Full wwPDB EM Validation Report ⓘ

Mar 28, 2026 – 11:48 PM UTC

PDB ID	:	4V6N / pdb_00004v6n
EMDB ID	:	EMD-5361
Title	:	Structural characterization of mRNA-tRNA translocation intermediates (50S ribosome of class2 of the six classes)
Authors	:	Agirrezabala, X.; Liao, H.; Schreiner, E.; Fu, J.; Ortiz-Meoz, R.F.; Schulten, K.; Green, R.; Frank, J.
Deposited on	:	2011-12-07
Resolution	:	12.10 Å(reported)
Based on initial models	:	1MZP, 1ZAV, 2I2V

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:

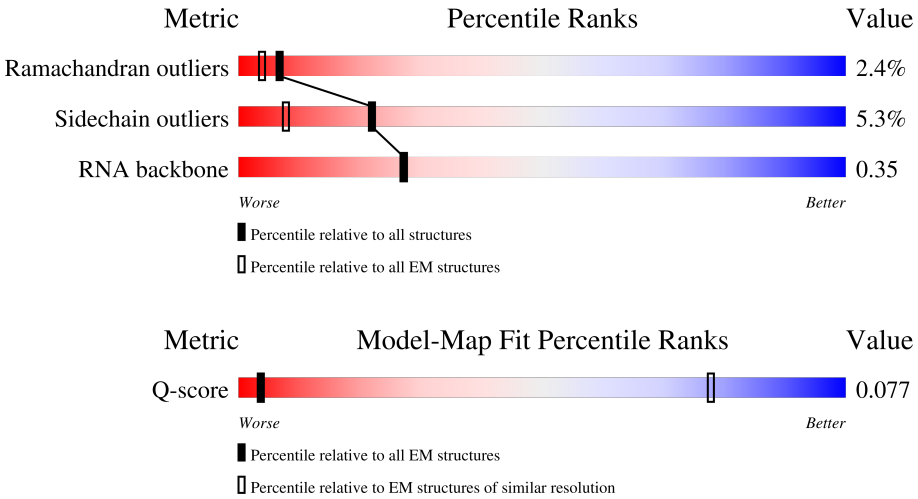
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
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 12.10 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))
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	85 (11.60 - 12.60)

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	AA	120	7% 41% 42% 10%
2	AB	2904	9% 36% 44% 11%
3	AC	234	55% 43%
4	AD	272	56% 38% 6%

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Mol	Chain	Length	Quality of chain
5	AE	209	52% 42% 5%
6	AF	201	57% 39%
7	AG	178	41% 49% 10%
8	AH	176	57% 39%
9	AI	149	10% 59% 34% 7%
10	AJ	164	16% 51% 45%
11	AK	141	55% 40% 5%
12	AL	142	47% 44% 9%
13	AM	123	66% 28% 6%
14	AN	144	61% 38%
15	AO	136	47% 50%
16	AP	127	54% 44%
17	AQ	117	62% 38%
18	AR	114	52% 38% 11%
19	AS	117	56% 41%
20	AT	103	58% 36% 6%
21	AU	110	51% 45%
22	AV	100	64% 32%
23	AW	103	55% 41%
24	AX	94	64% 34%
25	AY	84	55% 37% 8%
26	AZ	77	45% 47% 8%
27	A0	63	51% 43% 6%
28	A1	58	60% 36%
29	A2	70	51% 46%

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Mol	Chain	Length	Quality of chain
30	A3	56	57% 34% 9%
31	A4	54	56% 39% 6%
32	A5	46	37% 54%
33	A6	64	45% 48% 6%
34	A7	38	50% 47%
35	BA	1542	7% 37% 44% 12%
36	BB	76	9% 30% 45% 16%
37	BC	47	15% 30% 36% 30%
38	BD	77	8% 35% 45% 12%
39	BE	240	57% 39%
40	BF	232	53% 44%
41	BG	205	61% 38%
42	BH	166	63% 35%
43	BI	135	58% 40%
44	BJ	178	53% 43%
45	BK	129	54% 41% 5%
46	BL	129	53% 40% 6%
47	BM	103	50% 45% 6%
48	BN	128	53% 42% 5%
49	BO	123	54% 38% 7%
50	BP	117	52% 41% 6%
51	BQ	100	53% 44%
52	BR	88	47% 51%
53	BS	82	56% 41%
54	BT	83	63% 35%

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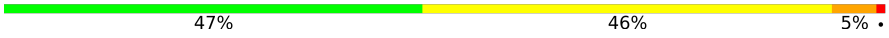
Mol	Chain	Length	Quality of chain
55	BU	74	
56	BV	91	
57	BW	86	
58	BX	70	

2 Entry composition

There are 60 unique types of molecules in this entry. The entry contains 152351 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 5S ribosomal RNA.

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

- Molecule 2 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	AB	2904	62351	27824	11469	20155	2903	0	0

- Molecule 3 is a protein called 50S ribosomal protein L1.

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

- Molecule 4 is a protein called 50S ribosomal protein L2.

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

- Molecule 5 is a protein called 50S ribosomal protein L3.

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

- Molecule 6 is a protein called 50S ribosomal protein L4.

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

- Molecule 7 is a protein called 50S ribosomal protein L5.

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

- Molecule 8 is a protein called 50S ribosomal protein L6.

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

- Molecule 9 is a protein called 50S ribosomal protein L9.

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

- Molecule 10 is a protein called 50S ribosomal protein L10.

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

- Molecule 11 is a protein called 50S ribosomal protein L11.

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

- Molecule 12 is a protein called 50S ribosomal protein L13.

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

- Molecule 13 is a protein called 50S ribosomal protein L14.

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

- Molecule 14 is a protein called 50S ribosomal protein L15.

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

- Molecule 15 is a protein called 50S ribosomal protein L16.

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

- Molecule 16 is a protein called 50S ribosomal protein L17.

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

- Molecule 17 is a protein called 50S ribosomal protein L18.

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

- Molecule 18 is a protein called 50S ribosomal protein L19.

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

- Molecule 19 is a protein called 50S ribosomal protein L20.

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

- Molecule 20 is a protein called 50S ribosomal protein L21.

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

- Molecule 21 is a protein called 50S ribosomal protein L22.

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

- Molecule 22 is a protein called 50S ribosomal protein L23.

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

- Molecule 23 is a protein called 50S ribosomal protein L24.

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

- Molecule 24 is a protein called 50S ribosomal protein L25.

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

- Molecule 25 is a protein called 50S ribosomal protein L27.

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

- Molecule 26 is a protein called 50S ribosomal protein L28.

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

- Molecule 27 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	A0	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 28 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	A1	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 29 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	A2	70	Total	C	N	O	S	0	0
			549	339	104	100	6		

- Molecule 30 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	A3	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 31 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
31	A4	54	Total	C	N	O	0	0
			441	284	81	76		

- Molecule 32 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	A5	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 33 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	A6	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 34 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	A7	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 35 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	BA	1542	Total	C	N	O	P	0	0
			33089	14767	6064	10717	1541		

- Molecule 36 is a RNA chain called A site tRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
36	BB	76	Total	C	N	O	P	S	0	0
			1627	731	287	532	75	2		

- Molecule 37 is a RNA chain called mRNA.

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

- Molecule 38 is a RNA chain called P site tRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
38	BD	77	Total	C	N	O	P	S	0	0
			1641	734	297	533	76	1		

- Molecule 39 is a protein called 30S ribosomal protein S2.

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

- Molecule 40 is a protein called 30S ribosomal protein S3.

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

- Molecule 41 is a protein called 30S ribosomal protein S4.

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

- Molecule 42 is a protein called 30S ribosomal protein S5.

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

- Molecule 43 is a protein called 30S ribosomal protein S6.

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

- Molecule 44 is a protein called 30S ribosomal protein S7.

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

- Molecule 45 is a protein called 30S ribosomal protein S8.

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

- Molecule 46 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	BL	129	Total	C	N	O	S	0	0
			1036	642	208	183	3		

- Molecule 47 is a protein called 30S ribosomal protein S10.

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

- Molecule 48 is a protein called 30S ribosomal protein S11.

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

- Molecule 49 is a protein called 30S ribosomal protein S12.

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

- Molecule 50 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	BP	117	Total	C	N	O	S	0	0
			910	564	183	160	3		

- Molecule 51 is a protein called 30S ribosomal protein S14.

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

- Molecule 52 is a protein called 30S ribosomal protein S15.

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

- Molecule 53 is a protein called 30S ribosomal protein S16.

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

- Molecule 54 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BT	83	Total	C	N	O	S	0	0
			672	425	124	120	3		

- Molecule 55 is a protein called 30S ribosomal protein S18.

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

- Molecule 56 is a protein called 30S ribosomal protein S19.

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

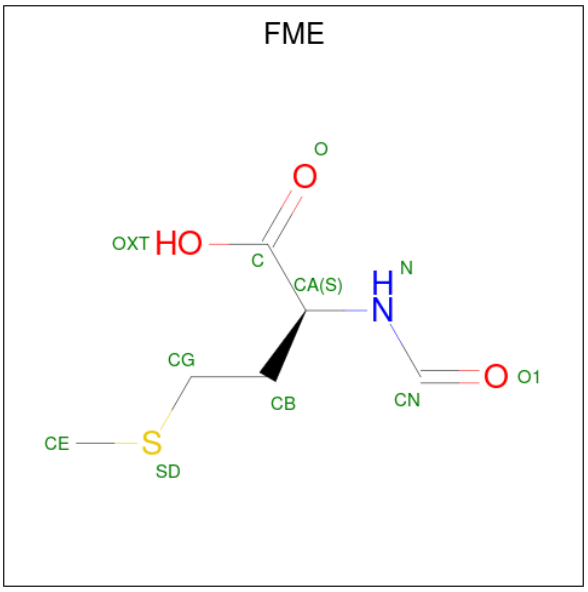
- Molecule 57 is a protein called 30S ribosomal protein S20.

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

- Molecule 58 is a protein called 30S ribosomal protein S21.

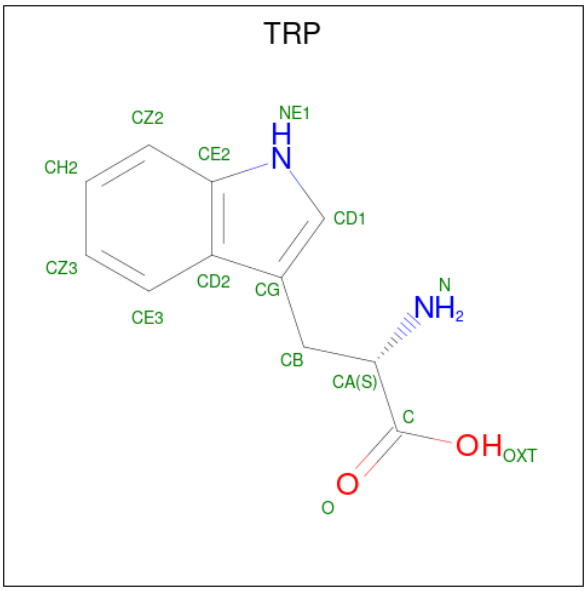
Mol	Chain	Residues	Atoms					AltConf	Trace
58	BX	70	Total	C	N	O	S	0	0
			590	366	125	98	1		

- Molecule 59 is N-FORMYLMETHIONINE (CCD ID: FME) (formula: $C_6H_{11}NO_3S$).



Mol	Chain	Residues	Atoms					AltConf
59	AB	1	Total	C	N	O	S	0
			10	6	1	2	1	

- Molecule 60 is TRYPTOPHAN (CCD ID: TRP) (formula: $C_{11}H_{12}N_2O_2$).



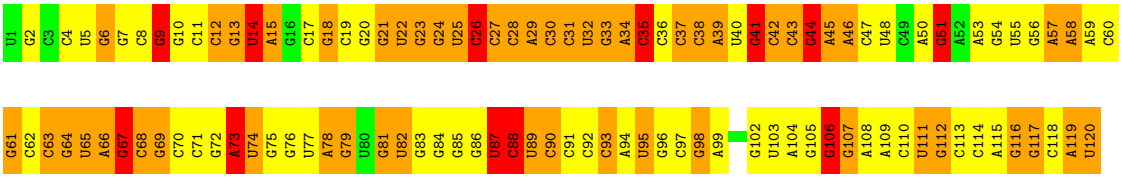
Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
60	BB	1	14	11	2	1	0

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.

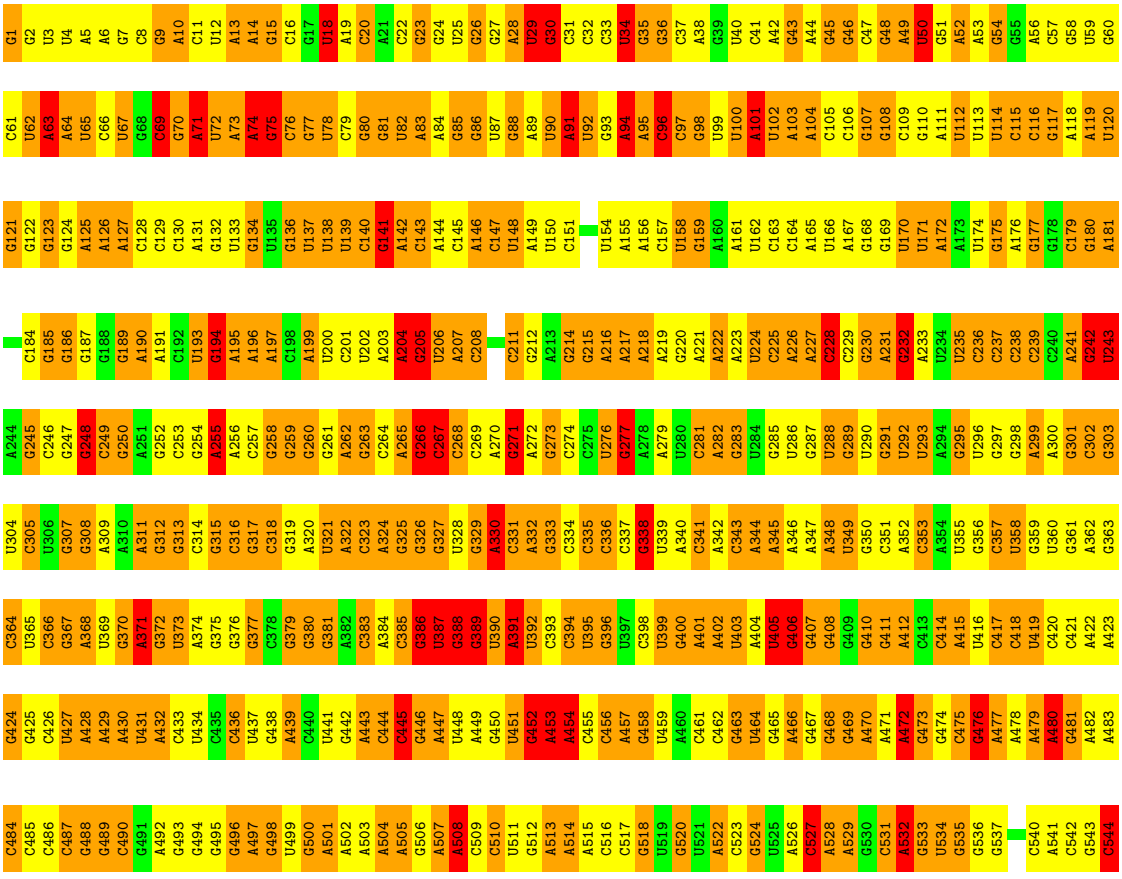
- Molecule 1: 5S ribosomal RNA

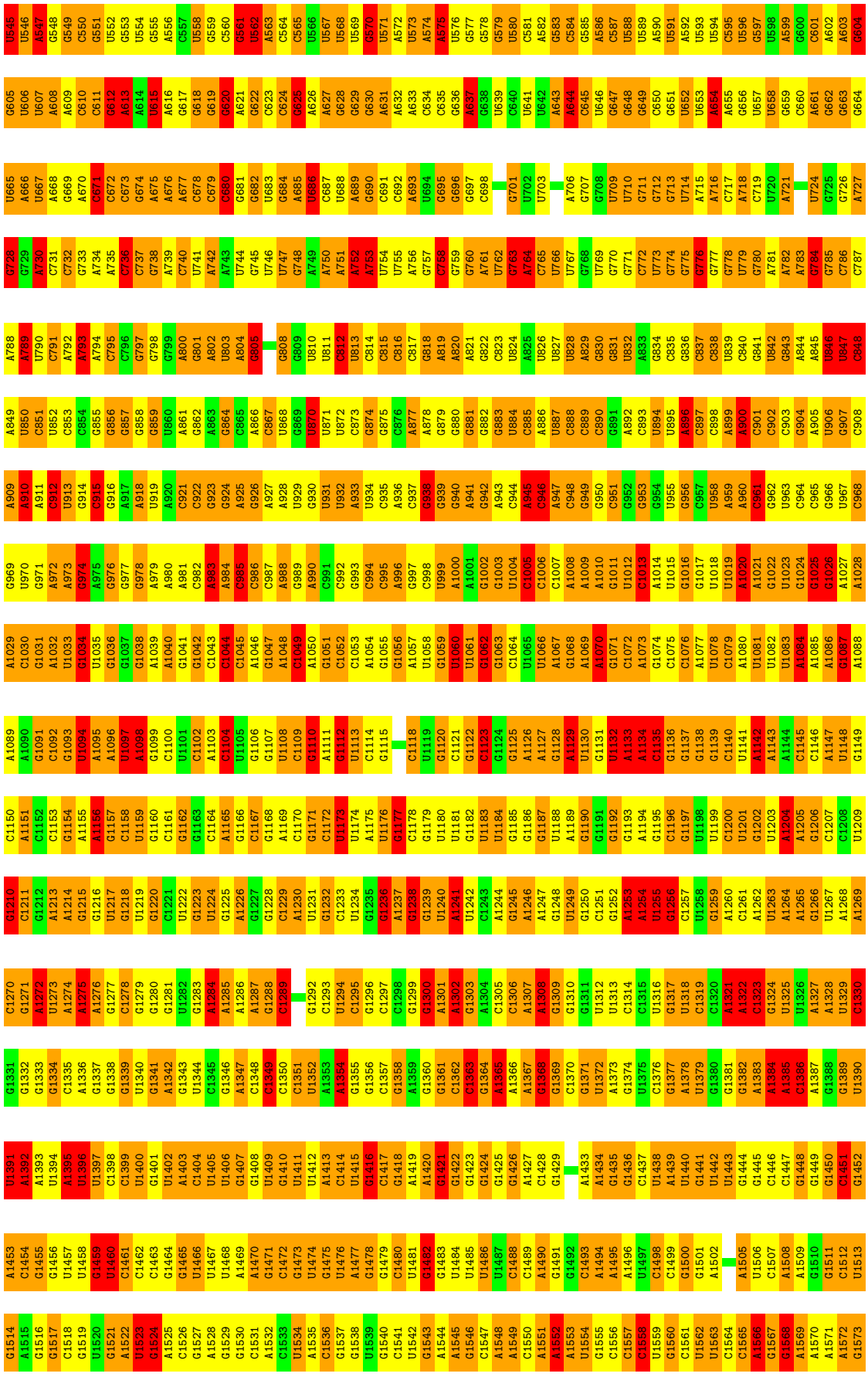
Chain AA: 7% 41% 42% 10%

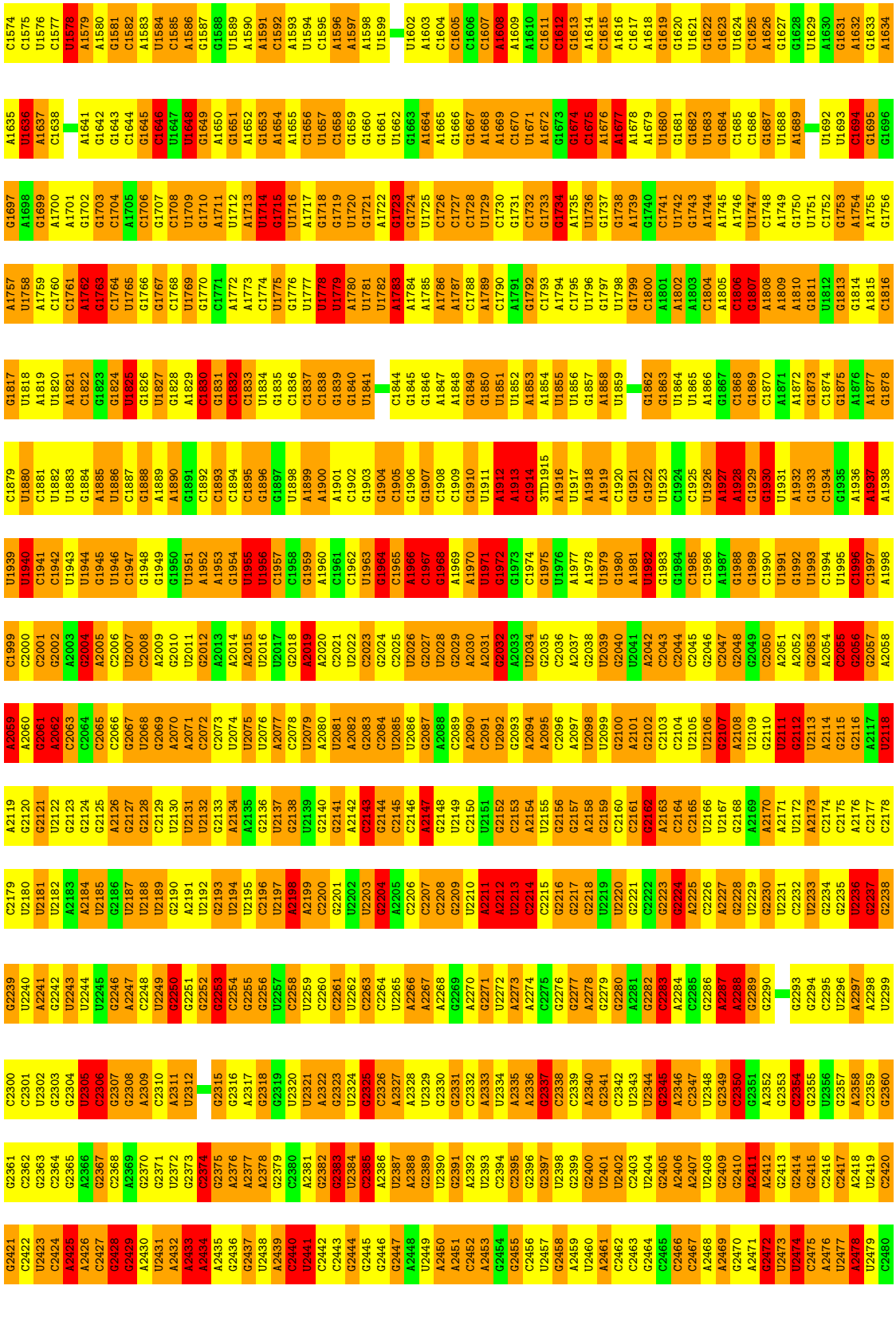


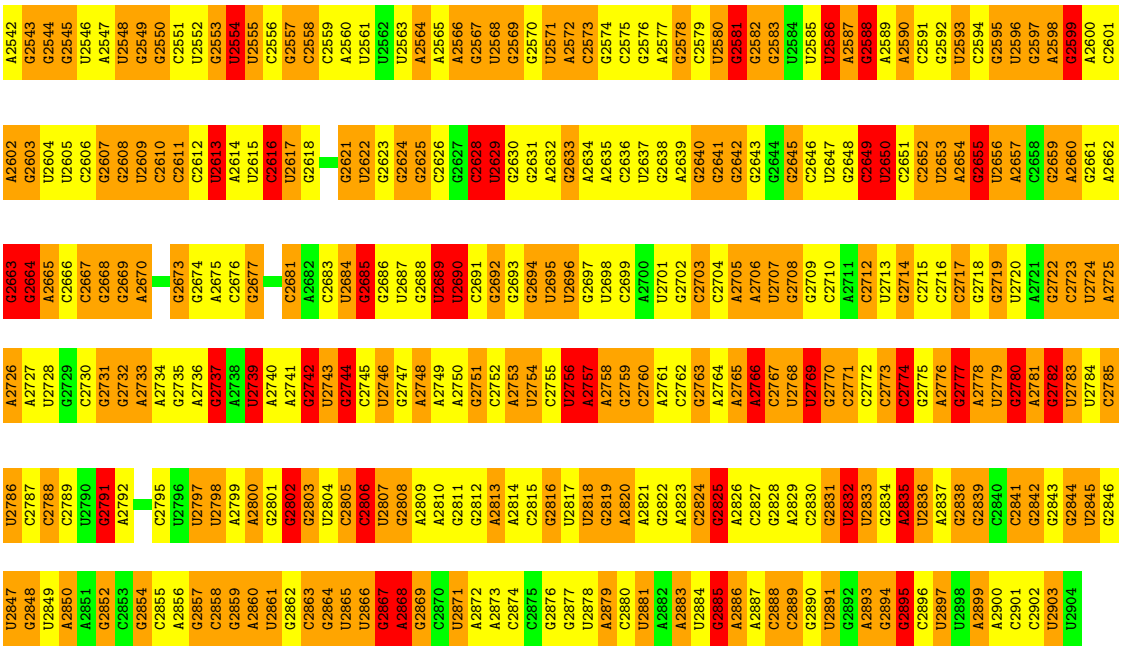
- Molecule 2: 23S ribosomal RNA

Chain AB: 9% 36% 44% 11%



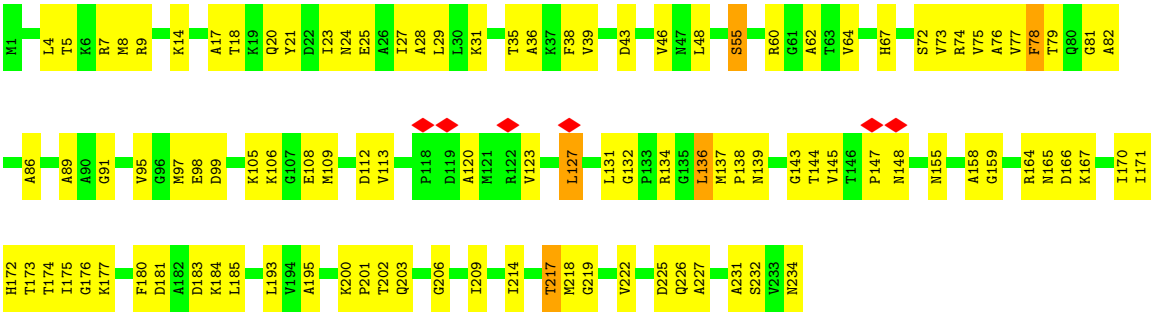






• Molecule 3: 50S ribosomal protein L1

Chain AC:

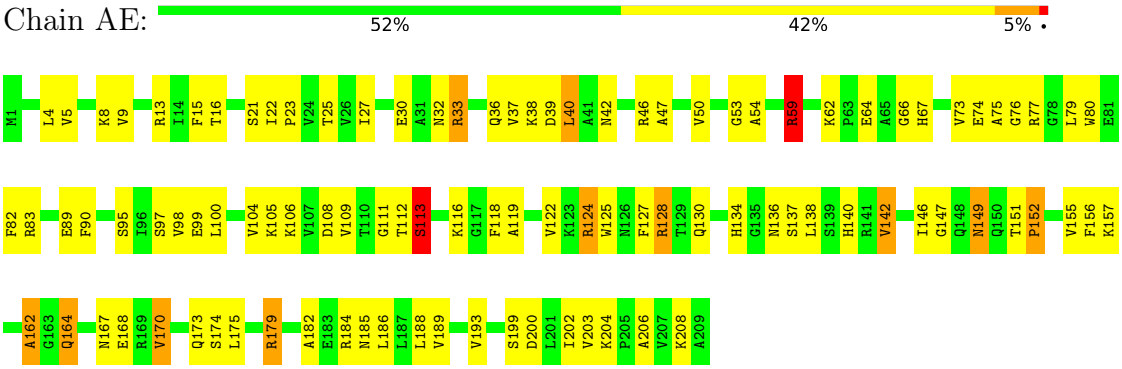


• Molecule 4: 50S ribosomal protein L2

Chain AD:

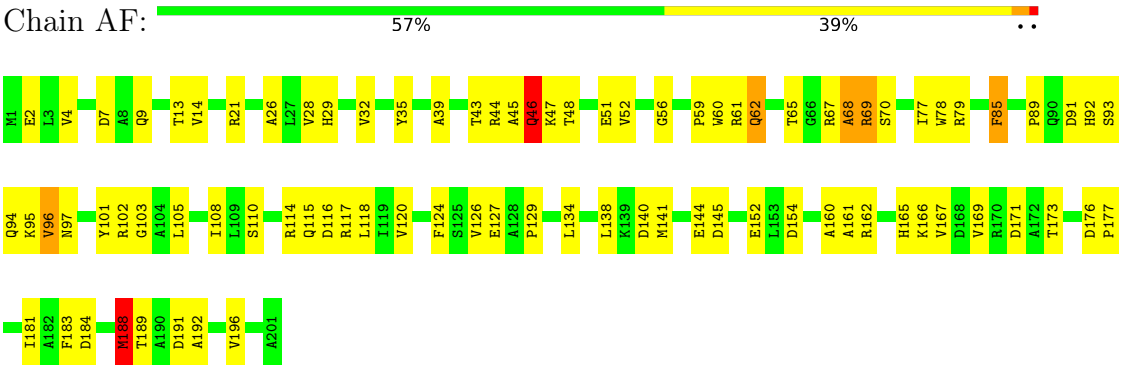
• Molecule 5: 50S ribosomal protein L3

Chain AE:



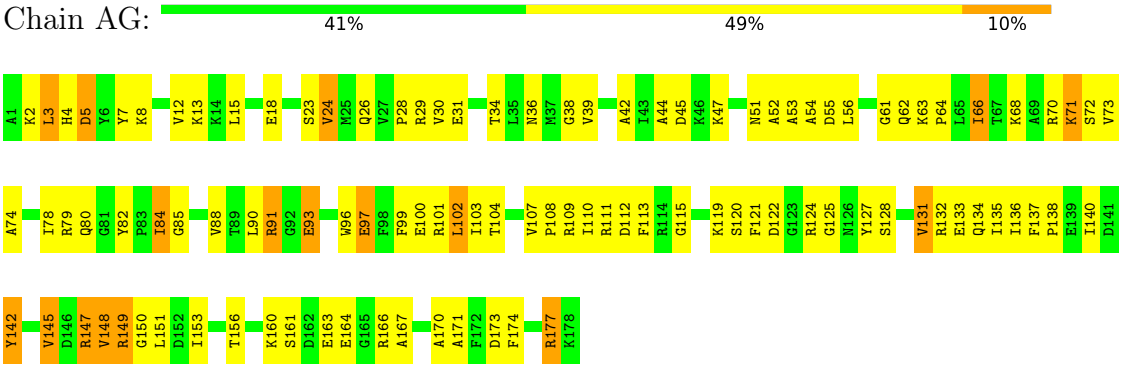
• Molecule 6: 50S ribosomal protein L4

Chain AF:



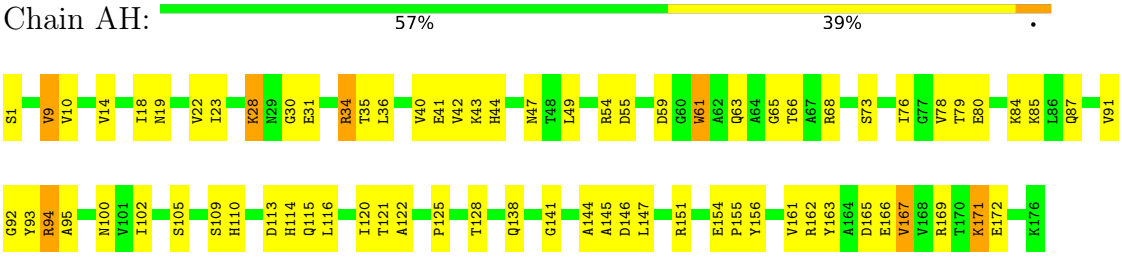
• Molecule 7: 50S ribosomal protein L5

Chain AG:

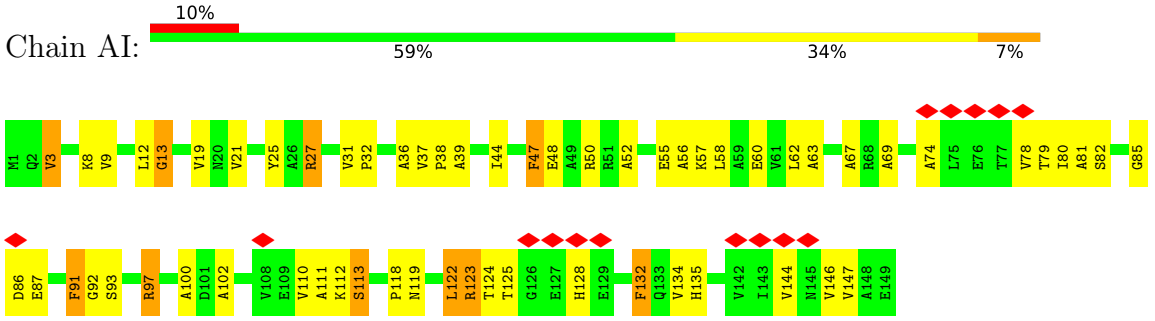


• Molecule 8: 50S ribosomal protein L6

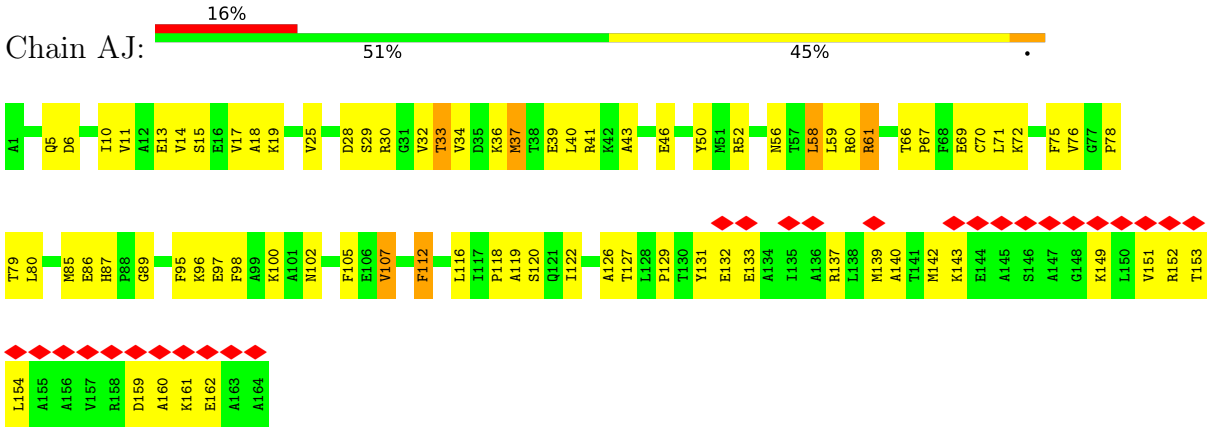
Chain AH:



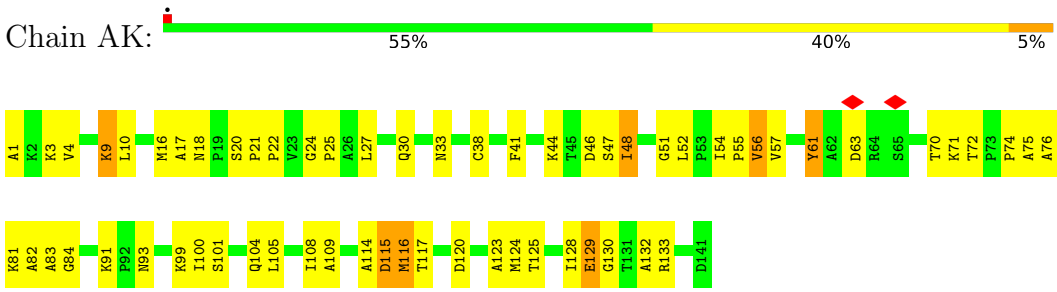
• Molecule 9: 50S ribosomal protein L9



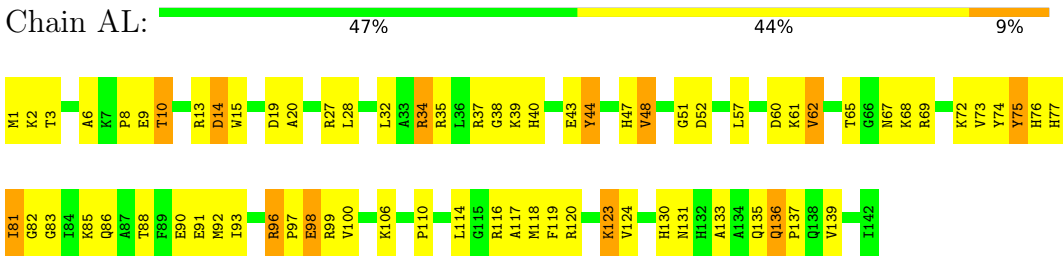
• Molecule 10: 50S ribosomal protein L10



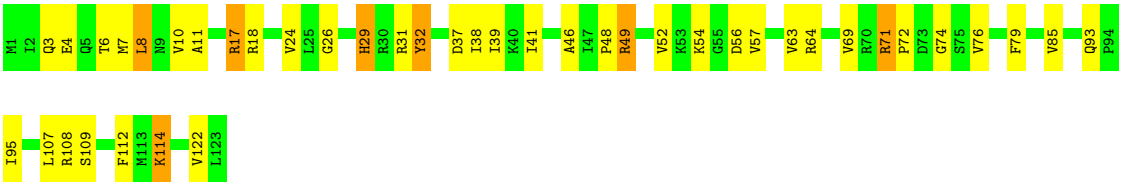
• Molecule 11: 50S ribosomal protein L11



• Molecule 12: 50S ribosomal protein L13

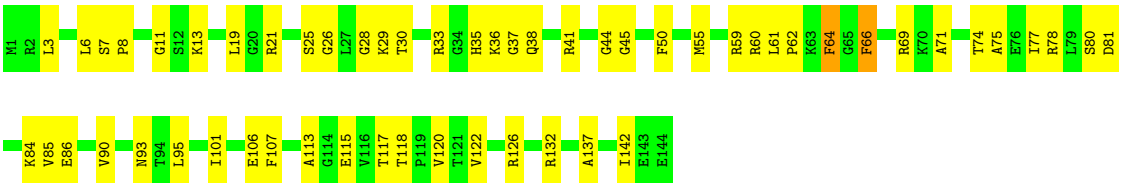


• Molecule 13: 50S ribosomal protein L14



• Molecule 14: 50S ribosomal protein L15

Chain AN:



• Molecule 15: 50S ribosomal protein L16

Chain AO:

• Molecule 16: 50S ribosomal protein L17

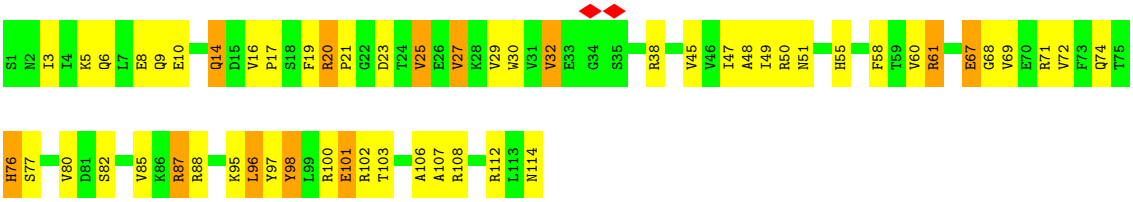
Chain AP:

• Molecule 17: 50S ribosomal protein L18

Chain AQ:

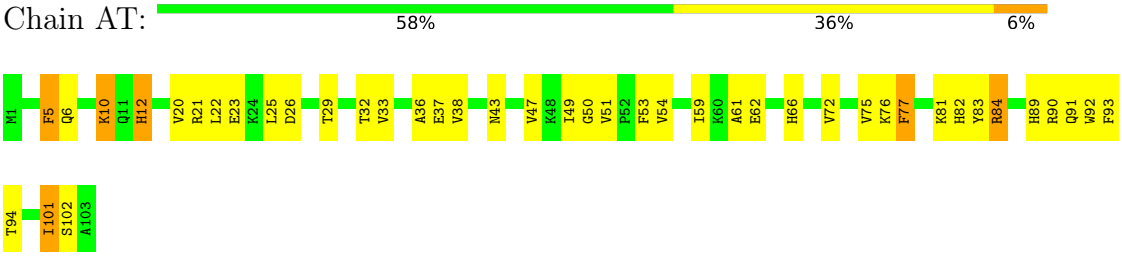
• Molecule 18: 50S ribosomal protein L19

Chain AR:



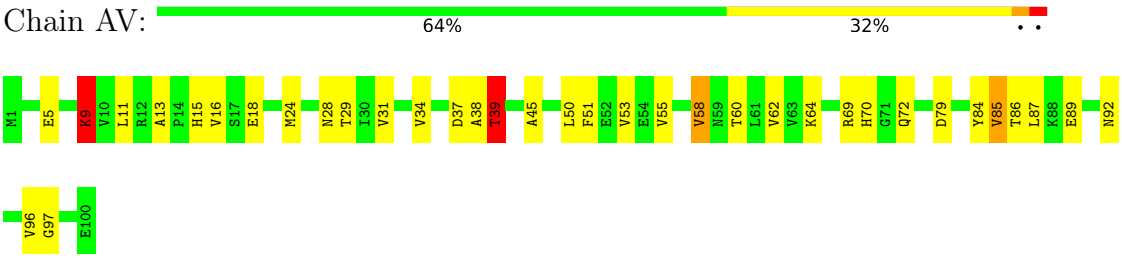
• Molecule 19: 50S ribosomal protein L20

• Molecule 20: 50S ribosomal protein L21



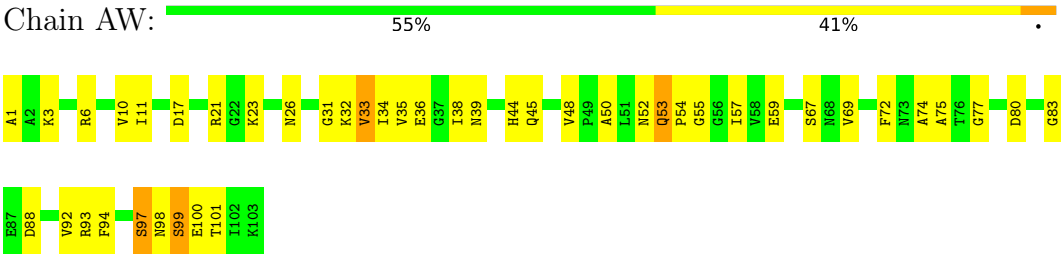
• Molecule 21: 50S ribosomal protein L22

• Molecule 22: 50S ribosomal protein L23



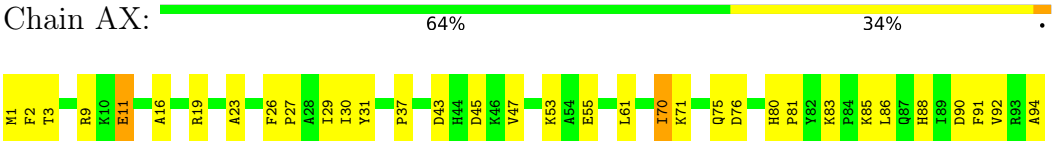
• Molecule 23: 50S ribosomal protein L24

Chain AW:



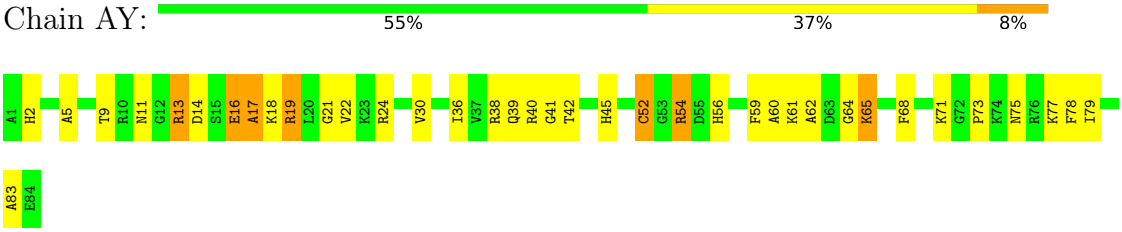
• Molecule 24: 50S ribosomal protein L25

Chain AX:



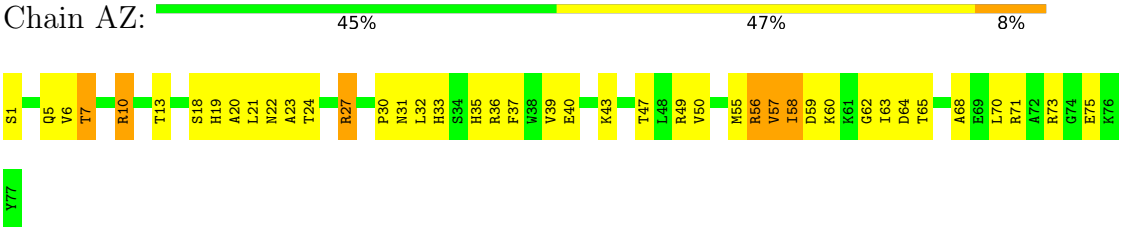
• Molecule 25: 50S ribosomal protein L27

Chain AY:



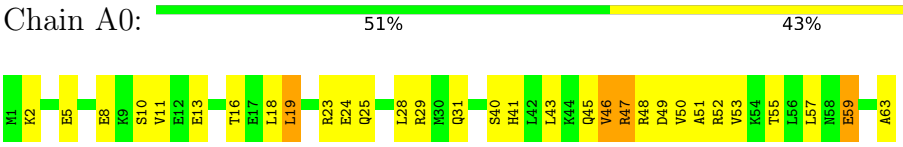
• Molecule 26: 50S ribosomal protein L28

Chain AZ:



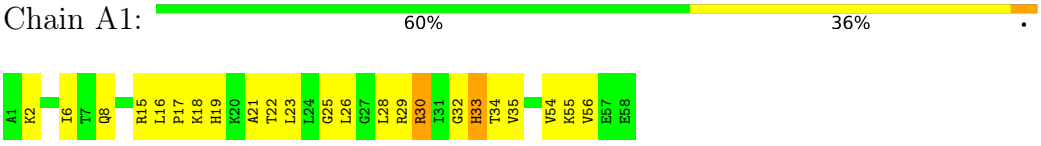
• Molecule 27: 50S ribosomal protein L29

Chain A0:



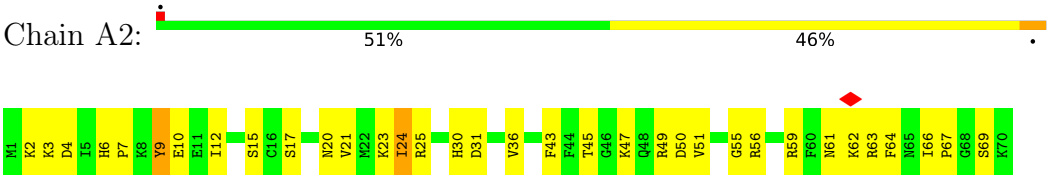
• Molecule 28: 50S ribosomal protein L30

Chain A1:



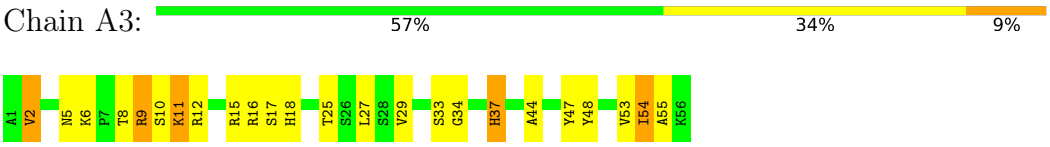
• Molecule 29: 50S ribosomal protein L31

Chain A2:



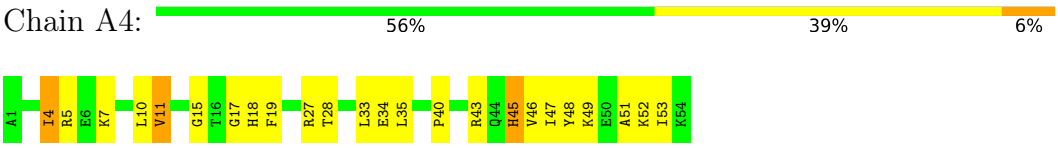
• Molecule 30: 50S ribosomal protein L32

Chain A3:



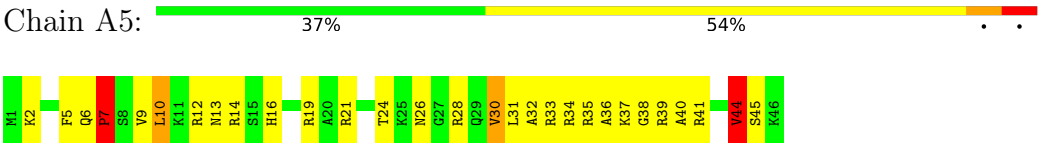
• Molecule 31: 50S ribosomal protein L33

Chain A4:



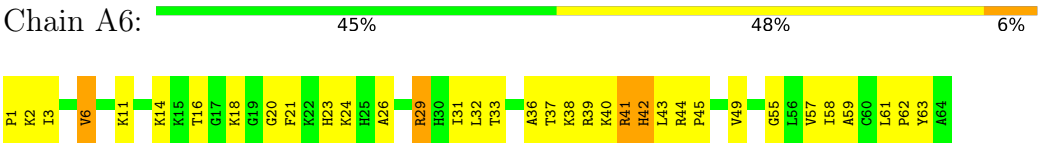
• Molecule 32: 50S ribosomal protein L34

Chain A5:



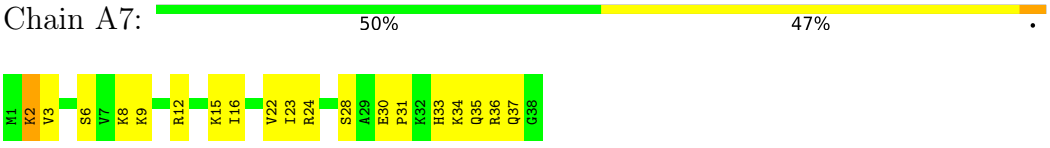
• Molecule 33: 50S ribosomal protein L35

Chain A6:



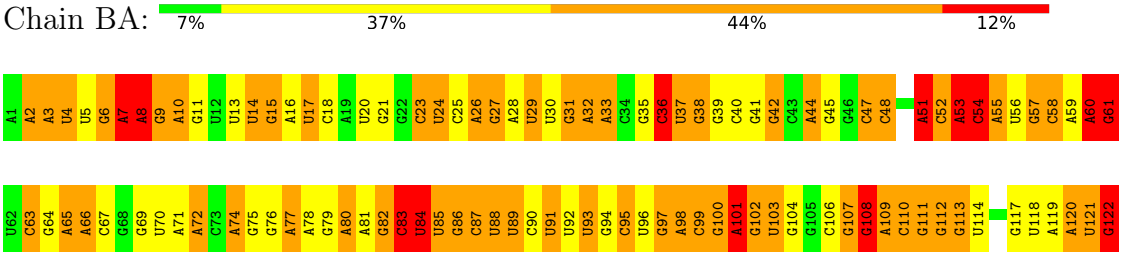
• Molecule 34: 50S ribosomal protein L36

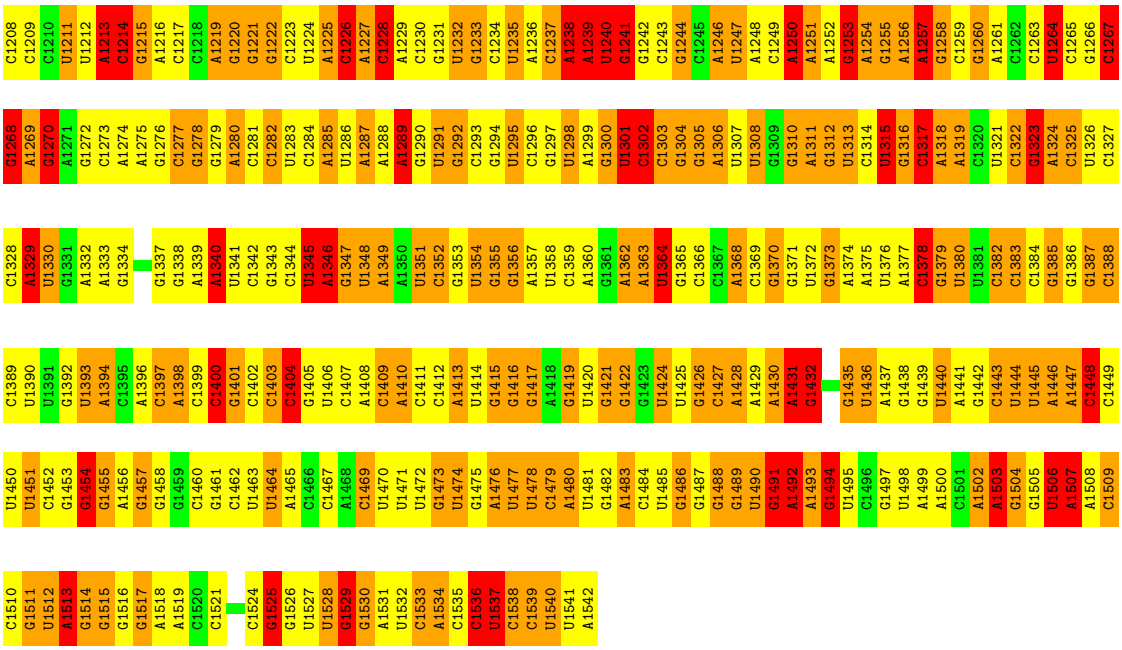
Chain A7:



• Molecule 35: 16S ribosomal RNA

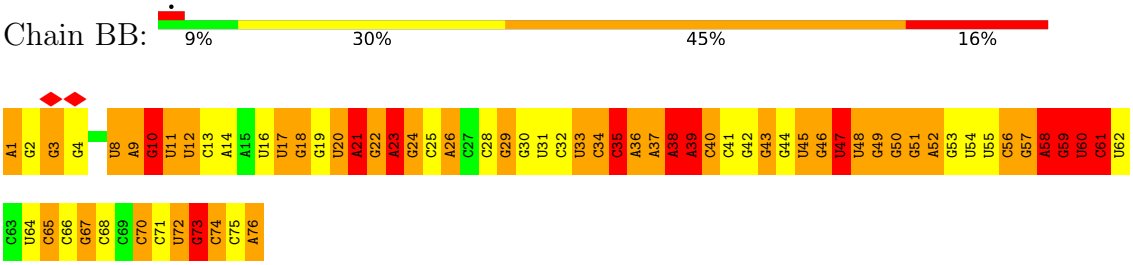
Chain BA:





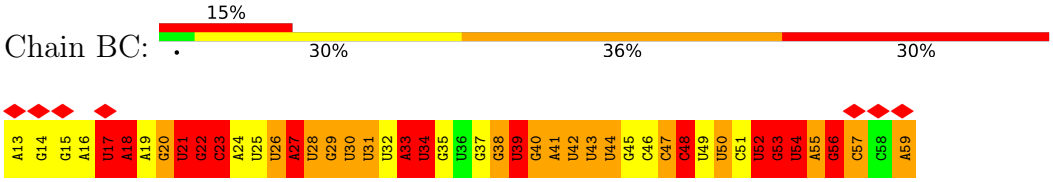
• Molecule 36: A site tRNA

Chain BB:



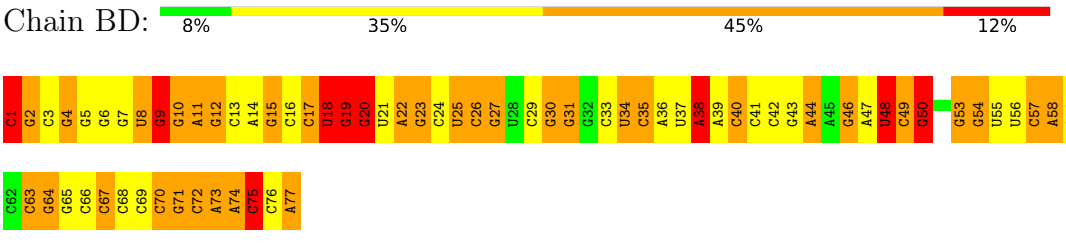
• Molecule 37: mRNA

Chain BC:



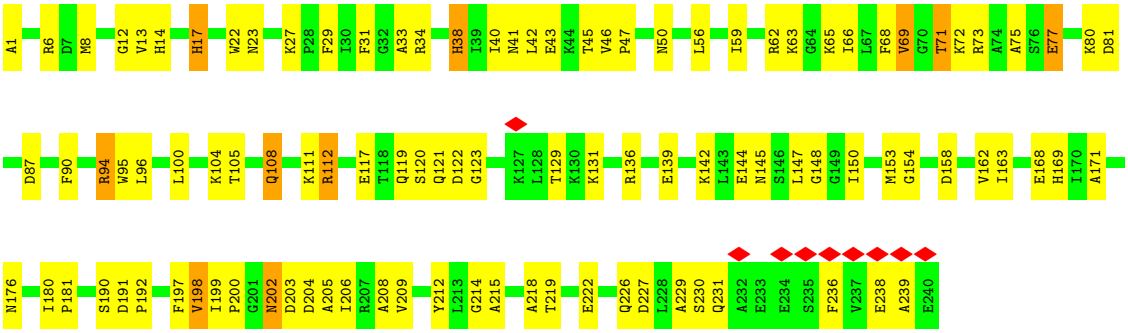
• Molecule 38: P site tRNA

Chain BD:



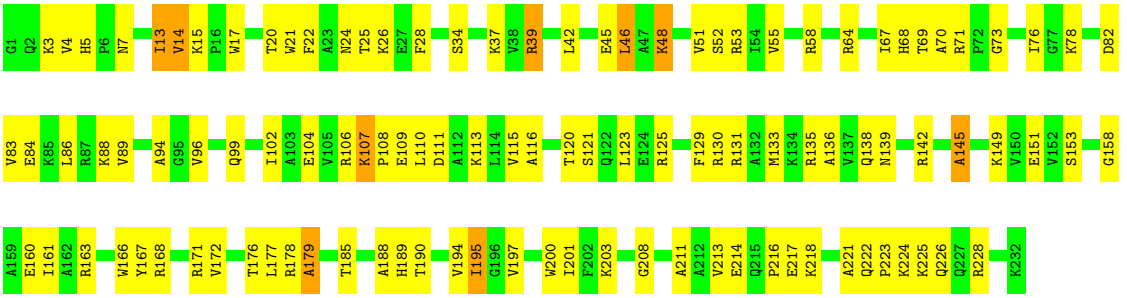
• Molecule 39: 30S ribosomal protein S2

Chain BE:



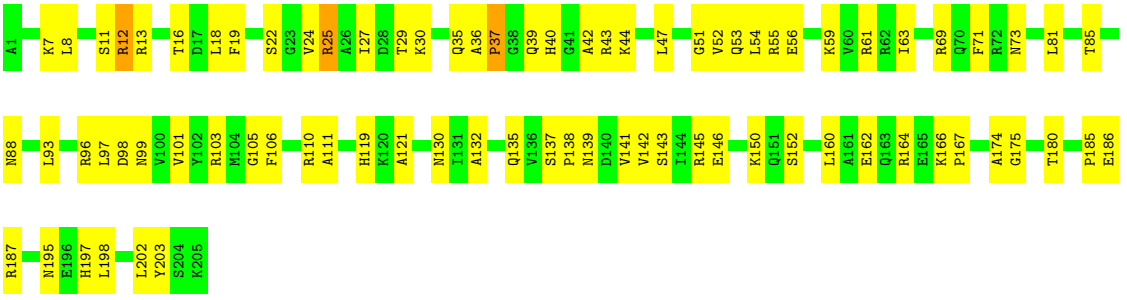
• Molecule 40: 30S ribosomal protein S3

Chain BF:



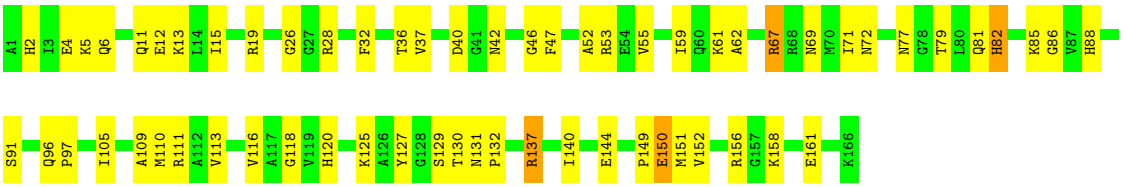
• Molecule 41: 30S ribosomal protein S4

Chain BG:



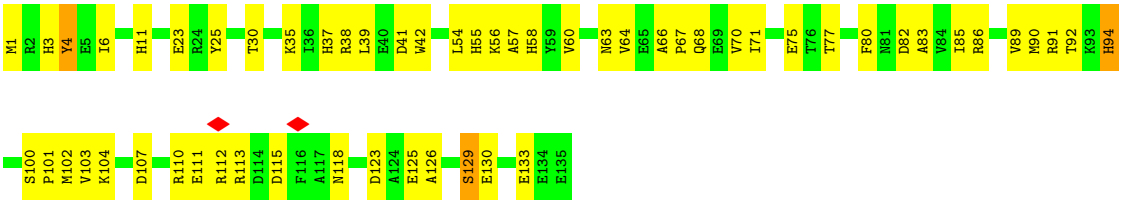
• Molecule 42: 30S ribosomal protein S5

Chain BH:



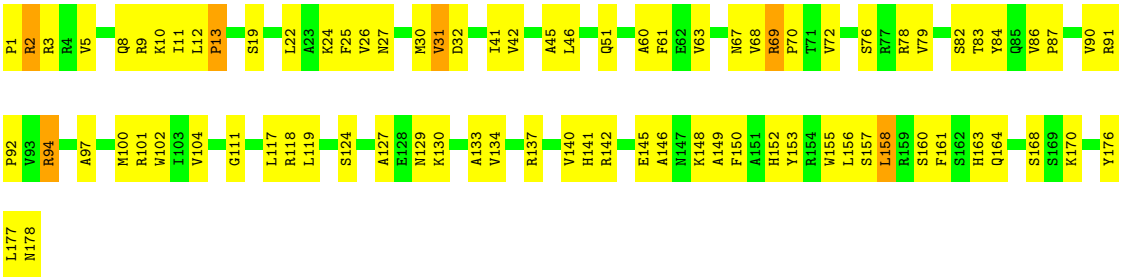
• Molecule 43: 30S ribosomal protein S6

Chain BI:



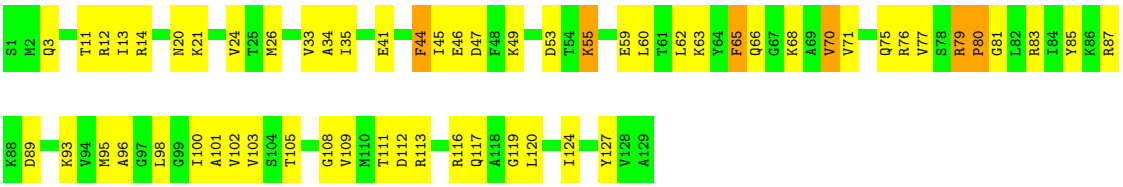
• Molecule 44: 30S ribosomal protein S7

Chain BJ:



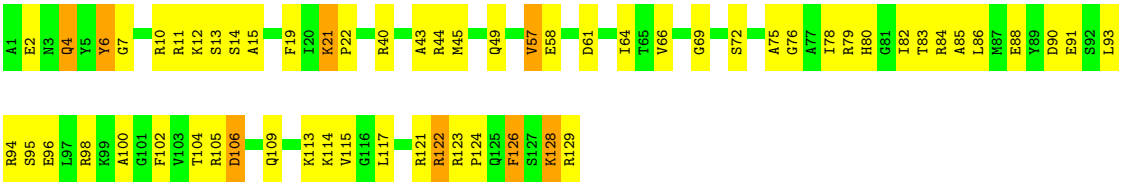
• Molecule 45: 30S ribosomal protein S8

Chain BK:



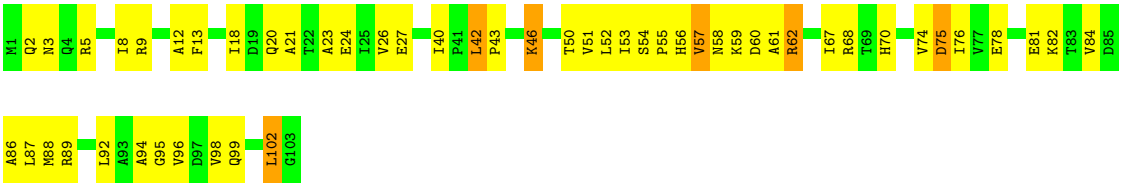
• Molecule 46: 30S ribosomal protein S9

Chain BL:



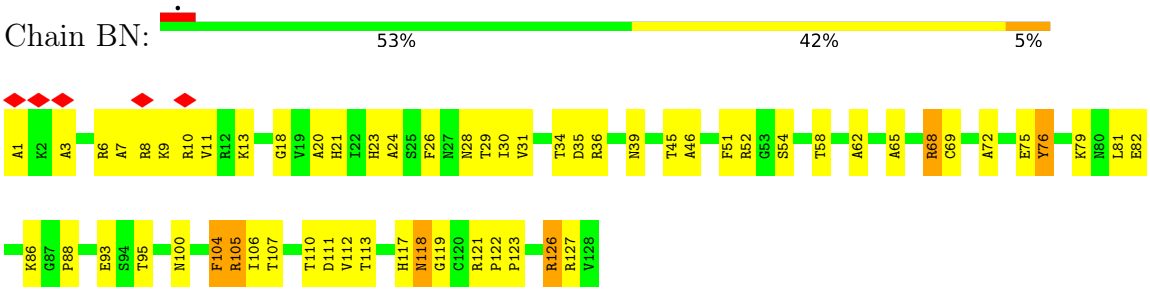
• Molecule 47: 30S ribosomal protein S10

Chain BM:



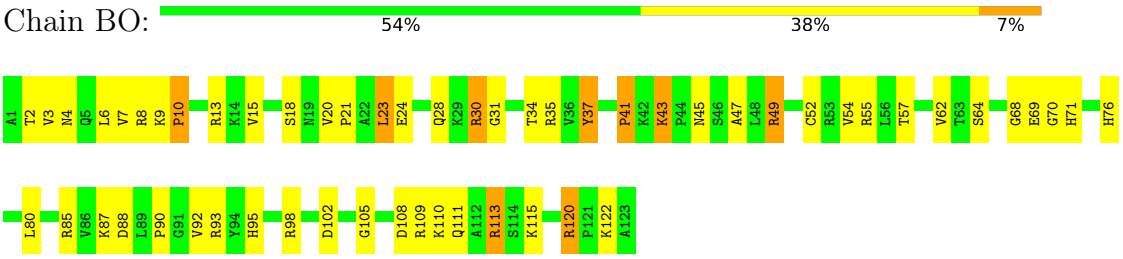
• Molecule 48: 30S ribosomal protein S11

Chain BN:



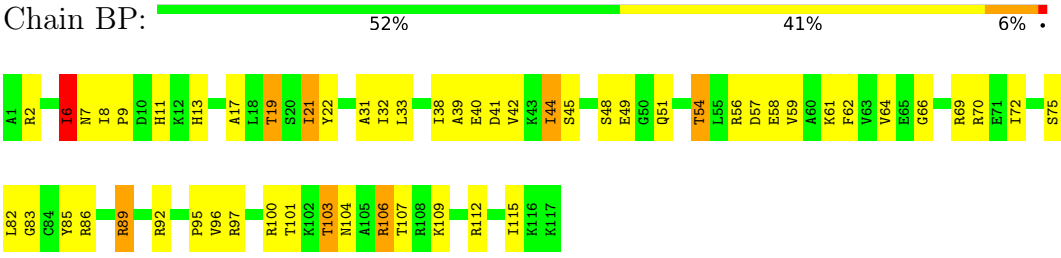
• Molecule 49: 30S ribosomal protein S12

Chain BO:



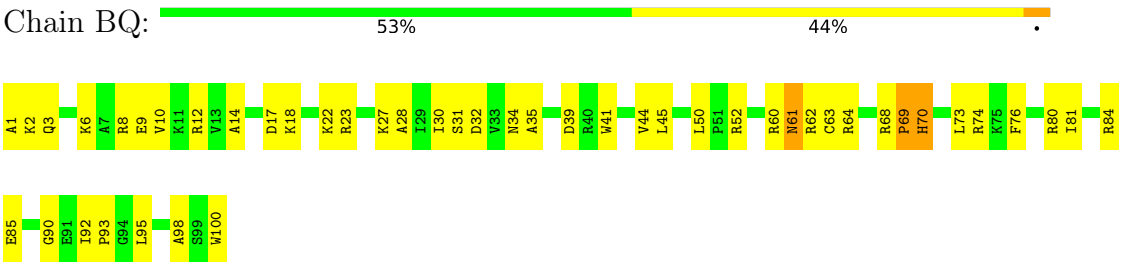
• Molecule 50: 30S ribosomal protein S13

Chain BP:



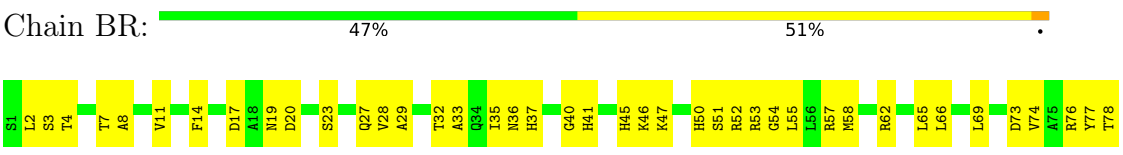
• Molecule 51: 30S ribosomal protein S14

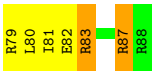
Chain BQ:



• Molecule 52: 30S ribosomal protein S15

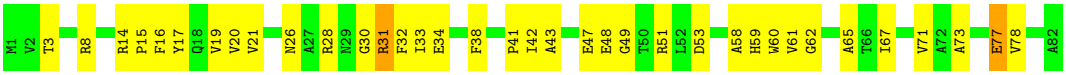
Chain BR:





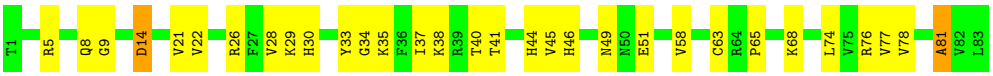
• Molecule 53: 30S ribosomal protein S16

Chain BS:



• Molecule 54: 30S ribosomal protein S17

Chain BT:

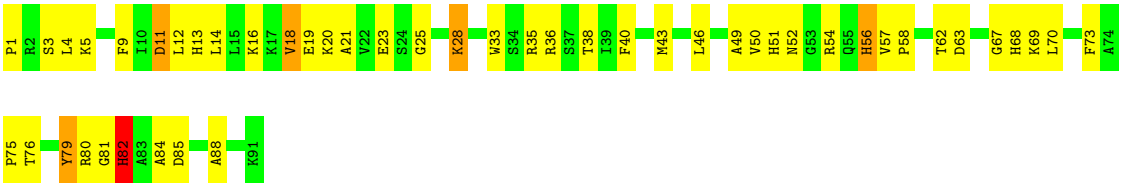


• Molecule 55: 30S ribosomal protein S18

Chain BU:

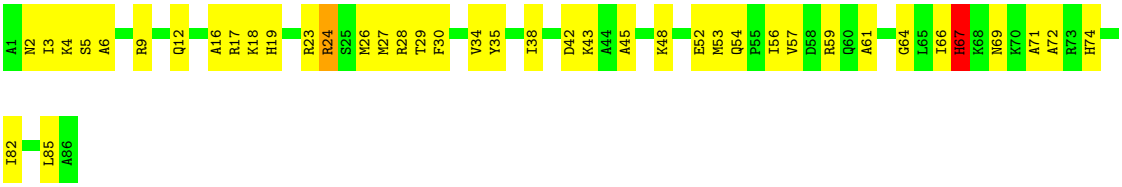
• Molecule 56: 30S ribosomal protein S19

Chain BV:



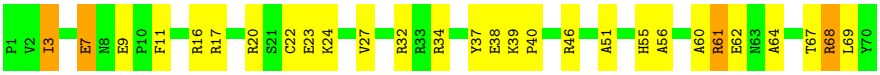
• Molecule 57: 30S ribosomal protein S20

Chain BW:



• Molecule 58: 30S ribosomal protein S21

Chain BX:


P1
V2
I3
E7
N8
E9
P10
F11
R16
R17
R20
S21
C22
E23
K24
V27
R32
R33
R34
Y37
E38
K39
P40
R46
A51
H55
A56
A60
R61
E62
N63
A64
T67
R68
L69
Y70

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	36204	Depositor
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	Volumes were CTF-corrected in defocus groups	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	25	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	58269	Depositor
Image detector	TVIPS TEMCAM-F415 (4k x 4k)	Depositor
Maximum map value	1.471	Depositor
Minimum map value	-0.515	Depositor
Average map value	0.030	Depositor
Map value standard deviation	0.201	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	375.0, 375.0, 375.0	wwPDB
Map dimensions	250, 250, 250	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.5, 1.5, 1.5	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: 5MU, 6MZ, 2MG, H2U, 5MC, 4OC, OMC, 4SU, 3TD, OMU, FME, 1MG, MA6, 7MG, OMG, UR3, 2MA, PSU, CH, MIA

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	AA	1.94	50/2869 (1.7%)	1.97	128/4474 (2.9%)
2	AB	1.90	1105/69257 (1.6%)	1.97	3457/108040 (3.2%)
3	AC	2.05	41/1748 (2.3%)	2.42	104/2355 (4.4%)
4	AD	2.03	49/2131 (2.3%)	2.42	134/2863 (4.7%)
5	AE	2.03	43/1586 (2.7%)	2.40	78/2134 (3.7%)
6	AF	1.97	31/1571 (2.0%)	2.38	87/2113 (4.1%)
7	AG	2.07	39/1444 (2.7%)	2.43	103/1937 (5.3%)
8	AH	2.10	35/1343 (2.6%)	2.36	68/1816 (3.7%)
9	AI	1.92	16/1122 (1.4%)	2.41	71/1515 (4.7%)
10	AJ	2.06	32/1247 (2.6%)	2.48	87/1679 (5.2%)
11	AK	2.08	23/1046 (2.2%)	2.42	72/1410 (5.1%)
12	AL	1.99	34/1152 (3.0%)	2.40	77/1551 (5.0%)
13	AM	1.91	11/956 (1.2%)	2.24	37/1279 (2.9%)
14	AN	2.05	17/1062 (1.6%)	2.33	57/1413 (4.0%)
15	AO	1.97	22/1093 (2.0%)	2.56	88/1460 (6.0%)
16	AP	1.95	15/1021 (1.5%)	2.39	59/1364 (4.3%)
17	AQ	1.94	9/910 (1.0%)	2.38	52/1219 (4.3%)
18	AR	2.05	20/929 (2.2%)	2.46	70/1242 (5.6%)
19	AS	2.01	15/960 (1.6%)	2.55	72/1278 (5.6%)
20	AT	2.02	18/829 (2.2%)	2.35	36/1107 (3.3%)
21	AU	2.06	20/864 (2.3%)	2.50	52/1156 (4.5%)
22	AV	2.03	17/794 (2.1%)	2.31	32/1060 (3.0%)
23	AW	2.00	14/797 (1.8%)	2.39	50/1062 (4.7%)
24	AX	1.91	12/766 (1.6%)	2.27	25/1025 (2.4%)
25	AY	1.98	12/642 (1.9%)	2.38	39/848 (4.6%)
26	AZ	2.08	14/635 (2.2%)	2.63	55/848 (6.5%)
27	A0	2.00	12/510 (2.4%)	2.45	29/677 (4.3%)
28	A1	2.02	9/453 (2.0%)	2.57	33/605 (5.5%)
29	A2	1.99	14/559 (2.5%)	2.52	42/745 (5.6%)
30	A3	2.10	12/450 (2.7%)	2.39	19/599 (3.2%)
31	A4	1.97	6/448 (1.3%)	2.20	15/594 (2.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
32	A5	1.97	9/380 (2.4%)	2.62	37/498 (7.4%)
33	A6	2.06	18/513 (3.5%)	2.30	26/676 (3.8%)
34	A7	2.02	8/303 (2.6%)	2.48	15/397 (3.8%)
35	BA	1.91	600/36769 (1.6%)	2.00	1992/57354 (3.5%)
36	BB	1.94	35/1600 (2.2%)	2.04	91/2492 (3.7%)
37	BC	1.93	17/1108 (1.5%)	2.11	70/1724 (4.1%)
38	BD	1.92	38/1721 (2.2%)	2.04	94/2683 (3.5%)
39	BE	2.02	40/1904 (2.1%)	2.44	112/2565 (4.4%)
40	BF	1.97	35/1852 (1.9%)	2.40	121/2490 (4.9%)
41	BG	2.00	29/1665 (1.7%)	2.34	85/2227 (3.8%)
42	BH	2.04	28/1239 (2.3%)	2.27	50/1664 (3.0%)
43	BI	2.02	24/1121 (2.1%)	2.32	59/1509 (3.9%)
44	BJ	2.01	26/1422 (1.8%)	2.45	88/1908 (4.6%)
45	BK	1.92	15/989 (1.5%)	2.42	62/1326 (4.7%)
46	BL	1.95	20/1048 (1.9%)	2.47	65/1394 (4.7%)
47	BM	2.06	19/835 (2.3%)	2.43	49/1127 (4.3%)
48	BN	2.03	25/982 (2.5%)	2.50	78/1323 (5.9%)
49	BO	2.03	22/969 (2.3%)	2.37	55/1300 (4.2%)
50	BP	2.01	16/919 (1.7%)	2.49	67/1226 (5.5%)
51	BQ	2.06	14/817 (1.7%)	2.44	50/1088 (4.6%)
52	BR	2.02	17/724 (2.3%)	2.62	58/966 (6.0%)
53	BS	1.97	11/659 (1.7%)	2.46	42/884 (4.8%)
54	BT	2.00	12/681 (1.8%)	2.32	26/913 (2.8%)
55	BU	1.96	9/637 (1.4%)	2.33	39/851 (4.6%)
56	BV	2.13	23/744 (3.1%)	2.42	46/995 (4.6%)
57	BW	2.10	18/676 (2.7%)	2.49	42/895 (4.7%)
58	BX	1.95	9/598 (1.5%)	2.28	22/792 (2.8%)
All	All	1.94	2904/164069 (1.8%)	2.11	8869/244735 (3.6%)

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	AA	0	68
2	AB	0	1652
3	AC	0	2
4	AD	0	11
5	AE	0	11
6	AF	0	3
7	AG	0	8

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Mol	Chain	#Chirality outliers	#Planarity outliers
8	AH	0	5
9	AI	0	3
10	AJ	0	3
11	AK	0	2
12	AL	0	4
13	AM	0	5
14	AN	0	4
15	AO	0	3
16	AP	0	8
17	AQ	0	2
18	AR	0	7
19	AS	0	5
20	AT	0	5
21	AU	0	2
22	AV	0	1
23	AW	0	1
24	AX	0	1
25	AY	0	7
26	AZ	0	2
27	A0	0	4
28	A1	0	1
29	A2	0	3
30	A3	0	3
31	A4	0	2
33	A6	0	5
35	BA	0	910
36	BB	0	37
37	BC	0	28
38	BD	0	45
39	BE	0	4
40	BF	0	7
41	BG	0	2
42	BH	0	3
43	BI	0	5
44	BJ	0	6
45	BK	0	4
46	BL	0	4
47	BM	0	2
48	BN	0	3
49	BO	0	8
50	BP	0	2
51	BQ	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
52	BR	0	1
53	BS	0	4
54	BT	0	1
55	BU	0	5
56	BV	0	4
57	BW	0	2
58	BX	0	3
All	All	0	2936

