	3.08	0.41
26:LA:930:G:H2'	26:LA:933:A:H2	1.84	0.41
26:LA:1085:A:H4'	26:LA:1105:U:H4'	2.02	0.41
26:LA:1173:U:O2	26:LA:1173:U:H2'	2.20	0.41
26:LA:1276:A:C2	26:LA:1277:G:C4	3.08	0.41
26:LA:1561:C:C2	26:LA:1562:U:C5	3.08	0.41
26:LA:1631:G:C2	26:LA:1633:G:C8	3.09	0.41
26:LA:1770:G:N1	26:LA:1983:G:C5	2.89	0.41
26:LA:1773:A:C4	26:LA:1829:A:C4	3.08	0.41
26:LA:1933:G:C5	26:LA:1934:C:C4	3.08	0.41
26:LA:2183:A:H2'	26:LA:2184:A:C8	2.55	0.41
26:LA:2665:A:C8	26:LA:2666:C:O4'	2.74	0.41
26:LA:2776:A:C5	26:LA:2782:G:C4	3.08	0.41
26:LA:2840:C:H2'	26:LA:2841:C:C6	2.56	0.41
27:LD:260:LYS:HA	27:LD:263:ASP:HB2	2.02	0.41
40:L4:36:LYS:HA	40:L4:47:ILE:HA	2.02	0.41
45:LG:43:ILE:HD13	45:LG:43:ILE:HG21	1.80	0.41
53:LP:14:SER:HA	53:LP:17:ARG:NH1	2.36	0.41
1:SS:51:HIS:CE1	2:SA:1220:G:H1'	2.56	0.41
2:SA:53:A:C5	2:SA:54:C:C6	3.09	0.41
2:SA:192:A:C5	2:SA:193:C:C5	3.09	0.41
2:SA:316:C:O2	2:SA:338:A:C2	2.74	0.41
2:SA:363:A:C5	2:SA:364:A:C6	3.08	0.41
2:SA:410:G:OP2	20:SD:25:ARG:NH2	2.53	0.41
2:SA:415:A:H3'	2:SA:416:G:H8	1.85	0.41
2:SA:499:A:C6	2:SA:547:A:C8	3.09	0.41
2:SA:669:G:C2	2:SA:670:G:C8	3.09	0.41
2:SA:693:G:C4	2:SA:694:A:C8	3.08	0.41
2:SA:1131:G:O6	2:SA:1132:C:C4	2.74	0.41
2:SA:1231:G:C6	2:SA:1232:U:C4	3.09	0.41
2:SA:1501:C:C4	2:SA:1504:G:C4	3.09	0.41
22:SF:47:LEU:HD12	22:SF:55:HIS:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:S3:641:LEU:HD23	24:S3:655:ALA:HB2	2.03	0.41
25:LB:69:G:N7	25:LB:70:C:C5	2.89	0.41
26:LA:17:G:C6	26:LA:18:U:C4	3.09	0.41
26:LA:23:G:C6	26:LA:518:G:C6	3.08	0.41
26:LA:83:A:N7	26:LA:101:A:C6	2.89	0.41
26:LA:227:A:C4	26:LA:2407:A:H1'	2.54	0.41
26:LA:244:A:C6	26:LA:255:A:C8	3.09	0.41
26:LA:301:G:C2	26:LA:302:C:C2	3.09	0.41
26:LA:332:A:C5	26:LA:335:C:C4	3.08	0.41
26:LA:462:C:C2	26:LA:468:G:N2	2.89	0.41
26:LA:524:G:C6	26:LA:525:U:O4	2.74	0.41
26:LA:689:A:C6	26:LA:690:G:C5	3.08	0.41
26:LA:721:A:C5	26:LA:722:A:C8	3.09	0.41
26:LA:734:A:C2	26:LA:735:A:N9	2.89	0.41
26:LA:774:G:C5'	27:LD:47:ARG:NH2	2.83	0.41
26:LA:780:G:C4	26:LA:782:A:C6	3.09	0.41
26:LA:961:C:C2	26:LA:2031:A:C6	3.09	0.41
26:LA:972:A:H3'	26:LA:973:A:H2'	2.02	0.41
26:LA:1057:A:N3	26:LA:1058:U:C6	2.89	0.41
26:LA:1128:G:C4	26:LA:2518:A:C2	3.09	0.41
26:LA:1195:G:C2	26:LA:1196:C:C6	3.09	0.41
26:LA:1255:U:H3'	26:LA:1256:G:H5"	2.03	0.41
26:LA:1331:G:C2	26:LA:1333:G:C8	3.08	0.41
26:LA:1437:C:H2'	26:LA:1438:U:C6	2.56	0.41
26:LA:1471:G:H2'	26:LA:1472:C:C6	2.56	0.41
26:LA:1488:C:C2	26:LA:1502:A:N1	2.89	0.41
26:LA:1569:A:C2	26:LA:1570:A:C4	3.09	0.41
26:LA:1638:C:C4	26:LA:1639:C:C4	3.09	0.41
26:LA:1764:C:H2'	26:LA:1765:U:C6	2.55	0.41
26:LA:1959:G:C6	26:LA:1960:A:C5	3.09	0.41
26:LA:2077:A:N7	26:LA:2435:A:C5	2.89	0.41
26:LA:2135:A:H61	26:LA:2156:G:H1'	1.86	0.41
26:LA:2165:C:H2'	26:LA:2166:U:OP2	2.20	0.41
26:LA:2519:U:C4	26:LA:2542:A:C4	3.09	0.41
26:LA:2592:G:H2'	26:LA:2593:U:H6	1.85	0.41
26:LA:2679:A:C2	26:LA:2729:G:C2	3.08	0.41
26:LA:2692:G:C2	26:LA:2693:G:C4	3.08	0.41
26:LA:2767:C:C2	26:LA:2768:U:C5	3.09	0.41
26:LA:2789:C:C5	26:LA:2893:A:C5	3.09	0.41
26:LA:2796:U:C5	26:LA:2798:U:C4	3.09	0.41
26:LA:2816:G:C2	26:LA:2831:G:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2842:G:C2	26:LA:2843:G:C4	3.09	0.41
27:LD:51:ARG:O	27:LD:52:HIS:CD2	2.74	0.41
27:LD:115:ILE:CD1	27:LD:116:GLN:H	2.29	0.41
32:LY:55:ASP:CG	32:LY:56:HIS:N	2.79	0.41
38:LE:49:GLN:HA	38:LE:81:GLU:HA	2.03	0.41
55:LQ:80:GLU:HA	55:LQ:80:GLU:OE2	2.21	0.41
58:LT:22:LEU:HD23	58:LT:96:VAL:HG22	2.03	0.41
2:SA:69:G:C6	2:SA:70:U:C4	3.09	0.41
2:SA:158:G:C6	2:SA:159:G:C4	3.09	0.41
2:SA:286:C:C4	2:SA:287:U:C4	3.09	0.41
2:SA:621:A:N6	2:SA:622:A:C6	2.89	0.41
2:SA:636:U:H2'	2:SA:637:C:C6	2.56	0.41
2:SA:716:A:C6	2:SA:717:U:C4	3.08	0.41
2:SA:749:A:C2	2:SA:750:C:C2	3.09	0.41
2:SA:860:A:H2'	2:SA:861:G:O4'	2.21	0.41
2:SA:887:G:N2	2:SA:911:U:C2	2.89	0.41
2:SA:928:G:C2	2:SA:1390:U:O2	2.74	0.41
2:SA:958:A:C6	2:SA:959:A:C2	3.09	0.41
2:SA:1078:U:O4	2:SA:1079:G:C2	2.75	0.41
4:S2:26:C:C4	4:S2:27:G:C5	3.09	0.41
22:SF:35:LYS:CB	22:SF:37:HIS:CE1	3.04	0.41
26:LA:83:A:C4	26:LA:101:A:C2	3.09	0.41
26:LA:283:G:C6	26:LA:284:U:C2	3.08	0.41
26:LA:778:G:C2	26:LA:787:C:O2	2.74	0.41
26:LA:993:G:O6	26:LA:1161:C:N4	2.53	0.41
26:LA:1405:U:H2'	26:LA:1406:U:C6	2.56	0.41
26:LA:1419:A:H2'	26:LA:1421:G:N7	2.35	0.41
26:LA:1450:G:C6	26:LA:1451:C:N4	2.89	0.41
26:LA:1651:G:C2	26:LA:1652:A:C4	3.09	0.41
26:LA:1878:G:H2'	26:LA:1879:C:C6	2.56	0.41
26:LA:2056:G:N1	26:LA:2577:A:H1'	2.36	0.41
26:LA:2440:C:H5"	26:LA:2587:A:H4'	2.03	0.41
26:LA:2494:G:C4	26:LA:2495:G:C8	3.09	0.41
26:LA:2636:C:H2'	26:LA:2637:U:C6	2.56	0.41
26:LA:2809:A:C6	26:LA:2810:A:C6	3.09	0.41
27:LD:145:MET:SD	27:LD:153:LEU:HD11	2.60	0.41
48:LN:123:ARG:HH12	48:LN:144:GLU:H	1.65	0.41
53:LP:58:ASP:CG	53:LP:59:SER:N	2.79	0.41
2:SA:21:G:H2'	2:SA:22:G:C8	2.56	0.40
2:SA:27:G:C6	2:SA:557:G:C2	3.09	0.40
2:SA:675:A:N1	2:SA:676:A:C2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SA:763:G:C5	2:SA:764:C:C5	3.08	0.40
2:SA:777:A:C2	2:SA:778:G:H1'	2.56	0.40
2:SA:782:A:C6	2:SA:801:U:C2	3.09	0.40
2:SA:1269:A:C2	2:SA:1313:U:O4'	2.74	0.40
6:SU:3:ILE:HG22	6:SU:23:GLU:HB2	2.02	0.40
9:SI:49:GLN:HB3	9:SI:50:PRO:HD3	2.03	0.40
13:SM:11:HIS:CG	13:SM:12:LYS:H	2.39	0.40
14:SN:41:TRP:CZ2	14:SN:47:LEU:HD11	2.56	0.40
24:S3:20:ALA:HB3	24:S3:22:LYS:H	1.86	0.40
26:LA:134:G:C6	26:LA:135:U:O4	2.74	0.40
26:LA:135:U:C2	26:LA:136:G:C8	3.10	0.40
26:LA:313:G:H2'	26:LA:314:C:O4'	2.22	0.40
26:LA:535:G:C5	26:LA:536:G:C8	3.09	0.40
26:LA:585:G:C5	26:LA:1251:C:C4	3.09	0.40
26:LA:607:U:C4	26:LA:608:A:N7	2.90	0.40
26:LA:1061:U:C2	49:LK:9:LYS:HD2	2.56	0.40
26:LA:1412:U:H2'	26:LA:1413:A:C8	2.57	0.40
26:LA:1439:A:C8	26:LA:1440:U:C6	3.09	0.40
26:LA:1725:U:C5	26:LA:1726:C:C5	3.07	0.40
26:LA:1842:G:C2	26:LA:1843:C:C2	3.09	0.40
26:LA:2024:G:O2'	26:LA:2025:C:H5'	2.21	0.40
26:LA:2190:G:H2'	26:LA:2191:A:C8	2.56	0.40
26:LA:2246:G:H2'	26:LA:2247:A:H8	1.86	0.40
26:LA:2265:U:C6	26:LA:2266:A:C8	3.09	0.40
26:LA:2322:A:C6	26:LA:2323:G:C5	3.10	0.40
26:LA:2478:A:C5	26:LA:2529:G:C8	3.10	0.40
26:LA:2532:G:C6	26:LA:2533:U:C2	3.08	0.40
26:LA:2678:C:C4	26:LA:2679:A:N7	2.89	0.40
47:LJ:6:ASP:O	47:LJ:10:ILE:HB	2.22	0.40
2:SA:61:G:C4	2:SA:107:G:C2	3.09	0.40
2:SA:105:G:C5	2:SA:106:C:C5	3.08	0.40
2:SA:284:C:H2'	2:SA:285:C:C6	2.56	0.40
2:SA:602:A:C6	2:SA:603:U:C4	3.09	0.40
2:SA:800:G:H2'	2:SA:801:U:C6	2.57	0.40
2:SA:824:G:C2	2:SA:825:A:C5	3.09	0.40
2:SA:923:A:C2	2:SA:1395:C:O2	2.74	0.40
2:SA:942:G:H2'	2:SA:943:U:C6	2.56	0.40
2:SA:1022:A:C6	2:SA:1023:U:C5	3.09	0.40
2:SA:1323:G:H2'	2:SA:1324:A:C8	2.56	0.40
2:SA:1376:U:H3'	7:SG:8:GLN:HE22	1.86	0.40
21:SE:105:ILE:H	21:SE:105:ILE:HG12	1.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:7:G:C6	26:LA:8:C:C4	3.09	0.40
26:LA:83:A:C5	26:LA:101:A:C4	3.09	0.40
26:LA:91:A:H4'	26:LA:92:U:H5'	2.03	0.40
26:LA:783:A:C8	26:LA:783:A:C3'	3.04	0.40
26:LA:1057:A:H1'	26:LA:1086:A:C5	2.57	0.40
26:LA:1071:G:H2'	26:LA:1071:G:N3	2.36	0.40
26:LA:1286:A:C2	26:LA:1289:C:C5	3.09	0.40
26:LA:1340:U:H3'	29:LV:61:LEU:CD1	2.52	0.40
26:LA:1491:G:C6	26:LA:1500:G:C2	3.09	0.40
26:LA:1723:G:H3'	26:LA:1724:G:C8	2.56	0.40
26:LA:1794:A:N1	26:LA:1795:C:C4	2.90	0.40
26:LA:1916:A:C6	26:LA:1917:U:H6	2.39	0.40
26:LA:1970:A:C8	26:LA:1972:G:C4	3.09	0.40
26:LA:2358:A:OP1	26:LA:2358:A:C8	2.71	0.40
26:LA:2711:A:C8	26:LA:2714:G:O4'	2.74	0.40
26:LA:2859:G:C6	26:LA:2860:A:N6	2.88	0.40
37:LC:19:LYS:HG2	37:LC:20:GLN:N	2.36	0.40
44:LF:120:VAL:HG11	44:LF:193:VAL:HG21	2.01	0.40
54:LM:12:ASP:HB3	54:LM:99:ILE:HG22	2.02	0.40
1:SS:54:ARG:HH21	2:SA:958:A:N6	2.19	0.40
2:SA:40:C:H2'	2:SA:41:G:C8	2.55	0.40
2:SA:409:U:C4	2:SA:410:G:C5	3.10	0.40
2:SA:427:U:H2'	2:SA:428:G:N7	2.35	0.40
2:SA:463:U:C4	2:SA:464:U:O2	2.74	0.40
2:SA:533:A:C2	2:SA:536:C:C5	3.10	0.40
2:SA:550:G:H2'	2:SA:551:U:H6	1.87	0.40
2:SA:729:A:H2'	2:SA:730:G:C8	2.56	0.40
2:SA:1271:A:H3'	2:SA:1272:G:H8	1.86	0.40
2:SA:1421:G:C6	2:SA:1480:A:C6	3.10	0.40
4:S2:14:A:C4	4:S2:23:G:C4	3.10	0.40
4:S2:14:A:C5	4:S2:23:G:C5	3.10	0.40
12:SL:115:LYS:O	12:SL:116:TYR:CD1	2.75	0.40
14:SN:20:PHE:CD1	14:SN:51:PRO:HB3	2.56	0.40
21:SE:95:MET:SD	21:SE:123:LEU:HD21	2.62	0.40
24:S3:19:ASP:CG	24:S3:145:ARG:HH12	2.30	0.40
25:LB:62:C:H2'	25:LB:63:C:C6	2.57	0.40
26:LA:68:G:C5	26:LA:69:C:C5	3.09	0.40
26:LA:729:G:C4	26:LA:1775:U:C2	3.09	0.40
26:LA:734:A:C2	26:LA:735:A:C4	3.09	0.40
26:LA:762:U:C6	26:LA:763:G:C6	3.09	0.40
26:LA:812:C:H4'	57:LS:12:ARG:HH22	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:1025:G:H1'	26:LA:1135:C:H5'	2.03	0.40
26:LA:1301:A:C2	26:LA:1303:G:C6	3.09	0.40
26:LA:1331:G:C5	26:LA:1333:G:N7	2.89	0.40
26:LA:1510:G:N2	26:LA:1511:G:C4	2.89	0.40
26:LA:1745:A:C2	26:LA:1746:A:C4	3.09	0.40
26:LA:1946:U:C4	26:LA:1947:C:C4	3.09	0.40
26:LA:2068:U:H4'	26:LA:2069:G:OP2	2.20	0.40
26:LA:2082:A:C2	26:LA:2239:G:N3	2.89	0.40
26:LA:2094:A:H5"	51:LI:25:TYR:CE1	2.57	0.40
26:LA:2330:G:C2	26:LA:2386:A:C2	3.09	0.40
26:LA:2365:G:H4'	32:LY:59:PHE:CE1	2.56	0.40
26:LA:2575:C:H1'	26:LA:2576:G:OP2	2.21	0.40
26:LA:2809:A:C2	26:LA:2810:A:N3	2.88	0.40
28:LU:6:LYS:HE3	28:LU:8:ARG:HD2	2.03	0.40
2:SA:14:U:O2	2:SA:16:A:C8	2.74	0.40
2:SA:15:G:C6	2:SA:16:A:C6	3.10	0.40
2:SA:241:G:H2'	2:SA:242:G:C8	2.56	0.40
2:SA:445:G:C2	2:SA:490:C:C2	3.09	0.40
2:SA:560:A:N6	2:SA:566:G:C8	2.89	0.40
2:SA:647:C:H2'	2:SA:648:A:C8	2.57	0.40
2:SA:909:A:C8	2:SA:910:C:C5	3.09	0.40
2:SA:1458:G:H5"	5:ST:25:SER:HB3	2.04	0.40
2:SA:1480:A:C5	2:SA:1481:U:C5	3.10	0.40
2:SA:1517:G:C6	2:SA:1518:A:C4	3.09	0.40
4:S2:70:C:H2'	4:S2:71:G:C8	2.57	0.40
7:SG:148:LYS:HB3	11:SK:60:PHE:CG	2.56	0.40
20:SD:25:ARG:O	20:SD:29:THR:HB	2.21	0.40
24:S3:544:ILE:HB	24:S3:548:TYR:HB2	2.04	0.40
26:LA:5:A:C2	26:LA:2899:A:C2	3.09	0.40
26:LA:12:U:O4	26:LA:13:A:C5	2.74	0.40
26:LA:80:G:C2	26:LA:107:G:C2	3.10	0.40
26:LA:80:G:H5'	26:LA:346:A:H1'	2.03	0.40
26:LA:85:G:C6	26:LA:98:G:C6	3.09	0.40
26:LA:362:A:C5	26:LA:363:G:N7	2.89	0.40
26:LA:671:C:H2'	26:LA:672:C:C6	2.56	0.40
26:LA:860:U:N3	26:LA:2268:A:C8	2.89	0.40
26:LA:925:A:C2	26:LA:926:G:C4	3.10	0.40
26:LA:1268:A:C6	26:LA:2013:A:C8	3.09	0.40
26:LA:1269:A:C8	26:LA:1270:C:H5	2.39	0.40
26:LA:1733:G:C2	26:LA:1734:G:C8	3.09	0.40
26:LA:2437:G:H2'	26:LA:2438:U:H6	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LA:2706:A:H4'	26:LA:2851:A:H5"	2.03	0.40
26:LA:2765:A:H2'	26:LA:2766:A:H5'	2.04	0.40
26:LA:2788:C:H2'	26:LA:2789:C:H6	1.84	0.40
45:LG:169:LEU:N	45:LG:172:PHE:CE1	2.90	0.40
56:LR:13:LYS:H	56:LR:76:HIS:CD2	2.39	0.40
2:SA:236:A:H2'	2:SA:237:G:H8	1.85	0.40
2:SA:522:C:H2'	2:SA:523:A:C8	2.56	0.40
2:SA:720:C:C2	2:SA:721:G:H2'	2.56	0.40
2:SA:730:G:H21	2:SA:765:G:C5'	2.33	0.40
2:SA:878:A:H2'	2:SA:879:C:C6	2.57	0.40
2:SA:1376:U:H3'	7:SG:8:GLN:NE2	2.37	0.40
4:S2:65:G:C5	4:S2:66:C:C5	3.10	0.40
6:SU:9:GLU:HB3	6:SU:10:PRO:HD3	2.02	0.40
9:SI:40:ARG:HD2	9:SI:40:ARG:H	1.86	0.40
12:SL:74:GLN:CD	12:SL:77:SER:HB3	2.46	0.40
24:S3:548:TYR:O	24:S3:551:ALA:HB3	2.21	0.40
25:LB:81:G:H2'	25:LB:82:U:O4'	2.22	0.40
26:LA:199:A:C6	26:LA:2434:A:C5	3.09	0.40
26:LA:199:A:C6	26:LA:2434:A:C6	3.09	0.40
26:LA:253:C:N4	26:LA:254:G:C6	2.90	0.40
26:LA:353:C:H2'	26:LA:354:A:C8	2.57	0.40
26:LA:1202:G:C6	26:LA:1203:U:C4	3.10	0.40
26:LA:1623:G:C6	26:LA:1624:U:C4	3.09	0.40
26:LA:1684:G:C6	26:LA:1685:C:C4	3.09	0.40
26:LA:2254:C:C6	26:LA:2255:G:C8	3.10	0.40
26:LA:2536:G:C5	26:LA:2537:U:C5	3.09	0.40
26:LA:2678:C:H2'	26:LA:2679:A:C8	2.57	0.40
26:LA:2680:U:H5'	38:LE:194:PRO:HA	2.04	0.40
26:LA:2850:A:H2'	26:LA:2851:A:H8	1.87	0.40
32:LY:45:HIS:CE1	32:LY:51:GLY:N	2.90	0.40
44:LF:33:VAL:HG13	44:LF:34:ALA:N	2.36	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
1	SS	89/91 (98%)	71 (80%)	13 (15%)	5 (6%)	1 14
5	ST	84/86 (98%)	77 (92%)	7 (8%)	0	100 100
6	SU	68/70 (97%)	46 (68%)	14 (21%)	8 (12%)	0 4
7	SG	176/178 (99%)	154 (88%)	14 (8%)	8 (4%)	2 17
8	SH	127/129 (98%)	103 (81%)	16 (13%)	8 (6%)	1 12
9	SI	127/129 (98%)	99 (78%)	22 (17%)	6 (5%)	2 17
10	SJ	101/103 (98%)	83 (82%)	11 (11%)	7 (7%)	1 11
11	SK	126/128 (98%)	102 (81%)	18 (14%)	6 (5%)	2 16
12	SL	121/123 (98%)	95 (78%)	14 (12%)	12 (10%)	0 6
13	SM	115/117 (98%)	97 (84%)	11 (10%)	7 (6%)	1 13
14	SN	98/100 (98%)	81 (83%)	12 (12%)	5 (5%)	1 15
15	SO	86/88 (98%)	76 (88%)	7 (8%)	3 (4%)	3 23
16	SP	80/82 (98%)	72 (90%)	4 (5%)	4 (5%)	1 16
17	SQ	81/83 (98%)	67 (83%)	9 (11%)	5 (6%)	1 12
18	SB	238/240 (99%)	212 (89%)	14 (6%)	12 (5%)	1 16
19	SC	230/232 (99%)	196 (85%)	18 (8%)	16 (7%)	1 10
20	SD	203/205 (99%)	166 (82%)	26 (13%)	11 (5%)	1 14
21	SE	164/166 (99%)	127 (77%)	24 (15%)	13 (8%)	1 8
22	SF	133/135 (98%)	114 (86%)	11 (8%)	8 (6%)	1 13
23	SR	72/74 (97%)	57 (79%)	10 (14%)	5 (7%)	1 11
24	S3	700/702 (100%)	611 (87%)	61 (9%)	28 (4%)	2 20
27	LD	270/272 (99%)	215 (80%)	42 (16%)	13 (5%)	2 16
28	LU	108/110 (98%)	95 (88%)	11 (10%)	2 (2%)	6 33
29	LV	98/100 (98%)	75 (76%)	13 (13%)	10 (10%)	0 5
30	LW	101/103 (98%)	84 (83%)	12 (12%)	5 (5%)	1 16
31	LX	92/94 (98%)	83 (90%)	5 (5%)	4 (4%)	2 18
32	LY	82/84 (98%)	57 (70%)	15 (18%)	10 (12%)	0 4
33	LZ	75/77 (97%)	63 (84%)	10 (13%)	2 (3%)	4 27
34	L0	61/63 (97%)	51 (84%)	8 (13%)	2 (3%)	3 24
35	L1	56/58 (97%)	45 (80%)	7 (12%)	4 (7%)	1 10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
36	L2	68/70 (97%)	44 (65%)	15 (22%)	9 (13%)	0 3
37	LC	232/234 (99%)	192 (83%)	29 (12%)	11 (5%)	2 17
38	LE	207/209 (99%)	151 (73%)	34 (16%)	22 (11%)	0 5
39	L3	54/56 (96%)	40 (74%)	7 (13%)	7 (13%)	0 3
40	L4	52/54 (96%)	45 (86%)	5 (10%)	2 (4%)	2 21
41	L5	44/46 (96%)	34 (77%)	7 (16%)	3 (7%)	1 11
42	L6	62/64 (97%)	53 (86%)	8 (13%)	1 (2%)	7 36
43	L7	36/38 (95%)	26 (72%)	5 (14%)	5 (14%)	0 3
44	LF	199/201 (99%)	163 (82%)	21 (11%)	15 (8%)	1 9
45	LG	176/178 (99%)	133 (76%)	26 (15%)	17 (10%)	0 6
46	LH	174/176 (99%)	127 (73%)	29 (17%)	18 (10%)	0 5
47	LJ	162/164 (99%)	143 (88%)	11 (7%)	8 (5%)	1 16
48	LN	142/144 (99%)	116 (82%)	22 (16%)	4 (3%)	4 26
49	LK	139/141 (99%)	114 (82%)	17 (12%)	8 (6%)	1 13
50	LL	140/142 (99%)	116 (83%)	14 (10%)	10 (7%)	1 10
51	LI	147/149 (99%)	121 (82%)	16 (11%)	10 (7%)	1 11
52	LO	134/136 (98%)	111 (83%)	14 (10%)	9 (7%)	1 11
53	LP	125/127 (98%)	109 (87%)	10 (8%)	6 (5%)	2 16
54	LM	121/123 (98%)	91 (75%)	18 (15%)	12 (10%)	0 6
55	LQ	115/117 (98%)	108 (94%)	5 (4%)	2 (2%)	7 35
56	LR	112/114 (98%)	79 (70%)	17 (15%)	16 (14%)	0 3
57	LS	115/117 (98%)	104 (90%)	5 (4%)	6 (5%)	1 15
58	LT	101/103 (98%)	87 (86%)	11 (11%)	3 (3%)	3 25
All	All	7019/7125 (98%)	5781 (82%)	805 (12%)	433 (6%)	2 12