All (2904) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	39	A	O3'-P	11.11	1.77	1.61
20	AT	51	VAL	CA-C	10.55	1.61	1.53
35	BA	729	A	P-O5'	10.40	1.75	1.59
25	AY	22	VAL	CA-C	10.01	1.63	1.52
8	AH	110	HIS	ND1-CE1	9.85	1.42	1.32
36	BB	8	4SU	O3'-P	9.82	1.66	1.56
44	BJ	60	ALA	CA-C	9.81	1.66	1.52
21	AU	9	HIS	ND1-CE1	9.75	1.42	1.32
14	AN	44	GLY	C-O	-9.75	1.17	1.23
7	AG	61	GLY	CA-C	9.70	1.65	1.51
42	BH	110	MET	CA-C	9.58	1.65	1.52
2	AB	969	G	P-O5'	9.35	1.73	1.59
2	AB	2398	U	O3'-P	9.32	1.75	1.61
35	BA	424	G	C2'-O2'	-9.29	1.28	1.42
35	BA	1439	G	P-O5'	9.20	1.73	1.59
2	AB	1028	A	C5'-C4'	9.17	1.65	1.51
2	AB	523	C	P-O5'	9.15	1.73	1.59
35	BA	637	C	P-O5'	9.10	1.73	1.59
2	AB	1314	C	C1'-N1	9.06	1.62	1.48
35	BA	336	A	P-O5'	9.05	1.73	1.59
51	BQ	28	ALA	N-CA	8.92	1.57	1.46
57	BW	74	HIS	CB-CG	8.92	1.62	1.50
52	BR	37	HIS	ND1-CE1	8.88	1.41	1.32
35	BA	453	G	O3'-P	8.87	1.74	1.61
1	AA	85	G	O3'-P	8.85	1.74	1.61
35	BA	213	G	C5'-C4'	8.82	1.64	1.51
50	BP	2	ARG	NE-CZ	8.77	1.42	1.33
10	AJ	52	ARG	CA-C	8.70	1.63	1.52
11	AK	74	PRO	CA-C	8.69	1.62	1.52
6	AF	77	ILE	CA-C	8.68	1.62	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	570	G	C4'-O4'	-8.63	1.32	1.45
17	AQ	67	ASN	CA-CB	8.62	1.66	1.53
7	AG	131	VAL	CA-C	8.51	1.64	1.52
2	AB	2520	C	O3'-P	8.49	1.73	1.61
5	AE	50	VAL	CA-C	8.49	1.62	1.52
2	AB	328	U	C5'-C4'	8.48	1.64	1.51
2	AB	1948	G	O3'-P	8.46	1.73	1.61
18	AR	112	ARG	NE-CZ	8.45	1.42	1.33
2	AB	2374	C	O3'-P	-8.42	1.48	1.61
2	AB	2818	U	C4'-O4'	-8.41	1.32	1.45
42	BH	144	GLU	CA-C	8.41	1.64	1.52
35	BA	1269	A	C5'-C4'	8.40	1.63	1.51
2	AB	28	A	C4'-O4'	-8.39	1.32	1.45
2	AB	1407	G	C5'-C4'	8.36	1.63	1.51
2	AB	1887	C	P-O5'	8.36	1.72	1.59
11	AK	91	LYS	CA-C	8.36	1.59	1.52
2	AB	1937	A	P-O5'	8.35	1.72	1.59
19	AS	50	ARG	NE-CZ	8.31	1.42	1.33
49	BO	34	THR	CA-C	8.30	1.62	1.52
35	BA	257	G	O3'-P	8.30	1.73	1.61
2	AB	2600	A	O3'-P	8.28	1.73	1.61
28	A1	30	ARG	N-CA	-8.27	1.35	1.46
7	AG	110	ILE	CA-C	8.25	1.62	1.52
4	AD	20	ASN	CA-C	8.24	1.61	1.53
2	AB	2241	A	P-O5'	8.23	1.72	1.59
56	BV	3	SER	CA-CB	8.23	1.64	1.53
2	AB	619	G	C5'-C4'	8.22	1.63	1.51
2	AB	2174	C	C2'-O2'	-8.20	1.30	1.42
2	AB	716	A	C5'-C4'	8.17	1.63	1.51
2	AB	1865	U	P-O5'	8.17	1.72	1.59
2	AB	288	U	P-O5'	8.16	1.72	1.59
54	BT	9	GLY	CA-C	8.15	1.59	1.51
15	AO	97	GLN	N-CA	8.13	1.53	1.45
2	AB	2747	G	P-O5'	8.12	1.72	1.59
3	AC	23	ILE	N-CA	8.09	1.56	1.46
14	AN	35	HIS	ND1-CE1	8.06	1.40	1.32
39	BE	77	GLU	CA-C	8.05	1.63	1.52
1	AA	95	U	C5'-C4'	8.04	1.63	1.51
3	AC	148	ASN	CA-CB	7.99	1.62	1.52
2	AB	2858	C	O3'-P	7.97	1.73	1.61
50	BP	6	ILE	CA-C	7.97	1.62	1.52
30	A3	34	GLY	N-CA	7.95	1.55	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	2201	G	P-O5'	7.94	1.71	1.59
17	AQ	44	GLY	CA-C	7.93	1.62	1.51
35	BA	500	G	P-O5'	7.93	1.71	1.59
9	AI	37	VAL	N-CA	7.93	1.53	1.46
2	AB	633	A	C5'-C4'	7.93	1.63	1.51
6	AF	47	LYS	CA-C	7.92	1.61	1.52
23	AW	32	LYS	CA-C	7.92	1.62	1.52
2	AB	1868	C	C4'-C3'	-7.92	1.40	1.52
56	BV	40	PHE	CA-C	7.91	1.59	1.52
35	BA	1481	U	C5'-C4'	7.90	1.63	1.51
36	BB	4	G	P-O5'	7.90	1.71	1.59
35	BA	689	C	P-O5'	7.89	1.71	1.59
35	BA	1259	C	C5'-C4'	7.89	1.63	1.51
55	BU	46	THR	CA-C	7.89	1.62	1.52
4	AD	44	ASN	CA-C	7.89	1.63	1.52
52	BR	4	THR	CA-C	7.89	1.63	1.52
50	BP	109	LYS	CA-C	7.88	1.62	1.52
23	AW	97	SER	N-CA	7.87	1.56	1.46
2	AB	1818	U	C4'-O4'	-7.87	1.33	1.45
35	BA	96	U	P-O5'	7.86	1.71	1.59
33	A6	6	VAL	CA-C	7.86	1.60	1.53
4	AD	137	GLY	CA-C	7.86	1.63	1.51
35	BA	1215	G	C4'-O4'	-7.85	1.33	1.45
2	AB	1064	C	C4'-O4'	-7.85	1.33	1.45
2	AB	1706	C	C5'-C4'	7.85	1.63	1.51
35	BA	1116	U	C4'-O4'	-7.84	1.33	1.45
39	BE	202	ASN	N-CA	7.84	1.55	1.45
13	AM	8	LEU	CA-C	7.84	1.62	1.52
2	AB	773	U	C4'-O4'	-7.83	1.33	1.45
45	BK	79	ARG	NE-CZ	7.82	1.41	1.33
2	AB	391	A	P-O5'	7.82	1.71	1.59
2	AB	529	A	O5'-C5'	-7.79	1.31	1.42
15	AO	39	GLY	N-CA	7.79	1.52	1.45
26	AZ	7	THR	CA-C	7.78	1.62	1.52
12	AL	69	ARG	CD-NE	7.78	1.57	1.46
35	BA	1306	A	O3'-P	7.78	1.72	1.61
2	AB	2286	G	C5'-C4'	7.77	1.63	1.51
2	AB	485	C	P-O5'	7.77	1.71	1.59
2	AB	1070	A	C5'-C4'	7.77	1.63	1.51
2	AB	2181	U	C4'-O4'	-7.77	1.33	1.45
2	AB	108	G	O3'-P	7.76	1.72	1.61
39	BE	31	PHE	N-CA	-7.75	1.36	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	BG	142	VAL	CA-C	7.74	1.61	1.52
35	BA	248	C	C4'-C3'	7.71	1.64	1.52
2	AB	2045	C	C4'-O4'	-7.71	1.33	1.45
35	BA	742	G	C5'-C4'	7.71	1.62	1.51
2	AB	569	U	C5'-C4'	7.70	1.62	1.51
33	A6	24	LYS	CA-C	7.70	1.63	1.52
41	BG	135	GLN	CA-C	7.70	1.62	1.52
49	BO	37	TYR	CA-C	-7.70	1.43	1.52
28	A1	28	LEU	CA-C	7.69	1.62	1.52
33	A6	42	HIS	CE1-NE2	7.69	1.40	1.32
38	BD	8	4SU	O3'-P	7.68	1.64	1.56
50	BP	97	ARG	NE-CZ	7.68	1.41	1.33
14	AN	21	ARG	CA-C	-7.68	1.43	1.52
2	AB	2238	G	C4'-O4'	-7.67	1.34	1.45
8	AH	23	ILE	CA-C	7.67	1.62	1.52
49	BO	62	VAL	N-CA	7.67	1.54	1.46
41	BG	119	HIS	CE1-NE2	7.65	1.40	1.32
2	AB	1858	A	C4'-O4'	-7.64	1.34	1.45
6	AF	129	PRO	CA-C	7.63	1.60	1.53
35	BA	178	C	C4'-O4'	-7.63	1.34	1.45
35	BA	917	G	C5'-C4'	7.62	1.62	1.51
2	AB	2346	A	O3'-P	7.61	1.72	1.61
35	BA	860	A	C4'-C3'	7.61	1.64	1.52
2	AB	2825	G	C3'-O3'	7.60	1.53	1.42
13	AM	32	TYR	N-CA	7.60	1.55	1.45
5	AE	38	LYS	N-CA	7.59	1.55	1.46
2	AB	2042	A	O3'-P	7.59	1.72	1.61
9	AI	82	SER	N-CA	7.59	1.55	1.45
35	BA	935	A	P-O5'	7.59	1.71	1.59
35	BA	162	A	C4'-O4'	-7.58	1.34	1.45
2	AB	375	G	O3'-P	7.57	1.72	1.61
5	AE	27	ILE	CA-C	7.57	1.62	1.52
35	BA	1454	G	O3'-P	7.56	1.72	1.61
2	AB	92	U	O3'-P	7.55	1.72	1.61
35	BA	826	C	P-O5'	7.55	1.71	1.59
8	AH	166	GLU	N-CA	7.54	1.55	1.46
18	AR	47	ILE	CA-CB	7.54	1.64	1.54
35	BA	1532	U	C4'-O4'	-7.54	1.34	1.45
44	BJ	27	ASN	N-CA	-7.54	1.37	1.46
2	AB	609	A	P-O5'	7.54	1.71	1.59
2	AB	2659	G	O3'-P	7.53	1.72	1.61
28	A1	6	ILE	CA-CB	7.53	1.63	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	649	A	C5'-C4'	7.53	1.62	1.51
42	BH	79	THR	CA-C	7.52	1.62	1.52
2	AB	2545	G	C4'-C3'	7.52	1.63	1.52
2	AB	2602	A	P-O5'	7.52	1.71	1.59
20	AT	51	VAL	N-CA	-7.51	1.41	1.46
2	AB	1834	U	P-O5'	7.50	1.71	1.59
2	AB	1965	C	C5'-C4'	7.50	1.62	1.51
35	BA	745	G	O3'-P	7.50	1.72	1.61
2	AB	252	G	C1'-N9	7.50	1.59	1.48
35	BA	1105	A	O3'-P	7.49	1.72	1.61
24	AX	16	ALA	CA-C	7.49	1.62	1.52
10	AJ	87	HIS	CG-CD2	7.49	1.44	1.35
17	AQ	61	GLN	CA-C	7.48	1.62	1.52
35	BA	568	G	P-O5'	7.48	1.71	1.59
49	BO	31	GLY	CA-C	7.47	1.59	1.51
6	AF	56	GLY	N-CA	7.47	1.54	1.45
2	AB	1409	U	O3'-P	7.46	1.72	1.61
4	AD	24	HIS	CG-CD2	7.46	1.44	1.35
35	BA	1394	A	C3'-O3'	7.46	1.54	1.43
2	AB	1265	A	P-O5'	7.46	1.71	1.59
2	AB	1778	U	C4'-O4'	-7.45	1.34	1.45
35	BA	82	G	C5'-C4'	7.45	1.62	1.51
2	AB	1979	U	O4'-C1'	7.45	1.52	1.41
35	BA	341	C	O3'-P	7.44	1.72	1.61
51	BQ	31	SER	CA-C	7.44	1.59	1.52
2	AB	260	G	O4'-C1'	7.43	1.52	1.41
35	BA	454	G	P-O5'	7.43	1.71	1.59
2	AB	1051	G	C3'-O3'	7.43	1.53	1.42
2	AB	389	G	P-O5'	7.42	1.70	1.59
57	BW	17	ARG	NE-CZ	7.42	1.41	1.33
31	A4	49	LYS	CA-C	7.41	1.61	1.52
35	BA	99	C	O3'-P	7.40	1.72	1.61
2	AB	2862	G	C4'-O4'	-7.40	1.34	1.45
2	AB	2884	U	C3'-C2'	7.39	1.63	1.52
18	AR	67	GLU	CA-C	7.38	1.63	1.53
35	BA	458	U	O5'-C5'	-7.38	1.31	1.42
35	BA	682	G	O3'-P	7.37	1.72	1.61
35	BA	368	U	O3'-P	7.37	1.72	1.61
2	AB	1999	C	P-O5'	7.36	1.70	1.59
35	BA	1472	U	C4'-O4'	-7.36	1.34	1.45
44	BJ	79	VAL	CA-CB	7.36	1.61	1.53
10	AJ	28	ASP	N-CA	7.36	1.55	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	92	U	P-O5'	7.35	1.70	1.59
2	AB	174	U	O3'-P	7.35	1.72	1.61
35	BA	1493	A	C2'-C1'	7.35	1.64	1.53
2	AB	299	A	C4'-O4'	-7.34	1.34	1.45
2	AB	1695	G	C5'-C4'	7.34	1.62	1.51
35	BA	261	U	P-O5'	7.34	1.70	1.59
2	AB	267	C	C4'-O4'	-7.34	1.34	1.45
45	BK	83	ARG	NE-CZ	7.33	1.41	1.33
51	BQ	80	ARG	NE-CZ	7.33	1.41	1.33
2	AB	909	A	P-O5'	7.33	1.70	1.59
2	AB	215	G	P-O5'	7.33	1.70	1.59
2	AB	945	A	C4'-O4'	-7.32	1.34	1.45
16	AP	45	ARG	CZ-NH2	7.32	1.43	1.33
35	BA	519	C	C1'-N1	7.32	1.59	1.48
42	BH	52	ALA	CA-C	7.32	1.61	1.52
35	BA	228	A	O3'-P	7.32	1.72	1.61
2	AB	1443	U	P-O5'	7.32	1.70	1.59
2	AB	950	G	C4'-O4'	-7.31	1.34	1.45
2	AB	1161	C	C5'-C4'	7.29	1.62	1.51
8	AH	54	ARG	CA-C	7.29	1.61	1.52
2	AB	1225	G	C4'-O4'	-7.29	1.34	1.45
2	AB	2779	U	C5'-C4'	7.29	1.62	1.51
35	BA	1243	C	O3'-P	-7.29	1.50	1.61
2	AB	498	G	P-O5'	7.27	1.70	1.59
2	AB	403	U	C1'-N1	7.27	1.59	1.48
10	AJ	95	PHE	CA-C	7.27	1.62	1.52
2	AB	1813	G	C4'-O4'	-7.26	1.34	1.45
2	AB	2197	U	C4'-O4'	-7.25	1.34	1.45
2	AB	2379	G	O3'-P	7.25	1.72	1.61
2	AB	1938	A	C3'-O3'	-7.25	1.32	1.43
35	BA	535	A	P-O5'	7.24	1.70	1.59
15	AO	71	LYS	CA-C	7.24	1.60	1.52
2	AB	1951	U	C5'-C4'	7.23	1.62	1.51
36	BB	66	C	C5'-C4'	7.23	1.62	1.51
1	AA	25	U	O3'-P	7.22	1.72	1.61
2	AB	1284	A	C4'-O4'	-7.22	1.34	1.45
2	AB	2583	G	C4'-O4'	-7.21	1.34	1.45
2	AB	462	C	C5'-C4'	7.21	1.62	1.51
2	AB	1149	G	P-O5'	7.21	1.70	1.59
35	BA	117	G	C3'-C2'	7.21	1.63	1.52
2	AB	1656	C	P-O5'	7.21	1.70	1.59
54	BT	33	TYR	CB-CG	7.20	1.67	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
39	BE	202	ASN	CA-C	7.19	1.61	1.52
35	BA	324	G	P-O5'	7.17	1.70	1.59
35	BA	772	U	O4'-C1'	7.17	1.52	1.41
2	AB	1913	A	C1'-N9	7.17	1.57	1.47
34	A7	34	LYS	CA-C	7.16	1.61	1.53
2	AB	724	U	P-O5'	7.16	1.70	1.59
16	AP	125	ALA	N-CA	7.16	1.54	1.45
35	BA	374	A	C4'-O4'	-7.16	1.34	1.45
2	AB	1902	C	O3'-P	7.15	1.71	1.61
2	AB	487	C	P-O5'	7.14	1.70	1.59
29	A2	23	LYS	CA-C	7.14	1.61	1.52
58	BX	34	ARG	NE-CZ	7.14	1.41	1.33
2	AB	1974	C	C4'-O4'	-7.14	1.34	1.45
39	BE	68	PHE	CA-CB	7.14	1.62	1.53
54	BT	35	LYS	CA-C	7.14	1.62	1.52
42	BH	140	ILE	CA-C	7.14	1.61	1.52
7	AG	101	ARG	CD-NE	7.13	1.56	1.46
4	AD	183	VAL	CA-C	7.13	1.61	1.52
2	AB	1786	A	O3'-P	7.13	1.71	1.61
35	BA	1380	U	P-O5'	7.13	1.70	1.59
35	BA	976	G	C3'-O3'	7.13	1.52	1.42
35	BA	1031	C	C4'-O4'	-7.12	1.35	1.45
35	BA	776	G	C2'-C1'	7.12	1.64	1.53
35	BA	69	G	C2'-O2'	7.11	1.53	1.42
2	AB	449	A	C5'-C4'	7.11	1.61	1.51
2	AB	1512	C	O4'-C1'	7.10	1.52	1.41
20	AT	49	ILE	CA-C	7.10	1.60	1.52
26	AZ	75	GLU	N-CA	7.10	1.55	1.45
2	AB	916	G	O3'-P	7.09	1.71	1.61
2	AB	2816	G	P-O5'	7.09	1.70	1.59
35	BA	861	G	P-O5'	7.09	1.70	1.59
7	AG	125	GLY	N-CA	7.08	1.55	1.45
2	AB	1820	U	O3'-P	7.08	1.71	1.61
2	AB	1482	G	O3'-P	7.07	1.71	1.61
5	AE	134	HIS	CE1-NE2	7.07	1.39	1.32
2	AB	432	A	C5'-C4'	7.07	1.61	1.51
35	BA	275	G	P-O5'	7.07	1.70	1.59
2	AB	469	G	O3'-P	-7.06	1.50	1.61
35	BA	787	A	P-O5'	7.06	1.70	1.59
40	BF	88	LYS	N-CA	-7.06	1.38	1.46
2	AB	96	C	P-O5'	7.05	1.70	1.59
2	AB	2065	C	C5'-C4'	7.05	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	1419	G	P-O5'	7.05	1.70	1.59
35	BA	1302	C	C4'-C3'	7.05	1.63	1.52
42	BH	2	HIS	CE1-NE2	7.05	1.39	1.32
2	AB	2087	G	C4'-C3'	-7.05	1.42	1.52
2	AB	2261	C	P-O5'	7.05	1.70	1.59
2	AB	2560	A	O3'-P	7.04	1.71	1.61
2	AB	2725	A	O3'-P	7.04	1.71	1.61
25	AY	5	ALA	N-CA	7.04	1.55	1.46
30	A3	53	VAL	CA-C	7.04	1.60	1.52
35	BA	1273	C	O3'-P	7.04	1.71	1.61
49	BO	70	GLY	CA-C	7.03	1.61	1.51
16	AP	26	GLY	CA-C	7.03	1.60	1.52
7	AG	91	ARG	CA-C	7.02	1.60	1.52
35	BA	1410	A	C5'-C4'	7.02	1.61	1.51
2	AB	1576	U	O3'-P	7.02	1.71	1.61
2	AB	727	A	C2'-C1'	-7.01	1.42	1.53
12	AL	67	ASN	N-CA	7.01	1.55	1.46
2	AB	1395	A	C4'-O4'	-7.01	1.35	1.45
2	AB	2834	G	P-O5'	7.01	1.70	1.59
35	BA	1061	G	P-O5'	7.00	1.70	1.59
2	AB	2193	G	C4'-O4'	-7.00	1.35	1.45
2	AB	207	A	P-O5'	7.00	1.70	1.59
45	BK	13	ILE	CA-CB	7.00	1.62	1.54
56	BV	75	PRO	CA-C	7.00	1.60	1.53
7	AG	135	ILE	CA-C	6.99	1.61	1.52
11	AK	46	ASP	CA-C	6.99	1.62	1.52
19	AS	13	HIS	CE1-NE2	6.99	1.39	1.32
51	BQ	76	PHE	C-N	6.99	1.40	1.33
2	AB	2402	U	C5'-C4'	6.99	1.61	1.51
35	BA	743	A	P-O5'	6.99	1.70	1.59
35	BA	130	A	C2'-C1'	6.98	1.63	1.53
35	BA	1018	G	C4'-O4'	-6.98	1.35	1.45
2	AB	1716	U	C5'-C4'	6.98	1.61	1.51
35	BA	1026	G	C2'-O2'	-6.98	1.31	1.42
2	AB	1893	C	C5'-C4'	6.97	1.61	1.51
35	BA	121	U	P-O5'	6.97	1.70	1.59
35	BA	895	G	C1'-N9	6.97	1.58	1.48
34	A7	2	LYS	CA-C	6.96	1.60	1.52
37	BC	26	U	C4'-O4'	-6.96	1.35	1.45
2	AB	1615	C	C4'-O4'	-6.96	1.35	1.45
2	AB	2207	C	P-O5'	6.96	1.70	1.59
39	BE	8	MET	CA-C	6.95	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	233	A	C4'-O4'	-6.95	1.35	1.45
1	AA	76	G	P-O5'	6.95	1.70	1.59
2	AB	441	U	O3'-P	-6.95	1.50	1.61
4	AD	231	HIS	CE1-NE2	6.95	1.39	1.32
5	AE	140	HIS	CE1-NE2	6.94	1.39	1.32
2	AB	935	C	P-O5'	6.94	1.70	1.59
28	A1	19	HIS	CE1-NE2	6.94	1.39	1.32
35	BA	1011	C	C4'-O4'	-6.94	1.35	1.45
35	BA	1091	U	P-O5'	6.93	1.70	1.59
35	BA	129	A	C5'-C4'	6.93	1.61	1.51
5	AE	188	LEU	CA-CB	6.92	1.61	1.53
2	AB	1889	A	C4'-O4'	-6.92	1.35	1.45
3	AC	27	ILE	CA-CB	6.92	1.63	1.54
57	BW	48	LYS	N-CA	-6.92	1.38	1.46
8	AH	169	ARG	CZ-NH2	6.92	1.42	1.33
2	AB	2074	U	P-O5'	6.92	1.70	1.59
35	BA	1288	A	O3'-P	6.92	1.71	1.61
2	AB	2815	C	C4'-O4'	-6.91	1.35	1.45
35	BA	1511	G	C1'-N9	6.91	1.58	1.48
14	AN	77	ILE	CA-CB	6.91	1.62	1.54
35	BA	816	A	P-O5'	6.90	1.70	1.59
10	AJ	67	PRO	CA-C	6.90	1.60	1.52
2	AB	1151	A	C5'-C4'	6.90	1.61	1.51
2	AB	2359	C	C1'-N1	6.90	1.58	1.48
35	BA	246	A	C4'-O4'	-6.90	1.35	1.45
2	AB	1832	C	P-O5'	6.89	1.70	1.59
5	AE	13	ARG	CA-CB	6.89	1.61	1.52
35	BA	1376	U	C4'-O4'	-6.89	1.35	1.45
2	AB	1581	G	C5'-C4'	6.89	1.61	1.51
30	A3	29	VAL	CA-C	6.88	1.60	1.52
1	AA	43	C	C1'-N1	6.88	1.57	1.47
2	AB	596	U	P-O5'	6.88	1.70	1.59
2	AB	683	U	O3'-P	6.88	1.71	1.61
22	AV	38	ALA	N-CA	6.88	1.55	1.46
47	BM	3	ASN	N-CA	6.88	1.54	1.46
2	AB	595	C	C4'-O4'	-6.87	1.35	1.45
48	BN	7	ALA	CA-C	6.87	1.61	1.52
48	BN	58	THR	CA-C	6.87	1.59	1.52
46	BL	12	LYS	CA-C	6.87	1.62	1.53
2	AB	1133	A	C1'-N9	6.87	1.57	1.47
2	AB	1509	A	C4'-O4'	-6.87	1.35	1.45
36	BB	45	U	C1'-N1	6.87	1.57	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	180	U	C5'-C4'	6.86	1.61	1.51
35	BA	360	G	C3'-O3'	6.86	1.52	1.42
40	BF	13	ILE	CA-CB	6.86	1.63	1.54
56	BV	20	LYS	CA-C	6.86	1.62	1.52
3	AC	232	SER	N-CA	-6.86	1.37	1.46
24	AX	2	PHE	N-CA	6.86	1.54	1.46
38	BD	22	A	O3'-P	6.86	1.71	1.61
39	BE	142	LYS	C-O	-6.86	1.16	1.24
5	AE	46	ARG	CA-CB	6.85	1.64	1.53
2	AB	2489	U	C5'-C4'	6.84	1.61	1.51
52	BR	55	LEU	N-CA	6.84	1.54	1.46
2	AB	417	C	C4'-O4'	-6.84	1.35	1.45
35	BA	559	A	C4'-C3'	6.83	1.63	1.53
2	AB	1109	C	C4'-O4'	-6.83	1.35	1.45
2	AB	2440	C	O3'-P	6.83	1.71	1.61
54	BT	81	ALA	CA-C	6.82	1.61	1.52
57	BW	9	ARG	N-CA	-6.82	1.38	1.46
2	AB	625	G	C1'-N9	6.82	1.58	1.48
52	BR	87	ARG	CA-C	6.82	1.61	1.52
2	AB	1334	G	P-O5'	6.82	1.70	1.59
20	AT	6	GLN	C-O	-6.82	1.16	1.24
38	BD	17	C	O5'-C5'	-6.81	1.32	1.42
25	AY	60	ALA	CA-C	6.81	1.60	1.52
36	BB	32	OMC	O3'-P	6.81	1.71	1.61
2	AB	1507	C	P-O5'	6.81	1.70	1.59
40	BF	89	VAL	CA-CB	-6.80	1.45	1.54
43	BI	89	VAL	C-O	6.80	1.31	1.24
2	AB	897	C	P-O5'	6.80	1.70	1.59
2	AB	2854	G	O4'-C1'	6.80	1.51	1.41
13	AM	57	VAL	CA-C	6.80	1.61	1.52
1	AA	13	G	C4'-O4'	-6.80	1.35	1.45
2	AB	2069	7MG	O3'-P	6.80	1.71	1.61
24	AX	23	ALA	N-CA	6.79	1.54	1.46
2	AB	1386	C	O3'-P	6.79	1.71	1.61
44	BJ	3	ARG	C-O	-6.78	1.16	1.24
2	AB	437	U	C4'-C3'	6.77	1.62	1.52
35	BA	159	G	C4'-O4'	-6.77	1.35	1.45
5	AE	80	TRP	NE1-CE2	6.77	1.44	1.37
49	BO	54	VAL	CA-CB	6.77	1.63	1.54
2	AB	907	G	C4'-O4'	-6.77	1.35	1.45
57	BW	67	HIS	ND1-CE1	6.77	1.39	1.32
2	AB	161	A	P-O5'	6.76	1.69	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AD	91	ALA	N-CA	-6.76	1.37	1.45
30	A3	9	ARG	CD-NE	6.76	1.55	1.46
2	AB	1364	G	P-O5'	6.76	1.69	1.59
40	BF	83	VAL	CA-CB	6.76	1.62	1.54
12	AL	131	ASN	N-CA	6.76	1.54	1.46
35	BA	1317	C	P-O5'	6.76	1.69	1.59
2	AB	2616	C	P-O5'	6.75	1.69	1.59
35	BA	95	C	O3'-P	6.75	1.71	1.61
10	AJ	152	ARG	N-CA	6.75	1.54	1.46
2	AB	329	G	C1'-N9	6.75	1.57	1.47
35	BA	222	C	C4'-C3'	-6.75	1.42	1.52
5	AE	25	THR	N-CA	-6.74	1.38	1.46
2	AB	1578	U	C4'-O4'	-6.74	1.35	1.45
2	AB	501	A	C4'-O4'	-6.74	1.35	1.45
35	BA	245	U	P-O5'	6.74	1.69	1.59
35	BA	110	C	C4'-O4'	-6.73	1.35	1.45
2	AB	822	G	C4'-C3'	6.73	1.62	1.52
2	AB	2297	A	O3'-P	6.73	1.71	1.61
14	AN	26	GLY	CA-C	6.73	1.61	1.51
11	AK	56	VAL	CA-CB	6.72	1.63	1.54
23	AW	6	ARG	CZ-NH2	6.72	1.42	1.33
1	AA	15	A	C2'-O2'	6.72	1.51	1.41
2	AB	2715	C	C3'-O3'	6.71	1.52	1.42
35	BA	647	C	P-O5'	6.71	1.69	1.59
58	BX	3	ILE	N-CA	6.71	1.54	1.46
2	AB	2405	G	O3'-P	6.71	1.71	1.61
35	BA	111	G	C5'-C4'	6.71	1.61	1.51
2	AB	475	C	O3'-P	6.70	1.71	1.61
2	AB	454	A	O3'-P	6.70	1.71	1.61
2	AB	2147	A	C4'-O4'	-6.70	1.35	1.45
35	BA	263	A	P-O5'	6.70	1.69	1.59
35	BA	1266	G	C5'-C4'	6.70	1.61	1.51
2	AB	342	A	P-O5'	6.70	1.69	1.59
24	AX	43	ASP	C-N	6.70	1.42	1.33
1	AA	39	A	C4'-O4'	-6.69	1.35	1.45
11	AK	72	THR	CA-C	6.69	1.60	1.53
35	BA	1526	G	P-O5'	6.69	1.69	1.59
2	AB	655	A	C4'-O4'	-6.68	1.35	1.45
18	AR	55	HIS	ND1-CE1	6.68	1.39	1.32
3	AC	231	ALA	CA-C	6.68	1.62	1.52
2	AB	91	A	C5'-C4'	6.68	1.61	1.51
35	BA	1148	U	C1'-N1	6.68	1.58	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AU	32	ALA	CA-CB	6.68	1.64	1.53
35	BA	674	G	C4'-O4'	-6.67	1.35	1.45
2	AB	1022	G	C5'-C4'	6.67	1.61	1.51
35	BA	372	C	P-O5'	6.67	1.69	1.59
6	AF	93	SER	N-CA	6.67	1.54	1.46
2	AB	1985	C	P-O5'	6.67	1.69	1.59
54	BT	26	ARG	CA-C	6.66	1.60	1.52
2	AB	2089	C	O4'-C1'	6.66	1.51	1.41
2	AB	416	U	C4'-O4'	-6.66	1.35	1.45
2	AB	315	G	P-O5'	6.66	1.69	1.59
2	AB	1255	U	C5'-C4'	6.66	1.61	1.51
2	AB	1825	U	C5'-C4'	6.66	1.61	1.51
2	AB	1097	U	C1'-N1	6.65	1.57	1.47
2	AB	2312	U	O4'-C1'	-6.65	1.31	1.41
2	AB	2725	A	O4'-C1'	6.65	1.51	1.42
42	BH	11	GLN	C-N	6.65	1.43	1.33
48	BN	34	THR	CA-C	6.65	1.60	1.52
35	BA	639	G	P-O5'	6.65	1.69	1.59
2	AB	2600	A	P-O5'	6.64	1.69	1.59
3	AC	60	ARG	CZ-NH1	6.64	1.42	1.32
2	AB	1451	C	O3'-P	6.64	1.71	1.61
2	AB	1907	G	P-O5'	6.64	1.69	1.59
30	A3	37	HIS	CE1-NE2	6.64	1.39	1.32
35	BA	302	G	O3'-P	6.64	1.71	1.61
11	AK	84	GLY	CA-C	6.64	1.61	1.51
19	AS	15	LYS	N-CA	6.64	1.54	1.46
22	AV	9	LYS	CA-C	6.64	1.61	1.52
2	AB	1741	C	P-O5'	6.64	1.69	1.59
2	AB	2629	U	C4'-O4'	-6.64	1.35	1.45
2	AB	522	A	C4'-O4'	-6.63	1.35	1.45
2	AB	830	G	C4'-O4'	-6.63	1.35	1.45
2	AB	1528	A	C5'-C4'	6.63	1.61	1.51
49	BO	64	SER	N-CA	6.63	1.54	1.46
2	AB	462	C	C4'-O4'	-6.63	1.35	1.45
40	BF	224	LYS	CA-C	6.63	1.61	1.52
23	AW	26	ASN	CA-C	6.62	1.60	1.52
2	AB	2609	U	O3'-P	6.62	1.71	1.61
2	AB	1525	A	O3'-P	6.62	1.71	1.61
21	AU	97	LEU	C-O	-6.62	1.16	1.24
56	BV	40	PHE	N-CA	6.62	1.51	1.45
12	AL	96	ARG	NE-CZ	6.62	1.40	1.33
3	AC	74	ARG	N-CA	6.62	1.55	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	2607	G	P-O5'	6.61	1.69	1.59
7	AG	124	ARG	NE-CZ	6.61	1.40	1.33
20	AT	82	HIS	CE1-NE2	6.61	1.39	1.32
2	AB	832	U	C3'-O3'	6.61	1.52	1.42
35	BA	935	A	C5'-C4'	6.61	1.61	1.51
46	BL	80	HIS	CE1-NE2	6.61	1.39	1.32
35	BA	1213	A	C5'-C4'	6.61	1.61	1.51
43	BI	91	ARG	NE-CZ	6.61	1.40	1.33
35	BA	183	C	P-O5'	6.60	1.69	1.59
35	BA	993	G	O3'-P	6.60	1.71	1.61
2	AB	321	U	O3'-P	6.60	1.71	1.61
15	AO	92	TRP	N-CA	6.60	1.54	1.46
2	AB	243	U	C4'-O4'	-6.60	1.35	1.45
39	BE	14	HIS	CE1-NE2	6.60	1.39	1.32
36	BB	76	A	C4'-O4'	-6.59	1.35	1.45
35	BA	1431	A	C5'-C4'	6.59	1.61	1.51
8	AH	68	ARG	C-N	-6.58	1.25	1.33
2	AB	2167	U	P-O5'	6.58	1.69	1.59
2	AB	553	G	P-O5'	6.58	1.69	1.59
5	AE	140	HIS	ND1-CE1	6.57	1.39	1.32
2	AB	1813	G	O5'-C5'	-6.57	1.32	1.42
2	AB	2094	A	O3'-P	-6.57	1.51	1.61
2	AB	467	G	O3'-P	6.56	1.71	1.61
2	AB	114	U	P-O5'	6.56	1.69	1.59
2	AB	2339	C	C4'-O4'	-6.56	1.35	1.45
27	A0	16	THR	CB-OG1	-6.56	1.33	1.43
46	BL	15	ALA	CA-C	6.56	1.60	1.52
20	AT	43	ASN	N-CA	6.55	1.54	1.46
23	AW	57	ILE	CA-C	6.55	1.59	1.52
2	AB	2691	C	C4'-O4'	-6.55	1.35	1.45
2	AB	1841	U	P-O5'	6.55	1.69	1.59
52	BR	19	ASN	CA-C	6.55	1.61	1.53
2	AB	2311	A	P-O5'	6.55	1.69	1.59
7	AG	140	ILE	CA-CB	-6.55	1.46	1.54
10	AJ	76	VAL	CA-CB	6.54	1.62	1.54
5	AE	116	LYS	CA-CB	6.54	1.61	1.53
7	AG	128	SER	CA-C	6.54	1.60	1.52
2	AB	1127	A	O4'-C1'	-6.54	1.31	1.41
2	AB	1996	C	O3'-P	6.54	1.71	1.61
35	BA	528	C	P-O5'	6.53	1.69	1.59
42	BH	61	LYS	N-CA	6.53	1.54	1.46
7	AG	149	ARG	NE-CZ	6.53	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BB	44	G	C4'-C3'	6.52	1.62	1.52
2	AB	766	U	O3'-P	6.52	1.71	1.61
49	BO	47	ALA	CA-C	6.52	1.60	1.52
35	BA	1167	A	C1'-N9	6.52	1.56	1.47
3	AC	67	HIS	CE1-NE2	6.52	1.39	1.32
2	AB	34	U	C4'-O4'	-6.51	1.35	1.45
2	AB	2513	A	C2'-C1'	6.51	1.63	1.53
35	BA	919	A	C4'-O4'	-6.51	1.35	1.45
2	AB	1087	G	P-O5'	6.51	1.69	1.59
35	BA	254	G	C4'-C3'	6.51	1.62	1.52
3	AC	132	GLY	N-CA	6.51	1.53	1.44
35	BA	206	C	P-O5'	6.51	1.69	1.59
2	AB	2761	A	C5'-C4'	6.51	1.61	1.51
35	BA	1154	G	C4'-O4'	-6.51	1.35	1.45
35	BA	1266	G	P-O5'	6.51	1.69	1.59
2	AB	2052	A	C4'-O4'	-6.50	1.35	1.45
8	AH	165	ASP	CA-C	6.50	1.61	1.52
2	AB	633	A	P-O5'	6.50	1.69	1.59
35	BA	282	A	P-O5'	6.50	1.69	1.59
35	BA	358	U	O3'-P	6.50	1.70	1.61
35	BA	1355	G	P-O5'	6.50	1.69	1.59
2	AB	490	C	C4'-O4'	-6.50	1.36	1.45
2	AB	1755	A	P-O5'	6.50	1.69	1.59
35	BA	1488	G	P-O5'	6.49	1.69	1.59
56	BV	49	ALA	CA-C	6.49	1.61	1.52
35	BA	184	G	C2'-O2'	6.49	1.52	1.42
1	AA	35	C	C3'-C2'	6.49	1.62	1.52
4	AD	94	LEU	CA-C	6.49	1.61	1.52
13	AM	85	VAL	CA-CB	6.49	1.61	1.54
35	BA	929	G	P-O5'	6.48	1.69	1.59
2	AB	1044	C	O3'-P	6.48	1.70	1.61
2	AB	1649	G	O3'-P	6.48	1.70	1.61
2	AB	2703	C	C2'-C1'	6.48	1.63	1.53
13	AM	48	PRO	N-CA	-6.48	1.39	1.47
2	AB	1999	C	C4'-O4'	-6.48	1.35	1.45
16	AP	30	ARG	N-CA	6.47	1.54	1.46
2	AB	967	U	O5'-C5'	-6.47	1.32	1.42
2	AB	2655	G	C4'-O4'	-6.47	1.36	1.45
35	BA	36	C	P-O5'	6.47	1.69	1.59
2	AB	237	C	O3'-P	6.46	1.70	1.61
2	AB	611	C	C5'-C4'	6.46	1.60	1.51
41	BG	7	LYS	N-CA	6.46	1.54	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
39	BE	214	GLY	N-CA	6.46	1.53	1.45
54	BT	44	HIS	CE1-NE2	6.46	1.39	1.32
35	BA	423	G	C4'-C3'	6.46	1.62	1.52
18	AR	87	ARG	NE-CZ	6.46	1.40	1.33
2	AB	1809	A	P-O5'	6.45	1.69	1.59
3	AC	109	MET	CA-C	6.45	1.60	1.52
2	AB	2310	C	O3'-P	6.45	1.70	1.61
35	BA	901	A	O5'-C5'	-6.45	1.32	1.42
35	BA	863	U	C2'-O2'	-6.44	1.32	1.42
2	AB	1377	G	P-O5'	6.44	1.69	1.59
10	AJ	34	VAL	N-CA	6.44	1.54	1.46
50	BP	9	PRO	CA-CB	6.44	1.62	1.53
2	AB	1051	G	C3'-C2'	6.43	1.62	1.52
8	AH	161	VAL	CA-C	6.43	1.59	1.52
39	BE	112	ARG	NE-CZ	6.43	1.40	1.33
5	AE	105	LYS	CA-CB	6.43	1.63	1.53
43	BI	133	GLU	CA-C	6.43	1.61	1.52
55	BU	34	GLU	CA-C	6.43	1.61	1.52
4	AD	190	THR	C-O	-6.43	1.15	1.23
36	BB	1	A	C3'-O3'	6.43	1.51	1.42
57	BW	24	ARG	C-O	-6.43	1.16	1.24
2	AB	326	G	C4'-O4'	-6.43	1.35	1.45
2	AB	1615	C	C1'-N1	6.43	1.57	1.47
2	AB	495	G	O3'-P	-6.42	1.51	1.61
24	AX	37	PRO	N-CA	-6.42	1.39	1.47
12	AL	52	ASP	N-CA	-6.42	1.38	1.45
48	BN	118	ASN	CA-C	6.42	1.61	1.52
2	AB	1397	U	P-O5'	6.42	1.69	1.59
2	AB	473	G	C5'-C4'	6.42	1.60	1.51
2	AB	652	U	P-O5'	6.42	1.69	1.59
35	BA	436	C	O4'-C1'	6.42	1.51	1.41
2	AB	75	G	P-O5'	6.41	1.69	1.59
2	AB	1279	G	C4'-O4'	-6.41	1.35	1.45
5	AE	170	VAL	CA-C	6.41	1.60	1.52
2	AB	657	U	C4'-O4'	-6.41	1.35	1.45
2	AB	2276	G	C4'-C3'	6.41	1.62	1.52
2	AB	2899	A	P-O5'	6.41	1.69	1.59
33	A6	32	LEU	N-CA	6.41	1.54	1.45
2	AB	2300	C	C4'-O4'	-6.41	1.35	1.45
35	BA	293	G	O5'-C5'	6.41	1.52	1.42
24	AX	70	ILE	CA-C	6.40	1.60	1.52
35	BA	442	G	C4'-O4'	-6.40	1.35	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	451	A	C3'-C2'	-6.40	1.43	1.52
42	BH	85	LYS	C-N	-6.40	1.28	1.33
35	BA	1048	G	C4'-O4'	-6.40	1.35	1.45
12	AL	100	VAL	CA-CB	6.40	1.61	1.54
36	BB	70	C	C4'-C3'	-6.40	1.43	1.52
4	AD	117	SER	N-CA	6.40	1.53	1.46
36	BB	65	C	C4'-O4'	-6.40	1.35	1.45
5	AE	104	VAL	N-CA	6.39	1.53	1.46
36	BB	56	C	P-O5'	6.39	1.69	1.59
2	AB	857	G	C5'-C4'	6.39	1.60	1.51
2	AB	645	C	C1'-N1	6.39	1.57	1.47
43	BI	94	HIS	CG-CD2	6.39	1.42	1.35
2	AB	2381	A	C5'-C4'	6.39	1.60	1.51
26	AZ	68	ALA	CA-C	6.39	1.61	1.52
7	AG	100	GLU	CA-C	6.39	1.61	1.52
35	BA	1429	A	O5'-C5'	-6.39	1.32	1.42
7	AG	66	ILE	N-CA	6.39	1.54	1.46
7	AG	122	ASP	N-CA	6.38	1.53	1.46
39	BE	226	GLN	CA-C	6.38	1.61	1.52
49	BO	13	ARG	NE-CZ	6.38	1.40	1.33
2	AB	546	U	C5'-C4'	6.38	1.60	1.51
35	BA	382	A	P-O5'	6.38	1.69	1.59
2	AB	2395	C	O3'-P	6.38	1.70	1.61
35	BA	982	U	P-O5'	6.38	1.69	1.59
35	BA	289	G	P-O5'	6.38	1.69	1.59
35	BA	515	G	P-O5'	6.38	1.69	1.59
2	AB	2225	A	P-O5'	6.37	1.69	1.59
2	AB	426	C	C2'-O2'	6.37	1.52	1.42
2	AB	1775	U	O4'-C1'	6.37	1.51	1.41
2	AB	647	G	C4'-O4'	-6.37	1.35	1.45
35	BA	1247	U	C2'-O2'	-6.37	1.32	1.42
16	AP	125	ALA	CA-C	6.37	1.62	1.53
35	BA	1354	U	C5'-C4'	6.36	1.60	1.51
35	BA	845	A	O3'-P	6.36	1.70	1.61
35	BA	1081	A	O3'-P	6.36	1.70	1.61
2	AB	1264	A	C5'-C4'	6.36	1.60	1.51
32	A5	28	ARG	CD-NE	6.36	1.55	1.46
2	AB	1419	A	P-O5'	6.36	1.69	1.59
8	AH	23	ILE	C-O	6.36	1.30	1.24
2	AB	899	A	O3'-P	6.35	1.70	1.61
2	AB	552	U	C1'-N1	6.35	1.57	1.48
2	AB	1896	G	O4'-C1'	6.35	1.51	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	1188	A	P-O5'	6.35	1.69	1.59
46	BL	44	ARG	N-CA	6.35	1.54	1.46
2	AB	351	C	P-O5'	6.35	1.69	1.59
14	AN	90	VAL	CA-CB	6.35	1.61	1.54
35	BA	1234	C	P-O5'	6.35	1.69	1.59
38	BD	15	G	C4'-O4'	-6.35	1.36	1.45
42	BH	19	ARG	CZ-NH1	6.35	1.41	1.32
2	AB	2610	C	C3'-C2'	-6.34	1.43	1.52
11	AK	18	ASN	CA-CB	6.34	1.61	1.53
2	AB	2616	C	C4'-O4'	-6.34	1.36	1.45
22	AV	29	THR	C-N	6.34	1.41	1.33
40	BF	84	GLU	CA-CB	6.34	1.63	1.53
43	BI	63	ASN	CA-C	6.34	1.60	1.53
47	BM	75	ASP	CA-CB	6.34	1.64	1.53
2	AB	623	C	O4'-C1'	6.34	1.51	1.41
2	AB	810	U	C3'-O3'	-6.34	1.32	1.42
2	AB	1177	G	O3'-P	6.34	1.70	1.61
35	BA	1341	U	C4'-O4'	-6.34	1.36	1.45
2	AB	1104	C	C4'-O4'	-6.33	1.36	1.45
35	BA	151	A	C3'-C2'	6.33	1.62	1.52
41	BG	22	SER	C-O	-6.33	1.16	1.24
2	AB	712	G	P-O5'	6.33	1.69	1.59
6	AF	46	GLN	N-CA	6.33	1.54	1.46
2	AB	1546	G	P-O5'	6.33	1.69	1.59
21	AU	45	VAL	C-N	6.33	1.42	1.33
35	BA	492	C	C4'-O4'	-6.33	1.36	1.45
35	BA	873	A	C1'-N9	6.33	1.56	1.47
2	AB	387	U	C2'-C1'	-6.33	1.43	1.53
46	BL	96	GLU	CA-C	6.33	1.60	1.52
49	BO	93	ARG	NE-CZ	6.33	1.40	1.33
35	BA	973	G	P-O5'	6.32	1.69	1.59
37	BC	27	A	P-O5'	6.32	1.69	1.59
2	AB	964	C	O3'-P	6.32	1.70	1.61
10	AJ	30	ARG	CZ-NH1	6.32	1.41	1.32
2	AB	60	G	O3'-P	6.32	1.70	1.61
35	BA	1153	G	P-O5'	6.32	1.69	1.59
2	AB	922	C	C4'-O4'	-6.32	1.36	1.45
2	AB	2005	A	C4'-O4'	-6.32	1.36	1.45
2	AB	2331	G	C1'-N9	-6.32	1.38	1.48
2	AB	950	G	C5'-C4'	6.31	1.60	1.51
2	AB	1465	G	C3'-C2'	6.31	1.62	1.52
47	BM	12	ALA	N-CA	6.31	1.53	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	AW	99	SER	CA-C	6.31	1.61	1.53
49	BO	76	HIS	CE1-NE2	6.31	1.38	1.32
4	AD	237	ARG	CA-C	6.31	1.61	1.52
2	AB	2596	U	C4'-O4'	-6.30	1.36	1.45
31	A4	11	VAL	CA-C	6.30	1.60	1.52
35	BA	386	C	C1'-N1	6.30	1.57	1.48
35	BA	879	C	C4'-C3'	6.30	1.62	1.52
6	AF	162	ARG	CA-C	6.30	1.60	1.52
35	BA	676	A	C5'-C4'	6.30	1.60	1.51
2	AB	1654	A	O4'-C1'	6.30	1.51	1.41
33	A6	41	ARG	NE-CZ	6.30	1.40	1.33
2	AB	2174	C	C4'-O4'	-6.30	1.36	1.45
35	BA	1465	A	C4'-C3'	6.30	1.61	1.52
3	AC	214	ILE	CA-CB	6.30	1.62	1.54
56	BV	51	HIS	CE1-NE2	6.30	1.38	1.32
2	AB	2432	A	P-O5'	6.29	1.69	1.59
2	AB	2761	A	C3'-C2'	6.29	1.62	1.52
32	A5	21	ARG	CA-C	6.29	1.61	1.52
7	AG	64	PRO	N-CD	-6.29	1.39	1.47
35	BA	960	U	C4'-O4'	-6.29	1.36	1.45
2	AB	2358	A	C5'-C4'	6.28	1.60	1.51
4	AD	7	PRO	CA-CB	6.28	1.61	1.53
2	AB	1735	A	C4'-O4'	-6.28	1.36	1.45
1	AA	18	G	C4'-O4'	-6.28	1.36	1.45
38	BD	36	A	O5'-C5'	6.28	1.51	1.42
23	AW	88	ASP	CA-C	6.27	1.60	1.52
54	BT	78	VAL	C-O	-6.27	1.17	1.24
35	BA	1030	U	C3'-C2'	6.27	1.62	1.52
35	BA	1363	A	O3'-P	6.26	1.70	1.61
11	AK	104	GLN	CA-C	6.26	1.60	1.52
35	BA	1223	C	O3'-P	6.26	1.70	1.61
1	AA	40	U	C4'-O4'	-6.26	1.36	1.45
30	A3	37	HIS	CG-ND1	6.26	1.45	1.38
35	BA	869	G	C5'-C4'	6.26	1.60	1.51
47	BM	76	ILE	CA-C	6.26	1.59	1.52
2	AB	1121	C	P-O5'	6.26	1.69	1.59
18	AR	9	GLN	CA-C	6.25	1.61	1.52
1	AA	25	U	P-O5'	6.25	1.69	1.59
28	A1	21	ALA	CA-C	6.25	1.61	1.52
48	BN	93	GLU	CA-C	6.25	1.60	1.52
2	AB	412	A	C4'-O4'	-6.25	1.36	1.45
35	BA	643	C	O4'-C1'	6.25	1.51	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	AW	23	LYS	CA-C	6.25	1.60	1.52
35	BA	291	U	P-O5'	6.25	1.69	1.59
35	BA	776	G	O3'-P	6.25	1.70	1.61
14	AN	86	GLU	C-N	6.25	1.40	1.33
9	AI	63	ALA	CA-CB	6.24	1.62	1.53
2	AB	2039	U	O3'-P	6.24	1.70	1.61
2	AB	2359	C	P-O5'	6.24	1.69	1.59
13	AM	72	PRO	CA-C	6.24	1.60	1.52
2	AB	1411	U	P-O5'	6.24	1.69	1.59
2	AB	1596	A	C5'-C4'	6.24	1.60	1.51
14	AN	120	VAL	C-O	6.23	1.30	1.24
35	BA	473	U	P-O5'	6.23	1.69	1.59
2	AB	313	G	O3'-P	6.23	1.70	1.61
47	BM	84	VAL	C-O	-6.23	1.16	1.24
15	AO	86	LYS	CA-C	6.23	1.60	1.52
35	BA	1400	C	C1'-N1	6.23	1.56	1.47
40	BF	178	ARG	NE-CZ	6.23	1.40	1.33
4	AD	52	HIS	CA-C	6.22	1.61	1.53
2	AB	2871	U	P-O5'	6.22	1.69	1.59
5	AE	179	ARG	NE-CZ	6.22	1.39	1.33
45	BK	41	GLU	CA-C	6.22	1.60	1.52
35	BA	943	U	P-O5'	6.22	1.69	1.59
38	BD	46	G	C5'-C4'	-6.22	1.42	1.51
2	AB	1271	G	P-O5'	6.22	1.69	1.59
35	BA	1405	G	C5'-C4'	6.22	1.60	1.51
2	AB	1391	U	C4'-O4'	-6.21	1.36	1.45
2	AB	926	G	C5'-C4'	6.21	1.60	1.51
2	AB	1811	G	O3'-P	6.21	1.70	1.61
2	AB	1145	C	C4'-O4'	-6.21	1.36	1.45
2	AB	2574	G	P-O5'	6.21	1.69	1.59
4	AD	242	HIS	CE1-NE2	6.21	1.38	1.32
35	BA	11	G	C4'-O4'	-6.20	1.36	1.45
48	BN	9	LYS	CA-C	-6.20	1.45	1.52
38	BD	36	A	C5'-C4'	6.20	1.60	1.51
39	BE	23	ASN	CA-C	6.20	1.59	1.52
2	AB	2340	A	C3'-C2'	6.19	1.62	1.52
8	AH	65	GLY	CA-C	6.19	1.59	1.52
2	AB	331	C	P-O5'	6.19	1.69	1.59
2	AB	1930	G	P-O5'	6.19	1.69	1.59
35	BA	411	A	C1'-N9	6.19	1.56	1.47
43	BI	104	LYS	C-O	6.19	1.31	1.24
2	AB	1936	A	C4'-O4'	-6.19	1.36	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	BD	2	G	O3'-P	6.19	1.70	1.61
35	BA	1506	U	C4'-O4'	6.19	1.55	1.45
12	AL	117	ALA	CA-CB	6.18	1.63	1.53
35	BA	265	G	C4'-C3'	6.18	1.61	1.52
42	BH	55	VAL	CA-CB	6.18	1.58	1.53
2	AB	1900	A	C5'-C4'	6.18	1.60	1.51
2	AB	1348	C	C5'-C4'	6.18	1.60	1.51
2	AB	1680	U	P-O5'	6.18	1.69	1.59
6	AF	4	VAL	CA-CB	6.18	1.61	1.54
38	BD	74	A	P-O5'	6.18	1.69	1.59
2	AB	1838	C	P-O5'	6.18	1.69	1.59
2	AB	2544	G	C5'-C4'	6.18	1.60	1.51
35	BA	1311	A	C5'-C4'	6.18	1.60	1.51
35	BA	1438	G	O3'-P	6.18	1.70	1.61
2	AB	1453	A	C4'-O4'	-6.17	1.36	1.45
18	AR	29	VAL	CA-C	6.17	1.59	1.52
2	AB	947	A	C4'-O4'	-6.17	1.36	1.45
2	AB	2000	C	C4'-O4'	-6.17	1.36	1.45
2	AB	1899	A	C2'-C1'	-6.17	1.44	1.53
1	AA	75	G	P-O5'	6.17	1.69	1.59
2	AB	1055	G	P-O5'	6.17	1.69	1.59
2	AB	1580	A	C4'-C3'	6.17	1.61	1.52
5	AE	149	ASN	C-O	6.17	1.30	1.24
16	AP	120	GLU	CA-C	6.17	1.60	1.52
2	AB	49	A	C5'-C4'	6.17	1.60	1.51
2	AB	1075	C	O3'-P	6.17	1.70	1.61
2	AB	1183	U	C3'-C2'	6.16	1.61	1.52
11	AK	10	LEU	N-CA	-6.16	1.38	1.45
35	BA	1265	C	C4'-O4'	-6.16	1.36	1.45
2	AB	206	U	C1'-N1	6.16	1.57	1.48
2	AB	653	U	P-O5'	6.16	1.69	1.59
2	AB	147	C	C1'-N1	6.16	1.57	1.48
2	AB	526	A	O5'-C5'	6.16	1.51	1.42
2	AB	2569	G	O3'-P	6.16	1.70	1.61
17	AQ	67	ASN	N-CA	6.16	1.53	1.45
40	BF	106	ARG	CD-NE	6.16	1.54	1.46
2	AB	1159	U	P-O5'	6.15	1.69	1.59
35	BA	1521	C	C5'-C4'	6.15	1.60	1.51
2	AB	2698	U	C2'-O2'	-6.15	1.33	1.42
4	AD	177	SER	N-CA	6.15	1.54	1.46
40	BF	5	HIS	CD2-NE2	6.15	1.44	1.37
2	AB	2308	G	C2'-O2'	-6.15	1.33	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
44	BJ	86	VAL	N-CA	-6.15	1.39	1.46
2	AB	1050	A	C4'-O4'	-6.14	1.36	1.45
2	AB	1313	U	C4'-O4'	-6.14	1.36	1.45
35	BA	689	C	O3'-P	6.14	1.70	1.61
17	AQ	26	LEU	CA-C	6.14	1.60	1.52
3	AC	35	THR	CA-C	6.14	1.60	1.52
35	BA	304	U	P-O5'	6.14	1.69	1.59
36	BB	14	A	O3'-P	6.14	1.70	1.61
2	AB	1385	A	P-O5'	6.13	1.69	1.59
2	AB	615	U	O3'-P	6.13	1.70	1.61
35	BA	804	U	O5'-C5'	-6.13	1.33	1.42
2	AB	227	A	C3'-O3'	-6.13	1.33	1.43
2	AB	2632	A	C4'-O4'	-6.13	1.36	1.45
2	AB	937	C	P-O5'	6.13	1.69	1.59
20	AT	59	ILE	C-O	-6.13	1.17	1.24
2	AB	828	U	C4'-O4'	-6.13	1.36	1.45
2	AB	1692	U	C2'-C1'	6.13	1.62	1.53
30	A3	2	VAL	C-N	6.13	1.41	1.33
2	AB	365	U	P-O5'	6.12	1.69	1.59
2	AB	1170	C	C5'-C4'	6.12	1.60	1.51
35	BA	150	U	O3'-P	6.12	1.70	1.61
2	AB	1787	A	P-O5'	6.12	1.69	1.59
4	AD	74	PRO	N-CA	6.12	1.54	1.47
35	BA	731	G	C5'-C4'	6.12	1.60	1.51
35	BA	990	C	C1'-N1	6.12	1.57	1.48
36	BB	68	C	O4'-C1'	6.12	1.50	1.41
48	BN	46	ALA	N-CA	-6.12	1.38	1.46
2	AB	2641	G	O5'-C5'	-6.12	1.33	1.42
51	BQ	3	GLN	CA-C	6.12	1.61	1.52
2	AB	784	G	P-O5'	6.11	1.69	1.59
18	AR	3	ILE	CA-C	6.11	1.61	1.52
2	AB	1794	A	C2'-C1'	-6.11	1.44	1.53
35	BA	1292	G	O3'-P	6.11	1.70	1.61
48	BN	9	LYS	C-N	6.11	1.41	1.33
21	AU	58	ALA	CA-C	6.11	1.60	1.52
41	BG	61	ARG	CZ-NH1	6.11	1.41	1.32
35	BA	782	A	O3'-P	6.11	1.70	1.61
37	BC	38	G	C3'-C2'	-6.11	1.43	1.52
2	AB	1199	U	C3'-O3'	6.11	1.51	1.42
12	AL	61	LYS	CA-C	6.11	1.61	1.52
2	AB	1435	G	O3'-P	6.10	1.70	1.61
35	BA	378	G	P-O5'	6.10	1.69	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	884	U	O3'-P	6.10	1.70	1.61
37	BC	55	A	O3'-P	6.10	1.70	1.61
5	AE	162	ALA	C-N	6.10	1.42	1.33
2	AB	634	C	O3'-P	6.10	1.70	1.61
9	AI	128	HIS	CE1-NE2	6.10	1.38	1.32
2	AB	458	G	C5'-C4'	6.09	1.60	1.51
41	BG	186	GLU	C-N	6.09	1.42	1.33
49	BO	92	VAL	N-CA	6.09	1.53	1.46
2	AB	418	C	P-O5'	6.09	1.68	1.59
2	AB	2340	A	O3'-P	6.09	1.70	1.61
18	AR	50	ARG	CA-C	6.09	1.57	1.53
2	AB	904	G	P-O5'	6.09	1.68	1.59
26	AZ	70	LEU	N-CA	-6.09	1.38	1.46
57	BW	61	ALA	N-CA	-6.09	1.39	1.46
2	AB	2613	U	C2'-C1'	6.09	1.62	1.53
9	AI	36	ALA	C-O	-6.09	1.16	1.23
13	AM	18	ARG	C-N	6.08	1.42	1.33
2	AB	340	A	P-O5'	6.08	1.68	1.59
2	AB	1881	C	C5'-C4'	6.08	1.60	1.51
2	AB	2659	G	C4'-C3'	6.08	1.61	1.52
56	BV	56	HIS	CA-C	6.08	1.60	1.52
25	AY	2	HIS	ND1-CE1	6.08	1.38	1.32
20	AT	36	ALA	N-CA	6.08	1.54	1.46
23	AW	101	THR	CA-CB	6.08	1.62	1.53
13	AM	52	VAL	N-CA	6.08	1.53	1.46
18	AR	97	TYR	CA-CB	6.08	1.62	1.53
40	BF	94	ALA	CA-C	6.08	1.60	1.52
2	AB	329	G	O5'-C5'	-6.07	1.33	1.42
2	AB	1963	U	P-O5'	6.07	1.68	1.59
2	AB	247	G	C4'-O4'	-6.07	1.36	1.45
2	AB	828	U	C5'-C4'	6.07	1.60	1.51
6	AF	103	GLY	CA-C	6.07	1.59	1.51
2	AB	2582	G	C4'-C3'	-6.07	1.43	1.52
43	BI	90	MET	CA-C	6.07	1.59	1.52
2	AB	2243	U	C4'-O4'	-6.06	1.36	1.45
2	AB	549	G	C4'-O4'	-6.06	1.36	1.45
2	AB	1202	G	O4'-C1'	-6.06	1.32	1.41
35	BA	1304	G	O3'-P	6.06	1.70	1.61
35	BA	736	C	P-O5'	6.06	1.68	1.59
11	AK	101	SER	CA-CB	6.06	1.63	1.53
33	A6	14	LYS	CA-C	6.06	1.59	1.52
50	BP	11	HIS	CB-CG	6.06	1.58	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	41	G	O3'-P	6.05	1.70	1.61
2	AB	2819	G	C2'-O2'	6.05	1.51	1.42
35	BA	1430	A	P-O5'	6.05	1.68	1.59
2	AB	2615	U	C2-N3	6.05	1.49	1.37
2	AB	195	A	P-O5'	6.05	1.68	1.59
5	AE	128	ARG	CA-CB	6.05	1.63	1.53
2	AB	2887	A	P-O5'	6.05	1.68	1.59
2	AB	592	A	P-O5'	6.05	1.68	1.59
35	BA	1205	U	C4'-O4'	-6.05	1.36	1.45
48	BN	46	ALA	CA-C	6.05	1.60	1.52
2	AB	664	G	O3'-P	6.04	1.70	1.61
4	AD	45	ASN	CA-C	6.04	1.61	1.52
30	A3	11	LYS	C-N	6.04	1.42	1.34
35	BA	860	A	O3'-P	-6.04	1.52	1.61
4	AD	215	VAL	CA-CB	-6.04	1.46	1.53
2	AB	46	G	C4'-O4'	-6.04	1.36	1.45
2	AB	2107	G	P-O5'	6.03	1.68	1.59
27	A0	59	GLU	N-CA	-6.03	1.39	1.46
35	BA	88	U	O3'-P	6.03	1.70	1.61
2	AB	2447	G	P-O5'	6.03	1.68	1.59
2	AB	2515	C	P-O5'	6.03	1.68	1.59
2	AB	14	A	P-O5'	6.03	1.68	1.59
25	AY	64	GLY	C-O	6.03	1.31	1.23
35	BA	456	A	O3'-P	6.03	1.70	1.61
35	BA	1155	A	C2'-C1'	6.03	1.62	1.53
3	AC	193	LEU	N-CA	-6.03	1.39	1.46
35	BA	700	G	C3'-O3'	-6.03	1.33	1.42
1	AA	76	G	C4'-O4'	-6.03	1.36	1.45
2	AB	276	U	O4'-C1'	6.03	1.50	1.41
2	AB	2633	G	O4'-C1'	-6.03	1.32	1.41
35	BA	748	G	O3'-P	6.03	1.70	1.61
2	AB	546	U	P-O5'	6.02	1.68	1.59
58	BX	68	ARG	N-CA	-6.02	1.38	1.46
2	AB	2640	G	C5'-C4'	6.02	1.60	1.51
35	BA	361	G	P-O5'	-6.02	1.50	1.59
7	AG	97	GLU	CA-CB	6.02	1.62	1.53
35	BA	491	G	C5'-C4'	6.02	1.60	1.51
40	BF	73	GLY	C-N	6.02	1.41	1.33
2	AB	2185	U	C5'-C4'	6.02	1.60	1.51
2	AB	893	C	P-O5'	6.02	1.68	1.59
2	AB	1887	C	C3'-O3'	-6.02	1.33	1.42
5	AE	76	GLY	CA-C	6.02	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	1868	C	C4'-O4'	-6.01	1.36	1.45
2	AB	1903	G	C4'-O4'	-6.01	1.36	1.45
32	A5	10	LEU	CA-C	6.01	1.60	1.52
15	AO	13	HIS	CB-CG	6.01	1.58	1.50
46	BL	129	ARG	NE-CZ	6.01	1.39	1.33
55	BU	39	VAL	CA-C	6.01	1.59	1.52
1	AA	64	G	C4'-O4'	-6.01	1.36	1.45
2	AB	15	G	C5'-C4'	6.01	1.60	1.51
49	BO	85	ARG	CA-C	6.01	1.60	1.52
22	AV	11	LEU	CA-C	-6.00	1.45	1.52
2	AB	2501	C	C5'-C4'	6.00	1.60	1.51
10	AJ	60	ARG	CA-C	6.00	1.60	1.52
8	AH	34	ARG	N-CA	-6.00	1.38	1.45
33	A6	55	GLY	CA-C	6.00	1.58	1.52
44	BJ	13	PRO	CA-C	6.00	1.60	1.52
2	AB	1448	G	C4'-C3'	6.00	1.61	1.52
2	AB	1956	U	C4'-O4'	-6.00	1.36	1.45
2	AB	2621	G	C4'-O4'	-6.00	1.36	1.45
8	AH	61	TRP	CA-C	6.00	1.60	1.52
35	BA	672	U	C4'-O4'	-6.00	1.36	1.45
35	BA	853	C	C5'-C4'	6.00	1.60	1.51
47	BM	60	ASP	N-CA	-6.00	1.39	1.46
2	AB	363	G	C4'-O4'	-5.99	1.36	1.45
24	AX	80	HIS	CD2-NE2	-5.99	1.31	1.37
18	AR	82	SER	CA-C	5.99	1.60	1.52
2	AB	690	G	O3'-P	5.99	1.70	1.61
2	AB	2417	C	C4'-O4'	-5.99	1.36	1.45
2	AB	2741	A	O4'-C1'	5.99	1.50	1.41
40	BF	52	SER	CA-C	5.99	1.60	1.52
51	BQ	35	ALA	CA-CB	5.99	1.60	1.53
2	AB	738	G	O3'-P	5.99	1.70	1.61
38	BD	2	G	C5'-C4'	5.99	1.60	1.51
2	AB	909	A	C1'-N9	5.99	1.56	1.48
2	AB	1677	A	C4'-O4'	-5.99	1.36	1.45
2	AB	2096	C	C3'-C2'	-5.99	1.43	1.52
2	AB	2489	U	C2'-C1'	5.99	1.62	1.53
2	AB	2734	A	O3'-P	5.99	1.70	1.61
15	AO	33	LEU	C-N	5.99	1.42	1.33
42	BH	118	GLY	CA-C	5.99	1.60	1.51
55	BU	69	TYR	CA-CB	5.98	1.63	1.53
39	BE	63	LYS	N-CA	5.98	1.52	1.45
21	AU	18	ARG	NE-CZ	5.98	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	2900	A	C4'-O4'	-5.98	1.36	1.45
3	AC	145	VAL	N-CA	-5.98	1.39	1.46
36	BB	66	C	O3'-P	5.98	1.70	1.61
51	BQ	50	LEU	CA-C	5.98	1.60	1.52
2	AB	2519	U	C4'-O4'	-5.98	1.36	1.45
2	AB	515	A	O3'-P	5.97	1.70	1.61
2	AB	1754	A	O5'-C5'	-5.97	1.33	1.42
2	AB	2890	G	O5'-C5'	5.97	1.51	1.42
16	AP	113	ILE	CA-C	5.97	1.59	1.52
22	AV	9	LYS	N-CA	5.97	1.53	1.46
35	BA	869	G	O4'-C1'	5.97	1.50	1.41
2	AB	2007	U	O3'-P	-5.97	1.52	1.61
2	AB	2433	A	C4'-C3'	5.97	1.61	1.52
43	BI	35	LYS	C-O	5.97	1.31	1.23
2	AB	86	G	C2'-C1'	-5.97	1.44	1.53
35	BA	1072	G	C3'-O3'	-5.97	1.33	1.42
2	AB	486	C	C3'-C2'	5.97	1.61	1.52
2	AB	1621	U	C4'-O4'	-5.97	1.36	1.45
2	AB	1990	C	P-O5'	5.96	1.68	1.59
2	AB	2558	C	P-O5'	5.96	1.68	1.59
2	AB	864	G	C3'-C2'	5.96	1.61	1.52
2	AB	933	A	O3'-P	5.96	1.70	1.61
2	AB	1817	G	C4'-O4'	-5.96	1.36	1.45
35	BA	1220	G	O3'-P	5.96	1.70	1.61
2	AB	466	A	C3'-O3'	-5.96	1.33	1.42
2	AB	693	A	C4'-O4'	-5.96	1.36	1.45
2	AB	2776	A	C5'-C4'	5.96	1.60	1.51
10	AJ	107	VAL	C-O	-5.96	1.17	1.24
6	AF	173	THR	CA-C	5.96	1.61	1.52
2	AB	1988	G	C4'-O4'	-5.96	1.36	1.45
31	A4	18	HIS	ND1-CE1	5.96	1.38	1.32
35	BA	84	U	C5'-C4'	5.96	1.60	1.51
49	BO	85	ARG	CD-NE	5.96	1.54	1.46
22	AV	15	HIS	N-CA	-5.96	1.39	1.46
35	BA	1168	U	C4'-O4'	-5.96	1.36	1.45
39	BE	72	LYS	CA-C	5.96	1.59	1.52
2	AB	126	A	C5'-C4'	5.96	1.60	1.51
2	AB	1461	C	O3'-P	5.95	1.70	1.61
2	AB	1671	U	C5'-C4'	5.95	1.60	1.51
2	AB	2799	A	C4'-C3'	5.95	1.61	1.52
18	AR	100	ARG	N-CA	5.95	1.53	1.46
48	BN	30	ILE	CA-CB	5.95	1.61	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	2287	A	O3'-P	5.95	1.70	1.61
2	AB	2552	OMU	O3'-P	5.95	1.62	1.56
35	BA	1383	C	C2'-C1'	-5.95	1.44	1.53
35	BA	1420	U	C4'-O4'	-5.95	1.36	1.45
35	BA	625	U	O3'-P	5.95	1.70	1.61
2	AB	1160	G	C5'-C4'	5.95	1.60	1.51
35	BA	412	A	C5'-C4'	5.95	1.60	1.51
35	BA	558	G	C4'-O4'	-5.95	1.36	1.45
35	BA	911	U	P-O5'	5.95	1.68	1.59
2	AB	1112	G	C4'-C3'	-5.94	1.43	1.52
2	AB	2588	G	C1'-N9	5.94	1.56	1.48
35	BA	624	C	C4'-O4'	-5.94	1.36	1.45
2	AB	66	C	C3'-O3'	5.94	1.51	1.42
2	AB	672	C	C5'-C4'	5.94	1.60	1.51
4	AD	101	ARG	CA-C	5.94	1.59	1.52
35	BA	843	U	C5'-C4'	5.94	1.60	1.51
2	AB	138	U	O3'-P	5.94	1.70	1.61
2	AB	1745	A	O3'-P	5.94	1.70	1.61
2	AB	2379	G	P-O5'	5.94	1.68	1.59
21	AU	2	GLU	N-CA	5.94	1.52	1.45
35	BA	1007	U	C2'-O2'	-5.94	1.33	1.42
2	AB	2181	U	O5'-C5'	5.94	1.51	1.42
2	AB	2803	G	O4'-C1'	5.94	1.50	1.41
35	BA	513	C	C4'-O4'	-5.94	1.36	1.45
15	AO	3	GLN	N-CA	5.94	1.52	1.46
1	AA	61	G	C5'-C4'	5.93	1.60	1.51
2	AB	2827	C	O3'-P	5.93	1.70	1.61
4	AD	62	ARG	CA-C	5.93	1.59	1.52
35	BA	833	G	P-O5'	5.93	1.68	1.59
35	BA	1138	G	C4'-O4'	-5.93	1.36	1.45
51	BQ	12	ARG	CZ-NH2	5.93	1.41	1.33
52	BR	54	GLY	N-CA	5.93	1.53	1.45
2	AB	2201	G	O3'-P	-5.93	1.52	1.61
2	AB	2687	U	P-O5'	5.93	1.68	1.59
18	AR	50	ARG	CD-NE	-5.93	1.38	1.46
35	BA	933	G	C5'-C4'	5.93	1.60	1.51
25	AY	2	HIS	CB-CG	-5.93	1.41	1.50
35	BA	694	A	O4'-C1'	5.93	1.50	1.41
2	AB	222	A	C5'-C4'	5.93	1.60	1.51
35	BA	710	G	O5'-C5'	-5.93	1.33	1.42
58	BX	22	CYS	CA-C	5.93	1.59	1.52
2	AB	179	C	C5'-C4'	5.93	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AC	7	ARG	NE-CZ	5.93	1.39	1.33
7	AG	64	PRO	CA-CB	-5.93	1.45	1.53
12	AL	14	ASP	CA-C	5.93	1.60	1.52
12	AL	81	ILE	C-N	5.93	1.42	1.33
2	AB	437	U	C1'-N1	5.92	1.57	1.48
2	AB	1955	U	C1'-N1	5.92	1.56	1.47
7	AG	85	GLY	N-CA	5.92	1.51	1.45
26	AZ	50	VAL	CA-CB	5.92	1.63	1.54
33	A6	16	THR	N-CA	5.92	1.53	1.45
1	AA	102	G	C4'-C3'	5.92	1.61	1.52
2	AB	1769	U	O3'-P	5.92	1.70	1.61
22	AV	70	HIS	CD2-NE2	5.92	1.44	1.37
2	AB	986	C	C5'-C4'	5.92	1.60	1.51
35	BA	821	G	C3'-O3'	5.92	1.51	1.42
39	BE	162	VAL	CA-CB	5.92	1.61	1.54
21	AU	30	SER	N-CA	5.92	1.53	1.46
2	AB	929	U	C4'-C3'	-5.91	1.43	1.52
35	BA	326	G	C2'-O2'	5.91	1.50	1.41
2	AB	403	U	C5'-C4'	5.91	1.60	1.51
2	AB	1186	G	C5'-C4'	5.91	1.60	1.51
8	AH	138	GLN	N-CA	5.91	1.53	1.46
2	AB	550	C	C5'-C4'	5.91	1.60	1.51
2	AB	1429	G	C5'-C4'	5.91	1.60	1.51
2	AB	2845	U	O4'-C1'	5.91	1.50	1.41
35	BA	622	A	O3'-P	5.91	1.70	1.61
1	AA	114	C	P-O5'	5.91	1.68	1.59
2	AB	1605	C	C4'-O4'	-5.91	1.36	1.45
2	AB	2458	G	C1'-N9	5.91	1.55	1.47
2	AB	2665	A	O3'-P	5.91	1.70	1.61
2	AB	2804	U	C4'-O4'	-5.91	1.36	1.45
35	BA	1124	G	C5'-C4'	5.91	1.60	1.51
33	A6	62	PRO	CA-CB	-5.90	1.45	1.53
35	BA	559	A	O5'-C5'	-5.90	1.33	1.42
35	BA	1000	A	O4'-C1'	5.90	1.50	1.41
44	BJ	68	VAL	CA-C	5.90	1.60	1.52
2	AB	345	A	C1'-N9	5.90	1.55	1.47
23	AW	21	ARG	CZ-NH1	5.90	1.41	1.32
35	BA	487	A	C2'-O2'	-5.90	1.33	1.42
2	AB	547	A	C5'-C4'	5.89	1.60	1.51
2	AB	1348	C	C2'-C1'	5.89	1.62	1.53
13	AM	24	VAL	CA-C	5.89	1.60	1.52
2	AB	2597	G	C4'-O4'	-5.89	1.36	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	1509	A	O3'-P	-5.89	1.52	1.61
2	AB	45	G	C3'-O3'	5.89	1.50	1.42
35	BA	396	C	O5'-C5'	-5.89	1.33	1.42
12	AL	139	VAL	CA-CB	5.89	1.60	1.54
29	A2	20	ASN	CA-CB	5.89	1.61	1.53
35	BA	496	A	P-O5'	5.89	1.68	1.59
35	BA	1474	U	C4'-C3'	5.89	1.61	1.52
35	BA	1052	U	P-O5'	5.88	1.68	1.59
2	AB	1517	G	C4'-C3'	5.88	1.61	1.52
13	AM	17	ARG	CA-C	5.88	1.60	1.52
35	BA	129	A	C4'-O4'	-5.88	1.37	1.45
35	BA	1034	G	P-O5'	5.88	1.68	1.59
35	BA	1073	U	C1'-N1	5.88	1.57	1.48
2	AB	1043	C	C5'-C4'	5.88	1.60	1.51
2	AB	2685	G	P-O5'	5.88	1.68	1.59
5	AE	105	LYS	C-O	-5.88	1.17	1.24
8	AH	73	SER	C-O	5.88	1.30	1.24
35	BA	955	U	P-O5'	5.88	1.68	1.59
35	BA	1074	G	C2'-C1'	5.88	1.62	1.53
16	AP	126	ALA	CA-C	5.88	1.59	1.52
2	AB	228	C	O5'-C5'	-5.87	1.34	1.42
2	AB	1468	U	C4'-C3'	-5.87	1.43	1.52
3	AC	172	HIS	ND1-CE1	5.87	1.38	1.32
6	AF	60	TRP	CA-C	5.87	1.60	1.52
35	BA	738	C	C1'-N1	5.87	1.57	1.48
2	AB	1269	A	C4'-O4'	-5.87	1.36	1.45
41	BG	150	LYS	CA-C	5.87	1.60	1.52
2	AB	116	C	O4'-C1'	-5.87	1.32	1.41
2	AB	1280	G	C4'-O4'	-5.87	1.36	1.45
2	AB	20	C	C3'-C2'	5.87	1.61	1.52
2	AB	2663	G	O3'-P	5.87	1.70	1.61
44	BJ	72	VAL	N-CA	-5.87	1.39	1.46
51	BQ	68	ARG	CD-NE	5.87	1.54	1.46
4	AD	79	ARG	NE-CZ	5.86	1.39	1.33
2	AB	1259	G	C5'-C4'	5.86	1.60	1.51
2	AB	2399	G	C5'-C4'	5.86	1.60	1.51
41	BG	160	LEU	N-CA	-5.86	1.39	1.46
2	AB	1863	G	C5'-C4'	5.86	1.60	1.51
35	BA	933	G	O3'-P	5.86	1.70	1.61
47	BM	9	ARG	CD-NE	5.86	1.54	1.46
2	AB	2825	G	C4'-O4'	-5.85	1.36	1.45
8	AH	125	PRO	CA-C	5.85	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	BS	48	GLU	C-N	5.85	1.41	1.33
54	BT	14	ASP	C-O	-5.85	1.16	1.24
2	AB	1066	U	P-O5'	5.85	1.68	1.59
36	BB	25	C	C4'-O4'	-5.85	1.36	1.45
35	BA	726	C	C5'-C4'	5.85	1.60	1.51
35	BA	1510	C	O3'-P	5.85	1.70	1.61
35	BA	187	G	C5'-C4'	5.85	1.60	1.51
40	BF	223	PRO	CA-C	-5.85	1.44	1.52
46	BL	21	LYS	C-O	5.85	1.29	1.24
2	AB	2180	U	C2'-O2'	-5.85	1.33	1.42
2	AB	1511	G	C1'-N9	-5.84	1.39	1.48
30	A3	15	ARG	NE-CZ	5.84	1.39	1.33
35	BA	1119	C	O4'-C1'	5.84	1.50	1.41
2	AB	470	A	P-O5'	5.84	1.68	1.59
6	AF	160	ALA	CA-CB	5.84	1.61	1.53
2	AB	1080	A	O4'-C1'	5.84	1.50	1.41
2	AB	1798	U	C4'-O4'	-5.84	1.36	1.45
3	AC	222	VAL	CA-C	5.84	1.60	1.52
51	BQ	52	ARG	C-N	5.84	1.42	1.33
2	AB	1581	G	O3'-P	5.84	1.70	1.61
35	BA	1045	C	C2'-O2'	-5.84	1.33	1.42
52	BR	50	HIS	CE1-NE2	5.84	1.38	1.32
53	BS	30	GLY	CA-C	5.84	1.60	1.51
2	AB	344	A	O4'-C1'	5.83	1.50	1.41
3	AC	46	VAL	CA-C	5.83	1.60	1.52
35	BA	45	G	P-O5'	5.83	1.68	1.59
35	BA	723	U	O3'-P	5.83	1.69	1.61
39	BE	199	ILE	CA-C	5.83	1.57	1.53
2	AB	1372	U	O4'-C1'	5.83	1.50	1.41
2	AB	2423	U	C1'-N1	5.83	1.56	1.47
2	AB	2669	G	O3'-P	5.83	1.69	1.61
35	BA	429	U	O5'-C5'	-5.83	1.34	1.42
46	BL	128	LYS	CA-C	5.83	1.60	1.52
2	AB	574	A	P-O5'	5.83	1.68	1.59
56	BV	68	HIS	ND1-CE1	5.83	1.38	1.32
2	AB	216	A	O5'-C5'	-5.83	1.33	1.42
2	AB	1865	U	C1'-N1	5.83	1.56	1.47
2	AB	676	A	C5'-C4'	5.82	1.59	1.51
2	AB	944	C	C4'-O4'	-5.82	1.36	1.45
2	AB	1192	G	P-O5'	5.82	1.68	1.59
35	BA	1227	A	O5'-C5'	-5.82	1.34	1.42
47	BM	88	MET	CA-C	5.82	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	1277	G	C2'-O2'	-5.82	1.33	1.42
2	AB	2136	G	C3'-C2'	5.82	1.61	1.52
2	AB	2236	U	C3'-O3'	5.82	1.50	1.42
2	AB	2879	A	P-O5'	5.82	1.68	1.59
7	AG	160	LYS	N-CA	5.82	1.53	1.46
35	BA	1352	C	P-O5'	5.82	1.68	1.59
2	AB	1562	U	C5'-C4'	5.82	1.59	1.51
2	AB	2027	G	O3'-P	5.82	1.69	1.61
35	BA	714	G	O4'-C1'	5.82	1.50	1.41
35	BA	886	G	O5'-C5'	-5.82	1.33	1.42
35	BA	1091	U	C4'-O4'	-5.82	1.36	1.45
2	AB	4	U	C4'-O4'	-5.81	1.36	1.45
2	AB	1379	U	C2'-O2'	-5.81	1.33	1.42
35	BA	315	A	C5'-C4'	5.81	1.60	1.51
35	BA	517	G	O4'-C1'	-5.81	1.33	1.42
35	BA	1023	U	C4'-O4'	-5.81	1.36	1.45
35	BA	490	C	P-O5'	5.81	1.68	1.59
40	BF	58	ARG	NE-CZ	5.81	1.39	1.33
35	BA	137	U	P-O5'	5.81	1.68	1.59
39	BE	208	ALA	N-CA	5.81	1.53	1.46
2	AB	2452	C	O5'-C5'	5.81	1.51	1.42
37	BC	13	A	C4'-O4'	-5.81	1.36	1.45
2	AB	1543	G	C2'-C1'	5.81	1.62	1.53
14	AN	38	GLN	CA-C	5.80	1.60	1.52
35	BA	1173	U	P-O5'	5.80	1.68	1.59
2	AB	1903	G	C5'-C4'	5.80	1.59	1.51
5	AE	5	VAL	C-O	-5.80	1.18	1.24
2	AB	643	A	C5'-C4'	5.80	1.59	1.51
2	AB	842	U	O4'-C1'	5.80	1.50	1.41
2	AB	1482	G	C4'-O4'	-5.80	1.36	1.45
2	AB	2791	G	C4'-O4'	-5.80	1.36	1.45
42	BH	5	LYS	CA-CB	5.80	1.61	1.53
2	AB	103	A	C5'-C4'	5.80	1.59	1.51
35	BA	1410	A	O3'-P	5.80	1.69	1.61
35	BA	1374	A	O5'-C5'	-5.80	1.33	1.42
40	BF	86	LEU	CA-C	-5.80	1.45	1.52
46	BL	122	ARG	NE-CZ	5.80	1.39	1.33
44	BJ	111	GLY	CA-C	5.79	1.60	1.51
2	AB	74	A	C2'-O2'	-5.79	1.32	1.41
2	AB	2032	G	P-O5'	5.79	1.68	1.59
2	AB	2234	G	P-O5'	5.79	1.68	1.59
48	BN	126	ARG	NE-CZ	5.79	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	1097	C	C2'-O2'	-5.79	1.33	1.42
48	BN	24	ALA	CA-C	5.79	1.59	1.52
2	AB	585	G	P-O5'	5.79	1.68	1.59
2	AB	737	C	C3'-O3'	5.79	1.50	1.42
2	AB	1500	G	P-O5'	5.79	1.68	1.59
3	AC	127	LEU	C-O	-5.79	1.16	1.24
10	AJ	18	ALA	CA-C	5.79	1.60	1.52
19	AS	102	LYS	C-N	5.79	1.41	1.34
29	A2	10	GLU	N-CA	-5.79	1.39	1.46
35	BA	1277	C	O3'-P	-5.79	1.52	1.61
35	BA	1308	U	P-O5'	5.79	1.68	1.59
36	BB	13	C	C4'-O4'	-5.79	1.36	1.45
1	AA	93	C	C1'-N1	5.79	1.57	1.48
5	AE	13	ARG	CA-C	5.79	1.60	1.52
19	AS	98	ALA	N-CA	5.79	1.53	1.46
2	AB	432	A	C2'-C1'	5.78	1.62	1.53
35	BA	57	G	O3'-P	5.78	1.69	1.61
35	BA	1087	G	C5'-C4'	5.78	1.59	1.51
2	AB	2645	G	O4'-C1'	5.78	1.50	1.42
2	AB	2745	C	C4'-O4'	-5.78	1.36	1.45
3	AC	86	ALA	N-CA	5.78	1.53	1.46
2	AB	211	C	P-O5'	5.78	1.68	1.59
2	AB	2509	G	C5'-C4'	5.78	1.59	1.51
3	AC	219	GLY	N-CA	5.78	1.53	1.45
44	BJ	45	ALA	CA-C	5.78	1.60	1.52
2	AB	2843	G	C5'-C4'	5.78	1.59	1.51
2	AB	2481	G	C2'-C1'	-5.78	1.44	1.53
2	AB	2709	G	P-O5'	5.78	1.68	1.59
35	BA	810	C	P-O5'	5.78	1.68	1.59
35	BA	894	G	C1'-N9	5.78	1.56	1.48
15	AO	116	ALA	N-CA	5.77	1.53	1.46
17	AQ	88	LYS	CA-C	5.77	1.59	1.52
2	AB	388	G	C2'-O2'	-5.77	1.33	1.42
10	AJ	66	THR	CA-C	-5.77	1.45	1.52
39	BE	219	THR	C-N	5.77	1.41	1.33
52	BR	2	LEU	CA-C	5.77	1.59	1.52
2	AB	1927	A	O5'-C5'	5.77	1.51	1.42
35	BA	1476	A	C2'-C1'	5.77	1.62	1.53
47	BM	92	LEU	CA-C	5.77	1.59	1.52
2	AB	1938	A	P-O5'	5.77	1.68	1.59
13	AM	38	ILE	CA-C	5.77	1.60	1.52
35	BA	181	A	C5'-C4'	5.77	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	102	G	C5'-C4'	5.77	1.59	1.51
2	AB	1963	U	O4'-C1'	5.77	1.50	1.41
7	AG	138	PRO	CA-CB	-5.77	1.46	1.53
29	A2	61	ASN	C-N	5.77	1.41	1.33
3	AC	98	GLU	CA-C	5.76	1.60	1.52
8	AH	44	HIS	CD2-NE2	5.76	1.44	1.37
32	A5	9	VAL	CA-C	5.76	1.61	1.52
35	BA	1195	C	C2'-O2'	5.76	1.51	1.42
2	AB	1436	G	C4'-O4'	-5.76	1.36	1.45
15	AO	39	GLY	CA-C	5.76	1.58	1.52
33	A6	14	LYS	C-N	5.76	1.41	1.33
35	BA	7	A	C3'-O3'	5.76	1.50	1.42
35	BA	594	U	C3'-C2'	5.76	1.61	1.52
35	BA	983	A	C3'-O3'	5.76	1.50	1.42
55	BU	73	HIS	CG-ND1	5.76	1.44	1.38
38	BD	67	C	C5'-C4'	5.76	1.59	1.51
2	AB	736	C	O5'-C5'	-5.76	1.33	1.42
2	AB	1470	A	C4'-O4'	-5.76	1.36	1.45
2	AB	2309	A	C5'-C4'	5.76	1.59	1.51
35	BA	296	U	O4'-C1'	5.76	1.50	1.41
38	BD	40	C	P-O5'	5.76	1.68	1.59
38	BD	66	C	C3'-O3'	-5.76	1.33	1.42
44	BJ	27	ASN	CA-C	5.76	1.60	1.52
35	BA	1050	G	P-O5'	5.75	1.68	1.59
47	BM	8	ILE	N-CA	5.75	1.53	1.46
48	BN	110	THR	CA-C	-5.75	1.45	1.52
2	AB	1779	U	C2'-O2'	5.75	1.51	1.42
35	BA	902	G	P-O5'	5.75	1.68	1.59
35	BA	1100	C	O3'-P	5.75	1.69	1.61
1	AA	11	C	C5'-C4'	5.75	1.59	1.51
2	AB	426	C	C4'-C3'	5.75	1.61	1.52
36	BB	34	C	O4'-C1'	5.75	1.50	1.41
38	BD	20	G	C3'-O3'	-5.75	1.34	1.43
2	AB	120	U	C4'-C3'	-5.75	1.44	1.53
2	AB	529	A	C5'-C4'	5.75	1.59	1.51
4	AD	258	SER	CA-C	5.75	1.60	1.53
35	BA	634	C	P-O5'	5.75	1.68	1.59
35	BA	1079	G	P-O5'	5.75	1.68	1.59
2	AB	1739	A	P-O5'	5.75	1.68	1.59
2	AB	2387	U	C4'-O4'	-5.75	1.36	1.45
46	BL	126	PHE	CA-C	-5.74	1.45	1.52
50	BP	59	VAL	CA-CB	5.74	1.61	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AD	237	ARG	C-N	5.74	1.41	1.33
2	AB	351	C	C2'-C1'	5.74	1.61	1.53
2	AB	1980	G	C1'-N9	5.74	1.55	1.47
10	AJ	87	HIS	CE1-NE2	5.74	1.38	1.32
12	AL	97	PRO	CA-C	5.74	1.61	1.52
35	BA	1338	G	C5'-C4'	5.74	1.59	1.51
2	AB	6	A	C4'-O4'	-5.74	1.36	1.45
2	AB	2739	U	C4'-O4'	-5.74	1.36	1.45
2	AB	2807	U	O4'-C1'	5.74	1.50	1.41
35	BA	1503	A	O3'-P	5.74	1.69	1.61
38	BD	27	G	C4'-O4'	-5.74	1.36	1.45
2	AB	1383	A	C4'-O4'	-5.74	1.36	1.45
2	AB	1846	G	C2'-C1'	5.74	1.61	1.53
2	AB	2099	U	C4'-C3'	5.74	1.61	1.52
50	BP	45	SER	CA-CB	-5.74	1.43	1.53
2	AB	2301	C	O3'-P	5.73	1.69	1.61
45	BK	101	ALA	CA-C	5.73	1.59	1.52
2	AB	715	A	C4'-O4'	-5.73	1.36	1.45
35	BA	640	A	C5'-C4'	5.73	1.59	1.51
35	BA	1201	A	C5'-C4'	5.73	1.59	1.51
49	BO	105	GLY	CA-C	5.73	1.57	1.52
3	AC	4	LEU	CA-CB	5.73	1.60	1.52
6	AF	166	LYS	CA-C	5.73	1.60	1.52
35	BA	996	A	C4'-O4'	-5.73	1.36	1.45
35	BA	222	C	C4'-O4'	-5.73	1.36	1.45
40	BF	76	ILE	N-CA	-5.73	1.39	1.46
21	AU	95	ARG	NE-CZ	5.72	1.39	1.33
26	AZ	30	PRO	CA-C	5.72	1.59	1.52
2	AB	267	C	C2'-C1'	-5.72	1.44	1.53
2	AB	2264	C	C4'-C3'	5.72	1.61	1.52
3	AC	139	ASN	N-CA	5.72	1.53	1.45
16	AP	56	LYS	CA-C	5.72	1.60	1.52
35	BA	698	G	C5'-C4'	5.72	1.59	1.51
35	BA	1517	G	P-O5'	5.72	1.68	1.59
2	AB	402	A	C2'-O2'	-5.72	1.33	1.42
10	AJ	120	SER	CA-C	5.72	1.60	1.52
35	BA	1283	U	C3'-O3'	5.72	1.50	1.42
2	AB	2355	G	O4'-C1'	5.72	1.50	1.41
2	AB	2624	G	C4'-O4'	-5.72	1.36	1.45
22	AV	45	ALA	CA-CB	5.72	1.62	1.53
2	AB	121	G	C4'-O4'	-5.72	1.36	1.45
2	AB	630	G	O3'-P	-5.72	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	AP	22	ARG	N-CA	-5.72	1.39	1.46
35	BA	393	A	C4'-O4'	-5.72	1.36	1.45
2	AB	35	G	O3'-P	5.72	1.69	1.61
2	AB	2737	G	O4'-C1'	5.72	1.50	1.41
35	BA	549	C	C2'-C1'	5.72	1.61	1.53
14	AN	37	GLY	N-CA	5.71	1.52	1.45
37	BC	42	U	C5'-C4'	5.71	1.59	1.51
55	BU	5	ARG	NE-CZ	5.71	1.39	1.33
35	BA	452	A	P-O5'	5.71	1.68	1.59
2	AB	1471	G	C4'-O4'	-5.71	1.36	1.45
2	AB	2344	U	C4'-C3'	5.71	1.61	1.53
3	AC	227	ALA	C-O	5.71	1.30	1.24
48	BN	107	THR	N-CA	5.71	1.53	1.46
3	AC	108	GLU	CA-C	5.71	1.59	1.52
35	BA	906	A	O3'-P	5.71	1.69	1.61
35	BA	1005	A	C5'-C4'	5.71	1.59	1.51
2	AB	2359	C	C5'-C4'	5.71	1.59	1.51
2	AB	2803	G	C4'-C3'	5.71	1.61	1.52
2	AB	246	C	P-O5'	5.71	1.68	1.59
19	AS	34	ALA	CA-C	5.71	1.60	1.52
34	A7	22	VAL	N-CA	-5.71	1.39	1.46
35	BA	1095	U	C5'-C4'	5.71	1.59	1.51
2	AB	476	G	C4'-O4'	-5.71	1.36	1.45
2	AB	541	A	O3'-P	5.71	1.69	1.61
35	BA	1397	C	P-O5'	5.71	1.68	1.59
39	BE	120	SER	N-CA	-5.71	1.39	1.46
2	AB	259	G	C4'-O4'	-5.70	1.36	1.45
2	AB	379	G	O3'-P	5.70	1.69	1.61
2	AB	731	C	C3'-O3'	5.70	1.50	1.42
2	AB	1467	U	C4'-O4'	-5.70	1.36	1.45
2	AB	1840	G	P-O5'	5.70	1.68	1.59
15	AO	103	TYR	CA-C	5.70	1.59	1.52
35	BA	690	G	C5'-C4'	5.70	1.59	1.51
35	BA	1162	C	C4'-O4'	-5.70	1.36	1.45
35	BA	1328	C	O4'-C1'	5.70	1.50	1.41
2	AB	2071	A	C3'-O3'	-5.70	1.33	1.42
10	AJ	98	PHE	CA-C	5.70	1.60	1.52
35	BA	1300	G	P-O5'	5.70	1.68	1.59
2	AB	2460	U	C3'-C2'	5.70	1.61	1.52
36	BB	48	U	C1'-N1	5.70	1.56	1.48
2	AB	880	G	C3'-O3'	5.70	1.50	1.42
2	AB	1078	U	C1'-N1	5.70	1.55	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	1552	A	C3'-C2'	5.70	1.61	1.52
12	AL	136	GLN	C-N	5.70	1.40	1.33
35	BA	910	C	C4'-O4'	-5.70	1.37	1.45
35	BA	383	A	P-O5'	5.70	1.68	1.59
1	AA	65	U	O3'-P	5.70	1.69	1.61
2	AB	1668	A	P-O5'	5.70	1.68	1.59
2	AB	2414	G	O3'-P	5.70	1.69	1.61
7	AG	153	ILE	C-O	5.70	1.32	1.23
19	AS	100	PHE	N-CA	-5.70	1.38	1.45
2	AB	1027	A	C4'-O4'	-5.69	1.37	1.45
53	BS	31	ARG	CA-C	5.69	1.59	1.52
54	BT	9	GLY	N-CA	5.69	1.51	1.45
46	BL	93	LEU	C-O	-5.69	1.17	1.24
2	AB	2765	A	P-O5'	5.69	1.68	1.59
35	BA	1164	G	C1'-N9	5.69	1.56	1.48
2	AB	1148	U	C2'-O2'	5.69	1.50	1.42
2	AB	2839	G	C3'-O3'	5.69	1.50	1.42
35	BA	1148	U	C5'-C4'	5.69	1.59	1.51
35	BA	776	G	O4'-C1'	5.69	1.50	1.41
53	BS	15	PRO	CA-C	5.69	1.60	1.52
36	BB	60	U	P-O5'	5.68	1.68	1.59
2	AB	788	A	C4'-O4'	-5.68	1.37	1.45
35	BA	29	U	P-O5'	5.68	1.68	1.59
35	BA	1535	C	O3'-P	5.68	1.69	1.61
36	BB	9	A	C5'-C4'	5.68	1.59	1.51
2	AB	2462	C	C4'-C3'	-5.68	1.44	1.52
41	BG	143	SER	CA-C	5.68	1.59	1.52
44	BJ	157	SER	C-N	5.68	1.41	1.34
2	AB	1073	A	C5'-C4'	5.68	1.59	1.51
2	AB	2146	C	C4'-O4'	-5.68	1.37	1.45
2	AB	1721	G	C3'-O3'	-5.68	1.34	1.43
2	AB	1832	C	O5'-C5'	-5.68	1.33	1.42
2	AB	2630	G	C5'-C4'	5.68	1.59	1.51
5	AE	30	GLU	C-O	-5.68	1.17	1.23
35	BA	961	U	C5'-C4'	5.68	1.59	1.51
36	BB	38	A	P-O5'	5.68	1.68	1.59
2	AB	1306	C	O3'-P	5.67	1.69	1.61