All (433) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	SS	11	ASP
1	SS	37	SER
1	SS	75	PRO
6	SU	10	PRO
6	SU	18	PHE
7	SG	78	ARG

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Mol	Chain	Res	Type
7	SG	79	VAL
7	SG	114	SER
8	SH	74	ILE
8	SH	94	VAL
9	SI	14	SER
9	SI	110	VAL
10	SJ	4	GLN
10	SJ	59	LYS
10	SJ	62	ARG
11	SK	5	ILE
11	SK	52	ARG
11	SK	125	LYS
11	SK	127	ARG
12	SL	14	LYS
12	SL	74	GLN
12	SL	104	SER
13	SM	9	PRO
13	SM	22	TYR
13	SM	63	VAL
13	SM	115	ILE
15	SO	21	THR
16	SP	2	VAL
16	SP	12	LYS
17	SQ	82	VAL
18	SB	20	ARG
18	SB	39	ILE
18	SB	151	LYS
18	SB	190	SER
19	SC	50	SER
19	SC	126	ARG
20	SD	6	PRO
20	SD	191	SER
20	SD	192	ALA
21	SE	23	THR
21	SE	102	THR
21	SE	152	VAL
22	SF	84	VAL
22	SF	132	GLU
24	S3	76	LYS
24	S3	207	PRO
24	S3	401	ALA
24	S3	562	ALA

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Mol	Chain	Res	Type
27	LD	38	LYS
27	LD	59	GLN
27	LD	94	LEU
29	LV	28	ASN
29	LV	37	ASP
30	LW	3	LYS
31	LX	2	PHE
31	LX	85	LYS
32	LY	19	ARG
32	LY	29	SER
32	LY	30	VAL
32	LY	37	VAL
32	LY	50	VAL
32	LY	56	HIS
33	LZ	19	HIS
36	L2	35	ASP
37	LC	112	ASP
37	LC	147	PRO
37	LC	166	ASP
38	LE	16	THR
38	LE	17	GLU
38	LE	97	SER
38	LE	119	ALA
38	LE	130	GLN
38	LE	152	PRO
38	LE	162	ALA
39	L3	27	LEU
39	L3	43	THR
40	L4	50	GLU
41	L5	41	ARG
41	L5	44	VAL
43	L7	30	GLU
44	LF	45	ALA
44	LF	88	ARG
45	LG	41	GLU
45	LG	43	ILE
45	LG	78	ILE
46	LH	8	VAL
46	LH	53	PRO
46	LH	175	LYS
47	LJ	86	GLU
49	LK	33	ASN

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Mol	Chain	Res	Type
49	LK	120	ASP
50	LL	40	HIS
51	LI	20	ASN
51	LI	75	LEU
51	LI	121	VAL
52	LO	6	ARG
52	LO	58	LYS
52	LO	133	LYS
54	LM	3	GLN
54	LM	5	GLN
54	LM	79	PHE
54	LM	119	ALA
56	LR	5	LYS
56	LR	25	VAL
56	LR	69	VAL
56	LR	91	VAL
58	LT	79	ARG
1	SS	82	HIS
6	SU	8	ASN
6	SU	13	VAL
6	SU	20	ARG
7	SG	81	GLY
7	SG	149	ALA
7	SG	165	ALA
9	SI	115	VAL
10	SJ	57	VAL
11	SK	15	VAL
12	SL	22	ALA
12	SL	43	LYS
12	SL	117	GLY
14	SN	2	LYS
16	SP	25	ARG
17	SQ	35	LYS
18	SB	15	PHE
18	SB	128	LEU
19	SC	128	MET
19	SC	146	LYS
19	SC	227	GLN
20	SD	24	VAL
20	SD	28	ASP
20	SD	29	THR
20	SD	166	LYS

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Mol	Chain	Res	Type
21	SE	9	GLU
21	SE	123	LEU
21	SE	126	ALA
23	SR	12	PHE
23	SR	20	ILE
24	S3	38	LYS
24	S3	45	GLY
24	S3	354	ALA
24	S3	409	GLU
24	S3	488	ALA
24	S3	496	LYS
24	S3	571	VAL
24	S3	690	PRO
28	LU	89	ALA
29	LV	2	ILE
29	LV	38	ALA
29	LV	52	GLU
29	LV	70	HIS
29	LV	78	SER
30	LW	36	GLU
30	LW	79	ALA
31	LX	71	LYS
32	LY	10	ARG
35	L1	30	ARG
36	L2	22	MET
36	L2	39	LYS
37	LC	121	MET
37	LC	226	GLN
37	LC	227	ALA
38	LE	32	ASN
38	LE	96	ILE
38	LE	118	PHE
38	LE	122	VAL
38	LE	127	PHE
38	LE	139	SER
38	LE	163	GLY
38	LE	208	LYS
39	L3	8	THR
39	L3	20	ALA
40	L4	16	THR
44	LF	65	THR
44	LF	68	ALA

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Mol	Chain	Res	Type
45	LG	32	LYS
45	LG	62	GLN
45	LG	81	GLY
45	LG	87	LYS
45	LG	99	PHE
45	LG	176	PHE
46	LH	59	ASP
46	LH	151	ARG
47	LJ	21	ALA
47	LJ	55	ARG
47	LJ	72	LYS
48	LN	2	ARG
48	LN	113	ALA
48	LN	143	GLU
49	LK	87	SER
50	LL	65	THR
50	LL	120	ARG
51	LI	90	LEU
51	LI	122	LEU
52	LO	18	ARG
52	LO	87	GLY
52	LO	134	THR
53	LP	12	ARG
53	LP	59	SER
54	LM	44	LYS
56	LR	63	ILE
56	LR	96	LEU
56	LR	110	LYS
56	LR	111	GLU
57	LS	6	GLY
57	LS	85	ALA
57	LS	91	ARG
58	LT	29	THR
58	LT	49	ILE
6	SU	6	ARG
6	SU	68	ARG
7	SG	174	LEU
8	SH	22	ALA
8	SH	62	LEU
8	SH	82	LEU
9	SI	2	GLU
9	SI	114	LYS

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Mol	Chain	Res	Type
10	SJ	14	ASP
12	SL	18	SER
12	SL	44	PRO
12	SL	71	HIS
14	SN	39	ASP
14	SN	62	ARG
15	SO	19	ASN
18	SB	70	GLY
18	SB	84	LEU
18	SB	127	LYS
18	SB	192	PRO
19	SC	25	THR
19	SC	60	ALA
19	SC	106	ARG
19	SC	162	ALA
19	SC	211	ALA
19	SC	216	PRO
20	SD	138	PRO
21	SE	22	LYS
21	SE	125	LYS
22	SF	116	PHE
23	SR	23	LYS
24	S3	44	ASP
24	S3	146	MET
24	S3	305	PRO
24	S3	310	ALA
24	S3	344	SER
24	S3	407	ARG
24	S3	452	SER
27	LD	7	PRO
27	LD	121	ALA
27	LD	270	ARG
29	LV	3	ARG
30	LW	30	SER
30	LW	53	GLN
32	LY	36	ILE
32	LY	75	ASN
33	LZ	76	LYS
35	L1	40	THR
36	L2	9	TYR
37	LC	38	PHE
37	LC	110	ASN

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Mol	Chain	Res	Type
38	LE	113	SER
43	L7	31	PRO
44	LF	57	LYS
44	LF	62	GLN
45	LG	72	SER
45	LG	74	ALA
45	LG	112	ASP
45	LG	136	ILE
46	LH	6	ALA
46	LH	29	ASN
46	LH	47	ASN
46	LH	90	GLY
46	LH	111	PRO
46	LH	114	HIS
50	LL	79	GLY
50	LL	132	HIS
51	LI	93	SER
53	LP	10	LEU
53	LP	106	ASP
54	LM	45	GLU
54	LM	94	PRO
54	LM	104	THR
56	LR	51	ASN
57	LS	86	SER
8	SH	56	PRO
8	SH	83	ARG
8	SH	93	LYS
12	SL	23	LEU
14	SN	80	ARG
17	SQ	3	LYS
17	SQ	49	ASN
18	SB	156	LEU
19	SC	97	PRO
19	SC	226	GLN
20	SD	48	SER
21	SE	82	HIS
21	SE	105	ILE
22	SF	83	ALA
22	SF	95	ALA
22	SF	128	ASP
23	SR	33	THR
24	S3	543	VAL

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Mol	Chain	Res	Type
27	LD	57	HIS
27	LD	97	ASP
27	LD	98	GLY
27	LD	148	GLY
28	LU	41	LYS
32	LY	48	ALA
35	L1	11	SER
35	L1	15	ARG
36	L2	10	GLU
36	L2	23	LYS
36	L2	41	HIS
36	L2	69	SER
37	LC	231	ALA
38	LE	18	ASP
43	L7	21	GLY
44	LF	55	SER
44	LF	120	VAL
44	LF	165	HIS
44	LF	171	ASP
45	LG	173	ASP
46	LH	7	PRO
46	LH	32	LEU
46	LH	38	ASP
47	LJ	2	LEU
47	LJ	113	GLU
49	LK	51	GLY
49	LK	93	ASN
50	LL	43	GLU
50	LL	66	GLY
51	LI	3	VAL
51	LI	10	ALA
51	LI	18	GLN
51	LI	115	VAL
52	LO	20	LEU
52	LO	135	VAL
53	LP	107	ASN
53	LP	108	ALA
54	LM	17	ARG
54	LM	67	LYS
54	LM	93	GLN
54	LM	101	GLY
55	LQ	24	THR

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Mol	Chain	Res	Type
56	LR	65	ASN
56	LR	76	HIS
56	LR	92	ARG
1	SS	65	MET
7	SG	154	ARG
9	SI	127	SER
13	SM	112	ARG
14	SN	32	ASP
15	SO	17	ASP
17	SQ	2	ASP
20	SD	150	LYS
22	SF	91	ARG
23	SR	4	PHE
24	S3	78	TYR
24	S3	299	ASP
24	S3	408	MET
24	S3	442	PRO
24	S3	685	LYS
27	LD	150	GLY
27	LD	252	LYS
29	LV	35	ALA
34	L0	57	LEU
38	LE	36	GLN
38	LE	37	VAL
38	LE	95	SER
38	LE	153	GLY
39	L3	2	VAL
39	L3	22	THR
41	L5	8	SER
42	L6	27	ASN
43	L7	10	LEU
44	LF	188	MET
45	LG	37	MET
47	LJ	33	THR
47	LJ	76	VAL
48	LN	19	LEU
49	LK	65	SER
49	LK	73	PRO
56	LR	50	ARG
56	LR	94	ALA
57	LS	95	ALA
10	SJ	36	VAL

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Mol	Chain	Res	Type
11	SK	10	ARG
12	SL	68	GLY
16	SP	27	ALA
18	SB	32	GLY
19	SC	13	ILE
19	SC	59	PRO
20	SD	3	TYR
21	SE	97	PRO
22	SF	52	ASN
24	S3	18	ILE
24	S3	608	LYS
34	L0	62	GLY
36	L2	27	THR
37	LC	17	ALA
43	L7	35	GLN
44	LF	11	ALA
44	LF	64	GLY
44	LF	85	PHE
45	LG	66	ILE
46	LH	14	VAL
46	LH	40	VAL
50	LL	23	LYS
55	LQ	62	LEU
56	LR	32	VAL
13	SM	96	VAL
19	SC	173	PRO
21	SE	43	GLY
44	LF	59	PRO
46	LH	9	VAL
57	LS	93	ILE
12	SL	27	PRO
24	S3	398	ASP
31	LX	81	PRO
38	LE	142	VAL
45	LG	84	ILE
50	LL	8	PRO
50	LL	127	GLY
56	LR	49	ILE
13	SM	114	PRO
29	LV	53	VAL
37	LC	91	GLY
49	LK	98	GLY

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Mol	Chain	Res	Type
6	SU	2	VAL
10	SJ	40	ILE
27	LD	147	PRO
52	LO	69	PRO
39	L3	24	VAL
46	LH	167	VAL
21	SE	149	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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
1	SS	78/78 (100%)	67 (86%)	11 (14%)	3 19
5	ST	65/65 (100%)	59 (91%)	6 (9%)	8 33
6	SU	60/60 (100%)	53 (88%)	7 (12%)	5 25
7	SG	146/146 (100%)	137 (94%)	9 (6%)	16 44
8	SH	104/104 (100%)	90 (86%)	14 (14%)	4 21
9	SI	106/106 (100%)	89 (84%)	17 (16%)	2 15
10	SJ	90/90 (100%)	80 (89%)	10 (11%)	6 27
11	SK	98/98 (100%)	90 (92%)	8 (8%)	10 36
12	SL	103/103 (100%)	95 (92%)	8 (8%)	11 38
13	SM	95/95 (100%)	81 (85%)	14 (15%)	3 17
14	SN	83/83 (100%)	76 (92%)	7 (8%)	10 35
15	SO	76/76 (100%)	70 (92%)	6 (8%)	11 37
16	SP	65/65 (100%)	57 (88%)	8 (12%)	4 23
17	SQ	77/77 (100%)	73 (95%)	4 (5%)	21 48
18	SB	198/198 (100%)	184 (93%)	14 (7%)	13 40
19	SC	189/189 (100%)	168 (89%)	21 (11%)	6 27
20	SD	172/172 (100%)	149 (87%)	23 (13%)	4 21
21	SE	125/125 (100%)	109 (87%)	16 (13%)	4 22

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
22	SF	116/116 (100%)	99 (85%)	17 (15%)	3 17
23	SR	64/64 (100%)	59 (92%)	5 (8%)	11 38
24	S3	575/575 (100%)	518 (90%)	57 (10%)	7 31
27	LD	217/217 (100%)	190 (88%)	27 (12%)	4 23
28	LU	93/93 (100%)	81 (87%)	12 (13%)	4 22
29	LV	84/84 (100%)	73 (87%)	11 (13%)	4 21
30	LW	84/84 (100%)	78 (93%)	6 (7%)	13 40
31	LX	78/78 (100%)	72 (92%)	6 (8%)	12 38
32	LY	62/62 (100%)	54 (87%)	8 (13%)	4 22
33	LZ	67/67 (100%)	57 (85%)	10 (15%)	3 17
34	L0	55/55 (100%)	49 (89%)	6 (11%)	6 27
35	L1	48/48 (100%)	39 (81%)	9 (19%)	1 10
36	L2	62/62 (100%)	53 (86%)	9 (14%)	3 18
37	LC	181/181 (100%)	159 (88%)	22 (12%)	5 23
38	LE	164/164 (100%)	143 (87%)	21 (13%)	4 22
39	L3	47/47 (100%)	43 (92%)	4 (8%)	10 35
40	L4	48/48 (100%)	44 (92%)	4 (8%)	10 35
41	L5	38/38 (100%)	34 (90%)	4 (10%)	6 29
42	L6	51/51 (100%)	49 (96%)	2 (4%)	28 54
43	L7	34/34 (100%)	31 (91%)	3 (9%)	9 33
44	LF	165/165 (100%)	156 (94%)	9 (6%)	19 47
45	LG	149/149 (100%)	133 (89%)	16 (11%)	6 28
46	LH	137/137 (100%)	120 (88%)	17 (12%)	4 23
47	LJ	122/122 (100%)	110 (90%)	12 (10%)	7 31
48	LN	103/103 (100%)	91 (88%)	12 (12%)	5 25
49	LK	109/109 (100%)	93 (85%)	16 (15%)	3 17
50	LL	116/116 (100%)	108 (93%)	8 (7%)	14 41
51	LI	114/114 (100%)	95 (83%)	19 (17%)	2 14
52	LO	109/109 (100%)	97 (89%)	12 (11%)	6 27
53	LP	103/103 (100%)	95 (92%)	8 (8%)	11 38
54	LM	104/104 (100%)	95 (91%)	9 (9%)	9 34

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
55	LQ	87/87 (100%)	80 (92%)	7 (8%)	11 37
56	LR	99/99 (100%)	87 (88%)	12 (12%)	5 23
57	LS	89/89 (100%)	78 (88%)	11 (12%)	4 23
58	LT	84/84 (100%)	77 (92%)	7 (8%)	10 35
All	All	5788/5788 (100%)	5167 (89%)	621 (11%)	8 28

All (621) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	SS	1	PRO
1	SS	4	LEU
1	SS	6	LYS
1	SS	10	ILE
1	SS	11	ASP
1	SS	12	LEU
1	SS	15	LEU
1	SS	31	ARG
1	SS	38	THR
1	SS	60	PHE
1	SS	80	ARG
5	ST	17	ARG
5	ST	27	MET
5	ST	29	THR
5	ST	58	ASP
5	ST	69	ASN
5	ST	79	THR
6	SU	4	LYS
6	SU	5	VAL
6	SU	6	ARG
6	SU	16	ARG
6	SU	19	LYS
6	SU	35	GLU
6	SU	43	GLU
7	SG	6	ILE
7	SG	34	LYS
7	SG	43	TYR
7	SG	52	ARG
7	SG	57	GLU
7	SG	72	VAL
7	SG	104	VAL
7	SG	132	THR

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Mol	Chain	Res	Type
7	SG	158	LEU
8	SH	9	MET
8	SH	20	ASN
8	SH	24	VAL
8	SH	26	MET
8	SH	30	LYS
8	SH	45	ILE
8	SH	57	GLU
8	SH	60	LEU
8	SH	63	LYS
8	SH	66	GLN
8	SH	79	ARG
8	SH	107	LYS
8	SH	110	MET
8	SH	127	TYR
9	SI	4	GLN
9	SI	11	ARG
9	SI	26	LYS
9	SI	31	GLN
9	SI	45	MET
9	SI	79	ARG
9	SI	87	MET
9	SI	91	GLU
9	SI	94	ARG
9	SI	96	GLU
9	SI	103	VAL
9	SI	105	ARG
9	SI	109	GLN
9	SI	110	VAL
9	SI	124	PRO
9	SI	126	PHE
9	SI	129	ARG
10	SJ	5	ARG
10	SJ	35	GLN
10	SJ	40	ILE
10	SJ	44	THR
10	SJ	50	THR
10	SJ	54	SER
10	SJ	64	GLN
10	SJ	97	ASP
10	SJ	99	GLN
10	SJ	100	ILE

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Mol	Chain	Res	Type
11	SK	11	VAL
11	SK	13	LYS
11	SK	36	ARG
11	SK	63	GLN
11	SK	64	VAL
11	SK	93	GLU
11	SK	99	LEU
11	SK	107	THR
12	SL	23	LEU
12	SL	36	VAL
12	SL	39	THR
12	SL	50	LYS
12	SL	51	VAL
12	SL	72	ASN
12	SL	78	VAL
12	SL	110	LYS
13	SM	3	ILE
13	SM	18	LEU
13	SM	24	VAL
13	SM	45	SER
13	SM	52	ILE
13	SM	63	VAL
13	SM	64	VAL
13	SM	78	ARG
13	SM	86	ARG
13	SM	99	GLN
13	SM	102	LYS
13	SM	107	THR
13	SM	115	ILE
13	SM	116	LYS
14	SN	3	GLN
14	SN	5	MET
14	SN	10	VAL
14	SN	13	VAL
14	SN	34	ASN
14	SN	58	ARG
14	SN	63	CYS
15	SO	16	ARG
15	SO	20	ASP
15	SO	41	HIS
15	SO	42	PHE
15	SO	53	ARG

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Mol	Chain	Res	Type
15	SO	70	LYS
16	SP	1	MET
16	SP	14	ARG
16	SP	26	ASN
16	SP	28	ARG
16	SP	52	LEU
16	SP	56	ARG
16	SP	67	ILE
16	SP	78	VAL
17	SQ	18	LYS
17	SQ	22	VAL
17	SQ	64	ARG
17	SQ	68	LYS
18	SB	24	PRO
18	SB	51	GLU
18	SB	62	ARG
18	SB	63	LYS
18	SB	93	HIS
18	SB	109	SER
18	SB	112	ARG
18	SB	118	THR
18	SB	122	ASP
18	SB	150	ILE
18	SB	163	ILE
18	SB	187	ASP
18	SB	221	ARG
18	SB	238	GLU
19	SC	14	VAL
19	SC	27	GLU
19	SC	52	SER
19	SC	54	ILE
19	SC	56	ILE
19	SC	67	ILE
19	SC	75	VAL
19	SC	105	VAL
19	SC	124	GLU
19	SC	134	LYS
19	SC	138	GLN
19	SC	146	LYS
19	SC	166	TRP
19	SC	167	TYR
19	SC	172	VAL

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Mol	Chain	Res	Type
19	SC	181	ILE
19	SC	197	VAL
19	SC	200	TRP
19	SC	206	ILE
19	SC	219	PRO
19	SC	227	GLN
20	SD	4	LEU
20	SD	13	ARG
20	SD	24	VAL
20	SD	25	ARG
20	SD	33	ILE
20	SD	47	LEU
20	SD	56	GLU
20	SD	63	ILE
20	SD	99	ASN
20	SD	109	THR
20	SD	116	LEU
20	SD	122	ILE
20	SD	128	VAL
20	SD	139	ASN
20	SD	143	SER
20	SD	146	GLU
20	SD	160	LEU
20	SD	168	THR
20	SD	169	TRP
20	SD	187	ARG
20	SD	196	GLU
20	SD	197	HIS
20	SD	203	TYR
21	SE	15	ILE
21	SE	17	VAL
21	SE	42	ASN
21	SE	54	GLU
21	SE	56	PRO
21	SE	64	GLU
21	SE	68	ARG
21	SE	75	LEU
21	SE	82	HIS
21	SE	104	ILE
21	SE	122	VAL
21	SE	123	LEU
21	SE	125	LYS

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Mol	Chain	Res	Type
21	SE	133	ILE
21	SE	155	LYS
21	SE	163	ILE
22	SF	3	HIS
22	SF	5	GLU
22	SF	9	MET
22	SF	12	PRO
22	SF	18	VAL
22	SF	36	ILE
22	SF	41	ASP
22	SF	61	LEU
22	SF	63	ASN
22	SF	68	GLN
22	SF	69	GLU
22	SF	74	LEU
22	SF	77	THR
22	SF	97	THR
22	SF	102	MET
22	SF	110	ARG
22	SF	113	ARG
23	SR	4	PHE
23	SR	20	ILE
23	SR	23	LYS
23	SR	37	LYS
23	SR	65	SER
24	S3	12	ILE
24	S3	23	THR
24	S3	83	ILE
24	S3	86	ILE
24	S3	128	GLN
24	S3	181	VAL
24	S3	184	LEU
24	S3	196	ASP
24	S3	207	PRO
24	S3	217	TRP
24	S3	240	GLU
24	S3	278	LEU
24	S3	286	PRO
24	S3	288	PRO
24	S3	292	PRO
24	S3	298	LEU
24	S3	308	ARG