2	AB	2133	G	C4'-O4'	-5.67	1.37	1.45
35	BA	96	U	C2'-O2'	-5.67	1.33	1.42
57	BW	2	ASN	C-N	5.67	1.40	1.33
21	AU	76	VAL	CA-C	5.67	1.59	1.52
22	AV	16	VAL	CA-C	5.67	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AD	46	GLY	C-N	5.67	1.41	1.33
2	AB	711	G	C4'-O4'	-5.67	1.37	1.45
26	AZ	20	ALA	C-N	5.67	1.41	1.33
35	BA	1080	A	C3'-C2'	5.67	1.61	1.52
39	BE	122	ASP	N-CA	5.67	1.53	1.46
35	BA	127	G	C3'-O3'	5.67	1.50	1.42
2	AB	1236	G	C4'-C3'	5.67	1.61	1.53
42	BH	4	GLU	CA-C	5.67	1.60	1.52
2	AB	726	G	C2'-O2'	-5.66	1.33	1.42
11	AK	71	LYS	C-O	-5.66	1.16	1.23
35	BA	126	G	P-O5'	5.66	1.68	1.59
36	BB	30	G	O3'-P	5.66	1.69	1.61
2	AB	510	C	C5'-C4'	5.66	1.59	1.51
48	BN	23	HIS	CG-ND1	5.66	1.44	1.38
2	AB	682	G	C1'-N9	5.66	1.56	1.48
2	AB	1757	A	O3'-P	5.66	1.69	1.61
5	AE	108	ASP	CA-C	5.66	1.60	1.52
9	AI	67	ALA	N-CA	5.66	1.52	1.46
37	BC	14	G	C5'-C4'	5.66	1.59	1.51
45	BK	83	ARG	CD-NE	5.66	1.54	1.46
2	AB	769	U	P-O5'	5.66	1.68	1.59
3	AC	95	VAL	C-O	-5.66	1.18	1.24
2	AB	887	U	C1'-N1	5.66	1.56	1.48
2	AB	1016	G	O5'-C5'	-5.66	1.33	1.42
2	AB	1661	G	C4'-O4'	-5.66	1.37	1.45
2	AB	1981	A	C2'-O2'	-5.66	1.33	1.42
2	AB	1996	C	C5'-C4'	5.66	1.59	1.51
12	AL	2	LYS	CA-C	-5.66	1.45	1.52
2	AB	913	U	C5'-C4'	5.65	1.59	1.51
2	AB	934	U	C1'-N1	5.65	1.56	1.48
2	AB	120	U	C4'-O4'	-5.65	1.37	1.45
43	BI	55	HIS	CG-ND1	5.65	1.44	1.38
2	AB	679	C	C5'-C4'	5.65	1.59	1.51
6	AF	21	ARG	CD-NE	5.65	1.54	1.46
33	A6	29	ARG	NE-CZ	5.65	1.39	1.33
35	BA	14	U	P-O5'	5.65	1.68	1.59
2	AB	1103	A	C2'-C1'	5.65	1.61	1.53
49	BO	109	ARG	CZ-NH2	5.65	1.40	1.33
2	AB	1237	A	O3'-P	5.65	1.69	1.61
2	AB	1579	A	C5'-C4'	5.65	1.59	1.51
2	AB	2612	C	C3'-O3'	5.65	1.50	1.42
17	AQ	61	GLN	N-CA	-5.65	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	976	G	C4'-O4'	-5.65	1.37	1.45
41	BG	145	ARG	CZ-NH1	5.65	1.40	1.32
41	BG	101	VAL	N-CA	5.65	1.53	1.46
2	AB	1974	C	O5'-C5'	5.64	1.50	1.42
2	AB	2550	G	O3'-P	5.64	1.69	1.61
2	AB	2657	A	C3'-C2'	5.64	1.61	1.52
7	AG	62	GLN	C-O	5.64	1.31	1.23
35	BA	277	C	P-O5'	5.64	1.68	1.59
35	BA	518	C	O3'-P	5.64	1.69	1.61
2	AB	1713	A	P-O5'	5.64	1.68	1.59
4	AD	133	ASN	CA-C	5.64	1.60	1.52
35	BA	83	C	C3'-C2'	5.64	1.61	1.52
11	AK	17	ALA	N-CA	5.64	1.53	1.46
25	AY	38	ARG	NE-CZ	5.64	1.39	1.33
35	BA	545	C	C4'-C3'	5.64	1.61	1.52
2	AB	533	G	C5'-C4'	5.64	1.59	1.51
34	A7	33	HIS	CB-CG	5.64	1.58	1.50
50	BP	56	ARG	CA-C	5.64	1.60	1.52
2	AB	1075	C	C1'-N1	5.63	1.56	1.48
36	BB	40	C	C5'-C4'	5.63	1.59	1.51
2	AB	2108	A	C2'-O2'	-5.63	1.34	1.42
21	AU	28	LYS	C-O	5.63	1.31	1.24
11	AK	132	ALA	N-CA	5.63	1.53	1.46
35	BA	937	A	C3'-O3'	5.63	1.50	1.42
1	AA	105	G	C4'-O4'	-5.63	1.37	1.45
2	AB	72	U	O3'-P	5.63	1.69	1.61
2	AB	1648	U	C4'-C3'	5.63	1.60	1.52
22	AV	87	LEU	CA-C	5.63	1.59	1.52
35	BA	177	G	C4'-O4'	-5.62	1.37	1.45
2	AB	2412	A	O5'-C5'	5.62	1.50	1.42
14	AN	37	GLY	CA-C	5.62	1.58	1.52
35	BA	1270	G	C4'-O4'	-5.62	1.37	1.45
2	AB	731	C	C5'-C4'	5.62	1.59	1.51
2	AB	988	A	P-O5'	5.62	1.68	1.59
2	AB	1666	G	C2'-O2'	5.62	1.50	1.42
18	AR	76	HIS	CB-CG	5.62	1.58	1.50
38	BD	60	A	C2'-O2'	-5.62	1.34	1.42
42	BH	132	PRO	C-N	5.62	1.41	1.33
2	AB	1102	C	P-O5'	5.62	1.68	1.59
2	AB	1896	G	C3'-O3'	5.62	1.50	1.42
5	AE	54	ALA	N-CA	5.62	1.53	1.45
35	BA	573	A	O3'-P	5.62	1.69	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	771	G	O3'-P	5.62	1.69	1.61
2	AB	1083	U	P-O5'	5.61	1.68	1.59
2	AB	2248	C	C5'-C4'	5.61	1.59	1.51
7	AG	150	GLY	CA-C	5.61	1.61	1.52
21	AU	39	THR	CA-C	5.61	1.59	1.52
39	BE	41	ASN	CA-CB	5.61	1.60	1.53
40	BF	221	ALA	N-CA	5.61	1.53	1.46
43	BI	85	ILE	CA-C	5.61	1.60	1.52
2	AB	123	G	C5'-C4'	5.61	1.59	1.51
2	AB	661	A	C4'-O4'	-5.61	1.37	1.45
2	AB	2713	U	C4'-O4'	-5.61	1.37	1.45
35	BA	330	C	C5'-C4'	5.61	1.59	1.51
35	BA	362	G	O3'-P	5.61	1.69	1.61
38	BD	22	A	P-O5'	5.61	1.68	1.59
2	AB	381	G	C4'-O4'	-5.61	1.37	1.45
2	AB	1493	C	C4'-C3'	5.61	1.60	1.52
4	AD	51	ARG	N-CA	-5.61	1.38	1.45
19	AS	85	ALA	CA-C	-5.61	1.45	1.52
35	BA	931	C	O5'-C5'	5.61	1.50	1.42
40	BF	82	ASP	CA-C	5.61	1.60	1.52
2	AB	2420	C	O4'-C1'	5.61	1.50	1.41
38	BD	46	G	O3'-P	5.61	1.69	1.61
2	AB	30	G	C4'-O4'	-5.61	1.37	1.45
2	AB	1201	U	P-O5'	5.61	1.68	1.59
2	AB	2084	C	O5'-C5'	-5.61	1.34	1.42
35	BA	526	C	C4'-O4'	-5.61	1.37	1.45
2	AB	233	A	C4'-C3'	5.61	1.60	1.52
6	AF	26	ALA	CA-CB	5.61	1.62	1.53
35	BA	24	U	O4'-C1'	5.61	1.50	1.41
1	AA	82	U	O3'-P	5.60	1.69	1.61
2	AB	580	U	C4'-O4'	-5.60	1.37	1.45
2	AB	2326	C	C5'-C4'	5.60	1.59	1.51
5	AE	138	LEU	CA-C	5.60	1.60	1.53
12	AL	133	ALA	CA-C	5.60	1.60	1.52
2	AB	1872	A	C5'-C4'	5.60	1.59	1.51
2	AB	1941	C	O4'-C1'	5.60	1.50	1.41
7	AG	72	SER	CA-C	5.60	1.60	1.53
2	AB	174	U	O4'-C1'	5.60	1.50	1.41
2	AB	297	G	O5'-C5'	-5.60	1.34	1.42
2	AB	898	C	O3'-P	5.60	1.69	1.61
35	BA	278	G	C4'-O4'	-5.60	1.37	1.45
5	AE	73	VAL	CA-C	5.60	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BC	37	G	O3'-P	5.60	1.69	1.61
15	AO	125	PRO	N-CA	-5.59	1.41	1.47
35	BA	869	G	P-O5'	5.59	1.68	1.59
35	BA	931	C	P-O5'	5.59	1.68	1.59
39	BE	12	GLY	C-N	5.59	1.41	1.33
35	BA	249	U	C4'-O4'	-5.59	1.37	1.45
41	BG	198	LEU	CA-C	5.59	1.60	1.52
48	BN	75	GLU	N-CA	-5.59	1.39	1.46
2	AB	190	A	P-O5'	5.59	1.68	1.59
39	BE	163	ILE	C-N	5.59	1.40	1.33
43	BI	75	GLU	CA-CB	5.59	1.62	1.53
57	BW	74	HIS	CE1-NE2	5.59	1.38	1.32
2	AB	1476	U	C3'-O3'	5.58	1.50	1.42
2	AB	222	A	P-O5'	5.58	1.68	1.59
2	AB	815	C	C5'-C4'	5.58	1.59	1.51
2	AB	1599	U	C5'-C4'	5.58	1.59	1.51
8	AH	151	ARG	CA-CB	5.58	1.60	1.53
2	AB	1887	C	C1'-N1	5.58	1.56	1.48
2	AB	2867	G	O4'-C1'	5.58	1.50	1.42
2	AB	667	U	P-O5'	5.58	1.68	1.59
2	AB	1319	C	P-O5'	5.58	1.68	1.59
2	AB	1246	A	P-O5'	5.58	1.68	1.59
2	AB	1327	A	O4'-C1'	5.58	1.50	1.41
41	BG	25	ARG	CA-C	5.58	1.60	1.52
2	AB	1579	A	P-O5'	5.58	1.68	1.59
14	AN	28	GLY	CA-C	-5.58	1.44	1.51
48	BN	117	HIS	CE1-NE2	5.58	1.38	1.32
27	A0	24	GLU	CA-CB	5.57	1.61	1.53
36	BB	43	G	C4'-C3'	5.57	1.60	1.52
47	BM	46	LYS	CA-C	5.57	1.58	1.52
2	AB	74	A	C5'-C4'	5.57	1.59	1.51
8	AH	115	GLN	N-CA	5.57	1.52	1.45
35	BA	254	G	C3'-C2'	-5.57	1.44	1.52
38	BD	22	A	C3'-O3'	-5.57	1.33	1.42
46	BL	66	VAL	CA-CB	5.57	1.62	1.54
2	AB	453	A	O5'-C5'	-5.57	1.34	1.42
15	AO	111	GLU	CA-C	5.57	1.60	1.52
17	AQ	22	GLY	CA-C	5.57	1.58	1.51
44	BJ	149	ALA	CA-C	5.57	1.59	1.52
47	BM	57	VAL	CA-C	5.57	1.59	1.52
2	AB	1795	C	O5'-C5'	5.57	1.50	1.42
4	AD	83	ASP	CA-C	5.57	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	113	G	O3'-P	5.57	1.69	1.61
35	BA	543	U	C4'-O4'	-5.57	1.37	1.45
35	BA	614	C	C3'-C2'	5.57	1.61	1.52
52	BR	83	ARG	CA-C	5.57	1.60	1.52
2	AB	2666	C	C5'-C4'	5.56	1.59	1.51
2	AB	753	A	C4'-O4'	-5.56	1.37	1.45
2	AB	1493	C	C4'-O4'	-5.56	1.37	1.45
56	BV	43	MET	N-CA	5.56	1.53	1.46
56	BV	46	LEU	N-CA	5.56	1.52	1.45
2	AB	1735	A	C5'-C4'	5.56	1.59	1.51
2	AB	2167	U	C3'-O3'	5.56	1.50	1.42
39	BE	96	LEU	CA-C	5.56	1.59	1.52
1	AA	24	G	O3'-P	5.56	1.69	1.61
2	AB	283	G	O3'-P	-5.56	1.52	1.61
35	BA	412	A	O3'-P	-5.56	1.52	1.61
35	BA	1050	G	C5'-C4'	5.56	1.59	1.51
35	BA	1249	C	C4'-O4'	-5.56	1.37	1.45
2	AB	1945	G	C4'-O4'	-5.56	1.37	1.45
33	A6	2	LYS	CA-C	5.56	1.60	1.52
47	BM	23	ALA	CA-CB	5.56	1.61	1.53
50	BP	38	ILE	C-O	-5.56	1.17	1.24
57	BW	74	HIS	CG-ND1	5.56	1.44	1.38
2	AB	510	C	C2'-C1'	5.55	1.61	1.53
4	AD	242	HIS	C-N	5.55	1.41	1.33
6	AF	51	GLU	CA-C	5.55	1.60	1.52
35	BA	1388	C	C1'-N1	5.55	1.56	1.48
52	BR	27	GLN	CA-C	5.55	1.59	1.52
57	BW	72	ALA	N-CA	-5.55	1.39	1.46
22	AV	64	LYS	C-N	5.55	1.40	1.33
4	AD	181	ARG	CA-C	5.55	1.59	1.52
5	AE	23	PRO	CA-C	-5.55	1.46	1.52
35	BA	489	C	C5'-C4'	5.55	1.59	1.51
35	BA	637	C	C5'-C4'	5.55	1.59	1.51
35	BA	643	C	C1'-N1	5.55	1.56	1.48
56	BV	84	ALA	CA-C	5.55	1.59	1.52
2	AB	535	G	P-O5'	5.55	1.68	1.59
2	AB	1400	U	C1'-N1	5.55	1.56	1.48
2	AB	2199	A	O5'-C5'	-5.55	1.34	1.42
11	AK	83	ALA	N-CA	5.55	1.53	1.46
35	BA	1112	C	O3'-P	5.55	1.69	1.61
38	BD	15	G	C5'-C4'	5.55	1.59	1.51
55	BU	58	ILE	CA-C	5.55	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	2770	G	C4'-O4'	-5.55	1.37	1.45
35	BA	595	A	C2'-O2'	5.55	1.50	1.41
35	BA	1153	G	C5'-C4'	5.55	1.59	1.51
53	BS	26	ASN	CA-CB	5.55	1.62	1.53
7	AG	128	SER	C-O	5.55	1.30	1.23
10	AJ	17	VAL	N-CA	5.55	1.53	1.46
23	AW	31	GLY	N-CA	5.55	1.53	1.45
27	A0	31	GLN	CA-C	5.55	1.59	1.52
35	BA	727	G	C4'-O4'	-5.55	1.37	1.45
1	AA	113	C	C4'-O4'	-5.54	1.37	1.45
39	BE	168	GLU	N-CA	-5.54	1.40	1.46
21	AU	49	LYS	CA-CB	5.54	1.61	1.53
30	A3	33	SER	CA-C	5.54	1.59	1.52
35	BA	584	G	C4'-O4'	-5.54	1.37	1.45
36	BB	73	G	P-O5'	5.54	1.68	1.59
41	BG	51	GLY	N-CA	-5.54	1.39	1.45
53	BS	41	PRO	CA-C	5.54	1.60	1.52
2	AB	1836	C	C5'-C4'	5.54	1.59	1.51
35	BA	58	C	C4'-O4'	-5.54	1.37	1.45
35	BA	378	G	C5'-C4'	5.54	1.59	1.51
2	AB	296	U	P-O5'	-5.54	1.51	1.59
2	AB	2599	G	O3'-P	5.54	1.69	1.61
35	BA	331	G	C5'-C4'	5.54	1.59	1.51
35	BA	1163	A	O3'-P	5.54	1.69	1.61
2	AB	2097	A	C2'-O2'	-5.54	1.34	1.42
2	AB	2895	G	C5'-C4'	5.54	1.59	1.51
14	AN	80	SER	C-N	5.54	1.41	1.33
23	AW	83	GLY	N-CA	5.54	1.49	1.44
2	AB	1457	U	O3'-P	5.53	1.69	1.61
49	BO	6	LEU	C-N	5.53	1.40	1.33
57	BW	9	ARG	CA-C	5.53	1.59	1.52
2	AB	1139	G	C5'-C4'	5.53	1.59	1.51
2	AB	1564	C	C4'-O4'	-5.53	1.37	1.45
2	AB	235	U	C4'-C3'	-5.53	1.44	1.52
25	AY	45	HIS	ND1-CE1	5.53	1.38	1.32
38	BD	77	A	P-O5'	5.53	1.68	1.59
39	BE	239	ALA	CA-C	5.53	1.60	1.52
2	AB	2371	G	O3'-P	5.53	1.69	1.61
45	BK	79	ARG	C-O	-5.53	1.18	1.24
2	AB	125	A	C2'-C1'	5.53	1.61	1.53
2	AB	1578	U	O4'-C1'	5.53	1.50	1.41
2	AB	1061	U	C2'-C1'	5.52	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	165	G	P-O5'	5.52	1.68	1.59
56	BV	38	THR	CB-OG1	-5.52	1.34	1.43
2	AB	2612	C	C4'-O4'	-5.52	1.37	1.45
7	AG	104	THR	CA-C	5.52	1.60	1.52
1	AA	97	C	O3'-P	5.52	1.69	1.61
2	AB	56	A	P-O5'	5.52	1.68	1.59
2	AB	841	G	C2'-O2'	-5.52	1.34	1.42
10	AJ	162	GLU	C-O	-5.52	1.17	1.23
12	AL	85	LYS	N-CA	5.52	1.52	1.45
24	AX	26	PHE	N-CA	5.52	1.50	1.46
32	A5	34	ARG	CZ-NH2	5.52	1.40	1.33
35	BA	44	A	C4'-O4'	-5.52	1.37	1.45
35	BA	188	C	P-O5'	5.52	1.68	1.59
52	BR	35	ILE	CA-C	5.52	1.59	1.52
52	BR	82	GLU	N-CA	-5.52	1.39	1.46
2	AB	1068	G	P-O5'	5.52	1.68	1.59
35	BA	542	G	C1'-N9	5.52	1.56	1.48
35	BA	1189	U	P-O5'	5.52	1.68	1.59
42	BH	120	HIS	CG-ND1	5.52	1.44	1.38
2	AB	1553	A	P-O5'	5.51	1.68	1.59
35	BA	152	A	C4'-O4'	-5.51	1.37	1.45
2	AB	64	A	O3'-P	5.51	1.69	1.61
2	AB	547	A	C3'-O3'	5.51	1.50	1.42
11	AK	99	LYS	CA-C	5.51	1.59	1.52
35	BA	17	U	C3'-C2'	5.51	1.61	1.52
35	BA	485	U	C3'-C2'	5.51	1.61	1.52
35	BA	581	G	C2'-C1'	-5.51	1.45	1.53
56	BV	21	ALA	N-CA	-5.51	1.39	1.46
2	AB	1088	A	P-O5'	5.51	1.68	1.59
2	AB	2588	G	C5'-C4'	5.51	1.59	1.51
42	BH	105	ILE	C-O	-5.51	1.18	1.24
1	AA	109	A	C2'-C1'	5.51	1.61	1.53
2	AB	540	C	C3'-O3'	5.51	1.50	1.42
2	AB	2816	G	C2'-O2'	-5.51	1.34	1.42
35	BA	591	U	O5'-C5'	-5.51	1.34	1.42
1	AA	29	A	O5'-C5'	-5.51	1.34	1.42
38	BD	34	U	C3'-C2'	5.51	1.61	1.52
40	BF	5	HIS	CG-ND1	5.51	1.44	1.38
2	AB	1330	C	O3'-P	5.50	1.69	1.61
2	AB	414	C	C4'-O4'	-5.50	1.37	1.45
2	AB	2837	A	C2'-C1'	-5.50	1.45	1.53
3	AC	218	MET	N-CA	-5.50	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	A5	36	ALA	N-CA	5.50	1.53	1.46
35	BA	626	G	C5'-C4'	5.50	1.59	1.51
2	AB	762	U	O3'-P	-5.50	1.52	1.61
2	AB	1414	C	C4'-O4'	-5.50	1.37	1.45
4	AD	58	LYS	CA-CB	5.50	1.62	1.53
18	AR	45	VAL	CA-CB	5.50	1.62	1.54
35	BA	1499	A	O3'-P	5.50	1.69	1.61
2	AB	545	U	C4'-O4'	-5.50	1.37	1.45
5	AE	13	ARG	CD-NE	5.50	1.53	1.46
6	AF	29	HIS	CA-C	5.50	1.60	1.52
2	AB	620	G	P-O5'	5.50	1.68	1.59
38	BD	54	G	C3'-O3'	5.50	1.50	1.42
2	AB	1951	U	C2'-C1'	-5.50	1.45	1.53
2	AB	926	G	C4'-O4'	-5.49	1.37	1.45
16	AP	47	VAL	CA-C	5.49	1.59	1.52
35	BA	353	A	C5'-C4'	5.49	1.59	1.51
35	BA	502	A	P-O5'	-5.49	1.51	1.59
36	BB	22	G	C5'-C4'	5.49	1.59	1.51
45	BK	65	PHE	CA-C	5.49	1.60	1.52
2	AB	1338	G	C3'-O3'	5.49	1.50	1.42
35	BA	1532	U	O3'-P	5.49	1.69	1.61
2	AB	2123	G	O5'-C5'	5.49	1.50	1.42
22	AV	85	VAL	CA-C	5.49	1.60	1.53
35	BA	961	U	P-O5'	5.49	1.68	1.59
2	AB	2710	C	O3'-P	5.49	1.69	1.61
7	AG	15	LEU	CA-C	5.49	1.59	1.52
35	BA	469	C	C2'-O2'	-5.49	1.34	1.42
2	AB	359	G	P-O5'	5.49	1.68	1.59
2	AB	781	A	P-O5'	5.49	1.68	1.59
2	AB	1718	G	C2'-O2'	-5.49	1.34	1.42
28	A1	6	ILE	CA-C	5.49	1.59	1.52
2	AB	675	A	O3'-P	-5.49	1.52	1.61
2	AB	1070	A	C4'-C3'	5.49	1.61	1.53
2	AB	2724	U	C4'-O4'	-5.49	1.37	1.45
2	AB	1403	A	C4'-O4'	-5.48	1.37	1.45
2	AB	461	C	C1'-N1	5.48	1.56	1.48
15	AO	66	ARG	CD-NE	5.48	1.53	1.46
35	BA	905	U	O3'-P	5.48	1.69	1.61
2	AB	485	C	C2'-C1'	5.48	1.61	1.53
2	AB	684	G	C1'-N9	5.48	1.56	1.48
2	AB	1758	U	C1'-N1	5.48	1.55	1.47
20	AT	102	SER	C-N	5.48	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BC	46	C	C4'-C3'	5.48	1.61	1.53
9	AI	124	THR	CA-C	5.48	1.59	1.52
27	A0	19	LEU	C-O	-5.48	1.17	1.24
35	BA	963	G	C5'-C4'	5.48	1.59	1.51
2	AB	375	G	C3'-C2'	5.48	1.60	1.52
2	AB	1726	C	C1'-N1	5.48	1.56	1.48
9	AI	12	LEU	N-CA	5.48	1.52	1.46
20	AT	77	PHE	N-CA	5.48	1.52	1.46
44	BJ	119	LEU	CA-C	-5.48	1.45	1.52
35	BA	196	A	O3'-P	5.48	1.69	1.61
2	AB	994	C	P-O5'	5.47	1.68	1.59
2	AB	1776	G	C2'-C1'	-5.47	1.45	1.53
35	BA	1349	A	P-O5'	5.47	1.68	1.59
58	BX	40	PRO	N-CA	5.47	1.54	1.47
2	AB	322	A	O3'-P	-5.47	1.52	1.61
18	AR	61	ARG	N-CA	5.47	1.52	1.46
56	BV	88	ALA	N-CA	-5.47	1.38	1.45
2	AB	2378	A	C5'-C4'	5.47	1.59	1.51
2	AB	70	G	C4'-C3'	5.47	1.61	1.53
21	AU	110	ARG	CD-NE	5.47	1.53	1.46
2	AB	1406	U	C2'-O2'	5.47	1.50	1.42
2	AB	1729	U	P-O5'	5.47	1.68	1.59
2	AB	1866	A	C5'-C4'	5.47	1.59	1.51
2	AB	2347	C	P-O5'	5.47	1.68	1.59
12	AL	76	HIS	ND1-CE1	5.47	1.38	1.32
35	BA	261	U	C4'-O4'	-5.47	1.37	1.45
41	BG	203	TYR	CA-CB	5.47	1.62	1.53
2	AB	1028	A	O4'-C1'	-5.46	1.33	1.41
2	AB	2462	C	C2'-O2'	5.46	1.50	1.42
48	BN	76	TYR	CA-C	5.46	1.60	1.52
2	AB	1252	G	C4'-O4'	-5.46	1.37	1.45
35	BA	628	G	P-O5'	5.46	1.68	1.59
2	AB	255	A	C1'-N9	5.46	1.56	1.48
15	AO	13	HIS	CE1-NE2	5.46	1.38	1.32
35	BA	1187	G	C3'-C2'	-5.46	1.44	1.52
35	BA	1456	A	C4'-O4'	-5.46	1.37	1.45
56	BV	36	ARG	CA-C	5.46	1.60	1.52
16	AP	37	THR	CB-OG1	-5.46	1.35	1.43
20	AT	76	LYS	C-N	5.46	1.40	1.33
2	AB	1853	A	C3'-O3'	5.46	1.50	1.42
7	AG	28	PRO	N-CA	-5.46	1.40	1.47
28	A1	2	LYS	N-CA	5.46	1.53	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	838	G	C4'-O4'	-5.46	1.37	1.45
2	AB	1688	U	O5'-C5'	-5.46	1.34	1.42
35	BA	147	G	O4'-C1'	5.46	1.49	1.41
35	BA	1489	G	C3'-O3'	5.46	1.50	1.42
2	AB	1026	G	P-O5'	5.46	1.68	1.59
3	AC	176	GLY	N-CA	5.46	1.51	1.45
11	AK	114	ALA	N-CA	5.46	1.53	1.46
12	AL	99	ARG	C-N	5.46	1.40	1.33
35	BA	40	C	C2'-C1'	-5.46	1.45	1.53
34	A7	28	SER	CA-CB	5.45	1.61	1.53
47	BM	5	ARG	CZ-NH2	5.45	1.40	1.33
2	AB	85	G	P-O5'	5.45	1.68	1.59
9	AI	62	LEU	CA-CB	5.45	1.61	1.53
40	BF	171	ARG	C-O	-5.45	1.17	1.24
2	AB	76	C	O5'-C5'	-5.45	1.34	1.42
2	AB	263	G	C4'-C3'	5.45	1.60	1.52
2	AB	321	U	C5'-C4'	5.45	1.59	1.51
12	AL	110	PRO	CA-C	5.45	1.58	1.52
16	AP	74	GLU	C-O	-5.45	1.17	1.24
46	BL	44	ARG	CZ-NH1	5.45	1.40	1.32
2	AB	214	G	P-O5'	5.45	1.68	1.59
2	AB	300	A	C5'-C4'	5.45	1.59	1.51
10	AJ	142	MET	N-CA	5.45	1.53	1.46
35	BA	807	A	C4'-C3'	5.45	1.60	1.52
39	BE	148	GLY	C-N	5.45	1.39	1.33
56	BV	73	PHE	CA-C	5.45	1.59	1.52
2	AB	9	G	O3'-P	5.45	1.69	1.61
2	AB	11	C	C1'-N1	5.45	1.56	1.48
2	AB	1906	G	C4'-C3'	5.45	1.60	1.52
8	AH	154	GLU	N-CA	5.45	1.54	1.45
2	AB	407	G	P-O5'	5.44	1.68	1.59
2	AB	1085	A	C4'-O4'	-5.44	1.37	1.45
10	AJ	13	GLU	C-N	5.44	1.40	1.33
50	BP	72	ILE	CA-CB	5.44	1.61	1.54
2	AB	2077	A	P-O5'	5.44	1.68	1.59
39	BE	90	PHE	CG-CD2	5.44	1.50	1.38
24	AX	90	ASP	N-CA	-5.44	1.39	1.45
2	AB	2315	G	C4'-O4'	-5.44	1.37	1.45
35	BA	805	C	C3'-C2'	5.44	1.60	1.52
35	BA	1201	A	C4'-O4'	-5.44	1.37	1.45
58	BX	32	ARG	C-O	5.44	1.30	1.23
2	AB	457	A	O5'-C5'	5.44	1.51	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	1880	U	C3'-C2'	5.44	1.60	1.52
35	BA	562	U	C4'-C3'	5.43	1.61	1.53
2	AB	2161	C	P-O5'	-5.43	1.51	1.59
2	AB	2624	G	C5'-C4'	5.43	1.59	1.51
26	AZ	47	THR	N-CA	5.43	1.52	1.46
35	BA	89	U	C4'-O4'	-5.43	1.37	1.45
43	BI	3	HIS	CE1-NE2	5.43	1.38	1.32
2	AB	2076	U	O3'-P	-5.43	1.53	1.61
8	AH	28	LYS	CA-C	5.43	1.59	1.52
51	BQ	73	LEU	CA-C	5.43	1.58	1.52
2	AB	2693	G	P-O5'	5.43	1.67	1.59
39	BE	154	GLY	N-CA	-5.43	1.35	1.45
56	BV	54	ARG	CA-CB	5.43	1.62	1.53
11	AK	54	ILE	CA-C	5.43	1.57	1.53
12	AL	28	LEU	C-N	5.43	1.41	1.33
42	BH	15	ILE	C-O	5.43	1.29	1.23
47	BM	55	PRO	N-CD	-5.43	1.40	1.47
2	AB	2622	U	P-O5'	5.42	1.67	1.59
35	BA	891	U	C4'-O4'	-5.42	1.37	1.45
40	BF	71	ARG	N-CA	5.42	1.51	1.45
35	BA	1205	U	O3'-P	5.42	1.69	1.61
2	AB	1367	A	C4'-C3'	-5.42	1.44	1.52
2	AB	2224	G	C4'-O4'	-5.42	1.37	1.45
8	AH	163	TYR	N-CA	-5.42	1.39	1.46
35	BA	777	A	C4'-C3'	5.42	1.60	1.52
26	AZ	63	ILE	C-O	-5.42	1.18	1.24
2	AB	1703	G	C4'-O4'	-5.42	1.37	1.45
35	BA	416	G	P-O5'	5.42	1.67	1.59
38	BD	10	G	C4'-C3'	5.42	1.60	1.52
40	BF	89	VAL	CA-C	5.42	1.60	1.52
2	AB	835	C	O4'-C1'	5.42	1.49	1.41
2	AB	1334	G	C4'-C3'	5.42	1.60	1.52
2	AB	1558	C	C5'-C4'	5.42	1.59	1.51
2	AB	2225	A	N3-C4	5.42	1.45	1.34
8	AH	30	GLY	N-CA	5.42	1.50	1.45
2	AB	101	A	C5'-C4'	-5.41	1.43	1.51
2	AB	1721	G	O3'-P	5.41	1.69	1.61
2	AB	2886	A	C4'-C3'	5.41	1.60	1.52
35	BA	359	G	C4'-O4'	-5.41	1.37	1.45
35	BA	795	C	P-O5'	5.41	1.67	1.59
35	BA	988	G	C4'-O4'	-5.41	1.37	1.45
36	BB	35	C	C4'-O4'	-5.41	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	265	A	C3'-O3'	5.41	1.50	1.42
35	BA	155	A	C1'-N9	5.41	1.56	1.48
53	BS	20	VAL	CA-C	5.41	1.59	1.52
2	AB	612	G	O4'-C1'	5.41	1.49	1.41
2	AB	1317	G	C1'-N9	5.41	1.56	1.48
2	AB	2032	G	O3'-P	5.41	1.69	1.61
10	AJ	6	ASP	C-O	-5.41	1.17	1.24
29	A2	25	ARG	NE-CZ	5.41	1.39	1.33
35	BA	580	C	P-O5'	5.41	1.67	1.59
48	BN	117	HIS	CD2-NE2	5.41	1.43	1.37
2	AB	2512	C	O4'-C1'	5.41	1.49	1.41
6	AF	94	GLN	C-N	5.41	1.40	1.33
25	AY	78	PHE	N-CA	5.41	1.52	1.46
49	BO	15	VAL	CA-C	5.41	1.59	1.52
2	AB	933	A	P-O5'	5.40	1.67	1.59
35	BA	925	G	C4'-O4'	-5.40	1.37	1.45
40	BF	185	THR	C-N	5.40	1.40	1.33
50	BP	48	SER	C-O	-5.40	1.16	1.23
2	AB	181	A	C4'-O4'	-5.40	1.37	1.45
2	AB	861	A	C5'-C4'	5.40	1.59	1.51
2	AB	1224	U	P-O5'	5.40	1.67	1.59
2	AB	2705	A	P-O5'	5.40	1.67	1.59
9	AI	78	VAL	CA-CB	5.40	1.59	1.53
2	AB	526	A	C2'-O2'	-5.40	1.34	1.42
8	AH	92	GLY	CA-C	5.40	1.58	1.51
24	AX	86	LEU	C-N	5.40	1.41	1.33
35	BA	808	C	C1'-N1	5.40	1.56	1.48
35	BA	932	C	P-O5'	5.40	1.67	1.59
39	BE	31	PHE	C-N	5.40	1.39	1.33
2	AB	1337	G	O3'-P	5.40	1.69	1.61
2	AB	1561	C	O5'-C5'	-5.40	1.34	1.42
2	AB	1534	U	C2'-O2'	-5.39	1.34	1.42
18	AR	49	ILE	C-O	5.39	1.30	1.24
35	BA	545	C	C5'-C4'	5.39	1.59	1.51
35	BA	1487	G	P-O5'	5.39	1.67	1.59
57	BW	82	ILE	CA-C	5.39	1.59	1.52
12	AL	1	MET	SD-CE	5.39	1.93	1.79
12	AL	116	ARG	CD-NE	5.39	1.53	1.46
35	BA	911	U	C4'-O4'	-5.39	1.37	1.45
15	AO	128	THR	C-N	5.39	1.40	1.33
35	BA	751	U	C1'-N1	5.39	1.56	1.48
2	AB	1138	G	C4'-O4'	-5.39	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	AF	181	ILE	N-CA	5.39	1.53	1.46
16	AP	96	ARG	CZ-NH1	5.39	1.40	1.32
35	BA	358	U	O4'-C1'	5.39	1.49	1.41
35	BA	415	A	C5'-C4'	5.39	1.59	1.51
53	BS	26	ASN	C-N	5.39	1.40	1.33
2	AB	829	A	O5'-C5'	-5.38	1.34	1.42
2	AB	937	C	C4'-C3'	5.38	1.60	1.52
2	AB	2825	G	P-O5'	5.38	1.67	1.59
35	BA	1343	G	C4'-O4'	-5.38	1.37	1.45
2	AB	1714	U	C1'-N1	5.38	1.55	1.47
39	BE	236	PHE	CA-C	5.38	1.60	1.52
1	AA	10	G	P-O5'	5.38	1.67	1.59
2	AB	204	A	C4'-C3'	5.38	1.61	1.53
2	AB	1466	U	P-O5'	5.38	1.67	1.59
2	AB	1877	A	C3'-C2'	5.38	1.60	1.52
35	BA	299	G	P-O5'	5.38	1.67	1.59
35	BA	701	U	C4'-O4'	-5.38	1.37	1.45
35	BA	1528	U	C4'-O4'	-5.38	1.37	1.45
39	BE	136	ARG	NE-CZ	5.38	1.39	1.33
1	AA	11	C	O3'-P	5.38	1.69	1.61
2	AB	910	A	C2'-O2'	-5.38	1.34	1.42
2	AB	1251	C	O3'-P	5.38	1.69	1.61
35	BA	345	C	C4'-O4'	-5.38	1.37	1.45
2	AB	353	C	C2'-C1'	5.37	1.61	1.53
7	AG	133	GLU	CA-C	5.37	1.59	1.52
9	AI	79	THR	N-CA	5.37	1.52	1.46
35	BA	149	A	C5'-C4'	5.37	1.59	1.51
35	BA	642	A	O3'-P	5.37	1.69	1.61
42	BH	140	ILE	CA-CB	5.37	1.61	1.54
2	AB	548	G	C2'-O2'	5.37	1.49	1.41
2	AB	1964	G	C4'-C3'	5.37	1.61	1.53
35	BA	95	C	O5'-C5'	-5.37	1.34	1.42
44	BJ	11	ILE	CA-CB	5.37	1.61	1.54
2	AB	2184	A	O3'-P	5.37	1.69	1.61
2	AB	2226	C	C5'-C4'	5.37	1.59	1.51
2	AB	2249	U	O3'-P	-5.37	1.53	1.61
35	BA	769	G	C4'-O4'	-5.37	1.37	1.45
40	BF	149	LYS	CA-C	5.37	1.58	1.52
45	BK	117	GLN	CA-CB	5.37	1.62	1.53
44	BJ	177	LEU	N-CA	-5.37	1.39	1.46
2	AB	666	A	C4'-C3'	5.37	1.60	1.52
2	AB	2484	G	C4'-C3'	5.37	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	AJ	97	GLU	CA-C	5.37	1.59	1.52
2	AB	189	G	O3'-P	5.36	1.69	1.61
2	AB	2132	U	C1'-N1	5.36	1.56	1.48
3	AC	67	HIS	ND1-CE1	5.36	1.38	1.32
35	BA	817	C	O5'-C5'	-5.36	1.34	1.42
35	BA	851	G	C4'-O4'	-5.36	1.37	1.45
38	BD	48	U	C2'-C1'	5.36	1.61	1.53
38	BD	59	A	P-O5'	5.36	1.67	1.59
2	AB	1270	C	C1'-N1	5.36	1.55	1.47
2	AB	2567	G	O3'-P	5.36	1.69	1.61
4	AD	113	ASP	C-N	5.36	1.41	1.33
34	A7	9	LYS	N-CA	-5.36	1.39	1.46
35	BA	511	C	C2'-O2'	5.36	1.49	1.41
29	A2	59	ARG	CD-NE	5.36	1.53	1.46
2	AB	610	C	P-O5'	5.36	1.67	1.59
4	AD	211	ARG	C-N	5.36	1.41	1.33
35	BA	76	G	O3'-P	5.36	1.69	1.61
35	BA	1252	A	O3'-P	5.36	1.69	1.61
2	AB	2339	C	C3'-O3'	5.36	1.50	1.42
3	AC	60	ARG	N-CA	5.36	1.52	1.46
10	AJ	6	ASP	N-CA	-5.36	1.39	1.46
21	AU	64	ALA	CA-C	-5.36	1.46	1.52
35	BA	940	C	C5'-C4'	5.36	1.59	1.51
37	BC	28	U	C4'-O4'	-5.36	1.37	1.45
43	BI	60	VAL	CA-C	5.36	1.59	1.52
2	AB	1369	G	O4'-C1'	-5.35	1.33	1.41
2	AB	1560	G	C5'-C4'	5.35	1.59	1.51
7	AG	109	ARG	NE-CZ	5.35	1.39	1.33
35	BA	225	C	P-O5'	5.35	1.67	1.59
35	BA	1452	C	O5'-C5'	-5.35	1.34	1.42
43	BI	41	ASP	N-CA	-5.35	1.38	1.46
43	BI	57	ALA	N-CA	5.35	1.52	1.45
2	AB	2808	G	P-O5'	5.35	1.67	1.59
35	BA	923	A	P-O5'	5.35	1.67	1.59
44	BJ	45	ALA	N-CA	5.35	1.52	1.46
2	AB	2728	U	C1'-N1	-5.35	1.40	1.48
2	AB	2842	G	P-O5'	5.35	1.67	1.59
35	BA	149	A	O3'-P	5.35	1.69	1.61
35	BA	853	C	C1'-N1	5.35	1.56	1.48
35	BA	1432	G	C5'-C4'	5.35	1.59	1.51
42	BH	37	VAL	CA-CB	5.35	1.60	1.54
45	BK	34	ALA	C-O	-5.35	1.17	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	BL	124	PRO	N-CD	-5.35	1.40	1.47
2	AB	2382	G	O3'-P	5.35	1.69	1.61
2	AB	2748	A	O3'-P	5.35	1.69	1.61
2	AB	1547	C	C4'-O4'	-5.34	1.37	1.45
4	AD	43	ASN	N-CA	5.34	1.52	1.45
25	AY	65	LYS	CA-C	-5.34	1.46	1.52
27	A0	41	HIS	CG-ND1	-5.34	1.32	1.38
2	AB	750	A	C4'-O4'	-5.34	1.37	1.45
38	BD	75	C	O3'-P	5.34	1.69	1.61
2	AB	215	G	O3'-P	-5.34	1.53	1.61
8	AH	116	LEU	CA-C	5.34	1.58	1.53
10	AJ	39	GLU	CA-C	-5.34	1.45	1.52
35	BA	103	U	C4'-O4'	-5.34	1.37	1.45
35	BA	603	U	O3'-P	5.34	1.69	1.61
58	BX	38	GLU	N-CA	5.34	1.53	1.45
2	AB	579	G	P-O5'	5.34	1.67	1.59
2	AB	258	G	C5'-C4'	5.34	1.59	1.51
2	AB	2067	G	C4'-C3'	5.34	1.61	1.53
2	AB	2344	U	O3'-P	5.34	1.69	1.61
2	AB	2433	A	C2'-C1'	-5.34	1.45	1.53
8	AH	79	THR	N-CA	5.34	1.52	1.46
45	BK	21	LYS	CA-C	5.34	1.59	1.52
12	AL	80	HIS	CD2-NE2	5.33	1.43	1.37
49	BO	115	LYS	CA-C	-5.33	1.46	1.52
1	AA	57	A	C4'-O4'	-5.33	1.37	1.45
2	AB	2706	A	C4'-C3'	5.33	1.60	1.52
3	AC	164	ARG	CD-NE	5.33	1.53	1.46
29	A2	31	ASP	N-CA	5.33	1.52	1.46
35	BA	599	C	C1'-N1	5.33	1.56	1.48
19	AS	7	VAL	C-N	5.33	1.40	1.33
35	BA	1461	G	P-O5'	5.33	1.67	1.59
37	BC	50	U	C4'-O4'	-5.33	1.37	1.45
2	AB	238	C	O3'-P	5.33	1.69	1.61
2	AB	800	A	C3'-O3'	-5.33	1.35	1.43
2	AB	1782	U	P-O5'	5.33	1.67	1.59
2	AB	2610	C	C5'-C4'	5.33	1.59	1.51
28	A1	18	LYS	CA-C	5.33	1.59	1.52
37	BC	43	U	P-O5'	5.33	1.67	1.59
40	BF	168	ARG	C-N	5.33	1.40	1.33
47	BM	20	GLN	CA-CB	5.33	1.61	1.53
2	AB	387	U	C3'-O3'	5.33	1.51	1.43
2	AB	2510	C	P-O5'	5.33	1.67	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	1326	U	C3'-C2'	-5.33	1.44	1.52
2	AB	528	A	C4'-C3'	5.33	1.60	1.52
2	AB	2681	C	C4'-O4'	-5.33	1.37	1.45
2	AB	2733	A	C4'-O4'	-5.33	1.37	1.45
35	BA	1488	G	C5'-C4'	5.33	1.59	1.51
52	BR	66	LEU	CA-C	5.33	1.59	1.52
2	AB	785	G	O5'-C5'	-5.32	1.34	1.42
2	AB	1381	G	O3'-P	5.32	1.69	1.61
11	AK	20	SER	CA-C	5.32	1.59	1.52
35	BA	174	A	C4'-O4'	-5.32	1.37	1.45
35	BA	508	U	C4'-C3'	5.32	1.61	1.53
42	BH	32	PHE	N-CA	-5.32	1.39	1.45
2	AB	2253	G	O3'-P	5.32	1.69	1.61
27	A0	8	GLU	CA-C	5.32	1.59	1.52
29	A2	7	PRO	CA-C	5.32	1.58	1.52
2	AB	2548	U	C4'-O4'	-5.32	1.37	1.45
8	AH	76	ILE	CA-C	5.32	1.59	1.52
42	BH	158	LYS	CA-C	5.32	1.59	1.52
55	BU	8	LYS	N-CA	5.32	1.52	1.46
2	AB	883	G	C5'-C4'	5.32	1.59	1.51
2	AB	380	G	P-O5'	5.32	1.67	1.59
2	AB	2308	G	C4'-O4'	-5.32	1.37	1.45
24	AX	61	LEU	N-CA	-5.32	1.39	1.46
33	A6	61	LEU	N-CA	-5.32	1.41	1.46
35	BA	53	A	C4'-O4'	-5.32	1.37	1.45
44	BJ	3	ARG	NE-CZ	5.32	1.38	1.33
2	AB	1069	A	O5'-C5'	-5.32	1.34	1.42
35	BA	1457	G	O3'-P	5.32	1.69	1.61
55	BU	47	ARG	CA-C	5.32	1.59	1.52
35	BA	706	A	C4'-O4'	-5.31	1.37	1.45
2	AB	605	G	P-O5'	5.31	1.67	1.59
8	AH	141	GLY	C-O	-5.31	1.18	1.24
35	BA	1248	A	C4'-O4'	-5.31	1.37	1.45
2	AB	1052	C	C5'-C4'	5.31	1.59	1.51
2	AB	2521	C	P-O5'	5.31	1.67	1.59
5	AE	47	ALA	N-CA	5.31	1.52	1.46
35	BA	850	U	O3'-P	5.31	1.69	1.61
39	BE	119	GLN	C-N	5.31	1.40	1.33
43	BI	55	HIS	ND1-CE1	5.31	1.37	1.32
1	AA	56	G	C4'-O4'	-5.31	1.37	1.45
2	AB	282	A	P-O5'	5.31	1.67	1.59
2	AB	2341	G	C1'-N9	5.31	1.55	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AD	67	LYS	CA-C	5.31	1.59	1.52
35	BA	1284	C	C4'-O4'	-5.31	1.37	1.45
2	AB	2090	A	P-O5'	5.31	1.67	1.59
21	AU	68	ASP	CA-C	5.31	1.60	1.52
2	AB	2026	U	C2'-O2'	-5.30	1.34	1.42
6	AF	144	GLU	CA-C	5.30	1.58	1.52
35	BA	1101	A	O5'-C5'	5.30	1.50	1.42
35	BA	1045	C	C5'-C4'	5.30	1.59	1.51
2	AB	1710	G	C5'-C4'	5.30	1.59	1.51
2	AB	2824	C	C4'-O4'	-5.30	1.37	1.45
4	AD	52	HIS	CB-CG	-5.30	1.42	1.50
39	BE	153	MET	CA-CB	5.30	1.59	1.53
49	BO	9	LYS	C-N	5.30	1.40	1.33
2	AB	328	U	P-O5'	5.30	1.67	1.59
2	AB	661	A	O5'-C5'	-5.30	1.34	1.42
12	AL	38	GLY	CA-C	5.30	1.59	1.51
12	AL	73	VAL	CA-CB	5.30	1.61	1.54
12	AL	82	GLY	C-N	5.30	1.40	1.32
2	AB	1704	C	C5'-C4'	5.30	1.59	1.51
40	BF	99	GLN	CA-C	5.30	1.59	1.52
46	BL	57	VAL	CA-C	5.30	1.59	1.52
2	AB	1474	U	P-O5'	5.30	1.67	1.59
2	AB	2780	G	O5'-C5'	-5.30	1.34	1.42
40	BF	218	LYS	CA-C	5.30	1.58	1.52
43	BI	112	ARG	NE-CZ	5.30	1.38	1.33
2	AB	1094	U	C4'-C3'	5.29	1.60	1.52
4	AD	192	GLY	CA-C	5.29	1.59	1.51
2	AB	662	G	C3'-O3'	5.29	1.50	1.42
2	AB	1589	U	C5'-C4'	5.29	1.59	1.51
2	AB	2809	A	C5'-C4'	5.29	1.59	1.51
11	AK	24	GLY	N-CA	5.29	1.51	1.44
35	BA	243	A	P-O5'	5.29	1.67	1.59
35	BA	333	U	O4'-C1'	5.29	1.49	1.41
2	AB	1023	U	C3'-O3'	5.29	1.50	1.42
2	AB	1476	U	P-O5'	5.29	1.67	1.59
30	A3	44	ALA	N-CA	5.29	1.53	1.46
35	BA	277	C	O3'-P	5.29	1.69	1.61
53	BS	42	ILE	CA-C	5.29	1.59	1.53
22	AV	84	TYR	C-O	-5.29	1.17	1.24
35	BA	74	A	C5'-C4'	5.29	1.59	1.51
35	BA	292	G	O3'-P	5.29	1.69	1.61
1	AA	69	G	P-O5'	5.29	1.67	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	1098	A	P-O5'	5.29	1.67	1.59
2	AB	1113	U	C4'-O4'	-5.29	1.37	1.45
2	AB	1285	A	C2'-O2'	5.29	1.50	1.42
36	BB	26	A	O3'-P	5.29	1.69	1.61
39	BE	238	GLU	CA-CB	5.29	1.61	1.53
20	AT	10	LYS	C-N	5.29	1.41	1.33
35	BA	794	A	C5'-C4'	5.29	1.59	1.51
52	BR	33	ALA	CA-C	5.29	1.59	1.52
6	AF	32	VAL	CA-C	5.28	1.60	1.52
2	AB	543	G	C4'-O4'	-5.28	1.37	1.45
2	AB	1731	G	C5'-C4'	5.28	1.59	1.51
4	AD	162	GLN	CA-CB	5.28	1.61	1.53
10	AJ	129	PRO	N-CD	-5.28	1.40	1.47
35	BA	172	A	C4'-O4'	-5.28	1.37	1.45
2	AB	685	A	C1'-N9	5.28	1.54	1.47
4	AD	70	LYS	CA-C	5.28	1.58	1.52
45	BK	111	THR	CA-CB	5.28	1.62	1.53
23	AW	92	VAL	CA-C	-5.28	1.46	1.52
32	A5	35	ARG	CZ-NH2	5.28	1.40	1.33
2	AB	1501	G	O5'-C5'	-5.27	1.34	1.42
1	AA	33	G	O3'-P	5.27	1.69	1.61
2	AB	831	G	C4'-C3'	5.27	1.60	1.52
2	AB	2831	G	C4'-O4'	-5.27	1.37	1.45
8	AH	40	VAL	C-O	-5.27	1.18	1.24
35	BA	679	C	C1'-N1	5.27	1.56	1.48
35	BA	800	G	C4'-O4'	-5.27	1.37	1.45
35	BA	906	A	C4'-C3'	5.27	1.60	1.52
2	AB	93	G	C4'-O4'	-5.27	1.37	1.45
2	AB	1923	U	C5'-C4'	5.27	1.59	1.51
7	AG	121	PHE	CA-C	5.27	1.59	1.52
41	BG	135	GLN	N-CA	-5.27	1.39	1.46
51	BQ	63	CYS	N-CA	5.27	1.52	1.46
1	AA	73	A	C4'-O4'	-5.27	1.37	1.45
2	AB	843	G	C4'-O4'	-5.27	1.37	1.45
7	AG	63	LYS	CA-C	5.27	1.59	1.52
35	BA	1396	A	C5'-C4'	5.27	1.59	1.51
35	BA	1487	G	C1'-N9	5.27	1.55	1.48
35	BA	3	A	P-O5'	5.27	1.67	1.59
35	BA	659	U	C5'-C4'	5.27	1.59	1.51
35	BA	1323	G	O5'-C5'	-5.27	1.34	1.42
2	AB	963	U	C4'-O4'	-5.26	1.37	1.45
10	AJ	14	VAL	CA-C	5.26	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	BV	75	PRO	N-CA	5.26	1.53	1.47
2	AB	1086	A	C4'-C3'	5.26	1.60	1.52
2	AB	1288	G	C4'-O4'	-5.26	1.38	1.45
2	AB	1925	C	C5'-C4'	5.26	1.59	1.51
2	AB	2891	U	C4'-O4'	-5.26	1.37	1.45
33	A6	33	THR	CB-OG1	-5.26	1.35	1.43
2	AB	1968	G	C5'-C4'	5.26	1.59	1.51
2	AB	2400	G	O5'-C5'	5.26	1.50	1.42
2	AB	2413	G	P-O5'	5.26	1.67	1.59
2	AB	2420	C	C2'-C1'	5.26	1.61	1.53
5	AE	16	THR	CA-C	5.26	1.59	1.52
26	AZ	62	GLY	CA-C	5.26	1.59	1.51
35	BA	825	A	O4'-C1'	5.26	1.49	1.41
44	BJ	101	ARG	N-CA	5.26	1.52	1.46
2	AB	2136	G	C2'-O2'	5.26	1.50	1.42
3	AC	201	PRO	CA-C	5.26	1.58	1.52
2	AB	370	G	C4'-C3'	5.26	1.61	1.53
2	AB	2549	G	O3'-P	5.26	1.69	1.61
11	AK	81	LYS	CA-C	5.26	1.59	1.52
2	AB	630	G	C1'-N9	5.25	1.55	1.48
2	AB	2494	G	O3'-P	5.25	1.69	1.61
8	AH	102	ILE	CB-CG1	5.25	1.64	1.53
2	AB	906	U	C5'-C4'	5.25	1.59	1.51
2	AB	1550	C	O3'-P	-5.25	1.53	1.61
4	AD	31	PRO	C-N	5.25	1.41	1.33
16	AP	118	ARG	NE-CZ	5.25	1.38	1.33
2	AB	2852	G	C3'-O3'	5.25	1.50	1.42
12	AL	119	PHE	CA-C	5.25	1.59	1.52
43	BI	125	GLU	CA-C	5.25	1.59	1.52
31	A4	15	GLY	CA-C	-5.25	1.44	1.51
2	AB	109	C	C4'-O4'	-5.25	1.37	1.45
2	AB	2431	U	C5'-C4'	5.25	1.59	1.51
35	BA	335	C	O5'-C5'	-5.25	1.34	1.42
2	AB	1171	G	O4'-C1'	5.25	1.49	1.41
2	AB	1372	U	C4'-C3'	5.25	1.60	1.52
2	AB	2053	G	O3'-P	5.25	1.69	1.61
2	AB	2632	A	C2'-O2'	5.25	1.50	1.42
35	BA	95	C	C4'-O4'	-5.25	1.37	1.45
35	BA	588	G	P-O5'	5.25	1.67	1.59
36	BB	42	G	O3'-P	5.25	1.69	1.61
15	AO	108	VAL	CA-C	5.25	1.58	1.52
35	BA	194	C	N1-C2	5.25	1.50	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	251	G	P-O5'	5.25	1.67	1.59
35	BA	1139	G	O4'-C1'	-5.25	1.34	1.42
35	BA	1260	G	O3'-P	5.25	1.69	1.61
53	BS	33	ILE	CA-CB	-5.25	1.47	1.54
2	AB	447	A	O5'-C5'	-5.24	1.34	1.42
7	AG	18	GLU	C-N	5.24	1.41	1.33
40	BF	78	LYS	C-O	-5.24	1.17	1.23
49	BO	43	LYS	CA-C	5.24	1.59	1.52
2	AB	1399	C	C5'-C4'	5.24	1.59	1.51
19	AS	112	ALA	N-CA	5.24	1.52	1.46
35	BA	583	A	C2'-C1'	-5.24	1.45	1.53
35	BA	1483	A	O3'-P	5.24	1.69	1.61
44	BJ	117	LEU	C-O	-5.24	1.17	1.24
2	AB	1072	C	C5'-C4'	5.24	1.59	1.51
2	AB	1092	C	P-O5'	5.24	1.67	1.59
2	AB	2032	G	C2'-O2'	-5.24	1.33	1.41
35	BA	905	U	P-O5'	5.24	1.67	1.59
57	BW	59	ARG	CD-NE	5.24	1.53	1.46
2	AB	79	C	C2'-C1'	5.24	1.61	1.53
2	AB	1025	G	C4'-C3'	5.24	1.61	1.53
2	AB	1044	C	C1'-N1	5.24	1.56	1.48
2	AB	673	C	P-O5'	5.24	1.67	1.59
2	AB	892	A	C4'-O4'	-5.24	1.37	1.45
2	AB	1399	C	P-O5'	5.24	1.67	1.59
8	AH	113	ASP	CA-C	5.24	1.59	1.53
9	AI	50	ARG	CA-C	5.24	1.59	1.52
35	BA	351	G	P-O5'	5.24	1.67	1.59
45	BK	12	ARG	N-CA	-5.24	1.40	1.46
56	BV	25	GLY	CA-C	5.24	1.59	1.51
2	AB	612	G	O3'-P	5.23	1.69	1.61
2	AB	752	A	O5'-C5'	-5.23	1.35	1.42
2	AB	1293	C	C4'-O4'	-5.23	1.37	1.45
2	AB	2100	G	C3'-O3'	5.23	1.50	1.42
2	AB	2754	U	C4'-O4'	-5.23	1.37	1.45
22	AV	60	THR	C-N	5.23	1.40	1.33
35	BA	1171	A	C2'-C1'	-5.23	1.45	1.53
43	BI	58	HIS	CE1-NE2	5.23	1.37	1.32
21	AU	7	HIS	N-CA	5.23	1.52	1.46
40	BF	111	ASP	CA-CB	5.23	1.61	1.53
2	AB	905	A	O3'-P	5.23	1.69	1.61
15	AO	81	ARG	CA-CB	5.23	1.61	1.53
2	AB	2250	G	C5'-C4'	5.23	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A2	21	VAL	C-N	5.23	1.41	1.33
35	BA	857	C	C5'-C4'	5.23	1.59	1.51
2	AB	1421	G	C5'-C4'	5.23	1.59	1.51
6	AF	52	VAL	CA-C	5.23	1.58	1.52
35	BA	871	U	C2-N3	5.23	1.48	1.37
2	AB	1785	A	C2'-C1'	-5.22	1.45	1.53
2	AB	1929	G	C5'-C4'	5.22	1.59	1.51
2	AB	2232	C	C5'-C4'	5.22	1.59	1.51
22	AV	11	LEU	C-O	-5.22	1.17	1.23
2	AB	236	C	O4'-C1'	5.22	1.49	1.41
2	AB	277	G	C4'-O4'	-5.22	1.37	1.45
2	AB	923	G	C4'-O4'	-5.22	1.37	1.45
2	AB	1454	C	C4'-O4'	-5.22	1.37	1.45
2	AB	1674	G	C5'-C4'	5.22	1.59	1.51
2	AB	2157	G	P-O5'	5.22	1.67	1.59
38	BD	50	G	C2'-O2'	5.22	1.50	1.42
41	BG	97	LEU	CA-C	5.22	1.59	1.52
43	BI	56	LYS	C-O	-5.22	1.17	1.23
12	AL	44	TYR	N-CA	5.22	1.52	1.46
35	BA	937	A	O3'-P	-5.22	1.53	1.61
2	AB	2408	U	P-O5'	5.22	1.67	1.59
35	BA	241	G	O4'-C1'	5.22	1.49	1.41
35	BA	347	G	O3'-P	5.22	1.69	1.61
35	BA	1511	G	C2'-C1'	5.22	1.61	1.53
39	BE	230	SER	CA-C	5.22	1.59	1.52
42	BH	62	ALA	CA-CB	-5.22	1.45	1.53
4	AD	119	VAL	CA-CB	5.22	1.60	1.54
35	BA	503	C	C4'-O4'	-5.22	1.37	1.45
2	AB	648	G	C3'-O3'	5.22	1.50	1.42
2	AB	890	C	C3'-C2'	5.22	1.60	1.52
2	AB	246	C	C5'-C4'	5.21	1.59	1.51
2	AB	531	C	C4'-O4'	-5.21	1.38	1.45
2	AB	649	G	C4'-O4'	-5.21	1.37	1.45
2	AB	2287	A	O5'-C5'	-5.21	1.35	1.42
2	AB	1354	A	C2'-C1'	5.21	1.61	1.53
19	AS	54	ARG	N-CA	-5.21	1.40	1.46
1	AA	63	C	P-O5'	5.21	1.67	1.59
2	AB	872	U	C2-N3	5.21	1.48	1.37
35	BA	38	G	O5'-C5'	-5.21	1.34	1.42
35	BA	300	A	C5'-C4'	5.21	1.59	1.51
35	BA	1363	A	P-O5'	5.21	1.67	1.59
2	AB	122	G	C5'-C4'	5.21	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	2083	G	C5'-C4'	5.21	1.59	1.51
2	AB	2767	C	C4'-O4'	-5.21	1.37	1.45
35	BA	216	U	C4'-O4'	-5.21	1.37	1.45
1	AA	83	G	O3'-P	5.21	1.69	1.61
2	AB	305	C	P-O5'	5.21	1.67	1.59
2	AB	1426	G	C2'-O2'	-5.21	1.34	1.42
19	AS	50	ARG	N-CA	-5.21	1.39	1.46
35	BA	382	A	C4'-O4'	-5.21	1.37	1.45
35	BA	815	A	P-O5'	5.21	1.67	1.59
43	BI	101	PRO	N-CD	-5.21	1.40	1.47
46	BL	2	GLU	CA-C	5.21	1.58	1.52
2	AB	1609	A	P-O5'	5.21	1.67	1.59
2	AB	2466	C	O3'-P	5.21	1.69	1.61
5	AE	113	SER	CA-C	5.21	1.59	1.52
35	BA	1408	A	C2'-C1'	-5.21	1.45	1.53
2	AB	802	A	C4'-O4'	-5.21	1.37	1.45
35	BA	1129	C	C3'-C2'	-5.21	1.45	1.52
50	BP	96	VAL	CA-C	5.21	1.60	1.52
2	AB	2338	C	C5'-C4'	5.20	1.59	1.51
3	AC	137	MET	N-CA	5.20	1.52	1.45
41	BG	132	ALA	C-O	-5.20	1.17	1.24
2	AB	216	A	P-O5'	5.20	1.67	1.59
2	AB	444	C	O3'-P	5.20	1.69	1.61
2	AB	956	G	O3'-P	5.20	1.69	1.61
35	BA	686	U	O3'-P	5.20	1.69	1.61
35	BA	1066	C	C1'-N1	5.20	1.56	1.48
57	BW	26	MET	C-O	-5.20	1.18	1.24
2	AB	960	A	C3'-O3'	5.20	1.50	1.42
2	AB	721	A	C1'-N9	5.20	1.55	1.48
2	AB	1111	A	C2'-O2'	-5.20	1.33	1.41
20	AT	81	LYS	N-CA	-5.20	1.38	1.45
35	BA	1311	A	C4'-C3'	5.20	1.60	1.52
40	BF	96	VAL	CA-C	5.20	1.57	1.52
2	AB	1034	G	C1'-N9	-5.20	1.40	1.48
35	BA	708	C	C5'-C4'	5.20	1.59	1.51
2	AB	1051	G	O5'-C5'	-5.20	1.34	1.42
2	AB	2154	A	C5'-C4'	5.20	1.59	1.51
2	AB	2378	A	C4'-O4'	-5.20	1.37	1.45
6	AF	116	ASP	CA-CB	5.20	1.61	1.53
26	AZ	35	HIS	ND1-CE1	5.20	1.37	1.32
35	BA	494	G	O4'-C1'	5.20	1.49	1.41
35	BA	711	G	O3'-P	5.20	1.69	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
39	BE	104	LYS	CA-C	5.20	1.60	1.52
20	AT	84	ARG	CD-NE	5.19	1.53	1.46
58	BX	64	ALA	N-CA	5.19	1.52	1.46
5	AE	53	GLY	N-CA	5.19	1.50	1.45
35	BA	488	C	C2'-O2'	-5.19	1.34	1.42
35	BA	1477	U	C4'-O4'	-5.19	1.37	1.45
38	BD	46	G	N3-C4	5.19	1.45	1.35
4	AD	124	LYS	CA-C	5.19	1.59	1.52
31	A4	40	PRO	CA-C	5.19	1.60	1.52
2	AB	2788	C	C4'-O4'	-5.19	1.37	1.45
35	BA	53	A	C5'-C4'	5.19	1.59	1.51
2	AB	1682	G	C5'-C4'	5.19	1.59	1.51
52	BR	69	LEU	CA-C	-5.19	1.46	1.52
2	AB	429	A	C5'-C4'	5.19	1.59	1.51
35	BA	1289	A	P-O5'	5.19	1.67	1.59
41	BG	81	LEU	CB-CG	5.19	1.63	1.53
44	BJ	70	PRO	C-O	-5.19	1.18	1.23
2	AB	627	A	C3'-O3'	-5.18	1.35	1.43
2	AB	1916	A	C4'-C3'	5.18	1.60	1.52
40	BF	5	HIS	CA-C	5.18	1.58	1.52
40	BF	208	GLY	N-CA	5.18	1.51	1.45
2	AB	1033	U	C2'-O2'	5.18	1.49	1.41
24	AX	47	VAL	CA-C	5.18	1.59	1.53
27	A0	13	GLU	C-N	5.18	1.41	1.34
27	A0	47	ARG	CA-C	5.18	1.59	1.52
29	A2	7	PRO	N-CA	-5.18	1.40	1.47
39	BE	96	LEU	N-CA	5.18	1.52	1.46
48	BN	112	VAL	CA-CB	5.18	1.60	1.54
35	BA	341	C	C4'-O4'	-5.18	1.37	1.45
2	AB	1030	C	C5'-C4'	5.18	1.59	1.51
2	AB	1324	G	P-O5'	5.18	1.67	1.59
2	AB	2011	U	C4'-O4'	-5.18	1.37	1.45
22	AV	79	ASP	C-N	5.18	1.40	1.33
26	AZ	49	ARG	N-CA	-5.18	1.40	1.46
35	BA	649	A	O3'-P	5.18	1.69	1.61
2	AB	43	G	P-O5'	-5.18	1.51	1.59
2	AB	215	G	C2'-O2'	-5.18	1.33	1.41
2	AB	1223	G	O3'-P	5.18	1.69	1.61
35	BA	337	G	O3'-P	-5.18	1.53	1.61
2	AB	1234	U	N1-C2	5.18	1.49	1.38
2	AB	1474	U	C3'-O3'	5.18	1.50	1.42
2	AB	2142	A	C1'-N9	5.18	1.55	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	AG	107	VAL	CA-C	5.18	1.58	1.52
35	BA	446	G	O3'-P	5.18	1.69	1.61
35	BA	467	U	O4'-C1'	5.18	1.49	1.42
43	BI	100	SER	CA-CB	-5.18	1.43	1.53
45	BK	116	ARG	CA-C	5.18	1.59	1.52
2	AB	978	G	C4'-O4'	-5.17	1.37	1.45
5	AE	111	GLY	C-O	5.17	1.28	1.23
18	AR	48	ALA	CA-C	5.17	1.58	1.52
35	BA	340	U	O3'-P	5.17	1.69	1.61
48	BN	121	ARG	CZ-NH2	-5.17	1.26	1.33
49	BO	57	THR	CB-OG1	-5.17	1.35	1.43
2	AB	101	A	C4'-O4'	-5.17	1.38	1.45
2	AB	1913	A	O4'-C1'	5.17	1.49	1.42
35	BA	1062	U	C5'-C4'	5.17	1.59	1.51
46	BL	114	LYS	N-CA	5.17	1.52	1.45
2	AB	1507	C	C5'-C4'	5.17	1.59	1.51
2	AB	1862	G	C4'-O4'	-5.17	1.37	1.45
21	AU	43	ALA	CA-C	-5.17	1.45	1.52
35	BA	130	A	P-O5'	5.17	1.67	1.59
35	BA	1014	A	O4'-C1'	5.17	1.49	1.41
35	BA	1117	A	C5'-C4'	5.17	1.59	1.51
2	AB	826	U	P-O5'	5.17	1.67	1.59
2	AB	1176	U	C2'-O2'	-5.17	1.34	1.42
2	AB	1981	A	C5'-C4'	5.17	1.59	1.51
2	AB	2760	C	C5'-C4'	5.17	1.59	1.51
29	A2	66	ILE	CA-C	5.17	1.58	1.52
35	BA	946	A	C4'-O4'	-5.17	1.37	1.45
2	AB	2210	U	C1'-N1	5.17	1.55	1.47
2	AB	2689	U	O5'-C5'	5.17	1.50	1.42
35	BA	337	G	C4'-O4'	-5.17	1.37	1.45
38	BD	50	G	P-O5'	5.17	1.67	1.59
2	AB	1795	C	C2'-O2'	5.17	1.50	1.42
35	BA	658	C	P-O5'	5.17	1.67	1.59
6	AF	134	LEU	CA-C	5.16	1.59	1.52
39	BE	42	LEU	C-N	5.16	1.41	1.33
2	AB	1992	G	C3'-C2'	5.16	1.60	1.52
2	AB	25	U	C5'-C4'	5.16	1.58	1.51
2	AB	82	U	C4'-O4'	-5.16	1.37	1.45
2	AB	2384	U	C2'-O2'	5.16	1.49	1.41
15	AO	46	ILE	CA-C	5.16	1.59	1.52
29	A2	17	SER	N-CA	5.16	1.53	1.46
35	BA	107	G	C4'-O4'	-5.16	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	1238	A	C4'-O4'	-5.16	1.37	1.45
41	BG	197	HIS	ND1-CE1	5.16	1.37	1.32
43	BI	85	ILE	CA-CB	-5.16	1.47	1.54
2	AB	170	U	C4'-O4'	-5.16	1.37	1.45
8	AH	84	LYS	CA-C	5.16	1.59	1.52
9	AI	21	VAL	C-N	5.16	1.40	1.33
35	BA	170	U	C5'-C4'	5.16	1.58	1.51
35	BA	171	A	O3'-P	-5.16	1.53	1.61
35	BA	232	G	C4'-O4'	-5.16	1.37	1.45
35	BA	531	U	C2-N3	5.16	1.48	1.37
44	BJ	83	THR	CA-C	5.16	1.59	1.53
2	AB	2141	G	O5'-C5'	5.16	1.50	1.42
2	AB	689	A	C4'-O4'	-5.16	1.37	1.45
35	BA	27	G	C4'-O4'	-5.16	1.37	1.45
35	BA	639	G	O3'-P	5.16	1.68	1.61
36	BB	12	U	O3'-P	5.16	1.68	1.61
36	BB	21	A	O5'-C5'	5.16	1.50	1.42
35	BA	622	A	C4'-C3'	5.15	1.60	1.52
38	BD	70	C	P-O5'	5.15	1.67	1.59
56	BV	19	GLU	CA-CB	5.15	1.61	1.53
1	AA	54	G	P-O5'	5.15	1.67	1.59
2	AB	2383	G	C5'-C4'	5.15	1.58	1.51
2	AB	2384	U	P-O5'	5.15	1.67	1.59
35	BA	912	C	C4'-O4'	-5.15	1.37	1.45
35	BA	938	A	P-O5'	5.15	1.67	1.59
36	BB	18	G	C4'-O4'	-5.15	1.38	1.45
2	AB	71	A	O5'-C5'	-5.15	1.35	1.42
2	AB	356	G	C3'-O3'	5.15	1.49	1.42
2	AB	1199	U	P-O5'	5.15	1.67	1.59
2	AB	1937	A	C3'-O3'	-5.15	1.35	1.43
2	AB	2376	A	O4'-C1'	5.15	1.49	1.41
5	AE	182	ALA	CA-CB	5.15	1.61	1.53
9	AI	3	VAL	N-CA	5.15	1.52	1.46
35	BA	191	G	C3'-C2'	5.15	1.60	1.52
35	BA	1510	C	C1'-N1	5.15	1.56	1.48
48	BN	24	ALA	N-CA	5.15	1.52	1.46
2	AB	108	G	P-O5'	5.15	1.67	1.59
3	AC	74	ARG	NE-CZ	5.15	1.38	1.33
2	AB	102	U	C1'-N1	5.15	1.55	1.47
2	AB	2718	G	O4'-C1'	-5.15	1.33	1.41
23	AW	80	ASP	CA-C	5.15	1.59	1.52
40	BF	160	GLU	N-CA	5.15	1.52	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AE	147	GLY	N-CA	5.15	1.49	1.44
35	BA	1187	G	O4'-C1'	5.15	1.49	1.41
41	BG	106	PHE	CA-CB	5.15	1.61	1.53
2	AB	459	U	C4'-O4'	-5.14	1.37	1.45
2	AB	1765	U	C5'-C4'	5.14	1.58	1.51
18	AR	102	ARG	CA-CB	5.14	1.60	1.53
2	AB	1371	G	O5'-C5'	5.14	1.50	1.42
10	AJ	116	LEU	CA-C	-5.14	1.46	1.52
35	BA	155	A	C4'-C3'	5.14	1.60	1.52
6	AF	67	ARG	C-O	-5.14	1.17	1.23
7	AG	112	ASP	C-O	-5.14	1.18	1.23
20	AT	47	VAL	CA-C	5.14	1.59	1.52
33	A6	38	LYS	C-N	5.14	1.40	1.33
2	AB	1059	G	C5'-C4'	5.14	1.58	1.51
35	BA	614	C	O4'-C1'	5.14	1.49	1.41
35	BA	1267	C	C4'-O4'	-5.14	1.38	1.45
2	AB	2255	G	C5'-C4'	5.14	1.58	1.51
35	BA	563	A	C5'-C4'	5.14	1.58	1.51
2	AB	380	G	C5'-C4'	5.14	1.58	1.51
2	AB	1790	C	O3'-P	5.14	1.68	1.61
2	AB	1985	C	C3'-O3'	5.14	1.49	1.42
5	AE	22	ILE	N-CA	-5.14	1.42	1.46
7	AG	54	ALA	CA-C	5.14	1.59	1.52
9	AI	128	HIS	ND1-CE1	5.14	1.37	1.32
32	A5	39	ARG	CZ-NH1	5.14	1.40	1.32
35	BA	217	C	C4'-O4'	-5.14	1.37	1.45
35	BA	460	A	O3'-P	5.14	1.68	1.61
35	BA	1512	U	O3'-P	5.14	1.68	1.61
36	BB	61	C	C2'-C1'	5.14	1.61	1.53
38	BD	6	G	P-O5'	5.14	1.67	1.59
54	BT	21	VAL	N-CA	5.14	1.52	1.46
2	AB	824	U	O4'-C1'	5.13	1.49	1.41
2	AB	908	C	P-O5'	5.13	1.67	1.59
10	AJ	33	THR	CA-C	5.13	1.59	1.52
29	A2	49	ARG	CD-NE	5.13	1.53	1.46
35	BA	566	G	C2-N3	5.13	1.43	1.32
2	AB	1921	G	O3'-P	5.13	1.68	1.61
35	BA	254	G	C1'-N9	5.13	1.55	1.48
35	BA	585	G	O3'-P	5.13	1.68	1.61
42	BH	149	PRO	CA-C	5.13	1.59	1.52
2	AB	365	U	C3'-C2'	5.13	1.60	1.52
35	BA	552	U	C4'-O4'	-5.13	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	165	A	C1'-N9	5.13	1.55	1.48
2	AB	357	C	C4'-O4'	-5.13	1.37	1.45
11	AK	109	ALA	N-CA	-5.13	1.40	1.46
15	AO	104	GLU	CA-C	5.13	1.58	1.52
41	BG	85	THR	C-N	5.13	1.40	1.33
35	BA	678	U	C4'-O4'	-5.13	1.37	1.45
27	A0	29	ARG	CA-CB	5.12	1.61	1.53
35	BA	9	G	P-O5'	5.12	1.67	1.59
43	BI	35	LYS	N-CA	5.12	1.52	1.45
2	AB	392	U	O3'-P	5.12	1.68	1.61
2	AB	2802	G	O3'-P	5.12	1.68	1.61
19	AS	75	TYR	CA-C	5.12	1.59	1.52
35	BA	229	U	C4'-O4'	-5.12	1.37	1.45
35	BA	348	G	C2'-C1'	5.12	1.61	1.53
38	BD	66	C	C4-C5	5.12	1.53	1.43
54	BT	81	ALA	C-O	5.12	1.30	1.24
2	AB	11	C	C4'-O4'	-5.12	1.37	1.45
2	AB	1097	U	C2'-C1'	-5.12	1.45	1.53
11	AK	47	SER	N-CA	-5.12	1.39	1.46
6	AF	48	THR	CB-OG1	-5.12	1.35	1.43
12	AL	48	VAL	CA-C	5.12	1.58	1.52
20	AT	10	LYS	CA-C	5.12	1.58	1.52
35	BA	1125	U	C3'-C2'	5.12	1.60	1.52
1	AA	104	A	P-O5'	5.12	1.67	1.59
2	AB	1129	A	P-O5'	-5.12	1.52	1.59
2	AB	1926	U	C3'-O3'	5.12	1.49	1.42
30	A3	9	ARG	NE-CZ	5.12	1.38	1.33
46	BL	122	ARG	C-O	-5.12	1.17	1.24
1	AA	20	G	C4'-O4'	-5.12	1.37	1.45
1	AA	48	U	P-O5'	5.12	1.67	1.59
1	AA	94	A	O3'-P	5.12	1.68	1.61
2	AB	58	G	P-O5'	5.12	1.67	1.59
2	AB	752	A	O3'-P	5.12	1.68	1.61
2	AB	1118	C	P-O5'	5.12	1.67	1.59
15	AO	16	ARG	N-CA	5.12	1.52	1.45
29	A2	51	VAL	CA-C	-5.12	1.46	1.52
2	AB	1885	A	C4'-O4'	-5.12	1.37	1.45
19	AS	69	ARG	CZ-NH1	5.12	1.40	1.32
35	BA	472	U	C4'-O4'	-5.12	1.37	1.45
35	BA	958	A	C3'-C2'	5.12	1.60	1.52
35	BA	1113	C	C3'-C2'	5.12	1.60	1.52
38	BD	63	C	C1'-N1	5.12	1.56	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	551	G	C5'-C4'	5.11	1.58	1.51
2	AB	585	G	C4'-O4'	-5.11	1.37	1.45
2	AB	737	C	P-O5'	5.11	1.67	1.59
2	AB	2047	C	C5'-C4'	5.11	1.58	1.51
35	BA	1132	C	P-O5'	5.11	1.67	1.59
41	BG	162	GLU	CA-CB	5.11	1.61	1.53
17	AQ	72	ALA	C-O	-5.11	1.18	1.24
37	BC	33	A	C5'-C4'	5.11	1.58	1.51
44	BJ	146	ALA	CA-C	5.11	1.59	1.52
2	AB	1363	C	C4'-O4'	-5.11	1.37	1.45
2	AB	1475	G	C4'-O4'	-5.11	1.38	1.45
4	AD	200	MET	CA-C	5.11	1.59	1.52
5	AE	130	GLN	N-CA	5.11	1.52	1.46
35	BA	1000	A	P-O5'	5.11	1.67	1.59
2	AB	471	A	C3'-O3'	5.11	1.49	1.42
35	BA	1118	U	P-O5'	5.11	1.67	1.59
57	BW	61	ALA	C-N	5.11	1.40	1.33
2	AB	216	A	C2'-O2'	5.11	1.50	1.42
2	AB	1468	U	C1'-N1	5.11	1.56	1.48
20	AT	25	LEU	N-CA	-5.11	1.40	1.45
51	BQ	64	ARG	CA-C	5.11	1.59	1.52
56	BV	16	LYS	CA-C	5.11	1.59	1.52
3	AC	173	THR	CA-C	5.11	1.58	1.52
35	BA	1451	U	N3-C4	5.11	1.48	1.38
2	AB	177	G	C2'-O2'	5.10	1.49	1.41
14	AN	55	MET	C-O	5.10	1.30	1.23
50	BP	61	LYS	CA-CB	5.10	1.61	1.53
2	AB	2432	A	C2'-O2'	-5.10	1.34	1.42
3	AC	155	ASN	CA-CB	5.10	1.61	1.53
3	AC	175	ILE	CA-CB	-5.10	1.48	1.54
21	AU	21	ALA	CA-CB	-5.10	1.45	1.53
35	BA	91	U	O3'-P	5.10	1.68	1.61
35	BA	694	A	C4'-O4'	-5.10	1.37	1.45
39	BE	40	ILE	CA-CB	5.10	1.60	1.54
52	BR	51	SER	CA-C	5.10	1.59	1.52
2	AB	726	G	O3'-P	5.10	1.68	1.61
2	AB	1096	A	O3'-P	5.10	1.68	1.61
8	AH	162	ARG	C-N	5.10	1.40	1.33
32	A5	44	VAL	C-O	5.10	1.30	1.24
33	A6	23	HIS	CA-C	5.10	1.58	1.52
2	AB	759	G	C4'-O4'	-5.10	1.37	1.45
2	AB	1707	G	O5'-C5'	-5.10	1.34	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	1715	G	C4'-O4'	-5.10	1.38	1.45
2	AB	2050	C	O3'-P	5.10	1.68	1.61
4	AD	202	ARG	CD-NE	5.10	1.53	1.46
35	BA	797	C	C4'-O4'	-5.10	1.38	1.45
35	BA	1458	G	O3'-P	5.10	1.68	1.61
2	AB	281	C	C3'-C2'	-5.10	1.45	1.52
2	AB	2073	C	O3'-P	5.10	1.68	1.61
2	AB	2140	G	C5'-C4'	5.10	1.58	1.51
8	AH	95	ALA	CA-C	5.10	1.59	1.53
12	AL	118	MET	CA-C	5.10	1.59	1.52
34	A7	8	LYS	N-CA	5.10	1.52	1.45
35	BA	1272	G	C3'-O3'	-5.10	1.34	1.42
2	AB	250	G	P-O5'	5.10	1.67	1.59
3	AC	48	LEU	CA-C	5.10	1.58	1.52
35	BA	320	A	O3'-P	5.10	1.68	1.61
37	BC	31	U	C5'-C4'	5.10	1.58	1.51
2	AB	1821	A	C5'-C4'	5.09	1.58	1.51
14	AN	11	GLY	N-CA	5.09	1.52	1.45
25	AY	21	GLY	CA-C	-5.09	1.46	1.51
35	BA	968	A	O5'-C5'	-5.09	1.35	1.42
35	BA	1025	U	P-O5'	5.09	1.67	1.59
19	AS	86	SER	CA-C	5.09	1.59	1.52
35	BA	1324	A	O3'-P	-5.09	1.53	1.61
2	AB	249	C	P-O5'	5.09	1.67	1.59
6	AF	126	VAL	N-CA	5.09	1.51	1.46
35	BA	364	A	O4'-C1'	5.09	1.49	1.41
35	BA	1157	A	O4'-C1'	5.09	1.49	1.42
35	BA	1264	U	O3'-P	5.09	1.68	1.61
42	BH	47	PHE	CA-CB	-5.09	1.45	1.53
50	BP	33	LEU	C-N	5.09	1.40	1.33
35	BA	1317	C	C1'-N1	5.09	1.55	1.47
3	AC	89	ALA	N-CA	-5.09	1.39	1.46
1	AA	22	U	C3'-C2'	5.09	1.60	1.52
27	A0	45	GLN	CA-CB	5.09	1.61	1.53
35	BA	651	C	C4'-O4'	-5.09	1.38	1.45
35	BA	1488	G	C4'-O4'	-5.09	1.38	1.45
54	BT	51	GLU	CA-C	-5.09	1.46	1.52
35	BA	229	U	P-O5'	5.08	1.67	1.59
35	BA	731	G	C3'-C2'	5.08	1.60	1.52
42	BH	116	VAL	CA-CB	5.08	1.60	1.54
2	AB	377	G	O3'-P	5.08	1.68	1.61
2	AB	1701	A	C4'-O4'	-5.08	1.38	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	1822	C	C4'-O4'	-5.08	1.38	1.45
2	AB	2321	U	C5'-C4'	5.08	1.58	1.51
14	AN	59	ARG	N-CA	5.08	1.53	1.46
38	BD	36	A	C3'-C2'	5.08	1.60	1.52
38	BD	65	G	C5'-C4'	5.08	1.58	1.51
41	BG	39	GLN	C-N	5.08	1.39	1.33
47	BM	43	PRO	C-O	-5.08	1.17	1.23
2	AB	147	C	P-O5'	5.08	1.67	1.59
2	AB	824	U	C3'-O3'	5.08	1.49	1.42
2	AB	1004	U	C4'-O4'	-5.08	1.38	1.45
2	AB	1250	G	C1'-N9	5.08	1.54	1.47
2	AB	1563	U	C3'-O3'	5.08	1.49	1.42
4	AD	149	LYS	CA-C	5.08	1.59	1.52
4	AD	212	TRP	CD2-CE2	5.08	1.50	1.41
12	AL	99	ARG	CD-NE	5.08	1.53	1.46
27	A0	41	HIS	CG-CD2	5.08	1.41	1.35
35	BA	863	U	O4'-C1'	5.08	1.49	1.41
35	BA	886	G	C4'-O4'	-5.08	1.38	1.45
48	BN	36	ARG	CZ-NH1	5.08	1.39	1.32
2	AB	151	C	O3'-P	5.08	1.68	1.61
2	AB	401	A	C5'-C4'	5.08	1.58	1.51
2	AB	1486	U	C3'-C2'	5.08	1.60	1.52
35	BA	1252	A	O5'-C5'	5.08	1.50	1.42
2	AB	151	C	C2'-O2'	5.08	1.50	1.42
2	AB	663	G	P-O5'	5.08	1.67	1.59
2	AB	1650	A	O5'-C5'	5.08	1.50	1.42
2	AB	2350	C	C1'-N1	5.08	1.56	1.48
6	AF	120	VAL	CA-C	5.08	1.59	1.52
35	BA	51	A	C5'-C4'	5.08	1.58	1.51
35	BA	205	A	C4'-O4'	-5.08	1.38	1.45
44	BJ	19	SER	CA-C	5.08	1.58	1.52
2	AB	1307	A	O3'-P	5.07	1.68	1.61
4	AD	141	HIS	CA-C	5.07	1.58	1.52
6	AF	29	HIS	CG-CD2	5.07	1.41	1.35
10	AJ	154	LEU	CA-C	5.07	1.59	1.52
25	AY	54	ARG	CA-CB	5.07	1.61	1.53
26	AZ	59	ASP	CA-C	5.07	1.59	1.52
35	BA	647	C	C5'-C4'	-5.07	1.43	1.51
35	BA	1024	G	C5'-C4'	5.07	1.58	1.51
35	BA	1054	C	O4'-C1'	-5.07	1.34	1.42
2	AB	115	C	C1'-N1	5.07	1.56	1.48
2	AB	2315	G	C3'-C2'	-5.07	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AD	118	GLY	N-CA	-5.07	1.39	1.45
35	BA	727	G	O3'-P	-5.07	1.53	1.61
36	BB	68	C	O3'-P	-5.07	1.53	1.61
2	AB	87	U	C3'-O3'	5.07	1.49	1.42
2	AB	2094	A	C1'-N9	5.07	1.54	1.47
2	AB	2470	G	C5'-C4'	5.07	1.58	1.51
2	AB	2601	C	P-O5'	5.07	1.67	1.59
48	BN	65	ALA	CA-C	5.07	1.59	1.52
56	BV	79	TYR	N-CA	5.07	1.52	1.46
2	AB	2271	G	C3'-C2'	-5.07	1.45	1.52
35	BA	328	C	C4-C5	5.07	1.53	1.43
35	BA	710	G	P-O5'	5.07	1.67	1.59
2	AB	782	A	P-O5'	5.07	1.67	1.59
9	AI	21	VAL	C-O	-5.07	1.18	1.23
2	AB	550	C	O3'-P	5.07	1.68	1.61
5	AE	75	ALA	CA-C	5.07	1.59	1.53
2	AB	2173	A	P-O5'	5.06	1.67	1.59
8	AH	9	VAL	N-CA	5.06	1.52	1.46
35	BA	1082	A	O3'-P	5.06	1.68	1.61
40	BF	121	SER	CA-C	5.06	1.59	1.52
3	AC	203	GLN	N-CA	5.06	1.52	1.46
10	AJ	143	LYS	CA-C	5.06	1.59	1.52
20	AT	47	VAL	C-O	-5.06	1.17	1.24
35	BA	200	G	C4'-O4'	-5.06	1.38	1.45
35	BA	1037	C	O5'-C5'	-5.06	1.34	1.42
35	BA	1326	U	C1'-N1	5.06	1.56	1.48
37	BC	23	C	C4'-O4'	-5.06	1.38	1.45
41	BG	81	LEU	CA-CB	-5.06	1.44	1.53
2	AB	92	U	C5'-C4'	5.06	1.58	1.51
2	AB	107	G	O3'-P	-5.06	1.53	1.61
2	AB	556	A	O4'-C1'	5.06	1.49	1.41
5	AE	106	LYS	CA-C	5.06	1.58	1.52
35	BA	574	A	C2'-O2'	5.06	1.50	1.42
35	BA	778	G	C3'-C2'	5.06	1.60	1.52
35	BA	1416	G	C3'-O3'	5.06	1.49	1.42
35	BA	1420	U	O4'-C1'	5.06	1.49	1.41
2	AB	881	G	C3'-O3'	-5.06	1.34	1.42
2	AB	1042	G	P-O5'	5.06	1.67	1.59
8	AH	79	THR	CA-C	5.06	1.58	1.53
44	BJ	160	SER	CA-C	5.06	1.59	1.52
47	BM	56	HIS	CE1-NE2	5.06	1.37	1.32
52	BR	45	HIS	CA-CB	5.06	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	1182	G	O3'-P	5.06	1.68	1.61
2	AB	2515	C	C3'-C2'	5.06	1.60	1.52
35	BA	871	U	C4'-O4'	-5.06	1.38	1.45
2	AB	169	G	C1'-N9	5.05	1.55	1.48
2	AB	2500	U	C4'-C3'	5.05	1.60	1.52
28	A1	15	ARG	C-N	5.05	1.41	1.33
42	BH	161	GLU	N-CA	-5.05	1.39	1.46
7	AG	134	GLN	CA-C	5.05	1.59	1.52
1	AA	42	C	C4'-O4'	-5.05	1.38	1.45
35	BA	1228	C	C4'-O4'	-5.05	1.38	1.45
2	AB	1369	G	C2'-O2'	-5.05	1.34	1.42
5	AE	66	GLY	CA-C	5.05	1.58	1.51
15	AO	34	LYS	C-O	-5.05	1.18	1.23
34	A7	37	GLN	CA-C	5.05	1.58	1.52
2	AB	994	C	C2'-C1'	5.05	1.60	1.53
35	BA	85	U	O4'-C1'	5.05	1.49	1.42
47	BM	51	VAL	CA-C	5.05	1.58	1.52
2	AB	1674	G	O3'-P	-5.05	1.53	1.61
2	AB	2377	A	P-O5'	5.05	1.67	1.59
2	AB	2752	C	C3'-O3'	5.05	1.49	1.42
26	AZ	21	LEU	CA-C	5.05	1.60	1.52
33	A6	44	ARG	CZ-NH1	5.05	1.39	1.32
1	AA	60	C	C5'-C4'	5.04	1.58	1.51
2	AB	2861	U	C4'-C3'	5.04	1.60	1.52
12	AL	37	ARG	NE-CZ	5.04	1.38	1.33
2	AB	96	C	C5'-C4'	5.04	1.58	1.51
2	AB	145	C	P-O5'	5.04	1.67	1.59
2	AB	585	G	C5'-C4'	5.04	1.58	1.51
2	AB	2056	G	O3'-P	5.04	1.68	1.61
2	AB	2723	C	C4'-C3'	5.04	1.60	1.52
2	AB	2863	C	C3'-C2'	5.04	1.60	1.52
12	AL	99	ARG	CZ-NH1	5.04	1.39	1.32
35	BA	299	G	C5'-C4'	5.04	1.58	1.51
35	BA	689	C	C4'-C3'	5.04	1.60	1.52
35	BA	1126	U	C1'-N1	5.04	1.55	1.47
4	AD	29	PHE	CA-CB	-5.04	1.46	1.53
31	A4	19	PHE	N-CA	-5.04	1.39	1.45
35	BA	839	C	P-O5'	5.04	1.67	1.59
35	BA	1515	G	P-O5'	5.04	1.67	1.59
2	AB	30	G	O5'-C5'	-5.04	1.34	1.42
2	AB	1440	U	C5'-C4'	5.04	1.58	1.51
35	BA	436	C	C5'-C4'	5.04	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	822	U	P-O5'	5.04	1.67	1.59
37	BC	14	G	C4'-C3'	5.04	1.60	1.53
2	AB	1039	A	C2'-O2'	-5.04	1.34	1.42
6	AF	117	ARG	CZ-NH1	5.04	1.39	1.32
6	AF	124	PHE	CG-CD2	5.04	1.49	1.38
35	BA	522	C	C1'-N1	5.04	1.56	1.48
51	BQ	74	ARG	CA-C	5.04	1.59	1.52
2	AB	425	G	O4'-C1'	5.04	1.49	1.41
2	AB	1016	G	C1'-N9	5.04	1.55	1.48
2	AB	2724	U	C4-C5	5.04	1.53	1.43
10	AJ	18	ALA	C-O	5.04	1.30	1.24
35	BA	1151	A	C2'-O2'	-5.04	1.34	1.41
41	BG	55	ARG	N-CA	5.04	1.52	1.46
45	BK	93	LYS	CA-C	5.04	1.58	1.52
50	BP	103	THR	CB-OG1	-5.04	1.35	1.43
2	AB	1404	C	N1-C2	-5.04	1.30	1.40
35	BA	1513	A	O5'-C5'	5.04	1.50	1.42
42	BH	53	ARG	CA-C	5.04	1.59	1.52
2	AB	1137	G	C4'-O4'	-5.03	1.38	1.45
2	AB	2797	U	C1'-N1	5.03	1.55	1.47
7	AG	167	ALA	CA-C	5.03	1.59	1.52
36	BB	28	C	O3'-P	5.03	1.68	1.61
44	BJ	90	VAL	N-CA	5.03	1.52	1.46
58	BX	40	PRO	N-CD	-5.03	1.40	1.47
2	AB	567	U	C3'-C2'	-5.03	1.45	1.52
35	BA	1508	A	O3'-P	5.03	1.68	1.61
41	BG	13	ARG	C-O	5.03	1.30	1.24
2	AB	1309	G	P-O5'	5.03	1.67	1.59
2	AB	1712	U	C5'-C4'	-5.03	1.43	1.51
2	AB	2451	A	O3'-P	-5.03	1.53	1.61
35	BA	136	C	C2'-C1'	5.03	1.60	1.53
35	BA	1505	G	O5'-C5'	-5.03	1.34	1.42
40	BF	68	HIS	CE1-NE2	5.03	1.37	1.32
4	AD	173	LEU	CB-CG	5.03	1.63	1.53
2	AB	1471	G	C5'-C4'	5.03	1.58	1.51
18	AR	107	ALA	N-CA	5.03	1.51	1.46
35	BA	93	U	C5'-C4'	5.03	1.58	1.51
35	BA	403	C	C5'-C4'	5.03	1.58	1.51
57	BW	12	GLN	CA-C	5.03	1.59	1.52
1	AA	81	G	O4'-C1'	5.03	1.49	1.41
2	AB	2425	A	C2'-O2'	5.03	1.49	1.41
2	AB	2504	PSU	O3'-P	5.03	1.68	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	318	G	P-O5'	5.03	1.67	1.59
38	BD	73	A	C1'-N9	5.03	1.55	1.48
53	BS	60	TRP	CA-CB	5.03	1.61	1.53
2	AB	224	U	C3'-O3'	5.02	1.49	1.42
2	AB	2717	C	O5'-C5'	-5.02	1.34	1.42
5	AE	125	TRP	NE1-CE2	5.02	1.43	1.37
14	AN	33	ARG	NE-CZ	5.02	1.38	1.33
1	AA	31	C	C4'-O4'	-5.02	1.38	1.45
2	AB	477	A	C4'-O4'	-5.02	1.38	1.45
2	AB	1766	G	P-O5'	5.02	1.67	1.59
33	A6	57	VAL	CA-CB	5.02	1.61	1.54
35	BA	180	U	C4'-O4'	-5.02	1.38	1.45
35	BA	760	G	C4'-C3'	5.02	1.60	1.52
2	AB	2508	G	O3'-P	5.02	1.68	1.61
2	AB	346	A	O5'-C5'	5.02	1.50	1.42
35	BA	197	A	P-O5'	5.02	1.67	1.59
35	BA	343	U	P-O5'	5.02	1.67	1.59
35	BA	1316	G	C4'-O4'	-5.02	1.38	1.45
2	AB	395	U	O3'-P	5.02	1.68	1.61
2	AB	1148	U	C5'-C4'	5.02	1.58	1.51
35	BA	499	A	C3'-O3'	-5.02	1.35	1.43
35	BA	1295	U	P-O5'	5.02	1.67	1.59
37	BC	46	C	C4'-O4'	-5.02	1.38	1.45
38	BD	7	G	C4'-O4'	-5.02	1.38	1.45
2	AB	1558	C	P-O5'	5.02	1.67	1.59
2	AB	661	A	C3'-O3'	5.01	1.49	1.42
2	AB	2347	C	C4'-O4'	-5.01	1.38	1.45
2	AB	43	G	C4'-O4'	-5.01	1.38	1.45
2	AB	2622	U	O4'-C1'	5.01	1.49	1.41
35	BA	1160	G	C4'-C3'	5.01	1.60	1.52
2	AB	1232	G	C3'-O3'	5.01	1.49	1.42
21	AU	103	ILE	CA-CB	5.01	1.60	1.54
35	BA	440	C	O5'-C5'	-5.01	1.34	1.42
46	BL	69	GLY	CA-C	5.01	1.59	1.52
35	BA	278	G	O5'-C5'	-5.01	1.34	1.42
48	BN	45	THR	CA-C	5.01	1.58	1.52
2	AB	496	G	O3'-P	5.01	1.68	1.61
12	AL	43	GLU	CA-C	5.01	1.59	1.52
35	BA	1342	C	C4'-O4'	-5.01	1.38	1.45
35	BA	1344	C	C2'-C1'	-5.01	1.45	1.53
41	BG	166	LYS	CA-C	5.01	1.56	1.52
2	AB	218	A	C3'-O3'	5.01	1.49	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	1809	A	C3'-C2'	5.01	1.60	1.52
2	AB	2325	G	O3'-P	5.01	1.68	1.61
11	AK	116	MET	CA-C	5.01	1.59	1.52
35	BA	563	A	C4'-O4'	-5.01	1.38	1.45
2	AB	1253	A	C2'-O2'	5.00	1.49	1.41
2	AB	2403	C	O5'-C5'	-5.00	1.34	1.42
2	AB	197	A	C1'-N9	5.00	1.55	1.48
2	AB	1994	C	C4'-C3'	5.00	1.60	1.52
10	AJ	87	HIS	CG-ND1	5.00	1.43	1.38
35	BA	1325	C	C1'-N1	5.00	1.55	1.48
46	BL	91	GLU	N-CA	5.00	1.52	1.46
2	AB	239	C	C4'-O4'	-5.00	1.38	1.45
2	AB	751	A	C4'-O4'	-5.00	1.38	1.45
2	AB	1083	U	C5'-C4'	5.00	1.58	1.51
2	AB	2237	G	C3'-O3'	5.00	1.49	1.42
7	AG	96	TRP	CA-C	5.00	1.59	1.52
22	AV	92	ASN	C-N	5.00	1.40	1.33
57	BW	53	MET	CA-C	5.00	1.59	1.52