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Mol	Chain	Res	Type
24	S3	315	PRO
24	S3	325	THR
24	S3	326	ASP
24	S3	336	ARG
24	S3	348	VAL
24	S3	362	ILE
24	S3	373	ILE
24	S3	375	GLU
24	S3	377	ARG
24	S3	381	ILE
24	S3	388	LYS
24	S3	403	ILE
24	S3	415	ILE
24	S3	417	ILE
24	S3	423	THR
24	S3	442	PRO
24	S3	446	VAL
24	S3	453	ASN
24	S3	457	ILE
24	S3	467	ILE
24	S3	487	VAL
24	S3	495	GLN
24	S3	498	THR
24	S3	501	GLU
24	S3	507	GLN
24	S3	514	TYR
24	S3	516	HIS
24	S3	522	TYR
24	S3	531	LYS
24	S3	534	GLU
24	S3	539	ILE
24	S3	561	LYS
24	S3	579	PHE
24	S3	613	GLU
24	S3	634	LEU
24	S3	682	GLU
24	S3	688	GLU
24	S3	695	GLN
24	S3	698	ILE
24	S3	701	ARG
27	LD	22	GLU
27	LD	25	LYS

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Mol	Chain	Res	Type
27	LD	42	ARG
27	LD	57	HIS
27	LD	70	LYS
27	LD	79	ARG
27	LD	97	ASP
27	LD	102	TYR
27	LD	103	ILE
27	LD	115	ILE
27	LD	116	GLN
27	LD	117	SER
27	LD	124	LYS
27	LD	128	THR
27	LD	133	ASN
27	LD	142	ASN
27	LD	145	MET
27	LD	147	PRO
27	LD	173	LEU
27	LD	175	LEU
27	LD	191	LEU
27	LD	227	VAL
27	LD	230	PRO
27	LD	231	HIS
27	LD	235	GLU
27	LD	241	LYS
27	LD	267	VAL
28	LU	11	ARG
28	LU	15	GLN
28	LU	22	ASP
28	LU	30	SER
28	LU	33	LEU
28	LU	40	ASN
28	LU	55	ILE
28	LU	72	THR
28	LU	74	ILE
28	LU	82	MET
28	LU	94	ASP
28	LU	102	HIS
29	LV	2	ILE
29	LV	3	ARG
29	LV	16	VAL
29	LV	18	GLU
29	LV	32	LEU

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Mol	Chain	Res	Type
29	LV	57	VAL
29	LV	60	THR
29	LV	72	GLN
29	LV	74	ILE
29	LV	79	ASP
29	LV	93	LEU
30	LW	23	LYS
30	LW	41	VAL
30	LW	48	VAL
30	LW	51	LEU
30	LW	66	VAL
30	LW	91	LYS
31	LX	12	GLN
31	LX	29	ILE
31	LX	30	ILE
31	LX	68	LYS
31	LX	72	VAL
31	LX	88	HIS
32	LY	3	LYS
32	LY	23	LYS
32	LY	25	PHE
32	LY	28	GLU
32	LY	39	GLN
32	LY	40	ARG
32	LY	43	LYS
32	LY	66	VAL
33	LZ	7	THR
33	LZ	9	LYS
33	LZ	17	ARG
33	LZ	32	LEU
33	LZ	40	GLU
33	LZ	41	SER
33	LZ	59	ASP
33	LZ	60	LYS
33	LZ	63	ILE
33	LZ	73	ARG
34	L0	7	ARG
34	L0	15	ASN
34	L0	18	LEU
34	L0	36	GLN
34	L0	40	SER
34	L0	46	VAL

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Mol	Chain	Res	Type
35	L1	8	GLN
35	L1	13	ILE
35	L1	23	LEU
35	L1	35	VAL
35	L1	41	PRO
35	L1	44	ARG
35	L1	47	ILE
35	L1	51	SER
35	L1	53	MET
36	L2	5	ILE
36	L2	12	ILE
36	L2	24	ILE
36	L2	38	SER
36	L2	45	THR
36	L2	49	ARG
36	L2	56	ARG
36	L2	59	ARG
36	L2	60	PHE
37	LC	4	LEU
37	LC	9	ARG
37	LC	10	VAL
37	LC	12	ARG
37	LC	23	ILE
37	LC	30	LEU
37	LC	46	VAL
37	LC	79	THR
37	LC	108	GLU
37	LC	111	PHE
37	LC	124	VAL
37	LC	137	MET
37	LC	144	THR
37	LC	163	TYR
37	LC	167	LYS
37	LC	172	HIS
37	LC	173	THR
37	LC	192	LEU
37	LC	194	VAL
37	LC	208	TYR
37	LC	224	VAL
37	LC	226	GLN
38	LE	2	ILE
38	LE	11	MET

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Mol	Chain	Res	Type
38	LE	17	GLU
38	LE	18	ASP
38	LE	21	SER
38	LE	24	VAL
38	LE	32	ASN
38	LE	35	THR
38	LE	42	ASN
38	LE	50	VAL
38	LE	70	LYS
38	LE	73	VAL
38	LE	79	LEU
38	LE	107	VAL
38	LE	118	PHE
38	LE	134	HIS
38	LE	149	ASN
38	LE	164	GLN
38	LE	170	VAL
38	LE	176	ASP
38	LE	201	LEU
39	L3	2	VAL
39	L3	6	LYS
39	L3	21	LEU
39	L3	22	THR
40	L4	23	THR
40	L4	33	LEU
40	L4	37	LYS
40	L4	46	VAL
41	L5	2	LYS
41	L5	3	ARG
41	L5	4	THR
41	L5	31	LEU
42	L6	15	LYS
42	L6	29	ARG
43	L7	19	ARG
43	L7	22	VAL
43	L7	26	ILE
44	LF	12	LEU
44	LF	43	THR
44	LF	67	ARG
44	LF	85	PHE
44	LF	113	VAL
44	LF	143	LEU

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Mol	Chain	Res	Type
44	LF	152	GLU
44	LF	181	ILE
44	LF	186	VAL
45	LG	3	LEU
45	LG	10	GLU
45	LG	13	LYS
45	LG	37	MET
45	LG	43	ILE
45	LG	55	ASP
45	LG	56	LEU
45	LG	59	ILE
45	LG	65	LEU
45	LG	66	ILE
45	LG	77	LYS
45	LG	87	LYS
45	LG	145	VAL
45	LG	152	ASP
45	LG	158	THR
45	LG	172	PHE
46	LH	8	VAL
46	LH	33	THR
46	LH	34	ARG
46	LH	47	ASN
46	LH	49	LEU
46	LH	51	PHE
46	LH	59	ASP
46	LH	63	GLN
46	LH	68	ARG
46	LH	72	ASN
46	LH	78	VAL
46	LH	82	PHE
46	LH	93	TYR
46	LH	104	LEU
46	LH	106	LEU
46	LH	138	GLN
46	LH	163	TYR
47	LJ	2	LEU
47	LJ	28	ASP
47	LJ	33	THR
47	LJ	36	LYS
47	LJ	41	ARG
47	LJ	42	LYS

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Mol	Chain	Res	Type
47	LJ	51	MET
47	LJ	57	THR
47	LJ	67	PRO
47	LJ	83	TYR
47	LJ	96	LYS
47	LJ	122	ILE
48	LN	10	GLU
48	LN	25	SER
48	LN	39	LYS
48	LN	48	ARG
48	LN	66	PHE
48	LN	80	SER
48	LN	81	ASP
48	LN	104	GLN
48	LN	126	ARG
48	LN	129	LYS
48	LN	136	GLU
48	LN	142	ILE
49	LK	4	VAL
49	LK	5	GLN
49	LK	12	VAL
49	LK	22	PRO
49	LK	23	VAL
49	LK	41	PHE
49	LK	50	LYS
49	LK	55	PRO
49	LK	57	VAL
49	LK	58	ILE
49	LK	61	TYR
49	LK	73	PRO
49	LK	117	THR
49	LK	126	ARG
49	LK	127	SER
49	LK	133	ARG
50	LL	5	THR
50	LL	9	GLU
50	LL	17	VAL
50	LL	30	THR
50	LL	49	ASP
50	LL	75	TYR
50	LL	76	HIS
50	LL	109	LEU

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Mol	Chain	Res	Type
51	LI	8	LYS
51	LI	9	VAL
51	LI	20	ASN
51	LI	28	ASN
51	LI	66	ASN
51	LI	72	ILE
51	LI	76	GLU
51	LI	78	VAL
51	LI	79	THR
51	LI	82	SER
51	LI	87	GLU
51	LI	94	ILE
51	LI	98	ASP
51	LI	116	ARG
51	LI	127	GLU
51	LI	132	PHE
51	LI	138	VAL
51	LI	142	VAL
51	LI	143	ILE
52	LO	1	MET
52	LO	2	LEU
52	LO	22	GLN
52	LO	26	VAL
52	LO	28	PHE
52	LO	38	ARG
52	LO	47	GLU
52	LO	53	MET
52	LO	59	ARG
52	LO	91	TYR
52	LO	96	ILE
52	LO	111	GLU
53	LP	33	ILE
53	LP	34	ILE
53	LP	40	LYS
53	LP	74	GLU
53	LP	75	ILE
53	LP	79	LEU
53	LP	113	ILE
53	LP	119	SER
54	LM	3	GLN
54	LM	5	GLN
54	LM	35	VAL

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Mol	Chain	Res	Type
54	LM	39	ILE
54	LM	66	LYS
54	LM	84	CYS
54	LM	94	PRO
54	LM	114	LYS
54	LM	116	ILE
55	LQ	8	ILE
55	LQ	30	ARG
55	LQ	31	THR
55	LQ	58	ILE
55	LQ	62	LEU
55	LQ	64	TYR
55	LQ	89	ASP
56	LR	19	PHE
56	LR	25	VAL
56	LR	26	GLU
56	LR	29	VAL
56	LR	42	PHE
56	LR	50	ARG
56	LR	52	ARG
56	LR	55	HIS
56	LR	88	ARG
56	LR	103	THR
56	LR	108	ARG
56	LR	112	ARG
57	LS	8	ILE
57	LS	15	LYS
57	LS	21	LYS
57	LS	48	ASP
57	LS	50	ARG
57	LS	54	ARG
57	LS	58	GLN
57	LS	74	SER
57	LS	76	SER
57	LS	91	ARG
57	LS	108	LEU
58	LT	6	GLN
58	LT	10	LYS
58	LT	11	GLN
58	LT	22	LEU
58	LT	38	VAL
58	LT	40	MET

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Mol	Chain	Res	Type
58	LT	55	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (68) such sidechains are listed below:

Mol	Chain	Res	Type
1	SS	42	ASN
1	SS	56	HIS
5	ST	19	HIS
5	ST	60	GLN
7	SG	8	GLN
7	SG	85	GLN
9	SI	4	GLN
10	SJ	15	HIS
11	SK	39	ASN
11	SK	63	GLN
12	SL	45	ASN
12	SL	72	ASN
13	SM	13	HIS
14	SN	42	ASN
15	SO	49	HIS
17	SQ	46	HIS
18	SB	35	ASN
19	SC	175	HIS
20	SD	39	GLN
20	SD	119	HIS
22	SF	37	HIS
24	S3	56	GLN
24	S3	149	ASN
24	S3	219	GLN
24	S3	258	ASN
24	S3	368	ASN
24	S3	427	GLN
24	S3	453	ASN
24	S3	516	HIS
24	S3	692	ASN
27	LD	14	HIS
27	LD	89	ASN
27	LD	242	HIS
28	LU	40	ASN
31	LX	75	GLN
31	LX	88	HIS
33	LZ	19	HIS

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Mol	Chain	Res	Type
34	L0	45	GLN
35	L1	33	HIS
36	L2	20	ASN
37	LC	67	HIS
37	LC	80	GLN
37	LC	129	GLN
38	LE	32	ASN
38	LE	42	ASN
39	L3	5	ASN
39	L3	18	HIS
41	L5	16	HIS
44	LF	9	GLN
44	LF	136	GLN
45	LG	26	GLN
46	LH	19	ASN
46	LH	114	HIS
47	LJ	121	GLN
48	LN	104	GLN
50	LL	47	HIS
50	LL	77	HIS
50	LL	86	GLN
50	LL	130	HIS
53	LP	3	HIS
53	LP	107	ASN
54	LM	5	GLN
54	LM	93	GLN
56	LR	14	GLN
56	LR	55	HIS
58	LT	6	GLN
58	LT	12	HIS
58	LT	18	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	SA	1541/1542 (99%)	372 (24%)	122 (7%)
25	LB	119/120 (99%)	22 (18%)	9 (7%)
26	LA	2903/2904 (99%)	663 (22%)	221 (7%)
3	S1	46/47 (97%)	36 (78%)	12 (26%)
4	S2	77/77 (100%)	21 (27%)	10 (12%)
All	All	4686/4690 (99%)	1114 (23%)	374 (7%)

All (1114) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	SA	3	A
2	SA	4	U
2	SA	5	U
2	SA	8	A
2	SA	9	G
2	SA	31	G
2	SA	32	A
2	SA	36	C
2	SA	47	C
2	SA	48	C
2	SA	50	A
2	SA	51	A
2	SA	52	C
2	SA	54	C
2	SA	60	A
2	SA	61	G
2	SA	66	A
2	SA	83	C
2	SA	84	U
2	SA	85	U
2	SA	87	C
2	SA	95	C
2	SA	98	A
2	SA	108	G
2	SA	121	U
2	SA	122	G
2	SA	123	U
2	SA	128	G
2	SA	129	A
2	SA	131	A
2	SA	135	C
2	SA	136	C
2	SA	153	C
2	SA	164	G
2	SA	166	U
2	SA	171	A
2	SA	174	A
2	SA	182	A
2	SA	183	C
2	SA	184	G
2	SA	188	C
2	SA	197	A

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Mol	Chain	Res	Type
2	SA	204	G
2	SA	205	A
2	SA	210	C
2	SA	212	G
2	SA	225	C
2	SA	228	A
2	SA	239	U
2	SA	240	G
2	SA	244	U
2	SA	245	U
2	SA	247	G
2	SA	250	A
2	SA	251	G
2	SA	252	U
2	SA	261	U
2	SA	262	A
2	SA	266	G
2	SA	267	C
2	SA	272	C
2	SA	275	G
2	SA	276	G
2	SA	280	C
2	SA	281	G
2	SA	289	G
2	SA	293	G
2	SA	298	A
2	SA	306	A
2	SA	307	C
2	SA	308	C
2	SA	316	C
2	SA	317	U
2	SA	319	G
2	SA	328	C
2	SA	329	A
2	SA	352	C
2	SA	354	G
2	SA	366	A
2	SA	372	C
2	SA	373	A
2	SA	374	A
2	SA	381	C
2	SA	382	A

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Mol	Chain	Res	Type
2	SA	384	G
2	SA	389	A
2	SA	390	U
2	SA	392	C
2	SA	395	C
2	SA	398	U
2	SA	404	G
2	SA	406	G
2	SA	411	A
2	SA	412	A
2	SA	413	G
2	SA	415	A
2	SA	422	C
2	SA	428	G
2	SA	429	U
2	SA	444	G
2	SA	453	G
2	SA	462	G
2	SA	463	U
2	SA	464	U
2	SA	465	A
2	SA	467	U
2	SA	468	A
2	SA	479	U
2	SA	481	G
2	SA	485	U
2	SA	496	A
2	SA	498	A
2	SA	505	G
2	SA	508	U
2	SA	509	A
2	SA	518	C
2	SA	519	C
2	SA	524	G
2	SA	527	G
2	SA	528	C
2	SA	531	U
2	SA	532	A
2	SA	533	A
2	SA	547	A
2	SA	560	A
2	SA	561	U

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Mol	Chain	Res	Type
2	SA	562	U
2	SA	566	G
2	SA	572	A
2	SA	573	A
2	SA	575	G
2	SA	576	C
2	SA	577	G
2	SA	582	C
2	SA	583	A
2	SA	609	A
2	SA	610	U
2	SA	615	G
2	SA	620	C
2	SA	631	C
2	SA	632	U
2	SA	633	G
2	SA	636	U
2	SA	641	U
2	SA	642	A
2	SA	650	G
2	SA	653	U
2	SA	676	A
2	SA	687	A
2	SA	688	G
2	SA	693	G
2	SA	694	A
2	SA	695	A
2	SA	701	U
2	SA	703	G
2	SA	718	A
2	SA	719	C
2	SA	720	C
2	SA	721	G
2	SA	723	U
2	SA	724	G
2	SA	729	A
2	SA	755	G
2	SA	760	G
2	SA	765	G
2	SA	766	A
2	SA	776	G
2	SA	777	A