All (8869) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	BL	69	GLY	CA-C-N	16.36	138.79	121.45
46	BL	69	GLY	C-N-CA	16.36	138.79	121.45
37	BC	52	U	O3'-P-O5'	-12.91	84.64	104.00
5	AE	204	LYS	CA-C-N	12.70	132.85	119.90
5	AE	204	LYS	C-N-CA	12.70	132.85	119.90
2	AB	2371	G	C4'-C3'-C2'	-12.66	89.94	102.60
36	BB	11	U	C4'-C3'-C2'	-12.63	89.97	102.60
43	BI	126	ALA	CA-C-N	12.57	137.53	122.19
43	BI	126	ALA	C-N-CA	12.57	137.53	122.19
35	BA	1233	G	C4'-C3'-C2'	-12.23	90.37	102.60
1	AA	66	A	C4'-C3'-O3'	12.14	131.20	113.00
2	AB	1990	C	C4'-C3'-C2'	-12.00	90.60	102.60
2	AB	1646	C	O4'-C4'-C3'	11.98	115.98	104.00
41	BG	24	VAL	N-CA-C	-11.76	102.38	111.90
2	AB	2113	U	C4'-C3'-C2'	-11.71	90.89	102.60
52	BR	62	ARG	CA-C-N	11.69	135.94	120.28
52	BR	62	ARG	C-N-CA	11.69	135.94	120.28
35	BA	1233	G	O4'-C4'-C3'	11.65	115.65	104.00
44	BJ	117	LEU	N-CA-C	11.65	124.06	111.36
30	A3	37	HIS	CA-CB-CG	11.62	125.42	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	506	G	O4'-C1'-C2'	-11.59	94.21	105.80
2	AB	543	G	O4'-C4'-C3'	11.53	115.53	104.00
2	AB	2095	A	C4'-C3'-C2'	11.38	113.98	102.60
35	BA	970	C	O4'-C1'-C2'	-11.17	94.63	105.80
1	AA	18	G	O4'-C4'-C3'	11.15	115.15	104.00
2	AB	1619	G	C5'-C4'-C3'	-11.10	99.34	116.00
35	BA	231	U	C4'-C3'-C2'	-11.09	91.51	102.60
7	AG	99	PHE	N-CA-C	11.07	126.73	112.34
35	BA	1316	G	C4'-C3'-C2'	-11.06	91.54	102.60
2	AB	2756	U	C2'-C3'-O3'	10.95	125.93	109.50
2	AB	1675	C	O4'-C1'-C2'	-10.94	96.66	107.60
2	AB	1076	C	C3'-C2'-C1'	10.92	112.22	101.30
7	AG	44	ALA	CA-C-N	10.91	135.78	120.29
7	AG	44	ALA	C-N-CA	10.91	135.78	120.29
35	BA	1051	C	C3'-C2'-C1'	10.86	112.16	101.30
37	BC	22	G	C2'-C3'-O3'	10.85	125.78	109.50
35	BA	1201	A	C2'-C3'-O3'	10.78	125.67	109.50
2	AB	307	G	O4'-C4'-C3'	10.75	114.75	104.00
20	AT	82	HIS	CA-CB-CG	10.71	124.51	113.80
3	AC	99	ASP	CA-CB-CG	-10.69	101.92	112.60
2	AB	2284	A	C4'-C3'-C2'	-10.65	91.95	102.60
2	AB	2763	G	C4'-C3'-C2'	-10.54	92.06	102.60
2	AB	1002	G	C4'-C3'-O3'	10.50	128.75	113.00
3	AC	55	SER	CA-C-N	10.50	134.72	120.54
3	AC	55	SER	C-N-CA	10.50	134.72	120.54
35	BA	222	C	O4'-C1'-N1	10.44	124.16	108.50
32	A5	16	HIS	CA-CB-CG	10.44	124.23	113.80
4	AD	225	ASN	CA-C-N	10.43	131.21	119.32
4	AD	225	ASN	C-N-CA	10.43	131.21	119.32
35	BA	1428	A	C4'-C3'-C2'	-10.33	92.27	102.60
7	AG	173	ASP	CA-CB-CG	-10.31	102.29	112.60
26	AZ	65	THR	CA-C-N	10.31	133.54	120.56
26	AZ	65	THR	C-N-CA	10.31	133.54	120.56
2	AB	2099	U	C4'-C3'-C2'	-10.30	92.30	102.60
2	AB	307	G	C4'-C3'-C2'	-10.29	92.31	102.60
35	BA	784	A	O4'-C4'-C3'	10.28	114.28	104.00
7	AG	2	LYS	CA-C-N	10.28	134.41	120.54
7	AG	2	LYS	C-N-CA	10.28	134.41	120.54
39	BE	43	GLU	N-CA-C	10.26	122.54	111.36
45	BK	65	PHE	CA-CB-CG	10.25	124.05	113.80
2	AB	1864	U	C3'-C2'-C1'	10.24	111.54	101.30
50	BP	59	VAL	CA-C-O	-10.21	110.33	120.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BD	22	A	C1'-O4'-C4'	-10.20	99.70	109.90
2	AB	125	A	O4'-C4'-C3'	10.17	114.17	104.00
37	BC	33	A	C5'-C4'-C3'	-10.17	100.74	116.00
2	AB	387	U	C1'-O4'-C4'	-10.13	99.57	109.70
44	BJ	152	HIS	CB-CG-CD2	-10.12	118.04	131.20
2	AB	2040	G	C4'-C3'-C2'	-10.12	92.48	102.60
2	AB	60	G	O4'-C4'-C3'	10.11	116.21	106.10
2	AB	732	C	C4'-C3'-C2'	-10.07	92.53	102.60
35	BA	260	G	C4'-C3'-O3'	-10.07	97.89	113.00
44	BJ	46	LEU	CA-C-O	-10.03	109.80	120.63
3	AC	139	ASN	CA-C-N	9.99	129.78	119.19
3	AC	139	ASN	C-N-CA	9.99	129.78	119.19
2	AB	514	A	C4'-C3'-C2'	-9.99	92.61	102.60
2	AB	1990	C	C3'-C2'-C1'	9.97	111.27	101.30
2	AB	808	G	O4'-C1'-C2'	-9.90	97.70	107.60
2	AB	1423	G	N9-C1'-C2'	-9.90	97.15	112.00
2	AB	2797	U	C4'-C3'-C2'	-9.88	92.72	102.60
2	AB	2602	A	O4'-C4'-C3'	9.87	113.87	104.00
2	AB	1879	C	C4'-C3'-C2'	-9.86	92.74	102.60
3	AC	123	VAL	N-CA-C	9.85	120.67	110.72
2	AB	1767	G	C4'-C3'-C2'	-9.85	92.75	102.60
36	BB	34	C	O4'-C1'-C2'	-9.83	97.77	107.60
35	BA	23	C	C1'-O4'-C4'	9.80	119.70	109.90
2	AB	1391	U	C1'-O4'-C4'	-9.80	99.90	109.70
2	AB	1437	C	C3'-C2'-C1'	9.80	111.10	101.30
35	BA	1120	C	C4'-C3'-C2'	-9.75	92.85	102.60
35	BA	1120	C	C3'-C2'-C1'	9.75	111.05	101.30
22	AV	85	VAL	CB-CA-C	9.74	125.22	111.88
44	BJ	163	HIS	CB-CG-CD2	-9.74	118.54	131.20
28	A1	19	HIS	CE1-NE2-CD2	-9.71	99.28	109.00
2	AB	2263	C	C3'-C2'-C1'	9.70	111.00	101.30
35	BA	764	C	C2'-C3'-O3'	9.70	128.25	113.70
2	AB	895	U	O4'-C1'-C2'	-9.70	96.10	105.80
2	AB	2382	G	O3'-P-O5'	-9.70	89.46	104.00
10	AJ	127	THR	O-C-N	9.68	132.38	122.12
2	AB	196	A	O5'-C5'-C4'	-9.67	97.20	111.70
15	AO	97	GLN	O-C-N	-9.65	115.53	121.71
35	BA	221	C	O4'-C1'-N1	9.65	122.98	108.50
8	AH	146	ASP	CA-CB-CG	9.65	122.25	112.60
2	AB	1591	A	C4'-C3'-C2'	-9.65	92.95	102.60
2	AB	2066	C	O4'-C1'-N1	9.65	122.97	108.50
35	BA	452	A	C3'-C2'-C1'	-9.63	91.67	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	AR	61	ARG	NE-CZ-NH2	9.63	127.86	119.20
21	AU	75	PHE	CA-CB-CG	9.63	123.43	113.80
29	A2	25	ARG	NE-CZ-NH1	9.62	131.12	121.50
2	AB	1452	G	O4'-C4'-C3'	9.61	113.61	104.00
50	BP	75	SER	CA-C-O	-9.61	110.37	120.55
35	BA	473	U	O4'-C1'-N1	9.61	122.91	108.50
2	AB	222	A	O4'-C1'-N9	9.60	122.61	108.20
57	BW	52	GLU	N-CA-C	9.58	121.81	111.36
2	AB	1302	A	O4'-C4'-C3'	9.58	115.68	106.10
28	A1	29	ARG	NE-CZ-NH2	9.54	127.79	119.20
20	AT	66	HIS	CA-CB-CG	9.53	123.33	113.80
2	AB	3	U	O4'-C4'-C3'	9.52	113.52	104.00
35	BA	1451	U	O4'-C1'-N1	9.52	122.49	108.20
2	AB	2877	G	C4'-C3'-C2'	-9.52	93.08	102.60
40	BF	213	VAL	CA-C-N	9.52	133.04	120.28
40	BF	213	VAL	C-N-CA	9.52	133.04	120.28
2	AB	609	A	C3'-C2'-C1'	9.51	110.81	101.30
53	BS	28	ARG	CA-C-O	-9.50	109.37	120.10
2	AB	517	C	C3'-C2'-O2'	9.49	124.93	110.70
43	BI	11	HIS	CB-CG-CD2	-9.49	118.87	131.20
2	AB	1547	C	O4'-C1'-N1	9.48	122.73	108.50
2	AB	485	C	O4'-C1'-N1	9.48	122.72	108.50
38	BD	49	C	C2'-C3'-O3'	9.47	123.70	109.50
35	BA	926	G	O3'-P-O5'	9.47	118.20	104.00
40	BF	218	LYS	CA-C-O	-9.47	109.70	118.79
1	AA	89	U	C1'-O4'-C4'	-9.46	100.44	109.90
2	AB	1725	U	C4'-C3'-C2'	-9.46	93.14	102.60
2	AB	2779	U	O5'-C5'-C4'	9.46	125.89	111.70
2	AB	2372	U	C4'-C3'-C2'	-9.45	93.16	102.60
2	AB	1993	U	C4'-C3'-C2'	-9.44	93.16	102.60
22	AV	70	HIS	CA-C-N	9.43	130.45	119.98
22	AV	70	HIS	C-N-CA	9.43	130.45	119.98
35	BA	542	G	C5'-C4'-C3'	-9.43	101.86	116.00
40	BF	218	LYS	O-C-N	9.43	127.83	120.38
2	AB	1091	G	C4'-C3'-C2'	-9.42	93.18	102.60
21	AU	8	ARG	CA-C-N	9.42	135.47	122.19
21	AU	8	ARG	C-N-CA	9.42	135.47	122.19
2	AB	305	C	C3'-C2'-C1'	9.40	110.70	101.30
35	BA	164	G	C5'-C4'-O4'	9.39	123.89	109.80
2	AB	2588	G	C3'-C2'-C1'	-9.39	91.91	101.30
35	BA	1229	A	O3'-P-O5'	-9.39	89.92	104.00
35	BA	1342	C	C4'-C3'-C2'	-9.39	93.21	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2802	G	C5'-C4'-O4'	9.39	123.88	109.80
52	BR	35	ILE	O-C-N	9.39	130.97	121.87
35	BA	387	U	O4'-C1'-C2'	9.38	116.98	107.60
2	AB	2788	C	C4'-C3'-C2'	-9.35	93.25	102.60
50	BP	109	LYS	CA-C-O	9.33	129.32	119.05
36	BB	11	U	C3'-C2'-C1'	9.32	110.62	101.30
2	AB	585	G	C3'-C2'-C1'	-9.32	91.98	101.30
35	BA	156	C	O4'-C1'-C2'	-9.31	98.29	107.60
35	BA	23	C	O4'-C1'-C2'	-9.30	98.30	107.60
35	BA	776	G	O4'-C4'-C3'	9.30	113.30	104.00
35	BA	1478	U	C4'-C3'-C2'	-9.29	93.31	102.60
4	AD	134	ILE	CA-C-N	9.28	129.22	120.03
4	AD	134	ILE	C-N-CA	9.28	129.22	120.03
2	AB	1094	U	C4'-C3'-C2'	-9.28	93.32	102.60
35	BA	376	G	C4'-C3'-C2'	-9.24	93.36	102.60
35	BA	162	A	C1'-O4'-C4'	9.23	119.13	109.90
35	BA	1046	A	C5'-C4'-C3'	-9.22	102.17	116.00
35	BA	577	G	O4'-C1'-C2'	-9.22	98.38	107.60
35	BA	1223	C	O3'-P-O5'	-9.22	90.18	104.00
35	BA	177	G	C3'-C2'-C1'	9.21	110.51	101.30
2	AB	1284	A	C5'-C4'-O4'	9.20	123.60	109.80
44	BJ	91	ARG	CA-C-N	9.20	129.81	119.32
44	BJ	91	ARG	C-N-CA	9.20	129.81	119.32
2	AB	462	C	O3'-P-O5'	-9.20	90.20	104.00
20	AT	50	GLY	CA-C-N	9.19	128.85	122.60
20	AT	50	GLY	C-N-CA	9.19	128.85	122.60
35	BA	1160	G	C4'-C3'-C2'	-9.19	93.41	102.60
2	AB	570	G	O4'-C4'-C3'	9.19	113.19	104.00
35	BA	927	G	C4'-C3'-C2'	-9.19	93.42	102.60
2	AB	2326	C	C3'-C2'-C1'	9.17	110.47	101.30
2	AB	2649	C	C4'-C3'-C2'	-9.17	93.43	102.60
35	BA	58	C	O4'-C1'-C2'	-9.15	98.45	107.60
35	BA	524	G	O4'-C1'-C2'	-9.15	98.45	107.60
2	AB	1963	U	O4'-C1'-N1	9.14	122.22	108.50
35	BA	1086	U	C4'-C3'-C2'	-9.14	93.45	102.60
35	BA	141	G	C4'-C3'-C2'	-9.13	93.47	102.60
35	BA	304	U	C3'-C2'-C1'	9.12	110.42	101.30
35	BA	1228	C	C4'-C3'-C2'	-9.12	93.48	102.60
15	AO	51	ARG	NE-CZ-NH2	9.12	127.41	119.20
35	BA	326	G	C3'-C2'-O2'	-9.11	100.93	114.60
35	BA	785	G	C3'-C2'-O2'	9.12	124.37	110.70
16	AP	44	LEU	CA-C-N	9.11	132.28	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	AP	44	LEU	C-N-CA	9.11	132.28	120.44
35	BA	543	U	O4'-C4'-C3'	9.11	113.11	104.00
2	AB	887	U	C3'-C2'-C1'	9.10	110.40	101.30
2	AB	1287	A	C5'-C4'-O4'	9.10	123.45	109.80
2	AB	2092	U	C3'-C2'-C1'	9.09	110.59	101.50
2	AB	1475	G	C5'-C4'-C3'	-9.09	101.57	115.20
35	BA	7	A	O4'-C1'-C2'	-9.09	98.51	107.60
2	AB	1783	A	O4'-C1'-C2'	-9.08	98.52	107.60
35	BA	726	C	C3'-C2'-C1'	-9.08	92.22	101.30
38	BD	25	U	C3'-C2'-C1'	9.08	110.38	101.30
2	AB	2737	G	C3'-C2'-C1'	9.08	110.38	101.30
2	AB	2322	A	O4'-C4'-C3'	9.06	113.06	104.00
38	BD	4	G	C4'-C3'-C2'	-9.06	93.54	102.60
2	AB	2590	A	O4'-C1'-N9	9.05	122.08	108.50
2	AB	2162	G	C2'-C3'-O3'	9.05	123.08	109.50
2	AB	935	C	C4'-C3'-C2'	-9.05	93.55	102.60
2	AB	2588	G	C4'-C3'-C2'	9.04	111.64	102.60
25	AY	61	LYS	CA-C-O	9.03	130.07	119.32
35	BA	478	A	C4'-C3'-C2'	-9.03	93.57	102.60
2	AB	1762	A	O4'-C4'-C3'	9.03	113.03	104.00
35	BA	974	A	O4'-C1'-C2'	9.03	114.83	105.80
16	AP	12	ARG	NE-CZ-NH1	9.01	130.51	121.50
3	AC	72	SER	CA-C-O	-9.01	109.61	119.97
15	AO	114	ARG	NE-CZ-NH1	-9.00	112.50	121.50
19	AS	67	ALA	O-C-N	9.00	131.45	122.09
35	BA	233	C	C3'-C2'-C1'	8.98	110.28	101.30
35	BA	452	A	C2'-C3'-O3'	-8.97	100.24	113.70
2	AB	1321	A	C1'-O4'-C4'	-8.97	100.93	109.90
2	AB	553	G	N9-C1'-C2'	-8.96	98.56	112.00
2	AB	2611	C	O5'-C5'-C4'	-8.96	98.06	111.50
51	BQ	68	ARG	CA-C-O	-8.96	110.84	119.80
2	AB	420	C	O4'-C1'-N1	8.95	121.92	108.50
2	AB	1502	A	O4'-C4'-C3'	8.94	112.94	104.00
2	AB	279	A	O4'-C4'-C3'	8.93	112.93	104.00
39	BE	50	ASN	CA-C-N	8.93	132.25	120.28
39	BE	50	ASN	C-N-CA	8.93	132.25	120.28
2	AB	1104	C	C5'-C4'-C3'	-8.93	102.61	116.00
2	AB	2323	G	O4'-C4'-C3'	8.92	112.92	104.00
2	AB	1998	A	O4'-C1'-N9	8.92	121.88	108.50
42	BH	47	PHE	CA-CB-CG	8.92	122.72	113.80
10	AJ	105	PHE	CA-CB-CG	8.91	122.71	113.80
40	BF	190	THR	CA-C-N	8.90	132.58	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BF	190	THR	C-N-CA	8.90	132.58	120.38
2	AB	95	A	O4'-C4'-C3'	8.90	112.90	104.00
35	BA	758	C	O4'-C4'-C3'	8.89	112.89	104.00
5	AE	59	ARG	NE-CZ-NH1	-8.89	112.61	121.50
9	AI	36	ALA	CA-C-N	-8.89	115.60	123.33
9	AI	36	ALA	C-N-CA	-8.89	115.60	123.33
34	A7	30	GLU	CA-C-N	8.89	128.63	119.56
34	A7	30	GLU	C-N-CA	8.89	128.63	119.56
2	AB	2126	A	C1'-O4'-C4'	8.89	118.59	109.70
2	AB	637	A	C5'-C4'-C3'	-8.88	101.88	115.20
2	AB	846	U	O5'-C5'-C4'	-8.88	98.18	111.50
2	AB	2006	C	O4'-C4'-C3'	8.88	112.88	104.00
4	AD	63	ILE	CA-C-N	8.88	137.95	121.97
4	AD	63	ILE	C-N-CA	8.88	137.95	121.97
35	BA	156	C	C3'-C2'-C1'	8.88	110.17	101.30
2	AB	1408	G	O4'-C1'-N9	8.87	121.81	108.50
35	BA	381	C	O4'-C1'-N1	8.87	121.51	108.20
2	AB	847	U	C4'-C3'-C2'	-8.86	93.74	102.60
35	BA	756	C	O4'-C1'-C2'	-8.85	98.75	107.60
36	BB	72	U	O3'-P-O5'	-8.85	90.72	104.00
35	BA	458	U	C4'-C3'-C2'	-8.85	93.75	102.60
35	BA	1086	U	O4'-C1'-C2'	-8.85	98.75	107.60
35	BA	793	U	O4'-C1'-C2'	-8.84	98.77	107.60
2	AB	98	G	C3'-C2'-C1'	8.81	110.11	101.30
18	AR	50	ARG	N-CA-C	8.81	116.00	108.78
35	BA	231	U	C3'-C2'-C1'	8.81	110.11	101.30
2	AB	134	G	O4'-C4'-C3'	8.80	112.81	104.00
40	BF	158	GLY	CA-C-N	8.80	133.76	120.82
40	BF	158	GLY	C-N-CA	8.80	133.76	120.82
2	AB	2868	A	P-O5'-C5'	8.80	134.10	120.90
2	AB	1904	G	C4'-C3'-C2'	-8.80	93.80	102.60
2	AB	2052	A	O4'-C4'-C3'	8.80	112.80	104.00
38	BD	35	C	O4'-C4'-C3'	8.80	112.80	104.00
4	AD	66	PHE	CA-CB-CG	8.79	122.59	113.80
10	AJ	75	PHE	CA-CB-CG	8.79	122.59	113.80
10	AJ	95	PHE	CA-CB-CG	-8.79	105.02	113.80
2	AB	546	U	O4'-C1'-C2'	-8.78	98.82	107.60
2	AB	558	U	C3'-C2'-C1'	8.78	110.08	101.30
42	BH	131	ASN	CA-C-N	8.78	129.65	119.47
42	BH	131	ASN	C-N-CA	8.78	129.65	119.47
17	AQ	44	GLY	N-CA-C	-8.76	103.12	115.30
35	BA	53	A	O4'-C4'-C3'	8.76	112.76	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	406	G	N9-C1'-C2'	-8.76	98.87	112.00
2	AB	2263	C	O4'-C1'-C2'	-8.75	98.85	107.60
4	AD	116	GLN	OE1-CD-NE2	-8.74	113.86	122.60
35	BA	756	C	C4'-C3'-C2'	-8.74	93.86	102.60
35	BA	1191	A	O4'-C4'-C3'	8.74	112.74	104.00
2	AB	1050	A	O3'-P-O5'	-8.74	90.89	104.00
2	AB	2425	A	C4'-C3'-C2'	8.74	111.34	102.60
35	BA	853	C	C3'-C2'-C1'	8.74	110.04	101.30
41	BG	167	PRO	N-CA-CB	8.74	110.94	103.25
57	BW	18	LYS	CA-C-N	8.72	132.68	120.29
57	BW	18	LYS	C-N-CA	8.72	132.68	120.29
2	AB	2834	G	C4'-C3'-O3'	-8.72	99.92	113.00
16	AP	104	ALA	N-CA-C	8.72	120.86	111.36
2	AB	2218	G	C4'-C3'-C2'	-8.71	93.89	102.60
2	AB	2276	G	C1'-O4'-C4'	8.71	118.61	109.90
4	AD	242	HIS	CA-CB-CG	8.71	122.51	113.80
35	BA	98	A	C4'-C3'-C2'	-8.71	93.89	102.60
35	BA	387	U	C1'-O4'-C4'	-8.71	101.19	109.90
2	AB	279	A	C3'-C2'-C1'	8.71	110.01	101.30
2	AB	1716	U	O4'-C1'-C2'	-8.71	98.89	107.60
2	AB	2468	A	O3'-P-O5'	-8.70	90.95	104.00
2	AB	199	A	O3'-P-O5'	-8.70	90.95	104.00
2	AB	307	G	C1'-O4'-C4'	-8.70	101.20	109.90
2	AB	2007	U	C4'-C3'-C2'	-8.70	93.91	102.60
37	BC	53	G	C4'-C3'-O3'	8.69	122.43	109.40
2	AB	2730	C	C3'-C2'-C1'	8.68	109.98	101.30
4	AD	261	ARG	N-CA-C	-8.68	104.72	114.62
35	BA	239	U	C3'-C2'-C1'	-8.68	92.62	101.30
35	BA	969	A	O4'-C4'-C3'	8.68	114.78	106.10
2	AB	2797	U	O4'-C1'-N1	8.67	121.20	108.20
35	BA	1394	A	O4'-C1'-C2'	-8.67	97.13	105.80
2	AB	1902	C	C3'-C2'-C1'	8.66	109.97	101.30
35	BA	610	U	C2'-C3'-O3'	-8.66	100.70	113.70
37	BC	18	A	O4'-C4'-C3'	8.66	112.66	104.00
2	AB	1286	A	C1'-O4'-C4'	8.66	118.36	109.70
2	AB	1651	G	C4'-C3'-C2'	-8.66	93.94	102.60
35	BA	109	A	O4'-C1'-N9	8.65	121.17	108.20
2	AB	494	G	C4'-C3'-C2'	-8.65	93.95	102.60
3	AC	5	THR	CA-C-N	8.65	131.68	120.44
3	AC	5	THR	C-N-CA	8.65	131.68	120.44
38	BD	13	C	O4'-C4'-C3'	8.64	112.64	104.00
2	AB	558	U	C4'-C3'-C2'	-8.64	93.96	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1318	A	O4'-C4'-C3'	8.64	112.64	104.00
31	A4	46	VAL	CA-CB-CG2	8.63	125.08	110.40
32	A5	19	ARG	NE-CZ-NH1	-8.63	112.87	121.50
35	BA	1246	A	C4'-C3'-C2'	-8.63	93.97	102.60
44	BJ	92	PRO	CA-C-N	8.63	132.28	120.46
44	BJ	92	PRO	C-N-CA	8.63	132.28	120.46
3	AC	39	VAL	CB-CA-C	8.63	120.75	111.35
7	AG	7	TYR	CA-C-N	8.63	132.19	120.54
7	AG	7	TYR	C-N-CA	8.63	132.19	120.54
13	AM	11	ALA	CA-C-N	8.62	136.01	121.87
13	AM	11	ALA	C-N-CA	8.62	136.01	121.87
43	BI	129	SER	CA-C-N	8.62	133.38	121.05
43	BI	129	SER	C-N-CA	8.62	133.38	121.05
35	BA	1152	A	O4'-C1'-N9	8.62	121.43	108.50
7	AG	174	PHE	CB-CA-C	8.62	121.81	108.88
2	AB	921	C	O4'-C4'-C3'	8.62	112.61	104.00
35	BA	969	A	C1'-O4'-C4'	-8.62	101.08	109.70
2	AB	2055	C	C4'-C3'-C2'	-8.61	93.99	102.60
35	BA	1165	U	C3'-C2'-C1'	8.60	109.90	101.30
2	AB	464	U	C1'-O4'-C4'	8.60	118.50	109.90
2	AB	786	C	O4'-C1'-N1	8.60	121.40	108.50
35	BA	635	A	O5'-C5'-C4'	8.59	124.39	111.50
2	AB	1175	A	O4'-C1'-C2'	-8.59	99.01	107.60
2	AB	2545	G	C4'-C3'-C2'	-8.59	94.01	102.60
56	BV	33	TRP	CA-C-N	8.59	137.94	121.54
56	BV	33	TRP	C-N-CA	8.59	137.94	121.54
2	AB	2347	C	C4'-C3'-C2'	-8.58	94.02	102.60
19	AS	69	ARG	NH1-CZ-NH2	-8.58	108.15	119.30
35	BA	1400	C	O4'-C1'-N1	8.58	121.07	108.20
35	BA	610	U	C5'-C4'-O4'	8.58	122.67	109.80
35	BA	694	A	O4'-C1'-C2'	-8.58	99.02	107.60
10	AJ	89	GLY	CA-C-N	8.57	131.77	120.28
10	AJ	89	GLY	C-N-CA	8.57	131.77	120.28
2	AB	2341	G	O4'-C4'-C3'	8.57	112.57	104.00
2	AB	301	G	C4'-C3'-C2'	-8.57	94.03	102.60
2	AB	748	G	C3'-C2'-C1'	8.57	109.87	101.30
2	AB	611	C	O4'-C1'-N1	8.56	121.35	108.50
2	AB	2425	A	C2'-C3'-O3'	8.56	122.34	109.50
14	AN	81	ASP	CA-C-N	8.56	131.75	120.28
14	AN	81	ASP	C-N-CA	8.56	131.75	120.28
8	AH	110	HIS	CB-CG-CD2	-8.56	120.07	131.20
15	AO	113	ALA	CA-C-N	8.56	131.57	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	AO	113	ALA	C-N-CA	8.56	131.57	120.44
50	BP	58	GLU	CA-C-N	8.55	132.18	120.46
50	BP	58	GLU	C-N-CA	8.55	132.18	120.46
2	AB	2785	C	O4'-C1'-C2'	-8.55	99.05	107.60
15	AO	86	LYS	CA-C-N	8.55	132.17	121.06
15	AO	86	LYS	C-N-CA	8.55	132.17	121.06
35	BA	1465	A	C4'-C3'-C2'	-8.55	94.05	102.60
38	BD	34	U	C5'-C4'-C3'	-8.55	103.18	116.00
35	BA	197	A	O4'-C1'-N9	8.54	121.02	108.20
2	AB	1013	C	O4'-C1'-N1	8.54	121.31	108.50
2	AB	406	G	C3'-C2'-O2'	8.53	123.50	110.70
2	AB	1702	G	C4'-C3'-C2'	-8.53	94.07	102.60
38	BD	26	C	O4'-C1'-C2'	-8.53	99.07	107.60
2	AB	1149	G	C4'-C3'-C2'	-8.52	94.08	102.60
35	BA	330	C	C1'-O4'-C4'	-8.52	101.38	109.90
2	AB	1626	A	O4'-C1'-C2'	-8.51	97.29	105.80
2	AB	121	G	O4'-C4'-C3'	8.51	112.51	104.00
2	AB	348	A	C1'-O4'-C4'	8.50	118.40	109.90
2	AB	1367	A	O3'-P-O5'	8.50	116.75	104.00
2	AB	2664	G	O3'-P-O5'	-8.50	91.25	104.00
2	AB	1929	G	O4'-C1'-C2'	-8.50	97.30	105.80
2	AB	2113	U	C3'-C2'-C1'	8.50	109.80	101.30
2	AB	748	G	O4'-C1'-C2'	-8.49	99.11	107.60
2	AB	1069	A	O4'-C1'-N9	8.49	120.94	108.20
4	AD	13	ARG	CA-C-O	-8.49	111.82	120.90
26	AZ	58	ILE	CA-C-N	8.49	131.98	120.44
26	AZ	58	ILE	C-N-CA	8.49	131.98	120.44
35	BA	708	C	C4'-C3'-C2'	-8.49	94.11	102.60
35	BA	507	C	C3'-C2'-O2'	8.48	123.42	110.70
2	AB	2859	G	C3'-C2'-C1'	8.48	109.78	101.30
52	BR	7	THR	N-CA-C	-8.47	102.04	111.28
48	BN	105	ARG	NE-CZ-NH1	8.47	129.97	121.50
15	AO	71	LYS	CA-C-N	8.47	128.23	119.76
15	AO	71	LYS	C-N-CA	8.47	128.23	119.76
2	AB	1888	G	O3'-P-O5'	-8.46	91.31	104.00
38	BD	75	C	C1'-O4'-C4'	-8.46	101.24	109.70
2	AB	2429	G	O4'-C4'-C3'	8.45	112.45	104.00
2	AB	164	C	C4'-C3'-C2'	-8.45	94.15	102.60
2	AB	616	A	O4'-C1'-N9	8.45	121.18	108.50
35	BA	724	G	O4'-C1'-C2'	-8.45	99.15	107.60
2	AB	1241	A	O4'-C4'-C3'	8.44	112.44	104.00
2	AB	2112	G	O4'-C1'-C2'	-8.44	99.16	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1017	G	O3'-P-O5'	-8.44	91.34	104.00
41	BG	99	ASN	CA-CB-CG	8.44	121.04	112.60
2	AB	1779	U	C3'-C2'-C1'	8.43	109.73	101.30
2	AB	508	A	C4'-C3'-C2'	-8.43	94.17	102.60
2	AB	1057	A	O4'-C1'-C2'	-8.43	99.17	107.60
48	BN	104	PHE	CA-CB-CG	8.43	122.23	113.80
47	BM	43	PRO	N-CA-CB	8.42	110.80	103.31
35	BA	1014	A	P-O3'-C3'	8.41	132.82	120.20
35	BA	614	C	O4'-C1'-N1	8.41	121.12	108.50
35	BA	253	A	C4'-C3'-C2'	-8.40	94.20	102.60
2	AB	328	U	O4'-C1'-N1	8.40	121.10	108.50
2	AB	107	G	C4'-C3'-C2'	-8.39	94.21	102.60
49	BO	90	PRO	N-CA-CB	8.39	110.33	103.36
2	AB	808	G	C1'-O4'-C4'	8.38	118.28	109.90
35	BA	1073	U	O4'-C1'-N1	8.38	121.07	108.50
35	BA	1412	C	C1'-O4'-C4'	-8.38	101.52	109.90
2	AB	818	G	C4'-C3'-C2'	-8.37	94.23	102.60
18	AR	71	ARG	NE-CZ-NH2	-8.37	111.67	119.20
35	BA	564	C	O4'-C1'-C2'	-8.37	99.23	107.60
39	BE	169	HIS	CB-CG-CD2	-8.37	120.31	131.20
35	BA	1116	U	C4'-C3'-C2'	-8.37	94.23	102.60
2	AB	808	G	C4'-C3'-C2'	-8.36	94.24	102.60
2	AB	1879	C	C3'-C2'-C1'	8.36	109.66	101.30
2	AB	1967	C	O4'-C4'-C3'	8.36	112.36	104.00
35	BA	1159	U	O5'-C5'-C4'	-8.36	98.96	111.50
2	AB	193	U	C4'-C3'-C2'	-8.35	94.25	102.60
2	AB	2220	U	N1-C1'-C2'	-8.35	99.48	112.00
2	AB	2788	C	O4'-C4'-C3'	8.35	112.35	104.00
2	AB	2284	A	O4'-C1'-C2'	-8.35	99.25	107.60
35	BA	681	A	O4'-C1'-C2'	-8.35	99.25	107.60
2	AB	1066	U	O4'-C4'-C3'	8.34	112.34	104.00
2	AB	1454	C	O4'-C4'-C3'	8.34	112.34	104.00
36	BB	45	U	O4'-C1'-N1	8.34	120.71	108.20
2	AB	1591	A	C1'-O4'-C4'	-8.34	101.56	109.90
21	AU	85	ILE	CB-CA-C	8.32	121.03	110.96
2	AB	678	C	O4'-C1'-C2'	-8.32	99.28	107.60
2	AB	689	A	C5'-C4'-O4'	8.32	122.28	109.80
22	AV	34	VAL	N-CA-C	8.32	120.69	111.88
35	BA	387	U	O4'-C1'-N1	8.32	120.97	108.50
2	AB	2766	A	C5'-C4'-O4'	8.31	122.27	109.80
2	AB	500	G	C4'-C3'-O3'	-8.31	100.53	113.00
2	AB	603	A	C3'-C2'-O2'	-8.31	102.14	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1999	C	C4'-C3'-C2'	-8.31	94.29	102.60
35	BA	7	A	C5'-C4'-O4'	8.31	122.26	109.80
2	AB	407	G	O4'-C1'-C2'	-8.30	99.30	107.60
2	AB	1943	U	O4'-C1'-N1	8.30	120.66	108.20
9	AI	119	ASN	O-C-N	-8.30	114.98	123.29
35	BA	1489	G	C5'-C4'-O4'	8.31	122.26	109.80
2	AB	2518	A	O4'-C1'-C2'	-8.30	97.50	105.80
2	AB	97	C	C4'-C3'-C2'	-8.30	94.30	102.60
35	BA	1453	G	O4'-C1'-N9	8.30	120.95	108.50
2	AB	578	G	O3'-P-O5'	-8.30	91.55	104.00
35	BA	650	G	O4'-C4'-C3'	8.29	112.29	104.00
49	BO	120	ARG	CA-C-N	8.29	130.20	119.84
49	BO	120	ARG	C-N-CA	8.29	130.20	119.84
55	BU	67	LEU	O-C-N	-8.29	115.60	121.65
2	AB	717	C	O4'-C1'-N1	8.29	120.93	108.50
12	AL	8	PRO	N-CA-CB	8.28	112.34	103.39
2	AB	1021	A	C4'-C3'-O3'	8.28	125.42	113.00
35	BA	1401	G	C3'-C2'-C1'	8.28	109.58	101.30
35	BA	1222	G	C3'-C2'-C1'	8.28	109.58	101.30
2	AB	1498	C	O4'-C1'-C2'	-8.28	99.32	107.60
2	AB	1348	C	O4'-C1'-N1	8.27	120.91	108.50
29	A2	3	LYS	N-CA-C	-8.27	102.21	111.14
35	BA	156	C	C4'-C3'-C2'	-8.27	94.33	102.60
39	BE	191	ASP	CA-C-N	8.26	127.99	119.56
39	BE	191	ASP	C-N-CA	8.26	127.99	119.56
2	AB	2336	A	C3'-C2'-C1'	8.26	109.76	101.50
2	AB	1854	A	O3'-P-O5'	-8.26	91.61	104.00
2	AB	2173	A	O4'-C4'-C3'	8.26	112.26	104.00
16	AP	27	SER	N-CA-C	8.25	120.27	111.28
35	BA	987	G	O4'-C1'-N9	8.25	120.87	108.50
2	AB	1076	C	O4'-C1'-C2'	-8.25	99.35	107.60
35	BA	1198	G	C4'-C3'-C2'	-8.25	94.35	102.60
10	AJ	97	GLU	CA-C-O	-8.24	111.68	120.42
1	AA	43	C	O4'-C4'-C3'	8.24	114.34	106.10
2	AB	2110	G	O5'-C5'-C4'	8.24	124.06	111.70
20	AT	21	ARG	NE-CZ-NH2	8.24	126.61	119.20
1	AA	28	C	C4'-C3'-C2'	-8.24	94.36	102.60
53	BS	16	PHE	CA-CB-CG	8.24	122.04	113.80
19	AS	34	ALA	N-CA-C	-8.23	102.26	111.07
35	BA	1277	C	O4'-C1'-N1	8.23	120.85	108.50
2	AB	2043	C	C5'-C4'-C3'	-8.23	103.65	116.00
35	BA	915	A	C4'-C3'-C2'	-8.23	94.37	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2197	U	O3'-P-O5'	-8.22	91.67	104.00
2	AB	1904	G	O4'-C1'-N9	8.21	120.81	108.50
2	AB	717	C	N1-C1'-C2'	-8.20	99.70	112.00
18	AR	20	ARG	CA-C-N	8.20	128.21	119.76
18	AR	20	ARG	C-N-CA	8.20	128.21	119.76
2	AB	2330	G	C1'-C2'-O2'	8.20	120.69	108.40
24	AX	91	PHE	CA-CB-CG	8.20	122.00	113.80
27	A0	47	ARG	N-CA-C	-8.20	102.87	113.12
35	BA	473	U	N1-C1'-C2'	-8.19	99.71	112.00
35	BA	1291	U	O4'-C1'-C2'	-8.19	99.41	107.60
2	AB	2263	C	C4'-C3'-C2'	-8.19	94.41	102.60
35	BA	960	U	C2'-C3'-O3'	8.19	125.98	113.70
51	BQ	27	LYS	N-CA-C	8.19	120.94	111.11
2	AB	2256	G	O4'-C1'-C2'	-8.19	99.42	107.60
2	AB	2520	C	O4'-C1'-N1	8.18	120.77	108.50
10	AJ	6	ASP	CA-C-O	8.18	129.22	120.55
10	AJ	140	ALA	CA-C-N	8.18	131.07	120.44
10	AJ	140	ALA	C-N-CA	8.18	131.07	120.44
47	BM	94	ALA	CA-C-N	8.18	129.06	119.98
47	BM	94	ALA	C-N-CA	8.18	129.06	119.98
51	BQ	85	GLU	O-C-N	8.17	130.78	122.12
35	BA	756	C	O4'-C4'-C3'	8.17	112.17	104.00
48	BN	46	ALA	CA-C-O	8.17	128.64	119.41
41	BG	164	ARG	CD-NE-CZ	8.16	135.83	124.40
2	AB	932	U	N1-C1'-C2'	8.16	124.24	112.00
35	BA	1111	A	C5'-C4'-C3'	-8.16	103.76	116.00
2	AB	552	U	C4'-C3'-C2'	-8.16	94.44	102.60
35	BA	963	G	O3'-P-O5'	-8.16	91.76	104.00
2	AB	2307	G	P-O3'-C3'	8.16	132.44	120.20
10	AJ	120	SER	CA-C-N	8.16	131.87	120.29
10	AJ	120	SER	C-N-CA	8.16	131.87	120.29
35	BA	1448	C	O4'-C4'-C3'	8.16	112.16	104.00
35	BA	1401	G	O4'-C1'-C2'	-8.15	99.45	107.60
35	BA	1495	U	C4'-C3'-C2'	-8.15	94.45	102.60
41	BG	103	ARG	NE-CZ-NH2	-8.15	111.86	119.20
2	AB	944	C	C4'-C3'-C2'	-8.15	94.45	102.60
2	AB	1837	C	P-O3'-C3'	8.15	132.42	120.20
53	BS	67	ILE	CB-CA-C	8.15	121.01	110.91
35	BA	510	A	O4'-C1'-C2'	-8.14	99.46	107.60
2	AB	2900	A	O4'-C1'-N9	8.14	120.71	108.50
2	AB	2590	A	O4'-C1'-C2'	-8.14	99.46	107.60
26	AZ	31	ASN	CA-CB-CG	8.14	120.74	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	900	A	C2'-C3'-O3'	8.13	125.90	113.70
51	BQ	68	ARG	O-C-N	8.13	129.41	121.28
2	AB	1723	G	C4'-C3'-C2'	-8.13	94.47	102.60
6	AF	62	GLN	CA-C-N	8.13	135.96	122.87
6	AF	62	GLN	C-N-CA	8.13	135.96	122.87
10	AJ	36	LYS	N-CA-C	8.13	120.14	111.28
47	BM	70	HIS	CB-CG-CD2	-8.13	120.63	131.20
35	BA	346	G	O3'-P-O5'	8.13	116.19	104.00
17	AQ	106	LEU	CA-C-O	-8.12	111.86	120.55
2	AB	44	A	C4'-C3'-C2'	-8.12	94.48	102.60
2	AB	112	U	O4'-C4'-C3'	8.12	112.12	104.00
2	AB	2426	A	C5'-C4'-C3'	-8.12	103.02	115.20
9	AI	47	PHE	CA-CB-CG	8.12	121.92	113.80
2	AB	1130	U	O4'-C1'-C2'	-8.12	99.48	107.60
35	BA	1538	C	C4'-C3'-C2'	-8.12	94.48	102.60
56	BV	52	ASN	CA-CB-CG	8.11	120.71	112.60
1	AA	40	U	C5'-C4'-C3'	-8.11	103.04	115.20
35	BA	1347	G	C4'-C3'-O3'	8.11	121.56	109.40
2	AB	2797	U	C3'-C2'-O2'	-8.11	102.44	114.60
16	AP	55	ALA	CA-C-N	8.11	132.63	120.31
16	AP	55	ALA	C-N-CA	8.11	132.63	120.31
25	AY	30	VAL	O-C-N	8.10	132.69	122.57
2	AB	2111	U	C4'-C3'-O3'	8.10	121.54	109.40
10	AJ	52	ARG	NE-CZ-NH1	-8.09	113.41	121.50
10	AJ	151	VAL	CA-C-O	-8.09	111.73	120.47
26	AZ	36	ARG	NE-CZ-NH2	8.09	126.48	119.20
35	BA	1537	U	P-O3'-C3'	8.09	132.34	120.20
35	BA	1327	C	C4'-C3'-C2'	-8.09	94.51	102.60
35	BA	261	U	C4'-C3'-O3'	8.08	125.12	113.00
2	AB	2118	U	C1'-O4'-C4'	-8.08	101.62	109.70
35	BA	842	U	O4'-C4'-C3'	-8.07	98.03	106.10
35	BA	171	A	C3'-C2'-C1'	8.07	109.37	101.30
2	AB	479	A	O4'-C1'-C2'	-8.07	97.73	105.80
5	AE	124	ARG	NE-CZ-NH2	8.06	126.46	119.20
1	AA	44	G	O4'-C1'-C2'	-8.06	97.74	105.80
1	AA	54	G	C2'-C3'-O3'	8.06	125.78	113.70
35	BA	247	G	C5'-C4'-O4'	8.05	121.88	109.80
35	BA	195	A	C5'-C4'-C3'	-8.05	103.92	116.00
41	BG	19	PHE	CA-CB-CG	8.05	121.85	113.80
35	BA	1136	C	O4'-C1'-N1	8.05	120.57	108.50
2	AB	1931	U	C4'-C3'-C2'	-8.04	94.56	102.60
36	BB	73	G	C3'-C2'-O2'	8.04	122.77	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	420	C	C4'-C3'-C2'	-8.04	94.56	102.60
4	AD	3	VAL	CA-CB-CG2	8.04	124.07	110.40
26	AZ	57	VAL	N-CA-C	8.04	118.80	110.36
35	BA	918	A	O4'-C4'-C3'	8.04	112.03	104.00
2	AB	1938	A	C4'-C3'-C2'	-8.03	94.57	102.60
2	AB	1273	U	N1-C1'-C2'	8.03	124.04	112.00
35	BA	1073	U	C4'-C3'-C2'	-8.03	94.57	102.60
5	AE	203	VAL	CA-CB-CG1	8.02	124.04	110.40
35	BA	647	C	C4'-C3'-C2'	-8.02	94.58	102.60
2	AB	2280	G	C4'-C3'-C2'	-8.02	94.58	102.60
35	BA	1074	G	C4'-C3'-C2'	-8.02	94.58	102.60
35	BA	1313	U	C1'-O4'-C4'	-8.02	101.88	109.90
36	BB	33	U	C4'-C3'-C2'	-8.02	94.58	102.60
38	BD	49	C	P-O5'-C5'	8.01	132.92	120.90
2	AB	1456	G	C4'-C3'-C2'	-8.01	94.59	102.60
35	BA	392	C	C5'-C4'-O4'	8.01	121.81	109.80
29	A2	9	TYR	CA-C-N	8.01	131.35	120.54
29	A2	9	TYR	C-N-CA	8.01	131.35	120.54
35	BA	793	U	O3'-P-O5'	-8.00	91.99	104.00
32	A5	13	ASN	CA-CB-CG	8.00	120.60	112.60
2	AB	1382	G	O4'-C1'-N9	8.00	120.49	108.50
2	AB	2896	C	P-O5'-C5'	8.00	132.89	120.90
35	BA	4	U	C1'-O4'-C4'	7.99	117.89	109.90
35	BA	529	G	O4'-C4'-C3'	7.99	111.99	104.00
2	AB	1108	U	C4'-C3'-C2'	-7.99	94.61	102.60
35	BA	467	U	N1-C1'-C2'	7.99	125.98	114.00
35	BA	288	A	C3'-C2'-O2'	7.99	122.68	110.70
35	BA	1377	A	C4'-C3'-C2'	-7.98	94.62	102.60
35	BA	823	C	C4'-C3'-O3'	7.98	124.97	113.00
2	AB	943	A	O4'-C1'-C2'	-7.98	99.62	107.60
2	AB	564	C	O4'-C4'-C3'	7.97	111.97	104.00
2	AB	1404	C	C4'-C3'-C2'	-7.97	94.63	102.60
2	AB	1302	A	C4'-C3'-C2'	-7.96	94.64	102.60
13	AM	29	HIS	CA-C-N	7.96	134.50	122.65
13	AM	29	HIS	C-N-CA	7.96	134.50	122.65
2	AB	970	U	C4'-C3'-C2'	-7.95	94.65	102.60
12	AL	136	GLN	OE1-CD-NE2	-7.95	114.65	122.60
2	AB	2869	G	O4'-C4'-C3'	7.95	111.95	104.00
2	AB	1240	U	O4'-C1'-N1	7.95	120.42	108.50
5	AE	59	ARG	NE-CZ-NH2	7.95	126.35	119.20
18	AR	17	PRO	N-CA-CB	7.95	110.26	103.35
35	BA	1513	A	O4'-C4'-C3'	-7.95	96.05	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	984	A	O4'-C1'-C2'	-7.94	97.86	105.80
35	BA	325	A	O3'-P-O5'	7.94	115.92	104.00
7	AG	15	LEU	CA-C-O	-7.94	112.01	120.42
35	BA	631	C	C3'-C2'-C1'	7.93	109.23	101.30
35	BA	714	G	C1'-O4'-C4'	-7.93	101.97	109.90
2	AB	1094	U	O4'-C4'-C3'	7.93	111.93	104.00
42	BH	11	GLN	CB-CA-C	7.93	122.81	109.80
35	BA	1063	C	C1'-O4'-C4'	7.93	117.83	109.90
2	AB	2419	U	O4'-C1'-C2'	-7.93	99.67	107.60
53	BS	8	ARG	NE-CZ-NH2	-7.93	112.06	119.20
35	BA	304	U	C4'-C3'-C2'	-7.92	94.68	102.60
35	BA	1240	U	O4'-C1'-N1	7.92	120.08	108.20
35	BA	1287	A	O3'-P-O5'	7.92	115.88	104.00
2	AB	620	G	C1'-O4'-C4'	-7.92	101.78	109.70
2	AB	400	G	O4'-C1'-C2'	-7.92	99.68	107.60
35	BA	724	G	C5'-C4'-O4'	7.92	121.67	109.80
2	AB	133	U	C4'-C3'-C2'	-7.92	94.69	102.60
2	AB	1349	C	C5'-C4'-C3'	-7.91	104.13	116.00
39	BE	144	GLU	CA-C-N	7.91	130.73	120.44
39	BE	144	GLU	C-N-CA	7.91	130.73	120.44
2	AB	132	G	C2'-C3'-O3'	-7.91	101.84	113.70
35	BA	651	C	O4'-C4'-C3'	7.91	111.91	104.00
54	BT	30	HIS	CB-CG-CD2	-7.91	120.92	131.20
2	AB	386	G	C4'-C3'-C2'	-7.91	94.69	102.60
15	AO	46	ILE	CA-C-N	7.91	131.09	120.65
15	AO	46	ILE	C-N-CA	7.91	131.09	120.65
2	AB	2758	A	N9-C1'-C2'	-7.90	100.15	112.00
35	BA	1313	U	O4'-C1'-C2'	7.90	115.50	107.60
35	BA	894	G	C3'-C2'-C1'	7.89	109.19	101.30
35	BA	1000	A	O3'-P-O5'	-7.89	92.16	104.00
12	AL	34	ARG	CA-C-N	7.89	130.85	120.28
12	AL	34	ARG	C-N-CA	7.89	130.85	120.28
41	BG	103	ARG	CA-C-O	-7.89	112.19	120.55
2	AB	1990	C	O4'-C1'-C2'	-7.88	99.72	107.60
2	AB	1587	G	C4'-C3'-O3'	7.88	124.82	113.00
37	BC	38	G	C3'-C2'-C1'	-7.88	93.42	101.30
2	AB	1472	C	C4'-C3'-O3'	7.88	124.82	113.00
35	BA	162	A	O4'-C1'-C2'	-7.88	99.72	107.60
50	BP	100	ARG	N-CA-C	7.88	120.93	110.53
35	BA	1324	A	C4'-C3'-C2'	-7.88	94.72	102.60
2	AB	455	C	O3'-P-O5'	7.87	115.81	104.00
2	AB	504	A	O4'-C4'-C3'	7.87	111.87	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	468	G	C2'-C3'-O3'	-7.87	101.89	113.70
2	AB	1008	A	O4'-C1'-N9	7.87	120.00	108.20
35	BA	224	U	O4'-C1'-C2'	-7.87	99.73	107.60
43	BI	86	ARG	NE-CZ-NH1	7.87	129.37	121.50
45	BK	87	ARG	CA-C-O	-7.87	112.89	121.94
1	AA	34	A	P-O3'-C3'	7.87	132.00	120.20
35	BA	1408	A	C4'-C3'-C2'	-7.87	94.73	102.60
2	AB	112	U	C1'-O4'-C4'	-7.86	102.04	109.90
2	AB	2226	C	O4'-C1'-C2'	-7.86	99.74	107.60
35	BA	855	U	C4'-C3'-C2'	-7.86	94.74	102.60
37	BC	27	A	O4'-C4'-C3'	-7.86	96.14	104.00
39	BE	171	ALA	CA-C-N	7.86	130.62	120.56
39	BE	171	ALA	C-N-CA	7.86	130.62	120.56
2	AB	1659	G	N9-C1'-C2'	-7.86	100.22	112.00
36	BB	67	G	C5'-C4'-C3'	-7.86	104.22	116.00
35	BA	954	G	C1'-C2'-O2'	-7.85	96.62	108.40
41	BG	43	ARG	CA-C-N	7.85	132.52	121.61
41	BG	43	ARG	C-N-CA	7.85	132.52	121.61
4	AD	87	SER	N-CA-C	7.84	119.47	111.07
2	AB	1189	A	C5'-C4'-C3'	-7.84	104.24	116.00
35	BA	986	U	C4'-C3'-C2'	-7.84	94.76	102.60
2	AB	788	A	O4'-C4'-C3'	7.84	113.94	106.10
35	BA	1069	C	C4'-C3'-O3'	-7.83	101.26	113.00
2	AB	82	U	O4'-C1'-C2'	-7.82	99.78	107.60
35	BA	138	G	C4'-C3'-C2'	-7.82	94.78	102.60
35	BA	251	G	O4'-C1'-C2'	-7.82	97.98	105.80
2	AB	629	G	C3'-C2'-C1'	7.82	109.11	101.30
38	BD	9	G	O4'-C1'-N9	7.82	120.22	108.50
2	AB	254	G	O4'-C1'-C2'	-7.81	99.79	107.60
2	AB	1057	A	O3'-P-O5'	-7.81	92.28	104.00
2	AB	2467	C	O4'-C4'-C3'	-7.81	96.19	104.00
37	BC	26	U	C1'-C2'-O2'	7.81	120.12	108.40
49	BO	95	HIS	ND1-CE1-NE2	7.81	116.21	108.40
2	AB	2528	U	O4'-C1'-N1	7.81	120.21	108.50
48	BN	105	ARG	NE-CZ-NH2	-7.81	112.17	119.20
19	AS	7	VAL	CA-C-N	7.80	133.98	121.34
19	AS	7	VAL	C-N-CA	7.80	133.98	121.34
2	AB	331	C	C5'-C4'-O4'	7.80	120.80	109.10
7	AG	171	ALA	CA-C-N	7.80	133.76	123.00
7	AG	171	ALA	C-N-CA	7.80	133.76	123.00
35	BA	1123	U	O4'-C4'-C3'	7.80	111.80	104.00
2	AB	1294	U	C3'-C2'-C1'	-7.80	93.50	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	766	A	C1'-O4'-C4'	-7.80	102.10	109.90
35	BA	167	A	C5'-C4'-C3'	-7.79	104.31	116.00
2	AB	140	C	O3'-P-O5'	7.79	115.69	104.00
44	BJ	104	VAL	CA-C-N	7.79	130.57	120.44
44	BJ	104	VAL	C-N-CA	7.79	130.57	120.44
39	BE	68	PHE	CA-CB-CG	7.79	121.59	113.80
2	AB	1768	C	O4'-C1'-N1	7.79	120.18	108.50
2	AB	231	A	C2'-C3'-O3'	7.78	125.38	113.70
2	AB	2098	U	C1'-O4'-C4'	-7.78	102.12	109.90
35	BA	528	C	O3'-P-O5'	7.78	115.68	104.00
35	BA	1415	G	C3'-C2'-C1'	7.78	109.08	101.30
2	AB	944	C	O4'-C4'-C3'	7.78	111.78	104.00
2	AB	2770	G	C4'-C3'-O3'	-7.78	101.33	113.00
2	AB	1521	G	O5'-C5'-C4'	7.78	123.17	111.50
2	AB	1807	G	C4'-C3'-C2'	-7.78	94.82	102.60
35	BA	1124	G	C5'-C4'-C3'	-7.78	103.53	115.20
35	BA	1465	A	C3'-C2'-O2'	7.78	122.37	110.70
2	AB	1902	C	O4'-C4'-C3'	7.78	111.78	104.00
2	AB	2425	A	O4'-C4'-C3'	-7.77	98.33	106.10
35	BA	773	G	O3'-P-O5'	-7.77	92.34	104.00
1	AA	113	C	O4'-C1'-N1	7.77	120.16	108.50
2	AB	2881	U	C1'-O4'-C4'	-7.77	102.13	109.90
1	AA	43	C	C1'-O4'-C4'	-7.77	101.93	109.70
19	AS	51	GLN	CA-C-N	7.77	131.02	120.38
19	AS	51	GLN	C-N-CA	7.77	131.02	120.38
35	BA	1237	C	O4'-C1'-C2'	-7.77	99.83	107.60
35	BA	1018	G	C4'-C3'-C2'	-7.77	94.83	102.60
11	AK	41	PHE	CA-CB-CG	7.76	121.56	113.80
2	AB	2334	U	C4'-C3'-C2'	-7.76	94.84	102.60
2	AB	2881	U	O4'-C4'-C3'	7.76	111.76	104.00
8	AH	14	VAL	N-CA-CB	-7.76	102.15	111.00
49	BO	4	ASN	CA-CB-CG	7.76	120.36	112.60
56	BV	57	VAL	CA-C-O	-7.76	114.70	119.51
20	AT	54	VAL	CA-C-N	7.76	132.10	120.31
20	AT	54	VAL	C-N-CA	7.76	132.10	120.31
36	BB	36	A	O4'-C1'-C2'	-7.75	99.84	107.60
2	AB	1558	C	C4'-C3'-C2'	-7.75	94.85	102.60
2	AB	137	U	O3'-P-O5'	-7.75	92.38	104.00
2	AB	250	G	C4'-C3'-C2'	-7.75	94.85	102.60
5	AE	23	PRO	N-CA-CB	7.75	110.18	103.36
22	AV	13	ALA	N-CA-C	7.75	117.05	108.14
44	BJ	5	VAL	CB-CA-C	7.75	122.88	111.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	378	G	O4'-C1'-N9	7.75	120.12	108.50
43	BI	83	ALA	N-CA-C	-7.75	102.78	111.07
35	BA	645	G	N9-C1'-C2'	-7.75	100.38	112.00
41	BG	137	SER	CA-C-N	7.75	127.80	119.90
41	BG	137	SER	C-N-CA	7.75	127.80	119.90
2	AB	1362	C	O4'-C1'-C2'	-7.74	99.86	107.60
2	AB	2731	G	O4'-C4'-C3'	7.74	111.74	104.00
2	AB	2686	G	C3'-C2'-O2'	7.74	122.31	110.70
6	AF	92	HIS	CA-CB-CG	7.74	121.54	113.80
21	AU	25	ARG	NE-CZ-NH1	7.74	129.24	121.50
2	AB	2869	G	N9-C1'-C2'	-7.74	100.39	112.00
2	AB	1687	G	O4'-C1'-C2'	-7.74	99.86	107.60
35	BA	195	A	C4'-C3'-C2'	-7.74	94.86	102.60
35	BA	722	G	O3'-P-O5'	7.74	115.61	104.00
2	AB	1450	G	C4'-C3'-O3'	7.73	124.60	113.00
2	AB	2362	C	O4'-C1'-N1	7.73	120.10	108.50
15	AO	55	ARG	NE-CZ-NH2	7.73	126.16	119.20
35	BA	797	C	O4'-C1'-C2'	-7.73	99.87	107.60
2	AB	1211	C	O4'-C1'-N1	7.73	119.80	108.20
17	AQ	49	VAL	N-CA-C	7.73	117.96	108.06
43	BI	6	ILE	CA-CB-CG1	7.73	123.54	110.40
35	BA	752	G	O4'-C1'-N9	7.73	119.79	108.20
2	AB	933	A	C4'-C3'-C2'	7.73	110.33	102.60
32	A5	33	ARG	CA-C-O	-7.73	112.36	120.55
33	A6	29	ARG	NE-CZ-NH1	-7.73	113.77	121.50
15	AO	133	LYS	N-CA-C	7.73	119.34	111.07
35	BA	451	A	O3'-P-O5'	7.72	115.58	104.00
2	AB	1472	C	C2'-C3'-O3'	-7.72	102.12	113.70
35	BA	1226	C	O3'-P-O5'	7.72	115.58	104.00
2	AB	1049	C	C4'-C3'-C2'	-7.72	94.88	102.60
2	AB	976	G	C4'-C3'-O3'	7.71	124.57	113.00
2	AB	2188	U	O4'-C1'-N1	7.71	120.07	108.50
2	AB	2730	C	O4'-C4'-C3'	7.71	111.72	104.00
2	AB	2821	A	C4'-C3'-C2'	-7.71	94.89	102.60
5	AE	174	SER	N-CA-C	7.71	122.27	112.86
41	BG	36	ALA	O-C-N	-7.71	115.11	121.12
2	AB	750	A	C5'-C4'-C3'	-7.71	104.44	116.00
2	AB	1362	C	C3'-C2'-C1'	7.71	109.01	101.30
40	BF	7	ASN	CA-CB-CG	7.71	120.31	112.60
2	AB	1613	G	O3'-P-O5'	-7.70	92.44	104.00
2	AB	817	C	C4'-C3'-C2'	-7.70	94.90	102.60
2	AB	2178	C	O4'-C4'-C3'	7.70	111.70	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	565	C	C5'-C4'-C3'	-7.70	104.45	116.00
2	AB	282	A	C4'-C3'-C2'	-7.69	94.91	102.60
2	AB	1774	C	C4'-C3'-O3'	-7.69	101.46	113.00
2	AB	2462	C	O4'-C4'-C3'	7.69	111.69	104.00
50	BP	66	GLY	CA-C-O	-7.69	112.09	120.40
2	AB	1205	A	O4'-C1'-N9	7.69	119.73	108.20
2	AB	176	A	C1'-O4'-C4'	7.69	117.59	109.90
2	AB	1002	G	O4'-C1'-N9	7.68	120.03	108.50
35	BA	66	A	C4'-C3'-O3'	-7.68	101.47	113.00
38	BD	24	C	C4'-C3'-C2'	-7.68	94.92	102.60
2	AB	967	U	C3'-C2'-C1'	-7.68	93.62	101.30
2	AB	769	U	O4'-C4'-C3'	7.68	111.68	104.00
2	AB	2618	G	O3'-P-O5'	-7.68	92.48	104.00
39	BE	73	ARG	O-C-N	7.68	130.26	122.12
2	AB	463	G	O4'-C1'-N9	7.68	120.02	108.50
20	AT	37	GLU	CA-C-N	7.68	132.27	122.37
20	AT	37	GLU	C-N-CA	7.68	132.27	122.37
32	A5	13	ASN	N-CA-C	7.68	120.62	111.33
2	AB	2707	U	O4'-C1'-N1	7.67	120.01	108.50
23	AW	52	ASN	CA-CB-CG	7.67	120.27	112.60
35	BA	907	A	C4'-C3'-C2'	-7.67	94.93	102.60
35	BA	231	U	O4'-C4'-C3'	7.67	111.67	104.00
35	BA	193	C	C4'-C3'-C2'	-7.67	94.93	102.60
2	AB	2492	U	O4'-C1'-N1	7.67	119.70	108.20
35	BA	1135	U	O4'-C1'-N1	7.67	120.00	108.50
2	AB	105	C	O4'-C4'-C3'	7.66	111.66	104.00
35	BA	1123	U	C5'-C4'-C3'	-7.66	104.50	116.00
2	AB	494	G	O4'-C4'-C3'	7.66	111.66	104.00
2	AB	2897	U	O4'-C4'-C3'	7.66	111.66	104.00
21	AU	102	HIS	CB-CG-CD2	-7.66	121.24	131.20
35	BA	147	G	O4'-C1'-C2'	-7.66	99.94	107.60
35	BA	1497	G	N9-C1'-C2'	-7.66	100.51	112.00
2	AB	1224	U	O4'-C1'-N1	7.66	119.99	108.50
1	AA	97	C	O5'-C5'-C4'	-7.66	100.02	111.50
2	AB	1850	G	O4'-C4'-C3'	7.66	111.66	104.00
12	AL	27	ARG	CA-C-O	-7.66	110.75	119.79
11	AK	47	SER	CA-C-N	7.65	132.24	122.37
11	AK	47	SER	C-N-CA	7.65	132.24	122.37
35	BA	1264	U	C4'-C3'-C2'	-7.65	94.95	102.60
2	AB	246	C	O4'-C4'-C3'	7.65	111.65	104.00
2	AB	2844	G	C4'-C3'-C2'	-7.65	94.95	102.60
35	BA	7	A	O4'-C4'-C3'	-7.65	96.35	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2594	C	O4'-C1'-N1	7.65	119.97	108.50
40	BF	139	ASN	OD1-CG-ND2	7.65	130.25	122.60
2	AB	2413	G	C5'-C4'-O4'	7.65	121.27	109.80
49	BO	24	GLU	CA-C-N	7.65	132.97	122.34
49	BO	24	GLU	C-N-CA	7.65	132.97	122.34
2	AB	2272	U	C3'-C2'-C1'	7.64	108.94	101.30
6	AF	108	ILE	CA-C-O	-7.64	112.39	120.57
2	AB	592	A	O4'-C1'-C2'	7.64	115.24	107.60
2	AB	932	U	O3'-P-O5'	-7.64	92.54	104.00
24	AX	27	PRO	N-CA-C	7.64	124.63	111.03
2	AB	46	G	C5'-C4'-C3'	-7.64	104.54	116.00
2	AB	1607	C	O4'-C4'-C3'	7.64	113.74	106.10
42	BH	96	GLN	OE1-CD-NE2	-7.64	114.96	122.60
2	AB	1570	A	C4'-C3'-C2'	-7.64	94.96	102.60
2	AB	2469	A	C1'-O4'-C4'	-7.63	102.27	109.90
6	AF	39	ALA	N-CA-C	-7.63	103.99	113.38
35	BA	1075	U	O4'-C1'-C2'	-7.63	99.97	107.60
2	AB	370	G	C4'-C3'-C2'	-7.63	94.97	102.60
49	BO	111	GLN	O-C-N	7.63	130.33	122.09
2	AB	1974	C	O4'-C1'-C2'	7.63	115.23	107.60
2	AB	1275	A	C1'-O4'-C4'	-7.63	102.27	109.90
35	BA	132	C	O4'-C1'-N1	7.63	119.94	108.50
35	BA	739	C	C5'-C4'-C3'	-7.63	104.56	116.00
2	AB	897	C	O4'-C1'-N1	7.62	119.94	108.50
2	AB	750	A	O5'-C5'-C4'	7.62	122.93	111.50
2	AB	970	U	O4'-C1'-C2'	-7.62	99.98	107.60
35	BA	1093	A	C4'-C3'-C2'	-7.62	94.98	102.60
2	AB	2726	A	C4'-C3'-C2'	7.62	110.22	102.60
2	AB	2232	C	C2'-C3'-O3'	-7.62	102.27	113.70
3	AC	79	THR	CA-CB-CG2	7.62	123.45	110.50
2	AB	1140	C	C3'-C2'-C1'	7.61	108.91	101.30
35	BA	139	A	O5'-C5'-C4'	-7.61	100.08	111.50
2	AB	727	A	C4'-C3'-C2'	-7.61	94.99	102.60
2	AB	734	A	C5'-C4'-O4'	7.61	121.21	109.80
2	AB	2501	C	C3'-C2'-O2'	7.61	122.11	110.70
1	AA	107	G	C5'-C4'-O4'	7.61	121.21	109.80
2	AB	156	A	O4'-C4'-C3'	7.61	111.61	104.00
2	AB	490	C	C3'-C2'-C1'	7.61	109.11	101.50
35	BA	1135	U	C4'-C3'-O3'	-7.60	101.59	113.00
2	AB	1775	U	O4'-C1'-N1	7.60	119.89	108.50
18	AR	21	PRO	N-CA-CB	7.60	110.07	103.31
36	BB	50	G	C5'-C4'-O4'	7.60	121.19	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	992	C	C4'-C3'-C2'	-7.59	95.01	102.60
2	AB	2347	C	O4'-C1'-C2'	-7.59	100.01	107.60
2	AB	2354	C	C5'-C4'-C3'	-7.59	104.61	116.00
2	AB	2383	G	C5'-C4'-C3'	-7.59	104.61	116.00
2	AB	2414	G	C5'-C4'-C3'	7.59	127.39	116.00
35	BA	694	A	C4'-C3'-C2'	-7.59	95.01	102.60
35	BA	1046	A	C4'-C3'-C2'	-7.59	95.01	102.60
48	BN	58	THR	O-C-N	7.59	127.27	121.88
35	BA	524	G	C3'-C2'-C1'	7.59	108.89	101.30
2	AB	366	C	C5'-C4'-C3'	7.59	127.38	116.00
2	AB	1971	U	C4'-C3'-O3'	7.59	124.38	113.00
2	AB	1131	G	C1'-C2'-O2'	7.58	123.17	111.80
11	AK	105	LEU	CA-C-O	-7.58	112.51	120.55
2	AB	44	A	C5'-C4'-C3'	-7.58	104.63	116.00
35	BA	745	G	C4'-C3'-C2'	7.58	110.18	102.60
6	AF	13	THR	CA-C-N	7.58	130.88	120.35
6	AF	13	THR	C-N-CA	7.58	130.88	120.35
35	BA	85	U	C4'-C3'-O3'	7.58	120.77	109.40
35	BA	1298	U	C5'-C4'-C3'	-7.58	103.83	115.20
35	BA	1310	G	C4'-C3'-C2'	-7.58	95.02	102.60
2	AB	1352	U	O4'-C1'-N1	7.58	119.86	108.50
2	AB	2897	U	C1'-O4'-C4'	-7.57	102.33	109.90
35	BA	355	C	C5'-C4'-O4'	7.57	121.16	109.80
2	AB	2873	A	O4'-C1'-C2'	-7.57	98.23	105.80
25	AY	17	ALA	N-CA-CB	-7.57	99.51	110.56
2	AB	1726	C	O4'-C1'-N1	7.57	119.86	108.50
35	BA	1510	C	C3'-C2'-C1'	-7.57	93.73	101.30
2	AB	984	A	C3'-C2'-C1'	7.57	109.07	101.50
4	AD	114	GLN	CA-C-N	7.57	132.76	122.01
4	AD	114	GLN	C-N-CA	7.57	132.76	122.01
2	AB	915	C	O4'-C4'-C3'	-7.57	96.44	104.00
23	AW	50	ALA	CA-C-O	-7.56	111.49	120.57
44	BJ	152	HIS	ND1-CG-CD2	7.56	113.66	106.10
2	AB	2617	U	C1'-O4'-C4'	-7.56	102.34	109.90
35	BA	487	A	O4'-C1'-C2'	-7.56	100.04	107.60
2	AB	1031	G	C5'-C4'-C3'	7.56	127.34	116.00
2	AB	653	U	C3'-C2'-C1'	7.56	108.86	101.30
51	BQ	10	VAL	CA-C-O	-7.56	113.09	120.95
29	A2	4	ASP	CA-C-O	-7.56	111.56	120.10
35	BA	61	G	C3'-C2'-O2'	7.55	122.03	110.70
38	BD	9	G	C3'-C2'-C1'	7.55	108.85	101.30
48	BN	54	SER	N-CA-CB	-7.55	99.02	110.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	496	G	C5'-C4'-C3'	-7.55	104.68	116.00
2	AB	889	C	O4'-C1'-N1	7.55	119.82	108.50
16	AP	11	ASN	CA-CB-CG	7.54	120.14	112.60
2	AB	184	C	C4'-C3'-C2'	-7.54	95.06	102.60
3	AC	172	HIS	ND1-CG-CD2	7.54	113.64	106.10
18	AR	16	VAL	CA-C-N	7.54	127.55	119.78
18	AR	16	VAL	C-N-CA	7.54	127.55	119.78
35	BA	396	C	O4'-C1'-N1	7.54	119.81	108.50
2	AB	2610	C	C3'-C2'-C1'	7.54	109.03	101.50
35	BA	1035	A	O4'-C4'-C3'	7.54	111.54	104.00
2	AB	1694	C	O4'-C1'-N1	7.53	119.50	108.20
26	AZ	64	ASP	O-C-N	7.53	130.10	122.12
35	BA	166	U	C4'-C3'-C2'	-7.53	95.07	102.60
35	BA	554	A	O4'-C4'-C3'	-7.53	96.47	104.00
35	BA	637	C	O4'-C4'-C3'	7.53	111.53	104.00
2	AB	1032	A	O4'-C4'-C3'	7.53	111.53	104.00
2	AB	1851	U	C1'-O4'-C4'	7.53	117.43	109.90
5	AE	67	HIS	ND1-CG-CD2	7.53	113.63	106.10
2	AB	79	C	O4'-C1'-C2'	-7.53	100.08	107.60
25	AY	41	GLY	N-CA-C	7.53	122.75	114.40
35	BA	1266	G	O3'-P-O5'	7.52	115.28	104.00
39	BE	56	LEU	CA-C-O	-7.52	112.95	120.70
35	BA	1364	U	O4'-C1'-C2'	-7.52	100.08	107.60
2	AB	2759	G	O4'-C1'-N9	7.52	119.77	108.50
35	BA	1026	G	C3'-C2'-O2'	7.52	121.97	110.70
2	AB	2184	A	C4'-C3'-C2'	7.51	110.11	102.60
2	AB	2813	A	C4'-C3'-C2'	-7.51	95.09	102.60
2	AB	2637	U	O3'-P-O5'	7.51	115.27	104.00
2	AB	732	C	C3'-C2'-C1'	7.51	108.81	101.30
2	AB	2123	G	C4'-C3'-O3'	7.51	124.26	113.00
35	BA	1191	A	O5'-C5'-C4'	-7.51	100.24	111.50
10	AJ	137	ARG	NE-CZ-NH1	-7.50	114.00	121.50
35	BA	1091	U	C5'-C4'-C3'	-7.50	104.74	116.00
35	BA	678	U	C5'-C4'-O4'	7.50	121.06	109.80
2	AB	934	U	C3'-C2'-O2'	7.50	121.95	110.70
2	AB	2174	C	C3'-C2'-O2'	7.50	121.95	110.70
2	AB	2338	C	O4'-C4'-C3'	7.50	111.50	104.00
35	BA	234	C	C5'-C4'-C3'	7.50	127.25	116.00
2	AB	1034	G	C5'-C4'-C3'	-7.50	104.75	116.00
8	AH	162	ARG	NE-CZ-NH1	-7.50	114.00	121.50
35	BA	1257	A	O4'-C4'-C3'	7.49	111.49	104.00
2	AB	680	C	C4'-C3'-O3'	7.49	124.24	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2192	U	O4'-C4'-C3'	7.49	111.49	104.00
28	A1	16	LEU	CA-C-N	7.49	127.01	118.85
28	A1	16	LEU	C-N-CA	7.49	127.01	118.85
35	BA	197	A	C4'-C3'-O3'	-7.49	98.17	109.40
48	BN	119	GLY	CA-C-N	7.49	131.76	121.05
48	BN	119	GLY	C-N-CA	7.49	131.76	121.05
2	AB	277	G	P-O5'-C5'	7.48	132.13	120.90
35	BA	9	G	C4'-C3'-C2'	-7.48	95.12	102.60
2	AB	2474	U	C3'-C2'-C1'	7.48	108.78	101.30
2	AB	1085	A	O4'-C1'-N9	7.48	119.72	108.50
35	BA	188	C	O4'-C1'-C2'	-7.48	100.12	107.60
35	BA	1176	A	C3'-C2'-C1'	7.48	108.78	101.30
35	BA	1374	A	C5'-C4'-C3'	-7.48	104.78	116.00
2	AB	1697	G	C1'-C2'-O2'	7.48	119.62	108.40
2	AB	1931	U	O4'-C4'-C3'	7.47	111.47	104.00
20	AT	26	ASP	CA-C-N	7.47	130.52	120.50
20	AT	26	ASP	C-N-CA	7.47	130.52	120.50
35	BA	1364	U	C5'-C4'-C3'	-7.47	104.79	116.00
40	BF	55	VAL	CA-C-O	-7.47	112.85	120.25
56	BV	85	ASP	CA-C-N	7.47	131.41	120.95
56	BV	85	ASP	C-N-CA	7.47	131.41	120.95
4	AD	242	HIS	CB-CG-CD2	-7.47	121.49	131.20
35	BA	440	C	C3'-C2'-C1'	7.47	108.77	101.30
39	BE	17	HIS	CA-CB-CG	7.47	121.27	113.80
2	AB	1076	C	C4'-C3'-O3'	7.47	124.20	113.00
2	AB	1122	G	C3'-C2'-C1'	-7.47	93.83	101.30
16	AP	87	PHE	CA-C-N	7.47	131.28	120.38
16	AP	87	PHE	C-N-CA	7.47	131.28	120.38
35	BA	316	C	C3'-C2'-C1'	7.46	108.76	101.30
2	AB	812	C	O4'-C1'-N1	7.46	119.69	108.50
2	AB	2773	C	O4'-C1'-N1	7.46	119.69	108.50
2	AB	399	U	C5'-C4'-O4'	7.46	120.99	109.80
19	AS	50	ARG	NE-CZ-NH2	-7.46	112.49	119.20
35	BA	1098	C	O3'-P-O5'	-7.46	92.81	104.00
6	AF	89	PRO	CA-C-O	-7.46	113.25	121.23
2	AB	1294	U	O4'-C4'-C3'	-7.46	96.54	104.00
39	BE	222	GLU	CA-C-N	7.46	128.22	119.94
39	BE	222	GLU	C-N-CA	7.46	128.22	119.94
2	AB	701	G	N9-C1'-C2'	-7.45	100.82	112.00
2	AB	1832	C	C4'-C3'-C2'	-7.45	95.15	102.60
30	A3	54	ILE	CB-CA-C	7.45	123.51	111.29
35	BA	1291	U	C4'-C3'-C2'	-7.45	95.15	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AU	60	HIS	CB-CG-CD2	-7.45	121.52	131.20
2	AB	2402	U	C4'-C3'-C2'	-7.45	95.15	102.60
2	AB	1929	G	O4'-C1'-N9	7.45	119.37	108.20
40	BF	69	THR	CA-C-N	7.45	133.34	120.68
40	BF	69	THR	C-N-CA	7.45	133.34	120.68
2	AB	60	G	C5'-C4'-C3'	-7.44	104.03	115.20
2	AB	142	A	C3'-C2'-C1'	7.44	108.74	101.30
2	AB	2893	A	O3'-P-O5'	-7.44	92.84	104.00
35	BA	647	C	O4'-C1'-C2'	-7.44	100.16	107.60
35	BA	1077	G	O3'-P-O5'	-7.44	92.84	104.00
2	AB	82	U	O4'-C1'-N1	7.44	119.66	108.50
2	AB	2685	G	O4'-C4'-C3'	7.44	111.44	104.00
20	AT	93	PHE	CA-CB-CG	7.44	121.24	113.80
35	BA	977	A	C4'-C3'-C2'	7.44	110.04	102.60
2	AB	189	G	O4'-C1'-C2'	-7.44	100.16	107.60
2	AB	410	G	C3'-C2'-C1'	-7.44	93.86	101.30
2	AB	654	A	C5'-C4'-O4'	7.44	120.96	109.80
2	AB	1493	C	O4'-C1'-C2'	-7.44	100.16	107.60
10	AJ	100	LYS	CA-C-O	-7.44	112.53	120.42
3	AC	185	LEU	CA-C-O	-7.44	113.01	120.82
35	BA	1143	G	C4'-C3'-O3'	7.44	124.15	113.00
35	BA	562	U	O4'-C1'-C2'	7.43	113.23	105.80
35	BA	1492	A	C2'-C3'-O3'	7.43	120.65	109.50
2	AB	726	G	O3'-P-O5'	-7.43	92.85	104.00
7	AG	140	ILE	CA-C-O	-7.43	112.62	120.57
35	BA	902	G	C5'-C4'-C3'	-7.43	104.86	116.00
35	BA	1315	U	O4'-C1'-N1	7.43	119.64	108.50
35	BA	304	U	O4'-C1'-C2'	-7.43	100.17	107.60
52	BR	17	ASP	CA-CB-CG	7.43	120.03	112.60
35	BA	767	A	C4'-C3'-C2'	-7.43	95.17	102.60
2	AB	2863	C	O4'-C1'-N1	7.42	119.64	108.50
27	A0	49	ASP	CA-CB-CG	7.42	120.03	112.60
35	BA	1257	A	O4'-C1'-C2'	-7.42	100.18	107.60
43	BI	37	HIS	ND1-CE1-NE2	7.42	115.82	108.40
35	BA	981	U	C4'-C3'-O3'	7.42	124.13	113.00
2	AB	2748	A	C5'-C4'-C3'	-7.42	104.87	116.00
4	AD	202	ARG	NE-CZ-NH1	7.42	128.92	121.50
35	BA	570	G	C5'-C4'-C3'	-7.42	104.88	116.00
2	AB	552	U	C3'-C2'-C1'	7.42	108.72	101.30
2	AB	1879	C	O4'-C4'-C3'	7.42	111.42	104.00
2	AB	1595	C	C4'-C3'-C2'	-7.41	95.19	102.60
2	AB	1806	C	N1-C1'-C2'	-7.41	100.88	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	988	G	C5'-C4'-C3'	-7.41	104.88	116.00
1	AA	12	C	O4'-C1'-C2'	7.41	113.21	105.80
2	AB	923	G	N9-C1'-C2'	-7.41	100.89	112.00
6	AF	35	TYR	CA-C-N	7.41	131.57	120.31
6	AF	35	TYR	C-N-CA	7.41	131.57	120.31
35	BA	269	C	O4'-C1'-N1	7.41	119.61	108.50
2	AB	752	A	O4'-C1'-N9	7.41	119.31	108.20
2	AB	1591	A	C4'-C3'-O3'	7.41	124.11	113.00
2	AB	229	C	C3'-C2'-O2'	7.40	121.81	110.70
2	AB	2079	U	C5'-C4'-O4'	7.40	120.91	109.80
26	AZ	30	PRO	N-CA-CB	7.40	109.90	103.31
35	BA	649	A	O4'-C1'-C2'	-7.40	100.20	107.60
2	AB	1493	C	C1'-O4'-C4'	7.40	117.30	109.90
12	AL	110	PRO	N-CA-CB	7.40	109.50	103.36
35	BA	47	C	C5'-C4'-C3'	-7.40	104.10	115.20
35	BA	789	U	O4'-C4'-C3'	7.40	111.40	104.00
11	AK	27	LEU	O-C-N	7.40	129.69	122.07
2	AB	175	G	C4'-C3'-C2'	-7.40	95.20	102.60
35	BA	410	G	C1'-O4'-C4'	-7.39	102.51	109.90
35	BA	589	U	O4'-C1'-N1	7.39	119.59	108.50
35	BA	828	U	C4'-C3'-C2'	-7.39	95.21	102.60
2	AB	1160	G	C4'-C3'-C2'	-7.39	95.21	102.60
2	AB	2608	G	C4'-C3'-C2'	-7.39	95.21	102.60
35	BA	1028	C	C5'-C4'-O4'	7.39	120.88	109.80
35	BA	1074	G	O4'-C4'-C3'	7.39	111.39	104.00
35	BA	1314	C	O4'-C4'-C3'	7.39	111.39	104.00
35	BA	290	C	C5'-C4'-O4'	7.39	120.88	109.80
35	BA	387	U	O4'-C4'-C3'	7.38	111.39	104.00
13	AM	109	SER	CA-C-N	7.38	130.50	120.38
13	AM	109	SER	C-N-CA	7.38	130.50	120.38
35	BA	710	G	C4'-C3'-C2'	-7.38	95.22	102.60
2	AB	1926	U	C4'-C3'-C2'	-7.38	95.22	102.60
2	AB	2060	A	C1'-C2'-O2'	7.38	122.87	111.80
35	BA	2	A	O4'-C1'-C2'	-7.38	100.22	107.60
2	AB	1234	U	O4'-C1'-N1	7.38	119.57	108.50
35	BA	144	G	C4'-C3'-C2'	-7.38	95.22	102.60
2	AB	492	A	O4'-C4'-C3'	7.38	111.38	104.00
19	AS	41	ALA	N-CA-CB	7.37	120.93	109.94
2	AB	1373	A	C4'-C3'-C2'	-7.37	95.23	102.60
17	AQ	108	ASP	CA-CB-CG	-7.37	105.23	112.60
35	BA	686	U	C2'-C3'-O3'	7.37	120.56	109.50
35	BA	749	A	O4'-C1'-N9	7.37	119.56	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1781	U	O4'-C1'-N1	7.37	119.55	108.50
2	AB	2657	A	O4'-C4'-C3'	7.37	111.37	104.00
35	BA	1043	G	C5'-C4'-C3'	-7.37	104.95	116.00
35	BA	1163	A	C4'-C3'-C2'	7.37	109.97	102.60
3	AC	165	ASN	O-C-N	-7.36	114.69	122.94
35	BA	176	C	O4'-C4'-C3'	7.36	111.36	104.00
2	AB	1066	U	C5'-C4'-C3'	-7.36	104.96	116.00
35	BA	1328	C	O4'-C4'-C3'	7.36	111.36	104.00
2	AB	679	C	O3'-P-O5'	7.36	115.03	104.00
2	AB	1660	G	C4'-C3'-C2'	-7.36	95.24	102.60
7	AG	134	GLN	OE1-CD-NE2	-7.36	115.25	122.60
35	BA	1285	A	P-O3'-C3'	7.35	131.23	120.20
2	AB	1877	A	C4'-C3'-C2'	-7.35	95.25	102.60
37	BC	17	U	C5'-C4'-C3'	-7.35	104.97	116.00
58	BX	56	ALA	N-CA-C	7.35	118.94	111.07
2	AB	1918	A	O4'-C1'-N9	7.35	119.23	108.20
28	A1	25	GLY	O-C-N	-7.35	115.13	122.19
35	BA	467	U	C1'-O4'-C4'	7.35	117.05	109.70
2	AB	1981	A	O4'-C4'-C3'	7.35	111.35	104.00
35	BA	4	U	O4'-C4'-C3'	-7.35	96.65	104.00
35	BA	851	G	C3'-C2'-O2'	-7.35	99.68	110.70
9	AI	91	PHE	CA-CB-CG	7.35	121.15	113.80
57	BW	23	ARG	CA-C-N	7.35	130.43	120.44
57	BW	23	ARG	C-N-CA	7.35	130.43	120.44
56	BV	69	LYS	CA-C-N	7.35	130.86	120.28
56	BV	69	LYS	C-N-CA	7.35	130.86	120.28
2	AB	1806	C	C4'-C3'-C2'	-7.34	95.26	102.60
24	AX	88	HIS	CB-CG-CD2	-7.34	121.65	131.20
35	BA	142	G	C4'-C3'-C2'	-7.34	95.26	102.60
35	BA	1359	C	O3'-P-O5'	-7.34	92.98	104.00
38	BD	7	G	C4'-C3'-O3'	7.34	124.02	113.00
57	BW	19	HIS	CA-CB-CG	7.34	121.14	113.80
12	AL	91	GLU	CA-C-N	7.34	130.85	120.28
12	AL	91	GLU	C-N-CA	7.34	130.85	120.28
48	BN	9	LYS	O-C-N	-7.34	114.29	121.85
48	BN	123	PRO	N-CA-CB	7.34	109.84	103.31
35	BA	382	A	C3'-C2'-O2'	7.34	121.71	110.70
40	BF	20	THR	CA-CB-CG2	7.34	122.97	110.50
11	AK	17	ALA	CA-C-N	7.34	128.88	119.78
11	AK	17	ALA	C-N-CA	7.34	128.88	119.78
35	BA	455	G	N9-C1'-C2'	7.34	123.01	112.00
35	BA	1284	C	O5'-C5'-C4'	7.34	122.50	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	51	G	O3'-P-O5'	-7.33	93.00	104.00
2	AB	371	A	O5'-C5'-C4'	7.33	122.70	111.70
2	AB	1386	C	N1-C1'-C2'	-7.33	101.00	112.00
2	AB	2311	A	O4'-C1'-C2'	-7.33	98.47	105.80
2	AB	2551	C	C4'-C3'-O3'	-7.33	102.00	113.00
15	AO	131	VAL	CB-CA-C	7.33	121.48	110.63
35	BA	98	A	O4'-C4'-C3'	7.33	111.33	104.00
35	BA	1079	G	C4'-C3'-C2'	-7.33	95.27	102.60
43	BI	55	HIS	CA-CB-CG	7.33	121.13	113.80
2	AB	2152	G	C5'-C4'-C3'	-7.33	105.01	116.00
54	BT	28	VAL	CA-C-O	-7.33	112.78	121.28
1	AA	47	C	O4'-C1'-N1	7.33	119.49	108.50
2	AB	10	A	C4'-C3'-C2'	-7.33	95.28	102.60
35	BA	145	G	C4'-C3'-C2'	-7.33	95.28	102.60
37	BC	15	G	O4'-C1'-N9	7.33	119.49	108.50
25	AY	61	LYS	O-C-N	-7.32	113.38	122.24
35	BA	326	G	C1'-C2'-O2'	7.32	122.79	111.80
35	BA	1060	U	C4'-C3'-C2'	-7.32	95.28	102.60
44	BJ	12	LEU	CA-C-N	7.32	128.99	119.84
44	BJ	12	LEU	C-N-CA	7.32	128.99	119.84
35	BA	1226	C	C2'-C3'-O3'	7.32	120.48	109.50
2	AB	1940	U	C1'-O4'-C4'	-7.32	102.38	109.70
35	BA	183	C	O4'-C1'-N1	7.32	119.48	108.50
35	BA	1072	G	C2'-C3'-O3'	-7.32	102.72	113.70
2	AB	2059	A	O3'-P-O5'	7.32	114.97	104.00
7	AG	164	GLU	CA-C-N	7.32	128.05	120.00
7	AG	164	GLU	C-N-CA	7.32	128.05	120.00
30	A3	12	ARG	NE-CZ-NH1	7.32	128.81	121.50
2	AB	1172	C	C4'-C3'-C2'	-7.31	95.29	102.60
39	BE	176	ASN	CA-CB-CG	7.31	119.91	112.60
29	A2	50	ASP	CA-CB-CG	7.31	119.91	112.60
35	BA	1024	G	C4'-C3'-C2'	-7.31	95.29	102.60
2	AB	779	U	C4'-C3'-C2'	-7.31	95.29	102.60
2	AB	1199	U	O4'-C4'-C3'	7.31	111.31	104.00
2	AB	1869	G	O5'-C5'-C4'	-7.31	100.54	111.50
2	AB	2779	U	C5'-C4'-C3'	-7.31	104.23	115.20
35	BA	107	G	O4'-C4'-C3'	7.31	111.31	104.00
35	BA	1005	A	C4'-C3'-C2'	-7.31	95.29	102.60
35	BA	1473	G	C4'-C3'-C2'	-7.31	95.29	102.60
2	AB	2736	A	O4'-C1'-N9	7.31	119.46	108.50
2	AB	2595	G	O4'-C1'-N9	7.30	119.45	108.50
12	AL	28	LEU	N-CA-C	-7.30	103.25	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1504	G	C1'-O4'-C4'	-7.30	102.39	109.70
2	AB	2848	G	C3'-C2'-C1'	-7.30	94.20	101.50
9	AI	123	ARG	NE-CZ-NH2	-7.30	112.63	119.20
35	BA	48	C	C5'-C4'-C3'	-7.30	104.25	115.20
1	AA	54	G	O4'-C4'-C3'	7.30	111.30	104.00
35	BA	410	G	C4'-C3'-C2'	-7.30	95.30	102.60
35	BA	552	U	O4'-C4'-C3'	7.30	111.30	104.00
2	AB	1149	G	C1'-O4'-C4'	-7.30	102.60	109.90
2	AB	1632	A	O3'-P-O5'	7.30	114.95	104.00
8	AH	105	SER	CA-C-N	7.30	134.65	121.15
8	AH	105	SER	C-N-CA	7.30	134.65	121.15
2	AB	2341	G	C1'-O4'-C4'	-7.29	102.61	109.90
56	BV	50	VAL	N-CA-CB	7.29	120.80	111.83
17	AQ	63	LYS	CA-C-O	-7.29	112.69	120.42
35	BA	20	U	C3'-C2'-O2'	7.29	121.64	110.70
35	BA	1159	U	O4'-C1'-N1	7.29	119.44	108.50
2	AB	421	C	O4'-C1'-N1	7.29	119.14	108.20
35	BA	239	U	C1'-O4'-C4'	-7.29	102.61	109.90
2	AB	610	C	C3'-C2'-C1'	7.29	108.59	101.30
2	AB	1746	A	O3'-P-O5'	-7.29	93.07	104.00
38	BD	64	G	C5'-C4'-C3'	-7.29	105.07	116.00
2	AB	2154	A	C5'-C4'-C3'	-7.29	105.07	116.00
2	AB	2446	G	O4'-C1'-C2'	-7.29	100.31	107.60
2	AB	445	C	C4'-C3'-C2'	-7.28	95.32	102.60
2	AB	1121	C	O4'-C1'-N1	7.28	119.42	108.50
35	BA	626	G	C1'-O4'-C4'	7.28	117.18	109.90
2	AB	60	G	C1'-O4'-C4'	-7.28	102.42	109.70
10	AJ	139	MET	CA-C-O	-7.28	112.71	120.42
35	BA	1159	U	C3'-C2'-C1'	7.28	108.58	101.30
48	BN	79	LYS	CA-C-N	7.28	133.97	122.62
48	BN	79	LYS	C-N-CA	7.28	133.97	122.62
50	BP	54	THR	CA-CB-OG1	7.28	120.51	109.60
2	AB	527	C	P-O3'-C3'	7.27	131.11	120.20
12	AL	32	LEU	CA-C-N	7.27	130.34	120.38
12	AL	32	LEU	C-N-CA	7.27	130.34	120.38
2	AB	1849	G	O4'-C4'-C3'	7.27	111.27	104.00
35	BA	97	G	C4'-C3'-C2'	-7.27	95.33	102.60
35	BA	220	G	N9-C1'-C2'	-7.27	101.09	112.00
35	BA	1093	A	O4'-C4'-C3'	7.27	111.27	104.00
2	AB	81	G	C2'-C3'-O3'	-7.27	102.80	113.70
35	BA	1201	A	P-O3'-C3'	7.27	131.10	120.20
2	AB	523	C	N1-C1'-C2'	-7.26	101.11	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	873	A	O5'-C5'-C4'	7.26	122.59	111.70
2	AB	2447	G	C4'-C3'-C2'	-7.26	95.34	102.60
21	AU	86	MET	CA-C-O	-7.26	113.95	119.32
35	BA	652	U	C4'-C3'-C2'	-7.26	95.34	102.60
38	BD	10	G	C4'-C3'-C2'	-7.26	95.34	102.60
2	AB	757	G	C3'-C2'-O2'	7.26	121.59	110.70
2	AB	1237	A	C2'-C3'-O3'	7.26	120.39	109.50
2	AB	2660	A	C4'-C3'-C2'	-7.26	95.34	102.60
21	AU	17	VAL	CA-C-O	-7.26	112.94	120.71
35	BA	226	G	C3'-C2'-O2'	7.26	121.59	110.70
2	AB	2349	G	C1'-C2'-O2'	7.26	119.29	108.40
2	AB	914	G	C1'-C2'-O2'	7.26	119.28	108.40
2	AB	1142	A	C2'-C3'-O3'	7.26	120.38	109.50
15	AO	44	ARG	CA-C-N	7.25	130.31	120.44
15	AO	44	ARG	C-N-CA	7.25	130.31	120.44
35	BA	222	C	C3'-C2'-O2'	7.25	121.58	110.70
2	AB	421	C	N1-C1'-C2'	-7.25	103.12	114.00
2	AB	2423	U	C5'-C4'-O4'	7.25	119.98	109.10
2	AB	2732	G	C3'-C2'-O2'	7.25	121.58	110.70
35	BA	101	A	C3'-C2'-C1'	-7.25	94.05	101.30
35	BA	167	A	O4'-C1'-C2'	-7.25	100.35	107.60
2	AB	2761	A	C4'-C3'-C2'	-7.25	95.35	102.60
13	AM	41	ILE	O-C-N	-7.25	115.74	123.14
35	BA	172	A	O4'-C4'-C3'	7.25	111.25	104.00
35	BA	652	U	C3'-C2'-C1'	7.25	108.75	101.50
45	BK	89	ASP	CA-CB-CG	7.25	119.85	112.60
50	BP	8	ILE	CA-C-N	7.25	127.51	119.90
50	BP	8	ILE	C-N-CA	7.25	127.51	119.90
2	AB	1512	C	O4'-C1'-C2'	-7.25	100.35	107.60
35	BA	513	C	O4'-C1'-C2'	-7.25	100.35	107.60
52	BR	14	PHE	CA-CB-CG	7.25	121.05	113.80
2	AB	2302	U	C4'-C3'-O3'	7.25	123.87	113.00
42	BH	88	HIS	CB-CG-CD2	-7.25	121.78	131.20
34	A7	22	VAL	CA-CB-CG2	7.25	122.72	110.40
35	BA	849	G	C3'-C2'-C1'	7.25	108.55	101.30
2	AB	180	G	C3'-C2'-C1'	-7.24	94.06	101.30
2	AB	430	A	O4'-C4'-C3'	7.24	111.24	104.00
35	BA	1080	A	C4'-C3'-C2'	-7.24	95.36	102.60
40	BF	22	PHE	CA-CB-CG	-7.24	106.56	113.80
2	AB	532	A	C5'-C4'-O4'	-7.24	98.24	109.10
6	AF	176	ASP	CA-CB-CG	7.24	119.84	112.60
24	AX	31	TYR	CA-C-N	7.24	134.45	122.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AX	31	TYR	C-N-CA	7.24	134.45	122.43
35	BA	119	A	C4'-C3'-C2'	-7.24	95.36	102.60
2	AB	1893	C	O4'-C1'-C2'	-7.24	100.36	107.60
2	AB	2779	U	C1'-C2'-O2'	-7.24	100.95	111.80
15	AO	54	THR	N-CA-C	7.24	120.03	111.71
35	BA	1114	C	P-O3'-C3'	7.24	131.05	120.20
2	AB	1794	A	C5'-C4'-C3'	-7.23	105.15	116.00
2	AB	1314	C	O4'-C4'-C3'	7.23	111.23	104.00
35	BA	1295	U	C5'-C4'-O4'	7.23	120.64	109.80
36	BB	36	A	C3'-C2'-C1'	7.23	108.53	101.30
2	AB	1322	A	C4'-C3'-C2'	-7.23	95.37	102.60
2	AB	1580	A	C3'-C2'-C1'	-7.23	94.07	101.30
2	AB	620	G	O4'-C1'-N9	7.23	119.04	108.20
2	AB	373	U	O5'-C5'-C4'	-7.22	100.66	111.50
22	AV	70	HIS	CA-CB-CG	7.22	121.02	113.80
2	AB	2595	G	C4'-C3'-C2'	-7.22	95.38	102.60
17	AQ	56	LYS	CB-CG-CD	7.22	127.91	111.30
35	BA	521	G	O4'-C1'-C2'	7.22	114.82	107.60
2	AB	1839	G	C3'-C2'-C1'	7.22	108.52	101.30
4	AD	124	LYS	O-C-N	7.22	129.62	121.53
18	AR	20	ARG	NE-CZ-NH2	7.22	125.70	119.20
2	AB	1319	C	C4'-C3'-C2'	-7.22	95.38	102.60
2	AB	2734	A	C5'-C4'-C3'	-7.22	105.17	116.00
2	AB	2897	U	C4'-C3'-C2'	-7.22	95.38	102.60
2	AB	2252	G	P-O5'-C5'	7.21	131.72	120.90
35	BA	458	U	C4'-C3'-O3'	7.21	123.82	113.00
35	BA	923	A	O3'-P-O5'	7.21	114.82	104.00
2	AB	1888	G	O4'-C1'-N9	7.21	119.32	108.50
2	AB	1963	U	O5'-C5'-C4'	-7.21	100.68	111.50
2	AB	2078	C	C4'-C3'-C2'	-7.21	95.39	102.60
2	AB	830	G	O5'-C5'-C4'	7.21	122.52	111.70
2	AB	1646	C	C3'-C2'-C1'	7.21	108.51	101.30
35	BA	763	G	C3'-C2'-C1'	7.21	108.51	101.30
2	AB	583	G	O4'-C1'-C2'	-7.21	100.39	107.60
2	AB	2350	C	O5'-C5'-C4'	7.21	122.32	111.50
2	AB	813	U	C4'-C3'-C2'	-7.21	95.39	102.60
2	AB	1982	U	C4'-C3'-C2'	-7.21	95.39	102.60
17	AQ	41	ALA	CA-C-N	7.21	126.91	119.56
17	AQ	41	ALA	C-N-CA	7.21	126.91	119.56
2	AB	94	A	O4'-C1'-N9	7.21	119.31	108.50
2	AB	242	G	C2'-C3'-O3'	7.21	120.31	109.50
2	AB	1562	U	O4'-C1'-N1	7.21	119.31	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1083	U	C2'-C3'-O3'	-7.20	102.89	113.70
2	AB	2323	G	C4'-C3'-C2'	-7.20	95.40	102.60
35	BA	497	G	C4'-C3'-O3'	7.20	123.81	113.00
35	BA	878	A	O3'-P-O5'	-7.20	93.19	104.00
2	AB	1590	A	O4'-C1'-N9	7.20	119.30	108.50
11	AK	33	ASN	O-C-N	7.20	131.70	123.06
10	AJ	6	ASP	O-C-N	-7.20	114.49	122.12
37	BC	42	U	O4'-C4'-C3'	7.20	111.20	104.00
35	BA	468	A	O4'-C1'-N9	7.20	119.30	108.50
36	BB	51	G	O4'-C1'-N9	7.20	119.30	108.50
54	BT	40	THR	CA-C-N	7.20	132.34	122.19
54	BT	40	THR	C-N-CA	7.20	132.34	122.19
35	BA	701	U	O3'-P-O5'	-7.20	93.20	104.00
56	BV	35	ARG	CA-C-N	7.20	132.74	120.72
56	BV	35	ARG	C-N-CA	7.20	132.74	120.72
46	BL	79	ARG	CA-C-O	-7.20	111.69	119.97
14	AN	95	LEU	N-CA-C	-7.19	103.81	112.59
35	BA	118	U	C1'-C2'-O2'	-7.19	97.61	108.40
2	AB	1303	G	O4'-C4'-C3'	7.19	111.19	104.00
2	AB	1776	G	C5'-C4'-O4'	7.19	120.59	109.80
2	AB	2557	G	C5'-C4'-C3'	-7.19	105.21	116.00
35	BA	597	G	O4'-C1'-N9	7.19	119.29	108.50
2	AB	665	U	O4'-C4'-C3'	7.19	111.19	104.00
2	AB	2527	C	O4'-C4'-C3'	7.19	111.19	104.00
35	BA	246	A	O4'-C1'-C2'	-7.19	98.61	105.80
35	BA	823	C	O4'-C1'-C2'	-7.19	100.41	107.60
16	AP	64	ARG	NE-CZ-NH2	7.19	125.67	119.20
2	AB	2696	U	C5'-C4'-O4'	7.19	120.58	109.80
35	BA	613	C	C3'-C2'-C1'	7.19	108.49	101.30
50	BP	69	ARG	NE-CZ-NH2	-7.18	112.73	119.20
1	AA	113	C	O4'-C1'-C2'	-7.18	100.42	107.60
2	AB	950	G	C1'-O4'-C4'	7.18	117.08	109.90
2	AB	2227	A	C1'-C2'-O2'	7.18	119.17	108.40
35	BA	660	C	O4'-C1'-N1	7.18	119.27	108.50
46	BL	7	GLY	CA-C-O	-7.18	114.64	121.11
2	AB	326	G	C3'-C2'-O2'	7.18	121.47	110.70
35	BA	1536	C	C3'-C2'-C1'	-7.18	94.12	101.30
57	BW	56	ILE	CA-C-O	-7.18	113.08	121.05
2	AB	167	A	C3'-C2'-O2'	7.18	121.47	110.70
2	AB	312	G	C3'-C2'-C1'	-7.18	94.12	101.30
2	AB	2677	G	C4'-C3'-C2'	-7.18	95.42	102.60
35	BA	751	U	O3'-P-O5'	-7.18	93.23	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	BM	54	SER	CA-C-N	7.18	126.71	119.24
47	BM	54	SER	C-N-CA	7.18	126.71	119.24
4	AD	231	HIS	CA-CB-CG	7.17	120.97	113.80
35	BA	1063	C	O4'-C1'-C2'	-7.17	100.42	107.60
2	AB	738	G	O4'-C4'-C3'	-7.17	96.83	104.00
35	BA	1059	C	O4'-C1'-N1	7.17	119.26	108.50
45	BK	35	ILE	CA-C-N	7.17	130.61	120.28
45	BK	35	ILE	C-N-CA	7.17	130.61	120.28
35	BA	173	U	P-O3'-C3'	7.17	130.96	120.20
38	BD	34	U	O4'-C1'-C2'	7.17	114.77	107.60
2	AB	126	A	C1'-O4'-C4'	-7.17	102.73	109.90
2	AB	674	G	O4'-C4'-C3'	7.17	111.17	104.00
45	BK	120	LEU	CA-C-N	7.17	130.15	122.69
45	BK	120	LEU	C-N-CA	7.17	130.15	122.69
4	AD	68	ARG	CD-NE-CZ	7.17	134.43	124.40
2	AB	556	A	O4'-C4'-C3'	7.17	111.17	104.00
2	AB	2502	G	C3'-C2'-C1'	7.17	108.67	101.50
35	BA	180	U	C3'-C2'-O2'	7.17	121.45	110.70
2	AB	1702	G	C1'-O4'-C4'	-7.16	102.74	109.90
35	BA	1011	C	O4'-C1'-N1	7.16	119.25	108.50
37	BC	43	U	C4'-C3'-O3'	7.16	120.14	109.40
35	BA	805	C	O4'-C1'-C2'	-7.16	100.44	107.60
2	AB	206	U	C1'-O4'-C4'	-7.16	102.74	109.90
11	AK	27	LEU	CA-C-N	7.16	128.05	120.03
11	AK	27	LEU	C-N-CA	7.16	128.05	120.03
35	BA	577	G	C1'-O4'-C4'	7.16	117.06	109.90
35	BA	958	A	C1'-O4'-C4'	7.16	117.06	109.90
35	BA	1038	C	C3'-C2'-O2'	7.16	121.44	110.70
2	AB	2464	G	C3'-C2'-O2'	7.16	121.44	110.70
3	AC	82	ALA	O-C-N	7.16	131.83	123.17
35	BA	1202	U	C5'-C4'-C3'	-7.16	105.26	116.00
2	AB	1286	A	O4'-C1'-N9	7.16	118.93	108.20
2	AB	2331	G	N9-C1'-C2'	-7.16	101.27	112.00
51	BQ	100	TRP	CG-CD2-CE3	-7.16	126.74	133.90
2	AB	2663	G	C2'-C3'-O3'	7.15	124.43	113.70
35	BA	1506	U	C4'-C3'-O3'	-7.15	98.67	109.40
35	BA	400	C	O3'-P-O5'	-7.15	93.27	104.00
2	AB	1310	G	O4'-C4'-C3'	7.15	111.15	104.00
35	BA	1194	U	C5'-C4'-O4'	7.15	120.52	109.80
35	BA	1348	U	C2'-C3'-O3'	-7.15	102.98	113.70
36	BB	61	C	O4'-C4'-C3'	7.15	111.15	104.00
2	AB	2167	U	O4'-C1'-N1	7.14	119.22	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	AR	100	ARG	CA-C-O	-7.14	113.26	120.90
19	AS	105	PHE	CA-CB-CG	7.14	120.94	113.80
35	BA	1215	G	C2'-C3'-O3'	-7.14	102.99	113.70
39	BE	68	PHE	O-C-N	-7.14	114.36	122.93
2	AB	1382	G	C4'-C3'-C2'	-7.14	95.46	102.60
4	AD	142	ASN	OD1-CG-ND2	-7.14	115.46	122.60
29	A2	24	ILE	CA-C-O	-7.14	114.20	122.13
2	AB	1286	A	O4'-C1'-C2'	-7.14	98.66	105.80
19	AS	100	PHE	CA-CB-CG	7.14	120.94	113.80
35	BA	1202	U	C4'-C3'-C2'	-7.14	95.46	102.60
2	AB	154	U	C5'-C4'-C3'	-7.14	105.30	116.00
2	AB	1399	C	O4'-C1'-N1	7.14	119.20	108.50
40	BF	116	ALA	CA-C-N	7.14	130.16	120.38
40	BF	116	ALA	C-N-CA	7.14	130.16	120.38
1	AA	91	C	C5'-C4'-C3'	-7.13	105.30	116.00
2	AB	295	G	O4'-C1'-N9	7.13	119.20	108.50
18	AR	100	ARG	O-C-N	7.13	129.51	122.09
35	BA	286	C	C4'-C3'-O3'	7.13	123.70	113.00
38	BD	18	U	O4'-C1'-N1	7.13	118.90	108.20
35	BA	870	U	O4'-C1'-C2'	-7.13	98.67	105.80
35	BA	217	C	C4'-C3'-C2'	-7.13	95.47	102.60
35	BA	643	C	O4'-C4'-C3'	7.13	111.13	104.00
2	AB	603	A	C5'-C4'-C3'	-7.13	104.51	115.20
35	BA	181	A	C3'-C2'-C1'	-7.13	94.37	101.50
35	BA	330	C	C2'-C3'-O3'	-7.13	103.01	113.70
44	BJ	141	HIS	CE1-NE2-CD2	-7.13	101.87	109.00
2	AB	2193	G	O4'-C4'-C3'	7.12	111.12	104.00
2	AB	2566	A	C3'-C2'-C1'	-7.12	94.38	101.50
35	BA	382	A	O4'-C1'-N9	7.12	119.19	108.50
5	AE	167	ASN	OD1-CG-ND2	7.12	129.72	122.60
34	A7	24	ARG	NE-CZ-NH2	7.12	125.61	119.20
35	BA	669	G	C4'-C3'-C2'	-7.12	95.48	102.60
35	BA	1268	G	O4'-C1'-N9	7.12	119.18	108.50
2	AB	123	G	C1'-O4'-C4'	7.12	117.02	109.90
44	BJ	141	HIS	ND1-CE1-NE2	7.12	115.52	108.40
58	BX	27	VAL	CA-CB-CG1	7.12	122.50	110.40
2	AB	948	C	O4'-C1'-N1	7.12	119.18	108.50
2	AB	1285	A	C3'-C2'-C1'	7.12	108.42	101.30
2	AB	2433	A	C4'-C3'-O3'	-7.12	102.32	113.00
36	BB	24	G	C3'-C2'-O2'	7.12	121.38	110.70
2	AB	342	A	O4'-C4'-C3'	7.12	111.11	104.00
2	AB	1523	U	C3'-C2'-C1'	-7.12	94.19	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	54	C	O5'-C5'-C4'	7.12	122.17	111.50
1	AA	51	G	O4'-C4'-C3'	7.11	111.11	104.00
2	AB	1664	A	C5'-C4'-C3'	-7.11	105.33	116.00
5	AE	98	VAL	CA-C-O	-7.11	112.96	120.57
3	AC	24	ASN	N-CA-C	7.11	120.07	111.82
18	AR	68	GLY	CA-C-N	7.11	133.06	122.75
18	AR	68	GLY	C-N-CA	7.11	133.06	122.75
35	BA	328	C	C4'-C3'-C2'	7.11	109.71	102.60
47	BM	3	ASN	OD1-CG-ND2	7.11	129.71	122.60
2	AB	1695	G	C3'-C2'-O2'	7.11	121.36	110.70
35	BA	834	U	C4'-C3'-C2'	-7.11	95.49	102.60
35	BA	918	A	C4'-C3'-C2'	-7.11	95.49	102.60
35	BA	1226	C	C4'-C3'-O3'	7.11	120.06	109.40
35	BA	1344	C	C3'-C2'-C1'	7.11	108.41	101.30
2	AB	1255	U	C2'-C3'-O3'	7.11	124.36	113.70
4	AD	139	THR	CA-CB-OG1	7.11	120.26	109.60
39	BE	81	ASP	CA-C-N	7.11	131.12	120.31
39	BE	81	ASP	C-N-CA	7.11	131.12	120.31
2	AB	1074	G	O3'-P-O5'	-7.11	93.34	104.00
50	BP	2	ARG	CA-C-N	7.11	129.51	120.56
50	BP	2	ARG	C-N-CA	7.11	129.51	120.56
6	AF	116	ASP	CA-CB-CG	-7.11	105.49	112.60
35	BA	538	G	C1'-O4'-C4'	7.10	117.00	109.90
53	BS	62	GLY	CA-C-O	-7.10	112.49	120.30
2	AB	2111	U	C4'-C3'-C2'	-7.10	95.50	102.60
35	BA	1529	G	C1'-O4'-C4'	-7.10	102.60	109.70
38	BD	64	G	C5'-C4'-O4'	7.10	120.45	109.80
2	AB	2296	U	P-O5'-C5'	7.10	131.55	120.90
2	AB	1157	G	O5'-C5'-C4'	7.10	122.15	111.50
4	AD	231	HIS	CA-C-N	7.10	126.84	120.10
4	AD	231	HIS	C-N-CA	7.10	126.84	120.10
35	BA	569	C	O4'-C4'-C3'	7.10	111.10	104.00
2	AB	283	G	O4'-C1'-N9	7.10	119.15	108.50
34	A7	24	ARG	NE-CZ-NH1	-7.10	114.40	121.50
35	BA	119	A	C2'-C3'-O3'	7.10	120.14	109.50
35	BA	216	U	O4'-C1'-N1	7.10	119.14	108.50
2	AB	1490	A	O4'-C1'-C2'	-7.09	100.50	107.60
2	AB	2429	G	C4'-C3'-C2'	-7.09	95.50	102.60
23	AW	38	ILE	CA-C-N	7.09	131.26	121.33
23	AW	38	ILE	C-N-CA	7.09	131.26	121.33
2	AB	1286	A	O4'-C4'-C3'	-7.09	99.01	106.10
35	BA	1255	G	C2'-C3'-O3'	-7.09	103.06	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2660	A	C3'-C2'-C1'	7.09	108.39	101.30
1	AA	25	U	C1'-O4'-C4'	-7.09	102.61	109.70
2	AB	627	A	C4'-C3'-C2'	-7.09	95.51	102.60
2	AB	1650	A	O4'-C4'-C3'	7.09	111.09	104.00
2	AB	1918	A	C3'-C2'-O2'	-7.09	103.97	114.60
35	BA	1108	G	O4'-C1'-C2'	-7.09	100.51	107.60
2	AB	34	U	O4'-C4'-C3'	7.09	111.09	104.00
17	AQ	35	ILE	N-CA-C	7.09	118.03	108.11
2	AB	571	U	O3'-P-O5'	7.08	114.62	104.00
2	AB	879	G	C4'-C3'-C2'	-7.08	95.52	102.60
2	AB	627	A	O4'-C4'-C3'	7.08	113.18	106.10
58	BX	61	ARG	CA-C-N	7.08	129.77	120.28
58	BX	61	ARG	C-N-CA	7.08	129.77	120.28
2	AB	1047	G	C4'-C3'-C2'	-7.08	95.52	102.60
2	AB	2091	C	C4'-C3'-C2'	-7.08	95.52	102.60
35	BA	324	G	O4'-C1'-C2'	-7.08	100.52	107.60
35	BA	1533	C	O4'-C1'-N1	7.08	118.82	108.20
2	AB	1657	U	C5'-C4'-C3'	-7.08	105.38	116.00
35	BA	969	A	C2'-C3'-O3'	7.08	120.11	109.50
2	AB	2343	U	O5'-C5'-C4'	7.07	122.11	111.50
7	AG	166	ARG	NE-CZ-NH2	7.07	125.57	119.20
19	AS	112	ALA	CA-C-N	7.07	129.76	120.28
19	AS	112	ALA	C-N-CA	7.07	129.76	120.28
2	AB	625	G	O5'-C5'-C4'	7.07	122.11	111.50
52	BR	20	ASP	CA-C-N	7.07	133.50	122.26
52	BR	20	ASP	C-N-CA	7.07	133.50	122.26
2	AB	91	A	O4'-C4'-C3'	7.07	113.17	106.10
12	AL	90	GLU	N-CA-C	7.07	120.02	111.82
2	AB	2403	C	C4'-C3'-C2'	-7.07	95.53	102.60
35	BA	1165	U	O4'-C1'-N1	7.07	119.10	108.50
26	AZ	63	ILE	CA-C-O	-7.07	113.92	121.27
35	BA	907	A	C1'-O4'-C4'	-7.07	102.83	109.90
44	BJ	63	VAL	N-CA-C	7.07	120.91	111.44
2	AB	33	C	C1'-O4'-C4'	-7.06	102.64	109.70
2	AB	113	U	O4'-C1'-N1	7.06	119.09	108.50
2	AB	1564	C	C5'-C4'-C3'	-7.06	105.41	116.00
6	AF	14	VAL	N-CA-C	7.06	120.94	109.78
35	BA	499	A	O4'-C4'-C3'	7.06	113.16	106.10
44	BJ	119	LEU	CA-C-N	7.06	130.45	120.28
44	BJ	119	LEU	C-N-CA	7.06	130.45	120.28
2	AB	286	U	O3'-P-O5'	-7.06	93.41	104.00
2	AB	535	G	C4'-C3'-C2'	-7.06	95.54	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1084	A	O4'-C1'-C2'	-7.06	100.54	107.60
2	AB	1234	U	O3'-P-O5'	-7.06	93.41	104.00
35	BA	1041	G	C3'-C2'-C1'	-7.06	94.24	101.30
2	AB	279	A	C4'-C3'-C2'	-7.06	95.54	102.60
2	AB	1434	A	O4'-C1'-N9	7.06	119.08	108.50
2	AB	1524	G	C5'-C4'-C3'	-7.06	105.41	116.00
2	AB	1784	A	O4'-C4'-C3'	7.06	111.06	104.00
2	AB	2094	A	O3'-P-O5'	-7.06	93.41	104.00
35	BA	207	C	C5'-C4'-O4'	7.06	120.39	109.80
2	AB	543	G	C4'-C3'-C2'	-7.06	95.54	102.60
2	AB	2529	G	C3'-C2'-C1'	7.06	108.36	101.30
1	AA	37	C	C1'-O4'-C4'	-7.05	102.84	109.90
2	AB	2663	G	C3'-C2'-C1'	-7.05	94.25	101.30
35	BA	323	U	C4'-C3'-C2'	-7.05	95.55	102.60
2	AB	595	C	C3'-C2'-O2'	7.05	121.28	110.70
35	BA	1062	U	O5'-C5'-C4'	-7.05	100.93	111.50
2	AB	1657	U	C4'-C3'-C2'	-7.05	95.55	102.60
2	AB	785	G	N9-C1'-C2'	-7.05	101.43	112.00
35	BA	889	A	C3'-C2'-C1'	-7.04	94.45	101.50
2	AB	932	U	O4'-C4'-C3'	7.04	111.04	104.00
57	BW	69	ASN	N-CA-C	7.04	122.74	113.30
1	AA	87	U	C3'-C2'-C1'	-7.04	94.26	101.30
2	AB	1602	U	O4'-C4'-C3'	7.04	113.14	106.10
15	AO	97	GLN	CA-C-N	7.04	128.89	120.23
15	AO	97	GLN	C-N-CA	7.04	128.89	120.23
35	BA	752	G	C1'-C2'-O2'	-7.04	101.24	111.80
48	BN	62	ALA	CA-C-O	-7.04	113.43	120.82
51	BQ	85	GLU	CA-C-O	-7.04	113.09	120.55
4	AD	88	ALA	CA-C-N	7.04	131.38	120.75
4	AD	88	ALA	C-N-CA	7.04	131.38	120.75
16	AP	47	VAL	O-C-N	7.04	129.22	121.90
30	A3	17	SER	N-CA-C	7.04	119.98	111.82
35	BA	185	U	O4'-C1'-N1	7.04	119.05	108.50
35	BA	1258	G	C4'-C3'-C2'	-7.04	95.56	102.60
35	BA	1422	G	O4'-C1'-C2'	-7.04	100.56	107.60
2	AB	754	U	C3'-C2'-O2'	7.03	121.25	110.70
2	AB	1365	A	O3'-P-O5'	7.03	114.55	104.00
2	AB	1319	C	C3'-C2'-C1'	7.03	108.33	101.30
35	BA	79	G	C3'-C2'-O2'	7.03	121.25	110.70
2	AB	1004	U	O4'-C4'-C3'	7.03	111.03	104.00
2	AB	1595	C	C3'-C2'-C1'	7.03	108.33	101.30
2	AB	1845	G	C5'-C4'-C3'	-7.03	105.45	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	A2	66	ILE	CA-C-N	7.03	126.66	119.56
29	A2	66	ILE	C-N-CA	7.03	126.66	119.56
35	BA	792	A	O4'-C1'-C2'	-7.03	98.77	105.80
42	BH	12	GLU	CA-C-O	7.03	129.64	121.34
2	AB	1493	C	O4'-C1'-N1	7.03	119.04	108.50
2	AB	1899	A	P-O3'-C3'	7.03	130.74	120.20
2	AB	979	A	O3'-P-O5'	7.03	114.54	104.00
2	AB	990	A	O5'-C5'-C4'	7.03	122.04	111.50
18	AR	19	PHE	N-CA-CB	-7.03	99.92	111.66
36	BB	43	G	C3'-C2'-C1'	7.03	108.33	101.30
2	AB	262	A	O4'-C4'-C3'	7.02	111.02	104.00
35	BA	387	U	C3'-C2'-C1'	-7.02	94.28	101.30
2	AB	2244	U	N1-C1'-C2'	-7.02	101.47	112.00
35	BA	860	A	C5'-C4'-C3'	-7.02	105.47	116.00
48	BN	106	ILE	CB-CA-C	7.02	122.80	111.29
11	AK	93	ASN	CA-CB-CG	7.02	119.62	112.60
48	BN	36	ARG	N-CA-C	7.02	119.78	111.71
2	AB	575	A	O4'-C1'-N9	7.02	119.02	108.50
37	BC	29	G	C4'-C3'-O3'	7.02	123.52	113.00
2	AB	216	A	N9-C1'-C2'	-7.01	101.48	112.00
35	BA	754	C	C5'-C4'-O4'	7.01	120.32	109.80
2	AB	2843	G	C2'-C3'-O3'	-7.01	103.18	113.70
2	AB	2059	A	O4'-C4'-C3'	7.01	111.01	104.00
35	BA	1268	G	O4'-C4'-C3'	7.01	111.01	104.00
45	BK	44	PHE	CA-CB-CG	-7.01	106.79	113.80
46	BL	121	ARG	CA-C-O	-7.01	110.48	120.51
2	AB	1591	A	O4'-C4'-C3'	7.01	111.01	104.00
2	AB	1654	A	C5'-C4'-C3'	-7.01	105.49	116.00
2	AB	2419	U	C4'-C3'-C2'	-7.01	95.59	102.60
35	BA	346	G	C1'-C2'-O2'	7.01	118.91	108.40
40	BF	228	ARG	CA-C-N	7.01	132.08	122.34
40	BF	228	ARG	C-N-CA	7.01	132.08	122.34
1	AA	5	U	C5'-C4'-O4'	7.01	120.31	109.80
7	AG	63	LYS	CA-C-O	-7.01	112.64	119.51
39	BE	136	ARG	NE-CZ-NH2	-7.01	112.89	119.20
43	BI	80	PHE	CA-CB-CG	7.01	120.81	113.80
35	BA	973	G	O4'-C4'-C3'	7.00	111.00	104.00
38	BD	3	C	C4'-C3'-C2'	-7.00	95.59	102.60
2	AB	2066	C	O4'-C1'-C2'	-7.00	100.60	107.60
15	AO	18	ARG	NE-CZ-NH1	-7.00	114.50	121.50
35	BA	518	C	O4'-C1'-N1	7.00	118.71	108.20
35	BA	914	A	C2'-C3'-O3'	-7.00	103.19	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1346	A	O3'-P-O5'	-7.00	93.50	104.00
41	BG	103	ARG	NE-CZ-NH1	7.00	128.50	121.50
15	AO	129	THR	CA-CB-CG2	7.00	122.40	110.50
38	BD	36	A	O4'-C1'-C2'	-7.00	100.60	107.60
33	A6	24	LYS	CA-C-N	7.00	130.81	120.87
33	A6	24	LYS	C-N-CA	7.00	130.81	120.87
43	BI	11	HIS	CB-CG-ND1	7.00	133.20	122.70
2	AB	60	G	O3'-P-O5'	-7.00	93.50	104.00
2	AB	763	G	C4'-C3'-C2'	-7.00	95.60	102.60
37	BC	55	A	C2'-C3'-O3'	7.00	120.00	109.50
2	AB	2806	C	O4'-C1'-C2'	-7.00	100.60	107.60
45	BK	68	LYS	CA-C-N	7.00	131.10	120.82
45	BK	68	LYS	C-N-CA	7.00	131.10	120.82
2	AB	1552	A	O4'-C1'-N9	7.00	118.99	108.50
52	BR	81	ILE	CA-C-N	7.00	132.57	120.68
52	BR	81	ILE	C-N-CA	7.00	132.57	120.68
35	BA	929	G	O4'-C1'-N9	6.99	118.99	108.50
2	AB	38	A	C4'-C3'-C2'	-6.99	95.61	102.60
2	AB	1413	A	C1'-O4'-C4'	6.99	116.89	109.90
44	BJ	163	HIS	CA-C-N	6.99	134.06	122.66
44	BJ	163	HIS	C-N-CA	6.99	134.06	122.66
2	AB	1225	G	O4'-C4'-C3'	6.99	110.99	104.00
8	AH	85	LYS	N-CA-C	6.99	120.25	108.23
15	AO	18	ARG	NE-CZ-NH2	6.99	125.49	119.20
35	BA	159	G	O4'-C4'-C3'	6.99	110.99	104.00
2	AB	218	A	N9-C1'-C2'	6.99	122.48	112.00
2	AB	978	G	C2'-C3'-O3'	6.99	124.18	113.70
2	AB	1455	G	C5'-C4'-C3'	-6.99	105.52	116.00
2	AB	1276	A	O5'-C5'-C4'	-6.99	101.02	111.50
2	AB	1350	C	O4'-C1'-N1	6.99	118.98	108.50
2	AB	1512	C	O4'-C1'-N1	6.99	118.98	108.50
2	AB	2081	U	C5'-C4'-C3'	-6.99	105.52	116.00
28	A1	22	THR	CA-C-N	6.99	129.64	120.28
28	A1	22	THR	C-N-CA	6.99	129.64	120.28
35	BA	58	C	C1'-O4'-C4'	6.99	116.89	109.90
37	BC	43	U	O4'-C4'-C3'	-6.99	99.11	106.10
2	AB	937	C	C4'-C3'-C2'	-6.98	95.62	102.60
2	AB	2820	A	O4'-C4'-C3'	6.98	110.98	104.00
35	BA	973	G	O5'-C5'-C4'	6.98	121.97	111.50
35	BA	988	G	C4'-C3'-C2'	-6.98	95.62	102.60
2	AB	1722	A	C5'-C4'-C3'	6.98	126.47	116.00
26	AZ	56	ARG	N-CA-C	-6.98	103.75	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	45	A	C4'-C3'-C2'	-6.98	95.62	102.60
2	AB	1806	C	O4'-C1'-C2'	-6.98	100.62	107.60
9	AI	38	PRO	N-CA-CB	6.98	109.95	103.39
23	AW	17	ASP	CA-CB-CG	6.98	119.58	112.60
35	BA	1225	A	O5'-C5'-C4'	6.98	122.17	111.70
2	AB	2181	U	C4'-C3'-C2'	-6.98	95.62	102.60
35	BA	290	C	C1'-O4'-C4'	6.98	116.88	109.90
2	AB	1959	G	O5'-C5'-C4'	6.97	121.96	111.50
9	AI	135	HIS	CB-CG-CD2	-6.97	122.13	131.20
35	BA	1526	G	O3'-P-O5'	-6.97	93.54	104.00
36	BB	72	U	C4'-C3'-C2'	-6.97	95.63	102.60
2	AB	2866	U	C2'-C3'-O3'	6.97	119.96	109.50
6	AF	115	GLN	OE1-CD-NE2	-6.97	115.63	122.60
35	BA	756	C	O3'-P-O5'	-6.97	93.54	104.00
51	BQ	81	ILE	CA-CB-CG1	6.97	122.25	110.40
2	AB	348	A	O4'-C1'-C2'	-6.97	100.63	107.60
2	AB	1441	G	C5'-C4'-O4'	6.97	120.25	109.80
23	AW	92	VAL	N-CA-C	6.97	118.16	108.12
35	BA	764	C	C4'-C3'-C2'	-6.97	95.63	102.60
35	BA	705	G	C2'-C3'-O3'	-6.97	103.25	113.70
35	BA	1005	A	O4'-C1'-N9	6.97	118.95	108.50
2	AB	338	G	C4'-C3'-O3'	6.96	123.44	113.00
2	AB	369	U	C3'-C2'-C1'	6.96	108.26	101.30
35	BA	183	C	C1'-O4'-C4'	-6.96	102.94	109.90
21	AU	60	HIS	CE1-NE2-CD2	-6.96	102.04	109.00
39	BE	46	VAL	CA-C-O	-6.96	110.62	119.95
35	BA	211	G	C4'-C3'-C2'	-6.96	95.64	102.60
49	BO	102	ASP	CA-C-N	6.96	131.87	120.94
49	BO	102	ASP	C-N-CA	6.96	131.87	120.94
51	BQ	18	LYS	CA-C-O	-6.96	113.51	120.82
35	BA	756	C	C3'-C2'-C1'	6.96	108.26	101.30
15	AO	51	ARG	NE-CZ-NH1	-6.96	114.55	121.50
12	AL	27	ARG	NE-CZ-NH1	-6.95	114.55	121.50
39	BE	147	LEU	CA-C-N	6.95	128.89	120.13
39	BE	147	LEU	C-N-CA	6.95	128.89	120.13
2	AB	2040	G	C3'-C2'-C1'	6.95	108.25	101.30
2	AB	1455	G	C5'-C4'-O4'	6.95	120.23	109.80
15	AO	100	LYS	CB-CA-C	6.95	119.72	110.06
2	AB	1809	A	C2'-C3'-O3'	-6.95	103.28	113.70
2	AB	2028	U	O4'-C1'-C2'	-6.95	100.65	107.60
39	BE	202	ASN	CA-CB-CG	6.95	119.55	112.60
57	BW	29	THR	N-CA-C	6.95	119.74	111.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	BQ	44	VAL	CB-CA-C	6.95	119.52	110.84
36	BB	72	U	O4'-C4'-C3'	6.95	113.05	106.10
36	BB	4	G	C4'-C3'-C2'	-6.94	95.66	102.60
2	AB	2145	C	O4'-C1'-N1	6.94	118.61	108.20
2	AB	2564	A	O4'-C4'-C3'	6.94	110.94	104.00
35	BA	60	A	C4'-C3'-O3'	-6.94	98.99	109.40
2	AB	2440	C	C2'-C3'-O3'	6.94	124.11	113.70
35	BA	498	A	O4'-C4'-C3'	6.94	110.94	104.00
2	AB	3	U	O4'-C1'-N1	6.94	118.91	108.50
4	AD	57	HIS	CA-CB-CG	6.94	120.74	113.80
35	BA	906	A	C2'-C3'-O3'	6.94	124.11	113.70
45	BK	95	MET	O-C-N	6.94	130.91	122.58
2	AB	558	U	O4'-C1'-C2'	-6.94	100.66	107.60
2	AB	544	C	O4'-C4'-C3'	6.93	110.93	104.00
2	AB	2648	G	C5'-C4'-C3'	-6.93	105.60	116.00
35	BA	221	C	O4'-C1'-C2'	-6.93	100.67	107.60
2	AB	1725	U	O4'-C1'-N1	6.93	118.90	108.50
2	AB	2402	U	O4'-C1'-N1	6.93	118.90	108.50
35	BA	905	U	O4'-C1'-C2'	6.93	114.53	107.60
40	BF	131	ARG	CA-C-N	6.93	129.88	120.38
40	BF	131	ARG	C-N-CA	6.93	129.88	120.38
2	AB	1960	A	O4'-C1'-C2'	6.93	114.53	107.60
35	BA	1330	U	O4'-C1'-N1	6.93	118.90	108.50
38	BD	75	C	C5'-C4'-C3'	-6.93	104.80	115.20
41	BG	69	ARG	NE-CZ-NH2	-6.93	112.96	119.20
2	AB	1774	C	O4'-C1'-C2'	-6.93	100.67	107.60
2	AB	2712	C	O4'-C1'-N1	6.93	118.60	108.20
35	BA	630	A	O3'-P-O5'	6.93	114.39	104.00
2	AB	2317	A	O4'-C4'-C3'	6.93	110.93	104.00
2	AB	2405	G	C3'-C2'-C1'	6.93	108.23	101.30
8	AH	44	HIS	CE1-NE2-CD2	-6.93	102.07	109.00
30	A3	18	HIS	N-CA-C	-6.93	104.64	113.23
35	BA	839	C	C4'-C3'-C2'	-6.93	95.67	102.60
35	BA	1197	A	O4'-C1'-N9	6.93	118.89	108.50
2	AB	2452	C	O4'-C1'-N1	6.92	118.89	108.50
35	BA	541	G	C2'-C3'-O3'	6.92	124.09	113.70
35	BA	44	A	C4'-C3'-C2'	-6.92	95.68	102.60
38	BD	69	C	C4'-C3'-C2'	-6.92	95.68	102.60
17	AQ	109	ALA	N-CA-C	6.92	119.67	111.71
2	AB	1328	A	C1'-O4'-C4'	-6.92	102.98	109.90
2	AB	1566	A	P-O5'-C5'	6.92	131.28	120.90
2	AB	1608	A	C2'-C3'-O3'	6.92	119.88	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	AJ	131	TYR	CA-C-O	-6.92	113.16	120.63
22	AV	85	VAL	N-CA-C	-6.92	105.79	112.29
35	BA	224	U	C4'-C3'-C2'	-6.92	95.68	102.60
35	BA	233	C	O4'-C1'-C2'	-6.92	100.68	107.60
35	BA	1277	C	C4'-C3'-O3'	6.92	123.38	113.00
40	BF	68	HIS	CB-CG-CD2	-6.92	122.21	131.20
2	AB	2098	U	O4'-C4'-C3'	6.92	110.92	104.00
2	AB	1067	A	C4'-C3'-C2'	-6.92	95.69	102.60
19	AS	63	ARG	NH1-CZ-NH2	-6.91	110.31	119.30
35	BA	128	G	C3'-C2'-O2'	6.91	121.07	110.70
35	BA	569	C	C5'-C4'-C3'	-6.91	105.63	116.00
35	BA	1258	G	C3'-C2'-C1'	6.91	108.21	101.30
2	AB	789	A	P-O3'-C3'	6.91	130.57	120.20
2	AB	2138	G	O4'-C1'-C2'	-6.91	100.69	107.60
5	AE	147	GLY	O-C-N	-6.91	116.33	123.31
2	AB	763	G	P-O5'-C5'	6.91	131.26	120.90
35	BA	795	C	O4'-C4'-C3'	6.91	110.91	104.00
2	AB	1206	G	O4'-C1'-N9	6.91	118.86	108.50
2	AB	2029	G	C4'-C3'-C2'	-6.91	95.69	102.60
2	AB	2530	A	O4'-C1'-C2'	6.91	114.51	107.60
2	AB	487	C	O3'-P-O5'	-6.91	93.64	104.00
2	AB	2611	C	O4'-C1'-N1	6.91	118.86	108.50
2	AB	2737	G	C4'-C3'-C2'	-6.91	95.69	102.60
35	BA	995	C	C4'-C3'-O3'	6.91	123.36	113.00
35	BA	1090	U	C4'-C3'-O3'	6.91	123.36	113.00
35	BA	1317	C	O4'-C4'-C3'	-6.91	99.19	106.10
2	AB	1555	G	C4'-C3'-C2'	-6.90	95.70	102.60
1	AA	26	C	C5'-C4'-O4'	6.90	120.15	109.80
2	AB	1073	A	C5'-C4'-C3'	-6.90	105.65	116.00
2	AB	1368	G	C3'-C2'-O2'	6.90	121.06	110.70
2	AB	1781	U	C4'-C3'-O3'	-6.90	102.65	113.00
50	BP	11	HIS	CB-CG-CD2	-6.90	122.23	131.20
2	AB	2593	U	C5'-C4'-C3'	-6.90	105.65	116.00
2	AB	1362	C	C4'-C3'-C2'	-6.90	95.70	102.60
2	AB	2024	G	O3'-P-O5'	6.90	114.35	104.00
39	BE	56	LEU	O-C-N	6.90	129.54	122.09
2	AB	735	A	P-O3'-C3'	6.90	130.55	120.20
2	AB	1724	G	O4'-C1'-N9	6.90	118.84	108.50
14	AN	28	GLY	CA-C-N	6.90	130.96	120.82
14	AN	28	GLY	C-N-CA	6.90	130.96	120.82
35	BA	313	A	C4'-C3'-O3'	6.90	123.35	113.00
52	BR	58	MET	CA-C-N	6.90	129.39	120.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	BR	58	MET	C-N-CA	6.90	129.39	120.56
43	BI	103	VAL	CA-C-N	6.90	129.40	120.44
43	BI	103	VAL	C-N-CA	6.90	129.40	120.44
2	AB	228	C	O4'-C1'-C2'	-6.89	98.91	105.80
2	AB	1741	C	O4'-C1'-N1	6.89	118.84	108.50
35	BA	682	G	C4'-C3'-C2'	6.89	109.50	102.60
35	BA	1491	G	O3'-P-O5'	-6.89	93.66	104.00
2	AB	874	G	C4'-C3'-C2'	-6.89	95.71	102.60
4	AD	52	HIS	CA-CB-CG	6.89	120.69	113.80
35	BA	294	U	C4'-C3'-C2'	-6.89	95.71	102.60
35	BA	544	G	C1'-O4'-C4'	-6.89	103.01	109.90
35	BA	1450	U	C3'-C2'-C1'	6.89	108.19	101.30
2	AB	1214	A	C4'-C3'-C2'	-6.89	95.71	102.60
2	AB	1783	A	C1'-O4'-C4'	6.89	116.79	109.90
15	AO	12	MET	CA-C-N	6.89	131.16	120.75
15	AO	12	MET	C-N-CA	6.89	131.16	120.75
35	BA	1198	G	C1'-O4'-C4'	-6.89	103.01	109.90
2	AB	365	U	N1-C1'-C2'	-6.89	101.66	112.00
2	AB	2284	A	C3'-C2'-C1'	6.89	108.19	101.30
35	BA	663	A	O5'-C5'-C4'	-6.89	101.17	111.50
2	AB	553	G	C4'-C3'-C2'	-6.89	95.71	102.60
35	BA	616	G	O3'-P-O5'	6.89	114.33	104.00
2	AB	1651	G	C5'-C4'-C3'	-6.88	105.67	116.00
44	BJ	79	VAL	N-CA-CB	-6.88	104.35	112.40
2	AB	1128	G	C4'-C3'-C2'	-6.88	95.72	102.60
2	AB	323	C	O4'-C1'-N1	6.88	118.52	108.20
43	BI	77	THR	CA-CB-OG1	6.88	119.92	109.60
25	AY	79	ILE	CB-CA-C	6.88	118.66	111.23
41	BG	51	GLY	N-CA-C	6.88	120.48	112.50
2	AB	1278	C	O3'-P-O5'	6.87	114.31	104.00
2	AB	2043	C	C5'-C4'-O4'	6.87	120.11	109.80
3	AC	113	VAL	O-C-N	6.87	130.60	123.18
6	AF	14	VAL	CA-CB-CG2	6.87	122.08	110.40
29	A2	36	VAL	CB-CA-C	6.87	120.09	111.15
35	BA	766	A	O4'-C4'-C3'	6.87	110.87	104.00
39	BE	47	PRO	CA-C-N	6.87	129.79	120.44
39	BE	47	PRO	C-N-CA	6.87	129.79	120.44
2	AB	2553	G	O5'-C5'-C4'	-6.87	101.19	111.50
3	AC	95	VAL	O-C-N	-6.87	115.92	123.20
4	AD	54	GLY	O-C-N	6.87	131.63	122.70
12	AL	100	VAL	O-C-N	6.87	128.64	121.91
30	A3	8	THR	CA-C-O	-6.87	113.90	121.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	BE	71	THR	CA-C-N	6.87	133.55	121.80
39	BE	71	THR	C-N-CA	6.87	133.55	121.80
2	AB	779	U	O4'-C1'-N1	6.87	118.80	108.50
2	AB	960	A	C1'-O4'-C4'	-6.87	103.03	109.90
2	AB	775	G	C4'-C3'-C2'	-6.87	95.73	102.60
2	AB	1650	A	C1'-O4'-C4'	-6.87	103.03	109.90
2	AB	872	U	C4'-C3'-C2'	-6.87	95.73	102.60
2	AB	1634	A	C1'-O4'-C4'	-6.87	102.83	109.70
35	BA	310	G	O4'-C1'-N9	6.87	118.80	108.50
36	BB	74	C	O5'-C5'-C4'	6.87	121.80	111.50
2	AB	40	U	C4'-C3'-C2'	-6.86	95.74	102.60
2	AB	1415	U	O3'-P-O5'	-6.86	93.70	104.00
22	AV	38	ALA	CA-C-N	6.86	134.65	121.54
22	AV	38	ALA	C-N-CA	6.86	134.65	121.54
2	AB	476	G	O3'-P-O5'	-6.86	93.71	104.00
2	AB	528	A	C5'-C4'-C3'	-6.86	105.71	116.00
47	BM	42	LEU	CA-C-N	6.86	126.83	119.76
47	BM	42	LEU	C-N-CA	6.86	126.83	119.76
35	BA	1154	G	O4'-C1'-N9	6.86	118.79	108.50
49	BO	95	HIS	CB-CG-CD2	-6.86	122.28	131.20
52	BR	28	VAL	O-C-N	6.86	128.52	121.87
1	AA	57	A	C2'-C3'-O3'	6.86	123.99	113.70
32	A5	32	ALA	CA-C-N	6.86	129.47	120.28
32	A5	32	ALA	C-N-CA	6.86	129.47	120.28
35	BA	243	A	C4'-C3'-O3'	6.86	119.69	109.40
2	AB	790	U	C3'-C2'-C1'	6.86	108.16	101.30
35	BA	92	U	C3'-C2'-C1'	6.86	108.16	101.30
35	BA	284	C	C1'-C2'-O2'	-6.86	98.12	108.40
44	BJ	156	LEU	CA-C-N	6.86	129.47	120.28
44	BJ	156	LEU	C-N-CA	6.86	129.47	120.28
2	AB	1250	G	O4'-C4'-C3'	-6.85	99.25	106.10
2	AB	2323	G	O5'-C5'-C4'	-6.85	101.22	111.50
35	BA	988	G	O4'-C4'-C3'	6.85	110.85	104.00
39	BE	1	ALA	CA-C-N	6.85	131.66	120.63
39	BE	1	ALA	C-N-CA	6.85	131.66	120.63
35	BA	51	A	O3'-P-O5'	-6.85	93.72	104.00
46	BL	91	GLU	CA-C-O	-6.85	112.36	120.10
2	AB	924	G	O4'-C4'-C3'	6.85	110.85	104.00
2	AB	2446	G	P-O3'-C3'	6.85	130.47	120.20
2	AB	803	U	N1-C1'-C2'	-6.85	101.73	112.00
2	AB	1488	C	C1'-O4'-C4'	-6.85	103.05	109.90
18	AR	23	ASP	CA-C-O	6.85	128.43	120.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	AR	108	ARG	CA-C-N	6.85	129.94	120.49
18	AR	108	ARG	C-N-CA	6.85	129.94	120.49
42	BH	28	ARG	CD-NE-CZ	6.85	133.98	124.40
47	BM	60	ASP	O-C-N	-6.84	114.86	122.12
2	AB	1756	G	C4'-C3'-C2'	-6.84	95.76	102.60
2	AB	330	A	C2'-C3'-O3'	6.84	119.76	109.50
14	AN	33	ARG	NE-CZ-NH2	-6.84	113.04	119.20
42	BH	130	THR	CA-C-N	6.84	130.61	120.83
42	BH	130	THR	C-N-CA	6.84	130.61	120.83
21	AU	33	LEU	N-CA-C	6.83	119.75	111.82
35	BA	1316	G	O4'-C4'-C3'	6.83	110.83	104.00
31	A4	5	ARG	NE-CZ-NH2	6.83	125.35	119.20
35	BA	968	A	C5'-C4'-O4'	6.83	119.35	109.10
35	BA	1195	C	C5'-C4'-C3'	-6.83	105.75	116.00
35	BA	1506	U	O3'-P-O5'	-6.83	93.75	104.00
35	BA	1079	G	O4'-C4'-C3'	6.83	110.83	104.00
2	AB	730	A	C3'-C2'-C1'	-6.82	94.48	101.30
35	BA	1329	A	C3'-C2'-C1'	-6.82	94.48	101.30
37	BC	52	U	O5'-C5'-C4'	-6.82	101.26	111.50
1	AA	44	G	C2'-C3'-O3'	6.82	119.73	109.50
2	AB	2665	A	C3'-C2'-C1'	6.82	108.12	101.30
2	AB	270	A	O4'-C1'-N9	6.82	118.73	108.50
2	AB	838	C	C3'-C2'-O2'	6.82	120.93	110.70
2	AB	1046	A	C3'-C2'-C1'	-6.82	94.68	101.50
2	AB	170	U	C4'-C3'-O3'	6.82	123.23	113.00
7	AG	135	ILE	CA-C-N	6.82	134.24	121.97
7	AG	135	ILE	C-N-CA	6.82	134.24	121.97
35	BA	569	C	O4'-C1'-N1	6.82	118.73	108.50
35	BA	681	A	C5'-C4'-O4'	6.82	120.03	109.80
2	AB	1723	G	P-O3'-C3'	6.82	130.43	120.20
2	AB	1949	G	C1'-O4'-C4'	-6.82	103.08	109.90
2	AB	1989	G	O3'-P-O5'	-6.82	93.77	104.00
5	AE	184	ARG	CA-C-N	6.82	132.56	122.74
5	AE	184	ARG	C-N-CA	6.82	132.56	122.74
11	AK	57	VAL	CA-CB-CG2	6.82	121.99	110.40
52	BR	79	ARG	CD-NE-CZ	6.82	133.94	124.40
2	AB	1927	A	C2'-C3'-O3'	6.82	123.92	113.70
2	AB	2138	G	C3'-C2'-C1'	6.82	108.12	101.30
28	A1	32	GLY	CA-C-N	6.82	129.74	120.54
28	A1	32	GLY	C-N-CA	6.82	129.74	120.54
2	AB	898	C	O3'-P-O5'	-6.81	93.78	104.00
2	AB	1828	G	O4'-C1'-C2'	6.81	112.61	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AW	98	ASN	CA-C-N	6.81	132.55	122.74
23	AW	98	ASN	C-N-CA	6.81	132.55	122.74
35	BA	731	G	C4'-C3'-C2'	-6.81	95.79	102.60
3	AC	173	THR	CA-C-N	6.81	131.10	121.02
3	AC	173	THR	C-N-CA	6.81	131.10	121.02
10	AJ	6	ASP	CA-CB-CG	6.81	119.41	112.60
35	BA	1215	G	C5'-C4'-C3'	-6.81	105.78	116.00
49	BO	45	ASN	CA-C-N	6.81	132.31	122.44
49	BO	45	ASN	C-N-CA	6.81	132.31	122.44
2	AB	1378	A	O3'-P-O5'	-6.81	93.79	104.00
2	AB	2178	C	C1'-O4'-C4'	-6.81	103.09	109.90
37	BC	56	G	O4'-C1'-N9	6.81	118.71	108.50
2	AB	2358	A	C2'-C3'-O3'	-6.81	103.49	113.70
2	AB	2583	G	O4'-C4'-C3'	6.81	110.81	104.00
35	BA	93	U	C3'-C2'-C1'	6.81	108.11	101.30
2	AB	1405	U	O5'-C5'-C4'	-6.80	101.29	111.50
1	AA	15	A	O4'-C1'-C2'	-6.80	99.00	105.80
35	BA	565	U	C4'-C3'-C2'	-6.80	95.80	102.60
2	AB	453	A	C4'-C3'-O3'	6.80	123.20	113.00
2	AB	1615	C	O3'-P-O5'	-6.80	93.80	104.00
2	AB	1813	G	C4'-C3'-C2'	-6.80	95.80	102.60
2	AB	2486	C	C4'-C3'-C2'	-6.80	95.80	102.60
24	AX	83	LYS	CA-C-N	6.80	126.43	119.56
24	AX	83	LYS	C-N-CA	6.80	126.43	119.56
35	BA	475	C	C5'-C4'-C3'	-6.80	105.80	116.00
35	BA	1410	A	C5'-C4'-C3'	-6.80	105.80	116.00
2	AB	399	U	C2'-C3'-O3'	-6.80	103.50	113.70
2	AB	1289	C	O4'-C1'-N1	6.80	118.70	108.50
2	AB	2175	C	O3'-P-O5'	-6.80	93.81	104.00
35	BA	647	C	C3'-C2'-C1'	6.80	108.10	101.30
2	AB	984	A	C4'-C3'-C2'	-6.79	95.81	102.60
2	AB	2806	C	C3'-C2'-O2'	6.79	120.89	110.70
35	BA	724	G	C4'-C3'-C2'	-6.79	95.81	102.60
35	BA	1102	A	C4'-C3'-C2'	-6.79	95.81	102.60
36	BB	66	C	C4'-C3'-C2'	-6.79	95.81	102.60
2	AB	4	U	C5'-C4'-O4'	6.79	119.99	109.80
2	AB	2140	G	C4'-C3'-C2'	-6.79	95.81	102.60
2	AB	2212	A	C3'-C2'-C1'	-6.79	94.71	101.50
57	BW	3	ILE	N-CA-C	6.79	117.79	109.30
35	BA	1301	U	O4'-C1'-C2'	-6.79	99.01	105.80
2	AB	2763	G	O4'-C4'-C3'	6.79	110.79	104.00
23	AW	11	ILE	CA-C-N	6.79	131.13	122.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AW	11	ILE	C-N-CA	6.79	131.13	122.37
35	BA	954	G	C2'-C3'-O3'	-6.79	103.52	113.70
2	AB	1761	C	C3'-C2'-C1'	6.79	108.09	101.30
35	BA	568	G	O4'-C1'-C2'	-6.79	100.81	107.60
35	BA	167	A	C3'-C2'-C1'	6.79	108.08	101.30
35	BA	1393	U	C1'-O4'-C4'	-6.79	103.11	109.90
2	AB	1685	C	C2'-C3'-O3'	-6.78	103.53	113.70
9	AI	132	PHE	CA-CB-CG	6.78	120.58	113.80
27	A0	63	ALA	CB-CA-C	-6.78	100.33	110.50
56	BV	11	ASP	CA-C-N	6.78	129.37	120.28
56	BV	11	ASP	C-N-CA	6.78	129.37	120.28
2	AB	2091	C	C1'-O4'-C4'	-6.78	103.12	109.90
35	BA	398	U	C1'-O4'-C4'	-6.78	103.12	109.90
2	AB	369	U	O4'-C4'-C3'	6.78	110.78	104.00
2	AB	900	A	C5'-C4'-C3'	-6.78	105.83	116.00
2	AB	1219	U	C5'-C4'-O4'	6.78	119.97	109.80
35	BA	118	U	C3'-C2'-C1'	6.78	108.08	101.30
2	AB	847	U	C1'-O4'-C4'	-6.78	103.12	109.90
2	AB	2426	A	C3'-C2'-C1'	-6.78	94.72	101.50
35	BA	93	U	O4'-C1'-N1	6.78	118.67	108.50
2	AB	886	A	O4'-C4'-C3'	6.78	110.78	104.00
2	AB	1586	A	C3'-C2'-C1'	-6.78	94.53	101.30
2	AB	2723	C	C4'-C3'-C2'	-6.78	95.82	102.60
35	BA	129	A	O4'-C1'-N9	6.78	118.36	108.20
35	BA	209	U	C3'-C2'-C1'	-6.78	94.72	101.50
2	AB	1694	C	C3'-C2'-O2'	-6.77	104.44	114.60
35	BA	59	A	O4'-C4'-C3'	6.77	110.77	104.00
2	AB	1110	G	O4'-C1'-C2'	-6.77	99.03	105.80
35	BA	162	A	O4'-C1'-N9	6.77	118.66	108.50
35	BA	393	A	P-O5'-C5'	6.77	131.06	120.90
35	BA	752	G	O4'-C1'-C2'	-6.77	99.03	105.80
2	AB	166	U	O3'-P-O5'	-6.77	93.85	104.00
41	BG	110	ARG	NE-CZ-NH2	-6.77	113.11	119.20
2	AB	1942	C	P-O3'-C3'	6.77	130.35	120.20
35	BA	581	G	C1'-O4'-C4'	-6.76	103.14	109.90
35	BA	776	G	C1'-O4'-C4'	-6.76	103.14	109.90
2	AB	1790	C	O5'-C5'-C4'	-6.76	101.36	111.50
2	AB	1895	C	C4'-C3'-C2'	-6.76	95.84	102.60
44	BJ	158	LEU	N-CA-C	6.76	119.49	111.71
2	AB	1	G	C4'-C3'-C2'	-6.76	95.84	102.60
2	AB	443	A	O4'-C4'-C3'	6.76	110.76	104.00
2	AB	805	G	C4'-C3'-C2'	-6.76	95.84	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	966	G	C3'-C2'-C1'	-6.76	94.54	101.30
2	AB	1661	G	C5'-C4'-O4'	6.76	119.94	109.80
5	AE	37	VAL	N-CA-C	6.76	123.40	109.34
20	AT	33	VAL	CA-C-O	-6.76	113.33	120.57
46	BL	78	ILE	CA-C-N	6.76	130.59	120.31
46	BL	78	ILE	C-N-CA	6.76	130.59	120.31
29	A2	45	THR	O-C-N	6.76	130.63	123.06
36	BB	43	G	O4'-C1'-C2'	-6.76	100.84	107.60
36	BB	73	G	C1'-O4'-C4'	-6.76	103.14	109.90
35	BA	1059	C	O4'-C4'-C3'	6.76	110.76	104.00
2	AB	784	G	C4'-C3'-C2'	-6.76	95.84	102.60
2	AB	2004	G	C5'-C4'-C3'	-6.75	105.87	116.00
2	AB	51	G	C1'-O4'-C4'	6.75	116.45	109.70
2	AB	1457	U	O3'-P-O5'	-6.75	93.87	104.00
2	AB	2730	C	C4'-C3'-C2'	-6.75	95.85	102.60
5	AE	193	VAL	CA-C-N	6.75	126.74	119.78
5	AE	193	VAL	C-N-CA	6.75	126.74	119.78
11	AK	124	MET	CA-C-O	-6.75	113.73	120.82
23	AW	23	LYS	CA-C-N	6.75	129.55	120.50
23	AW	23	LYS	C-N-CA	6.75	129.55	120.50
35	BA	1215	G	O4'-C4'-C3'	6.75	110.75	104.00
35	BA	1249	C	O4'-C4'-C3'	6.75	110.75	104.00
42	BH	81	GLN	OE1-CD-NE2	-6.75	115.85	122.60
2	AB	1792	G	N9-C1'-C2'	-6.75	101.87	112.00
35	BA	837	U	O4'-C1'-N1	6.75	118.63	108.50
35	BA	965	U	O4'-C1'-C2'	-6.75	99.05	105.80
2	AB	1981	A	C1'-O4'-C4'	-6.75	103.15	109.90
35	BA	1157	A	C3'-C2'-C1'	6.75	108.25	101.50
2	AB	783	A	C3'-C2'-C1'	-6.75	94.55	101.30
35	BA	96	U	C3'-C2'-C1'	6.75	108.05	101.30
35	BA	574	A	O4'-C1'-N9	6.75	118.62	108.50
2	AB	1140	C	O5'-C5'-C4'	-6.75	101.38	111.50
2	AB	2127	G	C4'-C3'-O3'	-6.75	102.88	113.00
2	AB	185	G	N9-C1'-C2'	-6.74	101.89	112.00
2	AB	2604	U	C4'-C3'-C2'	-6.74	95.86	102.60
22	AV	51	PHE	CA-C-N	6.74	132.20	122.35
22	AV	51	PHE	C-N-CA	6.74	132.20	122.35
35	BA	625	U	O4'-C1'-N1	6.74	118.61	108.50
53	BS	59	HIS	CB-CG-CD2	-6.74	122.43	131.20
2	AB	1709	U	O4'-C1'-C2'	-6.74	100.86	107.60
2	AB	1977	A	O3'-P-O5'	-6.74	93.89	104.00
35	BA	359	G	C4'-C3'-C2'	-6.74	95.86	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1955	U	C1'-O4'-C4'	-6.74	102.96	109.70
2	AB	2331	G	C4'-C3'-C2'	-6.74	95.86	102.60
5	AE	206	ALA	CB-CA-C	6.74	120.91	109.72
2	AB	2290	G	C5'-C4'-O4'	6.74	119.91	109.80
35	BA	4	U	O4'-C1'-C2'	-6.74	100.86	107.60
2	AB	508	A	O4'-C1'-N9	6.74	118.61	108.50
2	AB	505	A	C3'-C2'-C1'	6.74	108.03	101.30
2	AB	507	A	O5'-C5'-C4'	6.74	121.60	111.50
8	AH	61	TRP	CE2-CD2-CE3	-6.74	112.06	118.80
32	A5	40	ALA	N-CA-C	-6.74	103.41	111.69
35	BA	925	G	O4'-C4'-C3'	6.74	110.74	104.00
2	AB	1928	A	C4'-C3'-O3'	-6.73	102.90	113.00
8	AH	122	ALA	N-CA-C	6.73	119.31	109.07
2	AB	929	U	O4'-C1'-N1	6.73	118.60	108.50
29	A2	24	ILE	O-C-N	6.73	129.47	122.54
35	BA	106	C	O4'-C1'-N1	6.73	118.60	108.50
1	AA	44	G	O3'-P-O5'	-6.73	93.90	104.00
2	AB	2847	U	C3'-C2'-C1'	6.73	108.03	101.30
35	BA	852	G	C4'-C3'-C2'	-6.73	95.87	102.60
2	AB	2018	G	O4'-C1'-C2'	-6.73	100.87	107.60
2	AB	1454	C	N1-C1'-C2'	6.73	122.09	112.00
35	BA	590	U	O4'-C1'-N1	6.73	118.59	108.50
41	BG	44	LYS	O-C-N	6.73	127.54	121.35
2	AB	1847	A	O4'-C4'-C3'	-6.73	97.27	104.00
2	AB	1949	G	C4'-C3'-C2'	-6.73	95.87	102.60
2	AB	2217	G	O3'-P-O5'	-6.72	93.92	104.00
35	BA	1323	G	O4'-C4'-C3'	-6.72	97.28	104.00
35	BA	1399	C	O4'-C1'-C2'	-6.72	99.08	105.80
2	AB	305	C	C4'-C3'-C2'	-6.72	95.88	102.60
2	AB	2668	G	C4'-C3'-C2'	-6.72	95.88	102.60
15	AO	114	ARG	N-CA-C	6.72	118.26	111.07
21	AU	86	MET	CA-CB-CG	-6.72	100.66	114.10
21	AU	106	VAL	CA-CB-CG2	6.72	121.83	110.40
33	A6	3	ILE	CA-CB-CG1	6.72	121.83	110.40
35	BA	1243	C	C4'-C3'-C2'	-6.72	95.88	102.60
35	BA	1504	G	C1'-C2'-O2'	6.72	121.88	111.80
2	AB	2336	A	C4'-C3'-O3'	6.72	119.48	109.40
29	A2	31	ASP	CA-CB-CG	-6.72	105.88	112.60
36	BB	34	C	N1-C1'-C2'	6.72	122.08	112.00
2	AB	2334	U	O4'-C1'-N1	6.72	118.58	108.50
4	AD	268	ARG	CA-C-O	-6.72	114.07	121.33
44	BJ	1	PRO	CA-N-CD	-6.72	102.59	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1568	G	C3'-C2'-C1'	-6.72	94.58	101.30
2	AB	1844	C	C1'-C2'-O2'	6.72	118.48	108.40
49	BO	102	ASP	N-CA-C	6.72	121.33	113.20
2	AB	2340	A	O4'-C1'-C2'	-6.72	100.88	107.60
35	BA	260	G	C2'-C3'-O3'	6.72	123.78	113.70
2	AB	1234	U	C5'-C4'-O4'	6.71	119.87	109.80
2	AB	1309	G	C1'-O4'-C4'	-6.71	103.19	109.90
42	BH	5	LYS	CA-C-N	6.71	132.57	122.23
42	BH	5	LYS	C-N-CA	6.71	132.57	122.23
45	BK	26	MET	CA-C-N	6.71	126.75	119.90
45	BK	26	MET	C-N-CA	6.71	126.75	119.90
2	AB	1463	C	O4'-C1'-N1	6.71	118.57	108.50
27	A0	55	THR	N-CA-C	6.71	119.61	111.82
2	AB	2398	U	C5'-C4'-C3'	-6.71	105.93	116.00
3	AC	147	PRO	CA-C-N	6.71	132.14	122.21
3	AC	147	PRO	C-N-CA	6.71	132.14	122.21
43	BI	94	HIS	ND1-CE1-NE2	6.71	115.11	108.40
35	BA	1421	G	O3'-P-O5'	6.71	114.06	104.00
1	AA	111	U	C1'-O4'-C4'	-6.71	103.19	109.90
2	AB	458	G	C5'-C4'-C3'	-6.71	105.14	115.20
35	BA	631	C	O4'-C1'-C2'	-6.71	100.89	107.60
2	AB	644	A	O5'-C5'-C4'	6.71	121.56	111.50
35	BA	149	A	C4'-C3'-O3'	6.71	123.06	113.00
36	BB	38	A	C5'-C4'-O4'	6.71	119.86	109.80
2	AB	1128	G	O4'-C1'-C2'	-6.71	99.09	105.80
2	AB	163	C	C2'-C3'-O3'	-6.70	103.65	113.70
2	AB	1738	G	O4'-C1'-N9	6.70	118.25	108.20
4	AD	232	GLY	CA-C-N	6.70	129.93	122.69
4	AD	232	GLY	C-N-CA	6.70	129.93	122.69
35	BA	805	C	C4'-C3'-C2'	-6.70	95.90	102.60
35	BA	991	U	C1'-O4'-C4'	-6.70	103.00	109.70
50	BP	96	VAL	CA-CB-CG1	6.70	121.79	110.40
2	AB	1830	C	N1-C1'-C2'	-6.70	101.95	112.00
8	AH	163	TYR	CA-C-O	6.70	128.33	120.43
35	BA	880	C	P-O3'-C3'	6.70	130.25	120.20
44	BJ	24	LYS	CB-CA-C	6.70	122.23	110.85
2	AB	662	G	O5'-C5'-C4'	6.70	121.54	111.50
2	AB	2110	G	P-O3'-C3'	6.70	130.24	120.20
2	AB	2846	G	O4'-C4'-C3'	6.70	110.69	104.00
8	AH	59	ASP	CA-C-N	6.70	127.82	121.46
8	AH	59	ASP	C-N-CA	6.70	127.82	121.46
1	AA	90	C	C4'-C3'-C2'	-6.69	95.91	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2831	G	C4'-C3'-C2'	-6.69	95.91	102.60
2	AB	2495	G	C4'-C3'-C2'	-6.69	95.91	102.60
35	BA	635	A	C2'-C3'-O3'	-6.69	103.66	113.70
2	AB	2170	A	C5'-C4'-C3'	6.69	126.04	116.00
12	AL	118	MET	CA-C-N	6.69	129.14	120.44
12	AL	118	MET	C-N-CA	6.69	129.14	120.44
35	BA	7	A	O5'-C5'-C4'	-6.69	101.46	111.50
2	AB	2161	C	C3'-C2'-C1'	-6.69	94.61	101.30
1	AA	53	A	C4'-C3'-C2'	-6.69	95.91	102.60
2	AB	2500	U	O4'-C1'-N1	6.69	118.53	108.50
35	BA	564	C	C3'-C2'-C1'	6.69	107.99	101.30
39	BE	111	LYS	N-CA-C	6.69	118.57	111.28
40	BF	34	SER	CA-C-N	6.69	129.24	120.28
40	BF	34	SER	C-N-CA	6.69	129.24	120.28
2	AB	1045	C	C2'-C3'-O3'	6.69	119.53	109.50
35	BA	90	C	C3'-C2'-C1'	-6.69	94.61	101.30
35	BA	337	G	C2'-C3'-O3'	-6.69	103.67	113.70
35	BA	342	C	O4'-C1'-N1	6.69	118.53	108.50
48	BN	23	HIS	CB-CG-CD2	-6.69	122.51	131.20
2	AB	1336	A	O4'-C1'-C2'	-6.68	100.92	107.60
2	AB	1442	U	C4'-C3'-C2'	-6.68	95.92	102.60
39	BE	215	ALA	CA-C-N	6.68	129.62	120.46
39	BE	215	ALA	C-N-CA	6.68	129.62	120.46
46	BL	72	SER	N-CA-C	6.68	118.57	111.28
35	BA	980	C	C3'-C2'-O2'	6.68	120.72	110.70
2	AB	2817	U	C5'-C4'-O4'	6.68	119.82	109.80
2	AB	507	A	C4'-C3'-C2'	-6.68	95.92	102.60
35	BA	1193	G	N9-C1'-C2'	-6.68	101.98	112.00
55	BU	70	THR	CA-C-N	6.68	129.23	120.28
55	BU	70	THR	C-N-CA	6.68	129.23	120.28
2	AB	2218	G	O4'-C4'-C3'	6.68	110.68	104.00
15	AO	52	ALA	CA-C-N	6.68	129.52	120.44
15	AO	52	ALA	C-N-CA	6.68	129.52	120.44
16	AP	47	VAL	CA-CB-CG1	6.68	121.75	110.40
2	AB	1658	C	O4'-C1'-C2'	-6.68	100.92	107.60
2	AB	2758	A	O4'-C4'-C3'	6.68	110.68	104.00
15	AO	62	LYS	CA-C-O	-6.68	113.56	121.11
35	BA	1258	G	O4'-C1'-C2'	-6.68	100.92	107.60
50	BP	61	LYS	CA-C-O	-6.68	113.34	120.42
2	AB	846	U	O3'-P-O5'	-6.67	93.99	104.00
2	AB	1125	G	C2'-C3'-O3'	6.67	123.71	113.70
3	AC	172	HIS	CB-CG-CD2	-6.67	122.52	131.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	268	C	O5'-C5'-C4'	-6.67	101.49	111.50
35	BA	1344	C	C4'-C3'-C2'	-6.67	95.93	102.60
20	AT	72	VAL	CA-CB-CG2	6.67	121.74	110.40
43	BI	91	ARG	CA-C-O	6.67	129.21	121.87
2	AB	1719	G	C4'-C3'-O3'	-6.67	103.00	113.00
2	AB	2072	C	C1'-C2'-O2'	-6.67	98.39	108.40
35	BA	521	G	C3'-C2'-C1'	-6.67	94.63	101.30
2	AB	15	G	C5'-C4'-O4'	-6.67	99.80	109.80
2	AB	479	A	C3'-C2'-C1'	6.67	108.17	101.50
2	AB	2228	G	O4'-C4'-C3'	6.67	110.67	104.00
35	BA	1019	A	O3'-P-O5'	-6.67	94.00	104.00
47	BM	98	VAL	CA-C-N	6.67	131.64	122.77
47	BM	98	VAL	C-N-CA	6.67	131.64	122.77
2	AB	380	G	O4'-C1'-N9	6.67	118.50	108.50
8	AH	44	HIS	CB-CG-CD2	-6.67	122.53	131.20
12	AL	86	GLN	O-C-N	6.67	130.85	123.25
2	AB	532	A	C1'-O4'-C4'	6.67	116.36	109.70
2	AB	13	A	C1'-C2'-O2'	6.66	121.79	111.80
2	AB	196	A	O4'-C4'-C3'	6.66	112.76	106.10
2	AB	1593	A	C4'-C3'-C2'	-6.66	95.94	102.60
35	BA	93	U	O4'-C1'-C2'	-6.66	100.94	107.60
35	BA	1448	C	O3'-P-O5'	6.66	114.00	104.00
2	AB	1158	C	C1'-O4'-C4'	6.66	116.56	109.90
2	AB	1709	U	O4'-C1'-N1	6.66	118.49	108.50
35	BA	176	C	O4'-C1'-N1	6.66	118.49	108.50
35	BA	239	U	N1-C1'-C2'	6.66	121.99	112.00
35	BA	612	C	C5'-C4'-C3'	-6.66	106.01	116.00
35	BA	977	A	C4'-C3'-O3'	6.66	122.99	113.00
36	BB	1	A	C4'-C3'-C2'	-6.66	95.94	102.60
2	AB	631	A	O3'-P-O5'	6.66	113.99	104.00
2	AB	940	G	O4'-C1'-C2'	-6.66	100.94	107.60
19	AS	12	ARG	N-CA-C	-6.66	103.95	111.14
35	BA	1404	C	C3'-C2'-C1'	-6.66	94.64	101.30
2	AB	1966	A	C2'-C3'-O3'	6.66	119.48	109.50
2	AB	2560	A	C5'-C4'-O4'	6.66	119.78	109.80
35	BA	1447	A	C5'-C4'-C3'	-6.66	105.22	115.20
2	AB	1314	C	C1'-O4'-C4'	-6.65	103.25	109.90
4	AD	263	ASP	CA-C-N	6.65	130.42	120.31
4	AD	263	ASP	C-N-CA	6.65	130.42	120.31
2	AB	785	G	O4'-C4'-C3'	6.65	110.65	104.00
2	AB	2778	A	O3'-P-O5'	-6.65	94.02	104.00
35	BA	100	G	C2'-C3'-O3'	6.65	123.68	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	106	G	C5'-C4'-O4'	6.65	119.77	109.80
2	AB	142	A	C4'-C3'-C2'	-6.65	95.95	102.60
2	AB	1653	G	C5'-C4'-C3'	-6.65	105.22	115.20
2	AB	2007	U	C5'-C4'-C3'	-6.65	106.02	116.00
35	BA	1424	U	C4'-C3'-O3'	-6.65	103.02	113.00
45	BK	102	VAL	N-CA-CB	6.65	118.58	111.00
2	AB	2177	C	C5'-C4'-C3'	-6.65	106.03	116.00
2	AB	2877	G	O4'-C4'-C3'	6.65	110.65	104.00
3	AC	227	ALA	N-CA-C	6.65	118.60	111.36
4	AD	133	ASN	N-CA-CB	6.65	120.33	110.49
27	A0	25	GLN	CA-C-N	6.65	129.73	120.29
27	A0	25	GLN	C-N-CA	6.65	129.73	120.29
2	AB	818	G	C4'-C3'-O3'	-6.64	103.03	113.00
2	AB	1695	G	C4'-C3'-C2'	-6.64	95.96	102.60
2	AB	2507	C	O4'-C1'-C2'	6.64	114.25	107.60
35	BA	1056	U	C1'-O4'-C4'	6.64	116.55	109.90
16	AP	60	VAL	O-C-N	-6.64	115.43	121.87
35	BA	1503	A	P-O3'-C3'	6.64	130.16	120.20
35	BA	695	A	O4'-C1'-N9	6.64	118.46	108.50
35	BA	1303	C	O4'-C1'-C2'	-6.64	100.96	107.60
38	BD	2	G	C2'-C3'-O3'	-6.64	103.74	113.70
2	AB	660	C	C5'-C4'-C3'	-6.64	106.04	116.00
29	A2	12	ILE	CB-CG1-CD1	6.64	127.75	113.80
34	A7	12	ARG	CD-NE-CZ	6.64	133.69	124.40
2	AB	81	G	C4'-C3'-O3'	6.64	122.96	113.00
2	AB	71	A	C4'-C3'-O3'	-6.64	99.44	109.40
2	AB	2726	A	O4'-C1'-C2'	6.64	112.44	105.80
12	AL	75	TYR	CA-C-N	6.64	133.60	121.85
12	AL	75	TYR	C-N-CA	6.64	133.60	121.85
35	BA	277	C	O3'-P-O5'	-6.64	94.05	104.00
35	BA	575	G	C5'-C4'-C3'	-6.64	105.25	115.20
35	BA	622	A	C4'-C3'-C2'	-6.64	95.96	102.60
36	BB	61	C	P-O5'-C5'	6.64	130.85	120.90
49	BO	95	HIS	CE1-NE2-CD2	-6.64	102.36	109.00
2	AB	2415	G	O4'-C1'-C2'	-6.63	100.97	107.60
2	AB	2897	U	O3'-P-O5'	6.63	113.95	104.00
35	BA	328	C	O4'-C1'-C2'	6.63	112.44	105.80
35	BA	990	C	C3'-C2'-O2'	6.63	120.65	110.70
53	BS	78	VAL	CA-C-N	6.63	131.56	122.34
53	BS	78	VAL	C-N-CA	6.63	131.56	122.34
19	AS	67	ALA	CA-C-O	-6.63	113.80	120.90
35	BA	3	A	O4'-C1'-C2'	-6.63	100.97	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	379	G	C4'-C3'-C2'	-6.63	95.97	102.60
2	AB	445	C	C3'-C2'-C1'	6.63	107.93	101.30
2	AB	1395	A	O3'-P-O5'	6.63	113.95	104.00
1	AA	18	G	C1'-O4'-C4'	-6.63	103.27	109.90
2	AB	2161	C	C5'-C4'-C3'	6.63	125.94	116.00
37	BC	45	G	O4'-C1'-N9	6.63	118.14	108.20
2	AB	1702	G	C4'-C3'-O3'	6.63	122.94	113.00
8	AH	100	ASN	CA-C-O	6.63	127.80	119.12
32	A5	36	ALA	CA-C-O	-6.63	112.61	120.10
35	BA	1412	C	C4'-C3'-C2'	-6.63	95.97	102.60
2	AB	853	C	C5'-C4'-O4'	6.63	119.74	109.80
8	AH	114	HIS	CB-CG-CD2	-6.63	122.59	131.20
2	AB	1577	C	O4'-C1'-C2'	-6.62	100.97	107.60
2	AB	2116	G	O4'-C4'-C3'	6.62	110.62	104.00
38	BD	44	A	P-O5'-C5'	6.62	130.84	120.90
2	AB	715	A	O4'-C4'-C3'	6.62	110.62	104.00
2	AB	2276	G	O4'-C4'-C3'	-6.62	97.38	104.00
35	BA	363	A	C1'-O4'-C4'	-6.62	103.28	109.90
35	BA	1429	A	C1'-O4'-C4'	-6.62	103.28	109.90
37	BC	48	C	C4'-C3'-C2'	-6.62	95.98	102.60
2	AB	2483	C	C1'-C2'-O2'	6.62	118.33	108.40
2	AB	2868	A	O4'-C4'-C3'	6.62	110.62	104.00
35	BA	119	A	C3'-C2'-O2'	-6.62	104.67	114.60
35	BA	783	C	C5'-C4'-C3'	-6.62	106.07	116.00
2	AB	929	U	C4'-C3'-C2'	-6.62	95.98	102.60
2	AB	1659	G	O4'-C1'-N9	6.62	118.43	108.50
2	AB	293	U	O3'-P-O5'	-6.62	94.08	104.00
2	AB	1045	C	O4'-C1'-N1	6.62	118.12	108.20
35	BA	565	U	O5'-C5'-C4'	6.62	121.42	111.50
35	BA	81	A	O4'-C4'-C3'	6.61	110.61	104.00
35	BA	347	G	C4'-C3'-O3'	6.61	122.92	113.00
35	BA	1144	G	C1'-C2'-O2'	-6.61	98.48	108.40
2	AB	508	A	O4'-C4'-C3'	6.61	110.61	104.00
35	BA	579	A	O4'-C4'-C3'	6.61	110.61	104.00
56	BV	18	VAL	CA-C-O	-6.61	114.07	120.95
11	AK	109	ALA	CA-C-N	6.61	129.80	120.28
11	AK	109	ALA	C-N-CA	6.61	129.80	120.28
35	BA	1130	A	C5'-C4'-C3'	-6.61	106.08	116.00
35	BA	1440	U	O4'-C1'-N1	6.61	118.42	108.50
36	BB	25	C	C5'-C4'-C3'	-6.61	106.08	116.00
40	BF	76	ILE	O-C-N	6.61	128.64	121.83
2	AB	2450	A	C1'-O4'-C4'	-6.61	103.29	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	BE	65	LYS	CA-C-O	-6.61	112.15	120.28
45	BK	46	GLU	CA-C-N	6.61	133.18	121.75
45	BK	46	GLU	C-N-CA	6.61	133.18	121.75
50	BP	59	VAL	O-C-N	6.61	128.28	121.87
2	AB	206	U	N1-C1'-C2'	-6.61	102.09	112.00
2	AB	262	A	C1'-C2'-O2'	6.61	118.31	108.40
2	AB	780	G	C4'-C3'-C2'	-6.61	96.00	102.60
2	AB	2730	C	O4'-C1'-C2'	-6.61	101.00	107.60
6	AF	28	VAL	CA-C-O	-6.61	114.08	120.95
6	AF	171	ASP	CA-CB-CG	6.61	119.21	112.60
14	AN	62	PRO	O-C-N	6.61	131.19	123.06
2	AB	1685	C	C5'-C4'-O4'	6.60	119.71	109.80
35	BA	1049	U	C3'-C2'-C1'	-6.60	94.90	101.50
38	BD	4	G	C3'-C2'-C1'	6.60	107.90	101.30
2	AB	2181	U	O4'-C1'-C2'	-6.60	101.00	107.60
2	AB	2903	U	O3'-P-O5'	6.60	113.90	104.00
35	BA	279	A	C2'-C3'-O3'	6.60	119.40	109.50
35	BA	981	U	C4'-C3'-C2'	-6.60	96.00	102.60
2	AB	650	C	C5'-C4'-O4'	6.60	119.70	109.80
2	AB	1078	U	C5'-C4'-C3'	-6.60	105.30	115.20
2	AB	36	G	O3'-P-O5'	6.60	113.90	104.00
2	AB	721	A	C5'-C4'-O4'	6.60	119.70	109.80
2	AB	1234	U	C5'-C4'-C3'	-6.60	106.10	116.00
7	AG	68	LYS	CA-C-O	-6.60	113.70	121.16
35	BA	1014	A	C3'-C2'-O2'	6.60	120.60	110.70
35	BA	1281	C	O4'-C1'-N1	6.60	118.10	108.20
44	BJ	161	PHE	CA-CB-CG	6.60	120.40	113.80
2	AB	44	A	C3'-C2'-C1'	6.59	107.89	101.30
2	AB	2143	C	O5'-C5'-C4'	6.59	121.39	111.50
10	AJ	151	VAL	CA-C-N	6.59	129.12	120.28
10	AJ	151	VAL	C-N-CA	6.59	129.12	120.28
2	AB	613	A	C5'-C4'-O4'	6.59	119.69	109.80
53	BS	38	PHE	CA-CB-CG	6.59	120.39	113.80
2	AB	1789	A	C4'-C3'-C2'	-6.59	96.01	102.60
35	BA	738	C	O4'-C4'-C3'	6.59	110.59	104.00
39	BE	23	ASN	CA-C-N	6.59	127.12	119.47
39	BE	23	ASN	C-N-CA	6.59	127.12	119.47
45	BK	59	GLU	CA-C-N	6.59	132.94	122.59
45	BK	59	GLU	C-N-CA	6.59	132.94	122.59
2	AB	2785	C	O4'-C1'-N1	6.59	118.39	108.50
35	BA	976	G	C4'-C3'-C2'	-6.59	96.01	102.60
2	AB	1761	C	O4'-C4'-C3'	6.59	110.59	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	10	PRO	N-CA-C	6.59	121.56	111.15
49	BO	30	ARG	NE-CZ-NH2	-6.59	113.27	119.20
9	AI	56	ALA	N-CA-C	6.58	119.28	111.71
2	AB	60	G	C4'-C3'-C2'	-6.58	96.02	102.60
2	AB	2474	U	O4'-C1'-C2'	-6.58	101.02	107.60
48	BN	21	HIS	CB-CG-CD2	-6.58	122.64	131.20
56	BV	21	ALA	O-C-N	6.58	131.15	122.33
1	AA	13	G	O4'-C4'-C3'	6.58	110.58	104.00
6	AF	62	GLN	OE1-CD-NE2	-6.58	116.02	122.60
2	AB	425	G	O5'-C5'-C4'	6.58	121.37	111.50
2	AB	1319	C	O3'-P-O5'	6.58	113.87	104.00
2	AB	1463	C	C4'-C3'-C2'	-6.58	96.02	102.60
14	AN	33	ARG	CB-CA-C	6.58	119.22	109.29
17	AQ	82	ALA	CA-C-N	6.58	130.31	120.31
17	AQ	82	ALA	C-N-CA	6.58	130.31	120.31
35	BA	458	U	C5'-C4'-C3'	-6.58	106.13	116.00
35	BA	641	U	O4'-C4'-C3'	6.58	112.68	106.10
38	BD	48	U	O4'-C1'-N1	6.58	118.07	108.20
2	AB	535	G	C4'-C3'-O3'	6.58	122.86	113.00
18	AR	108	ARG	NE-CZ-NH2	6.58	125.12	119.20
35	BA	63	C	O4'-C1'-C2'	-6.58	101.02	107.60
45	BK	62	LEU	N-CA-C	6.58	119.43	110.55
2	AB	819	A	C3'-C2'-O2'	6.57	120.56	110.70
15	AO	32	GLY	O-C-N	-6.57	115.73	123.55
27	A0	59	GLU	CA-C-N	6.57	129.09	120.28
27	A0	59	GLU	C-N-CA	6.57	129.09	120.28
2	AB	1456	G	O4'-C4'-C3'	6.57	110.57	104.00
35	BA	230	G	O4'-C4'-C3'	-6.57	97.43	104.00
35	BA	1171	A	C4'-C3'-C2'	6.57	109.17	102.60
41	BG	164	ARG	NE-CZ-NH1	-6.57	114.93	121.50
18	AR	14	GLN	CA-CB-CG	6.57	127.24	114.10
1	AA	45	A	N9-C1'-C2'	-6.57	102.15	112.00
2	AB	448	U	O4'-C4'-C3'	6.57	112.67	106.10
2	AB	684	G	O4'-C1'-N9	6.57	118.35	108.50
2	AB	2776	A	O4'-C1'-C2'	-6.57	99.23	105.80
6	AF	154	ASP	CA-CB-CG	6.57	119.17	112.60
46	BL	109	GLN	CA-C-N	6.57	129.55	120.49
46	BL	109	GLN	C-N-CA	6.57	129.55	120.49
2	AB	1056	G	C4'-C3'-O3'	6.56	122.85	113.00
35	BA	274	A	C4'-C3'-O3'	-6.56	99.55	109.40
2	AB	1343	G	O3'-P-O5'	6.56	113.84	104.00
2	AB	2530	A	C1'-O4'-C4'	-6.56	103.34	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	AE	127	PHE	CA-CB-CG	6.56	120.36	113.80
2	AB	123	G	O4'-C1'-C2'	-6.56	101.04	107.60
2	AB	338	G	O4'-C4'-C3'	6.56	110.56	104.00
2	AB	269	C	O4'-C1'-N1	6.56	118.33	108.50
2	AB	1573	G	O4'-C4'-C3'	6.56	110.56	104.00
2	AB	1765	U	O4'-C1'-N1	6.56	118.34	108.50
9	AI	74	ALA	CA-C-N	6.56	131.80	122.09
9	AI	74	ALA	C-N-CA	6.56	131.80	122.09
33	A6	18	LYS	CA-C-N	6.56	131.48	121.51
33	A6	18	LYS	C-N-CA	6.56	131.48	121.51
35	BA	180	U	O3'-P-O5'	-6.56	94.16	104.00
35	BA	632	U	O3'-P-O5'	-6.56	94.16	104.00
2	AB	599	A	O4'-C4'-C3'	6.55	110.55	104.00
2	AB	1367	A	C1'-C2'-O2'	-6.55	98.57	108.40
35	BA	100	G	O4'-C1'-N9	6.55	118.33	108.50
35	BA	1020	G	P-O3'-C3'	6.55	130.03	120.20
38	BD	30	G	O4'-C1'-N9	6.55	118.33	108.50
45	BK	24	VAL	CB-CA-C	6.55	119.27	110.42
2	AB	1392	A	C3'-C2'-O2'	6.55	120.53	110.70
4	AD	186	ASP	CA-C-N	6.55	130.01	120.71
4	AD	186	ASP	C-N-CA	6.55	130.01	120.71
35	BA	269	C	P-O3'-C3'	6.55	130.03	120.20
2	AB	1120	G	C4'-C3'-C2'	-6.55	96.05	102.60
14	AN	137	ALA	N-CA-C	6.55	118.08	111.07
36	BB	56	C	C5'-C4'-O4'	6.55	119.62	109.80
57	BW	45	ALA	O-C-N	6.55	131.11	122.33
35	BA	41	G	O4'-C4'-C3'	-6.55	97.45	104.00
2	AB	1386	C	C1'-O4'-C4'	-6.55	103.35	109.90
3	AC	43	ASP	CA-C-N	6.55	131.72	123.14
3	AC	43	ASP	C-N-CA	6.55	131.72	123.14
15	AO	73	ILE	CA-CB-CG1	6.55	121.53	110.40
35	BA	670	G	C4'-C3'-O3'	-6.54	103.18	113.00
2	AB	348	A	O4'-C4'-C3'	-6.54	97.46	104.00
2	AB	791	C	C5'-C4'-C3'	-6.54	105.38	115.20
2	AB	1582	C	C4'-C3'-C2'	-6.54	96.06	102.60
35	BA	977	A	C3'-C2'-C1'	-6.54	94.76	101.30
2	AB	2253	G	C1'-O4'-C4'	-6.54	103.36	109.90
7	AG	31	GLU	N-CA-CB	-6.54	100.78	110.85
20	AT	20	VAL	CA-CB-CG1	6.54	121.52	110.40
35	BA	149	A	C2'-C3'-O3'	-6.54	103.89	113.70
35	BA	1420	U	O4'-C4'-C3'	6.54	110.54	104.00
55	BU	40	PRO	CA-C-N	6.54	130.25	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BU	40	PRO	C-N-CA	6.54	130.25	120.31
2	AB	1573	G	C1'-O4'-C4'	-6.54	103.36	109.90
12	AL	136	GLN	CA-C-N	6.54	126.77	119.90
12	AL	136	GLN	C-N-CA	6.54	126.77	119.90
31	A4	33	LEU	CA-C-O	-6.54	113.25	120.38
36	BB	39	A	C5'-C4'-O4'	6.54	119.61	109.80
41	BG	52	VAL	O-C-N	6.54	128.56	121.83
56	BV	18	VAL	O-C-N	6.54	128.21	121.87
2	AB	850	U	O3'-P-O5'	-6.54	94.19	104.00
35	BA	80	A	O4'-C1'-C2'	-6.54	101.06	107.60
35	BA	1192	C	C2'-C3'-O3'	-6.54	103.89	113.70
2	AB	1192	G	N9-C1'-C2'	-6.54	102.20	112.00
32	A5	28	ARG	N-CA-C	6.54	119.22	111.71
35	BA	650	G	C4'-C3'-C2'	-6.54	96.06	102.60
2	AB	437	U	C4'-C3'-C2'	-6.53	96.07	102.60
2	AB	1238	G	C4'-C3'-C2'	-6.53	96.07	102.60
2	AB	1672	A	O4'-C4'-C3'	6.53	110.53	104.00
35	BA	820	U	O4'-C1'-C2'	6.53	112.33	105.80
2	AB	1575	C	O4'-C1'-N1	6.53	118.30	108.50
2	AB	1076	C	C4'-C3'-C2'	-6.53	96.07	102.60
2	AB	1201	U	O3'-P-O5'	-6.53	94.20	104.00
2	AB	1577	C	C1'-O4'-C4'	6.53	116.43	109.90
21	AU	26	GLY	CA-C-N	6.53	132.57	121.14
21	AU	26	GLY	C-N-CA	6.53	132.57	121.14
33	A6	39	ARG	O-C-N	6.53	128.82	122.03
1	AA	34	A	C3'-C2'-C1'	6.53	107.83	101.30
1	AA	38	C	O4'-C1'-N1	6.53	118.29	108.50
2	AB	1765	U	O3'-P-O5'	-6.53	94.21	104.00
46	BL	6	TYR	CA-C-N	6.53	126.68	122.18
46	BL	6	TYR	C-N-CA	6.53	126.68	122.18
7	AG	84	ILE	CB-CA-C	6.52	121.99	111.29
2	AB	431	U	C4'-C3'-O3'	6.52	122.78	113.00
2	AB	1864	U	C4'-C3'-C2'	-6.52	96.08	102.60
27	A0	28	LEU	CA-C-O	-6.52	113.64	120.55
40	BF	83	VAL	CA-CB-CG1	6.52	121.49	110.40
2	AB	528	A	O3'-P-O5'	6.52	113.78	104.00
2	AB	657	U	C2'-C3'-O3'	-6.52	103.92	113.70
2	AB	2247	A	C4'-C3'-C2'	-6.52	96.08	102.60
2	AB	2543	G	C5'-C4'-O4'	6.52	119.58	109.80
35	BA	961	U	C4'-C3'-C2'	-6.52	96.08	102.60
39	BE	231	GLN	CA-C-O	-6.52	113.97	120.82
44	BJ	134	VAL	N-CA-C	-6.52	104.16	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	BL	11	ARG	NE-CZ-NH2	6.52	125.07	119.20
2	AB	1739	A	C5'-C4'-C3'	-6.52	106.22	116.00
26	AZ	39	VAL	CA-C-N	6.52	129.01	120.28
26	AZ	39	VAL	C-N-CA	6.52	129.01	120.28
41	BG	56	GLU	CA-C-N	6.52	129.54	120.29
41	BG	56	GLU	C-N-CA	6.52	129.54	120.29
41	BG	71	PHE	N-CA-CB	-6.52	100.18	110.28
2	AB	939	G	C1'-C2'-O2'	-6.52	98.63	108.40
35	BA	1222	G	C4'-C3'-C2'	-6.52	96.08	102.60
2	AB	85	G	C2'-C3'-O3'	6.51	123.47	113.70
6	AF	114	ARG	NE-CZ-NH2	-6.51	113.34	119.20
12	AL	9	GLU	N-CA-C	6.51	118.46	111.36
35	BA	587	G	O4'-C1'-N9	6.51	117.97	108.20
35	BA	29	U	O4'-C1'-C2'	-6.51	101.09	107.60
2	AB	376	G	O4'-C1'-C2'	-6.51	101.09	107.60
2	AB	1029	A	C4'-C3'-C2'	-6.51	96.09	102.60
2	AB	1742	U	O4'-C4'-C3'	6.51	110.51	104.00
2	AB	2886	A	O5'-C5'-C4'	-6.51	101.73	111.50
15	AO	82	MET	O-C-N	-6.51	115.43	122.85
32	A5	6	GLN	CA-C-N	6.51	127.98	119.84
32	A5	6	GLN	C-N-CA	6.51	127.98	119.84
40	BF	82	ASP	CA-CB-CG	6.51	119.11	112.60
50	BP	78	ARG	NH1-CZ-NH2	-6.51	110.84	119.30
53	BS	65	ALA	CA-C-O	6.51	128.66	121.56
2	AB	2722	G	C3'-C2'-O2'	6.51	120.46	110.70
35	BA	668	G	C1'-O4'-C4'	6.51	116.41	109.90
50	BP	8	ILE	CA-CB-CG2	6.51	121.56	110.50
9	AI	144	VAL	CA-CB-CG1	6.51	121.46	110.40
16	AP	31	HIS	CB-CG-CD2	-6.51	122.74	131.20
35	BA	909	A	O4'-C1'-C2'	-6.51	101.09	107.60
2	AB	1247	A	C1'-O4'-C4'	6.50	116.20	109.70
35	BA	807	A	C5'-C4'-O4'	6.50	119.56	109.80
12	AL	60	ASP	CA-CB-CG	6.50	119.10	112.60
35	BA	749	A	C4'-C3'-C2'	-6.50	96.10	102.60
35	BA	1444	U	O4'-C4'-C3'	6.50	110.50	104.00
2	AB	2388	A	C1'-O4'-C4'	-6.50	103.40	109.90
54	BT	45	VAL	O-C-N	6.50	130.28	123.26
2	AB	2409	G	C4'-C3'-C2'	-6.50	96.10	102.60
2	AB	2797	U	O4'-C1'-C2'	-6.50	99.30	105.80
6	AF	43	THR	CA-C-O	-6.50	114.01	120.70
23	AW	75	ALA	CA-C-O	-6.50	114.00	120.82
40	BF	110	LEU	N-CA-CB	-6.50	100.80	110.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AC	167	LYS	CA-C-N	6.50	132.76	122.36
3	AC	167	LYS	C-N-CA	6.50	132.76	122.36
41	BG	174	ALA	N-CA-CB	-6.50	100.30	110.30
49	BO	108	ASP	CB-CA-C	6.50	120.95	111.73
2	AB	769	U	C4'-C3'-C2'	-6.50	96.11	102.60
2	AB	1544	A	C2'-C3'-O3'	-6.50	103.96	113.70
41	BG	152	SER	CA-C-N	6.50	129.63	120.28
41	BG	152	SER	C-N-CA	6.50	129.63	120.28
2	AB	1452	G	C4'-C3'-C2'	-6.49	96.11	102.60
2	AB	2203	U	C1'-O4'-C4'	-6.49	103.41	109.90
35	BA	565	U	O4'-C1'-C2'	-6.49	101.11	107.60
2	AB	1173	U	O4'-C1'-N1	6.49	118.23	108.50
7	AG	8	LYS	O-C-N	-6.49	115.34	122.09
45	BK	109	VAL	CB-CA-C	6.49	118.67	111.08
2	AB	150	U	O4'-C1'-N1	6.49	118.23	108.50
2	AB	918	A	O4'-C1'-C2'	-6.49	101.11	107.60
2	AB	1590	A	O4'-C4'-C3'	6.49	110.49	104.00
25	AY	52	CYS	CA-C-N	6.49	127.86	120.53
25	AY	52	CYS	C-N-CA	6.49	127.86	120.53
35	BA	128	G	O3'-P-O5'	-6.49	94.27	104.00
2	AB	442	G	O5'-C5'-C4'	-6.49	101.97	111.70
2	AB	1286	A	C1'-C2'-O2'	6.49	121.53	111.80
4	AD	230	PRO	N-CA-C	6.49	122.27	113.84
8	AH	1	SER	CA-CB-OG	-6.49	98.13	111.10
2	AB	247	G	O4'-C4'-C3'	6.49	110.48	104.00
2	AB	2826	A	N9-C1'-C2'	-6.49	102.27	112.00
6	AF	169	VAL	O-C-N	-6.49	116.33	123.20
35	BA	471	U	O5'-C5'-C4'	-6.49	101.77	111.50
35	BA	506	G	C5'-C4'-O4'	6.49	119.53	109.80
35	BA	973	G	C4'-C3'-O3'	-6.49	103.27	113.00
35	BA	1136	C	P-O3'-C3'	6.49	129.93	120.20
35	BA	1411	C	O4'-C1'-N1	6.49	118.23	108.50
36	BB	13	C	P-O3'-C3'	6.49	129.93	120.20
41	BG	110	ARG	NE-CZ-NH1	6.49	127.99	121.50
2	AB	1204	A	C5'-C4'-O4'	-6.48	99.38	109.10
2	AB	1351	C	C4'-C3'-C2'	-6.48	96.12	102.60
10	AJ	66	THR	CA-C-N	6.48	127.45	120.13
10	AJ	66	THR	C-N-CA	6.48	127.45	120.13
15	AO	64	TRP	CA-C-N	6.48	131.23	123.19
15	AO	64	TRP	C-N-CA	6.48	131.23	123.19
25	AY	56	HIS	CB-CG-CD2	-6.48	122.77	131.20
57	BW	45	ALA	CA-C-O	-6.48	112.14	119.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2011	U	O4'-C1'-N1	6.48	118.22	108.50
2	AB	2198	A	C3'-C2'-C1'	6.48	107.98	101.50
3	AC	36	ALA	N-CA-CB	-6.48	101.09	110.36
8	AH	61	TRP	CA-C-N	6.48	128.86	120.44
8	AH	61	TRP	C-N-CA	6.48	128.86	120.44
10	AJ	43	ALA	N-CA-C	6.48	119.34	111.82
12	AL	135	GLN	OE1-CD-NE2	-6.48	116.12	122.60
15	AO	34	LYS	CA-CB-CG	6.48	127.06	114.10
35	BA	180	U	C5'-C4'-O4'	6.48	119.52	109.80
2	AB	1658	C	C4'-C3'-C2'	-6.48	96.12	102.60
24	AX	3	THR	CB-CA-C	6.48	121.17	110.74
1	AA	39	A	O4'-C4'-C3'	6.48	110.48	104.00
1	AA	91	C	O4'-C1'-N1	6.48	118.22	108.50
2	AB	2474	U	C4'-C3'-C2'	-6.48	96.12	102.60
35	BA	1327	C	C3'-C2'-C1'	6.48	107.78	101.30
2	AB	1249	U	C4'-C3'-C2'	-6.48	96.12	102.60
2	AB	2477	U	N1-C1'-C2'	6.48	121.71	112.00
7	AG	56	LEU	CA-C-N	6.47	128.96	120.28
7	AG	56	LEU	C-N-CA	6.47	128.96	120.28
16	AP	51	LEU	O-C-N	6.47	129.53	122.15
35	BA	4	U	C4'-C3'-O3'	-6.47	103.29	113.00
35	BA	1275	A	O4'-C1'-N9	6.47	118.21	108.50
2	AB	155	A	O4'-C1'-N9	6.47	118.21	108.50
35	BA	757	U	C3'-C2'-O2'	6.47	120.41	110.70
2	AB	226	A	O4'-C1'-C2'	-6.47	101.13	107.60
2	AB	497	A	O5'-C5'-C4'	-6.47	101.79	111.50
2	AB	1732	C	C4'-C3'-O3'	6.47	119.11	109.40
35	BA	88	U	C1'-C2'-O2'	-6.47	98.69	108.40
43	BI	70	VAL	N-CA-C	6.47	116.61	110.53
2	AB	222	A	O4'-C1'-C2'	-6.47	99.33	105.80
13	AM	37	ASP	CA-C-N	6.47	131.18	122.90
13	AM	37	ASP	C-N-CA	6.47	131.18	122.90
45	BK	112	ASP	CB-CA-C	6.47	122.60	110.63
2	AB	1146	C	O3'-P-O5'	-6.47	94.30	104.00
2	AB	1450	G	C3'-C2'-C1'	6.47	107.77	101.30
2	AB	2781	A	P-O5'-C5'	6.47	130.60	120.90
51	BQ	6	LYS	CA-C-N	6.47	128.85	120.44
51	BQ	6	LYS	C-N-CA	6.47	128.85	120.44
53	BS	14	ARG	CA-C-N	6.47	126.23	119.76
53	BS	14	ARG	C-N-CA	6.47	126.23	119.76
2	AB	820	A	O4'-C4'-C3'	6.47	110.47	104.00
46	BL	95	SER	N-CA-C	-6.47	104.16	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	335	C	C1'-O4'-C4'	6.46	116.36	109.90
2	AB	1641	A	O4'-C4'-C3'	6.46	110.47	104.00
35	BA	962	C	C4'-C3'-O3'	-6.46	103.30	113.00
49	BO	76	HIS	CA-C-O	-6.46	112.79	119.51
16	AP	50	PRO	N-CA-CB	6.46	110.37	103.52
19	AS	38	VAL	CA-C-N	6.46	129.60	120.42
19	AS	38	VAL	C-N-CA	6.46	129.60	120.42
2	AB	472	A	C5'-C4'-C3'	-6.46	106.31	116.00
2	AB	2865	U	C5'-C4'-C3'	-6.46	106.31	116.00
35	BA	1494	G	O4'-C1'-C2'	-6.46	101.14	107.60
45	BK	14	ARG	CA-C-O	-6.46	114.04	120.82
2	AB	914	G	O4'-C4'-C3'	6.46	110.46	104.00
17	AQ	84	GLU	O-C-N	6.46	129.51	122.15
2	AB	1998	A	C5'-C4'-O4'	6.46	119.49	109.80
35	BA	376	G	O4'-C4'-C3'	6.46	110.46	104.00
35	BA	1248	A	O4'-C1'-N9	6.46	118.19	108.50
45	BK	76	ARG	NE-CZ-NH1	6.46	127.96	121.50
2	AB	1096	A	O3'-P-O5'	-6.46	94.32	104.00
2	AB	2822	G	O4'-C1'-C2'	6.46	114.06	107.60
2	AB	1680	U	C1'-C2'-O2'	6.45	118.08	108.40
35	BA	970	C	O4'-C1'-N1	6.45	117.88	108.20
36	BB	1	A	O4'-C1'-N9	6.45	118.18	108.50
2	AB	2525	G	O4'-C1'-N9	6.45	118.18	108.50
2	AB	16	C	O4'-C1'-N1	6.45	118.18	108.50
2	AB	2004	G	C4'-C3'-C2'	-6.45	96.15	102.60
2	AB	2432	A	C2'-C3'-O3'	6.45	123.38	113.70
2	AB	2243	U	O4'-C1'-N1	6.45	118.17	108.50
35	BA	173	U	O4'-C1'-N1	6.45	117.87	108.20
35	BA	296	U	C4'-C3'-C2'	-6.45	96.15	102.60
2	AB	2401	U	O4'-C1'-N1	6.45	118.17	108.50
35	BA	1481	U	O4'-C4'-C3'	6.45	110.45	104.00
38	BD	75	C	O4'-C4'-C3'	6.45	112.55	106.10
2	AB	902	C	O3'-P-O5'	-6.45	94.33	104.00
2	AB	1653	G	C1'-O4'-C4'	-6.45	103.25	109.70
2	AB	2792	A	C5'-C4'-O4'	6.45	119.47	109.80
4	AD	105	ALA	CA-C-N	6.45	127.90	119.84
4	AD	105	ALA	C-N-CA	6.45	127.90	119.84
19	AS	29	ARG	CD-NE-CZ	6.45	133.42	124.40
35	BA	184	G	C5'-C4'-C3'	-6.45	106.33	116.00
48	BN	105	ARG	CB-CA-C	6.45	120.67	109.65
2	AB	399	U	O5'-C5'-C4'	6.44	121.17	111.50
2	AB	611	C	P-O3'-C3'	6.44	129.87	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	637	A	P-O3'-C3'	6.44	129.87	120.20
2	AB	1081	U	O5'-C5'-C4'	-6.44	101.84	111.50
12	AL	97	PRO	CA-C-N	6.44	129.21	120.38
12	AL	97	PRO	C-N-CA	6.44	129.21	120.38
29	A2	6	HIS	CA-C-N	6.44	127.33	120.11
29	A2	6	HIS	C-N-CA	6.44	127.33	120.11
2	AB	37	C	C4'-C3'-C2'	-6.44	96.16	102.60
2	AB	607	U	O4'-C4'-C3'	6.44	110.44	104.00
2	AB	1323	C	C1'-O4'-C4'	-6.44	103.26	109.70
35	BA	323	U	O3'-P-O5'	-6.44	94.34	104.00
35	BA	1213	A	C4'-C3'-C2'	-6.44	96.16	102.60
36	BB	65	C	O5'-C5'-C4'	6.44	121.16	111.50
2	AB	2525	G	C3'-C2'-C1'	6.44	107.74	101.30
3	AC	177	LYS	CA-C-O	-6.44	113.68	121.28
35	BA	26	A	O4'-C4'-C3'	6.44	110.44	104.00
38	BD	60	A	C3'-C2'-C1'	6.44	107.74	101.30
17	AQ	29	HIS	CB-CG-CD2	-6.43	122.83	131.20
2	AB	88	G	O3'-P-O5'	-6.43	94.35	104.00
2	AB	2273	A	O4'-C1'-C2'	-6.43	101.17	107.60
2	AB	2770	G	O3'-P-O5'	6.43	113.65	104.00
35	BA	772	U	C1'-C2'-O2'	6.43	118.05	108.40
2	AB	934	U	C1'-C2'-O2'	-6.43	98.75	108.40
2	AB	1534	U	C1'-O4'-C4'	-6.43	103.47	109.90
35	BA	1120	C	O4'-C1'-C2'	-6.43	101.17	107.60
2	AB	575	A	C5'-C4'-C3'	6.43	125.64	116.00
2	AB	1349	C	C5'-C4'-O4'	6.43	119.44	109.80
2	AB	1622	G	C4'-C3'-C2'	-6.43	96.17	102.60
2	AB	2327	A	O4'-C4'-C3'	6.43	110.43	104.00
37	BC	32	U	P-O3'-C3'	6.43	129.84	120.20
10	AJ	34	VAL	N-CA-C	6.43	117.18	110.62
47	BM	89	ARG	NE-CZ-NH2	6.43	124.98	119.20
2	AB	1137	G	C1'-O4'-C4'	6.43	116.33	109.90
2	AB	1827	U	C1'-O4'-C4'	6.43	116.33	109.90
2	AB	2509	G	O3'-P-O5'	-6.43	94.36	104.00
2	AB	2572	A	C1'-O4'-C4'	6.43	116.13	109.70
35	BA	325	A	O4'-C1'-N9	6.43	117.84	108.20
35	BA	1113	C	P-O3'-C3'	6.43	129.84	120.20
2	AB	1363	C	C4'-C3'-C2'	-6.42	96.17	102.60
3	AC	184	LYS	N-CA-CB	-6.42	100.67	110.12
8	AH	76	ILE	CA-C-N	6.42	127.07	119.94
8	AH	76	ILE	C-N-CA	6.42	127.07	119.94
35	BA	283	U	O4'-C4'-C3'	6.42	110.42	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	467	U	O4'-C4'-C3'	-6.42	99.67	106.10
35	BA	558	G	O4'-C4'-C3'	6.42	110.42	104.00
35	BA	924	C	O4'-C4'-C3'	-6.42	97.58	104.00
39	BE	104	LYS	O-C-N	-6.42	114.43	122.20
2	AB	2615	U	O4'-C1'-N1	6.42	118.14	108.50
21	AU	86	MET	CA-C-N	6.42	126.38	119.76
21	AU	86	MET	C-N-CA	6.42	126.38	119.76
2	AB	347	A	C1'-C2'-O2'	6.42	118.03	108.40
2	AB	782	A	C4'-C3'-O3'	6.42	119.03	109.40
2	AB	985	C	N1-C1'-C2'	6.42	121.63	112.00
2	AB	1597	A	C3'-C2'-C1'	6.42	107.72	101.30
2	AB	1804	C	O4'-C1'-N1	6.42	118.13	108.50
35	BA	773	G	C4'-C3'-C2'	-6.42	96.18	102.60
35	BA	1209	C	O4'-C1'-N1	6.42	118.13	108.50
53	BS	34	GLU	O-C-N	-6.42	115.90	123.41
16	AP	11	ASN	N-CA-C	6.42	122.07	113.72
2	AB	389	G	O4'-C1'-N9	6.42	117.83	108.20
7	AG	71	LYS	N-CA-C	-6.42	106.08	114.04
9	AI	69	ALA	O-C-N	-6.42	115.32	122.12
12	AL	120	ARG	NE-CZ-NH1	-6.42	115.08	121.50
22	AV	24	MET	CA-C-N	6.42	129.21	120.54
22	AV	24	MET	C-N-CA	6.42	129.21	120.54
26	AZ	62	GLY	CA-C-N	6.42	128.88	120.60
26	AZ	62	GLY	C-N-CA	6.42	128.88	120.60
49	BO	3	VAL	CA-C-O	-6.42	114.05	120.85
2	AB	594	U	O4'-C1'-C2'	6.42	114.02	107.60
2	AB	658	U	C3'-C2'-O2'	6.42	120.32	110.70
2	AB	2437	G	C1'-O4'-C4'	6.42	116.32	109.90
2	AB	2802	G	C5'-C4'-C3'	-6.42	106.37	116.00
35	BA	563	A	C1'-C2'-O2'	6.42	118.03	108.40
35	BA	1127	G	C3'-C2'-O2'	6.42	120.32	110.70
2	AB	1130	U	O4'-C1'-N1	6.42	118.12	108.50
13	AM	26	GLY	CA-C-N	6.42	129.76	120.91
13	AM	26	GLY	C-N-CA	6.42	129.76	120.91
35	BA	1110	A	C3'-C2'-C1'	-6.42	94.89	101.30
2	AB	107	G	C3'-C2'-O2'	6.41	120.32	110.70
2	AB	2843	G	O4'-C1'-N9	6.41	118.12	108.50
35	BA	206	C	C2'-C3'-O3'	6.41	123.32	113.70
35	BA	487	A	C2'-C3'-O3'	-6.41	104.08	113.70
2	AB	1864	U	O4'-C4'-C3'	6.41	110.41	104.00
2	AB	2019	A	C2'-C3'-O3'	6.41	123.32	113.70
4	AD	198	GLU	CA-CB-CG	6.41	126.92	114.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	410	G	O4'-C4'-C3'	6.41	110.41	104.00
28	A1	54	VAL	CA-C-N	6.41	132.02	123.05
28	A1	54	VAL	C-N-CA	6.41	132.02	123.05
35	BA	79	G	O5'-C5'-C4'	-6.41	101.89	111.50
35	BA	1417	G	C2'-C3'-O3'	6.41	123.31	113.70
2	AB	1786	A	O3'-P-O5'	-6.41	94.39	104.00
2	AB	2643	G	O4'-C4'-C3'	6.41	110.41	104.00
37	BC	39	U	C2'-C3'-O3'	6.41	123.31	113.70
2	AB	856	G	C4'-C3'-C2'	-6.41	96.19	102.60
2	AB	2544	G	O3'-P-O5'	6.41	113.61	104.00
10	AJ	10	ILE	CA-C-N	6.41	128.76	120.56
10	AJ	10	ILE	C-N-CA	6.41	128.76	120.56
23	AW	98	ASN	CA-CB-CG	6.41	119.00	112.60
35	BA	549	C	C4'-C3'-C2'	-6.41	96.19	102.60
35	BA	586	C	C4'-C3'-C2'	-6.41	96.19	102.60
35	BA	1486	G	C3'-C2'-C1'	-6.41	94.89	101.30
7	AG	153	ILE	N-CA-CB	-6.40	105.23	111.89
47	BM	18	ILE	CA-C-O	-6.40	114.06	120.85
2	AB	940	G	C4'-C3'-C2'	-6.40	96.20	102.60
2	AB	2411	A	C1'-C2'-O2'	6.40	118.00	108.40
11	AK	125	THR	O-C-N	6.40	128.91	122.12
35	BA	884	U	O4'-C1'-C2'	-6.40	99.40	105.80
35	BA	1270	G	C4'-C3'-C2'	-6.40	96.20	102.60
2	AB	470	A	C3'-C2'-C1'	-6.40	94.90	101.30
2	AB	1361	G	N9-C1'-C2'	-6.40	102.40	112.00
2	AB	2355	G	O4'-C4'-C3'	6.40	110.40	104.00
19	AS	13	HIS	CE1-NE2-CD2	-6.40	102.60	109.00
35	BA	680	C	C5'-C4'-C3'	-6.40	106.40	116.00
35	BA	766	A	C5'-C4'-C3'	-6.40	106.40	116.00
35	BA	1103	C	C5'-C4'-C3'	-6.40	106.40	116.00
43	BI	37	HIS	CE1-NE2-CD2	-6.40	102.60	109.00
49	BO	49	ARG	O-C-N	6.40	130.23	123.06
2	AB	1103	A	C5'-C4'-C3'	-6.40	106.40	116.00
2	AB	2114	A	C4'-C3'-C2'	-6.40	96.20	102.60
2	AB	2787	C	C1'-O4'-C4'	6.39	116.29	109.90
16	AP	46	ARG	CA-C-N	6.39	128.75	120.56
16	AP	46	ARG	C-N-CA	6.39	128.75	120.56
35	BA	882	C	O4'-C1'-N1	6.39	118.09	108.50
35	BA	1491	G	C3'-C2'-C1'	6.39	107.69	101.30
36	BB	47	U	C4'-C3'-C2'	-6.39	96.20	102.60
52	BR	37	HIS	CA-C-N	6.39	129.37	120.29
52	BR	37	HIS	C-N-CA	6.39	129.37	120.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2526	G	O5'-C5'-C4'	6.39	121.09	111.50
2	AB	2719	G	C5'-C4'-O4'	6.39	119.39	109.80
19	AS	97	ILE	CA-C-N	6.39	129.13	120.44
19	AS	97	ILE	C-N-CA	6.39	129.13	120.44
35	BA	476	U	O4'-C1'-N1	6.39	118.09	108.50
35	BA	733	G	O3'-P-O5'	-6.39	94.41	104.00
35	BA	934	C	N1-C1'-C2'	6.39	123.59	114.00
35	BA	1293	C	N1-C1'-C2'	-6.39	102.41	112.00
39	BE	139	GLU	CA-C-N	6.39	128.75	120.44
39	BE	139	GLU	C-N-CA	6.39	128.75	120.44
2	AB	1680	U	O5'-C5'-C4'	-6.39	101.91	111.50
2	AB	2444	G	C5'-C4'-C3'	-6.39	106.41	116.00
15	AO	55	ARG	NE-CZ-NH1	-6.39	115.11	121.50
2	AB	1115	G	P-O5'-C5'	6.39	130.48	120.90
2	AB	1299	G	O4'-C1'-C2'	-6.39	101.21	107.60
2	AB	1336	A	C1'-O4'-C4'	6.39	116.29	109.90
2	AB	2637	U	C1'-O4'-C4'	6.39	116.29	109.90
17	AQ	101	GLY	CA-C-N	6.39	129.36	120.29
17	AQ	101	GLY	C-N-CA	6.39	129.36	120.29
35	BA	485	U	O4'-C4'-C3'	6.39	112.49	106.10
35	BA	1014	A	N9-C1'-C2'	6.39	121.58	112.00
35	BA	1126	U	C2'-C3'-O3'	6.39	119.08	109.50
2	AB	2858	C	C5'-C4'-C3'	-6.39	106.42	116.00
12	AL	72	LYS	CA-CB-CG	-6.39	101.32	114.10
2	AB	229	C	O4'-C1'-N1	6.39	118.08	108.50
2	AB	2581	G	P-O3'-C3'	6.39	129.78	120.20
5	AE	75	ALA	N-CA-CB	-6.39	102.49	111.62
33	A6	45	PRO	N-CA-CB	6.39	108.99	103.31
35	BA	33	A	O5'-C5'-C4'	6.39	121.08	111.50
41	BG	42	ALA	N-CA-CB	-6.39	101.04	110.49
2	AB	695	G	O4'-C1'-N9	6.38	118.08	108.50
2	AB	1413	A	O4'-C1'-C2'	-6.38	101.22	107.60
2	AB	1584	U	P-O3'-C3'	6.38	129.78	120.20