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Mol	Chain	Res	Type
2	SA	783	C
2	SA	788	U
2	SA	789	U
2	SA	790	A
2	SA	791	G
2	SA	792	A
2	SA	793	U
2	SA	794	A
2	SA	805	C
2	SA	810	C
2	SA	811	C
2	SA	812	G
2	SA	816	A
2	SA	817	C
2	SA	819	A
2	SA	820	U
2	SA	821	G
2	SA	828	U
2	SA	829	G
2	SA	841	C
2	SA	842	U
2	SA	843	U
2	SA	844	G
2	SA	845	A
2	SA	870	U
2	SA	871	U
2	SA	873	A
2	SA	874	G
2	SA	876	C
2	SA	885	G
2	SA	889	A
2	SA	890	G
2	SA	899	C
2	SA	900	A
2	SA	910	C
2	SA	913	A
2	SA	914	A
2	SA	926	G
2	SA	927	G
2	SA	933	G
2	SA	935	A
2	SA	938	A

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Mol	Chain	Res	Type
2	SA	939	G
2	SA	945	G
2	SA	959	A
2	SA	960	U
2	SA	961	U
2	SA	962	C
2	SA	965	U
2	SA	966	G
2	SA	967	C
2	SA	968	A
2	SA	969	A
2	SA	970	C
2	SA	973	G
2	SA	974	A
2	SA	975	A
2	SA	976	G
2	SA	977	A
2	SA	978	A
2	SA	980	C
2	SA	981	U
2	SA	982	U
2	SA	983	A
2	SA	984	C
2	SA	993	G
2	SA	994	A
2	SA	995	C
2	SA	996	A
2	SA	1004	A
2	SA	1006	G
2	SA	1014	A
2	SA	1015	G
2	SA	1026	G
2	SA	1028	C
2	SA	1030	U
2	SA	1031	C
2	SA	1032	G
2	SA	1045	C
2	SA	1049	U
2	SA	1050	G
2	SA	1054	C
2	SA	1064	G
2	SA	1065	U

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Mol	Chain	Res	Type
2	SA	1079	G
2	SA	1081	A
2	SA	1094	G
2	SA	1095	U
2	SA	1101	A
2	SA	1109	C
2	SA	1111	A
2	SA	1118	U
2	SA	1130	A
2	SA	1136	C
2	SA	1137	C
2	SA	1139	G
2	SA	1148	U
2	SA	1149	C
2	SA	1152	A
2	SA	1154	G
2	SA	1159	U
2	SA	1167	A
2	SA	1168	U
2	SA	1181	G
2	SA	1182	G
2	SA	1189	U
2	SA	1190	G
2	SA	1191	A
2	SA	1196	A
2	SA	1197	A
2	SA	1198	G
2	SA	1200	C
2	SA	1201	A
2	SA	1202	U
2	SA	1208	C
2	SA	1212	U
2	SA	1213	A
2	SA	1214	C
2	SA	1215	G
2	SA	1223	C
2	SA	1224	U
2	SA	1226	C
2	SA	1227	A
2	SA	1228	C
2	SA	1238	A
2	SA	1240	U

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Mol	Chain	Res	Type
2	SA	1241	G
2	SA	1250	A
2	SA	1253	G
2	SA	1254	A
2	SA	1256	A
2	SA	1258	G
2	SA	1264	U
2	SA	1270	G
2	SA	1278	G
2	SA	1279	G
2	SA	1280	A
2	SA	1286	U
2	SA	1287	A
2	SA	1290	G
2	SA	1300	G
2	SA	1301	U
2	SA	1303	C
2	SA	1305	G
2	SA	1315	U
2	SA	1317	C
2	SA	1318	A
2	SA	1319	A
2	SA	1322	C
2	SA	1323	G
2	SA	1336	C
2	SA	1337	G
2	SA	1338	G
2	SA	1339	A
2	SA	1340	A
2	SA	1345	U
2	SA	1346	A
2	SA	1347	G
2	SA	1348	U
2	SA	1359	C
2	SA	1364	U
2	SA	1365	G
2	SA	1368	A
2	SA	1377	A
2	SA	1378	C
2	SA	1394	A
2	SA	1395	C
2	SA	1397	C

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Mol	Chain	Res	Type
2	SA	1398	A
2	SA	1401	G
2	SA	1418	A
2	SA	1419	G
2	SA	1431	A
2	SA	1432	G
2	SA	1437	A
2	SA	1446	A
2	SA	1448	C
2	SA	1451	U
2	SA	1452	C
2	SA	1453	G
2	SA	1454	G
2	SA	1466	C
2	SA	1490	U
2	SA	1492	A
2	SA	1493	A
2	SA	1494	G
2	SA	1502	A
2	SA	1503	A
2	SA	1506	U
2	SA	1517	G
2	SA	1520	C
2	SA	1529	G
2	SA	1530	G
2	SA	1531	A
2	SA	1532	U
2	SA	1533	C
2	SA	1534	A
2	SA	1535	C
2	SA	1536	C
2	SA	1537	U
2	SA	1539	C
2	SA	1540	U
2	SA	1541	U
2	SA	1542	A
3	S1	14	G
3	S1	15	G
3	S1	16	A
3	S1	18	A
3	S1	21	U
3	S1	22	G

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Mol	Chain	Res	Type
3	S1	23	C
3	S1	24	A
3	S1	25	U
3	S1	26	U
3	S1	27	A
3	S1	28	U
3	S1	29	G
3	S1	30	U
3	S1	31	U
3	S1	34	U
3	S1	36	U
3	S1	37	G
3	S1	39	U
3	S1	40	G
3	S1	41	A
3	S1	42	U
3	S1	43	U
3	S1	44	U
3	S1	45	G
3	S1	46	C
3	S1	47	C
3	S1	48	C
3	S1	49	U
3	S1	50	U
3	S1	51	C
3	S1	53	G
3	S1	54	U
3	S1	55	A
3	S1	56	G
3	S1	57	C
4	S2	2	G
4	S2	8	U
4	S2	9	G
4	S2	16	C
4	S2	17	C
4	S2	18	U
4	S2	19	G
4	S2	20	G
4	S2	21	U
4	S2	22	A
4	S2	38	A
4	S2	47	A

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Mol	Chain	Res	Type
4	S2	48	U
4	S2	49	C
4	S2	50	G
4	S2	57	C
4	S2	58	A
4	S2	61	U
4	S2	73	A
4	S2	74	A
4	S2	77	A
25	LB	6	G
25	LB	9	G
25	LB	13	G
25	LB	14	U
25	LB	25	U
25	LB	26	C
25	LB	35	C
25	LB	41	G
25	LB	42	C
25	LB	43	C
25	LB	44	G
25	LB	45	A
25	LB	51	G
25	LB	57	A
25	LB	58	A
25	LB	66	A
25	LB	67	G
25	LB	73	A
25	LB	87	U
25	LB	88	C
25	LB	89	U
25	LB	99	A
26	LA	13	A
26	LA	14	A
26	LA	18	U
26	LA	30	G
26	LA	34	U
26	LA	35	G
26	LA	42	A
26	LA	43	G
26	LA	46	G
26	LA	49	A
26	LA	50	U

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Mol	Chain	Res	Type
26	LA	71	A
26	LA	72	U
26	LA	73	A
26	LA	74	A
26	LA	75	G
26	LA	92	U
26	LA	99	U
26	LA	100	U
26	LA	101	A
26	LA	102	U
26	LA	103	A
26	LA	112	U
26	LA	113	U
26	LA	115	C
26	LA	119	A
26	LA	120	U
26	LA	128	C
26	LA	139	U
26	LA	140	C
26	LA	155	A
26	LA	163	C
26	LA	181	A
26	LA	194	G
26	LA	195	A
26	LA	196	A
26	LA	199	A
26	LA	200	U
26	LA	204	A
26	LA	205	G
26	LA	215	G
26	LA	216	A
26	LA	218	A
26	LA	219	A
26	LA	222	A
26	LA	224	U
26	LA	225	C
26	LA	232	G
26	LA	242	G
26	LA	243	U
26	LA	248	G
26	LA	250	G
26	LA	255	A

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Mol	Chain	Res	Type
26	LA	264	C
26	LA	265	A
26	LA	266	G
26	LA	271	G
26	LA	272	A
26	LA	277	G
26	LA	294	A
26	LA	295	G
26	LA	300	A
26	LA	324	A
26	LA	330	A
26	LA	338	G
26	LA	345	A
26	LA	346	A
26	LA	367	G
26	LA	368	A
26	LA	369	U
26	LA	371	A
26	LA	372	G
26	LA	386	G
26	LA	387	U
26	LA	389	G
26	LA	390	U
26	LA	391	A
26	LA	405	U
26	LA	406	G
26	LA	411	G
26	LA	424	G
26	LA	428	A
26	LA	429	A
26	LA	431	U
26	LA	436	C
26	LA	443	A
26	LA	452	G
26	LA	454	A
26	LA	456	C
26	LA	470	A
26	LA	475	C
26	LA	479	A
26	LA	480	A
26	LA	481	G
26	LA	484	C

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Mol	Chain	Res	Type
26	LA	489	G
26	LA	490	C
26	LA	491	G
26	LA	504	A
26	LA	505	A
26	LA	508	A
26	LA	513	A
26	LA	527	C
26	LA	529	A
26	LA	530	G
26	LA	531	C
26	LA	532	A
26	LA	545	U
26	LA	546	U
26	LA	548	G
26	LA	549	G
26	LA	561	G
26	LA	562	U
26	LA	563	A
26	LA	571	U
26	LA	572	A
26	LA	573	U
26	LA	574	A
26	LA	575	A
26	LA	603	A
26	LA	604	G
26	LA	611	C
26	LA	612	G
26	LA	613	A
26	LA	614	A
26	LA	615	U
26	LA	621	A
26	LA	627	A
26	LA	637	A
26	LA	643	A
26	LA	644	A
26	LA	645	C
26	LA	646	U
26	LA	651	G
26	LA	654	A
26	LA	655	A
26	LA	670	A

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Mol	Chain	Res	Type
26	LA	675	A
26	LA	677	A
26	LA	686	U
26	LA	696	G
26	LA	715	A
26	LA	717	C
26	LA	718	A
26	LA	719	C
26	LA	726	G
26	LA	728	G
26	LA	730	A
26	LA	732	C
26	LA	736	C
26	LA	747	U
26	LA	748	G
26	LA	751	A
26	LA	762	U
26	LA	763	G
26	LA	764	A
26	LA	765	C
26	LA	775	G
26	LA	776	G
26	LA	777	G
26	LA	782	A
26	LA	784	G
26	LA	786	C
26	LA	789	A
26	LA	792	A
26	LA	793	A
26	LA	794	A
26	LA	802	A
26	LA	805	G
26	LA	812	C
26	LA	846	U
26	LA	847	U
26	LA	848	C
26	LA	857	G
26	LA	859	G
26	LA	870	U
26	LA	887	U
26	LA	888	C
26	LA	889	C

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Mol	Chain	Res	Type
26	LA	890	C
26	LA	894	U
26	LA	896	A
26	LA	897	C
26	LA	901	C
26	LA	910	A
26	LA	911	A
26	LA	915	C
26	LA	925	A
26	LA	932	U
26	LA	938	G
26	LA	941	A
26	LA	945	A
26	LA	946	C
26	LA	961	C
26	LA	973	A
26	LA	974	G
26	LA	985	C
26	LA	986	C
26	LA	995	C
26	LA	996	A
26	LA	1002	G
26	LA	1003	G
26	LA	1005	C
26	LA	1008	A
26	LA	1009	A
26	LA	1012	U
26	LA	1013	C
26	LA	1020	A
26	LA	1021	A
26	LA	1022	G
26	LA	1025	G
26	LA	1027	A
26	LA	1033	U
26	LA	1044	C
26	LA	1045	C
26	LA	1046	A
26	LA	1048	A
26	LA	1052	C
26	LA	1060	U
26	LA	1061	U
26	LA	1062	G

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Mol	Chain	Res	Type
26	LA	1066	U
26	LA	1067	A
26	LA	1069	A
26	LA	1070	A
26	LA	1071	G
26	LA	1073	A
26	LA	1078	U
26	LA	1081	U
26	LA	1084	A
26	LA	1087	G
26	LA	1094	U
26	LA	1095	A
26	LA	1096	A
26	LA	1098	A
26	LA	1104	C
26	LA	1109	C
26	LA	1110	G
26	LA	1112	G
26	LA	1123	C
26	LA	1127	A
26	LA	1128	G
26	LA	1129	A
26	LA	1130	U
26	LA	1132	U
26	LA	1133	A
26	LA	1134	A
26	LA	1143	A
26	LA	1155	A
26	LA	1173	U
26	LA	1175	A
26	LA	1177	G
26	LA	1178	C
26	LA	1184	U
26	LA	1204	A
26	LA	1205	A
26	LA	1206	G
26	LA	1211	C
26	LA	1212	G
26	LA	1225	G
26	LA	1227	G
26	LA	1236	G
26	LA	1237	A

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Mol	Chain	Res	Type
26	LA	1238	G
26	LA	1241	A
26	LA	1242	U
26	LA	1253	A
26	LA	1255	U
26	LA	1256	G
26	LA	1266	G
26	LA	1272	A
26	LA	1273	U
26	LA	1274	A
26	LA	1275	A
26	LA	1283	G
26	LA	1286	A
26	LA	1287	A
26	LA	1288	G
26	LA	1289	C
26	LA	1300	G
26	LA	1301	A
26	LA	1302	A
26	LA	1303	G
26	LA	1308	A
26	LA	1318	U
26	LA	1321	A
26	LA	1322	A
26	LA	1323	C
26	LA	1324	G
26	LA	1325	U
26	LA	1340	U
26	LA	1341	G
26	LA	1349	C
26	LA	1354	A
26	LA	1359	A
26	LA	1362	C
26	LA	1363	C
26	LA	1366	A
26	LA	1367	A
26	LA	1368	G
26	LA	1377	G
26	LA	1379	U
26	LA	1383	A
26	LA	1384	A
26	LA	1385	A

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Mol	Chain	Res	Type
26	LA	1386	C
26	LA	1392	A
26	LA	1393	A
26	LA	1395	A
26	LA	1396	U
26	LA	1416	G
26	LA	1417	C
26	LA	1420	A
26	LA	1421	G
26	LA	1451	C
26	LA	1452	G
26	LA	1453	A
26	LA	1454	C
26	LA	1458	U
26	LA	1459	G
26	LA	1460	U
26	LA	1461	C
26	LA	1482	G
26	LA	1490	A
26	LA	1491	G
26	LA	1493	C
26	LA	1494	A
26	LA	1495	A
26	LA	1508	A
26	LA	1509	A
26	LA	1514	G
26	LA	1522	A
26	LA	1523	U
26	LA	1524	G
26	LA	1535	A
26	LA	1536	C
26	LA	1552	A
26	LA	1558	C
26	LA	1559	U
26	LA	1565	C
26	LA	1566	A
26	LA	1567	G
26	LA	1568	G
26	LA	1569	A
26	LA	1578	U
26	LA	1579	A
26	LA	1583	A

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Mol	Chain	Res	Type
26	LA	1584	U
26	LA	1608	A
26	LA	1609	A
26	LA	1612	C
26	LA	1616	A
26	LA	1618	C
26	LA	1633	G
26	LA	1634	A
26	LA	1635	A
26	LA	1648	U
26	LA	1649	G
26	LA	1653	G
26	LA	1669	A
26	LA	1673	G
26	LA	1674	G
26	LA	1675	C
26	LA	1676	A
26	LA	1677	A
26	LA	1678	A
26	LA	1679	A
26	LA	1713	A
26	LA	1714	U
26	LA	1715	G
26	LA	1724	G
26	LA	1729	U
26	LA	1730	C
26	LA	1731	G
26	LA	1737	G
26	LA	1757	A
26	LA	1758	U
26	LA	1759	A
26	LA	1762	A
26	LA	1763	G
26	LA	1764	C
26	LA	1773	A
26	LA	1778	U
26	LA	1779	U
26	LA	1780	A
26	LA	1781	U
26	LA	1782	U
26	LA	1783	A
26	LA	1786	A