2	AB	2106	U	O4'-C1'-N1	6.38	118.08	108.50
2	AB	2405	G	O4'-C1'-C2'	-6.38	101.22	107.60
23	AW	99	SER	CB-CA-C	6.38	121.28	111.39
35	BA	314	C	O4'-C4'-C3'	6.38	110.39	104.00
40	BF	189	HIS	CB-CA-C	6.38	121.05	109.37
2	AB	1485	U	C5'-C4'-O4'	6.38	119.37	109.80
2	AB	1572	A	O4'-C1'-C2'	-6.38	101.22	107.60
18	AR	69	VAL	N-CA-C	6.38	117.49	108.17
35	BA	1292	G	C3'-C2'-C1'	6.38	107.68	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	40	U	C3'-C2'-C1'	6.38	107.68	101.30
2	AB	561	G	O4'-C1'-N9	6.38	118.07	108.50
2	AB	1535	A	C3'-C2'-C1'	-6.38	95.12	101.50
23	AW	69	VAL	CA-C-O	-6.38	114.97	121.67
2	AB	774	G	C3'-C2'-C1'	-6.38	95.12	101.50
2	AB	118	A	C3'-C2'-C1'	6.38	107.68	101.30
2	AB	2157	G	O4'-C1'-N9	6.38	117.77	108.20
2	AB	2437	G	O4'-C1'-C2'	-6.38	101.22	107.60
2	AB	2753	A	O4'-C4'-C3'	6.38	110.38	104.00
22	AV	37	ASP	CA-C-O	-6.38	114.12	120.82
35	BA	1378	C	C3'-C2'-O2'	6.38	120.27	110.70
2	AB	816	C	C2'-C3'-O3'	6.38	123.27	113.70
2	AB	1069	A	C5'-C4'-O4'	6.38	118.67	109.10
2	AB	1083	U	C3'-C2'-C1'	6.38	107.68	101.30
35	BA	1040	U	O4'-C1'-N1	6.38	118.06	108.50
21	AU	60	HIS	CB-CG-ND1	6.38	132.26	122.70
35	BA	768	A	O4'-C1'-N9	6.38	118.06	108.50
36	BB	38	A	C4'-C3'-C2'	-6.38	96.22	102.60
56	BV	57	VAL	N-CA-CB	-6.38	105.61	112.37
2	AB	706	A	C3'-C2'-O2'	6.37	120.26	110.70
2	AB	1912	A	O4'-C1'-N9	6.37	118.06	108.50
12	AL	62	VAL	CB-CA-C	6.37	118.30	111.35
21	AU	32	ALA	N-CA-C	6.37	119.04	111.33
40	BF	14	VAL	N-CA-C	6.37	122.60	109.34
48	BN	46	ALA	CA-C-N	6.37	127.01	120.00
48	BN	46	ALA	C-N-CA	6.37	127.01	120.00
2	AB	458	G	O4'-C1'-N9	6.37	117.76	108.20
2	AB	1107	G	C5'-C4'-C3'	-6.37	106.44	116.00
2	AB	1889	A	C4'-C3'-C2'	-6.37	96.23	102.60
2	AB	2655	G	C1'-C2'-O2'	6.37	121.36	111.80
35	BA	680	C	C4'-C3'-C2'	-6.37	96.23	102.60
2	AB	2024	G	C4'-C3'-C2'	-6.37	96.23	102.60
8	AH	43	LYS	CG-CD-CE	6.37	125.95	111.30
35	BA	266	G	O3'-P-O5'	6.37	113.55	104.00
40	BF	37	LYS	N-CA-C	6.37	118.22	111.28
52	BR	37	HIS	CA-CB-CG	6.37	120.17	113.80
2	AB	1727	C	C5'-C4'-O4'	6.37	119.35	109.80
2	AB	2618	G	C5'-C4'-O4'	6.37	119.35	109.80
14	AN	101	ILE	CB-CA-C	6.37	119.96	111.94
35	BA	1494	G	C5'-C4'-C3'	-6.37	106.45	116.00
50	BP	31	ALA	CA-C-N	6.37	129.46	120.42
50	BP	31	ALA	C-N-CA	6.37	129.46	120.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1190	G	O4'-C1'-N9	6.37	118.05	108.50
12	AL	3	THR	N-CA-C	6.37	119.70	110.28
35	BA	1399	C	N1-C1'-C2'	-6.37	104.45	114.00
2	AB	2713	U	C3'-C2'-O2'	-6.36	105.05	114.60
2	AB	1429	G	O4'-C1'-C2'	-6.36	101.24	107.60
13	AM	112	PHE	CA-CB-CG	6.36	120.16	113.80
35	BA	207	C	C2'-C3'-O3'	-6.36	104.16	113.70
35	BA	363	A	O4'-C4'-C3'	6.36	110.36	104.00
35	BA	629	A	C3'-C2'-C1'	6.36	107.66	101.30
12	AL	19	ASP	CB-CA-C	6.36	119.82	109.90
56	BV	81	GLY	N-CA-C	-6.36	102.78	112.51
1	AA	58	A	C2'-C3'-O3'	6.36	123.24	113.70
3	AC	20	GLN	CB-CA-C	6.36	119.82	109.90
3	AC	29	LEU	CA-C-N	6.36	128.80	120.28
3	AC	29	LEU	C-N-CA	6.36	128.80	120.28
35	BA	422	C	O4'-C1'-N1	6.36	117.74	108.20
2	AB	1349	C	O4'-C4'-C3'	6.36	110.36	104.00
2	AB	2204	G	C1'-O4'-C4'	-6.36	103.54	109.90
3	AC	183	ASP	N-CA-C	6.36	118.74	111.11
2	AB	1140	C	O4'-C4'-C3'	6.36	110.36	104.00
42	BH	156	ARG	NE-CZ-NH1	-6.35	115.15	121.50
47	BM	78	GLU	O-C-N	-6.35	114.01	121.32
1	AA	85	G	C4'-C3'-O3'	6.35	122.53	113.00
2	AB	134	G	C4'-C3'-C2'	-6.35	96.25	102.60
2	AB	528	A	O4'-C1'-N9	6.35	118.03	108.50
35	BA	852	G	C3'-C2'-C1'	6.35	107.65	101.30
3	AC	127	LEU	CA-C-O	-6.35	112.25	120.00
2	AB	330	A	C1'-C2'-O2'	6.35	121.32	111.80
23	AW	48	VAL	CA-CB-CG2	6.35	121.19	110.40
30	A3	55	ALA	N-CA-C	-6.35	105.91	113.21
2	AB	174	U	C5'-C4'-O4'	6.35	119.32	109.80
2	AB	996	A	C4'-C3'-O3'	-6.35	103.48	113.00
7	AG	140	ILE	N-CA-C	6.35	117.44	108.36
35	BA	1294	G	C2'-C3'-O3'	-6.35	104.18	113.70
37	BC	43	U	C2'-C3'-O3'	6.35	119.02	109.50
37	BC	48	C	C1'-O4'-C4'	-6.35	103.55	109.90
28	A1	19	HIS	ND1-CE1-NE2	6.35	114.75	108.40
35	BA	10	A	C4'-C3'-C2'	-6.35	96.25	102.60
2	AB	2176	A	C2'-C3'-O3'	-6.34	104.18	113.70
2	AB	2812	G	C5'-C4'-C3'	-6.34	106.48	116.00
2	AB	2823	A	C4'-C3'-C2'	-6.34	96.25	102.60
3	AC	64	VAL	N-CA-CB	-6.34	103.77	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	23	C	C3'-C2'-C1'	6.34	107.64	101.30
2	AB	1889	A	O3'-P-O5'	6.34	113.51	104.00
12	AL	114	LEU	CA-C-O	-6.34	113.83	120.55
29	A2	69	SER	CA-C-N	6.34	133.12	121.70
29	A2	69	SER	C-N-CA	6.34	133.12	121.70
38	BD	23	G	C4'-C3'-C2'	-6.34	96.26	102.60
2	AB	520	G	N9-C1'-C2'	-6.34	102.49	112.00
2	AB	570	G	C5'-C4'-C3'	-6.34	106.49	116.00
2	AB	2328	A	O5'-C5'-C4'	6.34	121.01	111.50
2	AB	2410	G	O4'-C4'-C3'	6.34	110.34	104.00
36	BB	35	C	C2'-C3'-O3'	6.34	123.21	113.70
2	AB	738	G	C1'-O4'-C4'	6.34	116.24	109.90
2	AB	1347	A	C4'-C3'-O3'	6.34	122.51	113.00
12	AL	62	VAL	CA-CB-CG1	6.34	121.18	110.40
35	BA	350	G	O4'-C4'-C3'	6.34	110.34	104.00
35	BA	502	A	C3'-C2'-C1'	-6.34	94.96	101.30
35	BA	1237	C	C1'-O4'-C4'	6.34	116.24	109.90
2	AB	168	G	O4'-C4'-C3'	6.34	110.34	104.00
2	AB	2637	U	O4'-C1'-C2'	-6.34	101.26	107.60
35	BA	1298	U	O5'-C5'-C4'	6.34	121.20	111.70
29	A2	10	GLU	CA-C-O	-6.33	114.12	120.90
35	BA	385	C	C5'-C4'-C3'	6.33	125.50	116.00
2	AB	102	U	O4'-C1'-N1	6.33	117.70	108.20
2	AB	1329	U	C4'-C3'-C2'	6.33	108.93	102.60
2	AB	2321	U	P-O3'-C3'	6.33	129.70	120.20
7	AG	23	SER	O-C-N	6.33	130.62	123.27
35	BA	505	G	C3'-C2'-O2'	6.33	120.20	110.70
35	BA	942	G	P-O3'-C3'	6.33	129.70	120.20
41	BG	202	LEU	O-C-N	6.33	128.93	122.09
2	AB	1993	U	O4'-C1'-N1	6.33	118.00	108.50
2	AB	2472	G	C4'-C3'-C2'	-6.33	96.27	102.60
2	AB	2841	C	C2'-C3'-O3'	-6.33	104.20	113.70
11	AK	4	VAL	CA-C-N	6.33	132.49	122.74
11	AK	4	VAL	C-N-CA	6.33	132.49	122.74
25	AY	62	ALA	CA-C-N	6.33	129.70	120.71
25	AY	62	ALA	C-N-CA	6.33	129.70	120.71
2	AB	96	C	C1'-O4'-C4'	-6.33	103.57	109.90
2	AB	615	U	P-O3'-C3'	6.33	129.69	120.20
2	AB	1809	A	C4'-C3'-C2'	-6.33	96.27	102.60
29	A2	15	SER	O-C-N	-6.33	115.07	122.86
2	AB	568	U	O3'-P-O5'	6.33	113.49	104.00
23	AW	55	GLY	CA-C-N	6.33	129.53	119.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AW	55	GLY	C-N-CA	6.33	129.53	119.98
35	BA	213	G	C5'-C4'-C3'	-6.33	106.51	116.00
35	BA	955	U	C4'-C3'-C2'	-6.33	96.27	102.60
35	BA	1111	A	C5'-C4'-O4'	6.33	119.29	109.80
36	BB	35	C	O5'-C5'-C4'	6.33	120.99	111.50
4	AD	140	VAL	CA-CB-CG2	6.33	121.15	110.40
2	AB	2134	A	O4'-C1'-N9	6.32	117.99	108.50
2	AB	2458	G	C1'-O4'-C4'	-6.32	103.38	109.70
5	AE	118	PHE	CA-C-O	-6.32	113.72	120.42
9	AI	55	GLU	CA-C-N	6.32	129.39	120.28
9	AI	55	GLU	C-N-CA	6.32	129.39	120.28
35	BA	319	G	O4'-C4'-C3'	-6.32	97.68	104.00
35	BA	1035	A	C3'-C2'-C1'	6.32	107.62	101.30
2	AB	1226	A	C3'-C2'-O2'	6.32	120.18	110.70
2	AB	1894	C	O4'-C1'-N1	6.32	117.98	108.50
35	BA	85	U	O4'-C1'-N1	6.32	117.68	108.20
2	AB	316	C	O3'-P-O5'	-6.32	94.52	104.00
2	AB	782	A	C1'-O4'-C4'	6.32	116.02	109.70
2	AB	1263	U	O4'-C4'-C3'	6.32	110.32	104.00
2	AB	2799	A	C5'-C4'-O4'	6.32	119.28	109.80
35	BA	1502	A	C4'-C3'-C2'	-6.32	96.28	102.60
2	AB	1182	G	C3'-C2'-O2'	6.32	120.18	110.70
35	BA	962	C	C5'-C4'-O4'	6.32	119.28	109.80
2	AB	653	U	C4'-C3'-C2'	-6.32	96.28	102.60
2	AB	1476	U	N1-C1'-C2'	-6.32	102.52	112.00
2	AB	1930	G	O5'-C5'-C4'	-6.32	102.02	111.50
1	AA	116	G	O4'-C1'-N9	6.32	117.97	108.50
2	AB	1535	A	N9-C1'-C2'	-6.32	104.53	114.00
2	AB	2305	U	O3'-P-O5'	-6.32	94.53	104.00
2	AB	2698	U	C2'-C3'-O3'	-6.32	104.23	113.70
8	AH	35	THR	O-C-N	6.32	130.80	123.41
35	BA	602	A	O4'-C1'-C2'	-6.32	101.28	107.60
51	BQ	98	ALA	N-CA-CB	-6.32	100.14	110.43
2	AB	505	A	O5'-C5'-C4'	-6.31	102.03	111.50
2	AB	551	G	C3'-C2'-O2'	6.31	120.17	110.70
6	AF	102	ARG	N-CA-C	-6.31	104.50	111.82
6	AF	196	VAL	CB-CA-C	6.31	120.70	112.24
35	BA	464	U	C5'-C4'-O4'	6.31	119.27	109.80
35	BA	965	U	C3'-C2'-O2'	-6.31	105.13	114.60
2	AB	1381	G	O4'-C1'-N9	6.31	117.97	108.50
2	AB	2262	U	C4'-C3'-C2'	-6.31	96.29	102.60
2	AB	2785	C	C3'-C2'-C1'	6.31	107.61	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BF	211	ALA	CA-C-N	6.31	130.28	120.75
40	BF	211	ALA	C-N-CA	6.31	130.28	120.75
2	AB	119	A	P-O5'-C5'	6.31	130.37	120.90
2	AB	196	A	C1'-O4'-C4'	-6.31	103.39	109.70
14	AN	25	SER	CA-C-O	-6.31	111.89	119.27
34	A7	31	PRO	CA-C-N	6.31	130.70	120.60
34	A7	31	PRO	C-N-CA	6.31	130.70	120.60
35	BA	177	G	C4'-C3'-C2'	-6.31	96.29	102.60
2	AB	1265	A	C2'-C3'-O3'	6.31	118.96	109.50
2	AB	1285	A	O4'-C4'-C3'	6.31	110.31	104.00
8	AH	66	THR	CA-CB-OG1	6.31	119.06	109.60
29	A2	67	PRO	CA-N-CD	-6.31	103.17	112.00
35	BA	110	C	C1'-O4'-C4'	6.31	116.21	109.90
35	BA	221	C	C3'-C2'-C1'	6.31	107.61	101.30
38	BD	49	C	C3'-C2'-O2'	-6.31	105.14	114.60
2	AB	2777	G	O4'-C1'-C2'	-6.31	101.29	107.60
35	BA	184	G	O4'-C1'-N9	6.31	117.96	108.50
35	BA	552	U	O5'-C5'-C4'	6.31	120.96	111.50
35	BA	685	G	O4'-C1'-C2'	-6.31	101.29	107.60
40	BF	225	LYS	N-CA-CB	-6.31	102.51	110.90
2	AB	458	G	O3'-P-O5'	-6.31	94.54	104.00
2	AB	1870	C	O4'-C4'-C3'	6.31	110.31	104.00
2	AB	405	U	O4'-C1'-N1	6.30	117.96	108.50
2	AB	968	C	O5'-C5'-C4'	-6.30	102.04	111.50
2	AB	1728	C	O4'-C1'-N1	6.30	117.96	108.50
2	AB	2031	A	C2'-C3'-O3'	6.30	118.95	109.50
2	AB	2841	C	C1'-C2'-O2'	6.30	117.86	108.40
6	AF	85	PHE	CA-CB-CG	6.30	120.10	113.80
12	AL	69	ARG	NE-CZ-NH2	6.30	124.87	119.20
35	BA	118	U	O3'-P-O5'	6.30	113.45	104.00
35	BA	1065	U	O4'-C4'-C3'	6.30	112.41	106.10
35	BA	1319	A	C4'-C3'-C2'	-6.30	96.30	102.60
2	AB	2372	U	O4'-C1'-C2'	-6.30	101.30	107.60
2	AB	2744	G	C4'-C3'-C2'	-6.30	96.30	102.60
18	AR	16	VAL	N-CA-CB	6.30	116.97	110.23
28	A1	23	LEU	CB-CA-C	6.30	121.25	110.79
35	BA	76	G	C4'-C3'-C2'	-6.30	96.30	102.60
35	BA	135	C	O4'-C4'-C3'	6.30	110.30	104.00
37	BC	34	U	O4'-C1'-C2'	-6.30	101.30	107.60
48	BN	8	ARG	CB-CA-C	6.30	120.07	109.48
2	AB	343	C	C4'-C3'-C2'	-6.30	96.30	102.60
2	AB	1637	A	C5'-C4'-O4'	6.30	119.25	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2008	C	O4'-C1'-C2'	-6.30	101.30	107.60
7	AG	102	LEU	CA-C-N	6.30	133.31	121.97
7	AG	102	LEU	C-N-CA	6.30	133.31	121.97
35	BA	365	U	O4'-C4'-C3'	-6.30	97.70	104.00
46	BL	72	SER	O-C-N	6.30	128.80	122.12
35	BA	645	G	O4'-C4'-C3'	6.30	110.30	104.00
35	BA	1429	A	O4'-C1'-C2'	6.30	113.90	107.60
42	BH	151	MET	CA-C-N	6.29	131.37	120.86
42	BH	151	MET	C-N-CA	6.29	131.37	120.86
2	AB	215	G	C4'-C3'-C2'	-6.29	96.31	102.60
2	AB	742	A	C4'-C3'-C2'	-6.29	96.31	102.60
2	AB	1149	G	O4'-C4'-C3'	6.29	110.29	104.00
2	AB	2092	U	O3'-P-O5'	-6.29	94.56	104.00
11	AK	104	GLN	OE1-CD-NE2	-6.29	116.31	122.60
2	AB	218	A	O4'-C1'-C2'	-6.29	101.31	107.60
2	AB	321	U	N1-C1'-C2'	6.29	121.44	112.00
2	AB	166	U	C4'-C3'-C2'	-6.29	96.31	102.60
2	AB	239	C	O4'-C4'-C3'	6.29	110.29	104.00
2	AB	2650	U	C5'-C4'-C3'	-6.29	106.56	116.00
35	BA	1344	C	O4'-C1'-C2'	-6.29	101.31	107.60
2	AB	370	G	C3'-C2'-C1'	6.29	107.79	101.50
2	AB	514	A	C3'-C2'-C1'	6.29	107.59	101.30
2	AB	773	U	C5'-C4'-O4'	-6.29	100.37	109.80
9	AI	110	VAL	N-CA-C	-6.29	99.36	108.17
21	AU	101	SER	CA-C-N	6.29	131.01	122.84
21	AU	101	SER	C-N-CA	6.29	131.01	122.84
35	BA	138	G	C3'-C2'-O2'	6.29	120.13	110.70
35	BA	507	C	O5'-C5'-C4'	-6.29	102.07	111.50
6	AF	43	THR	O-C-N	6.29	128.88	122.09
2	AB	412	A	C2'-C3'-O3'	-6.29	104.27	113.70
2	AB	2018	G	O4'-C1'-N9	6.29	117.93	108.50
2	AB	2392	A	C3'-C2'-C1'	-6.29	95.01	101.30
2	AB	2424	C	C1'-O4'-C4'	6.29	116.19	109.90
20	AT	89	HIS	CA-CB-CG	6.29	120.08	113.80
35	BA	1011	C	O4'-C1'-C2'	-6.29	101.31	107.60
1	AA	12	C	C3'-C2'-C1'	-6.28	95.22	101.50
2	AB	2883	A	C3'-C2'-C1'	6.28	107.58	101.30
2	AB	105	C	C3'-C2'-C1'	6.28	107.58	101.30
2	AB	2441	U	C4'-C3'-C2'	-6.28	96.32	102.60
5	AE	67	HIS	CG-CD2-NE2	-6.28	100.92	107.20
2	AB	620	G	C3'-C2'-C1'	6.28	107.78	101.50
2	AB	2597	G	C4'-C3'-O3'	-6.28	103.58	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AG	79	ARG	NE-CZ-NH2	6.28	124.85	119.20
41	BG	43	ARG	CA-C-O	6.28	127.14	120.36
2	AB	2590	A	C4'-C3'-C2'	-6.28	96.32	102.60
35	BA	1387	G	C1'-C2'-O2'	6.28	117.82	108.40
2	AB	1187	G	O5'-C5'-C4'	-6.28	102.08	111.50
2	AB	2535	G	C4'-C3'-O3'	-6.28	103.58	113.00
24	AX	19	ARG	O-C-N	6.28	130.84	122.43
30	A3	18	HIS	CB-CG-CD2	-6.28	123.04	131.20
35	BA	353	A	O4'-C1'-C2'	6.28	113.88	107.60
35	BA	612	C	C2'-C3'-O3'	-6.28	104.28	113.70
38	BD	25	U	C5'-C4'-C3'	-6.28	106.58	116.00
2	AB	1249	U	O4'-C4'-C3'	6.28	110.28	104.00
2	AB	2112	G	C1'-C2'-O2'	-6.28	98.99	108.40
37	BC	24	A	C5'-C4'-C3'	-6.28	106.59	116.00
2	AB	2211	A	C3'-C2'-C1'	6.27	107.57	101.30
28	A1	56	VAL	N-CA-C	6.27	117.33	108.36
2	AB	161	A	O4'-C4'-C3'	6.27	110.27	104.00
2	AB	342	A	C1'-O4'-C4'	-6.27	103.63	109.90
2	AB	632	A	C3'-C2'-C1'	6.27	107.57	101.30
2	AB	2337	G	C5'-C4'-O4'	6.27	119.21	109.80
3	AC	120	ALA	CA-C-N	6.27	128.97	120.38
3	AC	120	ALA	C-N-CA	6.27	128.97	120.38
35	BA	509	A	C4'-C3'-C2'	-6.27	96.33	102.60
46	BL	104	THR	CA-CB-CG2	6.27	121.16	110.50
2	AB	1328	A	O4'-C1'-C2'	6.27	113.87	107.60
6	AF	7	ASP	O-C-N	6.27	128.86	122.09
10	AJ	19	LYS	CA-C-N	6.27	128.18	120.22
10	AJ	19	LYS	C-N-CA	6.27	128.18	120.22
35	BA	856	C	O4'-C1'-N1	6.27	117.91	108.50
2	AB	508	A	C3'-C2'-C1'	6.27	107.57	101.30
2	AB	2131	U	C3'-C2'-O2'	6.27	120.10	110.70
2	AB	2789	C	C4'-C3'-C2'	-6.27	96.33	102.60
35	BA	1217	C	C3'-C2'-C1'	6.27	107.57	101.30
39	BE	198	VAL	CA-C-N	6.27	130.00	122.85
39	BE	198	VAL	C-N-CA	6.27	130.00	122.85
52	BR	20	ASP	O-C-N	-6.27	115.92	122.94
54	BT	38	LYS	CA-C-O	-6.27	113.71	120.92
2	AB	344	A	N9-C1'-C2'	-6.27	102.60	112.00
2	AB	835	C	C1'-O4'-C4'	-6.27	103.63	109.90
2	AB	2509	G	O4'-C1'-C2'	-6.27	101.33	107.60
19	AS	87	VAL	CA-CB-CG2	6.27	121.05	110.40
23	AW	44	HIS	CB-CG-CD2	-6.27	123.05	131.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	A2	12	ILE	CA-C-N	6.27	129.84	120.31
29	A2	12	ILE	C-N-CA	6.27	129.84	120.31
35	BA	600	A	C5'-C4'-C3'	-6.27	106.60	116.00
38	BD	35	C	C4'-C3'-C2'	-6.27	96.33	102.60
40	BF	21	TRP	NE1-CE2-CD2	-6.27	99.25	107.40
17	AQ	94	ARG	NE-CZ-NH2	-6.27	113.56	119.20
35	BA	379	C	C3'-C2'-O2'	6.27	120.10	110.70
35	BA	663	A	C4'-C3'-C2'	-6.27	96.33	102.60
36	BB	28	C	C5'-C4'-C3'	-6.26	106.60	116.00
50	BP	51	GLN	O-C-N	6.26	129.29	122.15
35	BA	318	G	C5'-C4'-O4'	6.26	119.19	109.80
35	BA	1211	U	C3'-C2'-C1'	6.26	107.56	101.30
2	AB	1824	G	C3'-C2'-O2'	6.26	120.09	110.70
35	BA	430	A	C4'-C3'-C2'	-6.26	96.34	102.60
35	BA	716	A	O4'-C1'-C2'	-6.26	101.34	107.60
56	BV	57	VAL	CB-CA-C	6.26	116.20	110.13
2	AB	342	A	O4'-C1'-C2'	6.26	113.86	107.60
2	AB	2096	C	C4'-C3'-C2'	6.26	108.86	102.60
35	BA	1491	G	C4'-C3'-C2'	-6.26	96.34	102.60
37	BC	44	U	C3'-C2'-C1'	6.26	107.56	101.30
2	AB	981	A	C3'-C2'-O2'	6.26	120.08	110.70
2	AB	1541	C	C5'-C4'-O4'	6.26	119.19	109.80
2	AB	2099	U	O4'-C1'-C2'	-6.26	101.34	107.60
9	AI	8	LYS	O-C-N	6.26	129.22	122.34
35	BA	368	U	C5'-C4'-C3'	-6.26	106.61	116.00
35	BA	943	U	O4'-C4'-C3'	6.26	110.26	104.00
35	BA	1072	G	C4'-C3'-O3'	6.26	122.39	113.00
2	AB	2025	C	C5'-C4'-O4'	6.25	119.18	109.80
35	BA	1029	U	C1'-O4'-C4'	6.25	115.95	109.70
46	BL	83	THR	CA-C-N	6.25	128.98	120.54
46	BL	83	THR	C-N-CA	6.25	128.98	120.54
57	BW	71	ALA	CA-C-N	6.25	128.99	120.54
57	BW	71	ALA	C-N-CA	6.25	128.99	120.54
2	AB	1653	G	C3'-C2'-C1'	-6.25	95.25	101.50
6	AF	118	LEU	CA-C-N	6.25	128.56	120.56
6	AF	118	LEU	C-N-CA	6.25	128.56	120.56
8	AH	44	HIS	CB-CG-ND1	6.25	132.08	122.70
33	A6	40	LYS	CA-C-O	-6.25	113.92	120.55
35	BA	161	A	C5'-C4'-O4'	-6.25	100.42	109.80
35	BA	1340	A	O5'-C5'-C4'	6.25	120.88	111.50
2	AB	1411	U	O4'-C4'-C3'	6.25	110.25	104.00
2	AB	1896	G	O4'-C1'-C2'	-6.25	101.35	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	BB	52	A	O4'-C1'-C2'	-6.25	101.35	107.60
2	AB	1461	C	N1-C1'-C2'	-6.25	102.63	112.00
35	BA	898	G	O4'-C4'-C3'	6.25	110.25	104.00
39	BE	100	LEU	N-CA-C	6.25	120.93	113.12
44	BJ	26	VAL	CA-C-N	6.25	128.94	120.44
44	BJ	26	VAL	C-N-CA	6.25	128.94	120.44
46	BL	84	ARG	NE-CZ-NH1	-6.25	115.25	121.50
2	AB	1774	C	N1-C1'-C2'	6.25	121.37	112.00
2	AB	1836	C	O5'-C5'-C4'	-6.25	102.13	111.50
26	AZ	47	THR	CA-CB-CG2	6.25	121.12	110.50
38	BD	25	U	C4'-C3'-C2'	-6.25	96.36	102.60
2	AB	887	U	C5'-C4'-C3'	-6.24	106.64	116.00
2	AB	2174	C	C4'-C3'-C2'	-6.24	96.36	102.60
2	AB	2180	U	O3'-P-O5'	6.24	113.36	104.00
23	AW	44	HIS	O-C-N	6.24	130.61	122.68
35	BA	200	G	O4'-C1'-N9	6.24	117.87	108.50
35	BA	944	G	O3'-P-O5'	-6.24	94.64	104.00
35	BA	1196	A	C5'-C4'-O4'	6.24	119.16	109.80
35	BA	1311	A	C4'-C3'-C2'	-6.24	96.36	102.60
37	BC	13	A	N9-C1'-C2'	-6.24	102.63	112.00
46	BL	114	LYS	N-CA-C	6.24	120.25	110.32
2	AB	206	U	C4'-C3'-C2'	-6.24	96.36	102.60
4	AD	119	VAL	N-CA-C	6.24	116.41	110.42
35	BA	885	G	C3'-C2'-C1'	-6.24	95.06	101.30
35	BA	1436	U	C5'-C4'-O4'	-6.24	100.44	109.80
52	BR	79	ARG	NE-CZ-NH1	-6.24	115.26	121.50
2	AB	515	A	C4'-C3'-O3'	-6.24	103.64	113.00
2	AB	1789	A	O4'-C4'-C3'	6.24	110.24	104.00
2	AB	2757	A	C5'-C4'-C3'	-6.24	106.64	116.00
4	AD	218	THR	CA-C-N	6.24	131.60	121.62
4	AD	218	THR	C-N-CA	6.24	131.60	121.62
16	AP	89	SER	N-CA-C	6.24	120.51	113.02
28	A1	18	LYS	N-CA-C	-6.24	104.48	111.28
35	BA	934	C	O4'-C1'-C2'	-6.24	99.56	105.80
54	BT	49	ASN	CA-C-N	6.24	131.00	122.07
54	BT	49	ASN	C-N-CA	6.24	131.00	122.07
2	AB	1200	C	O4'-C1'-N1	6.24	117.86	108.50
2	AB	1782	U	C4'-C3'-O3'	6.24	122.36	113.00
2	AB	2597	G	O4'-C4'-C3'	6.24	110.24	104.00
3	AC	105	LYS	N-CA-CB	-6.24	100.93	110.16
14	AN	69	ARG	NH1-CZ-NH2	-6.24	111.19	119.30
35	BA	241	G	C5'-C4'-C3'	6.24	125.36	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	575	G	C1'-C2'-O2'	6.24	121.16	111.80
35	BA	708	C	O4'-C1'-C2'	-6.24	101.36	107.60
35	BA	1096	C	O4'-C1'-N1	6.24	117.86	108.50
35	BA	1163	A	O4'-C4'-C3'	-6.24	97.76	104.00
36	BB	3	G	O4'-C4'-C3'	6.24	110.24	104.00
35	BA	900	A	C4'-C3'-C2'	-6.24	96.36	102.60
2	AB	205	G	C3'-C2'-O2'	6.24	123.95	114.60
2	AB	792	A	O4'-C4'-C3'	6.24	110.24	104.00
2	AB	1450	G	C4'-C3'-C2'	-6.24	96.36	102.60
2	AB	1598	A	C5'-C4'-C3'	-6.24	106.65	116.00
35	BA	1180	A	O4'-C4'-C3'	6.24	110.23	104.00
43	BI	66	ALA	N-CA-C	-6.24	100.07	108.11
2	AB	393	C	C4'-C3'-C2'	-6.23	96.37	102.60
35	BA	77	A	C1'-O4'-C4'	6.23	116.13	109.90
2	AB	599	A	C4'-C3'-C2'	-6.23	96.37	102.60
2	AB	2295	C	C5'-C4'-C3'	-6.23	106.65	116.00
40	BF	115	VAL	N-CA-C	-6.23	104.21	111.00
45	BK	85	TYR	CB-CG-CD1	-6.23	111.45	120.80
2	AB	945	A	P-O5'-C5'	6.23	130.25	120.90
2	AB	2355	G	C1'-O4'-C4'	-6.23	103.67	109.90
2	AB	2426	A	O3'-P-O5'	-6.23	94.66	104.00
35	BA	1363	A	O4'-C1'-C2'	-6.23	99.57	105.80
2	AB	2826	A	C1'-O4'-C4'	6.23	116.13	109.90
35	BA	946	A	O4'-C4'-C3'	6.23	110.23	104.00
2	AB	793	A	P-O5'-C5'	-6.23	111.56	120.90
2	AB	1609	A	O4'-C1'-C2'	-6.23	101.37	107.60
51	BQ	60	ARG	CA-C-N	6.23	133.44	121.54
51	BQ	60	ARG	C-N-CA	6.23	133.44	121.54
2	AB	1043	C	O4'-C1'-C2'	-6.23	101.37	107.60
2	AB	1386	C	O4'-C4'-C3'	-6.23	97.77	104.00
2	AB	1886	U	C4'-C3'-O3'	-6.23	103.66	113.00
35	BA	973	G	P-O3'-C3'	6.22	129.54	120.20
35	BA	1493	A	O4'-C4'-C3'	6.22	110.22	104.00
39	BE	171	ALA	N-CA-C	6.22	118.86	111.33
2	AB	592	A	C2'-C3'-O3'	6.22	123.03	113.70
2	AB	2874	C	O3'-P-O5'	-6.22	94.67	104.00
6	AF	161	ALA	CA-C-N	6.22	128.62	120.28
6	AF	161	ALA	C-N-CA	6.22	128.62	120.28
35	BA	60	A	C2'-C3'-O3'	6.22	118.83	109.50
50	BP	19	THR	CB-CA-C	6.22	121.73	110.72
35	BA	426	U	O4'-C1'-N1	6.22	117.83	108.50
36	BB	38	A	C4'-C3'-O3'	6.22	122.33	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	414	C	O4'-C4'-C3'	6.22	110.22	104.00
2	AB	849	A	C3'-C2'-O2'	6.22	120.03	110.70
35	BA	3	A	C5'-C4'-C3'	-6.22	106.67	116.00
44	BJ	67	ASN	CA-CB-CG	-6.22	106.38	112.60
52	BR	53	ARG	CA-C-N	6.22	126.72	119.94
52	BR	53	ARG	C-N-CA	6.22	126.72	119.94
52	BR	76	ARG	NE-CZ-NH2	6.22	124.80	119.20
1	AA	76	G	C5'-C4'-C3'	6.22	125.33	116.00
2	AB	65	U	C4'-C3'-C2'	-6.22	96.38	102.60
2	AB	1570	A	O4'-C4'-C3'	6.22	110.22	104.00
1	AA	117	G	C3'-C2'-O2'	6.22	120.03	110.70
2	AB	56	A	C3'-C2'-C1'	-6.22	95.08	101.30
2	AB	2019	A	C3'-C2'-O2'	6.22	120.03	110.70
2	AB	2082	A	O4'-C4'-C3'	-6.22	97.78	104.00
2	AB	2410	G	C4'-C3'-C2'	-6.22	96.38	102.60
2	AB	2749	A	O4'-C1'-C2'	6.22	113.82	107.60
5	AE	39	ASP	CA-CB-CG	6.22	118.82	112.60
35	BA	1266	G	C1'-C2'-O2'	6.22	117.73	108.40
37	BC	21	U	O4'-C4'-C3'	6.22	110.22	104.00
33	A6	11	LYS	CA-C-O	-6.21	111.76	119.28
2	AB	2018	G	C1'-O4'-C4'	6.21	116.11	109.90
2	AB	2815	C	O4'-C1'-N1	6.21	117.82	108.50
1	AA	8	C	O3'-P-O5'	-6.21	94.68	104.00
2	AB	1074	G	C1'-O4'-C4'	-6.21	103.69	109.90
2	AB	1529	G	C3'-C2'-O2'	6.21	120.02	110.70
2	AB	1918	A	N9-C1'-C2'	-6.21	104.68	114.00
5	AE	186	LEU	CA-C-N	6.21	130.91	122.84
5	AE	186	LEU	C-N-CA	6.21	130.91	122.84
35	BA	1155	A	O4'-C4'-C3'	6.21	110.21	104.00
2	AB	647	G	C5'-C4'-C3'	-6.21	106.69	116.00
2	AB	1448	G	C5'-C4'-O4'	6.21	119.11	109.80
2	AB	1555	G	C1'-C2'-O2'	6.21	117.71	108.40
2	AB	1953	A	C3'-C2'-C1'	6.21	107.71	101.50
2	AB	2008	C	C3'-C2'-C1'	6.21	107.51	101.30
2	AB	2806	C	C4'-C3'-C2'	-6.21	96.39	102.60
26	AZ	56	ARG	CA-C-N	6.21	128.61	120.60
26	AZ	56	ARG	C-N-CA	6.21	128.61	120.60
41	BG	16	THR	CA-C-N	6.21	129.22	120.28
41	BG	16	THR	C-N-CA	6.21	129.22	120.28
46	BL	85	ALA	CA-C-O	-6.21	113.84	120.42
2	AB	1513	U	O4'-C4'-C3'	6.21	110.21	104.00
2	AB	1577	C	C1'-C2'-O2'	-6.21	99.09	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2523	G	C4'-C3'-C2'	-6.21	96.39	102.60
12	AL	2	LYS	O-C-N	-6.21	115.61	123.24
2	AB	11	C	C4'-C3'-O3'	6.21	122.31	113.00
25	AY	45	HIS	CB-CG-CD2	-6.21	123.13	131.20
35	BA	538	G	O4'-C1'-N9	6.21	117.81	108.50
35	BA	1401	G	C5'-C4'-O4'	6.21	119.11	109.80
50	BP	72	ILE	CA-CB-CG1	6.21	120.95	110.40
2	AB	2660	A	O4'-C4'-C3'	6.20	110.20	104.00
6	AF	14	VAL	O-C-N	6.20	129.01	122.62
19	AS	69	ARG	NE-CZ-NH2	6.20	124.78	119.20
35	BA	212	G	C3'-C2'-O2'	6.20	120.00	110.70
35	BA	615	G	C5'-C4'-O4'	6.20	119.11	109.80
2	AB	1877	A	O4'-C4'-C3'	6.20	110.20	104.00
36	BB	33	U	C5'-C4'-C3'	-6.20	106.70	116.00
50	BP	89	ARG	NE-CZ-NH1	6.20	127.70	121.50
2	AB	1012	U	O4'-C1'-C2'	-6.20	99.60	105.80
13	AM	29	HIS	CA-CB-CG	6.20	120.00	113.80
35	BA	673	A	O4'-C1'-C2'	-6.20	101.40	107.60
50	BP	107	THR	CA-CB-CG2	-6.20	99.96	110.50
2	AB	821	A	O3'-P-O5'	-6.20	94.70	104.00
2	AB	1210	G	O5'-C5'-C4'	6.20	120.80	111.50
2	AB	2336	A	P-O3'-C3'	6.20	129.50	120.20
2	AB	2349	G	C1'-O4'-C4'	6.20	116.10	109.90
4	AD	186	ASP	N-CA-C	-6.20	105.54	113.23
6	AF	93	SER	N-CA-C	6.20	118.98	110.24
9	AI	97	ARG	NE-CZ-NH1	6.20	127.70	121.50
2	AB	266	G	C3'-C2'-O2'	6.20	120.00	110.70
2	AB	709	U	C4'-C3'-C2'	-6.20	96.40	102.60
2	AB	2396	G	C2'-C3'-O3'	-6.20	104.40	113.70
41	BG	43	ARG	CD-NE-CZ	6.20	133.08	124.40
2	AB	1577	C	O4'-C1'-N1	6.20	117.79	108.50
2	AB	1849	G	O5'-C5'-C4'	6.20	120.79	111.50
5	AE	152	PRO	N-CA-CB	6.20	109.76	103.25
17	AQ	77	ALA	N-CA-C	6.20	117.70	111.07
35	BA	88	U	O4'-C1'-N1	6.20	117.79	108.50
35	BA	1487	G	C4'-C3'-C2'	-6.20	96.41	102.60
20	AT	29	THR	N-CA-C	6.19	118.83	111.33
40	BF	46	LEU	N-CA-C	6.19	119.87	112.93
2	AB	943	A	C4'-C3'-C2'	-6.19	96.41	102.60
2	AB	1457	U	C3'-C2'-O2'	6.19	119.99	110.70
2	AB	2450	A	C4'-C3'-C2'	-6.19	96.41	102.60
35	BA	266	G	O5'-C5'-C4'	-6.19	102.22	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1170	A	O4'-C4'-C3'	6.19	110.19	104.00
35	BA	1540	U	P-O3'-C3'	6.19	129.49	120.20
52	BR	47	LYS	CA-C-N	6.19	131.21	122.05
52	BR	47	LYS	C-N-CA	6.19	131.21	122.05
19	AS	48	ASP	CA-C-O	-6.19	111.77	119.38
35	BA	850	U	C5'-C4'-C3'	-6.19	106.72	116.00
2	AB	34	U	N1-C1'-C2'	6.19	121.28	112.00
2	AB	812	C	C4'-C3'-C2'	-6.19	96.41	102.60
7	AG	174	PHE	N-CA-C	-6.19	100.80	110.14
35	BA	570	G	C1'-O4'-C4'	6.19	116.09	109.90
35	BA	880	C	C4'-C3'-C2'	-6.19	96.41	102.60
35	BA	964	A	C2'-C3'-O3'	-6.19	104.42	113.70
38	BD	27	G	C1'-O4'-C4'	6.19	116.09	109.90
2	AB	1133	A	P-O5'-C5'	6.19	130.18	120.90
35	BA	1051	C	O4'-C1'-N1	6.19	117.78	108.50
2	AB	358	U	C4'-C3'-C2'	-6.18	96.42	102.60
2	AB	40	U	O4'-C1'-C2'	-6.18	101.42	107.60
2	AB	1202	G	O4'-C1'-C2'	6.18	113.78	107.60
2	AB	1253	A	O3'-P-O5'	-6.18	94.73	104.00
2	AB	2649	C	O4'-C1'-C2'	-6.18	101.42	107.60
2	AB	2782	G	C4'-C3'-O3'	6.18	122.28	113.00
4	AD	44	ASN	CA-C-N	6.18	131.04	120.72
4	AD	44	ASN	C-N-CA	6.18	131.04	120.72
35	BA	1539	C	C2'-C3'-O3'	-6.18	104.43	113.70
40	BF	228	ARG	NE-CZ-NH2	-6.18	113.64	119.20
2	AB	2062	A	O4'-C1'-N9	6.18	117.47	108.20
11	AK	63	ASP	CA-CB-CG	6.18	118.78	112.60
26	AZ	73	ARG	NH1-CZ-NH2	6.18	127.33	119.30
35	BA	243	A	C2'-C3'-O3'	6.18	118.77	109.50
2	AB	30	G	O5'-C5'-C4'	6.18	120.77	111.50
2	AB	1665	A	C2'-C3'-O3'	6.18	122.97	113.70
2	AB	1939	5MU	O3'-P-O5'	-6.18	94.74	104.00
2	AB	2588	G	O4'-C4'-C3'	-6.18	97.82	104.00
2	AB	2888	C	C3'-C2'-C1'	6.18	107.48	101.30
35	BA	408	A	C2'-C3'-O3'	-6.18	104.44	113.70
1	AA	34	A	O5'-C5'-C4'	6.17	120.76	111.50
2	AB	2086	U	O4'-C1'-N1	6.17	117.76	108.50
2	AB	2238	G	C1'-O4'-C4'	-6.17	103.53	109.70
35	BA	539	A	O5'-C5'-C4'	6.17	120.76	111.50
2	AB	611	C	C2'-C3'-O3'	6.17	122.96	113.70
2	AB	2542	A	C2'-C3'-O3'	6.17	118.76	109.50
7	AG	63	LYS	CA-C-N	6.17	126.50	119.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AG	63	LYS	C-N-CA	6.17	126.50	119.83
7	AG	121	PHE	O-C-N	6.17	130.46	122.87
1	AA	88	C	O3'-P-O5'	6.17	113.26	104.00
2	AB	1735	A	O4'-C4'-C3'	6.17	110.17	104.00
35	BA	65	A	O4'-C4'-C3'	6.17	110.17	104.00
35	BA	422	C	C3'-C2'-O2'	6.17	123.86	114.60
35	BA	553	A	O4'-C4'-C3'	6.17	110.17	104.00
35	BA	1202	U	O4'-C4'-C3'	6.17	110.17	104.00
2	AB	2705	A	O4'-C1'-C2'	-6.17	101.43	107.60
2	AB	710	U	O4'-C1'-C2'	-6.17	101.43	107.60
2	AB	1024	G	C4'-C3'-C2'	-6.17	96.43	102.60
2	AB	1187	G	C4'-C3'-O3'	-6.17	103.75	113.00
2	AB	2015	A	P-O5'-C5'	6.17	130.15	120.90
2	AB	2566	A	O3'-P-O5'	-6.17	94.75	104.00
9	AI	119	ASN	CA-C-N	6.17	129.08	121.06
9	AI	119	ASN	C-N-CA	6.17	129.08	121.06
25	AY	19	ARG	NE-CZ-NH2	6.17	124.75	119.20
35	BA	744	C	O3'-P-O5'	-6.17	94.75	104.00
35	BA	1120	C	O4'-C1'-N1	6.17	117.75	108.50
2	AB	461	C	O4'-C4'-C3'	6.17	110.17	104.00
2	AB	1032	A	C3'-C2'-C1'	6.17	107.47	101.30
2	AB	1683	U	P-O3'-C3'	6.17	129.45	120.20
2	AB	2406	A	O4'-C4'-C3'	6.17	110.17	104.00
35	BA	1312	G	P-O3'-C3'	6.17	129.45	120.20
39	BE	27	LYS	CA-C-O	-6.17	111.71	120.16
2	AB	1943	U	P-O5'-C5'	6.17	130.15	120.90
12	AL	8	PRO	CA-C-N	6.17	129.04	120.29
12	AL	8	PRO	C-N-CA	6.17	129.04	120.29
35	BA	719	C	C3'-C2'-C1'	6.17	107.67	101.50
37	BC	34	U	O4'-C4'-C3'	6.17	110.17	104.00
2	AB	607	U	C4'-C3'-C2'	-6.16	96.44	102.60
2	AB	2332	C	P-O3'-C3'	6.16	129.44	120.20
6	AF	21	ARG	CA-CB-CG	-6.16	101.77	114.10
35	BA	1393	U	O4'-C1'-C2'	6.16	113.76	107.60
2	AB	445	C	O4'-C4'-C3'	6.16	110.16	104.00
2	AB	1167	C	P-O3'-C3'	6.16	129.44	120.20
2	AB	1404	C	C3'-C2'-C1'	6.16	107.46	101.30
6	AF	196	VAL	CA-C-O	-6.16	114.12	120.71
7	AG	30	VAL	N-CA-CB	-6.16	103.98	111.00
15	AO	8	LYS	CA-C-O	-6.16	113.98	120.63
35	BA	102	G	O4'-C4'-C3'	6.16	110.16	104.00
35	BA	564	C	C1'-O4'-C4'	6.16	116.06	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1028	A	C3'-C2'-C1'	-6.16	95.14	101.30
2	AB	2358	A	C4'-C3'-O3'	6.16	122.24	113.00
14	AN	132	ARG	NE-CZ-NH2	-6.16	113.66	119.20
16	AP	73	ASN	CA-CB-CG	-6.16	106.44	112.60
35	BA	414	A	O4'-C4'-C3'	-6.16	97.84	104.00
35	BA	503	C	O5'-C5'-C4'	-6.16	102.26	111.50
2	AB	15	G	C4'-C3'-C2'	-6.16	96.44	102.60
2	AB	1563	U	C5'-C4'-C3'	-6.16	106.76	116.00
2	AB	1852	U	C4'-C3'-O3'	-6.16	103.76	113.00
31	A4	34	GLU	CA-C-O	-6.16	114.36	120.70
48	BN	127	ARG	NE-CZ-NH1	-6.16	115.34	121.50
2	AB	1511	G	O4'-C1'-N9	6.16	117.73	108.50
37	BC	26	U	C4'-C3'-O3'	-6.16	103.77	113.00
44	BJ	76	SER	CA-C-N	6.16	129.95	121.33
44	BJ	76	SER	C-N-CA	6.16	129.95	121.33
2	AB	632	A	C4'-C3'-C2'	-6.15	96.45	102.60
2	AB	866	A	N9-C1'-C2'	6.15	121.23	112.00
24	AX	45	ASP	CA-CB-CG	-6.15	106.45	112.60
2	AB	498	G	C2'-C3'-O3'	-6.15	104.47	113.70
2	AB	815	C	O4'-C1'-N1	6.15	117.73	108.50
11	AK	30	GLN	N-CA-CB	-6.15	101.03	110.44
21	AU	61	ASN	N-CA-C	6.15	118.94	108.67
35	BA	262	A	O5'-C5'-C4'	6.15	120.73	111.50
35	BA	793	U	C2'-C3'-O3'	-6.15	104.47	113.70
35	BA	834	U	O4'-C1'-N1	6.15	117.73	108.50
2	AB	225	C	O4'-C1'-C2'	-6.15	101.45	107.60
2	AB	1410	G	O5'-C5'-C4'	-6.15	102.28	111.50
35	BA	954	G	C3'-C2'-O2'	6.15	119.92	110.70
35	BA	1326	U	C5'-C4'-C3'	6.15	125.23	116.00
52	BR	36	ASN	CA-CB-CG	6.15	118.75	112.60
10	AJ	56	ASN	OD1-CG-ND2	-6.15	116.45	122.60
2	AB	732	C	O4'-C1'-C2'	-6.15	101.45	107.60
2	AB	2752	C	O4'-C4'-C3'	6.15	110.15	104.00
8	AH	49	LEU	CA-C-O	-6.15	113.63	120.70
9	AI	102	ALA	CA-C-N	6.15	128.74	120.50
9	AI	102	ALA	C-N-CA	6.15	128.74	120.50
35	BA	1160	G	C3'-C2'-O2'	6.15	119.92	110.70
43	BI	130	GLU	N-CA-C	6.15	119.28	110.24
2	AB	979	A	C5'-C4'-C3'	-6.15	106.78	116.00
2	AB	2635	A	O4'-C1'-N9	6.15	117.72	108.50
8	AH	91	VAL	O-C-N	6.15	129.97	122.72
35	BA	666	G	C4'-C3'-C2'	-6.15	96.45	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2805	C	O4'-C4'-C3'	-6.14	97.86	104.00
50	BP	96	VAL	N-CA-CB	-6.14	105.45	112.21
2	AB	1196	C	O5'-C5'-C4'	-6.14	102.29	111.50
32	A5	14	ARG	NE-CZ-NH2	6.14	124.73	119.20
35	BA	1270	G	O4'-C1'-C2'	-6.14	101.46	107.60
2	AB	579	G	C5'-C4'-C3'	-6.14	106.79	116.00
2	AB	710	U	O4'-C1'-N1	6.14	117.71	108.50
2	AB	2429	G	C3'-C2'-C1'	6.14	107.44	101.30
2	AB	543	G	C3'-C2'-C1'	6.14	107.44	101.30
2	AB	946	C	C5'-C4'-C3'	-6.14	106.79	116.00
2	AB	1297	C	C1'-O4'-C4'	6.14	116.04	109.90
2	AB	1884	G	O4'-C4'-C3'	6.14	110.14	104.00
2	AB	2182	U	C4'-C3'-C2'	-6.14	96.46	102.60
8	AH	145	ALA	CA-C-O	-6.14	113.91	120.42
35	BA	367	U	C1'-O4'-C4'	-6.14	103.56	109.70
39	BE	95	TRP	CA-CB-CG	6.14	125.26	113.60
39	BE	129	THR	O-C-N	6.14	129.79	122.79
42	BH	72	ASN	O-C-N	6.14	130.38	122.89
2	AB	859	G	O4'-C4'-C3'	-6.14	99.96	106.10
2	AB	2450	A	O4'-C4'-C3'	6.13	110.14	104.00
14	AN	66	PHE	CA-CB-CG	6.13	119.94	113.80
2	AB	1089	A	C3'-C2'-C1'	6.13	107.63	101.50
2	AB	1263	U	C3'-C2'-O2'	6.13	119.90	110.70
15	AO	41	LEU	CA-C-O	-6.13	113.61	120.66
35	BA	634	C	O4'-C1'-N1	6.13	117.70	108.50
2	AB	488	G	O5'-C5'-C4'	-6.13	102.30	111.50
2	AB	1338	G	C4'-C3'-C2'	-6.13	96.47	102.60
2	AB	1576	U	O4'-C1'-C2'	-6.13	101.47	107.60
2	AB	2792	A	C5'-C4'-C3'	-6.13	106.80	116.00
7	AG	115	GLY	CA-C-N	6.13	131.46	122.63
7	AG	115	GLY	C-N-CA	6.13	131.46	122.63
35	BA	209	U	O4'-C1'-C2'	-6.13	99.67	105.80
35	BA	1053	G	C3'-C2'-C1'	6.13	107.63	101.50
2	AB	2854	G	C5'-C4'-C3'	-6.13	106.81	116.00
35	BA	1447	A	C5'-C4'-O4'	6.13	118.29	109.10
2	AB	1847	A	O4'-C1'-N9	6.13	117.69	108.50
35	BA	840	C	C5'-C4'-O4'	6.13	118.99	109.80
39	BE	45	THR	CB-CA-C	6.13	121.98	109.55
53	BS	17	TYR	CB-CG-CD2	-6.13	111.61	120.80
2	AB	588	U	N1-C1'-C2'	-6.12	102.81	112.00
10	AJ	102	ASN	CA-C-N	6.12	129.52	120.95
10	AJ	102	ASN	C-N-CA	6.12	129.52	120.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	112	G	P-O3'-C3'	6.12	129.39	120.20
35	BA	1479	C	P-O5'-C5'	6.12	130.09	120.90
35	BA	1529	G	C3'-C2'-O2'	-6.12	105.41	114.60
47	BM	51	VAL	CA-C-O	-6.12	115.64	121.64
2	AB	2540	C	C5'-C4'-O4'	6.12	118.98	109.80
6	AF	140	ASP	N-CA-C	-6.12	104.69	111.36
35	BA	545	C	O4'-C4'-C3'	-6.12	97.88	104.00
40	BF	130	ARG	NH1-CZ-NH2	-6.12	111.34	119.30
56	BV	82	HIS	N-CA-C	6.12	122.84	112.99
2	AB	383	C	P-O3'-C3'	6.12	129.38	120.20
45	BK	79	ARG	CA-C-N	6.12	127.49	119.84
45	BK	79	ARG	C-N-CA	6.12	127.49	119.84
49	BO	76	HIS	ND1-CG-CD2	6.12	112.22	106.10
2	AB	1506	U	C5'-C4'-C3'	-6.12	106.82	116.00
2	AB	1545	A	C3'-C2'-O2'	6.12	119.88	110.70
2	AB	2140	G	O4'-C4'-C3'	6.12	110.12	104.00
35	BA	220	G	O3'-P-O5'	-6.12	94.82	104.00
35	BA	837	U	C4'-C3'-C2'	-6.12	96.48	102.60
44	BJ	69	ARG	CA-C-N	6.12	126.60	119.99
44	BJ	69	ARG	C-N-CA	6.12	126.60	119.99
2	AB	1826	G	C5'-C4'-C3'	-6.12	106.82	116.00
2	AB	63	A	C4'-C3'-C2'	-6.12	96.48	102.60
15	AO	77	PRO	CA-C-N	6.12	130.38	120.60
15	AO	77	PRO	C-N-CA	6.12	130.38	120.60
35	BA	464	U	N1-C1'-C2'	6.12	121.17	112.00
35	BA	471	U	O4'-C1'-N1	6.12	117.67	108.50
47	BM	81	GLU	CA-C-N	6.12	129.61	120.31
47	BM	81	GLU	C-N-CA	6.12	129.61	120.31
2	AB	362	A	C3'-C2'-O2'	6.11	119.87	110.70
35	BA	275	G	C4'-C3'-O3'	6.11	122.17	113.00
2	AB	1669	A	C1'-C2'-O2'	6.11	117.57	108.40
2	AB	1929	G	C5'-C4'-O4'	-6.11	99.93	109.10
19	AS	40	LYS	O-C-N	6.11	129.12	122.15
35	BA	575	G	C5'-C4'-O4'	6.11	118.27	109.10
40	BF	120	THR	CA-CB-OG1	6.11	118.77	109.60
2	AB	1137	G	C5'-C4'-O4'	6.11	118.97	109.80
35	BA	971	G	P-O5'-C5'	6.11	130.06	120.90
2	AB	332	A	C1'-C2'-O2'	6.11	120.96	111.80
35	BA	161	A	O4'-C1'-N9	6.11	117.66	108.50
2	AB	1544	A	C1'-O4'-C4'	-6.11	103.79	109.90
5	AE	202	ILE	N-CA-CB	6.11	118.32	110.99
27	A0	40	SER	O-C-N	6.11	130.61	122.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	189	A	C4'-C3'-C2'	-6.11	96.49	102.60
35	BA	1138	G	O4'-C4'-C3'	-6.11	97.89	104.00
48	BN	86	LYS	CB-CA-C	-6.11	103.70	111.70
51	BQ	92	ILE	CA-C-N	6.11	126.43	119.83
51	BQ	92	ILE	C-N-CA	6.11	126.43	119.83
2	AB	81	G	O4'-C1'-C2'	-6.11	101.49	107.60
2	AB	629	G	O4'-C4'-C3'	6.11	110.11	104.00
35	BA	600	A	O4'-C1'-C2'	-6.11	101.50	107.60
35	BA	913	A	C1'-O4'-C4'	6.11	115.81	109.70
2	AB	1155	A	N9-C1'-C2'	-6.10	102.84	112.00
2	AB	1437	C	O4'-C1'-N1	6.10	117.66	108.50
35	BA	579	A	C3'-C2'-C1'	6.10	107.40	101.30
35	BA	1443	C	C3'-C2'-C1'	-6.10	95.20	101.30
2	AB	848	C	C4'-C3'-C2'	-6.10	96.50	102.60
2	AB	1580	A	P-O5'-C5'	6.10	130.06	120.90
2	AB	1893	C	O4'-C1'-N1	6.10	117.65	108.50
4	AD	175	LEU	CA-C-O	6.10	127.18	120.71
16	AP	13	ASN	CA-C-N	6.10	128.46	120.28
16	AP	13	ASN	C-N-CA	6.10	128.46	120.28
34	A7	33	HIS	CB-CG-CD2	-6.10	123.27	131.20
35	BA	261	U	O4'-C1'-N1	6.10	117.65	108.50
45	BK	55	LYS	CA-C-N	6.10	126.01	119.85
45	BK	55	LYS	C-N-CA	6.10	126.01	119.85
50	BP	106	ARG	NE-CZ-NH2	6.10	124.69	119.20
1	AA	9	G	C5'-C4'-O4'	6.10	118.95	109.80
2	AB	1927	A	C3'-C2'-O2'	6.10	119.85	110.70
2	AB	2077	A	O4'-C1'-N9	6.10	117.65	108.50
35	BA	130	A	N9-C1'-C2'	-6.10	104.85	114.00
35	BA	1406	U	C1'-C2'-O2'	-6.10	99.25	108.40
2	AB	1544	A	C5'-C4'-O4'	6.10	118.95	109.80
35	BA	356	A	C4'-C3'-O3'	6.10	122.15	113.00
35	BA	1370	G	C4'-C3'-C2'	-6.10	96.50	102.60
12	AL	93	ILE	CA-CB-CG2	6.10	120.87	110.50
35	BA	654	G	C4'-C3'-C2'	-6.10	96.50	102.60
46	BL	4	GLN	CB-CA-C	6.10	119.89	110.14
2	AB	2612	C	C4'-C3'-O3'	6.09	122.14	113.00
5	AE	95	SER	O-C-N	6.09	130.16	122.91
35	BA	737	C	C4'-C3'-C2'	-6.09	96.50	102.60
41	BG	164	ARG	NE-CZ-NH2	6.09	124.69	119.20
41	BG	166	LYS	CA-C-O	6.09	125.71	119.86
2	AB	652	U	N1-C1'-C2'	-6.09	102.86	112.00
2	AB	1349	C	C4'-C3'-O3'	6.09	122.14	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1888	G	C4'-C3'-C2'	-6.09	96.51	102.60
2	AB	2666	C	C5'-C4'-C3'	-6.09	106.86	116.00
16	AP	65	LEU	N-CA-C	6.09	117.59	111.07
26	AZ	40	GLU	N-CA-C	6.09	117.92	111.28
35	BA	1086	U	C3'-C2'-C1'	6.09	107.39	101.30
48	BN	39	ASN	CA-C-N	6.09	130.03	121.02
48	BN	39	ASN	C-N-CA	6.09	130.03	121.02
3	AC	106	LYS	CA-C-O	-6.09	114.09	120.55
35	BA	1029	U	C2'-C3'-O3'	6.09	118.63	109.50
18	AR	8	GLU	O-C-N	6.09	129.09	122.15
35	BA	865	A	C5'-C4'-C3'	-6.09	106.87	116.00
2	AB	37	C	C1'-O4'-C4'	-6.09	103.81	109.90
2	AB	2209	G	N9-C1'-C2'	-6.09	102.87	112.00
2	AB	2497	A	C3'-C2'-O2'	-6.09	105.47	114.60
2	AB	2506	U	C3'-C2'-C1'	6.09	107.39	101.30
20	AT	90	ARG	CD-NE-CZ	6.09	132.92	124.40
21	AU	110	ARG	NE-CZ-NH2	6.09	124.68	119.20
35	BA	1002	G	C5'-C4'-C3'	-6.09	106.87	116.00
35	BA	1162	C	C1'-C2'-O2'	-6.09	99.27	108.40
38	BD	71	G	O4'-C1'-N9	6.09	117.63	108.50
46	BL	84	ARG	NE-CZ-NH2	6.09	124.68	119.20
53	BS	73	ALA	CA-C-N	6.09	130.99	120.58
53	BS	73	ALA	C-N-CA	6.09	130.99	120.58
2	AB	1608	A	O4'-C1'-N9	6.08	117.33	108.20
2	AB	2816	G	C3'-C2'-O2'	6.08	119.83	110.70
35	BA	167	A	C1'-O4'-C4'	6.08	115.98	109.90
2	AB	1763	G	C2'-C3'-O3'	6.08	122.83	113.70
16	AP	119	SER	CA-C-O	-6.08	111.81	120.51
25	AY	45	HIS	N-CA-C	-6.08	102.50	110.53
35	BA	321	A	C1'-O4'-C4'	6.08	115.98	109.90
35	BA	557	G	C3'-C2'-C1'	6.08	107.38	101.30
35	BA	1435	G	C3'-C2'-C1'	6.08	107.38	101.30
2	AB	515	A	O4'-C4'-C3'	-6.08	97.92	104.00
2	AB	826	U	C4'-C3'-O3'	-6.08	103.88	113.00
2	AB	1392	A	C5'-C4'-C3'	-6.08	106.88	116.00
2	AB	1931	U	C1'-O4'-C4'	-6.08	103.82	109.90
2	AB	2127	G	O4'-C1'-N9	6.08	117.62	108.50
35	BA	274	A	N9-C1'-C2'	-6.08	104.88	114.00
37	BC	48	C	C4'-C3'-O3'	6.08	122.12	113.00
38	BD	73	A	C4'-C3'-O3'	-6.08	103.88	113.00
2	AB	394	C	O4'-C1'-C2'	-6.08	101.52	107.60
2	AB	1467	U	N1-C1'-C2'	-6.08	102.88	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	124	VAL	CB-CA-C	6.08	116.87	110.91
19	AS	24	TYR	CB-CG-CD1	-6.08	111.68	120.80
35	BA	556	C	P-O3'-C3'	6.08	129.32	120.20
35	BA	1039	G	C4'-C3'-C2'	-6.08	96.52	102.60
35	BA	1111	A	C3'-C2'-O2'	6.08	119.82	110.70
2	AB	2360	G	O5'-C5'-C4'	6.08	120.62	111.50
2	AB	2900	A	C1'-O4'-C4'	6.08	115.98	109.90
5	AE	66	GLY	CA-C-O	-6.08	113.61	120.30
30	A3	25	THR	O-C-N	6.08	130.74	123.33
2	AB	57	C	C4'-C3'-C2'	-6.08	96.52	102.60
2	AB	1660	G	C1'-C2'-O2'	-6.08	99.29	108.40
35	BA	1267	C	O4'-C1'-C2'	-6.08	99.72	105.80
38	BD	7	G	O4'-C1'-N9	6.08	117.61	108.50
41	BG	202	LEU	CA-C-O	-6.08	114.44	120.70
3	AC	5	THR	CA-CB-CG2	6.07	120.82	110.50
35	BA	1379	G	C5'-C4'-C3'	6.07	125.11	116.00
39	BE	180	ILE	CA-C-N	6.07	126.28	119.90
39	BE	180	ILE	C-N-CA	6.07	126.28	119.90
56	BV	58	PRO	N-CA-CB	6.07	108.70	103.36
2	AB	961	C	C4'-C3'-C2'	-6.07	96.53	102.60
2	AB	1626	A	O4'-C1'-N9	6.07	117.31	108.20
44	BJ	133	ALA	CA-C-O	6.07	126.66	119.56
2	AB	364	C	N1-C1'-C2'	-6.07	102.89	112.00
2	AB	2411	A	C4'-C3'-C2'	-6.07	96.53	102.60
2	AB	2768	U	C4'-C3'-O3'	6.07	122.11	113.00
35	BA	109	A	N9-C1'-C2'	-6.07	104.89	114.00
35	BA	213	G	O4'-C1'-C2'	-6.07	101.53	107.60
35	BA	725	G	C4'-C3'-C2'	-6.07	96.53	102.60
40	BF	136	ALA	CA-C-N	6.07	128.78	120.46
40	BF	136	ALA	C-N-CA	6.07	128.78	120.46
41	BG	141	VAL	CA-CB-CG2	6.07	120.72	110.40
44	BJ	102	TRP	CA-CB-CG	6.07	125.13	113.60
2	AB	2637	U	C3'-C2'-C1'	6.07	107.37	101.30
3	AC	76	ALA	CA-C-O	-6.07	114.22	121.56
14	AN	13	LYS	CA-C-N	6.07	128.91	120.29
14	AN	13	LYS	C-N-CA	6.07	128.91	120.29
46	BL	19	PHE	O-C-N	6.07	130.27	123.05
2	AB	89	A	O4'-C1'-N9	6.07	117.60	108.50
11	AK	129	GLU	CA-C-O	-6.07	114.41	120.90
2	AB	586	A	O3'-P-O5'	-6.07	94.90	104.00
2	AB	618	G	C1'-O4'-C4'	-6.07	103.83	109.90
2	AB	1445	G	C1'-O4'-C4'	-6.07	103.83	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	382	A	O4'-C1'-C2'	-6.07	101.53	107.60
35	BA	696	A	O4'-C1'-C2'	-6.07	101.53	107.60
41	BG	18	LEU	CA-C-N	6.07	131.00	122.08
41	BG	18	LEU	C-N-CA	6.07	131.00	122.08
42	BH	111	ARG	N-CA-CB	-6.07	100.01	110.32
48	BN	54	SER	CA-C-N	6.07	130.31	120.60
48	BN	54	SER	C-N-CA	6.07	130.31	120.60
57	BW	74	HIS	ND1-CE1-NE2	6.07	114.47	108.40
6	AF	110	SER	N-CA-CB	-6.06	101.22	110.01
35	BA	340	U	O4'-C1'-N1	6.06	117.60	108.50
40	BF	194	VAL	N-CA-C	6.06	117.46	109.21
9	AI	57	LYS	CA-C-N	6.06	129.53	120.31
9	AI	57	LYS	C-N-CA	6.06	129.53	120.31
35	BA	108	G	N9-C1'-C2'	6.06	121.09	112.00
35	BA	241	G	O4'-C1'-N9	6.06	117.59	108.50
44	BJ	127	ALA	N-CA-C	6.06	118.68	111.71
2	AB	1675	C	C4'-C3'-C2'	-6.06	96.54	102.60
15	AO	54	THR	CA-C-N	6.06	129.52	120.31
15	AO	54	THR	C-N-CA	6.06	129.52	120.31
35	BA	749	A	O4'-C1'-C2'	-6.06	101.54	107.60
35	BA	782	A	O5'-C5'-C4'	6.06	120.59	111.50
36	BB	60	U	C3'-C2'-C1'	6.06	107.36	101.30
2	AB	908	C	O4'-C1'-C2'	6.06	113.66	107.60
2	AB	1645	G	N9-C1'-C2'	-6.06	104.91	114.00
2	AB	2266	A	C4'-C3'-C2'	-6.06	96.54	102.60
2	AB	2841	C	C4'-C3'-O3'	6.06	122.09	113.00
2	AB	2868	A	O5'-C5'-C4'	-6.06	102.41	111.50
35	BA	425	G	C1'-C2'-O2'	6.06	117.49	108.40
2	AB	325	G	C3'-C2'-C1'	-6.06	95.24	101.30
11	AK	82	ALA	N-CA-C	6.06	118.85	111.82
17	AQ	41	ALA	N-CA-CB	-6.06	101.98	110.04
17	AQ	104	GLN	OE1-CD-NE2	-6.06	116.54	122.60
18	AR	29	VAL	CA-C-O	-6.06	115.70	121.64
32	A5	41	ARG	CA-C-N	6.06	128.89	120.29
32	A5	41	ARG	C-N-CA	6.06	128.89	120.29
35	BA	965	U	C1'-C2'-O2'	6.06	120.89	111.80
35	BA	980	C	C4'-C3'-O3'	-6.06	103.91	113.00
35	BA	1046	A	C3'-C2'-O2'	6.06	119.78	110.70
2	AB	54	G	C5'-C4'-C3'	-6.06	106.92	116.00
2	AB	1893	C	P-O3'-C3'	6.06	129.28	120.20
2	AB	2334	U	O3'-P-O5'	-6.06	94.92	104.00
2	AB	2889	C	C4'-C3'-C2'	-6.06	96.54	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BN	127	ARG	NE-CZ-NH2	6.06	124.65	119.20
2	AB	995	C	N1-C1'-C2'	6.05	123.08	114.00
21	AU	46	LEU	N-CA-C	-6.05	104.59	111.07
35	BA	36	C	C1'-C2'-O2'	6.05	117.48	108.40
35	BA	517	G	O4'-C1'-C2'	6.05	111.85	105.80
2	AB	254	G	O4'-C1'-N9	6.05	117.58	108.50
2	AB	861	A	C5'-C4'-C3'	-6.05	106.92	116.00
2	AB	2583	G	N9-C1'-C2'	6.05	121.08	112.00
35	BA	317	U	O4'-C1'-N1	6.05	117.58	108.50
35	BA	937	A	C1'-C2'-O2'	-6.05	99.32	108.40
2	AB	1721	G	C3'-C2'-O2'	-6.05	105.53	114.60
2	AB	2578	G	P-O5'-C5'	6.05	129.97	120.90
35	BA	1348	U	O4'-C1'-N1	6.05	117.58	108.50
49	BO	76	HIS	CB-CG-CD2	-6.05	123.34	131.20
57	BW	74	HIS	CA-CB-CG	6.05	119.85	113.80
2	AB	62	U	C4'-C3'-C2'	-6.05	96.55	102.60
2	AB	878	A	C4'-C3'-C2'	-6.05	96.55	102.60
15	AO	134	THR	CB-CA-C	6.05	122.45	110.42
16	AP	60	VAL	CA-C-N	6.05	128.38	120.28
16	AP	60	VAL	C-N-CA	6.05	128.38	120.28
6	AF	65	THR	CB-CA-C	6.05	122.45	110.42
52	BR	83	ARG	NE-CZ-NH2	-6.05	113.76	119.20
22	AV	34	VAL	CA-CB-CG2	6.04	120.68	110.40
45	BK	119	GLY	CA-C-O	-6.04	112.93	119.82
2	AB	416	U	C4'-C3'-C2'	-6.04	96.56	102.60
2	AB	2345	G	C4'-C3'-C2'	-6.04	96.56	102.60
4	AD	115	ILE	CB-CA-C	6.04	117.76	111.23
12	AL	130	HIS	CB-CG-CD2	-6.04	123.34	131.20
35	BA	494	G	C3'-C2'-O2'	6.04	119.77	110.70
35	BA	803	G	C4'-C3'-C2'	6.04	108.64	102.60
35	BA	1528	U	C4'-C3'-O3'	6.04	118.47	109.40
36	BB	33	U	C3'-C2'-C1'	6.04	107.34	101.30
1	AA	74	U	C3'-C2'-O2'	6.04	119.76	110.70
11	AK	48	ILE	CB-CA-C	6.04	118.40	110.91
42	BH	46	GLY	O-C-N	6.04	130.55	122.70
52	BR	23	SER	CA-C-N	6.04	128.37	120.28
52	BR	23	SER	C-N-CA	6.04	128.37	120.28
56	BV	56	HIS	CB-CG-CD2	-6.04	123.34	131.20
35	BA	372	C	C2'-C3'-O3'	6.04	118.56	109.50
47	BM	95	GLY	N-CA-C	-6.04	105.48	112.73
2	AB	97	C	O5'-C5'-C4'	-6.04	102.44	111.50
2	AB	1697	G	C3'-C2'-C1'	-6.04	95.26	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	AJ	28	ASP	CA-CB-CG	6.04	118.64	112.60
26	AZ	23	ALA	CA-C-N	6.04	129.44	120.87
26	AZ	23	ALA	C-N-CA	6.04	129.44	120.87
35	BA	1239	A	C4'-C3'-C2'	6.04	108.64	102.60
38	BD	22	A	P-O3'-C3'	6.04	129.26	120.20
48	BN	10	ARG	CA-C-N	6.04	132.82	122.67
48	BN	10	ARG	C-N-CA	6.04	132.82	122.67
2	AB	293	U	C4'-C3'-O3'	-6.04	103.94	113.00
2	AB	1657	U	C1'-C2'-O2'	6.04	117.45	108.40
26	AZ	50	VAL	CB-CA-C	6.04	119.82	111.19
2	AB	266	G	O5'-C5'-C4'	-6.04	102.45	111.50
2	AB	686	U	O4'-C1'-N1	6.04	117.25	108.20
3	AC	7	ARG	CB-CG-CD	6.04	125.18	111.30
4	AD	211	ARG	CA-C-O	-6.04	114.48	120.82
6	AF	21	ARG	NE-CZ-NH2	6.04	124.63	119.20
35	BA	52	C	O4'-C1'-N1	6.04	117.55	108.50
35	BA	609	A	O3'-P-O5'	6.04	113.05	104.00
2	AB	125	A	C3'-C2'-C1'	6.03	107.33	101.30
2	AB	620	G	C1'-C2'-O2'	-6.03	102.75	111.80
2	AB	2106	U	C2'-C3'-O3'	6.03	122.75	113.70
2	AB	2496	C	P-O3'-C3'	6.03	129.25	120.20
35	BA	661	G	C3'-C2'-O2'	6.03	119.75	110.70
40	BF	125	ARG	CA-C-N	6.03	130.70	122.19
40	BF	125	ARG	C-N-CA	6.03	130.70	122.19
2	AB	712	G	C3'-C2'-O2'	6.03	119.75	110.70
2	AB	822	G	C1'-C2'-O2'	-6.03	99.35	108.40
2	AB	1582	C	O3'-P-O5'	-6.03	94.95	104.00
2	AB	1991	U	C3'-C2'-C1'	6.03	107.33	101.30
1	AA	25	U	O4'-C1'-N1	6.03	117.25	108.20
2	AB	1260	A	C4'-C3'-C2'	-6.03	96.57	102.60
2	AB	2147	A	C4'-C3'-O3'	6.03	118.45	109.40
35	BA	770	C	O4'-C4'-C3'	6.03	110.03	104.00
35	BA	1056	U	O4'-C1'-C2'	-6.03	101.57	107.60
48	BN	28	ASN	OD1-CG-ND2	6.03	128.63	122.60
55	BU	41	SER	N-CA-CB	-6.03	100.93	110.28
2	AB	1749	A	C4'-C3'-C2'	-6.03	96.57	102.60
2	AB	2236	U	O5'-C5'-C4'	6.03	120.54	111.50
35	BA	618	C	P-O3'-C3'	6.03	129.24	120.20
35	BA	952	U	N1-C1'-C2'	-6.03	102.96	112.00
57	BW	4	LYS	CA-C-N	6.03	128.36	120.28
57	BW	4	LYS	C-N-CA	6.03	128.36	120.28
2	AB	26	G	C5'-C4'-O4'	6.03	118.84	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	351	C	C3'-C2'-C1'	6.03	107.33	101.30
2	AB	737	C	O4'-C4'-C3'	6.03	110.03	104.00
2	AB	1238	G	O4'-C1'-N9	6.03	117.54	108.50
35	BA	1005	A	O4'-C1'-C2'	-6.03	101.57	107.60
2	AB	207	A	C4'-C3'-C2'	-6.03	96.58	102.60
2	AB	608	A	C5'-C4'-O4'	6.03	118.84	109.80
2	AB	2460	U	C5'-C4'-C3'	-6.03	106.96	116.00
31	A4	45	HIS	CB-CG-CD2	-6.03	123.37	131.20
35	BA	407	U	C4'-C3'-C2'	6.03	108.63	102.60
35	BA	636	U	C4'-C3'-C2'	-6.03	96.57	102.60
35	BA	1389	C	O3'-P-O5'	6.03	113.04	104.00
46	BL	44	ARG	N-CA-C	-6.03	104.83	111.82
2	AB	1866	A	C5'-C4'-O4'	6.02	118.84	109.80
2	AB	321	U	C5'-C4'-C3'	6.02	125.03	116.00
2	AB	604	G	C5'-C4'-C3'	6.02	125.03	116.00
2	AB	1339	G	C2'-C3'-O3'	-6.02	104.67	113.70
2	AB	1704	C	O4'-C1'-N1	6.02	117.53	108.50
11	AK	3	LYS	CA-C-O	6.02	127.05	120.12
34	A7	24	ARG	CB-CA-C	6.02	119.47	109.53
35	BA	1282	C	C4'-C3'-C2'	-6.02	96.58	102.60
51	BQ	52	ARG	NE-CZ-NH1	6.02	127.52	121.50
1	AA	14	U	C1'-C2'-O2'	6.02	120.83	111.80
2	AB	2083	G	C5'-C4'-C3'	-6.02	106.97	116.00
25	AY	40	ARG	CB-CA-C	6.02	122.40	110.42
26	AZ	36	ARG	CA-C-N	6.02	131.99	122.36
26	AZ	36	ARG	C-N-CA	6.02	131.99	122.36
2	AB	649	G	O4'-C1'-N9	6.02	117.53	108.50
2	AB	727	A	C3'-C2'-C1'	6.02	107.32	101.30
2	AB	1266	G	O4'-C1'-C2'	-6.02	99.78	105.80
2	AB	2187	U	C1'-O4'-C4'	6.02	115.92	109.90
8	AH	171	LYS	CA-C-O	6.02	128.04	121.06
20	AT	12	HIS	CA-CB-CG	-6.02	107.78	113.80
35	BA	685	G	C3'-C2'-C1'	6.02	107.32	101.30
2	AB	186	G	O4'-C1'-N9	6.02	117.53	108.50
2	AB	633	A	C2'-C3'-O3'	-6.02	104.67	113.70
2	AB	1756	G	O4'-C4'-C3'	6.02	110.02	104.00
9	AI	78	VAL	CB-CA-C	6.02	117.73	111.23
10	AJ	87	HIS	CA-C-N	6.02	125.90	119.28
10	AJ	87	HIS	C-N-CA	6.02	125.90	119.28
35	BA	690	G	C5'-C4'-O4'	6.02	118.83	109.80
35	BA	184	G	C1'-O4'-C4'	-6.02	103.88	109.90
35	BA	337	G	C3'-C2'-C1'	-6.02	95.28	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	83	A	O4'-C4'-C3'	6.01	110.01	104.00
2	AB	1736	U	O4'-C1'-N1	6.01	117.52	108.50
2	AB	2001	C	O4'-C1'-N1	6.01	117.52	108.50
2	AB	2558	C	O4'-C1'-C2'	-6.01	101.58	107.60
2	AB	2800	A	P-O5'-C5'	6.01	129.92	120.90
25	AY	38	ARG	CA-C-N	6.01	134.76	123.09
25	AY	38	ARG	C-N-CA	6.01	134.76	123.09
35	BA	266	G	C3'-C2'-C1'	-6.01	95.28	101.30
35	BA	726	C	C4'-C3'-C2'	6.01	108.61	102.60
35	BA	970	C	C1'-C2'-O2'	6.01	120.82	111.80
39	BE	181	PRO	CA-C-O	-6.01	114.17	121.03
43	BI	35	LYS	N-CA-CB	-6.01	100.34	111.53
48	BN	20	ALA	CA-C-N	6.01	132.00	122.74
48	BN	20	ALA	C-N-CA	6.01	132.00	122.74
1	AA	9	G	O4'-C4'-C3'	-6.01	97.99	104.00
2	AB	2181	U	O4'-C1'-N1	6.01	117.52	108.50
2	AB	2841	C	C5'-C4'-C3'	-6.01	106.98	116.00
36	BB	1	A	O4'-C1'-C2'	-6.01	101.59	107.60
36	BB	28	C	C3'-C2'-C1'	-6.01	95.29	101.30
44	BJ	42	VAL	CA-C-N	6.01	128.83	120.29
44	BJ	42	VAL	C-N-CA	6.01	128.83	120.29
2	AB	1297	C	C5'-C4'-O4'	6.01	118.82	109.80
2	AB	1438	U	C3'-C2'-C1'	6.01	107.31	101.30
2	AB	2441	U	O5'-C5'-C4'	-6.01	102.48	111.50
15	AO	99	GLY	CA-C-N	6.01	130.82	121.26
15	AO	99	GLY	C-N-CA	6.01	130.82	121.26
17	AQ	105	ALA	O-C-N	6.01	128.49	122.12
19	AS	81	GLY	CA-C-O	6.01	127.49	121.00
2	AB	2497	A	C1'-C2'-O2'	6.01	120.81	111.80
35	BA	564	C	C5'-C4'-O4'	6.01	118.81	109.80
35	BA	1182	G	O3'-P-O5'	-6.01	94.99	104.00
51	BQ	39	ASP	CA-CB-CG	-6.01	106.59	112.60
1	AA	18	G	O4'-C1'-C2'	6.01	113.61	107.60
2	AB	542	C	C4'-C3'-C2'	-6.01	96.59	102.60
2	AB	28	A	O4'-C1'-N9	6.01	117.51	108.50
2	AB	831	G	O4'-C1'-C2'	6.01	113.61	107.60
2	AB	1046	A	P-O3'-C3'	6.01	129.21	120.20
2	AB	1932	A	O4'-C4'-C3'	-6.01	97.99	104.00
2	AB	2153	C	C3'-C2'-C1'	6.01	107.51	101.50
11	AK	25	PRO	CA-C-N	6.01	128.33	120.28
11	AK	25	PRO	C-N-CA	6.01	128.33	120.28
14	AN	35	HIS	CA-CB-CG	-6.01	107.79	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	AR	32	VAL	N-CA-CB	6.01	121.14	111.23
4	AD	252	LYS	CA-C-N	6.00	128.92	120.57
4	AD	252	LYS	C-N-CA	6.00	128.92	120.57
19	AS	37	ALA	CA-C-N	6.00	128.69	120.46
19	AS	37	ALA	C-N-CA	6.00	128.69	120.46
35	BA	1390	U	O4'-C1'-N1	6.00	117.51	108.50
2	AB	1078	U	C3'-C2'-C1'	-6.00	95.50	101.50
2	AB	1747	U	C1'-O4'-C4'	6.00	115.90	109.90
2	AB	2384	U	O3'-P-O5'	-6.00	95.00	104.00
2	AB	2459	A	O4'-C4'-C3'	6.00	110.00	104.00
2	AB	2809	A	O4'-C1'-C2'	-6.00	101.60	107.60
6	AF	14	VAL	CA-C-N	6.00	129.91	121.02
6	AF	14	VAL	C-N-CA	6.00	129.91	121.02
21	AU	7	HIS	CA-CB-CG	6.00	119.80	113.80
35	BA	1211	U	O4'-C1'-C2'	-6.00	101.60	107.60
39	BE	108	GLN	OE1-CD-NE2	-6.00	116.60	122.60
2	AB	4	U	O4'-C1'-N1	6.00	117.50	108.50
2	AB	420	C	C3'-C2'-O2'	6.00	119.70	110.70
2	AB	1005	C	C3'-C2'-C1'	6.00	107.30	101.30
2	AB	1438	U	O4'-C1'-N1	6.00	117.50	108.50
2	AB	2144	G	C3'-C2'-C1'	6.00	107.30	101.30
2	AB	2520	C	C3'-C2'-C1'	-6.00	95.30	101.30
9	AI	123	ARG	NE-CZ-NH1	6.00	127.50	121.50
35	BA	524	G	C5'-C4'-C3'	-6.00	107.00	116.00
56	BV	67	GLY	CA-C-O	-6.00	110.13	120.57
2	AB	1529	G	C1'-C2'-O2'	-6.00	99.40	108.40
3	AC	155	ASN	CA-C-O	-6.00	113.07	119.97
11	AK	76	ALA	O-C-N	-6.00	115.76	122.12
44	BJ	168	SER	N-CA-CB	-6.00	102.13	110.65
2	AB	2272	U	O4'-C4'-C3'	6.00	110.00	104.00
2	AB	2760	C	P-O3'-C3'	6.00	129.20	120.20
20	AT	23	GLU	O-C-N	6.00	130.25	122.87
47	BM	2	GLN	N-CA-C	6.00	118.45	110.53
11	AK	100	ILE	CB-CA-C	6.00	119.75	110.28
23	AW	98	ASN	CB-CG-ND2	6.00	125.39	116.40
29	A2	6	HIS	ND1-CG-CD2	6.00	112.10	106.10
35	BA	1368	A	C4'-C3'-C2'	-6.00	96.60	102.60
46	BL	61	ASP	N-CA-CB	-6.00	100.86	110.63
46	BL	64	ILE	CA-CB-CG1	6.00	120.59	110.40
2	AB	1892	C	C3'-C2'-O2'	5.99	119.69	110.70
2	AB	1919	A	C5'-C4'-C3'	-5.99	107.01	116.00
2	AB	2770	G	O4'-C1'-C2'	-5.99	101.61	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	AF	181	ILE	CA-CB-CG1	5.99	120.59	110.40
35	BA	238	A	O3'-P-O5'	5.99	112.99	104.00
35	BA	640	A	O4'-C1'-C2'	5.99	113.59	107.60
35	BA	1035	A	C4'-C3'-C2'	-5.99	96.61	102.60
43	BI	70	VAL	CA-C-O	-5.99	114.40	121.05
2	AB	764	A	O4'-C1'-C2'	-5.99	99.81	105.80
2	AB	1071	G	C1'-C2'-O2'	5.99	117.39	108.40
35	BA	629	A	C4'-C3'-C2'	-5.99	96.61	102.60
2	AB	1193	G	C4'-C3'-C2'	-5.99	96.61	102.60
2	AB	1374	G	C3'-C2'-O2'	5.99	119.69	110.70
2	AB	114	U	C2'-C3'-O3'	5.99	122.68	113.70
2	AB	204	A	O4'-C1'-C2'	5.99	111.79	105.80
35	BA	1401	G	C4'-C3'-O3'	5.99	121.98	113.00
2	AB	801	G	C5'-C4'-O4'	5.99	118.08	109.10
2	AB	993	G	O4'-C1'-N9	5.99	117.48	108.50
2	AB	1277	G	O4'-C1'-N9	5.99	117.48	108.50
2	AB	2508	G	O3'-P-O5'	-5.99	95.02	104.00
9	AI	135	HIS	N-CA-C	-5.99	99.97	109.07
54	BT	30	HIS	ND1-CG-CD2	5.99	112.08	106.10
2	AB	1108	U	O4'-C1'-C2'	-5.98	101.62	107.60
2	AB	1734	G	O4'-C1'-C2'	-5.98	101.62	107.60
36	BB	33	U	O4'-C1'-N1	5.98	117.48	108.50
2	AB	149	A	C3'-C2'-O2'	5.98	119.67	110.70
2	AB	350	G	O4'-C4'-C3'	5.98	109.98	104.00
2	AB	2371	G	C1'-O4'-C4'	-5.98	103.92	109.90
2	AB	2886	A	C5'-C4'-C3'	-5.98	107.03	116.00
8	AH	10	VAL	N-CA-C	5.98	115.54	108.96
35	BA	1159	U	P-O5'-C5'	5.98	129.88	120.90
52	BR	8	ALA	CA-C-N	5.98	128.22	120.44
52	BR	8	ALA	C-N-CA	5.98	128.22	120.44
2	AB	1398	C	N1-C1'-C2'	5.98	120.97	112.00
2	AB	2492	U	C2'-C3'-O3'	5.98	118.47	109.50
35	BA	631	C	C1'-O4'-C4'	5.98	115.88	109.90
35	BA	797	C	C4'-C3'-C2'	-5.98	96.62	102.60
35	BA	1233	G	O4'-C1'-N9	5.98	117.47	108.50
53	BS	34	GLU	N-CA-C	5.98	118.98	108.75
51	BQ	61	ASN	CA-C-N	5.98	132.96	121.54
51	BQ	61	ASN	C-N-CA	5.98	132.96	121.54
2	AB	1866	A	C4'-C3'-C2'	-5.98	96.62	102.60
2	AB	2348	U	C3'-C2'-O2'	5.98	119.67	110.70
3	AC	181	ASP	CA-C-N	5.98	128.21	120.44
3	AC	181	ASP	C-N-CA	5.98	128.21	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	212	TRP	CE2-CD2-CE3	-5.98	112.82	118.80
12	AL	86	GLN	OE1-CD-NE2	-5.98	116.62	122.60
34	A7	15	LYS	N-CA-C	5.98	117.88	111.36
35	BA	632	U	O4'-C1'-C2'	-5.98	99.82	105.80
41	BG	146	GLU	CA-C-N	5.98	130.84	120.68
41	BG	146	GLU	C-N-CA	5.98	130.84	120.68
57	BW	28	ARG	NE-CZ-NH2	-5.98	113.82	119.20
2	AB	386	G	O4'-C4'-C3'	5.98	112.08	106.10
2	AB	1129	A	C4'-C3'-O3'	5.97	118.36	109.40
2	AB	1400	U	O4'-C1'-C2'	-5.97	101.63	107.60
14	AN	61	LEU	O-C-N	-5.97	117.64	121.88
15	AO	124	LEU	CA-C-O	5.97	126.78	120.63
35	BA	13	U	N1-C1'-C2'	5.97	122.96	114.00
35	BA	71	A	C4'-C3'-C2'	-5.97	96.62	102.60
35	BA	129	A	C2'-C3'-O3'	5.97	118.46	109.50
2	AB	89	A	O5'-C5'-C4'	5.97	120.46	111.50
2	AB	560	C	O4'-C4'-C3'	5.97	109.97	104.00
2	AB	1402	U	O4'-C1'-C2'	-5.97	101.63	107.60
2	AB	1847	A	O4'-C1'-C2'	-5.97	101.63	107.60
2	AB	1999	C	C5'-C4'-C3'	-5.97	107.04	116.00
2	AB	2415	G	C4'-C3'-C2'	-5.97	96.63	102.60
2	AB	2481	G	P-O3'-C3'	5.97	129.16	120.20
39	BE	145	ASN	O-C-N	5.97	128.22	122.07
2	AB	2608	G	C3'-C2'-C1'	5.97	107.27	101.30
6	AF	61	ARG	NE-CZ-NH1	-5.97	115.53	121.50
11	AK	33	ASN	CA-C-O	-5.97	114.45	120.96
35	BA	54	C	O3'-P-O5'	-5.97	95.04	104.00
35	BA	298	A	O4'-C1'-C2'	-5.97	101.63	107.60
35	BA	889	A	C1'-C2'-O2'	5.97	120.76	111.80
35	BA	1150	A	C3'-C2'-C1'	5.97	107.27	101.30
2	AB	484	C	C1'-O4'-C4'	-5.97	103.93	109.90
2	AB	1016	G	O4'-C4'-C3'	5.97	109.97	104.00
2	AB	1729	U	O3'-P-O5'	-5.97	95.05	104.00
2	AB	1946	U	C4'-C3'-C2'	-5.97	96.63	102.60
7	AG	147	ARG	CD-NE-CZ	5.97	132.76	124.40
10	AJ	152	ARG	NE-CZ-NH2	5.97	124.57	119.20
35	BA	45	G	C3'-C2'-O2'	5.97	119.65	110.70
35	BA	213	G	N9-C1'-C2'	5.97	120.95	112.00
35	BA	1538	C	C3'-C2'-C1'	5.97	107.27	101.30
2	AB	576	U	O4'-C1'-C2'	-5.97	101.63	107.60
2	AB	1762	A	P-O3'-C3'	5.97	129.15	120.20
2	AB	2724	U	P-O3'-C3'	5.97	129.15	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AG	4	HIS	CA-C-N	5.97	128.87	120.28
7	AG	4	HIS	C-N-CA	5.97	128.87	120.28
35	BA	918	A	O5'-C5'-C4'	-5.97	102.55	111.50
2	AB	1157	G	C3'-C2'-C1'	5.97	107.27	101.30
2	AB	1534	U	C5'-C4'-C3'	-5.97	107.05	116.00
6	AF	138	LEU	N-CA-C	-5.97	104.86	111.36
28	A1	28	LEU	CA-C-O	-5.97	114.25	121.05
35	BA	192	A	C4'-C3'-C2'	-5.97	96.63	102.60
35	BA	1326	U	C3'-C2'-C1'	-5.97	95.33	101.30
2	AB	224	U	C4'-C3'-O3'	-5.96	104.05	113.00
2	AB	2528	U	O4'-C1'-C2'	-5.96	101.64	107.60
2	AB	2698	U	P-O3'-C3'	5.96	129.15	120.20
36	BB	38	A	C1'-O4'-C4'	-5.96	103.94	109.90
27	A0	50	VAL	CB-CA-C	-5.96	103.99	112.22
35	BA	563	A	C4'-C3'-O3'	-5.96	104.06	113.00
2	AB	1301	A	C4'-C3'-O3'	5.96	118.34	109.40
2	AB	1990	C	O4'-C4'-C3'	5.96	109.96	104.00
2	AB	2732	G	C4'-C3'-C2'	5.96	108.56	102.60
5	AE	200	ASP	CA-CB-CG	5.96	118.56	112.60
6	AF	67	ARG	CA-C-N	5.96	132.93	121.54
6	AF	67	ARG	C-N-CA	5.96	132.93	121.54
35	BA	1013	G	O3'-P-O5'	5.96	112.94	104.00
42	BH	37	VAL	O-C-N	-5.96	116.92	123.18
2	AB	272	A	C4'-C3'-O3'	-5.96	104.06	113.00
2	AB	627	A	C1'-C2'-O2'	5.96	120.74	111.80
2	AB	1371	G	C4'-C3'-C2'	-5.96	96.64	102.60
2	AB	2424	C	O4'-C1'-C2'	-5.96	101.64	107.60
2	AB	2641	G	C4'-C3'-O3'	5.96	121.94	113.00
17	AQ	74	VAL	CA-C-N	5.96	126.56	120.00
17	AQ	74	VAL	C-N-CA	5.96	126.56	120.00
35	BA	996	A	C5'-C4'-C3'	-5.96	107.06	116.00
39	BE	162	VAL	N-CA-C	5.96	116.44	107.80
2	AB	625	G	C5'-C4'-C3'	-5.96	107.06	116.00
2	AB	1393	A	C1'-C2'-O2'	-5.96	99.46	108.40
2	AB	2485	G	C2'-C3'-O3'	-5.96	104.77	113.70
2	AB	2860	A	O4'-C4'-C3'	5.96	109.96	104.00
31	A4	4	ILE	CA-CB-CG1	5.96	120.53	110.40
35	BA	239	U	C3'-C2'-O2'	5.96	119.64	110.70
35	BA	1355	G	C5'-C4'-O4'	5.96	118.73	109.80
2	AB	663	G	O4'-C4'-C3'	5.96	109.95	104.00
2	AB	2224	G	O3'-P-O5'	5.96	112.93	104.00
40	BF	195	ILE	CA-CB-CG1	5.96	120.52	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1173	U	O3'-P-O5'	5.95	112.93	104.00
47	BM	99	GLN	CG-CD-NE2	-5.95	107.47	116.40
2	AB	2425	A	C1'-O4'-C4'	-5.95	103.75	109.70
2	AB	2477	U	O3'-P-O5'	-5.95	95.07	104.00
40	BF	58	ARG	CA-C-N	5.95	126.78	120.11
40	BF	58	ARG	C-N-CA	5.95	126.78	120.11
2	AB	419	U	C1'-O4'-C4'	5.95	115.85	109.90
2	AB	583	G	C3'-C2'-O2'	5.95	119.62	110.70
2	AB	730	A	O5'-C5'-C4'	-5.95	102.57	111.50
2	AB	846	U	O4'-C1'-N1	5.95	117.42	108.50
2	AB	1904	G	C1'-C2'-O2'	-5.95	99.47	108.40
5	AE	156	PHE	CA-C-N	5.95	129.16	120.71
5	AE	156	PHE	C-N-CA	5.95	129.16	120.71
18	AR	106	ALA	CA-C-O	-5.95	112.17	118.77
19	AS	19	GLN	O-C-N	5.95	129.18	122.22
22	AV	96	VAL	CA-C-O	5.95	126.28	120.27
33	A6	59	ALA	N-CA-C	5.95	119.01	111.69
35	BA	271	C	O4'-C4'-C3'	5.95	109.95	104.00
39	BE	163	ILE	CB-CA-C	5.95	117.37	110.88
40	BF	217	GLU	N-CA-C	5.95	118.53	111.33
2	AB	91	A	C1'-C2'-O2'	-5.95	102.88	111.80
2	AB	946	C	O4'-C1'-N1	5.95	117.42	108.50
2	AB	1103	A	P-O3'-C3'	5.95	129.12	120.20
2	AB	2282	G	P-O3'-C3'	5.95	129.12	120.20
35	BA	784	A	C4'-C3'-C2'	-5.95	96.65	102.60
2	AB	336	C	C5'-C4'-C3'	-5.95	107.08	116.00
2	AB	1230	A	N9-C1'-C2'	-5.95	103.08	112.00
2	AB	1321	A	P-O5'-C5'	5.95	129.82	120.90
1	AA	66	A	P-O3'-C3'	5.95	129.12	120.20
2	AB	19	A	O4'-C1'-C2'	-5.95	101.66	107.60
20	AT	101	ILE	CA-C-N	5.95	131.26	121.39
20	AT	101	ILE	C-N-CA	5.95	131.26	121.39
35	BA	197	A	C5'-C4'-C3'	-5.95	106.28	115.20
35	BA	501	C	C5'-C4'-C3'	5.95	124.92	116.00
35	BA	1059	C	C4'-C3'-C2'	-5.95	96.66	102.60
35	BA	1492	A	C1'-C2'-O2'	5.95	120.72	111.80
46	BL	86	LEU	N-CA-C	-5.95	101.10	109.96
47	BM	82	LYS	O-C-N	-5.95	114.96	122.27
2	AB	2593	U	C1'-O4'-C4'	-5.94	103.96	109.90
27	A0	23	ARG	CA-C-N	5.94	128.17	120.44
27	A0	23	ARG	C-N-CA	5.94	128.17	120.44
35	BA	484	G	P-O5'-C5'	5.94	129.82	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	985	C	C1'-C2'-O2'	-5.94	99.48	108.40
35	BA	1029	U	O4'-C1'-N1	5.94	117.12	108.20
1	AA	30	C	O4'-C1'-C2'	5.94	113.54	107.60
2	AB	1548	A	O3'-P-O5'	-5.94	95.08	104.00
2	AB	2691	C	C5'-C4'-C3'	5.94	124.91	116.00
35	BA	671	G	O4'-C4'-C3'	5.94	109.94	104.00
35	BA	748	G	C5'-C4'-C3'	5.94	124.91	116.00
37	BC	18	A	C1'-O4'-C4'	-5.94	103.96	109.90
2	AB	370	G	O4'-C4'-C3'	5.94	112.04	106.10
2	AB	416	U	O5'-C5'-C4'	-5.94	102.59	111.50
2	AB	740	C	O4'-C4'-C3'	5.94	109.94	104.00
2	AB	1000	A	C4'-C3'-C2'	-5.94	96.66	102.60
2	AB	1893	C	C3'-C2'-C1'	5.94	107.24	101.30
7	AG	79	ARG	CD-NE-CZ	5.94	132.72	124.40
18	AR	100	ARG	N-CA-C	5.94	118.24	111.11
18	AR	106	ALA	O-C-N	5.94	128.88	122.34
35	BA	1177	G	O4'-C4'-C3'	5.94	109.94	104.00
35	BA	1304	G	O4'-C4'-C3'	5.94	109.94	104.00
2	AB	2132	U	C5'-C4'-O4'	5.94	118.71	109.80
2	AB	2322	A	C1'-O4'-C4'	-5.94	103.96	109.90
2	AB	291	G	O3'-P-O5'	-5.94	95.09	104.00
2	AB	446	G	C1'-O4'-C4'	5.94	115.64	109.70
2	AB	543	G	C5'-C4'-C3'	-5.94	107.09	116.00
2	AB	553	G	O4'-C4'-C3'	5.94	109.94	104.00
2	AB	673	C	C5'-C4'-O4'	5.94	118.71	109.80
2	AB	846	U	C5'-C4'-C3'	-5.94	107.09	116.00
17	AQ	67	ASN	CA-C-N	5.94	128.24	120.28
17	AQ	67	ASN	C-N-CA	5.94	128.24	120.28
2	AB	2007	U	O4'-C4'-C3'	5.94	109.94	104.00
2	AB	2234	G	C4'-C3'-C2'	-5.94	96.66	102.60
2	AB	2637	U	O4'-C1'-N1	5.93	117.40	108.50
21	AU	17	VAL	N-CA-C	-5.93	104.53	111.00
21	AU	39	THR	CA-C-N	5.93	128.51	120.44
21	AU	39	THR	C-N-CA	5.93	128.51	120.44
35	BA	538	G	O4'-C4'-C3'	-5.93	98.06	104.00
35	BA	998	C	C1'-O4'-C4'	-5.93	103.97	109.90
35	BA	1233	G	C3'-C2'-C1'	5.93	107.23	101.30
36	BB	59	G	O4'-C1'-N9	5.93	117.10	108.20
39	BE	94	ARG	CD-NE-CZ	5.93	132.71	124.40
12	AL	86	GLN	CG-CD-NE2	5.93	125.30	116.40
14	AN	113	ALA	N-CA-C	-5.93	103.82	113.19
35	BA	1267	C	N1-C1'-C2'	-5.93	105.10	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1275	A	C4'-C3'-C2'	-5.93	96.67	102.60
35	BA	1428	A	O4'-C4'-C3'	5.93	109.93	104.00
53	BS	38	PHE	O-C-N	-5.93	115.94	123.24
2	AB	2771	C	C5'-C4'-O4'	5.93	118.70	109.80
4	AD	17	LYS	N-CA-C	5.93	119.21	109.72
2	AB	1255	U	O4'-C4'-C3'	5.93	109.93	104.00
2	AB	1878	G	C3'-C2'-C1'	-5.93	95.37	101.30
2	AB	2586	U	O4'-C1'-N1	5.93	117.09	108.20
4	AD	109	LEU	CA-C-N	5.93	129.53	121.05
4	AD	109	LEU	C-N-CA	5.93	129.53	121.05
35	BA	55	A	C4'-C3'-O3'	-5.93	104.11	113.00
35	BA	74	A	C4'-C3'-O3'	5.93	121.89	113.00
35	BA	106	C	C5'-C4'-C3'	5.93	124.89	116.00
35	BA	493	A	C5'-C4'-C3'	-5.93	107.11	116.00
35	BA	1540	U	C1'-C2'-O2'	-5.93	99.51	108.40
41	BG	106	PHE	CA-CB-CG	5.93	119.73	113.80
35	BA	795	C	O3'-P-O5'	-5.93	95.11	104.00
35	BA	1257	A	C3'-C2'-C1'	5.93	107.23	101.30
2	AB	1982	U	O4'-C1'-C2'	-5.93	101.67	107.60
2	AB	2815	C	O4'-C1'-C2'	-5.93	101.67	107.60
35	BA	37	U	P-O3'-C3'	5.93	129.09	120.20
38	BD	17	C	C3'-C2'-C1'	5.93	107.43	101.50
57	BW	5	SER	N-CA-C	5.93	117.74	111.28
2	AB	987	C	C1'-C2'-O2'	5.92	117.29	108.40
2	AB	1684	G	N9-C1'-C2'	-5.92	103.11	112.00
2	AB	2043	C	C2'-C3'-O3'	-5.92	104.81	113.70
2	AB	2094	A	P-O3'-C3'	5.92	129.09	120.20
2	AB	2477	U	C3'-C2'-O2'	-5.92	101.81	110.70
35	BA	57	G	C4'-C3'-O3'	-5.92	104.11	113.00
35	BA	831	A	C5'-C4'-C3'	-5.92	107.11	116.00
35	BA	938	A	N9-C1'-C2'	-5.92	103.11	112.00
56	BV	76	THR	CA-CB-OG1	5.92	118.49	109.60
2	AB	101	A	C4'-C3'-O3'	-5.92	100.52	109.40
2	AB	2024	G	C5'-C4'-C3'	-5.92	107.12	116.00
2	AB	2814	A	O4'-C1'-N9	5.92	117.38	108.50
35	BA	362	G	C5'-C4'-O4'	5.92	118.68	109.80
38	BD	37	U	P-O3'-C3'	5.92	129.08	120.20
2	AB	97	C	O4'-C1'-N1	5.92	117.38	108.50
2	AB	2558	C	C5'-C4'-O4'	5.92	118.68	109.80
14	AN	69	ARG	CA-C-N	5.92	131.49	122.08
14	AN	69	ARG	C-N-CA	5.92	131.49	122.08
35	BA	694	A	C3'-C2'-C1'	5.92	107.22	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BN	11	VAL	CB-CA-C	5.92	119.94	110.82
2	AB	63	A	O4'-C1'-C2'	-5.92	101.68	107.60
2	AB	1775	U	C3'-C2'-C1'	-5.92	95.38	101.30
2	AB	2159	G	O4'-C4'-C3'	-5.92	98.08	104.00
1	AA	32	U	C1'-O4'-C4'	-5.92	103.98	109.90
2	AB	290	U	O4'-C4'-C3'	5.92	109.92	104.00
2	AB	779	U	O4'-C4'-C3'	5.92	109.92	104.00
2	AB	1913	A	O4'-C1'-N9	5.92	117.08	108.20
2	AB	2710	C	C1'-C2'-O2'	5.92	117.28	108.40
5	AE	79	LEU	N-CA-CB	5.92	119.84	110.55
15	AO	53	MET	CA-C-N	5.92	128.80	120.28
15	AO	53	MET	C-N-CA	5.92	128.80	120.28
35	BA	773	G	C4'-C3'-O3'	5.92	121.88	113.00
35	BA	784	A	C1'-O4'-C4'	-5.92	103.98	109.90
43	BI	103	VAL	CA-CB-CG1	5.92	120.46	110.40
51	BQ	93	PRO	N-CA-CB	5.92	108.60	103.27
2	AB	469	G	P-O3'-C3'	5.92	129.07	120.20
2	AB	1937	A	O4'-C1'-C2'	-5.92	99.88	105.80
12	AL	40	HIS	CA-CB-CG	5.92	119.72	113.80
35	BA	143	A	O3'-P-O5'	-5.92	95.13	104.00
35	BA	253	A	O4'-C4'-C3'	5.92	109.92	104.00
35	BA	1384	C	C2'-C3'-O3'	5.92	122.58	113.70
2	AB	463	G	C4'-C3'-O3'	5.92	121.87	113.00
2	AB	2331	G	C3'-C2'-C1'	5.92	107.22	101.30
2	AB	2432	A	O4'-C1'-C2'	-5.92	101.69	107.60
2	AB	1546	G	O3'-P-O5'	-5.91	95.13	104.00
35	BA	1356	G	O3'-P-O5'	-5.91	95.13	104.00
36	BB	58	A	C2'-C3'-O3'	5.91	122.57	113.70
5	AE	182	ALA	CA-C-N	5.91	132.83	121.54
5	AE	182	ALA	C-N-CA	5.91	132.83	121.54
50	BP	39	ALA	CA-C-O	5.91	128.27	121.47
2	AB	556	A	C1'-O4'-C4'	-5.91	103.99	109.90
2	AB	1602	U	O4'-C1'-C2'	5.91	111.71	105.80
2	AB	2066	C	C1'-O4'-C4'	5.91	115.81	109.90
2	AB	2582	G	O4'-C4'-C3'	5.91	109.91	104.00
35	BA	61	G	C4'-C3'-C2'	-5.91	96.69	102.60
35	BA	1442	G	O4'-C1'-C2'	-5.91	101.69	107.60
36	BB	35	C	O4'-C4'-C3'	5.91	109.91	104.00
19	AS	83	LYS	CA-C-N	5.91	128.68	120.29
19	AS	83	LYS	C-N-CA	5.91	128.68	120.29
25	AY	19	ARG	NE-CZ-NH1	-5.91	115.59	121.50
35	BA	5	U	C5'-C4'-C3'	-5.91	106.34	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	76	G	C5'-C4'-C3'	-5.91	107.14	116.00
35	BA	83	C	C4'-C3'-C2'	-5.91	96.69	102.60
35	BA	490	C	O3'-P-O5'	-5.91	95.14	104.00
35	BA	693	G	O4'-C1'-N9	5.91	117.36	108.50
39	BE	33	ALA	O-C-N	5.91	130.08	122.81
53	BS	42	ILE	CB-CG1-CD1	5.91	126.21	113.80
2	AB	1742	U	C1'-O4'-C4'	-5.91	103.99	109.90
5	AE	83	ARG	CD-NE-CZ	5.91	132.67	124.40
32	A5	21	ARG	NE-CZ-NH2	5.91	124.52	119.20
34	A7	35	GLN	OE1-CD-NE2	-5.91	116.69	122.60
2	AB	1295	C	C5'-C4'-O4'	5.91	118.66	109.80
35	BA	742	G	C4'-C3'-O3'	5.91	121.86	113.00
37	BC	34	U	C5'-C4'-C3'	-5.91	107.14	116.00
2	AB	2695	U	O4'-C1'-N1	5.90	117.36	108.50
35	BA	1291	U	C3'-C2'-C1'	5.90	107.20	101.30
2	AB	11	C	C3'-C2'-C1'	5.90	107.20	101.30
2	AB	1682	G	C2'-C3'-O3'	-5.90	104.85	113.70
2	AB	1967	C	C1'-O4'-C4'	-5.90	104.00	109.90
35	BA	916	U	O4'-C1'-N1	5.90	117.35	108.50
35	BA	1529	G	O4'-C4'-C3'	5.90	112.00	106.10
2	AB	561	G	P-O5'-C5'	5.90	129.75	120.90
4	AD	196	ASN	CA-C-N	5.90	130.04	120.60
4	AD	196	ASN	C-N-CA	5.90	130.04	120.60
35	BA	746	A	O3'-P-O5'	5.90	112.85	104.00
35	BA	968	A	P-O3'-C3'	5.90	129.05	120.20
35	BA	1461	G	O4'-C4'-C3'	5.90	109.90	104.00
37	BC	32	U	C1'-C2'-O2'	-5.90	99.55	108.40
2	AB	158	U	O4'-C4'-C3'	5.90	109.90	104.00
28	A1	8	GLN	OE1-CD-NE2	-5.90	116.70	122.60
35	BA	233	C	O3'-P-O5'	-5.90	95.15	104.00
35	BA	301	G	C1'-C2'-O2'	-5.90	99.55	108.40
35	BA	729	A	C2'-C3'-O3'	-5.90	104.85	113.70
2	AB	52	A	C4'-C3'-C2'	-5.90	96.70	102.60
2	AB	404	A	C4'-C3'-C2'	-5.90	96.70	102.60
35	BA	58	C	C5'-C4'-O4'	5.90	118.64	109.80
35	BA	318	G	O4'-C1'-N9	5.90	117.35	108.50
35	BA	768	A	O4'-C1'-C2'	-5.90	101.70	107.60
35	BA	989	U	C5'-C4'-O4'	5.90	118.65	109.80
35	BA	1051	C	O4'-C1'-C2'	-5.90	101.70	107.60
35	BA	1156	G	C5'-C4'-O4'	5.90	118.64	109.80
35	BA	1338	G	C1'-C2'-O2'	5.90	117.25	108.40
51	BQ	41	TRP	CA-C-N	5.90	128.46	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	BQ	41	TRP	C-N-CA	5.90	128.46	120.38
1	AA	12	C	C1'-O4'-C4'	-5.90	103.80	109.70
3	AC	138	PRO	N-CA-C	5.90	120.48	111.34
20	AT	51	VAL	O-C-N	5.90	125.74	121.55
38	BD	1	C	O3'-P-O5'	-5.90	95.16	104.00
2	AB	852	U	O3'-P-O5'	-5.89	95.16	104.00
35	BA	1231	G	O4'-C1'-C2'	-5.89	101.70	107.60
35	BA	1264	U	C2'-C3'-O3'	5.89	122.54	113.70
56	BV	63	ASP	CA-CB-CG	-5.89	106.70	112.60
2	AB	50	U	C4'-C3'-O3'	5.89	118.24	109.40
2	AB	70	G	C5'-C4'-O4'	5.89	117.94	109.10
2	AB	734	A	O4'-C4'-C3'	5.89	109.89	104.00
2	AB	1909	C	C2'-C3'-O3'	5.89	122.54	113.70
2	AB	2302	U	O4'-C1'-N1	5.89	117.34	108.50
2	AB	2566	A	C4'-C3'-C2'	5.89	108.49	102.60
9	AI	147	VAL	N-CA-C	5.89	118.18	108.99
15	AO	101	VAL	CA-C-O	-5.89	114.10	121.11
33	A6	36	ALA	CA-C-O	5.89	128.35	121.87
8	AH	79	THR	N-CA-CB	5.89	118.47	110.10
23	AW	36	GLU	CA-CB-CG	5.89	125.88	114.10
35	BA	177	G	O4'-C1'-N9	5.89	117.34	108.50
2	AB	782	A	O4'-C4'-C3'	-5.89	100.21	106.10
12	AL	15	TRP	CB-CA-C	5.89	119.85	110.19
35	BA	1221	G	O3'-P-O5'	-5.89	95.17	104.00
2	AB	1649	G	O4'-C1'-N9	5.89	117.33	108.50
35	BA	86	G	O4'-C1'-N9	5.89	117.03	108.20
35	BA	1380	U	O4'-C1'-C2'	-5.89	99.91	105.80
2	AB	804	A	O4'-C1'-N9	5.89	117.33	108.50
2	AB	2804	U	C5'-C4'-C3'	-5.89	107.17	116.00
3	AC	137	MET	CA-C-N	5.89	126.22	119.92
3	AC	137	MET	C-N-CA	5.89	126.22	119.92
35	BA	403	C	C3'-C2'-O2'	5.89	119.53	110.70
35	BA	468	A	C4'-C3'-O3'	5.89	121.83	113.00
35	BA	998	C	O4'-C4'-C3'	5.89	109.89	104.00
46	BL	10	ARG	CD-NE-CZ	5.89	132.64	124.40
2	AB	990	A	C3'-C2'-C1'	5.88	107.19	101.30
2	AB	2112	G	C3'-C2'-O2'	5.88	119.53	110.70
35	BA	398	U	C1'-C2'-O2'	-5.88	99.57	108.40
35	BA	708	C	O4'-C4'-C3'	5.88	109.89	104.00
2	AB	2188	U	N1-C1'-C2'	-5.88	103.17	112.00
40	BF	177	LEU	CA-C-O	-5.88	112.67	119.14
2	AB	2385	C	P-O5'-C5'	5.88	129.72	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	10	THR	N-CA-C	5.88	119.71	112.54
2	AB	972	A	O4'-C4'-C3'	5.88	109.88	104.00
2	AB	2824	C	P-O5'-C5'	5.88	129.72	120.90
35	BA	1412	C	C3'-C2'-O2'	5.88	119.52	110.70
35	BA	1493	A	P-O3'-C3'	5.88	129.02	120.20
1	AA	113	C	C3'-C2'-O2'	5.88	119.52	110.70
2	AB	149	A	O4'-C1'-C2'	-5.88	101.72	107.60
2	AB	432	A	O4'-C4'-C3'	5.88	109.88	104.00
2	AB	680	C	C5'-C4'-O4'	5.88	118.62	109.80
3	AC	20	GLN	N-CA-C	-5.88	101.34	110.10
6	AF	191	ASP	CA-CB-CG	5.88	118.48	112.60
10	AJ	28	ASP	CA-C-O	-5.88	114.35	120.70
57	BW	54	GLN	O-C-N	-5.88	115.25	120.48
2	AB	195	A	C4'-C3'-C2'	5.88	108.48	102.60
2	AB	399	U	C5'-C4'-C3'	-5.88	107.19	116.00
2	AB	678	C	C3'-C2'-C1'	5.88	107.18	101.30
2	AB	1137	G	O4'-C1'-C2'	-5.88	101.72	107.60
2	AB	2442	C	C4'-C3'-C2'	-5.88	96.72	102.60
2	AB	2506	U	C4'-C3'-C2'	-5.88	96.72	102.60
30	A3	10	SER	CA-C-N	5.88	128.08	120.44
30	A3	10	SER	C-N-CA	5.88	128.08	120.44
35	BA	454	G	O5'-C5'-C4'	5.88	120.32	111.50
35	BA	1404	C	C3'-C2'-O2'	5.88	119.52	110.70
38	BD	46	G	C2'-C3'-O3'	-5.88	104.89	113.70
39	BE	139	GLU	CA-C-O	-5.88	114.19	120.42
39	BE	229	ALA	CA-C-O	-5.88	114.19	120.42
2	AB	870	U	C5'-C4'-O4'	5.87	118.61	109.80
2	AB	1944	U	C5'-C4'-C3'	-5.87	106.39	115.20
26	AZ	37	PHE	CA-CB-CG	5.87	119.67	113.80
35	BA	304	U	O5'-C5'-C4'	-5.87	102.69	111.50
35	BA	738	C	C2'-C3'-O3'	5.87	122.51	113.70
35	BA	1250	A	C3'-C2'-O2'	5.87	119.51	110.70
51	BQ	30	ILE	O-C-N	-5.87	116.47	122.23
2	AB	1012	U	N1-C1'-C2'	5.87	122.81	114.00
2	AB	1255	U	C5'-C4'-C3'	5.87	124.81	116.00
2	AB	1463	C	O4'-C1'-C2'	-5.87	101.73	107.60
18	AR	48	ALA	CA-C-N	5.87	128.37	120.50
18	AR	48	ALA	C-N-CA	5.87	128.37	120.50
35	BA	378	G	C4'-C3'-O3'	-5.87	104.19	113.00
35	BA	549	C	O4'-C4'-C3'	5.87	109.87	104.00
35	BA	580	C	O4'-C1'-C2'	-5.87	101.73	107.60
35	BA	1356	G	O4'-C1'-C2'	-5.87	101.73	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	BJ	2	ARG	CA-C-N	5.87	128.07	120.44
44	BJ	2	ARG	C-N-CA	5.87	128.07	120.44
51	BQ	17	ASP	CA-CB-CG	-5.87	106.73	112.60
2	AB	1986	C	C5'-C4'-O4'	5.87	118.61	109.80
18	AR	87	ARG	NE-CZ-NH2	-5.87	113.92	119.20
22	AV	13	ALA	CA-C-O	-5.87	115.60	120.71
35	BA	1301	U	N1-C1'-C2'	-5.87	105.20	114.00
2	AB	527	C	O4'-C4'-C3'	-5.87	100.23	106.10
2	AB	1790	C	O4'-C1'-N1	5.87	117.30	108.50
2	AB	1840	G	C5'-C4'-C3'	-5.87	107.20	116.00
2	AB	2189	U	O4'-C1'-N1	5.87	117.30	108.50
2	AB	2402	U	P-O3'-C3'	5.87	129.00	120.20
3	AC	67	HIS	CB-CG-CD2	-5.87	123.57	131.20
5	AE	67	HIS	N-CA-C	-5.87	104.79	111.07
37	BC	28	U	P-O3'-C3'	5.87	129.00	120.20
41	BG	139	ASN	CA-C-O	-5.87	113.50	119.78
2	AB	1956	U	C3'-C2'-O2'	5.87	119.50	110.70
4	AD	30	ALA	CA-C-O	-5.87	112.12	120.16
44	BJ	141	HIS	CB-CG-CD2	-5.87	123.57	131.20
1	AA	42	C	C4'-C3'-C2'	-5.87	96.73	102.60
2	AB	576	U	C1'-C2'-O2'	-5.87	99.60	108.40
2	AB	1991	U	C4'-C3'-C2'	-5.87	96.73	102.60
2	AB	2701	U	C2'-C3'-O3'	5.87	122.50	113.70
35	BA	391	G	C2'-C3'-O3'	-5.87	104.90	113.70
36	BB	56	C	C4'-C3'-C2'	-5.87	96.73	102.60
50	BP	115	ILE	CB-CA-C	5.87	117.10	110.41
2	AB	377	G	O4'-C1'-C2'	-5.86	101.74	107.60
2	AB	772	C	C3'-C2'-O2'	5.86	119.50	110.70
2	AB	1927	A	C4'-C3'-C2'	-5.86	96.74	102.60
2	AB	1952	A	O4'-C4'-C3'	5.86	111.96	106.10
2	AB	2101	A	O4'-C1'-C2'	-5.86	101.74	107.60
18	AR	85	VAL	CA-C-O	-5.86	114.64	120.85
35	BA	324	G	O5'-C5'-C4'	5.86	120.30	111.50
35	BA	386	C	C3'-C2'-C1'	-5.86	95.44	101.30
35	BA	1273	C	C5'-C4'-C3'	-5.86	107.20	116.00
38	BD	75	C	C1'-C2'-O2'	-5.86	103.00	111.80
41	BG	130	ASN	CA-C-N	5.86	130.90	123.10
41	BG	130	ASN	C-N-CA	5.86	130.90	123.10
45	BK	102	VAL	CB-CA-C	5.86	118.05	110.96
53	BS	77	GLU	CA-CB-CG	-5.86	102.37	114.10
2	AB	388	G	C4'-C3'-C2'	-5.86	96.74	102.60
2	AB	1496	A	C1'-C2'-O2'	5.86	117.19	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	AO	9	PHE	CA-CB-CG	5.86	119.66	113.80
15	AO	135	VAL	CA-C-O	5.86	127.56	121.05
2	AB	20	C	N1-C1'-C2'	-5.86	103.21	112.00
2	AB	948	C	C4'-C3'-C2'	-5.86	96.74	102.60
2	AB	2290	G	C3'-C2'-C1'	5.86	107.16	101.30
8	AH	78	VAL	CG1-CB-CG2	-5.86	97.91	110.80
35	BA	112	G	P-O5'-C5'	5.86	129.69	120.90
35	BA	708	C	C3'-C2'-C1'	5.86	107.16	101.30
45	BK	3	GLN	OE1-CD-NE2	-5.86	116.74	122.60
48	BN	111	ASP	N-CA-C	-5.86	100.44	109.76
1	AA	46	A	C4'-C3'-C2'	-5.86	96.74	102.60
2	AB	410	G	C2'-C3'-O3'	-5.86	104.91	113.70
17	AQ	18	LEU	N-CA-CB	5.86	118.93	110.20
35	BA	1301	U	O4'-C1'-N1	5.86	116.99	108.20
35	BA	1345	U	C4'-C3'-C2'	-5.86	96.74	102.60
39	BE	208	ALA	CA-C-O	-5.86	114.28	120.55
1	AA	79	G	O4'-C4'-C3'	5.86	109.86	104.00
2	AB	500	G	O4'-C1'-C2'	-5.86	101.74	107.60
2	AB	1442	U	O4'-C1'-N1	5.86	117.29	108.50
2	AB	1540	G	C3'-C2'-O2'	5.86	119.48	110.70
2	AB	1764	C	C3'-C2'-C1'	-5.86	95.44	101.30
2	AB	1989	G	O5'-C5'-C4'	5.86	120.28	111.50
28	A1	25	GLY	CA-C-O	5.86	126.78	120.75
38	BD	9	G	C5'-C4'-O4'	-5.86	101.01	109.80
47	BM	3	ASN	CA-CB-CG	5.86	118.46	112.60
2	AB	415	A	O4'-C4'-C3'	5.86	109.86	104.00
2	AB	889	C	N1-C1'-C2'	-5.86	103.22	112.00
2	AB	1434	A	O4'-C4'-C3'	-5.86	98.14	104.00
2	AB	2471	A	C2'-C3'-O3'	5.86	118.28	109.50
35	BA	86	G	C4'-C3'-O3'	-5.86	100.61	109.40
35	BA	743	A	C5'-C4'-C3'	-5.86	107.22	116.00
37	BC	23	C	O3'-P-O5'	-5.86	95.22	104.00
2	AB	127	A	C4'-C3'-O3'	-5.85	104.22	113.00
2	AB	522	A	C4'-C3'-O3'	5.85	121.78	113.00
1	AA	57	A	P-O3'-C3'	5.85	128.98	120.20
2	AB	1361	G	O4'-C4'-C3'	5.85	109.85	104.00
2	AB	1966	A	C5'-C4'-O4'	-5.85	100.32	109.10
3	AC	217	THR	CA-C-N	5.85	128.71	120.28
3	AC	217	THR	C-N-CA	5.85	128.71	120.28
23	AW	1	ALA	O-C-N	-5.85	113.64	123.00
35	BA	910	C	C4'-C3'-C2'	-5.85	96.75	102.60
39	BE	17	HIS	CA-C-O	-5.85	112.14	120.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BF	70	ALA	CA-C-N	5.85	132.51	122.38
40	BF	70	ALA	C-N-CA	5.85	132.51	122.38
47	BM	86	ALA	O-C-N	5.85	128.82	122.15
26	AZ	64	ASP	CA-CB-CG	-5.85	106.75	112.60
35	BA	6	G	C3'-C2'-C1'	-5.85	95.65	101.50
35	BA	802	A	O4'-C4'-C3'	5.85	109.85	104.00
35	BA	1534	A	P-O3'-C3'	5.85	128.98	120.20
2	AB	34	U	O4'-C1'-C2'	-5.85	101.75	107.60
2	AB	94	A	P-O3'-C3'	5.85	128.97	120.20
2	AB	1739	A	O4'-C4'-C3'	5.85	109.85	104.00
35	BA	677	U	O4'-C1'-C2'	5.85	113.45	107.60
35	BA	1031	C	C3'-C2'-C1'	-5.85	95.65	101.50
35	BA	1513	A	C1'-O4'-C4'	-5.85	104.05	109.90
39	BE	218	ALA	O-C-N	5.85	128.09	122.07
2	AB	2586	U	C4'-C3'-C2'	-5.85	96.75	102.60
8	AH	41	GLU	O-C-N	5.85	129.88	123.27
31	A4	17	GLY	CA-C-N	5.85	131.10	121.39
31	A4	17	GLY	C-N-CA	5.85	131.10	121.39
35	BA	284	C	O4'-C1'-N1	5.85	117.27	108.50
35	BA	373	A	C2'-C3'-O3'	5.85	122.47	113.70
11	AK	77	VAL	CA-CB-CG1	5.85	120.34	110.40
2	AB	1478	G	C5'-C4'-O4'	5.84	118.57	109.80
2	AB	1498	C	C1'-O4'-C4'	5.84	115.75	109.90
2	AB	1596	A	O4'-C1'-C2'	-5.84	101.76	107.60
2	AB	1807	G	C4'-C3'-O3'	-5.84	104.23	113.00
2	AB	2476	A	C3'-C2'-O2'	5.84	119.47	110.70
35	BA	821	G	O4'-C4'-C3'	-5.84	98.16	104.00
35	BA	916	U	O3'-P-O5'	-5.84	95.23	104.00
53	BS	42	ILE	N-CA-C	-5.84	106.71	111.91
53	BS	61	VAL	CA-CB-CG1	5.84	120.33	110.40
2	AB	276	U	C1'-O4'-C4'	-5.84	104.06	109.90
2	AB	1460	U	P-O3'-C3'	5.84	128.96	120.20
2	AB	2311	A	O4'-C1'-N9	5.84	116.96	108.20
6	AF	2	GLU	CA-C-O	-5.84	115.02	121.33
16	AP	47	VAL	CA-C-O	-5.84	114.57	121.05
35	BA	582	C	P-O3'-C3'	5.84	128.96	120.20
35	BA	1324	A	C3'-C2'-C1'	5.84	107.14	101.30
48	BN	126	ARG	CA-C-O	5.84	127.74	121.55
3	AC	76	ALA	O-C-N	5.84	130.63	123.10
35	BA	1474	U	O5'-C5'-C4'	-5.84	102.74	111.50
35	BA	1536	C	P-O3'-C3'	5.84	128.96	120.20
2	AB	2474	U	O4'-C1'-N1	5.84	117.26	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	476	U	C2'-C3'-O3'	-5.84	104.94	113.70
2	AB	484	C	O4'-C4'-C3'	5.84	109.84	104.00
2	AB	1904	G	O4'-C4'-C3'	5.84	109.84	104.00
2	AB	2296	U	C3'-C2'-C1'	-5.84	95.66	101.50
39	BE	6	ARG	NE-CZ-NH2	5.84	124.45	119.20
40	BF	86	LEU	CA-C-N	5.84	128.68	120.28
40	BF	86	LEU	C-N-CA	5.84	128.68	120.28
35	BA	1078	U	C1'-O4'-C4'	-5.83	104.06	109.90
54	BT	29	LYS	CA-C-N	5.83	128.59	120.65
54	BT	29	LYS	C-N-CA	5.83	128.59	120.65
4	AD	144	GLU	CA-C-N	5.83	128.57	120.29
4	AD	144	GLU	C-N-CA	5.83	128.57	120.29
7	AG	52	ALA	CA-C-N	5.83	128.10	120.28
7	AG	52	ALA	C-N-CA	5.83	128.10	120.28
10	AJ	76	VAL	CB-CA-C	5.83	118.73	111.15
19	AS	87	VAL	CA-C-N	5.83	132.68	121.54
19	AS	87	VAL	C-N-CA	5.83	132.68	121.54
35	BA	1386	G	O3'-P-O5'	-5.83	95.25	104.00
35	BA	1413	A	C4'-C3'-C2'	-5.83	96.77	102.60
41	BG	30	LYS	CA-C-O	-5.83	114.91	122.14
43	BI	60	VAL	CA-C-N	5.83	131.40	123.11
43	BI	60	VAL	C-N-CA	5.83	131.40	123.11
2	AB	542	C	C4'-C3'-O3'	-5.83	104.25	113.00
2	AB	853	C	C5'-C4'-C3'	-5.83	107.25	116.00
2	AB	1378	A	O4'-C4'-C3'	5.83	111.93	106.10
2	AB	2568	U	O4'-C1'-N1	5.83	117.25	108.50
45	BK	75	GLN	CB-CA-C	5.83	120.90	109.35
2	AB	63	A	C3'-C2'-C1'	5.83	107.13	101.30
2	AB	449	A	C3'-C2'-C1'	-5.83	95.47	101.30
31	A4	18	HIS	CB-CG-CD2	-5.83	123.62	131.20
35	BA	796	C	C1'-O4'-C4'	-5.83	104.07	109.90
2	AB	589	U	C4'-C3'-C2'	-5.83	96.77	102.60
2	AB	1007	C	O4'-C1'-N1	5.83	117.24	108.50
2	AB	1156	A	C4'-C3'-C2'	-5.83	96.77	102.60
2	AB	1202	G	O3'-P-O5'	-5.83	95.26	104.00
2	AB	2196	C	P-O3'-C3'	5.83	128.94	120.20
2	AB	2402	U	C5'-C4'-O4'	5.83	118.54	109.80
32	A5	5	PHE	CA-CB-CG	5.83	119.63	113.80
35	BA	71	A	O4'-C1'-N9	5.83	117.24	108.50
35	BA	581	G	C5'-C4'-O4'	5.83	118.54	109.80
35	BA	1303	C	C4'-C3'-C2'	-5.83	96.77	102.60
2	AB	1580	A	O4'-C1'-C2'	5.83	113.43	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1913	A	C1'-O4'-C4'	-5.83	103.87	109.70
2	AB	2887	A	O4'-C4'-C3'	5.83	109.83	104.00
3	AC	158	ALA	CA-C-O	-5.83	113.77	120.24
38	BD	6	G	C4'-C3'-C2'	-5.83	96.77	102.60
55	BU	48	ALA	CA-C-O	-5.83	114.37	120.55
2	AB	715	A	O5'-C5'-C4'	5.83	120.24	111.50
2	AB	1726	C	O4'-C4'-C3'	5.83	109.83	104.00
35	BA	243	A	C1'-O4'-C4'	-5.83	103.87	109.70
35	BA	916	U	P-O3'-C3'	5.83	128.94	120.20
57	BW	66	ILE	N-CA-C	-5.83	108.18	113.71
1	AA	63	C	O4'-C1'-N1	5.82	117.23	108.50
2	AB	325	G	O4'-C1'-C2'	5.82	113.42	107.60
2	AB	1744	A	C3'-C2'-C1'	5.82	107.12	101.30
10	AJ	15	SER	CA-C-N	5.82	128.34	120.65
10	AJ	15	SER	C-N-CA	5.82	128.34	120.65
20	AT	89	HIS	ND1-CG-CD2	5.82	111.92	106.10
35	BA	340	U	O5'-C5'-C4'	-5.82	102.76	111.50
35	BA	443	C	N1-C1'-C2'	-5.82	103.27	112.00
35	BA	1115	U	C5'-C4'-O4'	5.82	118.54	109.80
2	AB	375	G	C4'-C3'-C2'	-5.82	96.78	102.60
2	AB	1382	G	N9-C1'-C2'	-5.82	103.27	112.00
35	BA	988	G	O5'-C5'-C4'	5.82	120.23	111.50
2	AB	245	G	O3'-P-O5'	-5.82	95.27	104.00
2	AB	769	U	C3'-C2'-C1'	5.82	107.12	101.30
2	AB	1450	G	O4'-C1'-N9	5.82	117.23	108.50
2	AB	1625	C	C5'-C4'-O4'	5.82	118.53	109.80
2	AB	1755	A	O4'-C4'-C3'	5.82	109.82	104.00
2	AB	2628	C	C2'-C3'-O3'	5.82	118.23	109.50
8	AH	91	VAL	CA-C-O	-5.82	114.18	121.11
35	BA	149	A	C4'-C3'-C2'	-5.82	96.78	102.60
35	BA	1411	C	O3'-P-O5'	5.82	112.73	104.00
41	BG	52	VAL	CA-C-O	-5.82	114.68	120.85
46	BL	79	ARG	O-C-N	5.82	129.43	122.27
1	AA	111	U	O4'-C4'-C3'	5.82	109.82	104.00
2	AB	867	C	C1'-O4'-C4'	-5.82	104.08	109.90
18	AR	51	ASN	CB-CA-C	5.82	122.00	110.42
46	BL	106	ASP	CA-CB-CG	5.82	118.42	112.60
2	AB	546	U	C1'-O4'-C4'	5.82	115.72	109.90
2	AB	611	C	C4'-C3'-C2'	-5.82	96.78	102.60
2	AB	664	G	O4'-C4'-C3'	5.82	109.82	104.00
2	AB	1055	G	C3'-C2'-C1'	-5.82	95.48	101.30
2	AB	1407	G	C3'-C2'-C1'	-5.82	95.48	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	896	C	C1'-O4'-C4'	-5.82	104.08	109.90
2	AB	752	A	C5'-C4'-O4'	5.82	117.82	109.10
2	AB	1170	C	O4'-C1'-N1	5.82	117.22	108.50
2	AB	2206	C	C5'-C4'-C3'	-5.82	107.28	116.00
2	AB	2434	A	C1'-C2'-O2'	-5.82	103.08	111.80
2	AB	2649	C	N1-C1'-C2'	-5.82	103.28	112.00
2	AB	634	C	C4'-C3'-C2'	-5.81	96.79	102.60
2	AB	2168	G	O4'-C4'-C3'	5.81	109.81	104.00
35	BA	508	U	O4'-C1'-C2'	5.81	111.61	105.80
35	BA	747	A	P-O5'-C5'	5.81	129.62	120.90
35	BA	1116	U	O4'-C1'-N1	5.81	117.22	108.50
2	AB	3	U	C4'-C3'-C2'	-5.81	96.79	102.60
2	AB	1609	A	C3'-C2'-O2'	5.81	119.42	110.70
2	AB	1747	U	O4'-C1'-C2'	-5.81	101.79	107.60
2	AB	2736	A	C3'-C2'-C1'	-5.81	95.49	101.30
35	BA	178	C	O3'-P-O5'	5.81	112.72	104.00
35	BA	542	G	N9-C1'-C2'	-5.81	103.28	112.00
35	BA	1004	A	C2'-C3'-O3'	5.81	122.42	113.70
52	BR	41	HIS	CA-CB-CG	5.81	119.61	113.80
2	AB	938	G	O4'-C1'-C2'	-5.81	101.79	107.60
2	AB	1049	C	O4'-C1'-C2'	-5.81	101.79	107.60
2	AB	1064	C	C4'-C3'-C2'	-5.81	96.79	102.60
35	BA	918	A	C3'-C2'-C1'	5.81	107.11	101.30
2	AB	443	A	C3'-C2'-O2'	5.81	119.41	110.70
2	AB	2201	G	O5'-C5'-C4'	5.81	120.21	111.50
2	AB	2617	U	C4'-C3'-C2'	-5.81	96.79	102.60
2	AB	2743	U	O3'-P-O5'	-5.81	95.28	104.00
3	AC	78	PHE	CA-C-O	-5.81	114.36	120.58
7	AG	170	ALA	N-CA-CB	-5.81	101.99	110.47
15	AO	3	GLN	CA-C-N	5.81	125.74	119.76
15	AO	3	GLN	C-N-CA	5.81	125.74	119.76
40	BF	84	GLU	CA-C-O	-5.81	114.26	120.42
2	AB	1734	G	C4'-C3'-C2'	-5.81	96.79	102.60
2	AB	2478	A	P-O5'-C5'	5.81	129.61	120.90
35	BA	788	U	C4'-C3'-O3'	-5.81	104.29	113.00
35	BA	1193	G	C1'-C2'-O2'	-5.81	99.69	108.40
2	AB	2192	U	C1'-O4'-C4'	-5.81	104.09	109.90
35	BA	961	U	C3'-C2'-O2'	5.81	119.41	110.70
2	AB	425	G	N9-C1'-C2'	-5.80	103.29	112.00
2	AB	647	G	O3'-P-O5'	-5.80	95.29	104.00
4	AD	110	LYS	CA-C-N	5.80	129.08	120.95
4	AD	110	LYS	C-N-CA	5.80	129.08	120.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	826	C	O4'-C1'-N1	5.80	117.21	108.50
35	BA	1105	A	O4'-C1'-N9	5.80	117.21	108.50
35	BA	1205	U	C4'-C3'-C2'	-5.80	96.80	102.60
36	BB	64	U	C4'-C3'-C2'	-5.80	96.80	102.60
2	AB	929	U	C2'-C3'-O3'	5.80	122.41	113.70
2	AB	1391	U	C4'-C3'-C2'	-5.80	96.80	102.60
2	AB	2082	A	C1'-O4'-C4'	5.80	115.70	109.90
7	AG	80	GLN	OE1-CD-NE2	-5.80	116.80	122.60
27	A0	18	LEU	CA-C-N	5.80	128.53	120.29
27	A0	18	LEU	C-N-CA	5.80	128.53	120.29
35	BA	822	U	C1'-C2'-O2'	5.80	117.10	108.40
35	BA	1421	G	C4'-C3'-C2'	-5.80	96.80	102.60
47	BM	67	ILE	CB-CA-C	5.80	119.45	110.28
49	BO	105	GLY	CA-C-N	5.80	128.35	120.63
49	BO	105	GLY	C-N-CA	5.80	128.35	120.63
51	BQ	44	VAL	N-CA-CB	-5.80	105.83	112.21
2	AB	308	G	C4'-C3'-O3'	-5.80	104.30	113.00
2	AB	341	C	N1-C1'-C2'	-5.80	103.30	112.00
2	AB	849	A	P-O5'-C5'	5.80	129.60	120.90
2	AB	1016	G	O4'-C1'-N9	5.80	117.20	108.50
2	AB	1459	G	O4'-C1'-C2'	-5.80	101.80	107.60
2	AB	1565	C	O3'-P-O5'	-5.80	95.30	104.00
2	AB	1846	G	C5'-C4'-O4'	5.80	118.50	109.80
11	AK	117	THR	CA-C-N	5.80	125.61	120.10
11	AK	117	THR	C-N-CA	5.80	125.61	120.10
29	A2	63	ARG	NE-CZ-NH1	5.80	127.30	121.50
35	BA	1469	C	C4'-C3'-C2'	-5.80	96.80	102.60
53	BS	59	HIS	ND1-CG-CD2	5.80	111.90	106.10
2	AB	1405	U	C4'-C3'-C2'	-5.80	96.80	102.60
3	AC	137	MET	CA-CB-CG	-5.80	102.50	114.10
29	A2	66	ILE	CB-CG1-CD1	5.80	125.98	113.80
35	BA	778	G	P-O5'-C5'	5.80	129.60	120.90
43	BI	110	ARG	NE-CZ-NH1	5.80	127.30	121.50
2	AB	368	A	C5'-C4'-O4'	5.80	118.50	109.80
2	AB	98	G	C1'-C2'-O2'	-5.80	99.70	108.40
2	AB	131	A	C1'-C2'-O2'	5.80	117.09	108.40
2	AB	569	U	C1'-O4'-C4'	-5.80	104.10	109.90
2	AB	1409	U	O4'-C1'-C2'	-5.80	101.80	107.60
2	AB	2349	G	C3'-C2'-O2'	-5.80	102.01	110.70
2	AB	2467	C	C4'-C3'-O3'	-5.80	104.31	113.00
3	AC	62	ALA	CA-C-O	-5.80	115.25	121.45
21	AU	102	HIS	ND1-CE1-NE2	5.80	114.20	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	A5	40	ALA	CB-CA-C	5.80	121.31	110.70
35	BA	717	U	P-O3'-C3'	5.80	128.90	120.20
35	BA	1180	A	C3'-C2'-C1'	5.80	107.10	101.30
2	AB	385	C	O3'-P-O5'	-5.79	95.31	104.00
2	AB	1201	U	C4'-C3'-C2'	-5.79	96.81	102.60
4	AD	164	VAL	CA-CB-CG1	5.79	120.25	110.40
35	BA	1477	U	O4'-C1'-N1	5.79	117.19	108.50
38	BD	60	A	O4'-C1'-C2'	-5.79	101.81	107.60
1	AA	47	C	C1'-O4'-C4'	-5.79	104.11	109.90
2	AB	1127	A	O4'-C1'-N9	-5.79	99.81	108.50
2	AB	1469	A	O4'-C4'-C3'	-5.79	98.21	104.00
2	AB	2375	G	C5'-C4'-C3'	-5.79	107.31	116.00
7	AG	163	GLU	CA-C-O	-5.79	114.28	120.42
35	BA	505	G	C5'-C4'-C3'	-5.79	107.31	116.00
35	BA	1199	U	O4'-C4'-C3'	5.79	109.79	104.00
40	BF	129	PHE	CB-CA-C	5.79	120.37	111.39
1	AA	59	A	C4'-C3'-C2'	-5.79	96.81	102.60
2	AB	872	U	C3'-C2'-C1'	5.79	107.09	101.30
2	AB	2483	C	O3'-P-O5'	-5.79	95.31	104.00
2	AB	2760	C	O4'-C1'-N1	5.79	117.19	108.50
5	AE	13	ARG	CD-NE-CZ	5.79	132.51	124.40
35	BA	505	G	O4'-C4'-C3'	5.79	109.79	104.00
35	BA	947	G	C4'-C3'-C2'	-5.79	96.81	102.60
44	BJ	60	ALA	N-CA-C	5.79	119.53	112.23
2	AB	151	C	C4'-C3'-O3'	-5.79	104.31	113.00
2	AB	2165	C	C4'-C3'-C2'	-5.79	96.81	102.60
35	BA	1053	G	O4'-C1'-C2'	-5.79	100.01	105.80
44	BJ	97	ALA	N-CA-C	5.79	117.59	111.28
2	AB	29	U	C2'-C3'-O3'	5.79	122.38	113.70
2	AB	57	C	O4'-C4'-C3'	5.79	109.79	104.00
2	AB	2182	U	O4'-C4'-C3'	5.79	109.79	104.00
2	AB	2542	A	O4'-C1'-N9	5.79	116.88	108.20
38	BD	10	G	O4'-C4'-C3'	5.79	109.79	104.00
2	AB	480	A	N9-C1'-C2'	5.79	120.68	112.00
2	AB	2462	C	C4'-C3'-O3'	5.79	121.68	113.00
10	AJ	25	VAL	CA-CB-CG2	5.79	120.24	110.40
35	BA	177	G	O4'-C1'-C2'	-5.79	101.81	107.60
2	AB	1058	U	C5'-C4'-C3'	-5.79	107.32	116.00
2	AB	1490	A	N9-C1'-C2'	5.79	120.68	112.00
3	AC	98	GLU	CA-CB-CG	-5.79	102.53	114.10
35	BA	420	U	C3'-C2'-O2'	5.79	119.38	110.70
35	BA	477	C	C4'-C3'-C2'	-5.79	96.81	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1526	G	O4'-C1'-C2'	-5.79	101.81	107.60
50	BP	101	THR	CA-C-N	5.79	128.61	120.28
50	BP	101	THR	C-N-CA	5.79	128.61	120.28
2	AB	935	C	O4'-C4'-C3'	5.78	109.78	104.00
2	AB	1354	A	C4'-C3'-O3'	5.78	121.67	113.00
2	AB	1361	G	O5'-C5'-C4'	-5.78	102.83	111.50
10	AJ	126	ALA	CA-C-N	5.78	128.03	120.28
10	AJ	126	ALA	C-N-CA	5.78	128.03	120.28
11	AK	75	ALA	N-CA-C	-5.78	104.98	111.28
35	BA	148	G	O4'-C4'-C3'	5.78	109.78	104.00
35	BA	184	G	C3'-C2'-O2'	5.78	119.38	110.70
35	BA	1445	U	C3'-C2'-C1'	5.78	107.08	101.30
2	AB	313	G	C4'-C3'-C2'	-5.78	96.82	102.60
35	BA	51	A	C2'-C3'-O3'	5.78	118.17	109.50
2	AB	1314	C	C1'-C2'-O2'	5.78	117.07	108.40
3	AC	202	THR	N-CA-CB	5.78	119.99	110.39
7	AG	149	ARG	CA-C-O	5.78	128.41	121.65
2	AB	1988	G	O4'-C4'-C3'	5.78	109.78	104.00
2	AB	2732	G	C1'-O4'-C4'	5.78	115.68	109.90
35	BA	960	U	P-O3'-C3'	5.78	128.87	120.20
35	BA	1107	C	O3'-P-O5'	-5.78	95.33	104.00
35	BA	1345	U	O4'-C1'-C2'	-5.78	100.02	105.80
2	AB	155	A	O4'-C1'-C2'	-5.78	101.82	107.60
2	AB	1805	A	O4'-C1'-C2'	-5.78	101.82	107.60
2	AB	2019	A	C4'-C3'-O3'	-5.78	104.33	113.00
2	AB	2603	G	C5'-C4'-C3'	-5.78	107.33	116.00
15	AO	38	ARG	NE-CZ-NH1	5.78	127.28	121.50
35	BA	787	A	C1'-C2'-O2'	5.78	117.06	108.40
35	BA	1257	A	C4'-C3'-O3'	5.78	121.67	113.00
35	BA	1380	U	C1'-O4'-C4'	5.78	115.48	109.70
1	AA	13	G	O4'-C1'-N9	5.78	117.16	108.50
2	AB	367	G	O3'-P-O5'	5.78	112.66	104.00
2	AB	2876	G	C4'-C3'-C2'	-5.78	96.82	102.60
17	AQ	25	ARG	O-C-N	-5.78	116.45	123.27
35	BA	5	U	O4'-C1'-C2'	-5.78	100.03	105.80
35	BA	187	G	C2'-C3'-O3'	5.78	122.36	113.70
35	BA	231	U	C5'-C4'-C3'	-5.78	107.34	116.00
35	BA	428	G	C3'-C2'-C1'	5.78	107.28	101.50
12	AL	96	ARG	CA-C-N	5.77	125.39	119.56
12	AL	96	ARG	C-N-CA	5.77	125.39	119.56
23	AW	67	SER	N-CA-C	-5.77	106.24	113.28
44	BJ	45	ALA	N-CA-C	-5.77	104.62	111.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	561	G	O4'-C1'-C2'	-5.77	101.83	107.60
2	AB	1416	G	C3'-C2'-O2'	5.77	123.26	114.60
2	AB	1813	G	C3'-C2'-C1'	5.77	107.07	101.30
2	AB	2453	A	O4'-C4'-C3'	5.77	109.77	104.00
2	AB	2879	A	C5'-C4'-O4'	5.77	117.76	109.10
9	AI	57	LYS	CA-C-O	-5.77	114.75	120.70
17	AQ	79	ALA	CA-C-O	-5.77	114.76	120.82
35	BA	724	G	C5'-C4'-C3'	-5.77	107.34	116.00
57	BW	57	VAL	O-C-N	5.77	127.78	121.83
2	AB	852	U	O4'-C4'-C3'	5.77	109.77	104.00
35	BA	152	A	C1'-C2'-O2'	5.77	117.06	108.40
35	BA	719	C	O4'-C4'-C3'	5.77	111.87	106.10
2	AB	1910	G	C1'-C2'-O2'	5.77	117.06	108.40
35	BA	973	G	C3'-C2'-C1'	5.77	107.07	101.30
38	BD	38	A	O4'-C4'-C3'	5.77	109.77	104.00
2	AB	2535	G	C1'-C2'-O2'	-5.77	99.75	108.40
9	AI	27	ARG	NH1-CZ-NH2	5.77	126.80	119.30
10	AJ	46	GLU	CA-C-O	5.77	126.64	120.70
35	BA	1277	C	C2'-C3'-O3'	-5.77	105.05	113.70
35	BA	1495	U	O4'-C1'-N1	5.77	117.15	108.50
44	BJ	79	VAL	CB-CA-C	5.77	118.28	111.59
46	BL	98	ARG	CG-CD-NE	5.77	124.69	112.00
48	BN	104	PHE	CA-C-N	5.77	129.06	120.87
48	BN	104	PHE	C-N-CA	5.77	129.06	120.87
2	AB	2273	A	C4'-C3'-C2'	-5.77	96.83	102.60
2	AB	1428	C	C1'-O4'-C4'	5.76	115.47	109.70
2	AB	2349	G	O4'-C1'-N9	5.76	117.15	108.50
2	AB	2805	C	C3'-C2'-O2'	5.76	119.35	110.70
14	AN	35	HIS	O-C-N	5.76	129.79	123.22
35	BA	515	G	C1'-C2'-O2'	5.76	117.05	108.40
35	BA	530	G	C4'-C3'-O3'	-5.76	104.35	113.00
35	BA	535	A	O3'-P-O5'	-5.76	95.35	104.00
35	BA	665	A	C1'-C2'-O2'	5.76	117.05	108.40
35	BA	792	A	C1'-O4'-C4'	5.76	115.46	109.70
40	BF	139	ASN	CA-CB-CG	-5.76	106.83	112.60
46	BL	82	ILE	N-CA-CB	-5.76	102.70	110.54
48	BN	10	ARG	CA-C-O	5.76	128.10	121.47
49	BO	80	LEU	CA-C-O	5.76	127.06	120.54
50	BP	62	PHE	CA-CB-CG	5.76	119.56	113.80
2	AB	1756	G	C2'-C3'-O3'	5.76	122.34	113.70
47	BM	53	ILE	CB-CA-C	5.76	116.56	110.91
30	A3	37	HIS	ND1-CE1-NE2	5.76	114.16	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	148	G	O4'-C1'-N9	5.76	117.14	108.50
2	AB	448	U	C2'-C3'-O3'	5.76	118.14	109.50
2	AB	800	A	O5'-C5'-C4'	-5.76	103.06	111.70
2	AB	1078	U	C3'-C2'-O2'	5.76	123.24	114.60
2	AB	1342	A	C4'-C3'-O3'	5.76	118.04	109.40
2	AB	1855	U	C3'-C2'-C1'	5.76	107.06	101.30
2	AB	2653	U	C2'-C3'-O3'	-5.76	105.06	113.70
35	BA	51	A	C3'-C2'-C1'	5.76	107.26	101.50
35	BA	916	U	C5'-C4'-C3'	5.76	124.64	116.00
35	BA	962	C	C1'-O4'-C4'	5.76	115.66	109.90
35	BA	1161	C	C5'-C4'-O4'	5.76	118.44	109.80
53	BS	21	VAL	CB-CA-C	5.76	117.93	110.96
2	AB	2037	A	C1'-O4'-C4'	-5.76	104.14	109.90
2	AB	2164	C	O4'-C4'-C3'	5.76	111.86	106.10
2	AB	2707	U	C2'-C3'-O3'	-5.76	105.06	113.70
4	AD	68	ARG	CA-C-N	5.76	130.57	121.99
4	AD	68	ARG	C-N-CA	5.76	130.57	121.99
35	BA	1036	A	O5'-C5'-C4'	-5.76	102.87	111.50
1	AA	34	A	C5'-C4'-C3'	-5.75	107.37	116.00
1	AA	93	C	O4'-C4'-C3'	5.75	109.75	104.00
2	AB	157	C	O3'-P-O5'	5.75	112.63	104.00
35	BA	1158	C	O4'-C1'-C2'	-5.75	101.84	107.60
35	BA	1219	A	C5'-C4'-C3'	-5.75	107.37	116.00
2	AB	603	A	C3'-C2'-C1'	-5.75	95.75	101.50
2	AB	1709	U	C5'-C4'-C3'	-5.75	107.37	116.00
2	AB	1732	C	O4'-C1'-N1	5.75	116.83	108.20
35	BA	1383	C	C3'-C2'-C1'	5.75	107.05	101.30
35	BA	1489	G	C3'-C2'-C1'	5.75	107.05	101.30
2	AB	2004	G	O3'-P-O5'	-5.75	95.37	104.00
2	AB	2164	C	O3'-P-O5'	-5.75	95.37	104.00
35	BA	1133	G	O4'-C4'-C3'	5.75	109.75	104.00
2	AB	1646	C	C4'-C3'-C2'	-5.75	96.85	102.60
2	AB	2829	A	O5'-C5'-C4'	-5.75	102.88	111.50
9	AI	118	PRO	N-CA-C	5.75	121.10	114.03
11	AK	44	LYS	CA-C-O	5.75	126.16	119.32
18	AR	14	GLN	OE1-CD-NE2	-5.75	116.85	122.60
2	AB	693	A	C1'-O4'-C4'	5.75	115.65	109.90
2	AB	1217	U	O4'-C1'-N1	5.75	117.12	108.50
35	BA	404	G	O4'-C1'-N9	5.75	117.12	108.50
2	AB	330	A	C4'-C3'-C2'	-5.75	96.85	102.60
2	AB	675	A	O4'-C4'-C3'	5.75	109.75	104.00
2	AB	939	G	C3'-C2'-O2'	5.75	119.32	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1439	A	C2'-C3'-O3'	-5.75	105.08	113.70
2	AB	1545	A	C3'-C2'-C1'	-5.75	95.55	101.30
2	AB	2383	G	C5'-C4'-O4'	5.75	118.42	109.80
3	AC	195	ALA	CA-C-O	-5.75	114.78	120.70
35	BA	208	U	O3'-P-O5'	-5.75	95.38	104.00
35	BA	577	G	C5'-C4'-O4'	5.75	118.42	109.80
35	BA	870	U	N1-C1'-C2'	-5.75	105.38	114.00
35	BA	1452	C	C1'-C2'-O2'	5.75	120.42	111.80
57	BW	66	ILE	CA-C-O	-5.75	113.03	119.35
25	AY	77	LYS	CB-CA-C	5.75	119.23	109.75
35	BA	1225	A	N9-C1'-C2'	-5.75	105.38	114.00
44	BJ	31	VAL	CB-CA-C	5.75	118.18	110.42
2	AB	665	U	O4'-C1'-N1	5.74	117.11	108.50
2	AB	1048	A	O3'-P-O5'	-5.74	95.38	104.00
2	AB	1847	A	N9-C1'-C2'	-5.74	103.38	112.00
7	AG	36	ASN	CA-CB-CG	5.74	118.34	112.60
19	AS	110	GLU	CA-C-O	-5.74	114.46	120.55
35	BA	195	A	O4'-C4'-C3'	5.74	109.74	104.00
35	BA	1349	A	C4'-C3'-C2'	-5.74	96.86	102.60
40	BF	168	ARG	CD-NE-CZ	5.74	132.44	124.40
2	AB	2613	U	C3'-C2'-O2'	-5.74	105.99	114.60
4	AD	203	VAL	CA-CB-CG2	5.74	120.16	110.40
28	A1	19	HIS	CA-C-N	5.74	128.25	120.44
28	A1	19	HIS	C-N-CA	5.74	128.25	120.44
2	AB	119	A	C1'-O4'-C4'	-5.74	103.96	109.70
2	AB	864	G	O5'-C5'-C4'	-5.74	102.89	111.50
2	AB	1850	G	P-O3'-C3'	5.74	128.81	120.20
2	AB	2394	C	C5'-C4'-C3'	-5.74	107.39	116.00
28	A1	17	PRO	N-CA-CB	5.74	109.87	103.44
35	BA	267	C	O4'-C4'-C3'	5.74	109.74	104.00
35	BA	829	G	C2'-C3'-O3'	5.74	122.31	113.70
2	AB	181	A	C5'-C4'-O4'	5.74	118.41	109.80
2	AB	845	A	O5'-C5'-C4'	5.74	120.11	111.50
2	AB	1167	C	C4'-C3'-C2'	-5.74	96.86	102.60
2	AB	1792	G	C3'-C2'-C1'	5.74	107.04	101.30
2	AB	1807	G	O3'-P-O5'	5.74	112.61	104.00
2	AB	1824	G	C4'-C3'-C2'	-5.74	96.86	102.60
2	AB	2530	A	N9-C1'-C2'	-5.74	103.39	112.00
35	BA	96	U	C4'-C3'-C2'	-5.74	96.86	102.60
35	BA	1044	A	O4'-C1'-N9	5.74	117.11	108.50
40	BF	14	VAL	CA-C-O	-5.74	113.61	120.78
27	A0	57	LEU	CA-C-N	5.74	131.25	122.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	A0	57	LEU	C-N-CA	5.74	131.25	122.24
35	BA	426	U	C4'-C3'-O3'	-5.74	104.39	113.00
44	BJ	141	HIS	CA-C-N	5.74	128.44	120.29
44	BJ	141	HIS	C-N-CA	5.74	128.44	120.29
55	BU	51	GLN	N-CA-C	5.74	118.75	111.69
2	AB	141	G	P-O5'-C5'	5.74	129.50	120.90
2	AB	660	C	O4'-C1'-C2'	-5.74	101.86	107.60
2	AB	879	G	C3'-C2'-C1'	5.74	107.03	101.30
2	AB	1122	G	O4'-C4'-C3'	-5.74	98.27	104.00
14	AN	107	PHE	CA-C-O	5.74	127.03	120.84
17	AQ	24	THR	CA-CB-OG1	5.74	118.20	109.60
35	BA	345	C	C5'-C4'-O4'	5.74	117.70	109.10
35	BA	926	G	C4'-C3'-O3'	5.74	118.00	109.40
35	BA	941	G	C2'-C3'-O3'	-5.74	105.10	113.70
35	BA	944	G	P-O3'-C3'	5.74	128.80	120.20
35	BA	969	A	C4'-C3'-O3'	-5.74	100.80	109.40
2	AB	351	C	C1'-O4'-C4'	5.73	115.63	109.90
2	AB	1947	C	C4'-C3'-C2'	-5.73	96.87	102.60
35	BA	776	G	O3'-P-O5'	-5.73	95.40	104.00
37	BC	55	A	C4'-C3'-O3'	5.73	118.00	109.40
1	AA	25	U	C2'-C3'-O3'	5.73	118.10	109.50
1	AA	37	C	O4'-C1'-C2'	5.73	113.33	107.60
1	AA	89	U	C2'-C3'-O3'	5.73	122.30	113.70
2	AB	24	G	O4'-C4'-C3'	-5.73	98.27	104.00
2	AB	194	G	C4'-C3'-C2'	-5.73	96.87	102.60
2	AB	652	U	O4'-C1'-N1	5.73	117.10	108.50
3	AC	95	VAL	CA-C-O	5.73	126.35	120.39
12	AL	35	ARG	O-C-N	5.73	128.20	122.12
35	BA	644	U	C3'-C2'-C1'	-5.73	95.57	101.30
35	BA	684	U	N1-C1'-C2'	-5.73	103.40	112.00
2	AB	276	U	O4'-C1'-C2'	5.73	113.33	107.60
2	AB	2236	U	P-O3'-C3'	5.73	128.79	120.20
35	BA	897	C	O4'-C4'-C3'	5.73	109.73	104.00
35	BA	1099	G	O5'-C5'-C4'	5.73	120.09	111.50
2	AB	615	U	C2'-C3'-O3'	-5.73	105.11	113.70
2	AB	958	U	C3'-C2'-C1'	5.73	107.03	101.30
2	AB	1636	U	O4'-C1'-N1	5.73	117.09	108.50
17	AQ	100	HIS	ND1-CE1-NE2	5.73	114.13	108.40
35	BA	51	A	O4'-C1'-N9	5.73	116.79	108.20
35	BA	425	G	O3'-P-O5'	-5.73	95.41	104.00
1	AA	54	G	C4'-C3'-O3'	-5.73	104.41	113.00
2	AB	453	A	P-O3'-C3'	5.73	128.79	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1343	G	C5'-C4'-C3'	-5.73	107.41	116.00
2	AB	1869	G	O4'-C4'-C3'	5.73	109.73	104.00
7	AG	133	GLU	CA-C-N	5.73	128.97	120.95
7	AG	133	GLU	C-N-CA	5.73	128.97	120.95
28	A1	33	HIS	CB-CG-CD2	-5.73	123.75	131.20
35	BA	1075	U	O3'-P-O5'	-5.73	95.41	104.00
2	AB	1009	A	P-O3'-C3'	5.73	128.79	120.20
2	AB	2509	G	C3'-C2'-O2'	5.73	119.29	110.70
2	AB	2567	G	O4'-C1'-C2'	5.73	113.33	107.60
2	AB	241	A	C4'-C3'-O3'	5.72	117.99	109.40
2	AB	1009	A	O5'-C5'-C4'	-5.72	102.91	111.50
2	AB	1592	C	C2'-C3'-O3'	-5.72	105.11	113.70
2	AB	1720	U	C4'-C3'-C2'	5.72	108.33	102.60
2	AB	2567	G	O3'-P-O5'	-5.72	95.41	104.00
4	AD	155	ARG	NE-CZ-NH2	-5.72	114.05	119.20
35	BA	647	C	O4'-C1'-N1	5.72	117.09	108.50
52	BR	78	THR	N-CA-CB	5.72	119.15	110.28
2	AB	142	A	O4'-C4'-C3'	5.72	109.72	104.00
2	AB	624	C	O4'-C1'-N1	5.72	117.08	108.50
2	AB	753	A	C5'-C4'-O4'	5.72	118.38	109.80
2	AB	951	C	C1'-O4'-C4'	-5.72	104.18	109.90
2	AB	2786	U	C1'-O4'-C4'	-5.72	104.18	109.90
14	AN	115	GLU	CA-CB-CG	5.72	125.54	114.10
35	BA	605	U	C4'-C3'-C2'	-5.72	96.88	102.60
35	BA	1237	C	N1-C1'-C2'	-5.72	103.42	112.00
35	BA	1452	C	O4'-C1'-N1	5.72	116.78	108.20
2	AB	338	G	C4'-C3'-C2'	-5.72	96.88	102.60
2	AB	795	C	C4'-C3'-C2'	-5.72	96.88	102.60
2	AB	2253	G	C1'-C2'-O2'	5.72	116.98	108.40
6	AF	29	HIS	CE1-NE2-CD2	5.72	114.72	109.00
7	AG	13	LYS	CA-C-O	-5.72	114.49	120.55
12	AL	48	VAL	CA-CB-CG2	5.72	120.12	110.40
35	BA	237	G	O4'-C1'-C2'	-5.72	101.88	107.60
35	BA	908	A	O5'-C5'-C4'	-5.72	102.92	111.50
35	BA	944	G	C2'-C3'-O3'	5.72	122.28	113.70
39	BE	190	SER	O-C-N	5.72	130.14	122.82
58	BX	16	ARG	N-CA-C	5.72	119.07	111.75
45	BK	95	MET	CA-C-N	5.72	130.25	122.07
45	BK	95	MET	C-N-CA	5.72	130.25	122.07
1	AA	40	U	C5'-C4'-O4'	5.72	117.67	109.10
1	AA	74	U	C4'-C3'-C2'	5.72	108.32	102.60
2	AB	364	C	O4'-C1'-N1	5.72	117.08	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	892	A	O4'-C4'-C3'	5.72	109.72	104.00
2	AB	1486	U	O4'-C1'-N1	5.72	117.08	108.50
2	AB	2283	C	O4'-C1'-N1	5.72	117.07	108.50
2	AB	2663	G	O3'-P-O5'	-5.72	95.42	104.00
2	AB	2806	C	O4'-C1'-N1	5.72	117.08	108.50
2	AB	2877	G	O5'-C5'-C4'	5.72	120.07	111.50
10	AJ	61	ARG	O-C-N	5.72	128.91	122.22
27	A0	51	ALA	CA-C-N	5.72	128.26	120.54
27	A0	51	ALA	C-N-CA	5.72	128.26	120.54
35	BA	581	G	C5'-C4'-C3'	-5.72	107.42	116.00
35	BA	1252	A	O5'-C5'-C4'	5.72	120.08	111.50
37	BC	28	U	C4'-C3'-O3'	-5.72	104.43	113.00
38	BD	77	A	O4'-C1'-C2'	-5.72	101.88	107.60
45	BK	127	TYR	CA-CB-CG	5.72	124.19	113.90
50	BP	51	GLN	CA-CB-CG	5.72	125.53	114.10
57	BW	57	VAL	CA-C-O	-5.72	114.79	120.85
2	AB	324	A	O4'-C4'-C3'	5.71	109.72	104.00
2	AB	859	G	O3'-P-O5'	-5.71	95.43	104.00
2	AB	2289	G	C4'-C3'-C2'	-5.71	96.89	102.60
18	AR	58	PHE	O-C-N	5.71	129.79	122.93
37	BC	59	A	C1'-O4'-C4'	5.71	115.41	109.70
42	BH	59	ILE	O-C-N	-5.71	116.31	121.91
1	AA	21	G	C5'-C4'-C3'	-5.71	107.43	116.00
4	AD	261	ARG	CB-CA-C	5.71	116.88	109.28
44	BJ	102	TRP	N-CA-CB	-5.71	101.42	110.28
2	AB	143	C	O4'-C4'-C3'	5.71	109.71	104.00
2	AB	1767	G	C3'-C2'-C1'	5.71	107.01	101.30
2	AB	2894	G	O4'-C4'-C3'	5.71	109.71	104.00
26	AZ	60	LYS	CA-C-N	5.71	130.35	120.58
26	AZ	60	LYS	C-N-CA	5.71	130.35	120.58
35	BA	384	G	O4'-C1'-C2'	-5.71	101.89	107.60
35	BA	1455	G	P-O3'-C3'	5.71	128.77	120.20
43	BI	23	GLU	CA-CB-CG	-5.71	102.68	114.10
8	AH	10	VAL	CA-C-O	5.71	124.78	119.76
35	BA	536	C	P-O3'-C3'	5.71	128.76	120.20
36	BB	68	C	C5'-C4'-O4'	5.71	118.36	109.80
2	AB	671	C	O3'-P-O5'	5.71	112.56	104.00
2	AB	1674	G	C5'-C4'-O4'	-5.71	100.54	109.10
2	AB	1742	U	C4'-C3'-C2'	-5.71	96.89	102.60
2	AB	1880	U	C4'-C3'-O3'	5.71	121.56	113.00
2	AB	2408	U	O4'-C1'-N1	5.71	117.06	108.50
2	AB	2460	U	C1'-C2'-O2'	-5.71	99.84	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	A3	6	LYS	CA-C-N	5.71	126.19	120.14
30	A3	6	LYS	C-N-CA	5.71	126.19	120.14
2	AB	148	U	O3'-P-O5'	-5.71	95.44	104.00
2	AB	653	U	C4'-C3'-O3'	-5.71	104.44	113.00
2	AB	679	C	O4'-C1'-C2'	-5.71	101.89	107.60
2	AB	866	A	C4'-C3'-O3'	-5.71	104.44	113.00
2	AB	930	G	C4'-C3'-C2'	-5.71	96.89	102.60
2	AB	1784	A	C5'-C4'-C3'	5.71	124.56	116.00
5	AE	67	HIS	CB-CG-CD2	-5.71	123.78	131.20
30	A3	9	ARG	CA-C-N	5.71	127.93	120.28
30	A3	9	ARG	C-N-CA	5.71	127.93	120.28
2	AB	1658	C	C3'-C2'-C1'	5.71	107.00	101.30
2	AB	2515	C	C4'-C3'-C2'	-5.71	96.89	102.60
43	BI	30	THR	CA-CB-OG1	5.71	118.16	109.60
48	BN	26	PHE	CA-CB-CG	5.71	119.50	113.80
2	AB	11	C	C4'-C3'-C2'	-5.70	96.90	102.60
2	AB	60	G	O4'-C1'-C2'	5.70	111.50	105.80
2	AB	172	A	O4'-C4'-C3'	5.70	109.70	104.00
2	AB	976	G	O4'-C1'-C2'	-5.70	101.90	107.60
2	AB	2318	G	C4'-C3'-O3'	-5.70	104.44	113.00
2	AB	2446	G	C1'-O4'-C4'	5.70	115.60	109.90
2	AB	2848	G	O4'-C1'-C2'	5.70	111.50	105.80
16	AP	70	THR	CA-CB-OG1	5.70	118.16	109.60
2	AB	2804	U	C4'-C3'-C2'	-5.70	96.90	102.60
3	AC	97	MET	N-CA-C	-5.70	105.42	112.72
40	BF	42	LEU	CA-C-N	5.70	128.49	120.28
40	BF	42	LEU	C-N-CA	5.70	128.49	120.28
53	BS	71	VAL	CA-C-N	5.70	127.92	120.28
53	BS	71	VAL	C-N-CA	5.70	127.92	120.28
35	BA	1004	A	C3'-C2'-O2'	-5.70	102.15	110.70
35	BA	1517	G	C4'-C3'-C2'	-5.70	96.90	102.60
56	BV	67	GLY	O-C-N	5.70	130.11	122.70
2	AB	909	A	C1'-C2'-O2'	5.70	116.95	108.40
2	AB	2187	U	C3'-C2'-O2'	5.70	119.25	110.70
28	A1	29	ARG	NE-CZ-NH1	-5.70	115.80	121.50
35	BA	158	G	C1'-C2'-O2'	5.70	116.95	108.40
35	BA	466	A	C3'-C2'-C1'	5.70	107.00	101.30
39	BE	227	ASP	O-C-N	5.70	128.16	122.12
53	BS	41	PRO	N-CD-CG	5.70	111.75	103.20
2	AB	2589	A	C5'-C4'-O4'	5.70	118.34	109.80
2	AB	293	U	N1-C1'-C2'	5.70	120.54	112.00
2	AB	2443	C	O4'-C4'-C3'	-5.70	98.31	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	AE	80	TRP	NE1-CE2-CZ2	5.70	138.64	130.10
6	AF	192	ALA	CA-C-O	-5.70	114.51	120.55
19	AS	34	ALA	CA-C-N	5.70	127.84	120.44
19	AS	34	ALA	C-N-CA	5.70	127.84	120.44
35	BA	257	G	O5'-C5'-C4'	5.70	120.04	111.50
35	BA	898	G	C1'-O4'-C4'	-5.70	104.20	109.90
35	BA	992	U	O5'-C5'-C4'	5.70	120.24	111.70
35	BA	1244	G	O3'-P-O5'	-5.70	95.46	104.00
35	BA	1529	G	C4'-C3'-C2'	-5.70	96.90	102.60
51	BQ	9	GLU	CA-C-O	-5.70	114.51	120.55
2	AB	479	A	C2'-C3'-O3'	5.69	118.04	109.50
2	AB	1146	C	C5'-C4'-C3'	-5.69	107.46	116.00
2	AB	1711	A	C5'-C4'-O4'	5.69	118.34	109.80
5	AE	155	VAL	CA-CB-CG1	5.69	120.08	110.40
9	AI	32	PRO	CA-C-N	5.69	130.52	121.18
9	AI	32	PRO	C-N-CA	5.69	130.52	121.18
2	AB	710	U	O3'-P-O5'	-5.69	95.46	104.00
2	AB	1725	U	O4'-C4'-C3'	5.69	109.69	104.00
2	AB	2312	U	C4'-C3'-C2'	-5.69	96.91	102.60
2	AB	2349	G	C5'-C4'-O4'	5.69	118.34	109.80
6	AF	95	LYS	CA-C-O	-5.69	114.84	120.82
35	BA	577	G	C3'-C2'-C1'	5.69	106.99	101.30
2	AB	895	U	C1'-O4'-C4'	5.69	115.39	109.70
2	AB	1156	A	C4'-C3'-O3'	5.69	117.94	109.40
2	AB	1859	U	C3'-C2'-O2'	5.69	119.23	110.70
2	AB	2080	A	N9-C1'-C2'	-5.69	103.47	112.00
2	AB	2371	G	O4'-C4'-C3'	5.69	109.69	104.00
7	AG	166	ARG	NE-CZ-NH1	-5.69	115.81	121.50
35	BA	210	C	C4'-C3'-O3'	-5.69	104.46	113.00
35	BA	1062	U	O4'-C1'-C2'	5.69	113.29	107.60
40	BF	45	GLU	N-CA-C	5.69	118.42	111.82
1	AA	108	A	C4'-C3'-C2'	5.69	108.29	102.60
2	AB	286	U	C5'-C4'-C3'	5.69	124.53	116.00
35	BA	316	C	P-O5'-C5'	5.69	129.43	120.90
35	BA	1304	G	C4'-C3'-O3'	5.69	121.53	113.00
40	BF	153	SER	N-CA-CB	-5.69	102.40	111.62
51	BQ	60	ARG	O-C-N	5.69	130.49	122.41
1	AA	45	A	O4'-C4'-C3'	5.69	109.69	104.00
1	AA	68	C	C3'-C2'-O2'	5.69	119.23	110.70
2	AB	763	G	C2'-C3'-O3'	5.69	122.23	113.70
2	AB	1292	G	O4'-C4'-C3'	5.69	109.69	104.00
2	AB	1295	C	C4'-C3'-C2'	-5.69	96.91	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2000	C	O4'-C1'-C2'	-5.69	101.91	107.60
2	AB	2045	C	O4'-C1'-N1	5.69	117.03	108.50
35	BA	333	U	C4'-C3'-O3'	-5.69	104.47	113.00
35	BA	914	A	C5'-C4'-O4'	5.69	118.33	109.80
35	BA	1102	A	C5'-C4'-C3'	-5.69	107.47	116.00
43	BI	110	ARG	N-CA-CB	-5.69	101.46	110.22
2	AB	1140	C	C4'-C3'-C2'	-5.69	96.91	102.60
2	AB	1738	G	N9-C1'-C2'	-5.69	105.47	114.00
10	AJ	127	THR	N-CA-C	5.69	117.48	111.28
35	BA	42	G	C4'-C3'-O3'	-5.69	104.47	113.00
35	BA	1538	C	O3'-P-O5'	5.69	112.53	104.00
41	BG	63	ILE	N-CA-C	5.69	116.46	110.72
2	AB	215	G	O4'-C1'-N9	5.68	116.73	108.20
2	AB	2230	G	C5'-C4'-O4'	5.68	118.33	109.80
35	BA	163	C	P-O5'-C5'	5.68	129.43	120.90
35	BA	346	G	C3'-C2'-O2'	-5.68	102.17	110.70
35	BA	601	G	C5'-C4'-O4'	5.68	118.33	109.80
35	BA	1148	U	C5'-C4'-O4'	5.68	118.33	109.80
35	BA	1298	U	P-O3'-C3'	5.68	128.73	120.20
35	BA	1507	A	C3'-C2'-C1'	-5.68	95.61	101.30
1	AA	61	G	C3'-C2'-C1'	5.68	106.98	101.30
2	AB	995	C	C1'-C2'-O2'	5.68	120.33	111.80
2	AB	1614	A	O3'-P-O5'	5.68	112.52	104.00
2	AB	2240	U	O4'-C1'-C2'	-5.68	101.92	107.60
2	AB	2762	C	O4'-C4'-C3'	5.68	109.68	104.00
2	AB	2839	G	C1'-C2'-O2'	5.68	116.92	108.40
33	A6	1	PRO	CA-N-CD	-5.68	104.05	112.00
35	BA	233	C	C4'-C3'-C2'	-5.68	96.92	102.60
35	BA	824	G	O3'-P-O5'	5.68	112.52	104.00
42	BH	156	ARG	NH1-CZ-NH2	5.68	126.69	119.30
2	AB	314	C	C4'-C3'-C2'	5.68	108.28	102.60
2	AB	632	A	O4'-C4'-C3'	5.68	109.68	104.00
2	AB	899	A	O4'-C1'-N9	5.68	117.02	108.50
2	AB	1909	C	C1'-C2'-O2'	5.68	116.92	108.40
25	AY	18	LYS	CA-C-O	5.68	126.55	120.70
30	A3	16	ARG	NE-CZ-NH1	-5.68	115.82	121.50
55	BU	72	ARG	N-CA-C	5.68	119.69	112.87
2	AB	470	A	C1'-O4'-C4'	-5.68	104.22	109.90
2	AB	1263	U	C1'-O4'-C4'	-5.68	104.22	109.90
2	AB	1323	C	C3'-C2'-C1'	-5.68	95.82	101.50
39	BE	59	ILE	CA-CB-CG1	5.68	120.06	110.40
55	BU	20	ILE	CA-C-O	-5.68	113.68	120.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	BW	42	ASP	CA-CB-CG	5.68	118.28	112.60
2	AB	1306	C	O3'-P-O5'	-5.68	95.48	104.00
2	AB	1396	U	P-O3'-C3'	5.68	128.72	120.20
13	AM	38	ILE	CA-C-N	5.68	131.78	122.64
13	AM	38	ILE	C-N-CA	5.68	131.78	122.64
24	AX	88	HIS	CA-CB-CG	5.68	119.48	113.80
2	AB	47	C	C3'-C2'-C1'	-5.68	95.62	101.30
2	AB	1382	G	O3'-P-O5'	5.68	112.51	104.00
2	AB	1890	A	O4'-C1'-C2'	-5.68	101.92	107.60
18	AR	67	GLU	CA-C-N	5.68	126.10	120.31
18	AR	67	GLU	C-N-CA	5.68	126.10	120.31
35	BA	67	C	C3'-C2'-C1'	5.68	106.98	101.30
2	AB	309	A	O4'-C4'-C3'	5.67	109.67	104.00
2	AB	1136	G	O5'-C5'-C4'	5.67	120.01	111.50
2	AB	2118	U	N1-C1'-C2'	-5.67	105.49	114.00
7	AG	121	PHE	CA-C-O	-5.67	114.95	121.19
35	BA	658	C	C4'-C3'-O3'	-5.67	104.49	113.00
35	BA	1256	A	O4'-C4'-C3'	5.67	109.67	104.00
36	BB	11	U	C1'-O4'-C4'	-5.67	104.23	109.90
43	BI	118	ASN	CA-C-N	5.67	130.20	120.72
43	BI	118	ASN	C-N-CA	5.67	130.20	120.72
1	AA	92	C	C5'-C4'-C3'	-5.67	107.49	116.00
35	BA	203	G	C4'-C3'-O3'	-5.67	104.49	113.00
39	BE	199	ILE	CA-C-O	-5.67	114.94	119.25
2	AB	349	U	C1'-O4'-C4'	-5.67	104.23	109.90
2	AB	2459	A	O5'-C5'-C4'	5.67	120.01	111.50
2	AB	2876	G	O4'-C1'-N9	5.67	117.01	108.50
24	AX	85	LYS	O-C-N	5.67	129.89	122.97
29	A2	55	GLY	CA-C-N	5.67	129.96	122.42
29	A2	55	GLY	C-N-CA	5.67	129.96	122.42
35	BA	1429	A	C3'-C2'-C1'	-5.67	95.63	101.30
42	BH	71	ILE	N-CA-C	5.67	117.34	109.80
45	BK	26	MET	CA-C-O	-5.67	114.87	120.26
55	BU	36	GLY	O-C-N	-5.67	116.17	122.47
2	AB	2554	U	O4'-C1'-N1	5.67	117.00	108.50
16	AP	7	GLY	CA-C-O	-5.67	115.35	122.61
35	BA	886	G	O4'-C1'-N9	5.67	117.00	108.50
36	BB	59	G	C3'-C2'-C1'	5.67	107.17	101.50
2	AB	850	U	O4'-C4'-C3'	5.67	109.67	104.00
2	AB	1579	A	C5'-C4'-O4'	5.67	118.30	109.80
3	AC	31	LYS	CA-C-N	5.67	128.93	120.31
3	AC	31	LYS	C-N-CA	5.67	128.93	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	841	C	O4'-C1'-N1	5.67	117.00	108.50
45	BK	105	THR	CA-CB-CG2	5.67	120.14	110.50
2	AB	71	A	O4'-C1'-N9	5.67	116.70	108.20
2	AB	257	C	C3'-C2'-C1'	-5.67	95.63	101.30
2	AB	822	G	O4'-C1'-N9	5.67	117.00	108.50
2	AB	2068	U	C4'-C3'-O3'	5.67	121.50	113.00
5	AE	199	SER	CA-C-N	5.67	131.28	120.97
5	AE	199	SER	C-N-CA	5.67	131.28	120.97
6	AF	188	MET	O-C-N	-5.67	115.05	122.59
12	AL	68	LYS	CA-C-N	5.67	127.81	120.44
12	AL	68	LYS	C-N-CA	5.67	127.81	120.44
35	BA	983	A	P-O3'-C3'	5.67	128.70	120.20
46	BL	75	ALA	CA-C-N	5.67	127.22	120.14
46	BL	75	ALA	C-N-CA	5.67	127.22	120.14
2	AB	1742	U	P-O5'-C5'	5.67	129.40	120.90
2	AB	2430	A	C2'-C3'-O3'	-5.67	105.20	113.70
2	AB	2767	C	C4'-C3'-C2'	-5.67	96.94	102.60
33	A6	58	ILE	N-CA-CB	5.67	118.24	110.54
35	BA	174	A	C1'-C2'-O2'	5.67	116.90	108.40
44	BJ	8	GLN	OE1-CD-NE2	5.67	128.26	122.60
2	AB	51	G	C5'-C4'-O4'	5.66	117.59	109.10
2	AB	524	G	N9-C1'-C2'	-5.66	103.50	112.00
2	AB	905	A	C3'-C2'-O2'	5.66	119.19	110.70
2	AB	1059	G	O5'-C5'-C4'	-5.66	103.00	111.50
2	AB	2199	A	C3'-C2'-O2'	5.66	119.19	110.70
2	AB	2602	A	O5'-C5'-C4'	5.66	119.99	111.50
21	AU	83	LYS	N-CA-C	5.66	118.47	109.24
44	BJ	150	PHE	CA-C-N	5.66	131.16	121.87
44	BJ	150	PHE	C-N-CA	5.66	131.16	121.87
2	AB	25	U	C4'-C3'-O3'	5.66	121.49	113.00
23	AW	94	PHE	CA-CB-CG	5.66	119.46	113.80
40	BF	107	LYS	CA-C-N	5.66	125.33	119.56
40	BF	107	LYS	C-N-CA	5.66	125.33	119.56
2	AB	1371	G	N9-C1'-C2'	-5.66	103.51	112.00
4	AD	110	LYS	CB-CA-C	5.66	118.33	109.84
4	AD	167	ASP	N-CA-C	5.66	118.48	110.50
16	AP	124	ALA	N-CA-C	5.66	117.84	110.43
35	BA	184	G	N9-C1'-C2'	-5.66	103.51	112.00
35	BA	290	C	O4'-C1'-C2'	-5.66	101.94	107.60
52	BR	32	THR	CA-CB-CG2	5.66	120.12	110.50
52	BR	73	ASP	N-CA-C	5.66	118.45	109.96
2	AB	202	U	C5'-C4'-O4'	5.66	118.29	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1299	G	C1'-O4'-C4'	5.66	115.56	109.90
2	AB	1368	G	O3'-P-O5'	-5.66	95.51	104.00
2	AB	2214	C	O4'-C4'-C3'	5.66	109.66	104.00
20	AT	94	THR	O-C-N	-5.66	116.69	123.31
35	BA	608	A	P-O3'-C3'	5.66	128.69	120.20
50	BP	41	ASP	N-CA-CB	-5.66	101.26	110.42
2	AB	1340	U	O4'-C1'-C2'	-5.66	101.94	107.60
2	AB	1550	C	C4'-C3'-C2'	-5.66	96.94	102.60
2	AB	1620	G	O3'-P-O5'	-5.66	95.52	104.00
2	AB	2647	U	O5'-C5'-C4'	5.66	119.98	111.50
57	BW	85	LEU	CA-C-N	5.66	131.88	121.70
57	BW	85	LEU	C-N-CA	5.66	131.88	121.70
1	AA	119	A	C3'-C2'-C1'	-5.65	95.65	101.30
5	AE	82	PHE	CA-CB-CG	5.65	119.45	113.80
2	AB	23	G	P-O5'-C5'	5.65	129.38	120.90
2	AB	1259	G	C3'-C2'-O2'	5.65	119.18	110.70
2	AB	1475	G	O4'-C1'-N9	5.65	116.68	108.20
2	AB	2719	G	N9-C1'-C2'	5.65	120.48	112.00
24	AX	92	VAL	O-C-N	-5.65	117.38	123.14
35	BA	1399	C	O4'-C4'-C3'	5.65	111.75	106.10
45	BK	62	LEU	CA-C-N	-5.65	113.04	120.95
45	BK	62	LEU	C-N-CA	-5.65	113.04	120.95
49	BO	35	ARG	NE-CZ-NH2	5.65	124.29	119.20
2	AB	169	G	O4'-C1'-C2'	5.65	113.25	107.60
2	AB	923	G	C2'-C3'-O3'	-5.65	105.23	113.70
2	AB	1041	G	O4'-C1'-N9	5.65	116.97	108.50
2	AB	1358	G	O4'-C1'-C2'	5.65	113.25	107.60
2	AB	1625	C	C3'-C2'-C1'	5.65	106.95	101.30
15	AO	70	ASP	CA-C-N	5.65	130.65	121.83
15	AO	70	ASP	C-N-CA	5.65	130.65	121.83
35	BA	1219	A	C4'-C3'-C2'	-5.65	96.95	102.60
39	BE	212	TYR	CA-C-N	5.65	128.31	120.29
39	BE	212	TYR	C-N-CA	5.65	128.31	120.29
40	BF	216	PRO	CA-C-N	5.65	128.12	120.38
40	BF	216	PRO	C-N-CA	5.65	128.12	120.38
35	BA	1235	U	O4'-C4'-C3'	-5.65	98.35	104.00
41	BG	185	PRO	N-CD-CG	5.65	111.67	103.20
45	BK	117	GLN	CA-C-O	-5.65	113.72	120.10
46	BL	7	GLY	O-C-N	5.65	128.33	123.25
15	AO	68	PHE	N-CA-C	5.65	117.38	108.23
21	AU	31	GLN	N-CA-C	-5.65	104.74	111.69
35	BA	732	C	C4'-C3'-C2'	-5.65	96.95	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1303	C	O5'-C5'-C4'	-5.65	103.03	111.50
35	BA	1377	A	O3'-P-O5'	-5.65	95.53	104.00
2	AB	5	A	C4'-C3'-C2'	-5.65	96.95	102.60
2	AB	564	C	C1'-O4'-C4'	-5.65	104.25	109.90
2	AB	697	G	C1'-C2'-O2'	5.65	116.87	108.40
2	AB	1044	C	C4'-C3'-C2'	-5.65	96.95	102.60
2	AB	1511	G	O4'-C1'-C2'	5.65	113.25	107.60
2	AB	1553	A	C1'-C2'-O2'	-5.65	99.93	108.40
10	AJ	78	PRO	N-CA-CB	5.65	108.35	103.27
22	AV	50	LEU	CA-C-O	-5.65	114.98	121.19
33	A6	21	PHE	CB-CA-C	5.65	120.90	111.30
35	BA	906	A	C3'-C2'-O2'	-5.65	102.23	110.70
2	AB	2043	C	O5'-C5'-C4'	5.64	119.97	111.50
35	BA	961	U	O4'-C4'-C3'	5.64	109.64	104.00
36	BB	59	G	C1'-O4'-C4'	-5.64	104.06	109.70
37	BC	23	C	O4'-C4'-C3'	-5.64	98.36	104.00
40	BF	110	LEU	O-C-N	-5.64	115.41	122.24
2	AB	1667	G	C4'-C3'-C2'	-5.64	96.96	102.60
2	AB	1875	G	C3'-C2'-O2'	5.64	119.16	110.70
3	AC	106	LYS	CA-C-N	5.64	129.62	122.00
3	AC	106	LYS	C-N-CA	5.64	129.62	122.00
35	BA	1064	G	O4'-C4'-C3'	5.64	111.74	106.10
35	BA	1428	A	C3'-C2'-C1'	5.64	106.94	101.30
51	BQ	70	HIS	CB-CG-CD2	-5.64	123.86	131.20
52	BR	45	HIS	N-CA-C	5.64	119.21	111.54
18	AR	10	GLU	O-C-N	5.64	128.18	122.09
21	AU	37	THR	N-CA-C	-5.64	105.28	111.82
38	BD	53	G	O3'-P-O5'	5.64	112.46	104.00
49	BO	92	VAL	CA-C-N	5.64	131.23	122.49
49	BO	92	VAL	C-N-CA	5.64	131.23	122.49
2	AB	359	G	O4'-C4'-C3'	-5.64	98.36	104.00
2	AB	1828	G	C1'-O4'-C4'	-5.64	104.06	109.70
2	AB	2085	U	O4'-C4'-C3'	-5.64	98.36	104.00
2	AB	2282	G	C4'-C3'-O3'	5.64	117.86	109.40
2	AB	2475	C	C5'-C4'-C3'	-5.64	107.54	116.00
35	BA	1342	C	O4'-C1'-N1	5.64	116.96	108.50
39	BE	158	ASP	N-CA-CB	-5.64	101.64	110.44
2	AB	132	G	C3'-C2'-O2'	5.64	119.16	110.70
2	AB	2528	U	C4'-C3'-C2'	-5.64	96.96	102.60
4	AD	219	VAL	CA-C-N	5.64	128.88	120.87
4	AD	219	VAL	C-N-CA	5.64	128.88	120.87
35	BA	740	U	C4'-C3'-O3'	5.64	121.46	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	878	A	O4'-C1'-C2'	-5.64	101.96	107.60
2	AB	1853	A	N9-C1'-C2'	5.64	120.46	112.00
2	AB	2883	A	O5'-C5'-C4'	5.64	119.95	111.50
23	AW	6	ARG	NE-CZ-NH1	5.64	127.14	121.50
35	BA	314	C	C1'-C2'-O2'	5.64	116.86	108.40
35	BA	755	G	C5'-C4'-C3'	-5.64	107.55	116.00
38	BD	58	A	O4'-C1'-N9	-5.64	100.04	108.50
2	AB	584	C	O4'-C1'-N1	5.63	116.95	108.50
2	AB	1459	G	C3'-C2'-C1'	5.63	106.93	101.30
35	BA	337	G	C5'-C4'-O4'	5.63	118.25	109.80
35	BA	840	C	C1'-O4'-C4'	-5.63	104.27	109.90
35	BA	1093	A	P-O5'-C5'	5.63	129.35	120.90
3	AC	234	ASN	CA-CB-CG	5.63	118.23	112.60
35	BA	38	G	C1'-O4'-C4'	5.63	115.53	109.90
35	BA	1422	G	C4'-C3'-C2'	-5.63	96.97	102.60
2	AB	266	G	C4'-C3'-C2'	-5.63	96.97	102.60
2	AB	513	A	C3'-C2'-C1'	5.63	106.93	101.30
2	AB	866	A	C3'-C2'-C1'	-5.63	95.67	101.30
2	AB	1088	A	C4'-C3'-C2'	-5.63	96.97	102.60
2	AB	1213	A	C4'-C3'-C2'	-5.63	96.97	102.60
2	AB	1427	A	O4'-C1'-N9	5.63	116.65	108.20
2	AB	2290	G	C5'-C4'-C3'	-5.63	107.55	116.00
2	AB	2684	U	C5'-C4'-O4'	5.63	118.25	109.80
35	BA	513	C	C1'-O4'-C4'	5.63	115.53	109.90
36	BB	58	A	C5'-C4'-O4'	5.63	118.25	109.80
45	BK	81	GLY	N-CA-C	5.63	121.78	115.08
52	BR	19	ASN	N-CA-C	-5.63	104.38	111.92
2	AB	1164	C	C4'-C3'-O3'	5.63	121.44	113.00
35	BA	758	C	C5'-C4'-O4'	-5.63	101.36	109.80
58	BX	55	HIS	ND1-CG-CD2	5.63	111.73	106.10
2	AB	453	A	O4'-C4'-C3'	5.63	109.63	104.00
2	AB	1259	G	C3'-C2'-C1'	-5.63	95.67	101.30
2	AB	1734	G	C5'-C4'-O4'	5.63	118.24	109.80
25	AY	40	ARG	O-C-N	5.63	130.08	122.59
35	BA	163	C	C3'-C2'-O2'	5.63	119.14	110.70
35	BA	745	G	O3'-P-O5'	-5.63	95.56	104.00
38	BD	49	C	C4'-C3'-C2'	-5.63	96.97	102.60
50	BP	70	ARG	N-CA-C	-5.63	105.29	111.82
2	AB	301	G	O4'-C1'-N9	5.63	116.64	108.20
2	AB	401	A	O4'-C1'-C2'	-5.63	101.97	107.60
2	AB	1070	A	O4'-C1'-C2'	5.63	111.43	105.80
8	AH	110	HIS	CB-CG-ND1	5.63	131.14	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	AO	13	HIS	ND1-CG-CD2	5.63	111.73	106.10
24	AX	76	ASP	CA-CB-CG	5.63	118.23	112.60
25	AY	71	LYS	CA-C-N	5.63	130.70	121.87
25	AY	71	LYS	C-N-CA	5.63	130.70	121.87
35	BA	1344	C	C5'-C4'-C3'	-5.63	107.56	116.00
35	BA	1417	G	O4'-C1'-N9	-5.63	100.06	108.50
2	AB	791	C	O4'-C1'-N1	5.62	116.64	108.20
2	AB	97	C	O4'-C1'-C2'	-5.62	101.98	107.60
2	AB	217	A	O4'-C4'-C3'	5.62	109.62	104.00
2	AB	478	A	C4'-C3'-O3'	-5.62	104.56	113.00
2	AB	2652	C	C3'-C2'-C1'	5.62	106.92	101.30
2	AB	2826	A	O4'-C1'-C2'	-5.62	101.98	107.60
35	BA	18	C	C1'-O4'-C4'	5.62	115.52	109.90
35	BA	922	G	C3'-C2'-C1'	-5.62	95.68	101.30
50	BP	7	ASN	CB-CA-C	5.62	119.22	111.23
1	AA	25	U	C4'-C3'-O3'	5.62	117.83	109.40
2	AB	1126	A	O4'-C1'-N9	5.62	116.63	108.20
2	AB	1389	G	O4'-C1'-N9	5.62	116.93	108.50
2	AB	1580	A	C1'-O4'-C4'	-5.62	104.28	109.90
2	AB	2338	C	C1'-O4'-C4'	-5.62	104.28	109.90
4	AD	65	ASP	N-CA-C	-5.62	99.96	108.67
43	BI	67	PRO	N-CA-CB	5.62	108.67	103.39
2	AB	1175	A	C1'-O4'-C4'	5.62	115.52	109.90
35	BA	132	C	N1-C1'-C2'	-5.62	103.57	112.00
2	AB	1530	G	C2'-C3'-O3'	-5.62	105.27	113.70
2	AB	1951	U	C4'-C3'-C2'	5.62	108.22	102.60
10	AJ	40	LEU	CA-C-N	5.62	128.27	120.29
10	AJ	40	LEU	C-N-CA	5.62	128.27	120.29
33	A6	23	HIS	CA-CB-CG	5.62	119.42	113.80
35	BA	1479	C	O4'-C1'-N1	5.62	116.93	108.50
43	BI	71	ILE	CA-C-O	-5.62	114.52	120.64
2	AB	546	U	C5'-C4'-O4'	5.62	118.22	109.80
2	AB	1664	A	C5'-C4'-O4'	5.62	118.23	109.80
35	BA	468	A	O4'-C4'-C3'	5.62	109.62	104.00
43	BI	42	TRP	CA-CB-CG	5.62	124.27	113.60
2	AB	328	U	P-O3'-C3'	5.62	128.62	120.20
2	AB	534	U	P-O5'-C5'	5.62	129.32	120.90
2	AB	1256	G	O4'-C4'-C3'	5.62	109.62	104.00
2	AB	1549	A	C5'-C4'-C3'	-5.62	107.58	116.00
2	AB	2063	C	C4'-C3'-C2'	-5.62	96.98	102.60
25	AY	13	ARG	NE-CZ-NH2	-5.62	114.15	119.20
29	A2	56	ARG	CA-C-N	5.62	131.07	122.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	A2	56	ARG	C-N-CA	5.62	131.07	122.25
37	BC	43	U	O5'-C5'-C4'	5.62	120.12	111.70
2	AB	2850	A	O3'-P-O5'	-5.61	95.58	104.00
35	BA	851	G	C3'-C2'-C1'	-5.61	95.69	101.30
35	BA	1330	U	C4'-C3'-C2'	-5.61	96.99	102.60
38	BD	73	A	C5'-C4'-C3'	-5.61	107.58	116.00
47	BM	27	GLU	N-CA-C	5.61	117.08	111.07
2	AB	1660	G	C3'-C2'-O2'	5.61	119.12	110.70
2	AB	2825	G	C4'-C3'-C2'	-5.61	96.99	102.60
9	AI	44	ILE	O-C-N	5.61	128.14	121.80
35	BA	642	A	C1'-O4'-C4'	5.61	115.51	109.90
2	AB	974	G	O4'-C1'-N9	5.61	116.62	108.20
2	AB	1089	A	P-O3'-C3'	5.61	128.62	120.20
2	AB	1711	A	O4'-C1'-N9	-5.61	100.09	108.50
2	AB	1735	A	C4'-C3'-O3'	5.61	121.42	113.00
2	AB	2032	G	C1'-C2'-O2'	5.61	120.22	111.80
2	AB	2207	C	C5'-C4'-O4'	5.61	118.22	109.80
2	AB	2664	G	C5'-C4'-O4'	5.61	118.22	109.80
8	AH	18	ILE	CB-CA-C	5.61	119.15	110.96
19	AS	63	ARG	CA-C-N	5.61	128.15	120.46
19	AS	63	ARG	C-N-CA	5.61	128.15	120.46
35	BA	156	C	O4'-C4'-C3'	5.61	109.61	104.00
35	BA	347	G	C3'-C2'-C1'	-5.61	95.69	101.30
35	BA	396	C	P-O5'-C5'	5.61	129.32	120.90
35	BA	1295	U	C5'-C4'-C3'	-5.61	107.58	116.00
11	AK	114	ALA	N-CA-CB	-5.61	101.08	110.39
35	BA	219	U	C4'-C3'-C2'	-5.61	96.99	102.60
35	BA	421	U	C1'-O4'-C4'	5.61	115.31	109.70
35	BA	1094	G	C5'-C4'-C3'	-5.61	106.79	115.20
2	AB	753	A	C5'-C4'-C3'	-5.61	107.59	116.00
2	AB	1161	C	C5'-C4'-O4'	5.61	118.21	109.80
2	AB	1972	G	O4'-C1'-C2'	-5.61	101.99	107.60
2	AB	2000	C	C5'-C4'-C3'	-5.61	107.59	116.00
2	AB	2037	A	O4'-C1'-C2'	5.61	113.21	107.60
2	AB	2211	A	O3'-P-O5'	-5.61	95.59	104.00
2	AB	2649	C	C4'-C3'-O3'	5.61	121.41	113.00
2	AB	2893	A	C5'-C4'-C3'	-5.61	106.79	115.20
35	BA	869	G	O4'-C4'-C3'	5.61	109.61	104.00
35	BA	1420	U	O4'-C1'-N1	5.61	116.91	108.50
1	AA	51	G	O3'-P-O5'	-5.61	95.59	104.00
2	AB	1846	G	C5'-C4'-C3'	-5.61	107.59	116.00
2	AB	2489	U	O4'-C4'-C3'	5.61	109.61	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2598	A	P-O3'-C3'	5.61	128.61	120.20
2	AB	2708	G	P-O3'-C3'	5.61	128.61	120.20
5	AE	23	PRO	CB-CA-C	-5.61	104.68	111.46
7	AG	30	VAL	O-C-N	-5.61	116.10	122.94
10	AJ	122	ILE	CA-C-N	5.61	128.35	120.28
10	AJ	122	ILE	C-N-CA	5.61	128.35	120.28
17	AQ	42	PRO	CA-C-N	5.61	128.25	120.29
17	AQ	42	PRO	C-N-CA	5.61	128.25	120.29
35	BA	247	G	O5'-C5'-C4'	5.61	119.91	111.50
35	BA	956	U	O4'-C1'-N1	5.61	116.91	108.50
35	BA	1219	A	C5'-C4'-O4'	5.61	118.21	109.80
35	BA	1419	G	P-O5'-C5'	5.61	129.31	120.90
38	BD	31	G	C4'-C3'-C2'	-5.61	97.00	102.60
54	BT	77	VAL	N-CA-CB	5.61	118.42	111.41
2	AB	172	A	C3'-C2'-C1'	5.60	106.90	101.30
2	AB	1034	G	C1'-C2'-O2'	-5.60	99.99	108.40
35	BA	417	G	C5'-C4'-O4'	5.60	118.21	109.80
35	BA	797	C	C3'-C2'-O2'	5.60	119.11	110.70
2	AB	880	G	P-O5'-C5'	5.60	129.30	120.90
2	AB	1829	A	O4'-C1'-C2'	-5.60	102.00	107.60
2	AB	1901	A	C4'-C3'-C2'	-5.60	97.00	102.60
2	AB	2138	G	C4'-C3'-C2'	-5.60	97.00	102.60
2	AB	2159	G	N9-C1'-C2'	5.60	120.41	112.00
2	AB	2540	C	O4'-C4'-C3'	5.60	109.60	104.00
2	AB	2667	C	C3'-C2'-O2'	5.60	119.10	110.70
2	AB	575	A	O4'-C4'-C3'	-5.60	98.40	104.00
15	AO	114	ARG	CD-NE-CZ	5.60	132.24	124.40
41	BG	22	SER	O-C-N	5.60	128.54	122.15
47	BM	84	VAL	O-C-N	5.60	128.13	121.80
2	AB	467	G	C4'-C3'-C2'	-5.60	97.00	102.60
2	AB	1408	G	C4'-C3'-C2'	-5.60	97.00	102.60
2	AB	1541	C	C1'-O4'-C4'	5.60	115.50	109.90
2	AB	2317	A	C1'-O4'-C4'	-5.60	104.30	109.90
4	AD	249	VAL	CA-CB-CG1	5.60	119.92	110.40
25	AY	22	VAL	O-C-N	5.60	129.17	122.95
31	A4	40	PRO	N-CA-CB	5.60	108.89	103.51
35	BA	920	U	O4'-C1'-C2'	-5.60	102.00	107.60
2	AB	778	G	O4'-C4'-C3'	5.60	109.60	104.00
2	AB	2842	G	P-O5'-C5'	5.60	129.30	120.90
35	BA	259	G	O4'-C4'-C3'	5.60	109.60	104.00
35	BA	1029	U	O4'-C4'-C3'	-5.60	100.50	106.10
40	BF	71	ARG	CB-CA-C	5.60	118.65	109.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	BG	85	THR	N-CA-C	5.60	117.38	111.28
2	AB	18	U	O4'-C1'-N1	5.60	116.89	108.50
2	AB	79	C	C4'-C3'-C2'	-5.60	97.00	102.60
2	AB	272	A	C5'-C4'-C3'	-5.60	107.61	116.00
2	AB	392	U	C5'-C4'-O4'	5.60	118.19	109.80
2	AB	453	A	C5'-C4'-C3'	-5.60	107.61	116.00
2	AB	924	G	C4'-C3'-C2'	-5.60	97.00	102.60
4	AD	259	ASN	CB-CA-C	5.60	120.94	110.70
6	AF	52	VAL	N-CA-CB	5.60	116.92	110.49
27	A0	52	ARG	CA-C-N	5.60	128.13	120.46
27	A0	52	ARG	C-N-CA	5.60	128.13	120.46
50	BP	32	ILE	CA-C-N	5.60	128.05	120.44
50	BP	32	ILE	C-N-CA	5.60	128.05	120.44
2	AB	385	C	O4'-C4'-C3'	5.59	109.59	104.00
2	AB	922	C	C4'-C3'-C2'	-5.59	97.01	102.60
2	AB	1428	C	O5'-C5'-C4'	-5.59	103.31	111.70
2	AB	1709	U	C3'-C2'-C1'	5.59	106.89	101.30
7	AG	53	ALA	CA-C-O	-5.59	114.62	120.55
16	AP	57	THR	N-CA-C	-5.59	99.90	109.24
26	AZ	22	ASN	CA-CB-CG	5.59	118.19	112.60
35	BA	172	A	C4'-C3'-O3'	-5.59	104.61	113.00
35	BA	468	A	C5'-C4'-O4'	5.59	118.19	109.80
35	BA	1273	C	C4'-C3'-O3'	5.59	121.39	113.00
2	AB	1761	C	O4'-C1'-C2'	-5.59	102.01	107.60
2	AB	2195	U	C4'-C3'-C2'	-5.59	97.01	102.60
15	AO	24	THR	N-CA-C	-5.59	105.57	112.90
35	BA	436	C	O4'-C1'-C2'	-5.59	102.01	107.60
35	BA	1274	A	C4'-C3'-C2'	-5.59	97.01	102.60
39	BE	75	ALA	N-CA-CB	-5.59	102.43	110.65
2	AB	721	A	C1'-O4'-C4'	5.59	115.49	109.90
2	AB	742	A	C5'-C4'-C3'	-5.59	107.61	116.00
2	AB	1415	U	C3'-C2'-O2'	5.59	119.09	110.70
2	AB	2115	G	C5'-C4'-C3'	-5.59	107.61	116.00
2	AB	2596	U	C1'-C2'-O2'	5.59	116.79	108.40
7	AG	108	PRO	N-CA-CB	5.59	109.07	103.48
35	BA	65	A	C5'-C4'-C3'	-5.59	107.61	116.00
55	BU	64	LEU	N-CA-C	-5.59	105.67	112.88
2	AB	114	U	C5'-C4'-C3'	-5.59	107.62	116.00
2	AB	444	C	O5'-C5'-C4'	-5.59	103.11	111.50
2	AB	728	G	N9-C1'-C2'	-5.59	105.61	114.00
2	AB	1543	G	C4'-C3'-O3'	-5.59	104.62	113.00
2	AB	2538	C	C5'-C4'-O4'	5.59	118.18	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2781	A	C4'-C3'-C2'	-5.59	97.01	102.60
12	AL	137	PRO	N-CA-CB	5.59	108.28	103.36
35	BA	391	G	C4'-C3'-C2'	-5.59	97.01	102.60
35	BA	473	U	C5'-C4'-C3'	-5.59	107.62	116.00
35	BA	989	U	N1-C1'-C2'	-5.59	103.61	112.00
36	BB	23	A	C5'-C4'-C3'	-5.59	107.61	116.00
43	BI	38	ARG	CA-CB-CG	5.59	125.28	114.10
50	BP	92	ARG	CD-NE-CZ	5.59	132.22	124.40
55	BU	69	TYR	CA-C-N	5.59	131.74	121.85
55	BU	69	TYR	C-N-CA	5.59	131.74	121.85
29	A2	2	LYS	CA-C-N	5.59	128.04	120.44
29	A2	2	LYS	C-N-CA	5.59	128.04	120.44
35	BA	521	G	C1'-O4'-C4'	-5.59	104.31	109.90
40	BF	110	LEU	CB-CA-C	5.59	119.61	110.17
2	AB	625	G	C5'-C4'-O4'	5.59	118.18	109.80
2	AB	2430	A	P-O5'-C5'	5.59	129.28	120.90
2	AB	2510	C	C4'-C3'-C2'	-5.59	97.01	102.60
2	AB	2646	C	O4'-C1'-C2'	-5.59	102.01	107.60
4	AD	194	VAL	CB-CA-C	5.59	119.27	111.34
5	AE	175	LEU	CA-C-N	5.59	128.77	120.95
5	AE	175	LEU	C-N-CA	5.59	128.77	120.95
18	AR	17	PRO	CA-N-CD	-5.59	104.18	112.00
21	AU	67	ASP	N-CA-C	-5.59	105.27	111.36
35	BA	1351	U	C3'-C2'-C1'	5.59	106.89	101.30
2	AB	186	G	C1'-C2'-O2'	5.58	116.78	108.40
2	AB	2019	A	P-O3'-C3'	5.58	128.58	120.20
2	AB	2338	C	C4'-C3'-O3'	5.58	121.38	113.00
35	BA	1107	C	C4'-C3'-C2'	-5.58	97.02	102.60
35	BA	1374	A	N9-C1'-C2'	-5.58	103.62	112.00
2	AB	57	C	O3'-P-O5'	-5.58	95.62	104.00
2	AB	232	G	C3'-C2'-C1'	-5.58	95.92	101.50
2	AB	312	G	O4'-C1'-C2'	5.58	113.18	107.60
2	AB	867	C	C4'-C3'-C2'	5.58	108.18	102.60
2	AB	2059	A	P-O5'-C5'	5.58	129.28	120.90
18	AR	32	VAL	O-C-N	-5.58	115.59	122.57
35	BA	9	G	O4'-C4'-C3'	5.58	109.58	104.00
35	BA	281	G	O4'-C1'-C2'	5.58	111.38	105.80
35	BA	348	G	N9-C1'-C2'	-5.58	103.63	112.00
35	BA	928	G	P-O3'-C3'	5.58	128.58	120.20
56	BV	23	GLU	CA-C-N	5.58	132.44	122.06
56	BV	23	GLU	C-N-CA	5.58	132.44	122.06
2	AB	140	C	C5'-C4'-C3'	-5.58	106.83	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	570	G	C3'-C2'-C1'	5.58	106.88	101.30
2	AB	765	C	C1'-O4'-C4'	5.58	115.48	109.90
2	AB	1587	G	C5'-C4'-O4'	5.58	118.17	109.80
2	AB	2229	U	C5'-C4'-O4'	5.58	118.17	109.80
7	AG	127	TYR	CB-CG-CD1	-5.58	112.43	120.80
13	AM	56	ASP	CA-CB-CG	5.58	118.18	112.60
17	AQ	73	ALA	CA-C-N	5.58	128.35	120.42
17	AQ	73	ALA	C-N-CA	5.58	128.35	120.42
28	A1	19	HIS	CG-CD2-NE2	5.58	112.78	107.20
35	BA	449	G	P-O3'-C3'	5.58	128.57	120.20
35	BA	919	A	C4'-C3'-C2'	-5.58	97.02	102.60
2	AB	179	C	O4'-C1'-N1	5.58	116.87	108.50
2	AB	1732	C	C4'-C3'-C2'	-5.58	97.02	102.60
2	AB	2235	G	C5'-C4'-C3'	-5.58	107.63	116.00
35	BA	1505	G	C3'-C2'-C1'	-5.58	95.72	101.30
2	AB	609	A	N9-C1'-C2'	-5.58	103.63	112.00
2	AB	629	G	C4'-C3'-C2'	-5.58	97.02	102.60
2	AB	713	G	C5'-C4'-O4'	5.58	118.17	109.80
2	AB	1162	G	C3'-C2'-O2'	5.58	119.07	110.70
2	AB	1864	U	O4'-C1'-C2'	-5.58	102.02	107.60
3	AC	25	GLU	CA-C-N	5.58	127.76	120.28
3	AC	25	GLU	C-N-CA	5.58	127.76	120.28
4	AD	217	PRO	N-CA-C	5.58	119.99	111.34
35	BA	657	U	C5'-C4'-C3'	-5.58	107.63	116.00
35	BA	965	U	N1-C1'-C2'	-5.58	105.63	114.00
35	BA	1128	C	C4'-C3'-C2'	-5.58	97.02	102.60
35	BA	1349	A	C5'-C4'-C3'	-5.58	107.63	116.00
35	BA	1465	A	O4'-C1'-N9	5.58	116.87	108.50
36	BB	71	C	C3'-C2'-C1'	5.58	106.88	101.30
40	BF	88	LYS	N-CA-C	5.58	117.04	111.07
7	AG	31	GLU	CA-C-N	5.58	129.62	121.31
7	AG	31	GLU	C-N-CA	5.58	129.62	121.31
35	BA	862	C	C4'-C3'-C2'	-5.58	97.02	102.60
35	BA	998	C	C4'-C3'-C2'	-5.58	97.02	102.60
2	AB	1689	A	O4'-C1'-N9	5.58	116.86	108.50
4	AD	4	LYS	CA-C-N	5.58	128.75	120.95
4	AD	4	LYS	C-N-CA	5.58	128.75	120.95
13	AM	41	ILE	CA-C-O	5.58	127.08	120.72
32	A5	37	LYS	CB-CG-CD	5.58	124.12	111.30
35	BA	442	G	O4'-C1'-C2'	-5.58	102.03	107.60
35	BA	1110	A	O3'-P-O5'	-5.58	95.64	104.00
42	BH	67	ARG	NE-CZ-NH2	5.58	124.22	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	10	A	C3'-C2'-C1'	5.57	106.87	101.30
2	AB	929	U	C3'-C2'-C1'	5.57	106.87	101.30
2	AB	1595	C	O4'-C1'-C2'	-5.57	102.03	107.60
2	AB	2746	U	O3'-P-O5'	5.57	112.36	104.00