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Mol	Chain	Res	Type
26	LA	1787	A
26	LA	1801	A
26	LA	1808	A
26	LA	1815	A
26	LA	1816	C
26	LA	1817	G
26	LA	1818	U
26	LA	1819	A
26	LA	1825	U
26	LA	1829	A
26	LA	1830	C
26	LA	1831	G
26	LA	1833	C
26	LA	1839	G
26	LA	1851	U
26	LA	1870	C
26	LA	1871	A
26	LA	1873	G
26	LA	1901	A
26	LA	1912	A
26	LA	1913	A
26	LA	1914	C
26	LA	1915	C
26	LA	1918	A
26	LA	1928	A
26	LA	1930	G
26	LA	1938	A
26	LA	1939	U
26	LA	1940	U
26	LA	1943	U
26	LA	1952	A
26	LA	1953	A
26	LA	1954	G
26	LA	1955	U
26	LA	1956	U
26	LA	1963	U
26	LA	1964	G
26	LA	1965	C
26	LA	1966	A
26	LA	1967	C
26	LA	1968	G
26	LA	1970	A

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Mol	Chain	Res	Type
26	LA	1971	U
26	LA	1972	G
26	LA	1982	U
26	LA	1993	U
26	LA	1996	C
26	LA	1997	C
26	LA	2004	G
26	LA	2012	G
26	LA	2015	A
26	LA	2020	A
26	LA	2021	C
26	LA	2022	U
26	LA	2023	C
26	LA	2028	U
26	LA	2030	U
26	LA	2031	A
26	LA	2032	G
26	LA	2034	U
26	LA	2040	G
26	LA	2043	C
26	LA	2056	G
26	LA	2059	A
26	LA	2061	G
26	LA	2062	A
26	LA	2069	G
26	LA	2077	A
26	LA	2092	U
26	LA	2095	A
26	LA	2107	G
26	LA	2111	U
26	LA	2112	G
26	LA	2113	U
26	LA	2114	A
26	LA	2116	G
26	LA	2118	U
26	LA	2119	A
26	LA	2126	A
26	LA	2127	G
26	LA	2128	G
26	LA	2130	U
26	LA	2131	U
26	LA	2132	U

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Mol	Chain	Res	Type
26	LA	2133	G
26	LA	2134	A
26	LA	2137	U
26	LA	2138	G
26	LA	2143	C
26	LA	2146	C
26	LA	2147	A
26	LA	2148	G
26	LA	2154	A
26	LA	2157	G
26	LA	2158	A
26	LA	2163	A
26	LA	2164	C
26	LA	2165	C
26	LA	2166	U
26	LA	2167	U
26	LA	2170	A
26	LA	2178	C
26	LA	2198	A
26	LA	2199	A
26	LA	2203	U
26	LA	2204	G
26	LA	2210	U
26	LA	2211	A
26	LA	2212	A
26	LA	2214	C
26	LA	2215	C
26	LA	2224	G
26	LA	2225	A
26	LA	2237	G
26	LA	2238	G
26	LA	2239	G
26	LA	2246	G
26	LA	2250	G
26	LA	2253	G
26	LA	2254	C
26	LA	2266	A
26	LA	2272	U
26	LA	2282	G
26	LA	2283	C
26	LA	2287	A
26	LA	2288	A

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Mol	Chain	Res	Type
26	LA	2298	A
26	LA	2305	U
26	LA	2306	C
26	LA	2307	G
26	LA	2308	G
26	LA	2309	A
26	LA	2310	C
26	LA	2311	A
26	LA	2312	U
26	LA	2322	A
26	LA	2325	G
26	LA	2327	A
26	LA	2328	A
26	LA	2333	A
26	LA	2334	U
26	LA	2335	A
26	LA	2337	G
26	LA	2340	A
26	LA	2345	G
26	LA	2346	A
26	LA	2347	C
26	LA	2350	C
26	LA	2354	C
26	LA	2358	A
26	LA	2381	A
26	LA	2382	G
26	LA	2383	G
26	LA	2385	C
26	LA	2388	A
26	LA	2389	G
26	LA	2394	C
26	LA	2402	U
26	LA	2406	A
26	LA	2407	A
26	LA	2411	A
26	LA	2425	A
26	LA	2427	C
26	LA	2428	G
26	LA	2429	G
26	LA	2430	A
26	LA	2433	A
26	LA	2439	A

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Mol	Chain	Res	Type
26	LA	2441	U
26	LA	2448	A
26	LA	2449	U
26	LA	2451	A
26	LA	2472	G
26	LA	2473	U
26	LA	2475	C
26	LA	2476	A
26	LA	2478	A
26	LA	2486	C
26	LA	2491	U
26	LA	2492	U
26	LA	2493	U
26	LA	2494	G
26	LA	2501	C
26	LA	2502	G
26	LA	2503	A
26	LA	2504	U
26	LA	2505	G
26	LA	2515	C
26	LA	2516	A
26	LA	2518	A
26	LA	2519	U
26	LA	2534	A
26	LA	2542	A
26	LA	2547	A
26	LA	2553	G
26	LA	2554	U
26	LA	2556	C
26	LA	2566	A
26	LA	2567	G
26	LA	2572	A
26	LA	2573	C
26	LA	2574	G
26	LA	2575	C
26	LA	2576	G
26	LA	2581	G
26	LA	2582	G
26	LA	2585	U
26	LA	2586	U
26	LA	2587	A
26	LA	2596	U

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Mol	Chain	Res	Type
26	LA	2597	G
26	LA	2599	G
26	LA	2602	A
26	LA	2609	U
26	LA	2610	C
26	LA	2613	U
26	LA	2616	C
26	LA	2627	G
26	LA	2629	U
26	LA	2646	C
26	LA	2654	A
26	LA	2655	G
26	LA	2656	U
26	LA	2660	A
26	LA	2664	G
26	LA	2665	A
26	LA	2685	G
26	LA	2689	U
26	LA	2690	U
26	LA	2713	U
26	LA	2714	G
26	LA	2726	A
26	LA	2737	G
26	LA	2739	U
26	LA	2742	G
26	LA	2744	G
26	LA	2756	U
26	LA	2757	A
26	LA	2765	A
26	LA	2766	A
26	LA	2769	U
26	LA	2771	C
26	LA	2774	C
26	LA	2777	G
26	LA	2778	A
26	LA	2779	U
26	LA	2780	G
26	LA	2782	G
26	LA	2797	U
26	LA	2798	U
26	LA	2799	A
26	LA	2802	G

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Mol	Chain	Res	Type
26	LA	2803	G
26	LA	2807	U
26	LA	2808	G
26	LA	2809	A
26	LA	2821	A
26	LA	2825	G
26	LA	2842	G
26	LA	2844	G
26	LA	2849	U
26	LA	2864	G
26	LA	2867	G
26	LA	2868	A
26	LA	2879	A
26	LA	2883	A
26	LA	2884	U
26	LA	2885	G
26	LA	2886	A
26	LA	2889	C
26	LA	2893	A
26	LA	2895	G
26	LA	2903	U
26	LA	2904	U

All (374) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	SA	2	A
2	SA	3	A
2	SA	4	U
2	SA	7	A
2	SA	8	A
2	SA	39	G
2	SA	51	A
2	SA	52	C
2	SA	60	A
2	SA	94	G
2	SA	97	G
2	SA	121	U
2	SA	128	G
2	SA	135	C
2	SA	146	G
2	SA	173	U

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Mol	Chain	Res	Type
2	SA	182	A
2	SA	183	C
2	SA	187	G
2	SA	204	G
2	SA	209	U
2	SA	224	U
2	SA	239	U
2	SA	243	A
2	SA	250	A
2	SA	251	G
2	SA	253	A
2	SA	275	G
2	SA	279	A
2	SA	280	C
2	SA	307	C
2	SA	328	C
2	SA	344	A
2	SA	372	C
2	SA	412	A
2	SA	462	G
2	SA	464	U
2	SA	497	G
2	SA	533	A
2	SA	560	A
2	SA	582	C
2	SA	622	A
2	SA	631	C
2	SA	682	G
2	SA	693	G
2	SA	700	G
2	SA	717	U
2	SA	719	C
2	SA	727	G
2	SA	761	G
2	SA	764	C
2	SA	765	G
2	SA	776	G
2	SA	782	A
2	SA	788	U
2	SA	789	U
2	SA	793	U
2	SA	819	A

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Mol	Chain	Res	Type
2	SA	841	C
2	SA	843	U
2	SA	870	U
2	SA	872	A
2	SA	890	G
2	SA	899	C
2	SA	907	A
2	SA	913	A
2	SA	926	G
2	SA	937	A
2	SA	944	G
2	SA	960	U
2	SA	975	A
2	SA	982	U
2	SA	987	G
2	SA	993	G
2	SA	1013	G
2	SA	1014	A
2	SA	1029	U
2	SA	1031	C
2	SA	1054	C
2	SA	1067	A
2	SA	1094	G
2	SA	1136	C
2	SA	1167	A
2	SA	1190	G
2	SA	1201	A
2	SA	1207	G
2	SA	1212	U
2	SA	1213	A
2	SA	1214	C
2	SA	1224	U
2	SA	1226	C
2	SA	1239	A
2	SA	1240	U
2	SA	1253	G
2	SA	1257	A
2	SA	1278	G
2	SA	1279	G
2	SA	1286	U
2	SA	1302	C
2	SA	1322	C

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Mol	Chain	Res	Type
2	SA	1323	G
2	SA	1335	U
2	SA	1338	G
2	SA	1344	C
2	SA	1346	A
2	SA	1347	G
2	SA	1359	C
2	SA	1362	A
2	SA	1364	U
2	SA	1377	A
2	SA	1397	C
2	SA	1430	A
2	SA	1433	A
2	SA	1451	U
2	SA	1491	G
2	SA	1502	A
2	SA	1529	G
2	SA	1531	A
2	SA	1533	C
2	SA	1534	A
2	SA	1535	C
2	SA	1536	C
3	S1	15	G
3	S1	21	U
3	S1	22	G
3	S1	23	C
3	S1	29	G
3	S1	30	U
3	S1	39	U
3	S1	41	A
3	S1	44	U
3	S1	52	U
3	S1	53	G
3	S1	58	C
4	S2	1	C
4	S2	7	G
4	S2	9	G
4	S2	17	C
4	S2	20	G
4	S2	22	A
4	S2	57	C
4	S2	60	A

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Mol	Chain	Res	Type
4	S2	73	A
4	S2	76	C
25	LB	12	C
25	LB	25	U
25	LB	34	A
25	LB	44	G
25	LB	57	A
25	LB	66	A
25	LB	86	G
25	LB	88	C
25	LB	90	C
26	LA	13	A
26	LA	27	G
26	LA	29	U
26	LA	34	U
26	LA	49	A
26	LA	71	A
26	LA	72	U
26	LA	73	A
26	LA	91	A
26	LA	98	G
26	LA	100	U
26	LA	101	A
26	LA	102	U
26	LA	112	U
26	LA	114	U
26	LA	139	U
26	LA	140	C
26	LA	196	A
26	LA	199	A
26	LA	217	A
26	LA	218	A
26	LA	231	A
26	LA	242	G
26	LA	264	C
26	LA	265	A
26	LA	276	U
26	LA	321	U
26	LA	332	A
26	LA	345	A
26	LA	386	G
26	LA	389	G

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Mol	Chain	Res	Type
26	LA	390	U
26	LA	428	A
26	LA	443	A
26	LA	451	U
26	LA	453	A
26	LA	455	C
26	LA	470	A
26	LA	479	A
26	LA	480	A
26	LA	490	C
26	LA	503	A
26	LA	512	G
26	LA	527	C
26	LA	546	U
26	LA	561	G
26	LA	567	U
26	LA	571	U
26	LA	574	A
26	LA	603	A
26	LA	611	C
26	LA	620	G
26	LA	626	A
26	LA	649	G
26	LA	653	U
26	LA	654	A
26	LA	669	G
26	LA	704	G
26	LA	748	G
26	LA	762	U
26	LA	775	G
26	LA	776	G
26	LA	792	A
26	LA	805	G
26	LA	807	U
26	LA	827	U
26	LA	846	U
26	LA	847	U
26	LA	876	C
26	LA	893	C
26	LA	900	A
26	LA	910	A
26	LA	945	A

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Mol	Chain	Res	Type
26	LA	958	U
26	LA	1012	U
26	LA	1020	A
26	LA	1043	C
26	LA	1045	C
26	LA	1061	U
26	LA	1066	U
26	LA	1069	A
26	LA	1070	A
26	LA	1127	A
26	LA	1128	G
26	LA	1129	A
26	LA	1133	A
26	LA	1142	A
26	LA	1176	U
26	LA	1204	A
26	LA	1205	A
26	LA	1210	G
26	LA	1211	C
26	LA	1275	A
26	LA	1282	U
26	LA	1285	A
26	LA	1286	A
26	LA	1288	G
26	LA	1307	A
26	LA	1321	A
26	LA	1322	A
26	LA	1323	C
26	LA	1329	U
26	LA	1339	G
26	LA	1348	C
26	LA	1358	G
26	LA	1365	A
26	LA	1383	A
26	LA	1392	A
26	LA	1395	A
26	LA	1451	C
26	LA	1458	U
26	LA	1459	G
26	LA	1460	U
26	LA	1508	A
26	LA	1566	A

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Mol	Chain	Res	Type
26	LA	1579	A
26	LA	1583	A
26	LA	1608	A
26	LA	1634	A
26	LA	1647	U
26	LA	1673	G
26	LA	1679	A
26	LA	1715	G
26	LA	1723	G
26	LA	1729	U
26	LA	1730	C
26	LA	1757	A
26	LA	1761	C
26	LA	1763	G
26	LA	1778	U
26	LA	1781	U
26	LA	1786	A
26	LA	1800	C
26	LA	1818	U
26	LA	1828	G
26	LA	1870	C
26	LA	1901	A
26	LA	1903	G
26	LA	1913	A
26	LA	1927	A
26	LA	1938	A
26	LA	1954	G
26	LA	1955	U
26	LA	1963	U
26	LA	2019	A
26	LA	2021	C
26	LA	2022	U
26	LA	2042	A
26	LA	2068	U
26	LA	2069	G
26	LA	2076	U
26	LA	2079	U
26	LA	2106	U
26	LA	2111	U
26	LA	2113	U
26	LA	2116	G
26	LA	2118	U

Continued on next page...

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Mol	Chain	Res	Type
26	LA	2126	A
26	LA	2127	G
26	LA	2130	U
26	LA	2132	U
26	LA	2136	G
26	LA	2143	C
26	LA	2163	A
26	LA	2165	C
26	LA	2223	G
26	LA	2225	A
26	LA	2236	U
26	LA	2238	G
26	LA	2249	U
26	LA	2282	G
26	LA	2287	A
26	LA	2304	G
26	LA	2310	C
26	LA	2311	A
26	LA	2327	A
26	LA	2333	A
26	LA	2358	A
26	LA	2381	A
26	LA	2385	C
26	LA	2402	U
26	LA	2406	A
26	LA	2422	C
26	LA	2429	G
26	LA	2432	A
26	LA	2439	A
26	LA	2440	C
26	LA	2447	G
26	LA	2448	A
26	LA	2451	A
26	LA	2504	U
26	LA	2515	C
26	LA	2547	A
26	LA	2553	G
26	LA	2554	U
26	LA	2571	U
26	LA	2572	A
26	LA	2573	C
26	LA	2574	G

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Mol	Chain	Res	Type
26	LA	2575	C
26	LA	2581	G
26	LA	2596	U
26	LA	2602	A
26	LA	2609	U
26	LA	2616	C
26	LA	2628	C
26	LA	2645	G
26	LA	2655	G
26	LA	2663	G
26	LA	2690	U
26	LA	2713	U
26	LA	2756	U
26	LA	2765	A
26	LA	2791	G
26	LA	2798	U
26	LA	2802	G
26	LA	2806	C
26	LA	2808	G
26	LA	2818	U
26	LA	2867	G
26	LA	2879	A

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

1 ligand is modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the

expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
59	GTP	S3	801	-	33,34,34	3.55	9 (27%)	50,54,54	1.43	6 (12%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	GTP	S3	801	-	-	0/22/38/38	0/3/3/3

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	S3	801	GTP	PA-O3A	-11.93	1.46	1.59
59	S3	801	GTP	PB-O3A	-11.50	1.47	1.59
59	S3	801	GTP	PB-O3B	-8.91	1.49	1.59
59	S3	801	GTP	C1'-N9	-2.58	1.40	1.47
59	S3	801	GTP	C5-N7	-2.50	1.34	1.39
59	S3	801	GTP	O4'-C4'	2.34	1.50	1.45
59	S3	801	GTP	C8-N7	-2.25	1.26	1.32
59	S3	801	GTP	PG-O2G	-2.24	1.46	1.54
59	S3	801	GTP	C2-N2	-2.09	1.29	1.34

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	S3	801	GTP	O3A-PA-O1A	4.95	125.61	110.70
59	S3	801	GTP	O5'-PA-O1A	-3.17	96.38	108.94
59	S3	801	GTP	O4'-C4'-C3'	-2.79	99.61	105.15
59	S3	801	GTP	C6-C5-C4	-2.70	114.77	118.83
59	S3	801	GTP	C2'-C3'-C4'	2.33	107.12	102.61
59	S3	801	GTP	O4'-C1'-C2'	-2.05	102.24	106.62

There are no chirality outliers.

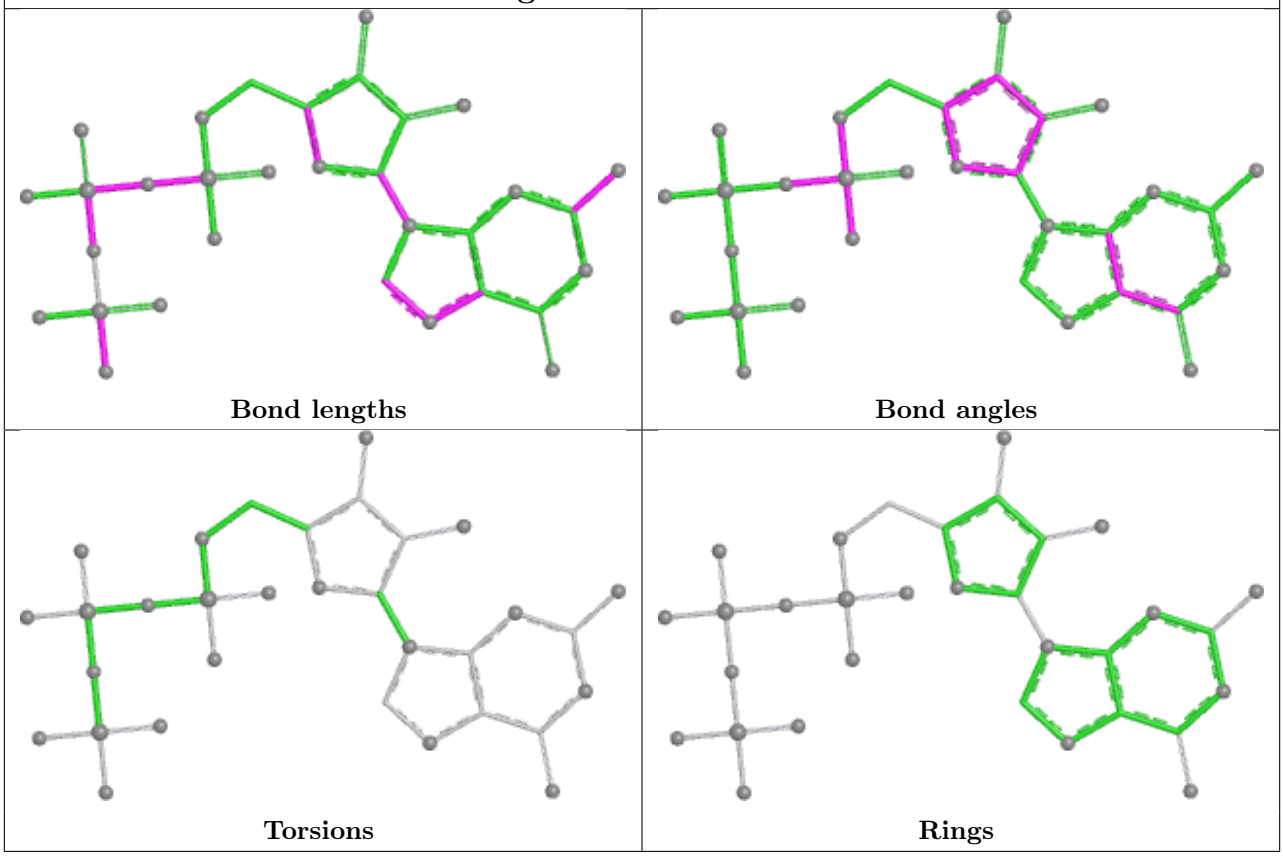
There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand GTP S3 801



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

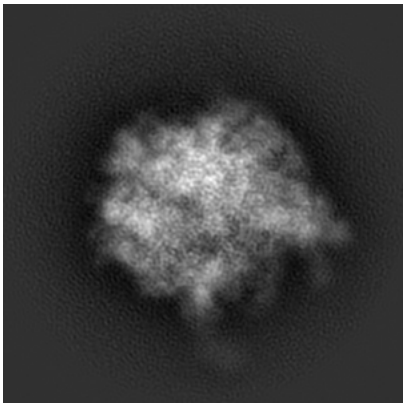
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-6316. These allow visual inspection of the internal detail of the map and identification of artifacts.

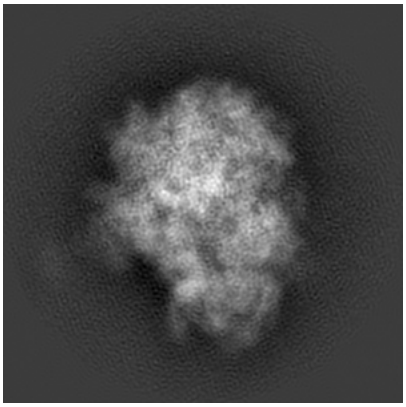
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

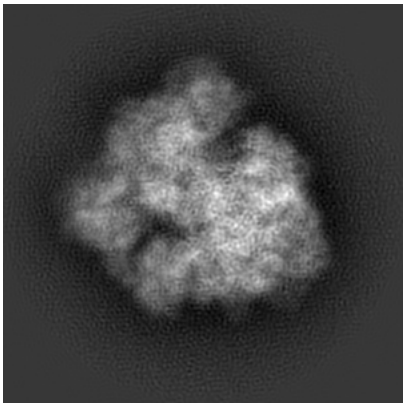
6.1.1 Primary map



X



Y

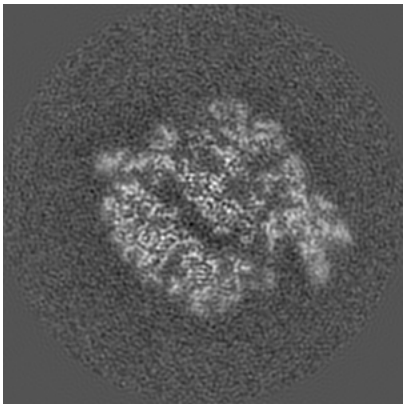


Z

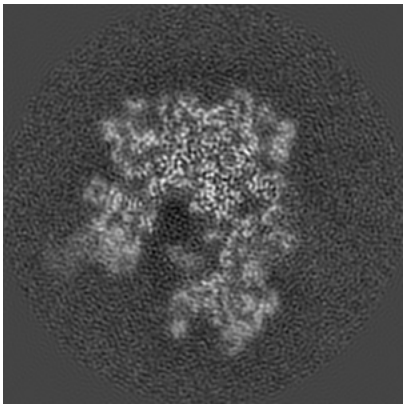
The images above show the map projected in three orthogonal directions.

6.2 Central slices

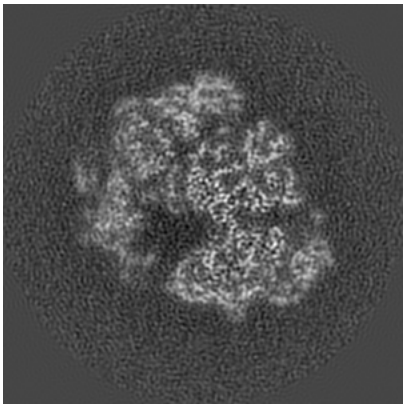
6.2.1 Primary map



X Index: 180



Y Index: 180

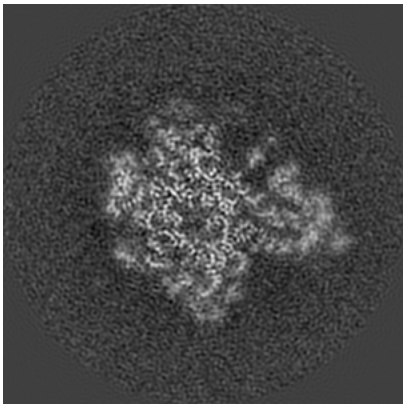


Z Index: 180

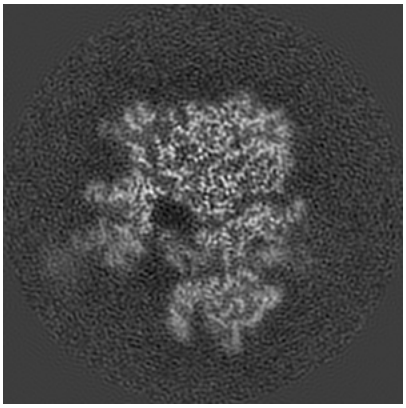
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

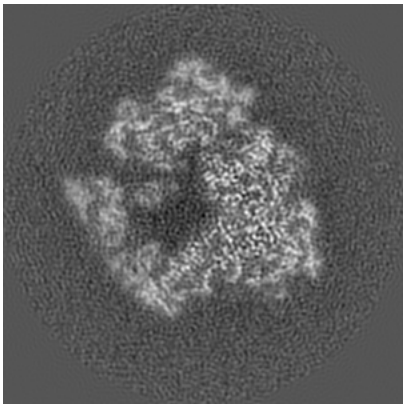
6.3.1 Primary map



X Index: 191



Y Index: 188

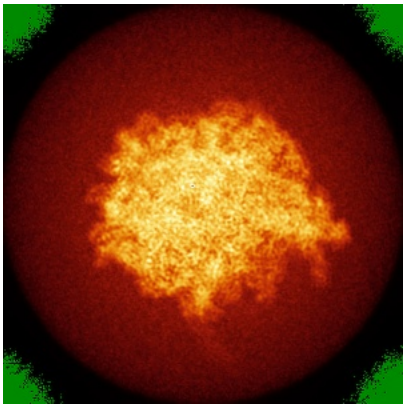


Z Index: 161

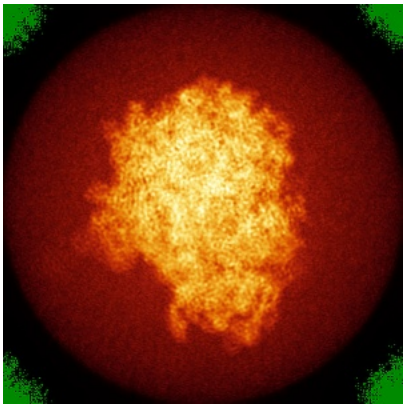
The images above show the largest variance slices of the map in three orthogonal directions.

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

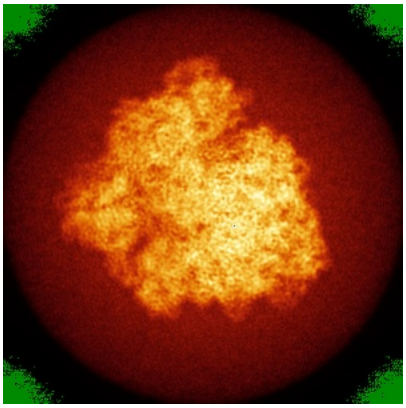
6.4.1 Primary map



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 0.03. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

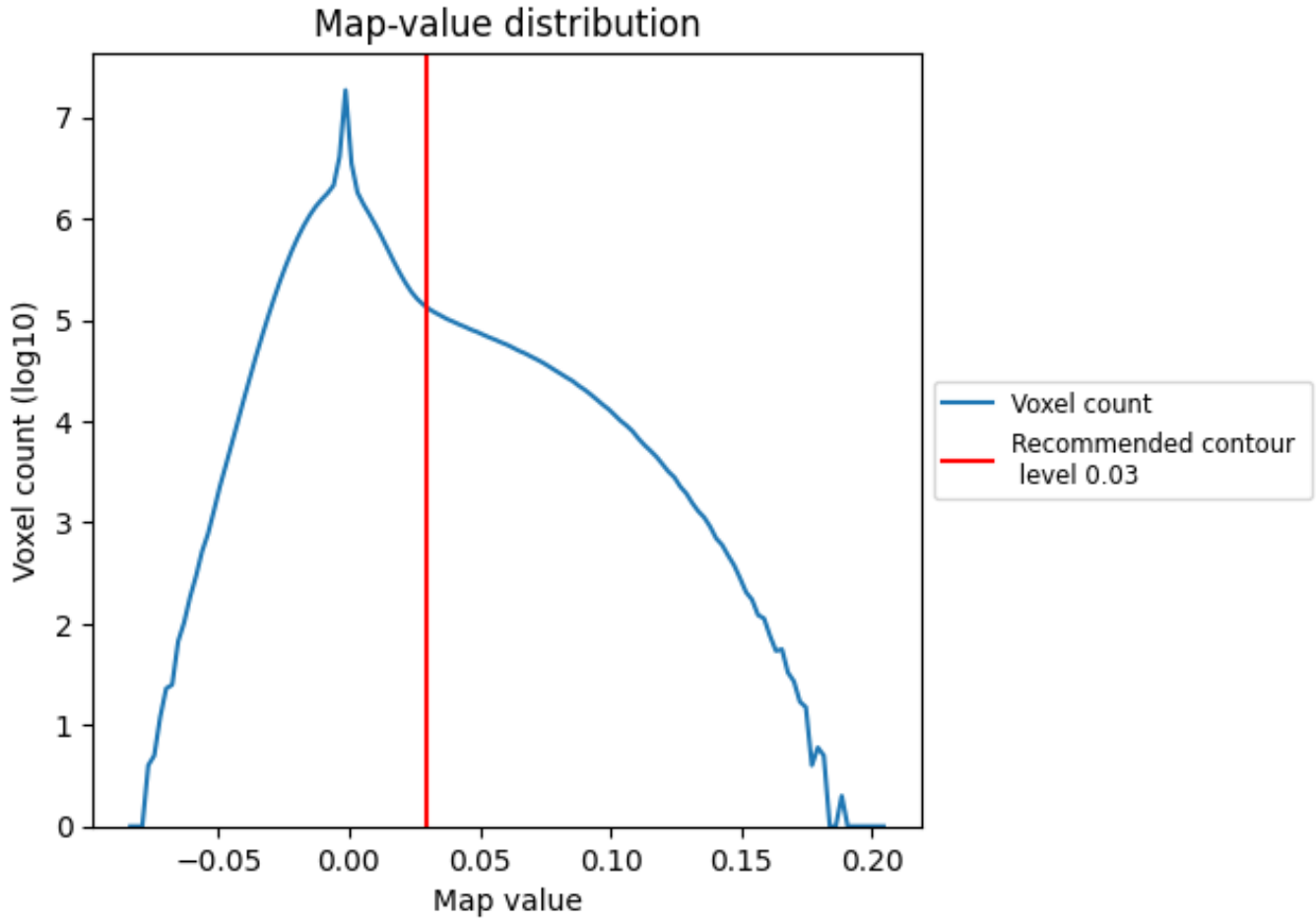
6.6 Mask visualisation (i)

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

7 Map analysis

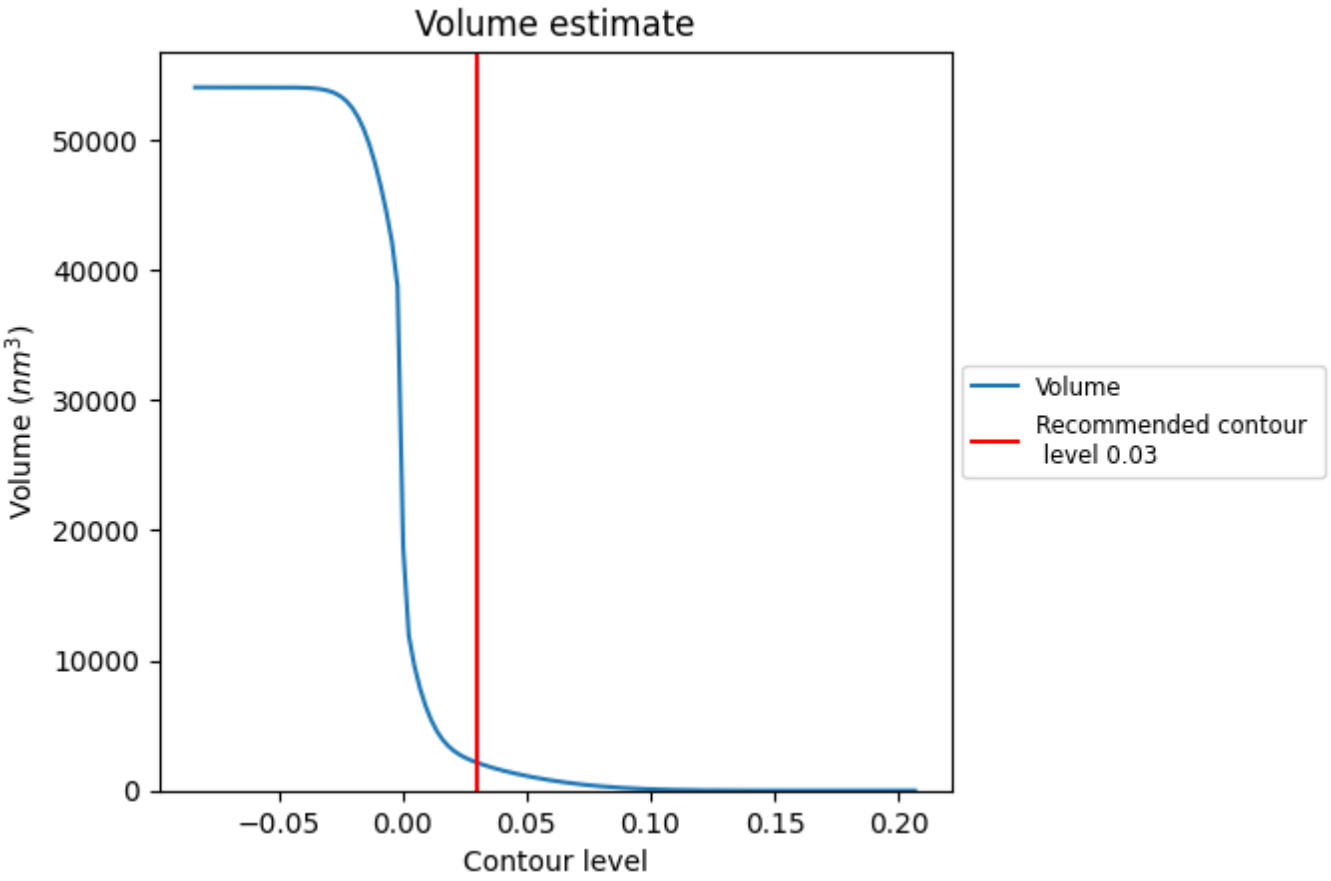
This section contains the results of statistical analysis of the map.

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.

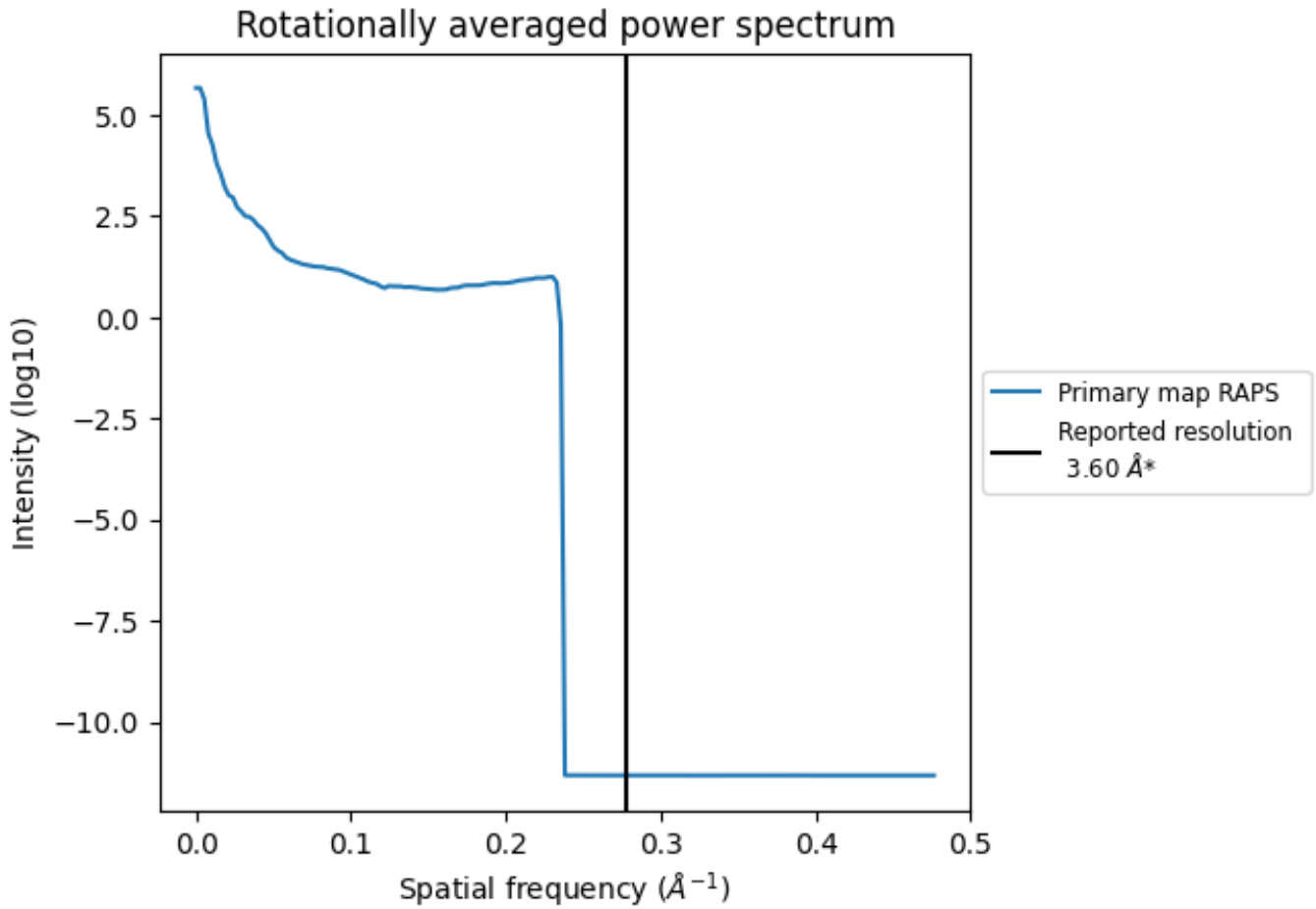
7.2 Volume estimate



The volume at the recommended contour level is 2151 nm^3; this corresponds to an approximate mass of 1943 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 0.278 $Å^{-1}$

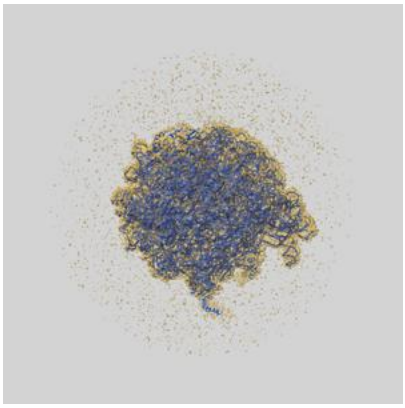
8 Fourier-Shell correlation

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

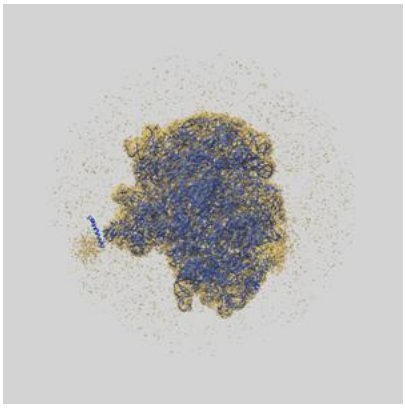
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-6316 and PDB model 3JA1. Per-residue inclusion information can be found in section 3 on page 16.

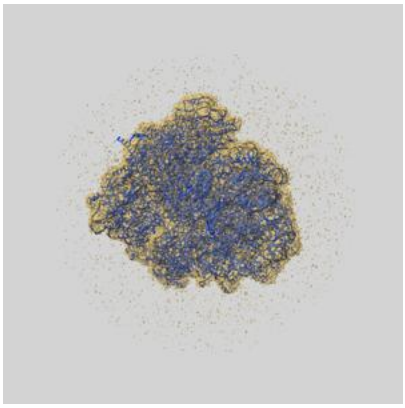
9.1 Map-model overlay



X



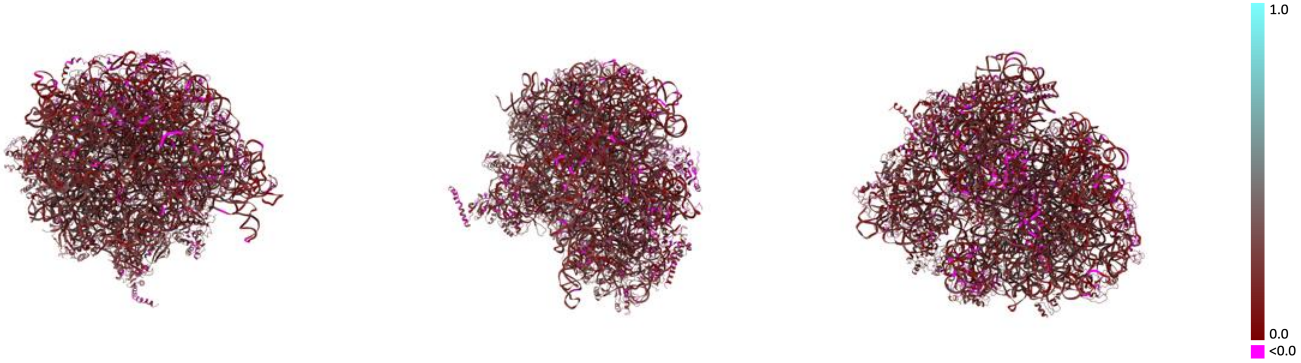
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.03 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.

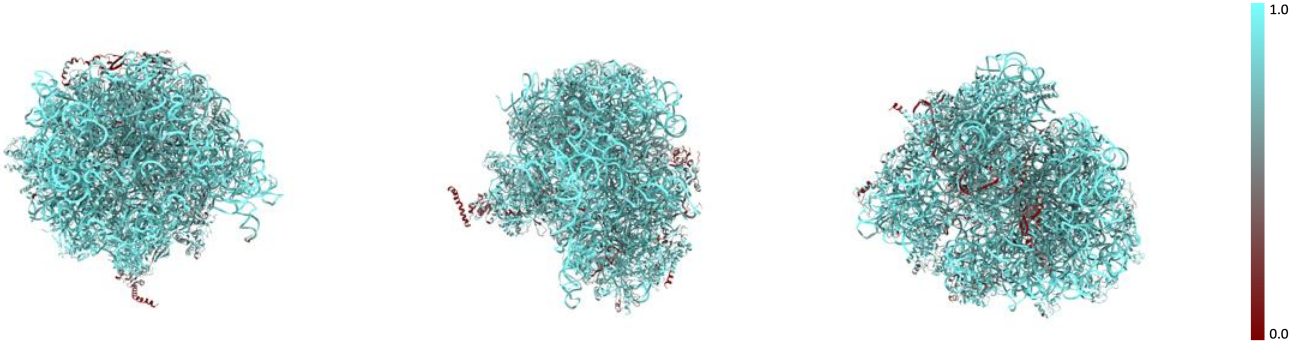
9.2 Q-score mapped to coordinate model



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.

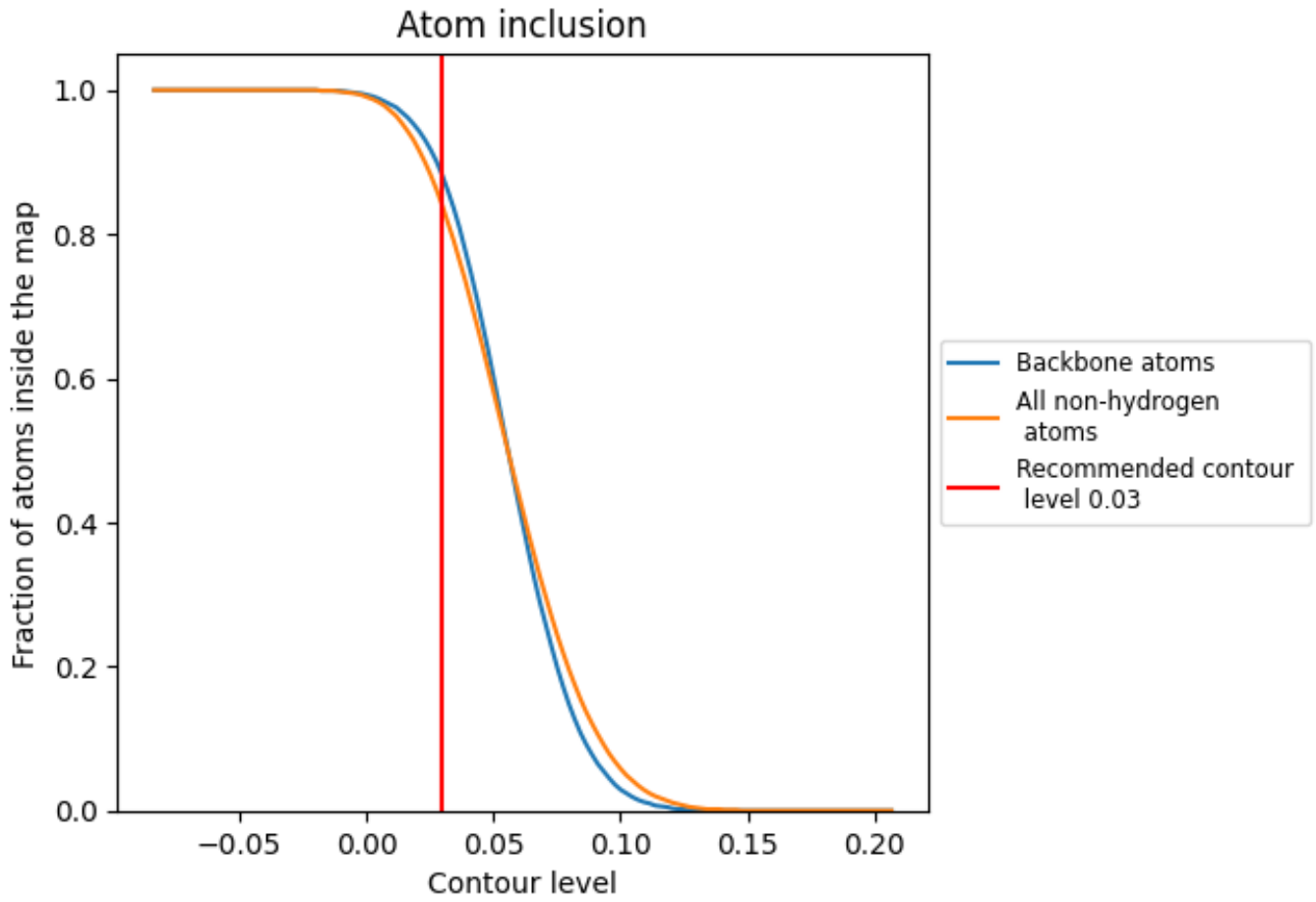
9.3 Atom inclusion mapped to coordinate model



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 (0.03).

9.4 Atom inclusion (i)



At the recommended contour level, 88% of all backbone atoms, 84% 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 (0.03) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8380	0.1980
L0	0.6980	0.0780
L1	0.7940	0.2550
L2	0.7100	0.2320
L3	0.8130	0.2120
L4	0.8010	0.2200
L5	0.7130	0.1580
L6	0.8310	0.2520
L7	0.8390	0.2520
LA	0.9060	0.2080
LB	0.9630	0.2520
LC	0.5670	0.1420
LD	0.7030	0.1620
LE	0.7480	0.2040
LF	0.7470	0.1930
LG	0.7990	0.2160
LH	0.7970	0.2420
LI	0.2460	0.0930
LJ	0.3820	0.1930
LK	0.6220	0.1940
LL	0.8150	0.2350
LM	0.6190	0.1840
LN	0.8070	0.2280
LO	0.8130	0.2710
LP	0.7750	0.1480
LQ	0.8970	0.2430
LR	0.6620	0.1500
LS	0.8280	0.2360
LT	0.8120	0.2220
LU	0.7360	0.1850
LV	0.6940	0.1090
LW	0.8190	0.1440
LX	0.8420	0.2880
LY	0.7770	0.2540
LZ	0.7590	0.1900

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Chain	Atom inclusion	Q-score
S1	0.4400	0.1220
S2	0.8660	0.1970
S3	0.6700	0.2040
SA	0.9160	0.1960
SB	0.6690	0.1540
SC	0.7290	0.2070
SD	0.7940	0.1780
SE	0.7070	0.1600
SF	0.5420	0.0470
SG	0.6780	0.1610
SH	0.7280	0.1580
SI	0.8110	0.1870
SJ	0.7180	0.1920
SK	0.6980	0.1770
SL	0.7100	0.2180
SM	0.7300	0.2250
SN	0.8280	0.2130
SO	0.7480	0.1270
SP	0.8020	0.1580
SQ	0.7300	0.1010
SR	0.7280	0.1310
SS	0.7450	0.2230
ST	0.7890	0.1410
SU	0.6040	0.1850