5	AE	189	VAL	CB-CA-C	5.57	118.84	110.98
6	AF	68	ALA	CA-C-N	5.57	128.78	120.31
6	AF	68	ALA	C-N-CA	5.57	128.78	120.31
27	A0	59	GLU	CA-C-O	5.57	124.65	118.52
35	BA	307	C	O4'-C1'-N1	5.57	116.56	108.20
37	BC	33	A	C4'-C3'-O3'	-5.57	104.64	113.00
40	BF	189	HIS	ND1-CE1-NE2	5.57	113.97	108.40
43	BI	67	PRO	CA-C-N	5.57	127.75	120.28
43	BI	67	PRO	C-N-CA	5.57	127.75	120.28
48	BN	82	GLU	CA-C-O	-5.57	114.59	121.11
2	AB	8	C	O4'-C1'-N1	5.57	116.86	108.50
2	AB	597	G	C4'-C3'-C2'	5.57	108.17	102.60
2	AB	1490	A	C3'-C2'-C1'	5.57	106.87	101.30
2	AB	1513	U	C4'-C3'-C2'	-5.57	97.03	102.60
2	AB	1755	A	C5'-C4'-C3'	-5.57	107.64	116.00
12	AL	92	MET	N-CA-C	5.57	118.12	111.71
15	AO	109	PRO	CA-C-N	5.57	128.06	120.54
15	AO	109	PRO	C-N-CA	5.57	128.06	120.54
35	BA	372	C	P-O3'-C3'	5.57	128.56	120.20
44	BJ	97	ALA	O-C-N	5.57	128.03	122.12
19	AS	22	GLY	N-CA-C	5.57	122.45	115.21
35	BA	1430	A	C5'-C4'-C3'	5.57	124.35	116.00
2	AB	797	G	N9-C1'-C2'	-5.57	103.65	112.00
2	AB	2154	A	C4'-C3'-C2'	-5.57	97.03	102.60
5	AE	21	SER	N-CA-CB	5.57	119.76	110.85
35	BA	249	U	C1'-O4'-C4'	-5.57	104.33	109.90
35	BA	396	C	N1-C1'-C2'	-5.57	103.65	112.00
35	BA	717	U	C5'-C4'-C3'	-5.57	107.65	116.00
2	AB	475	C	O4'-C1'-C2'	-5.57	102.03	107.60
2	AB	1074	G	C5'-C4'-C3'	-5.57	107.65	116.00
2	AB	2282	G	C2'-C3'-O3'	5.57	117.85	109.50
2	AB	2742	G	C3'-C2'-O2'	5.57	119.05	110.70
2	AB	2768	U	C1'-O4'-C4'	-5.57	104.33	109.90
9	AI	52	ALA	O-C-N	5.57	128.10	122.09
33	A6	18	LYS	N-CA-C	5.57	119.33	112.54
35	BA	124	C	O4'-C4'-C3'	5.57	109.56	104.00
35	BA	1124	G	O4'-C1'-C2'	-5.57	100.23	105.80
49	BO	80	LEU	O-C-N	-5.57	116.87	123.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	546	U	O4'-C1'-N1	5.56	116.85	108.50
2	AB	2043	C	C4'-C3'-C2'	-5.56	97.04	102.60
5	AE	122	VAL	CA-C-O	-5.56	113.83	120.78
35	BA	973	G	O4'-C1'-C2'	-5.56	102.04	107.60
35	BA	1237	C	O4'-C1'-N1	5.56	116.85	108.50
35	BA	1255	G	O3'-P-O5'	-5.56	95.65	104.00
2	AB	144	A	O4'-C4'-C3'	5.56	109.56	104.00
2	AB	1151	A	N9-C1'-C2'	-5.56	103.66	112.00
2	AB	1171	G	O3'-P-O5'	5.56	112.34	104.00
2	AB	2420	C	C4'-C3'-O3'	-5.56	104.66	113.00
16	AP	60	VAL	N-CA-C	5.56	116.29	110.62
19	AS	63	ARG	NE-CZ-NH2	5.56	124.21	119.20
35	BA	632	U	C2'-C3'-O3'	5.56	117.84	109.50
35	BA	746	A	C1'-O4'-C4'	-5.56	104.34	109.90
35	BA	929	G	P-O3'-C3'	5.56	128.54	120.20
35	BA	1026	G	O4'-C4'-C3'	5.56	109.56	104.00
46	BL	14	SER	CA-C-O	-5.56	114.72	121.28
2	AB	1975	G	C3'-C2'-C1'	5.56	106.86	101.30
35	BA	997	U	C1'-O4'-C4'	-5.56	104.34	109.90
36	BB	66	C	O4'-C4'-C3'	5.56	109.56	104.00
38	BD	1	C	C1'-O4'-C4'	-5.56	104.34	109.90
44	BJ	25	PHE	CA-C-O	-5.56	114.97	120.70
54	BT	28	VAL	N-CA-CB	-5.56	101.64	111.93
2	AB	1128	G	C2'-C3'-O3'	5.56	117.84	109.50
2	AB	2158	A	O4'-C1'-N9	5.56	116.54	108.20
2	AB	2160	C	O4'-C1'-N1	5.56	116.84	108.50
2	AB	2632	A	C4'-C3'-C2'	-5.56	97.04	102.60
4	AD	79	ARG	NE-CZ-NH2	5.56	124.20	119.20
16	AP	6	SER	CA-C-N	5.56	129.50	121.44
16	AP	6	SER	C-N-CA	5.56	129.50	121.44
35	BA	85	U	C2'-C3'-O3'	-5.56	101.16	109.50
35	BA	589	U	C3'-C2'-C1'	-5.56	95.74	101.30
41	BG	185	PRO	CA-C-N	5.56	131.22	122.21
41	BG	185	PRO	C-N-CA	5.56	131.22	122.21
53	BS	53	ASP	CB-CA-C	5.56	120.72	111.83
2	AB	464	U	O4'-C1'-C2'	-5.56	102.04	107.60
2	AB	535	G	O4'-C1'-N9	5.56	116.84	108.50
2	AB	2178	C	C3'-C2'-C1'	5.56	106.86	101.30
2	AB	2753	A	C3'-C2'-C1'	5.56	106.86	101.30
6	AF	47	LYS	CA-C-O	5.56	127.12	120.28
9	AI	19	VAL	CA-C-O	5.56	126.49	120.43
9	AI	27	ARG	NE-CZ-NH1	-5.56	115.94	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	A6	20	GLY	CA-C-O	5.56	126.75	121.64
33	A6	23	HIS	CG-CD2-NE2	-5.56	101.64	107.20
35	BA	305	G	C3'-C2'-O2'	-5.56	106.26	114.60
35	BA	1473	G	C5'-C4'-C3'	-5.56	107.66	116.00
2	AB	691	C	C3'-C2'-C1'	5.56	106.86	101.30
2	AB	2608	G	O4'-C1'-C2'	-5.56	102.04	107.60
4	AD	216	ARG	NE-CZ-NH1	5.56	127.06	121.50
18	AR	88	ARG	NE-CZ-NH1	-5.56	115.94	121.50
35	BA	780	A	C4'-C3'-C2'	5.56	108.16	102.60
35	BA	805	C	C2'-C3'-O3'	5.56	122.03	113.70
35	BA	972	C	O3'-P-O5'	-5.56	95.67	104.00
39	BE	169	HIS	CB-CG-ND1	5.56	131.03	122.70
44	BJ	148	LYS	CA-C-N	5.56	128.18	120.29
44	BJ	148	LYS	C-N-CA	5.56	128.18	120.29
2	AB	1576	U	C1'-O4'-C4'	5.55	115.45	109.90
2	AB	1933	G	C4'-C3'-C2'	-5.55	97.05	102.60
33	A6	49	VAL	N-CA-C	5.55	118.56	109.78
35	BA	765	G	O4'-C1'-N9	5.55	116.53	108.20
35	BA	853	C	C5'-C4'-O4'	5.55	118.13	109.80
54	BT	14	ASP	CA-CB-CG	-5.55	107.05	112.60
2	AB	1537	G	C2'-C3'-O3'	-5.55	105.37	113.70
2	AB	1541	C	O4'-C1'-N1	5.55	116.83	108.50
2	AB	2233	U	N1-C1'-C2'	-5.55	103.67	112.00
36	BB	50	G	C3'-C2'-O2'	5.55	119.03	110.70
2	AB	224	U	O4'-C1'-N1	5.55	116.83	108.50
2	AB	606	U	P-O5'-C5'	5.55	129.23	120.90
2	AB	2264	C	C1'-O4'-C4'	-5.55	104.35	109.90
2	AB	2473	U	C3'-C2'-C1'	5.55	106.85	101.30
5	AE	97	SER	CA-C-N	5.55	129.24	120.47
5	AE	97	SER	C-N-CA	5.55	129.24	120.47
35	BA	211	G	C1'-C2'-O2'	-5.55	100.07	108.40
35	BA	660	C	N1-C1'-C2'	-5.55	103.67	112.00
35	BA	1018	G	C3'-C2'-O2'	5.55	119.03	110.70
36	BB	58	A	O4'-C1'-C2'	5.55	113.15	107.60
2	AB	290	U	C4'-C3'-C2'	-5.55	97.05	102.60
2	AB	1076	C	C1'-O4'-C4'	5.55	115.45	109.90
14	AN	69	ARG	NE-CZ-NH1	5.55	127.05	121.50
35	BA	876	C	N1-C1'-C2'	-5.55	103.68	112.00
35	BA	1324	A	O4'-C1'-C2'	-5.55	102.05	107.60
40	BF	78	LYS	CB-CA-C	5.55	118.56	109.90
42	BH	109	ALA	CA-C-O	5.55	126.00	119.28
43	BI	63	ASN	CA-C-N	5.55	130.50	121.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
43	BI	63	ASN	C-N-CA	5.55	130.50	121.62
45	BK	96	ALA	CA-C-O	-5.55	115.10	121.54
55	BU	10	CYS	CA-C-N	5.55	132.14	121.54
55	BU	10	CYS	C-N-CA	5.55	132.14	121.54
2	AB	80	G	C4'-C3'-C2'	-5.55	97.05	102.60
2	AB	961	C	O4'-C4'-C3'	5.55	111.65	106.10
2	AB	1998	A	C3'-C2'-O2'	5.55	119.02	110.70
2	AB	2565	A	O4'-C4'-C3'	5.55	109.55	104.00
56	BV	69	LYS	CA-C-O	5.55	128.43	121.66
2	AB	595	C	O4'-C4'-C3'	5.55	109.55	104.00
2	AB	1183	U	C4'-C3'-C2'	-5.55	97.05	102.60
36	BB	26	A	C4'-C3'-O3'	5.55	121.32	113.00
37	BC	14	G	C1'-C2'-O2'	5.55	120.12	111.80
40	BF	76	ILE	CA-C-O	-5.55	114.97	120.85
50	BP	64	VAL	CA-C-N	5.55	127.71	120.28
50	BP	64	VAL	C-N-CA	5.55	127.71	120.28
2	AB	1667	G	C5'-C4'-O4'	-5.54	100.78	109.10
2	AB	2214	C	P-O3'-C3'	5.54	128.52	120.20
9	AI	81	ALA	O-C-N	5.54	129.51	123.13
23	AW	72	PHE	CA-C-O	-5.54	114.43	120.36
35	BA	1191	A	C3'-C2'-C1'	5.54	106.84	101.30
2	AB	1204	A	C2'-C3'-O3'	5.54	117.81	109.50
2	AB	1680	U	O4'-C1'-N1	5.54	116.82	108.50
2	AB	2331	G	O3'-P-O5'	-5.54	95.69	104.00
7	AG	70	ARG	CA-C-O	-5.54	113.25	119.79
39	BE	209	VAL	CA-C-O	-5.54	114.64	120.57
44	BJ	19	SER	CA-C-N	5.54	128.16	120.29
44	BJ	19	SER	C-N-CA	5.54	128.16	120.29
2	AB	1093	G	N9-C1'-C2'	-5.54	103.69	112.00
2	AB	1225	G	C4'-C3'-C2'	-5.54	97.06	102.60
2	AB	1518	C	N1-C1'-C2'	-5.54	103.69	112.00
2	AB	1707	G	O4'-C1'-N9	5.54	116.81	108.50
2	AB	2582	G	O4'-C1'-C2'	-5.54	102.06	107.60
11	AK	21	PRO	CA-C-N	5.54	125.06	119.19
11	AK	21	PRO	C-N-CA	5.54	125.06	119.19
32	A5	30	VAL	N-CA-C	-5.54	105.21	110.42
35	BA	288	A	C5'-C4'-O4'	5.54	118.11	109.80
35	BA	393	A	O4'-C4'-C3'	5.54	109.54	104.00
35	BA	602	A	C5'-C4'-C3'	-5.54	107.69	116.00
35	BA	720	C	N1-C1'-C2'	5.54	120.31	112.00
35	BA	1461	G	C5'-C4'-C3'	-5.54	107.69	116.00
2	AB	1	G	C3'-C2'-C1'	5.54	106.84	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	149	A	O5'-C5'-C4'	5.54	119.81	111.50
2	AB	1502	A	C1'-O4'-C4'	-5.54	104.36	109.90
2	AB	2357	G	C4'-C3'-C2'	5.54	108.14	102.60
16	AP	66	ALA	CA-C-O	-5.54	114.55	120.42
35	BA	296	U	O4'-C4'-C3'	5.54	109.54	104.00
35	BA	542	G	C1'-C2'-O2'	5.54	116.71	108.40
35	BA	693	G	C4'-C3'-C2'	-5.54	97.06	102.60
1	AA	118	C	O4'-C1'-N1	5.54	116.81	108.50
2	AB	1114	C	C5'-C4'-C3'	-5.54	107.69	116.00
2	AB	1733	G	C3'-C2'-O2'	5.54	119.01	110.70
2	AB	2084	C	O4'-C1'-N1	5.54	116.81	108.50
2	AB	2719	G	O4'-C4'-C3'	5.54	109.54	104.00
7	AG	119	LYS	CA-C-N	5.54	129.97	120.72
7	AG	119	LYS	C-N-CA	5.54	129.97	120.72
22	AV	62	VAL	N-CA-C	5.54	115.83	107.80
35	BA	117	G	C1'-C2'-O2'	-5.54	100.09	108.40
35	BA	320	A	O4'-C4'-C3'	-5.54	98.46	104.00
35	BA	681	A	C1'-O4'-C4'	5.54	115.44	109.90
35	BA	797	C	C3'-C2'-C1'	5.54	106.84	101.30
35	BA	1507	A	C4'-C3'-O3'	-5.54	104.69	113.00
2	AB	420	C	C4'-C3'-O3'	-5.54	104.69	113.00
2	AB	2451	A	O5'-C5'-C4'	-5.54	103.19	111.50
2	AB	2528	U	O3'-P-O5'	5.54	112.31	104.00
21	AU	99	ARG	NE-CZ-NH2	5.54	124.18	119.20
35	BA	1483	A	C4'-C3'-C2'	-5.54	97.06	102.60
2	AB	1045	C	O4'-C1'-C2'	-5.54	100.26	105.80
2	AB	1062	G	O3'-P-O5'	-5.54	95.70	104.00
2	AB	2277	G	C5'-C4'-O4'	5.54	118.10	109.80
2	AB	2428	G	C2'-C3'-O3'	-5.54	105.40	113.70
4	AD	114	GLN	OE1-CD-NE2	5.54	128.14	122.60
35	BA	819	A	O4'-C1'-N9	5.54	116.50	108.20
35	BA	1151	A	P-O5'-C5'	5.54	129.20	120.90
37	BC	25	U	C4'-C3'-O3'	5.54	121.30	113.00
39	BE	206	ILE	CA-CB-CG1	5.54	119.81	110.40
40	BF	222	GLN	N-CA-C	5.54	115.97	109.60
44	BJ	178	ASN	CB-CA-C	5.54	120.62	110.10
2	AB	1856	U	O4'-C1'-N1	5.53	116.80	108.50
35	BA	817	C	C3'-C2'-C1'	-5.53	95.97	101.50
2	AB	643	A	O4'-C4'-C3'	5.53	109.53	104.00
2	AB	1336	A	C3'-C2'-O2'	5.53	119.00	110.70
2	AB	1975	G	O4'-C1'-N9	5.53	116.80	108.50
2	AB	2899	A	N9-C1'-C2'	5.53	120.30	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	563	A	C2'-C3'-O3'	5.53	122.00	113.70
38	BD	57	C	N1-C1'-C2'	5.53	120.30	112.00
1	AA	64	G	C3'-C2'-O2'	5.53	119.00	110.70
2	AB	263	G	C3'-C2'-C1'	-5.53	95.77	101.30
2	AB	498	G	O3'-P-O5'	5.53	112.30	104.00
2	AB	1128	G	O4'-C4'-C3'	5.53	111.63	106.10
2	AB	1757	A	O4'-C4'-C3'	-5.53	98.47	104.00
2	AB	2145	C	P-O5'-C5'	5.53	129.20	120.90
2	AB	2318	G	C1'-O4'-C4'	-5.53	104.37	109.90
2	AB	2650	U	O3'-P-O5'	-5.53	95.70	104.00
15	AO	5	LYS	CB-CA-C	5.53	119.48	110.96
15	AO	96	ILE	N-CA-C	-5.53	100.47	108.71
24	AX	55	GLU	CA-C-N	5.53	127.69	120.28
24	AX	55	GLU	C-N-CA	5.53	127.69	120.28
35	BA	641	U	O4'-C1'-N1	5.53	116.50	108.20
35	BA	789	U	O5'-C5'-C4'	-5.53	103.21	111.50
35	BA	881	G	C4'-C3'-C2'	-5.53	97.07	102.60
36	BB	43	G	C4'-C3'-C2'	-5.53	97.07	102.60
2	AB	1123	C	O4'-C4'-C3'	5.53	109.53	104.00
2	AB	1245	G	O4'-C1'-C2'	-5.53	102.07	107.60
12	AL	130	HIS	CG-CD2-NE2	-5.53	101.67	107.20
35	BA	222	C	O4'-C1'-C2'	-5.53	102.07	107.60
45	BK	77	VAL	CB-CA-C	5.53	116.69	111.44
2	AB	350	G	C3'-C2'-C1'	5.53	106.83	101.30
2	AB	1645	G	O4'-C1'-C2'	5.53	111.33	105.80
2	AB	1779	U	O4'-C4'-C3'	5.53	109.53	104.00
2	AB	2515	C	O4'-C1'-N1	5.53	116.79	108.50
11	AK	9	LYS	N-CA-C	5.53	118.64	109.46
13	AM	26	GLY	N-CA-C	-5.53	106.57	115.08
21	AU	19	LEU	O-C-N	5.53	127.84	122.09
35	BA	899	C	C5'-C4'-O4'	5.53	118.09	109.80
35	BA	943	U	C1'-O4'-C4'	-5.53	104.37	109.90
35	BA	954	G	C4'-C3'-O3'	5.53	121.29	113.00
41	BG	12	ARG	O-C-N	-5.53	115.47	122.27
2	AB	449	A	P-O3'-C3'	5.53	128.49	120.20
2	AB	667	U	O3'-P-O5'	-5.53	95.71	104.00
2	AB	2673	G	C4'-C3'-C2'	-5.53	97.07	102.60
12	AL	57	LEU	N-CA-CB	-5.53	101.72	110.28
14	AN	84	LYS	N-CA-C	-5.53	106.58	113.38
35	BA	18	C	C2'-C3'-O3'	5.53	121.99	113.70
35	BA	1083	U	O4'-C4'-C3'	5.53	109.53	104.00
35	BA	1386	G	O5'-C5'-C4'	5.53	119.79	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	BR	41	HIS	CB-CG-CD2	-5.53	124.02	131.20
52	BR	81	ILE	CA-C-O	-5.53	115.20	120.95
1	AA	67	G	O5'-C5'-C4'	5.52	119.79	111.50
2	AB	288	U	O5'-C5'-C4'	-5.52	103.21	111.50
2	AB	999	U	O3'-P-O5'	5.52	112.28	104.00
2	AB	1536	C	C4'-C3'-C2'	-5.52	97.08	102.60
2	AB	1936	A	O4'-C1'-N9	5.52	116.49	108.20
35	BA	412	A	O5'-C5'-C4'	5.52	119.79	111.50
35	BA	574	A	P-O5'-C5'	5.52	129.19	120.90
35	BA	756	C	O4'-C1'-N1	5.52	116.79	108.50
35	BA	1454	G	O4'-C1'-N9	5.52	116.79	108.50
39	BE	229	ALA	O-C-N	5.52	128.45	122.15
41	BG	180	THR	CA-C-O	5.52	126.40	120.32
2	AB	315	G	O4'-C1'-N9	5.52	116.78	108.50
2	AB	1625	C	O4'-C1'-N1	5.52	116.78	108.50
2	AB	1788	C	C1'-O4'-C4'	-5.52	104.38	109.90
2	AB	2745	C	C1'-O4'-C4'	5.52	115.42	109.90
17	AQ	9	ARG	CA-C-N	5.52	127.68	120.28
17	AQ	9	ARG	C-N-CA	5.52	127.68	120.28
35	BA	709	U	O3'-P-O5'	-5.52	95.72	104.00
35	BA	1342	C	C3'-C2'-C1'	5.52	106.82	101.30
56	BV	70	LEU	CA-C-N	5.52	130.62	120.79
56	BV	70	LEU	C-N-CA	5.52	130.62	120.79
58	BX	39	LYS	CA-C-N	5.52	125.62	119.32
58	BX	39	LYS	C-N-CA	5.52	125.62	119.32
2	AB	1039	A	C1'-C2'-O2'	5.52	116.68	108.40
2	AB	2121	G	C2'-C3'-O3'	-5.52	105.42	113.70
26	AZ	27	ARG	CA-C-N	-5.52	114.42	122.65
26	AZ	27	ARG	C-N-CA	-5.52	114.42	122.65
48	BN	35	ASP	N-CA-CB	-5.52	102.22	110.17
2	AB	326	G	C5'-C4'-C3'	-5.52	107.72	116.00
2	AB	1233	C	C4'-C3'-C2'	-5.52	97.08	102.60
2	AB	1822	C	O4'-C1'-N1	5.52	116.78	108.50
2	AB	1993	U	O4'-C4'-C3'	5.52	109.52	104.00
2	AB	2174	C	O4'-C1'-C2'	-5.52	102.08	107.60
2	AB	2713	U	O4'-C1'-C2'	5.52	111.32	105.80
3	AC	172	HIS	CG-ND1-CE1	-5.52	99.92	109.30
15	AO	84	LYS	CA-C-N	5.52	130.92	121.87
15	AO	84	LYS	C-N-CA	5.52	130.92	121.87
35	BA	1439	G	O4'-C1'-N9	5.52	116.78	108.50
43	BI	107	ASP	CA-C-N	5.52	127.61	120.44
43	BI	107	ASP	C-N-CA	5.52	127.61	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	BL	91	GLU	O-C-N	5.52	128.68	122.22
49	BO	20	VAL	CA-C-O	-5.52	113.87	119.89
51	BQ	84	ARG	CA-C-N	5.52	127.68	120.28
51	BQ	84	ARG	C-N-CA	5.52	127.68	120.28
52	BR	77	TYR	O-C-N	-5.52	116.13	122.09
2	AB	2336	A	C4'-C3'-C2'	-5.52	97.08	102.60
26	AZ	13	THR	N-CA-CB	5.52	118.08	109.97
35	BA	142	G	C1'-C2'-O2'	5.52	116.68	108.40
35	BA	992	U	O4'-C1'-N1	5.52	116.48	108.20
36	BB	4	G	O4'-C4'-C3'	5.52	109.52	104.00
51	BQ	18	LYS	N-CA-C	5.52	116.97	111.07
2	AB	63	A	C5'-C4'-O4'	5.52	118.07	109.80
2	AB	232	G	O4'-C1'-C2'	5.52	111.32	105.80
2	AB	474	G	C3'-C2'-C1'	-5.52	95.98	101.50
5	AE	15	PHE	CA-CB-CG	5.52	119.32	113.80
35	BA	1001	C	O4'-C1'-N1	5.52	116.77	108.50
2	AB	352	A	C4'-C3'-C2'	-5.51	97.08	102.60
2	AB	363	G	O4'-C1'-C2'	-5.51	102.08	107.60
2	AB	1461	C	C4'-C3'-C2'	-5.51	97.09	102.60
2	AB	2341	G	C4'-C3'-C2'	-5.51	97.09	102.60
35	BA	63	C	C1'-O4'-C4'	5.51	115.41	109.90
35	BA	509	A	P-O5'-C5'	5.51	129.17	120.90
35	BA	864	A	C4'-C3'-O3'	-5.51	104.73	113.00
35	BA	1531	A	C1'-C2'-O2'	-5.51	100.13	108.40
36	BB	59	G	O4'-C4'-C3'	5.51	111.61	106.10
42	BH	152	VAL	CA-C-N	5.51	131.65	122.66
42	BH	152	VAL	C-N-CA	5.51	131.65	122.66
2	AB	287	G	C4'-C3'-C2'	-5.51	97.09	102.60
2	AB	949	G	C1'-C2'-O2'	5.51	116.67	108.40
35	BA	237	G	C1'-O4'-C4'	5.51	115.41	109.90
2	AB	76	C	C4'-C3'-C2'	-5.51	97.09	102.60
2	AB	292	U	O3'-P-O5'	-5.51	95.73	104.00
2	AB	551	G	O3'-P-O5'	-5.51	95.73	104.00
2	AB	561	G	P-O3'-C3'	5.51	128.47	120.20
3	AC	112	ASP	CA-C-O	-5.51	114.12	120.24
3	AC	172	HIS	ND1-CE1-NE2	5.51	113.91	108.40
35	BA	775	G	C5'-C4'-O4'	5.51	118.07	109.80
35	BA	920	U	C1'-O4'-C4'	5.51	115.41	109.90
35	BA	944	G	C1'-C2'-O2'	5.51	116.67	108.40
35	BA	1192	C	C3'-C2'-C1'	-5.51	95.79	101.30
35	BA	1382	C	C4'-C3'-C2'	-5.51	97.09	102.60
2	AB	242	G	C4'-C3'-O3'	5.51	117.66	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	430	A	P-O3'-C3'	5.51	128.47	120.20
2	AB	1135	C	C5'-C4'-O4'	5.51	118.06	109.80
2	AB	1760	C	C3'-C2'-C1'	5.51	106.81	101.30
2	AB	1796	U	C4'-C3'-O3'	5.51	121.26	113.00
2	AB	2002	G	C3'-C2'-C1'	5.51	106.81	101.30
2	AB	2360	G	O4'-C4'-C3'	5.51	109.51	104.00
2	AB	2785	C	C4'-C3'-C2'	-5.51	97.09	102.60
23	AW	35	VAL	CA-C-N	5.51	128.69	120.87
23	AW	35	VAL	C-N-CA	5.51	128.69	120.87
35	BA	811	C	C3'-C2'-O2'	5.51	118.97	110.70
3	AC	217	THR	CA-CB-CG2	5.51	119.86	110.50
35	BA	405	U	O4'-C1'-N1	5.51	116.76	108.50
35	BA	1394	A	P-O3'-C3'	5.51	128.46	120.20
1	AA	87	U	O4'-C1'-N1	5.51	116.76	108.50
2	AB	337	C	P-O5'-C5'	-5.51	112.64	120.90
2	AB	1271	G	O4'-C1'-N9	5.51	116.76	108.50
2	AB	1649	G	O3'-P-O5'	-5.51	95.74	104.00
2	AB	2652	C	O3'-P-O5'	-5.51	95.74	104.00
2	AB	2683	C	C3'-C2'-C1'	5.51	106.81	101.30
35	BA	756	C	C5'-C4'-C3'	-5.51	107.74	116.00
35	BA	1300	G	C5'-C4'-O4'	5.51	117.36	109.10
35	BA	1373	G	C5'-C4'-O4'	5.51	118.06	109.80
44	BJ	51	GLN	N-CA-C	5.51	119.17	112.23
56	BV	62	THR	CA-C-N	5.51	128.42	120.38
56	BV	62	THR	C-N-CA	5.51	128.42	120.38
7	AG	31	GLU	CA-C-O	-5.50	114.90	121.56
35	BA	104	G	C5'-C4'-O4'	5.50	118.06	109.80
35	BA	541	G	O4'-C4'-C3'	5.50	109.50	104.00
2	AB	527	C	N1-C1'-C2'	5.50	122.25	114.00
2	AB	893	C	C1'-O4'-C4'	-5.50	104.40	109.90
2	AB	1807	G	O4'-C1'-C2'	-5.50	102.10	107.60
2	AB	1895	C	C3'-C2'-C1'	5.50	106.80	101.30
2	AB	2405	G	C4'-C3'-C2'	-5.50	97.10	102.60
2	AB	2603	G	O4'-C1'-C2'	-5.50	102.10	107.60
4	AD	14	HIS	CB-CA-C	5.50	119.98	111.28
9	AI	60	GLU	CA-C-N	5.50	129.32	120.30
9	AI	60	GLU	C-N-CA	5.50	129.32	120.30
35	BA	182	A	C3'-C2'-C1'	-5.50	96.00	101.50
35	BA	386	C	O4'-C4'-C3'	-5.50	98.50	104.00
38	BD	50	G	O4'-C1'-N9	5.50	116.76	108.50
40	BF	161	ILE	CA-CB-CG1	5.50	119.76	110.40
46	BL	64	ILE	CB-CA-C	5.50	118.37	110.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	BP	70	ARG	NE-CZ-NH1	-5.50	116.00	121.50
2	AB	369	U	C5'-C4'-C3'	-5.50	107.75	116.00
2	AB	517	C	C1'-C2'-O2'	-5.50	100.15	108.40
2	AB	830	G	C4'-C3'-C2'	-5.50	97.10	102.60
2	AB	1172	C	C3'-C2'-O2'	5.50	118.95	110.70
2	AB	1261	C	N1-C1'-C2'	-5.50	103.75	112.00
35	BA	211	G	C5'-C4'-O4'	5.50	118.05	109.80
50	BP	86	ARG	CA-C-N	5.50	126.09	119.98
50	BP	86	ARG	C-N-CA	5.50	126.09	119.98
14	AN	74	THR	CB-CA-C	5.50	118.72	109.48
36	BB	67	G	C1'-C2'-O2'	5.50	116.65	108.40
39	BE	1	ALA	O-C-N	-5.50	114.20	123.00
40	BF	138	GLN	N-CA-C	-5.50	105.19	111.07
2	AB	104	A	C3'-C2'-C1'	5.50	106.80	101.30
2	AB	199	A	C5'-C4'-C3'	5.50	123.45	115.20
2	AB	1554	U	N1-C1'-C2'	-5.50	105.75	114.00
2	AB	2767	C	O4'-C1'-C2'	-5.50	102.10	107.60
32	A5	31	LEU	CA-C-N	5.50	127.59	120.44
32	A5	31	LEU	C-N-CA	5.50	127.59	120.44
35	BA	244	U	C4'-C3'-O3'	-5.50	101.15	109.40
35	BA	759	A	C1'-O4'-C4'	-5.50	104.40	109.90
35	BA	1289	A	P-O3'-C3'	5.50	128.45	120.20
35	BA	1500	A	C5'-C4'-C3'	-5.50	107.75	116.00
51	BQ	22	LYS	CA-C-N	5.50	131.61	122.54
51	BQ	22	LYS	C-N-CA	5.50	131.61	122.54
57	BW	16	ALA	N-CA-C	5.50	117.27	111.28
2	AB	146	A	C4'-C3'-C2'	-5.50	97.10	102.60
2	AB	821	A	O4'-C1'-C2'	-5.50	102.10	107.60
2	AB	915	C	C5'-C4'-O4'	5.50	118.04	109.80
2	AB	956	G	O4'-C1'-N9	5.50	116.75	108.50
2	AB	1254	A	C4'-C3'-O3'	-5.50	101.16	109.40
16	AP	30	ARG	N-CA-C	5.50	120.10	112.90
31	A4	47	ILE	CA-CB-CG2	5.50	119.85	110.50
35	BA	124	C	C3'-C2'-C1'	5.50	106.80	101.30
35	BA	808	C	C4'-C3'-O3'	5.50	121.24	113.00
35	BA	961	U	O5'-C5'-C4'	5.50	119.75	111.50
35	BA	1049	U	O4'-C1'-N1	5.50	116.44	108.20
41	BG	73	ASN	CA-CB-CG	5.50	118.10	112.60
2	AB	1210	G	O4'-C4'-C3'	5.50	109.50	104.00
2	AB	2832	U	O4'-C1'-N1	5.50	116.44	108.20
35	BA	782	A	C4'-C3'-C2'	-5.50	97.11	102.60
35	BA	1304	G	C4'-C3'-C2'	-5.50	97.11	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BF	177	LEU	N-CA-C	-5.50	106.74	113.50
2	AB	1239	G	C5'-C4'-O4'	5.49	118.04	109.80
2	AB	1756	G	O4'-C1'-C2'	-5.49	102.11	107.60
2	AB	2899	A	C4'-C3'-C2'	-5.49	97.11	102.60
24	AX	37	PRO	N-CA-CB	5.49	108.19	103.36
32	A5	26	ASN	OD1-CG-ND2	5.49	128.09	122.60
35	BA	567	G	O3'-P-O5'	-5.49	95.76	104.00
35	BA	1355	G	O4'-C1'-N9	5.49	116.74	108.50
50	BP	104	ASN	CA-CB-CG	-5.49	107.11	112.60
12	AL	136	GLN	CA-CB-CG	5.49	125.08	114.10
16	AP	111	ALA	CA-C-N	5.49	130.22	122.09
16	AP	111	ALA	C-N-CA	5.49	130.22	122.09
35	BA	888	G	O4'-C1'-C2'	-5.49	102.11	107.60
2	AB	44	A	C5'-C4'-O4'	5.49	118.04	109.80
2	AB	662	G	C2'-C3'-O3'	-5.49	105.47	113.70
2	AB	1672	A	C3'-C2'-O2'	5.49	118.94	110.70
2	AB	2273	A	N9-C1'-C2'	5.49	120.24	112.00
47	BM	76	ILE	N-CA-CB	5.49	116.91	110.82
2	AB	1264	A	C4'-C3'-C2'	-5.49	97.11	102.60
2	AB	2247	A	O5'-C5'-C4'	5.49	119.73	111.50
35	BA	191	G	C3'-C2'-O2'	5.49	118.93	110.70
35	BA	1109	C	O4'-C1'-C2'	-5.49	102.11	107.60
35	BA	1417	G	O4'-C4'-C3'	5.49	109.49	104.00
45	BK	66	GLN	OE1-CD-NE2	-5.49	117.11	122.60
48	BN	51	PHE	CA-CB-CG	5.49	119.29	113.80
1	AA	71	C	O4'-C1'-C2'	-5.49	102.11	107.60
2	AB	328	U	O4'-C4'-C3'	5.49	109.49	104.00
2	AB	2475	C	C4'-C3'-C2'	-5.49	97.11	102.60
2	AB	2610	C	O4'-C1'-N1	5.49	116.43	108.20
37	BC	19	A	O5'-C5'-C4'	-5.49	103.27	111.50
1	AA	102	G	C4'-C3'-C2'	-5.49	97.11	102.60
2	AB	1038	G	N9-C1'-C2'	-5.49	103.77	112.00
2	AB	2813	A	C2'-C3'-O3'	5.49	121.93	113.70
8	AH	78	VAL	CA-CB-CG2	5.49	119.73	110.40
10	AJ	160	ALA	N-CA-C	5.49	118.02	111.71
18	AR	3	ILE	CA-C-N	5.49	127.92	120.63
18	AR	3	ILE	C-N-CA	5.49	127.92	120.63
18	AR	95	LYS	CA-C-N	5.49	131.16	122.60
18	AR	95	LYS	C-N-CA	5.49	131.16	122.60
31	A4	51	ALA	CA-C-N	5.49	132.02	121.54
31	A4	51	ALA	C-N-CA	5.49	132.02	121.54
35	BA	129	A	P-O5'-C5'	5.49	129.13	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	348	G	O4'-C4'-C3'	5.49	109.48	104.00
35	BA	1369	C	C1'-C2'-O2'	5.49	116.63	108.40
35	BA	1385	G	O4'-C4'-C3'	5.49	109.48	104.00
47	BM	61	ALA	CA-C-N	5.49	132.02	121.54
47	BM	61	ALA	C-N-CA	5.49	132.02	121.54
47	BM	99	GLN	OE1-CD-NE2	5.49	128.09	122.60
2	AB	452	G	C5'-C4'-O4'	5.48	118.03	109.80
2	AB	552	U	O4'-C1'-C2'	-5.48	102.12	107.60
4	AD	41	GLY	CA-C-O	5.48	125.11	119.02
8	AH	61	TRP	CD2-CE2-CZ2	5.48	127.88	122.40
35	BA	1453	G	P-O3'-C3'	5.48	128.43	120.20
46	BL	100	ALA	CA-C-N	5.48	131.50	121.85
46	BL	100	ALA	C-N-CA	5.48	131.50	121.85
2	AB	292	U	O4'-C1'-N1	5.48	116.72	108.50
2	AB	319	G	C4'-C3'-C2'	5.48	108.08	102.60
2	AB	685	A	P-O3'-C3'	5.48	128.42	120.20
2	AB	1118	C	N1-C1'-C2'	-5.48	103.78	112.00
5	AE	42	ASN	CA-CB-CG	-5.48	107.12	112.60
10	AJ	50	TYR	CA-C-N	5.48	131.18	122.74
10	AJ	50	TYR	C-N-CA	5.48	131.18	122.74
35	BA	141	G	C3'-C2'-C1'	5.48	106.78	101.30
35	BA	195	A	O4'-C1'-C2'	-5.48	102.12	107.60
35	BA	720	C	C4'-C3'-O3'	-5.48	104.78	113.00
35	BA	929	G	O4'-C4'-C3'	-5.48	98.52	104.00
35	BA	1078	U	O4'-C4'-C3'	5.48	109.48	104.00
35	BA	1172	C	C2'-C3'-O3'	-5.48	105.48	113.70
35	BA	1427	C	C1'-C2'-O2'	5.48	116.62	108.40
35	BA	1435	G	O4'-C4'-C3'	5.48	109.48	104.00
38	BD	29	C	O4'-C1'-N1	5.48	116.72	108.50
44	BJ	164	GLN	CA-C-N	5.48	130.35	122.40
44	BJ	164	GLN	C-N-CA	5.48	130.35	122.40
2	AB	580	U	O4'-C4'-C3'	5.48	109.48	104.00
3	AC	176	GLY	O-C-N	-5.48	119.25	123.80
8	AH	47	ASN	OD1-CG-ND2	-5.48	117.12	122.60
19	AS	2	ARG	NE-CZ-NH2	-5.48	114.27	119.20
35	BA	799	G	C4'-C3'-C2'	-5.48	97.12	102.60
35	BA	1089	G	O5'-C5'-C4'	5.48	119.72	111.50
35	BA	1272	G	C4'-C3'-C2'	-5.48	97.12	102.60
35	BA	1354	U	C5'-C4'-O4'	5.48	118.02	109.80
48	BN	123	PRO	CA-N-CD	-5.48	104.33	112.00
2	AB	490	C	C1'-O4'-C4'	5.48	115.18	109.70
2	AB	590	A	C1'-O4'-C4'	-5.48	104.42	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	946	C	C1'-O4'-C4'	5.48	115.38	109.90
2	AB	2600	A	O4'-C4'-C3'	5.48	109.48	104.00
17	AQ	15	ARG	O-C-N	5.48	128.40	122.15
35	BA	710	G	C1'-O4'-C4'	-5.48	104.42	109.90
36	BB	11	U	C5'-C4'-C3'	-5.48	107.78	116.00
51	BQ	17	ASP	N-CA-CB	-5.48	102.05	110.16
2	AB	2421	G	C1'-O4'-C4'	5.48	115.38	109.90
2	AB	2432	A	O4'-C1'-N9	5.48	116.72	108.50
2	AB	2564	A	P-O5'-C5'	5.48	129.12	120.90
7	AG	74	ALA	N-CA-C	5.48	116.98	110.19
7	AG	90	LEU	CA-C-O	-5.48	114.50	120.36
15	AO	24	THR	CA-C-O	5.48	126.01	119.60
35	BA	674	G	C4'-C3'-C2'	5.48	108.08	102.60
53	BS	48	GLU	CB-CA-C	5.48	119.80	111.80
2	AB	328	U	C3'-C2'-C1'	5.48	106.78	101.30
2	AB	579	G	C1'-C2'-O2'	5.48	116.61	108.40
2	AB	2092	U	C4'-C3'-C2'	-5.48	97.12	102.60
2	AB	2452	C	C1'-C2'-O2'	-5.48	100.19	108.40
35	BA	656	G	O4'-C4'-C3'	-5.48	98.52	104.00
35	BA	761	G	C3'-C2'-O2'	5.48	118.91	110.70
35	BA	1292	G	C4'-C3'-C2'	-5.48	97.12	102.60
55	BU	41	SER	CA-C-O	-5.48	113.67	119.97
2	AB	1100	C	O3'-P-O5'	5.47	112.21	104.00
2	AB	1523	U	C2'-C3'-O3'	-5.47	105.49	113.70
2	AB	1965	C	C5'-C4'-C3'	-5.47	107.79	116.00
2	AB	2821	A	C3'-C2'-O2'	5.47	118.91	110.70
26	AZ	33	HIS	CB-CG-CD2	-5.47	124.08	131.20
35	BA	8	A	C3'-C2'-C1'	5.47	106.97	101.50
35	BA	156	C	O4'-C1'-N1	5.47	116.71	108.50
35	BA	1250	A	C5'-C4'-O4'	5.47	118.01	109.80
39	BE	162	VAL	CA-CB-CG1	5.47	119.71	110.40
42	BH	42	ASN	CA-CB-CG	5.47	118.07	112.60
52	BR	8	ALA	N-CA-C	5.47	117.33	111.36
53	BS	58	ALA	N-CA-C	5.47	117.25	111.28
2	AB	363	G	O5'-C5'-C4'	5.47	119.71	111.50
8	AH	167	VAL	CA-C-N	5.47	127.91	120.63
8	AH	167	VAL	C-N-CA	5.47	127.91	120.63
13	AM	95	ILE	CB-CA-C	5.47	117.84	111.55
13	AM	114	LYS	CB-CA-C	5.47	120.16	110.85
35	BA	117	G	C3'-C2'-O2'	5.47	118.91	110.70
35	BA	304	U	C1'-C2'-O2'	-5.47	100.19	108.40
35	BA	1492	A	C1'-O4'-C4'	-5.47	104.23	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BN	68	ARG	CA-C-O	-5.47	115.07	120.82
50	BP	42	VAL	N-CA-C	-5.47	102.52	109.80
2	AB	1019	U	C4'-C3'-C2'	-5.47	97.13	102.60
2	AB	1176	U	O4'-C1'-N1	5.47	116.71	108.50
2	AB	2664	G	C2'-C3'-O3'	-5.47	105.49	113.70
19	AS	69	ARG	NE-CZ-NH1	5.47	126.97	121.50
35	BA	411	A	O3'-P-O5'	5.47	112.21	104.00
1	AA	112	G	N9-C1'-C2'	-5.47	103.80	112.00
2	AB	177	G	N9-C1'-C2'	5.47	122.20	114.00
2	AB	928	A	O4'-C1'-C2'	-5.47	102.13	107.60
2	AB	1564	C	C5'-C4'-O4'	5.47	118.00	109.80
2	AB	2302	U	C1'-C2'-O2'	5.47	116.61	108.40
3	AC	174	THR	CA-CB-OG1	5.47	117.81	109.60
6	AF	176	ASP	O-C-N	5.47	125.96	121.31
35	BA	804	U	O4'-C1'-N1	5.47	116.71	108.50
35	BA	1202	U	C3'-C2'-C1'	5.47	106.77	101.30
35	BA	1279	G	C4'-C3'-O3'	-5.47	104.80	113.00
37	BC	42	U	C2'-C3'-O3'	5.47	121.91	113.70
45	BK	45	ILE	CA-C-N	5.47	129.84	120.71
45	BK	45	ILE	C-N-CA	5.47	129.84	120.71
2	AB	1583	A	O5'-C5'-C4'	5.47	119.90	111.70
2	AB	1988	G	N9-C1'-C2'	-5.47	103.80	112.00
19	AS	94	LEU	CD1-CG-CD2	-5.47	98.77	110.80
35	BA	511	C	O4'-C1'-C2'	-5.47	100.33	105.80
35	BA	1176	A	C1'-O4'-C4'	5.47	115.37	109.90
42	BH	40	ASP	CA-CB-CG	5.47	118.07	112.60
2	AB	1597	A	O4'-C1'-C2'	-5.47	102.13	107.60
2	AB	2310	C	C5'-C4'-C3'	-5.47	107.80	116.00
7	AG	62	GLN	OE1-CD-NE2	5.47	128.07	122.60
35	BA	83	C	C4'-C3'-O3'	-5.47	104.80	113.00
35	BA	319	G	O4'-C1'-C2'	-5.47	102.13	107.60
35	BA	831	A	N9-C1'-C2'	-5.47	103.80	112.00
35	BA	926	G	O4'-C4'-C3'	5.47	111.57	106.10
2	AB	1748	C	O4'-C1'-N1	5.46	116.70	108.50
2	AB	1779	U	C4'-C3'-C2'	-5.46	97.14	102.60
9	AI	63	ALA	CA-C-N	5.46	129.92	120.58
9	AI	63	ALA	C-N-CA	5.46	129.92	120.58
23	AW	45	GLN	OE1-CD-NE2	5.46	128.06	122.60
25	AY	83	ALA	CA-C-O	-5.46	114.53	120.81
26	AZ	1	SER	CB-CA-C	5.46	120.48	110.10
35	BA	66	A	C3'-C2'-O2'	5.46	118.90	110.70
35	BA	301	G	O3'-P-O5'	-5.46	95.80	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	BJ	32	ASP	CB-CA-C	5.46	119.49	111.73
44	BJ	61	PHE	CA-C-N	5.46	127.60	120.28
44	BJ	61	PHE	C-N-CA	5.46	127.60	120.28
50	BP	7	ASN	CA-CB-CG	-5.46	107.14	112.60
2	AB	408	G	C5'-C4'-C3'	-5.46	107.81	116.00
2	AB	1724	G	C5'-C4'-O4'	5.46	117.99	109.80
2	AB	1792	G	O4'-C1'-N9	5.46	116.69	108.50
9	AI	113	SER	N-CA-CB	-5.46	101.26	110.49
26	AZ	35	HIS	CE1-NE2-CD2	5.46	114.46	109.00
2	AB	985	C	P-O5'-C5'	5.46	129.09	120.90
2	AB	1272	A	O3'-P-O5'	-5.46	95.81	104.00
2	AB	2323	G	P-O3'-C3'	5.46	128.39	120.20
25	AY	11	ASN	CB-CG-ND2	5.46	124.59	116.40
35	BA	312	C	O4'-C1'-C2'	-5.46	102.14	107.60
35	BA	410	G	C5'-C4'-C3'	-5.46	107.81	116.00
35	BA	817	C	P-O3'-C3'	5.46	128.39	120.20
35	BA	1369	C	C4'-C3'-C2'	-5.46	97.14	102.60
35	BA	1484	C	C1'-C2'-O2'	5.46	116.59	108.40
39	BE	29	PHE	CA-C-N	5.46	130.22	123.12
39	BE	29	PHE	C-N-CA	5.46	130.22	123.12
42	BH	55	VAL	CB-CA-C	-5.46	108.56	114.35
43	BI	58	HIS	CB-CG-CD2	-5.46	124.10	131.20
2	AB	1171	G	C3'-C2'-O2'	5.46	118.89	110.70
2	AB	1892	C	C5'-C4'-O4'	5.46	117.99	109.80
2	AB	2185	U	N1-C1'-C2'	-5.46	103.81	112.00
2	AB	2463	C	C4'-C3'-C2'	-5.46	97.14	102.60
30	A3	12	ARG	NH1-CZ-NH2	-5.46	112.20	119.30
2	AB	314	C	C3'-C2'-C1'	-5.46	95.84	101.30
2	AB	1668	A	O3'-P-O5'	5.46	112.19	104.00
4	AD	25	LYS	CA-C-N	5.46	129.47	121.67
4	AD	25	LYS	C-N-CA	5.46	129.47	121.67
41	BG	11	SER	CA-C-N	5.46	128.61	120.31
41	BG	11	SER	C-N-CA	5.46	128.61	120.31
2	AB	877	A	C4'-C3'-O3'	-5.46	104.82	113.00
2	AB	1154	G	O4'-C1'-N9	5.46	116.69	108.50
2	AB	1344	U	O4'-C1'-N1	5.46	116.39	108.20
2	AB	2739	U	O4'-C1'-N1	5.46	116.68	108.50
2	AB	2812	G	C5'-C4'-O4'	5.46	117.98	109.80
35	BA	1197	A	C4'-C3'-C2'	-5.46	97.14	102.60
35	BA	1323	G	O3'-P-O5'	5.46	112.19	104.00
35	BA	1330	U	C5'-C4'-C3'	-5.46	107.82	116.00
45	BK	71	VAL	CB-CA-C	5.46	118.96	110.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BN	72	ALA	CA-C-O	-5.46	114.64	120.42
2	AB	191	A	O3'-P-O5'	5.46	112.18	104.00
35	BA	862	C	C1'-O4'-C4'	-5.46	104.44	109.90
51	BQ	100	TRP	CE2-CD2-CG	5.46	113.75	107.20
2	AB	575	A	O3'-P-O5'	-5.45	95.82	104.00
2	AB	1050	A	O4'-C1'-C2'	-5.45	102.15	107.60
2	AB	1528	A	O4'-C1'-C2'	-5.45	102.15	107.60
10	AJ	58	LEU	CA-C-N	5.45	127.59	120.28
10	AJ	58	LEU	C-N-CA	5.45	127.59	120.28
10	AJ	118	PRO	CA-C-N	5.45	127.85	120.38
10	AJ	118	PRO	C-N-CA	5.45	127.85	120.38
23	AW	3	LYS	N-CA-C	5.45	119.10	112.23
26	AZ	35	HIS	ND1-CE1-NE2	-5.45	102.95	108.40
32	A5	35	ARG	CA-C-O	5.45	126.55	120.82
35	BA	238	A	C3'-C2'-O2'	5.45	118.88	110.70
35	BA	766	A	O4'-C1'-C2'	5.45	113.05	107.60
40	BF	142	ARG	NE-CZ-NH2	5.45	124.11	119.20
57	BW	27	MET	CA-C-O	-5.45	115.07	121.07
14	AN	55	MET	CA-C-N	5.45	125.75	119.92
14	AN	55	MET	C-N-CA	5.45	125.75	119.92
35	BA	343	U	C5'-C4'-O4'	5.45	117.98	109.80
35	BA	895	G	C5'-C4'-O4'	5.45	117.98	109.80
1	AA	111	U	O4'-C1'-C2'	5.45	113.05	107.60
2	AB	350	G	C4'-C3'-C2'	-5.45	97.15	102.60
2	AB	1805	A	C1'-O4'-C4'	5.45	115.35	109.90
2	AB	1851	U	C4'-C3'-O3'	-5.45	104.82	113.00
2	AB	2333	A	C1'-C2'-O2'	5.45	119.98	111.80
35	BA	351	G	C3'-C2'-C1'	5.45	106.95	101.50
35	BA	448	A	C5'-C4'-C3'	-5.45	107.83	116.00
38	BD	66	C	O4'-C1'-C2'	-5.45	102.15	107.60
38	BD	71	G	C1'-C2'-O2'	5.45	116.58	108.40
2	AB	1006	C	O3'-P-O5'	-5.45	95.83	104.00
2	AB	1063	G	C4'-C3'-C2'	-5.45	97.15	102.60
2	AB	1496	A	C5'-C4'-C3'	-5.45	107.83	116.00
4	AD	74	PRO	N-CA-C	5.45	119.79	111.34
6	AF	118	LEU	O-C-N	5.45	129.60	122.68
12	AL	27	ARG	O-C-N	5.45	129.63	122.33
22	AV	28	ASN	CA-C-N	5.45	131.94	121.54
22	AV	28	ASN	C-N-CA	5.45	131.94	121.54
27	A0	40	SER	CA-C-O	-5.45	112.68	119.38
35	BA	81	A	C3'-C2'-C1'	5.45	106.75	101.30
35	BA	169	C	O4'-C1'-N1	5.45	116.67	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	930	C	O4'-C1'-N1	5.45	116.67	108.50
35	BA	1034	G	C3'-C2'-C1'	-5.45	95.85	101.30
35	BA	1044	A	C4'-C3'-C2'	-5.45	97.15	102.60
2	AB	57	C	O4'-C1'-N1	5.45	116.67	108.50
2	AB	443	A	C3'-C2'-C1'	5.45	106.75	101.30
2	AB	473	G	C5'-C4'-C3'	-5.45	107.83	116.00
2	AB	590	A	C3'-C2'-O2'	5.45	118.87	110.70
2	AB	2609	U	C4'-C3'-C2'	-5.45	97.15	102.60
35	BA	1231	G	C4'-C3'-C2'	-5.45	97.15	102.60
37	BC	45	G	C4'-C3'-C2'	-5.45	97.15	102.60
1	AA	77	U	O4'-C4'-C3'	-5.45	98.55	104.00
2	AB	1173	U	O3'-P-O5'	-5.45	95.83	104.00
2	AB	1474	U	C3'-C2'-C1'	5.45	106.75	101.30
2	AB	1706	C	O3'-P-O5'	-5.45	95.83	104.00
2	AB	2305	U	C4'-C3'-C2'	-5.45	97.16	102.60
2	AB	2452	C	C3'-C2'-O2'	5.45	118.87	110.70
3	AC	143	GLY	N-CA-C	-5.45	107.26	115.32
10	AJ	112	PHE	CA-CB-CG	5.45	119.25	113.80
16	AP	28	LEU	O-C-N	5.45	127.68	122.07
17	AQ	60	GLU	CA-C-O	-5.45	114.20	120.24
35	BA	16	A	N9-C1'-C2'	5.45	120.17	112.00
35	BA	313	A	C4'-C3'-C2'	-5.45	97.16	102.60
35	BA	681	A	C4'-C3'-C2'	-5.45	97.16	102.60
35	BA	1236	A	O4'-C4'-C3'	5.45	109.44	104.00
50	BP	112	ARG	CA-C-O	-5.45	115.62	121.56
51	BQ	8	ARG	NE-CZ-NH1	5.45	126.94	121.50
58	BX	55	HIS	CG-CD2-NE2	-5.45	101.75	107.20
2	AB	2029	G	C3'-C2'-O2'	5.44	118.87	110.70
2	AB	2091	C	C4'-C3'-O3'	5.44	121.17	113.00
13	AM	7	MET	CA-C-O	-5.44	114.84	121.05
2	AB	805	G	C4'-C3'-O3'	5.44	117.56	109.40
2	AB	1587	G	C2'-C3'-O3'	-5.44	105.53	113.70
2	AB	1587	G	C5'-C4'-C3'	-5.44	107.84	116.00
31	A4	45	HIS	ND1-CG-CD2	5.44	111.54	106.10
35	BA	414	A	C4'-C3'-C2'	-5.44	97.16	102.60
37	BC	57	C	O5'-C5'-C4'	-5.44	103.34	111.50
55	BU	12	PHE	CA-CB-CG	5.44	119.24	113.80
2	AB	1563	U	C1'-O4'-C4'	-5.44	104.46	109.90
4	AD	63	ILE	N-CA-C	5.44	117.85	111.05
14	AN	113	ALA	CA-C-O	-5.44	113.48	119.08
20	AT	89	HIS	O-C-N	-5.44	117.39	123.48
35	BA	1284	C	C1'-O4'-C4'	5.44	115.34	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1500	A	O5'-C5'-C4'	-5.44	103.34	111.50
43	BI	82	ASP	CA-CB-CG	-5.44	107.16	112.60
2	AB	1289	C	C1'-C2'-O2'	5.44	116.56	108.40
35	BA	1419	G	C1'-C2'-O2'	5.44	116.56	108.40
35	BA	1499	A	C2'-C3'-O3'	5.44	121.86	113.70
2	AB	105	C	C4'-C3'-C2'	-5.44	97.16	102.60
2	AB	579	G	C5'-C4'-O4'	5.44	117.96	109.80
2	AB	2690	U	O5'-C5'-C4'	-5.44	103.54	111.70
3	AC	43	ASP	N-CA-CB	-5.44	102.81	111.62
4	AD	24	HIS	ND1-CE1-NE2	5.44	113.84	108.40
9	AI	91	PHE	CA-C-N	5.44	126.02	119.98
9	AI	91	PHE	C-N-CA	5.44	126.02	119.98
26	AZ	73	ARG	NE-CZ-NH2	-5.44	114.31	119.20
35	BA	167	A	P-O5'-C5'	5.44	129.06	120.90
35	BA	454	G	O3'-P-O5'	5.44	112.16	104.00
35	BA	565	U	C3'-C2'-C1'	5.44	106.74	101.30
35	BA	731	G	O4'-C4'-C3'	5.44	109.44	104.00
35	BA	845	A	P-O3'-C3'	5.44	128.36	120.20
2	AB	446	G	C3'-C2'-C1'	5.44	106.94	101.50
2	AB	457	A	C1'-O4'-C4'	5.44	115.14	109.70
2	AB	1711	A	C2'-C3'-O3'	-5.44	105.55	113.70
2	AB	1774	C	O4'-C1'-N1	5.44	116.65	108.50
8	AH	42	VAL	N-CA-CB	-5.44	105.05	111.90
19	AS	60	TRP	N-CA-CB	5.44	117.89	110.01
35	BA	211	G	C3'-C2'-C1'	5.44	106.74	101.30
35	BA	496	A	C1'-O4'-C4'	-5.44	104.46	109.90
56	BV	62	THR	CA-CB-OG1	5.44	117.75	109.60
2	AB	1810	A	O4'-C4'-C3'	5.43	109.43	104.00
2	AB	1845	G	C5'-C4'-O4'	5.43	117.95	109.80
2	AB	1922	G	C1'-C2'-O2'	5.43	116.55	108.40
4	AD	188	ARG	NE-CZ-NH2	5.43	124.09	119.20
26	AZ	43	LYS	N-CA-C	5.43	118.89	111.39
35	BA	547	A	P-O3'-C3'	5.43	128.35	120.20
35	BA	1202	U	C1'-O4'-C4'	-5.43	104.47	109.90
35	BA	1411	C	O4'-C4'-C3'	5.43	109.44	104.00
41	BG	111	ALA	CA-C-N	5.43	127.51	120.44
41	BG	111	ALA	C-N-CA	5.43	127.51	120.44
41	BG	139	ASN	CA-CB-CG	5.43	118.03	112.60
2	AB	1019	U	C5'-C4'-C3'	-5.43	107.85	116.00
2	AB	1501	G	O4'-C1'-C2'	-5.43	102.17	107.60
2	AB	1621	U	O4'-C4'-C3'	5.43	109.43	104.00
4	AD	130	PRO	CA-C-O	-5.43	115.15	121.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	58	C	O4'-C1'-N1	5.43	116.65	108.50
35	BA	535	A	C5'-C4'-C3'	-5.43	107.05	115.20
35	BA	1014	A	C1'-C2'-O2'	-5.43	100.25	108.40
35	BA	1232	U	C5'-C4'-O4'	5.43	117.95	109.80
35	BA	1247	U	O4'-C4'-C3'	5.43	109.43	104.00
38	BD	11	A	O4'-C4'-C3'	5.43	109.43	104.00
45	BK	116	ARG	NE-CZ-NH1	5.43	126.93	121.50
55	BU	15	GLU	CA-C-O	-5.43	114.56	120.81
2	AB	2569	G	C3'-C2'-O2'	-5.43	102.55	110.70
2	AB	2813	A	C3'-C2'-C1'	5.43	106.73	101.30
2	AB	2887	A	C5'-C4'-O4'	5.43	117.95	109.80
35	BA	1412	C	O4'-C4'-C3'	5.43	109.43	104.00
41	BG	96	ARG	CA-C-N	5.43	127.56	120.28
41	BG	96	ARG	C-N-CA	5.43	127.56	120.28
2	AB	1476	U	O5'-C5'-C4'	-5.43	103.36	111.50
2	AB	1701	A	O4'-C1'-N9	5.43	116.64	108.50
9	AI	31	VAL	N-CA-CB	5.43	118.81	111.21
11	AK	115	ASP	CA-C-N	5.43	128.47	120.82
11	AK	115	ASP	C-N-CA	5.43	128.47	120.82
15	AO	89	VAL	CB-CA-C	5.43	118.21	111.15
35	BA	1075	U	C2'-C3'-O3'	-5.43	105.56	113.70
53	BS	19	VAL	CA-C-N	5.43	130.53	122.71
53	BS	19	VAL	C-N-CA	5.43	130.53	122.71
2	AB	471	A	C4'-C3'-C2'	-5.43	97.17	102.60
7	AG	93	GLU	CA-C-O	-5.43	114.80	120.55
12	AL	77	HIS	ND1-CG-CD2	5.43	111.53	106.10
12	AL	100	VAL	CA-C-O	-5.43	115.42	121.17
35	BA	905	U	C1'-O4'-C4'	-5.43	104.47	109.90
35	BA	955	U	O3'-P-O5'	-5.43	95.86	104.00
38	BD	70	C	O4'-C1'-N1	5.43	116.64	108.50
43	BI	123	ASP	CA-C-N	5.43	128.56	120.31
43	BI	123	ASP	C-N-CA	5.43	128.56	120.31
53	BS	78	VAL	CA-CB-CG2	5.43	119.63	110.40
2	AB	993	G	C3'-C2'-C1'	-5.43	95.87	101.30
2	AB	1218	G	O4'-C4'-C3'	5.43	109.43	104.00
2	AB	1400	U	C4'-C3'-C2'	-5.43	97.17	102.60
7	AG	3	LEU	CB-CA-C	5.43	119.49	110.81
7	AG	64	PRO	N-CA-CB	5.43	108.15	103.27
33	A6	29	ARG	NE-CZ-NH2	5.43	124.08	119.20
35	BA	988	G	C3'-C2'-C1'	5.43	106.73	101.30
51	BQ	8	ARG	CA-C-O	-5.43	115.09	120.90
2	AB	425	G	C3'-C2'-O2'	5.42	118.84	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	AH	161	VAL	CA-CB-CG1	5.42	119.62	110.40
9	AI	48	GLU	CA-C-O	-5.42	112.93	119.49
29	A2	55	GLY	CA-C-O	-5.42	113.53	119.88
35	BA	772	U	C2'-C3'-O3'	5.42	121.84	113.70
35	BA	1420	U	C4'-C3'-C2'	-5.42	97.17	102.60
35	BA	1479	C	C1'-C2'-O2'	5.42	116.54	108.40
2	AB	1942	C	O4'-C1'-N1	5.42	116.64	108.50
12	AL	96	ARG	CB-CA-C	5.42	120.85	110.17
35	BA	772	U	C5'-C4'-O4'	5.42	117.94	109.80
35	BA	962	C	C3'-C2'-O2'	5.42	118.83	110.70
35	BA	1259	C	O3'-P-O5'	5.42	112.13	104.00
2	AB	420	C	O4'-C1'-C2'	-5.42	102.18	107.60
2	AB	476	G	C4'-C3'-C2'	-5.42	97.18	102.60
2	AB	1419	A	C5'-C4'-O4'	5.42	117.93	109.80
2	AB	1748	C	C3'-C2'-O2'	5.42	118.83	110.70
2	AB	2532	G	P-O5'-C5'	5.42	129.03	120.90
10	AJ	41	ARG	CA-C-N	5.42	128.32	120.79
10	AJ	41	ARG	C-N-CA	5.42	128.32	120.79
35	BA	168	G	O3'-P-O5'	5.42	112.13	104.00
35	BA	267	C	C3'-C2'-C1'	5.42	106.72	101.30
52	BR	40	GLY	CA-C-N	5.42	127.49	120.44
52	BR	40	GLY	C-N-CA	5.42	127.49	120.44
2	AB	37	C	C2'-C3'-O3'	-5.42	105.57	113.70
2	AB	514	A	O4'-C1'-C2'	-5.42	102.18	107.60
2	AB	753	A	C4'-C3'-C2'	-5.42	97.18	102.60
2	AB	873	C	O3'-P-O5'	-5.42	95.87	104.00
2	AB	1056	G	C2'-C3'-O3'	-5.42	105.57	113.70
19	AS	23	TYR	CA-CB-CG	5.42	123.66	113.90
27	A0	43	LEU	N-CA-C	5.42	119.06	112.23
35	BA	1269	A	O4'-C4'-C3'	5.42	109.42	104.00
39	BE	148	GLY	CA-C-N	5.42	130.54	122.30
39	BE	148	GLY	C-N-CA	5.42	130.54	122.30
2	AB	227	A	C5'-C4'-O4'	5.42	117.23	109.10
2	AB	1795	C	O4'-C1'-N1	5.42	116.63	108.50
2	AB	2471	A	C3'-C2'-C1'	-5.42	96.08	101.50
2	AB	2572	A	O4'-C1'-N9	5.42	116.33	108.20
2	AB	2842	G	C5'-C4'-O4'	5.42	117.93	109.80
35	BA	179	A	O4'-C1'-N9	5.42	116.63	108.50
35	BA	1019	A	C4'-C3'-C2'	-5.42	97.18	102.60
2	AB	392	U	O3'-P-O5'	-5.42	95.88	104.00
2	AB	1974	C	C3'-C2'-C1'	-5.42	95.88	101.30
2	AB	2134	A	O4'-C4'-C3'	5.42	109.42	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2484	G	C2'-C3'-O3'	5.42	121.82	113.70
2	AB	2587	A	O3'-P-O5'	-5.42	95.88	104.00
35	BA	537	G	C2'-C3'-O3'	-5.42	105.58	113.70
35	BA	1319	A	C5'-C4'-O4'	5.42	117.22	109.10
43	BI	68	GLN	CA-C-N	5.42	127.85	120.54
43	BI	68	GLN	C-N-CA	5.42	127.85	120.54
57	BW	74	HIS	N-CA-C	5.42	116.87	111.07
2	AB	172	A	C5'-C4'-O4'	5.42	117.92	109.80
2	AB	818	G	C3'-C2'-C1'	5.42	106.72	101.30
2	AB	1284	A	C1'-C2'-O2'	-5.42	100.28	108.40
36	BB	73	G	O4'-C4'-C3'	5.42	109.42	104.00
2	AB	1437	C	C5'-C4'-C3'	-5.41	107.88	116.00
12	AL	88	THR	CA-C-O	-5.41	115.81	121.55
24	AX	75	GLN	CA-C-N	5.41	128.78	120.82
24	AX	75	GLN	C-N-CA	5.41	128.78	120.82
49	BO	7	VAL	CA-C-N	5.41	129.88	120.68
49	BO	7	VAL	C-N-CA	5.41	129.88	120.68
2	AB	439	A	O4'-C1'-N9	5.41	116.62	108.50
2	AB	2723	C	O4'-C1'-C2'	-5.41	102.19	107.60
5	AE	27	ILE	CA-C-O	-5.41	114.76	120.39
6	AF	45	ALA	CA-C-N	5.41	131.88	121.54
6	AF	45	ALA	C-N-CA	5.41	131.88	121.54
2	AB	140	C	O4'-C1'-N1	5.41	116.32	108.20
2	AB	843	G	C4'-C3'-C2'	-5.41	97.19	102.60
2	AB	1477	A	O3'-P-O5'	-5.41	95.88	104.00
2	AB	1904	G	C2'-C3'-O3'	-5.41	105.58	113.70
4	AD	103	ILE	CB-CG1-CD1	5.41	125.16	113.80
9	AI	32	PRO	N-CA-CB	5.41	108.66	103.52
35	BA	171	A	C4'-C3'-C2'	-5.41	97.19	102.60
35	BA	791	G	O4'-C4'-C3'	5.41	109.41	104.00
35	BA	938	A	C1'-C2'-O2'	5.41	116.52	108.40
58	BX	40	PRO	CA-N-CD	-5.41	104.43	112.00
2	AB	1054	A	C3'-C2'-C1'	5.41	106.71	101.30
2	AB	2204	G	N9-C1'-C2'	-5.41	103.89	112.00
2	AB	2326	C	O4'-C1'-C2'	-5.41	102.19	107.60
2	AB	2440	C	O4'-C1'-N1	5.41	116.61	108.50
2	AB	2766	A	C5'-C4'-C3'	-5.41	107.89	116.00
2	AB	2902	C	C4'-C3'-C2'	-5.41	97.19	102.60
51	BQ	69	PRO	CA-C-N	5.41	131.87	121.54
51	BQ	69	PRO	C-N-CA	5.41	131.87	121.54
2	AB	1162	G	C4'-C3'-O3'	5.41	121.11	113.00
2	AB	1154	G	C4'-C3'-O3'	5.41	121.11	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1943	U	C5'-C4'-O4'	5.41	117.21	109.10
2	AB	2247	A	C5'-C4'-C3'	-5.41	107.89	116.00
2	AB	2502	G	C1'-O4'-C4'	5.41	115.11	109.70
2	AB	2774	C	C3'-C2'-O2'	5.41	118.81	110.70
35	BA	149	A	C3'-C2'-C1'	5.41	106.71	101.30
35	BA	551	U	C4'-C3'-C2'	-5.41	97.19	102.60
35	BA	609	A	C5'-C4'-C3'	5.41	124.11	116.00
35	BA	1044	A	C5'-C4'-C3'	-5.41	107.89	116.00
35	BA	1054	C	N1-C1'-C2'	-5.41	105.89	114.00
35	BA	1227	A	O5'-C5'-C4'	-5.41	103.59	111.70
35	BA	1362	A	O4'-C1'-N9	5.41	116.31	108.20
36	BB	66	C	C4'-C3'-O3'	5.41	121.11	113.00
2	AB	832	U	C1'-O4'-C4'	-5.40	104.50	109.90
2	AB	1265	A	C4'-C3'-O3'	-5.40	101.29	109.40
2	AB	2621	G	C3'-C2'-C1'	-5.40	95.90	101.30
2	AB	2633	G	C2'-C3'-O3'	5.40	121.81	113.70
13	AM	63	VAL	CA-CB-CG1	5.40	119.59	110.40
35	BA	725	G	O4'-C4'-C3'	5.40	109.40	104.00
2	AB	595	C	P-O5'-C5'	-5.40	112.80	120.90
2	AB	601	C	C5'-C4'-O4'	5.40	117.90	109.80
2	AB	718	A	C4'-C3'-C2'	-5.40	97.20	102.60
2	AB	844	A	C4'-C3'-C2'	-5.40	97.20	102.60
2	AB	2739	U	P-O3'-C3'	5.40	128.30	120.20
7	AG	140	ILE	O-C-N	5.40	129.03	123.03
15	AO	89	VAL	CA-C-O	-5.40	114.69	120.85
35	BA	215	C	O4'-C1'-N1	5.40	116.60	108.50
35	BA	1275	A	C4'-C3'-O3'	-5.40	104.90	113.00
48	BN	18	GLY	O-C-N	5.40	129.02	123.29
55	BU	60	ARG	NE-CZ-NH2	5.40	124.06	119.20
2	AB	363	G	C1'-O4'-C4'	5.40	115.30	109.90
2	AB	583	G	C3'-C2'-C1'	5.40	106.70	101.30
2	AB	609	A	C4'-C3'-C2'	-5.40	97.20	102.60
2	AB	1183	U	C5'-C4'-O4'	5.40	117.90	109.80
2	AB	1250	G	O4'-C1'-N9	5.40	116.30	108.20
2	AB	1253	A	C5'-C4'-O4'	5.40	117.20	109.10
2	AB	1358	G	O5'-C5'-C4'	-5.40	103.40	111.50
2	AB	1683	U	C1'-O4'-C4'	5.40	115.30	109.90
2	AB	2694	G	C5'-C4'-C3'	-5.40	107.90	116.00
2	AB	2750	A	O4'-C4'-C3'	5.40	111.50	106.10
2	AB	2889	C	O4'-C1'-N1	5.40	116.60	108.50
7	AG	52	ALA	N-CA-C	5.40	117.25	111.36
35	BA	397	A	C4'-C3'-C2'	-5.40	97.20	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1214	C	C4'-C3'-O3'	5.40	121.10	113.00
35	BA	1253	G	C2'-C3'-O3'	5.40	121.80	113.70
36	BB	18	G	O4'-C1'-C2'	5.40	111.20	105.80
41	BG	97	LEU	CA-C-N	5.40	127.96	120.29
41	BG	97	LEU	C-N-CA	5.40	127.96	120.29
41	BG	187	ARG	CD-NE-CZ	5.40	131.96	124.40
44	BJ	101	ARG	CA-C-O	-5.40	114.83	120.55
2	AB	2085	U	C1'-O4'-C4'	-5.40	104.50	109.90
7	AG	127	TYR	N-CA-C	5.40	117.28	109.07
35	BA	613	C	O4'-C1'-C2'	-5.40	102.20	107.60
35	BA	1426	G	C3'-C2'-C1'	5.40	106.70	101.30
40	BF	102	ILE	O-C-N	5.40	128.65	122.93
47	BM	43	PRO	CA-C-N	5.40	129.14	121.42
47	BM	43	PRO	C-N-CA	5.40	129.14	121.42
2	AB	1058	U	C5'-C4'-O4'	5.40	117.90	109.80
2	AB	1670	C	N1-C1'-C2'	-5.40	103.91	112.00
2	AB	2418	A	N9-C1'-C2'	-5.40	103.90	112.00
2	AB	2712	C	O4'-C1'-C2'	-5.40	100.40	105.80
4	AD	57	HIS	CE1-NE2-CD2	-5.40	103.60	109.00
6	AF	145	ASP	CA-C-N	5.40	130.78	122.68
6	AF	145	ASP	C-N-CA	5.40	130.78	122.68
13	AM	31	ARG	N-CA-C	5.40	120.35	113.55
19	AS	82	LEU	CA-C-N	5.40	127.51	120.28
19	AS	82	LEU	C-N-CA	5.40	127.51	120.28
21	AU	30	SER	CA-C-O	-5.40	114.25	120.24
32	A5	24	THR	CA-C-N	5.40	127.78	120.65
32	A5	24	THR	C-N-CA	5.40	127.78	120.65
35	BA	177	G	N9-C1'-C2'	-5.40	103.90	112.00
35	BA	269	C	C1'-C2'-O2'	5.40	116.50	108.40
42	BH	91	SER	CB-CA-C	5.40	119.72	110.81
1	AA	19	C	C4'-C3'-C2'	-5.40	97.20	102.60
2	AB	2057	G	C4'-C3'-O3'	-5.40	104.91	113.00
2	AB	2565	A	O4'-C1'-N9	5.40	116.59	108.50
2	AB	2881	U	C5'-C4'-C3'	-5.40	107.91	116.00
38	BD	26	C	C3'-C2'-C1'	5.40	106.70	101.30
2	AB	104	A	C3'-C2'-O2'	-5.39	102.61	110.70
2	AB	789	A	O5'-C5'-C4'	-5.39	103.61	111.70
2	AB	1002	G	N9-C1'-C2'	-5.39	103.91	112.00
2	AB	1301	A	C3'-C2'-C1'	-5.39	96.11	101.50
2	AB	1398	C	O4'-C4'-C3'	5.39	109.39	104.00
2	AB	1582	C	O4'-C4'-C3'	5.39	109.39	104.00
2	AB	1674	G	C4'-C3'-O3'	-5.39	101.31	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1998	A	P-O3'-C3'	5.39	128.29	120.20
35	BA	221	C	C4'-C3'-C2'	-5.39	97.21	102.60
40	BF	226	GLN	OE1-CD-NE2	-5.39	117.20	122.60
52	BR	74	VAL	CA-C-N	5.39	127.77	120.65
52	BR	74	VAL	C-N-CA	5.39	127.77	120.65
2	AB	32	C	P-O3'-C3'	5.39	128.29	120.20
2	AB	164	C	P-O3'-C3'	5.39	128.29	120.20
2	AB	592	A	C4'-C3'-C2'	5.39	107.99	102.60
2	AB	1846	G	C4'-C3'-O3'	5.39	121.09	113.00
2	AB	2609	U	C2'-C3'-O3'	5.39	117.59	109.50
35	BA	123	U	O4'-C1'-C2'	-5.39	102.21	107.60
38	BD	49	C	C4'-C3'-O3'	-5.39	101.31	109.40
58	BX	46	ARG	CA-C-O	-5.39	114.03	120.55
2	AB	478	A	O3'-P-O5'	5.39	112.09	104.00
2	AB	1612	C	C5'-C4'-C3'	-5.39	107.91	116.00
35	BA	1055	A	O3'-P-O5'	-5.39	95.91	104.00
35	BA	1327	C	C5'-C4'-C3'	-5.39	107.91	116.00
39	BE	87	ASP	CB-CA-C	5.39	119.28	110.17
1	AA	58	A	O4'-C1'-N9	5.39	116.58	108.50
2	AB	1047	G	C2'-C3'-O3'	5.39	117.59	109.50
2	AB	1808	A	C1'-O4'-C4'	5.39	115.09	109.70
2	AB	1862	G	O4'-C1'-N9	5.39	116.58	108.50
2	AB	2194	U	C4'-C3'-C2'	-5.39	97.21	102.60
2	AB	2249	U	C2'-C3'-O3'	-5.39	105.62	113.70
2	AB	2442	C	C5'-C4'-C3'	-5.39	107.91	116.00
2	AB	2564	A	O4'-C1'-N9	5.39	116.58	108.50
4	AD	45	ASN	CA-C-N	5.39	130.72	121.07
4	AD	45	ASN	C-N-CA	5.39	130.72	121.07
11	AK	48	ILE	CA-CB-CG1	5.39	119.56	110.40
18	AR	5	LYS	N-CA-C	5.39	122.28	110.80
35	BA	82	G	C4'-C3'-C2'	-5.39	97.21	102.60
35	BA	983	A	C1'-C2'-O2'	-5.39	100.32	108.40
1	AA	109	A	O5'-C5'-C4'	-5.39	103.42	111.50
2	AB	1215	G	C3'-C2'-C1'	-5.39	95.91	101.30
2	AB	1669	A	P-O5'-C5'	5.39	128.98	120.90
35	BA	815	A	O4'-C1'-C2'	-5.39	100.41	105.80
38	BD	63	C	O3'-P-O5'	-5.39	95.92	104.00
40	BF	26	LYS	N-CA-C	5.39	117.15	111.28
2	AB	353	C	O4'-C1'-N1	5.39	116.58	108.50
2	AB	915	C	P-O3'-C3'	5.39	128.28	120.20
2	AB	1237	A	O4'-C4'-C3'	-5.39	100.71	106.10
2	AB	1711	A	C1'-C2'-O2'	5.39	116.48	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2505	G	C4'-C3'-C2'	-5.39	97.21	102.60
8	AH	147	LEU	CA-C-N	5.39	134.12	121.52
8	AH	147	LEU	C-N-CA	5.39	134.12	121.52
35	BA	176	C	P-O5'-C5'	5.39	128.98	120.90
35	BA	201	G	O4'-C1'-N9	5.39	116.58	108.50
35	BA	714	G	O3'-P-O5'	5.39	112.08	104.00
35	BA	843	U	C3'-C2'-O2'	-5.39	106.52	114.60
39	BE	80	LYS	CG-CD-CE	-5.39	98.91	111.30
39	BE	204	ASP	N-CA-CB	-5.39	102.95	110.38
58	BX	11	PHE	CA-C-N	5.39	128.24	120.38
58	BX	11	PHE	C-N-CA	5.39	128.24	120.38
2	AB	303	G	C4'-C3'-C2'	-5.38	97.22	102.60
2	AB	2200	C	C4'-C3'-C2'	-5.38	97.22	102.60
2	AB	2342	C	C4'-C3'-C2'	-5.38	97.22	102.60
11	AK	76	ALA	N-CA-C	5.38	117.15	111.28
11	AK	120	ASP	CA-CB-CG	5.38	117.98	112.60
25	AY	16	GLU	N-CA-CB	-5.38	102.25	110.33
35	BA	580	C	P-O3'-C3'	5.38	128.28	120.20
42	BH	137	ARG	CA-C-N	5.38	127.81	120.54
42	BH	137	ARG	C-N-CA	5.38	127.81	120.54
1	AA	32	U	O4'-C1'-C2'	5.38	112.98	107.60
2	AB	567	U	C1'-O4'-C4'	-5.38	104.52	109.90
2	AB	841	G	C1'-C2'-O2'	-5.38	100.33	108.40
13	AM	85	VAL	N-CA-CB	5.38	117.14	111.00
35	BA	345	C	O3'-P-O5'	-5.38	95.92	104.00
35	BA	1238	A	C5'-C4'-O4'	5.38	117.87	109.80
54	BT	46	HIS	CA-CB-CG	5.38	119.18	113.80
1	AA	51	G	C1'-O4'-C4'	-5.38	104.52	109.90
2	AB	851	C	O5'-C5'-C4'	5.38	119.57	111.50
2	AB	1770	G	C5'-C4'-C3'	-5.38	107.93	116.00
35	BA	425	G	C3'-C2'-C1'	-5.38	95.92	101.30
35	BA	554	A	C4'-C3'-O3'	-5.38	104.93	113.00
35	BA	1133	G	C1'-C2'-O2'	5.38	116.47	108.40
35	BA	1302	C	C3'-C2'-O2'	5.38	118.77	110.70
40	BF	21	TRP	CE2-CD2-CE3	-5.38	113.42	118.80
40	BF	67	ILE	CA-C-N	5.38	130.43	123.00
40	BF	67	ILE	C-N-CA	5.38	130.43	123.00
2	AB	1577	C	C3'-C2'-O2'	5.38	118.77	110.70
21	AU	99	ARG	CD-NE-CZ	5.38	131.93	124.40
38	BD	12	G	C3'-C2'-O2'	5.38	118.77	110.70
38	BD	72	C	O4'-C1'-N1	5.38	116.57	108.50
1	AA	51	G	C5'-C4'-C3'	-5.38	107.93	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	69	G	O4'-C4'-C3'	5.38	109.38	104.00
2	AB	268	C	C4'-C3'-C2'	-5.38	97.22	102.60
2	AB	315	G	C2'-C3'-O3'	-5.38	105.63	113.70
2	AB	675	A	C4'-C3'-O3'	-5.38	104.93	113.00
2	AB	953	G	C5'-C4'-O4'	5.38	117.87	109.80
2	AB	2541	A	C5'-C4'-O4'	5.38	117.87	109.80
2	AB	2895	G	C3'-C2'-O2'	5.38	118.77	110.70
7	AG	5	ASP	CA-CB-CG	5.38	117.98	112.60
7	AG	42	ALA	CA-C-N	5.38	129.44	120.62
7	AG	42	ALA	C-N-CA	5.38	129.44	120.62
16	AP	112	TYR	CA-CB-CG	5.38	123.58	113.90
21	AU	34	ASP	O-C-N	5.38	127.90	122.09
35	BA	581	G	O4'-C1'-C2'	5.38	112.98	107.60
35	BA	717	U	O4'-C1'-N1	5.38	116.57	108.50
35	BA	1328	C	C3'-C2'-C1'	5.38	106.68	101.30
46	BL	64	ILE	CA-C-N	5.38	131.02	122.74
46	BL	64	ILE	C-N-CA	5.38	131.02	122.74
2	AB	500	G	O5'-C5'-C4'	5.38	119.56	111.50
2	AB	1075	C	O4'-C4'-C3'	5.38	109.38	104.00
2	AB	1479	G	C4'-C3'-C2'	-5.38	97.22	102.60
2	AB	2530	A	C4'-C3'-O3'	-5.38	104.94	113.00
2	AB	2588	G	O3'-P-O5'	-5.38	95.94	104.00
5	AE	185	ASN	OD1-CG-ND2	-5.38	117.22	122.60
6	AF	29	HIS	CG-CD2-NE2	-5.38	101.82	107.20
28	A1	33	HIS	CA-CB-CG	5.38	119.18	113.80
35	BA	453	G	C4'-C3'-C2'	-5.38	97.22	102.60
35	BA	561	U	O4'-C1'-N1	5.38	116.56	108.50
35	BA	600	A	O4'-C1'-N9	5.38	116.57	108.50
35	BA	1307	U	C1'-C2'-O2'	5.38	116.47	108.40
2	AB	1428	C	P-O5'-C5'	5.38	128.96	120.90
2	AB	1551	A	O4'-C1'-C2'	-5.38	102.22	107.60
2	AB	2280	G	O4'-C1'-C2'	-5.38	102.22	107.60
2	AB	2328	A	C5'-C4'-O4'	5.38	117.86	109.80
2	AB	2821	A	O4'-C1'-C2'	-5.38	102.22	107.60
3	AC	180	PHE	N-CA-C	5.38	117.81	110.55
35	BA	1526	G	C5'-C4'-O4'	5.38	117.86	109.80
1	AA	43	C	C5'-C4'-C3'	-5.37	107.14	115.20
2	AB	2040	G	C2'-C3'-O3'	-5.37	105.64	113.70
3	AC	77	VAL	N-CA-C	5.37	115.27	106.72
12	AL	47	HIS	CB-CG-CD2	-5.37	124.21	131.20
35	BA	75	G	N9-C1'-C2'	-5.37	103.94	112.00
35	BA	1374	A	C2'-C3'-O3'	-5.37	105.64	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	BC	48	C	P-O3'-C3'	5.37	128.26	120.20
2	AB	241	A	P-O3'-C3'	5.37	128.26	120.20
2	AB	455	C	O4'-C1'-C2'	-5.37	102.23	107.60
2	AB	667	U	C3'-C2'-O2'	5.37	118.76	110.70
2	AB	1468	U	C5'-C4'-C3'	-5.37	107.94	116.00
2	AB	1923	U	C1'-O4'-C4'	5.37	115.27	109.90
2	AB	2045	C	C3'-C2'-O2'	5.37	118.76	110.70
2	AB	2712	C	C5'-C4'-C3'	-5.37	107.14	115.20
21	AU	99	ARG	CA-CB-CG	5.37	124.84	114.10
35	BA	185	U	C3'-C2'-O2'	5.37	118.76	110.70
35	BA	964	A	N9-C1'-C2'	-5.37	103.94	112.00
35	BA	1282	C	C4'-C3'-O3'	5.37	121.06	113.00
41	BG	29	THR	CA-C-N	5.37	130.58	122.68
41	BG	29	THR	C-N-CA	5.37	130.58	122.68
1	AA	33	G	O4'-C1'-N9	5.37	116.56	108.50
36	BB	25	C	O3'-P-O5'	5.37	112.06	104.00
2	AB	2129	C	O4'-C1'-N1	5.37	116.25	108.20
2	AB	2642	G	C4'-C3'-O3'	-5.37	104.95	113.00
2	AB	2863	C	P-O3'-C3'	5.37	128.25	120.20
12	AL	3	THR	O-C-N	5.37	129.44	122.89
35	BA	427	U	C1'-O4'-C4'	-5.37	104.53	109.90
35	BA	652	U	O4'-C1'-N1	5.37	116.25	108.20
35	BA	803	G	C4'-C3'-O3'	5.37	121.05	113.00
35	BA	1377	A	C5'-C4'-C3'	-5.37	107.95	116.00
40	BF	24	ASN	CA-CB-CG	5.37	117.97	112.60
55	BU	29	LYS	CA-C-N	5.37	129.19	120.60
55	BU	29	LYS	C-N-CA	5.37	129.19	120.60
2	AB	2147	A	P-O3'-C3'	5.37	128.25	120.20
29	A2	56	ARG	O-C-N	5.37	129.37	122.93
35	BA	188	C	N1-C1'-C2'	5.37	120.05	112.00
2	AB	54	G	C5'-C4'-O4'	5.37	117.85	109.80
2	AB	327	G	O4'-C1'-N9	5.37	116.55	108.50
7	AG	51	ASN	CA-C-O	-5.37	113.80	119.97
21	AU	10	ALA	CA-C-O	-5.37	115.30	121.47
35	BA	475	C	O5'-C5'-C4'	-5.37	103.45	111.50
35	BA	480	U	C4'-C3'-C2'	-5.37	97.23	102.60
2	AB	302	C	C4'-C3'-C2'	5.36	107.96	102.60
2	AB	399	U	N1-C1'-C2'	-5.36	103.95	112.00
2	AB	812	C	C3'-C2'-O2'	5.36	118.75	110.70
2	AB	1802	A	O4'-C4'-C3'	5.36	109.36	104.00
2	AB	2315	G	O4'-C1'-N9	5.36	116.55	108.50
2	AB	2533	U	O5'-C5'-C4'	-5.36	103.46	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2825	G	C1'-O4'-C4'	-5.36	104.54	109.90
35	BA	148	G	C5'-C4'-C3'	-5.36	107.96	116.00
48	BN	7	ALA	CA-C-N	5.36	130.64	122.65
48	BN	7	ALA	C-N-CA	5.36	130.64	122.65
2	AB	758	C	O5'-C5'-C4'	5.36	119.54	111.50
2	AB	2590	A	P-O5'-C5'	5.36	128.94	120.90
4	AD	12	ARG	CA-C-N	5.36	127.78	120.54
4	AD	12	ARG	C-N-CA	5.36	127.78	120.54
35	BA	215	C	O4'-C1'-C2'	-5.36	102.24	107.60
35	BA	376	G	C5'-C4'-C3'	-5.36	107.96	116.00
35	BA	950	U	O4'-C1'-N1	5.36	116.54	108.50
40	BF	104	GLU	CA-C-N	5.36	129.06	121.66
40	BF	104	GLU	C-N-CA	5.36	129.06	121.66
1	AA	13	G	C5'-C4'-C3'	-5.36	107.96	116.00
4	AD	211	ARG	NE-CZ-NH2	5.36	124.02	119.20
35	BA	15	G	C3'-C2'-C1'	5.36	106.66	101.30
35	BA	33	A	C5'-C4'-O4'	5.36	117.84	109.80
35	BA	240	G	P-O3'-C3'	5.36	128.24	120.20
2	AB	1150	C	C4'-C3'-C2'	5.36	107.96	102.60
2	AB	1292	G	C4'-C3'-C2'	-5.36	97.24	102.60
2	AB	1462	C	C3'-C2'-C1'	-5.36	95.94	101.30
2	AB	1511	G	O4'-C4'-C3'	5.36	109.36	104.00
2	AB	1851	U	O4'-C1'-C2'	-5.36	102.24	107.60
2	AB	2368	C	C5'-C4'-O4'	5.36	117.84	109.80
10	AJ	153	THR	CA-CB-CG2	5.36	119.61	110.50
26	AZ	59	ASP	O-C-N	5.36	127.88	122.09
35	BA	1019	A	C5'-C4'-C3'	-5.36	107.96	116.00
46	BL	113	LYS	CA-CB-CG	-5.36	103.39	114.10
53	BS	31	ARG	N-CA-C	5.36	117.20	110.24
2	AB	75	G	P-O5'-C5'	5.36	128.93	120.90
2	AB	425	G	C4'-C3'-C2'	-5.36	97.25	102.60
2	AB	447	A	O5'-C5'-C4'	5.36	119.73	111.70
2	AB	878	A	P-O5'-C5'	5.36	128.93	120.90
2	AB	981	A	O4'-C1'-N9	5.36	116.53	108.50
2	AB	1107	G	O4'-C4'-C3'	5.36	109.36	104.00
2	AB	1199	U	C1'-O4'-C4'	-5.36	104.55	109.90
2	AB	2709	G	C5'-C4'-O4'	5.36	117.83	109.80
9	AI	13	GLY	CA-C-N	5.36	131.19	122.67
9	AI	13	GLY	C-N-CA	5.36	131.19	122.67
26	AZ	19	HIS	CA-CB-CG	5.36	119.16	113.80
35	BA	17	U	C5'-C4'-C3'	-5.36	107.97	116.00
35	BA	1203	C	C1'-O4'-C4'	-5.36	104.55	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1310	G	C1'-O4'-C4'	-5.36	104.55	109.90
35	BA	1464	U	N1-C1'-C2'	5.36	120.03	112.00
35	BA	1525	G	C3'-C2'-C1'	-5.36	95.94	101.30
46	BL	61	ASP	CB-CA-C	5.36	118.55	109.50
53	BS	60	TRP	CE2-CD2-CE3	-5.36	113.44	118.80
2	AB	1688	U	O4'-C1'-N1	5.35	116.53	108.50
2	AB	2610	C	C2'-C3'-O3'	-5.35	101.47	109.50
2	AB	2707	U	N1-C1'-C2'	-5.35	103.97	112.00
9	AI	111	ALA	CA-C-N	5.35	127.40	120.44
9	AI	111	ALA	C-N-CA	5.35	127.40	120.44
35	BA	548	G	C1'-C2'-O2'	5.35	116.43	108.40
36	BB	73	G	C4'-C3'-C2'	-5.35	97.25	102.60
46	BL	22	PRO	CB-CA-C	-5.35	103.97	110.98
53	BS	49	GLY	N-CA-C	-5.35	107.68	114.16
2	AB	549	G	N9-C1'-C2'	5.35	122.03	114.00
2	AB	610	C	P-O5'-C5'	5.35	128.93	120.90
2	AB	1040	A	C4'-C3'-O3'	5.35	121.03	113.00
2	AB	1889	A	O4'-C1'-C2'	-5.35	102.25	107.60
2	AB	2300	C	P-O3'-C3'	5.35	128.23	120.20
2	AB	2397	G	O4'-C4'-C3'	5.35	109.35	104.00
2	AB	2399	G	C3'-C2'-O2'	5.35	118.73	110.70
9	AI	100	ALA	N-CA-C	-5.35	104.87	111.40
11	AK	70	THR	CA-C-N	5.35	130.97	122.62
11	AK	70	THR	C-N-CA	5.35	130.97	122.62
13	AM	71	ARG	NE-CZ-NH2	5.35	124.02	119.20
2	AB	323	C	C3'-C2'-C1'	5.35	106.85	101.50
2	AB	884	U	O4'-C1'-N1	5.35	116.53	108.50
2	AB	1301	A	C2'-C3'-O3'	-5.35	101.47	109.50
4	AD	124	LYS	CA-C-O	-5.35	114.89	120.88
12	AL	51	GLY	CA-C-N	5.35	132.48	122.74
12	AL	51	GLY	C-N-CA	5.35	132.48	122.74
35	BA	1095	U	C4'-C3'-C2'	-5.35	97.25	102.60
2	AB	1507	C	P-O3'-C3'	5.35	128.22	120.20
2	AB	2601	C	C5'-C4'-C3'	-5.35	107.17	115.20
35	BA	1152	A	O4'-C1'-C2'	5.35	112.95	107.60
42	BH	158	LYS	CA-CB-CG	-5.35	103.40	114.10
52	BR	77	TYR	CA-C-N	5.35	128.44	120.31
52	BR	77	TYR	C-N-CA	5.35	128.44	120.31
2	AB	111	A	C3'-C2'-O2'	5.35	118.72	110.70
2	AB	703	U	O4'-C1'-N1	5.35	116.52	108.50
2	AB	1734	G	O3'-P-O5'	5.35	112.02	104.00
2	AB	2098	U	C4'-C3'-C2'	-5.35	97.25	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BN	111	ASP	CA-C-N	5.35	132.29	122.88
48	BN	111	ASP	C-N-CA	5.35	132.29	122.88
2	AB	305	C	O4'-C1'-C2'	-5.35	102.25	107.60
2	AB	482	A	O4'-C4'-C3'	5.35	109.35	104.00
4	AD	178	GLY	CA-C-N	5.35	129.33	120.94
4	AD	178	GLY	C-N-CA	5.35	129.33	120.94
9	AI	80	ILE	CB-CA-C	5.35	118.14	110.33
2	AB	1143	A	O3'-P-O5'	-5.34	95.98	104.00
2	AB	2510	C	C5'-C4'-C3'	-5.34	107.98	116.00
2	AB	2736	A	C5'-C4'-O4'	5.34	117.81	109.80
10	AJ	11	VAL	CA-C-N	5.34	127.39	120.44
10	AJ	11	VAL	C-N-CA	5.34	127.39	120.44
35	BA	117	G	O4'-C1'-N9	5.34	116.52	108.50
35	BA	542	G	O4'-C1'-C2'	-5.34	102.25	107.60
35	BA	979	C	C4'-C3'-C2'	-5.34	97.25	102.60
42	BH	61	LYS	CA-C-N	5.34	127.44	120.28
42	BH	61	LYS	C-N-CA	5.34	127.44	120.28
47	BM	70	HIS	CA-C-N	5.34	130.53	123.00
47	BM	70	HIS	C-N-CA	5.34	130.53	123.00
58	BX	23	GLU	CA-C-N	5.34	131.75	121.54
58	BX	23	GLU	C-N-CA	5.34	131.75	121.54
2	AB	445	C	C5'-C4'-O4'	5.34	117.81	109.80
2	AB	660	C	O4'-C1'-N1	5.34	116.52	108.50
2	AB	1229	C	C5'-C4'-O4'	5.34	117.81	109.80
2	AB	166	U	O4'-C1'-N1	5.34	116.51	108.50
2	AB	1000	A	C1'-C2'-O2'	-5.34	100.39	108.40
2	AB	1287	A	O4'-C1'-C2'	-5.34	102.26	107.60
2	AB	1477	A	P-O5'-C5'	5.34	128.91	120.90
2	AB	2080	A	C5'-C4'-C3'	-5.34	107.99	116.00
2	AB	2761	A	C4'-C3'-O3'	5.34	121.01	113.00
3	AC	17	ALA	O-C-N	5.34	129.46	123.48
11	AK	51	GLY	CA-C-O	-5.34	113.08	119.06
25	AY	39	GLN	CA-C-O	-5.34	114.78	121.46
32	A5	2	LYS	N-CA-CB	-5.34	102.00	110.06
35	BA	54	C	O4'-C1'-N1	5.34	116.51	108.50
35	BA	533	A	O4'-C4'-C3'	5.34	111.44	106.10
35	BA	557	G	C4'-C3'-C2'	-5.34	97.26	102.60
35	BA	741	G	O3'-P-O5'	-5.34	95.99	104.00
35	BA	1249	C	C4'-C3'-C2'	-5.34	97.26	102.60
40	BF	51	VAL	CA-CB-CG1	5.34	119.48	110.40
40	BF	188	ALA	CA-C-O	-5.34	115.51	121.23
2	AB	297	G	O3'-P-O5'	5.34	112.01	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	400	G	C4'-C3'-O3'	-5.34	104.99	113.00
2	AB	650	C	O4'-C1'-C2'	-5.34	102.26	107.60
2	AB	994	C	O4'-C1'-N1	5.34	116.51	108.50
2	AB	1240	U	O4'-C4'-C3'	-5.34	98.66	104.00
2	AB	1365	A	O4'-C4'-C3'	5.34	109.34	104.00
23	AW	77	GLY	O-C-N	5.34	128.18	122.41
35	BA	704	A	C1'-C2'-O2'	5.34	116.41	108.40
35	BA	708	C	O3'-P-O5'	-5.34	95.99	104.00
35	BA	974	A	C1'-O4'-C4'	-5.34	104.36	109.70
37	BC	50	U	O3'-P-O5'	-5.34	95.99	104.00
41	BG	37	PRO	CA-C-N	5.34	129.67	121.45
41	BG	37	PRO	C-N-CA	5.34	129.67	121.45
49	BO	23	LEU	CD1-CG-CD2	-5.34	99.05	110.80
2	AB	150	U	C1'-O4'-C4'	-5.34	104.56	109.90
2	AB	1568	G	O5'-C5'-C4'	-5.34	103.49	111.50
7	AG	26	GLN	CG-CD-NE2	-5.34	108.39	116.40
13	AM	122	VAL	N-CA-C	5.34	120.44	109.34
35	BA	398	U	O4'-C1'-C2'	5.34	112.94	107.60
44	BJ	45	ALA	CA-C-O	-5.34	115.40	120.90
2	AB	353	C	C1'-C2'-O2'	5.34	116.40	108.40
2	AB	1278	C	C4'-C3'-C2'	-5.34	97.26	102.60
3	AC	225	ASP	CA-CB-CG	5.34	117.94	112.60
4	AD	83	ASP	CB-CA-C	5.34	116.09	110.17
9	AI	55	GLU	CB-CG-CD	-5.34	103.53	112.60
15	AO	44	ARG	NE-CZ-NH2	5.34	124.00	119.20
35	BA	119	A	O4'-C1'-N9	-5.34	100.19	108.20
35	BA	243	A	O3'-P-O5'	5.34	112.00	104.00
35	BA	939	G	N9-C1'-C2'	-5.34	104.00	112.00
36	BB	72	U	O4'-C1'-N1	5.34	116.21	108.20
41	BG	105	GLY	CA-C-N	5.34	127.43	120.28
41	BG	105	GLY	C-N-CA	5.34	127.43	120.28
42	BH	156	ARG	CD-NE-CZ	5.34	131.87	124.40
1	AA	88	C	C5'-C4'-C3'	-5.33	108.00	116.00
2	AB	232	G	C4'-C3'-O3'	-5.33	101.40	109.40
35	BA	490	C	C5'-C4'-C3'	-5.33	108.00	116.00
44	BJ	87	PRO	N-CA-C	5.33	119.69	111.21
45	BK	63	LYS	N-CA-C	5.33	117.96	109.96
1	AA	69	G	C4'-C3'-O3'	5.33	121.00	113.00
2	AB	2310	C	C5'-C4'-O4'	5.33	117.80	109.80
4	AD	141	HIS	CB-CG-CD2	-5.33	124.27	131.20
21	AU	14	ALA	N-CA-CB	-5.33	102.12	110.44
35	BA	230	G	O4'-C1'-C2'	-5.33	102.27	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	256	U	C1'-C2'-O2'	5.33	116.40	108.40
35	BA	730	G	C4'-C3'-O3'	5.33	121.00	113.00
35	BA	1180	A	C4'-C3'-C2'	-5.33	97.27	102.60
35	BA	1475	G	O4'-C1'-N9	5.33	116.50	108.50
35	BA	1480	A	C5'-C4'-C3'	-5.33	108.00	116.00
39	BE	46	VAL	O-C-N	5.33	127.18	121.10
51	BQ	61	ASN	OD1-CG-ND2	5.33	127.93	122.60
54	BT	76	ARG	NE-CZ-NH1	5.33	126.83	121.50
2	AB	622	G	O4'-C1'-N9	5.33	116.50	108.50
2	AB	761	A	P-O3'-C3'	5.33	128.20	120.20
2	AB	1070	A	C3'-C2'-C1'	5.33	106.83	101.50
35	BA	399	G	O5'-C5'-C4'	-5.33	103.50	111.50
35	BA	1515	G	C3'-C2'-O2'	5.33	118.70	110.70
41	BG	40	HIS	CB-CG-CD2	-5.33	124.27	131.20
42	BH	79	THR	CA-C-O	-5.33	114.88	120.80
2	AB	138	U	C1'-O4'-C4'	5.33	115.23	109.90
2	AB	881	G	C3'-C2'-O2'	5.33	118.69	110.70
2	AB	2342	C	O4'-C4'-C3'	5.33	109.33	104.00
2	AB	2751	G	C1'-C2'-O2'	5.33	119.80	111.80
4	AD	44	ASN	OD1-CG-ND2	-5.33	117.27	122.60
35	BA	1093	A	C3'-C2'-C1'	5.33	106.63	101.30
38	BD	30	G	O4'-C1'-C2'	-5.33	102.27	107.60
1	AA	98	G	O4'-C1'-C2'	-5.33	102.27	107.60
2	AB	594	U	C3'-C2'-C1'	-5.33	95.97	101.30
2	AB	1824	G	O4'-C1'-C2'	-5.33	102.27	107.60
2	AB	2216	G	C1'-O4'-C4'	-5.33	104.57	109.90
2	AB	2347	C	O4'-C1'-N1	5.33	116.49	108.50
16	AP	12	ARG	NE-CZ-NH2	-5.33	114.41	119.20
19	AS	35	PHE	N-CA-CB	5.33	117.74	110.01
29	A2	51	VAL	CB-CA-C	5.33	120.03	111.29
48	BN	105	ARG	N-CA-C	-5.33	102.39	110.28
2	AB	353	C	O4'-C4'-C3'	5.33	109.33	104.00
2	AB	2635	A	C3'-C2'-C1'	5.33	106.63	101.30
13	AM	74	GLY	O-C-N	5.33	129.44	122.35
27	A0	53	VAL	CB-CA-C	5.33	119.33	112.14
35	BA	599	C	C5'-C4'-C3'	-5.33	108.01	116.00
1	AA	6	G	C3'-C2'-O2'	5.33	118.69	110.70
2	AB	218	A	C3'-C2'-C1'	5.33	106.63	101.30
2	AB	390	U	C4'-C3'-O3'	5.33	117.39	109.40
2	AB	886	A	O4'-C1'-N9	5.33	116.49	108.50
2	AB	1335	C	O3'-P-O5'	-5.33	96.01	104.00
2	AB	1335	C	O4'-C1'-N1	5.33	116.49	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2212	A	C4'-C3'-C2'	5.33	107.93	102.60
2	AB	2616	C	P-O5'-C5'	5.33	128.89	120.90
8	AH	19	ASN	CA-C-O	5.33	125.79	119.56
8	AH	36	LEU	N-CA-CB	5.33	119.06	110.65
35	BA	485	U	C4'-C3'-C2'	-5.33	97.27	102.60
35	BA	670	G	N9-C1'-C2'	-5.33	104.01	112.00
35	BA	898	G	O5'-C5'-C4'	5.33	119.49	111.50
35	BA	1011	C	C4'-C3'-C2'	-5.33	97.27	102.60
40	BF	108	PRO	N-CD-CG	5.33	111.19	103.20
2	AB	117	G	C3'-C2'-C1'	5.32	106.62	101.30
2	AB	1451	C	C2'-C3'-O3'	5.32	117.49	109.50
2	AB	2161	C	C3'-C2'-O2'	5.32	118.69	110.70
2	AB	2635	A	C3'-C2'-O2'	5.32	118.68	110.70
12	AL	86	GLN	CA-C-O	-5.32	115.58	121.33
35	BA	243	A	C4'-C3'-C2'	-5.32	97.28	102.60
36	BB	14	A	O4'-C1'-C2'	-5.32	102.28	107.60
36	BB	35	C	O4'-C1'-C2'	-5.32	102.28	107.60
54	BT	76	ARG	NE-CZ-NH2	-5.32	114.41	119.20
55	BU	56	ARG	NE-CZ-NH1	5.32	126.82	121.50
2	AB	263	G	N9-C1'-C2'	-5.32	104.02	112.00
2	AB	766	U	C5'-C4'-O4'	5.32	117.78	109.80
2	AB	896	A	O3'-P-O5'	-5.32	96.02	104.00
2	AB	1837	C	O4'-C1'-N1	5.32	116.48	108.50
34	A7	23	ILE	CA-C-N	5.32	129.97	122.09
34	A7	23	ILE	C-N-CA	5.32	129.97	122.09
35	BA	57	G	O4'-C1'-C2'	-5.32	102.28	107.60
35	BA	165	G	C4'-C3'-C2'	-5.32	97.28	102.60
48	BN	122	PRO	CA-C-N	5.32	125.24	119.76
48	BN	122	PRO	C-N-CA	5.32	125.24	119.76
2	AB	1471	G	O4'-C4'-C3'	5.32	109.32	104.00
2	AB	1774	C	C4'-C3'-C2'	-5.32	97.28	102.60
2	AB	2415	G	N9-C1'-C2'	5.32	119.98	112.00
2	AB	2499	C	C5'-C4'-C3'	-5.32	108.02	116.00
6	AF	177	PRO	N-CA-CB	5.32	108.62	103.51
17	AQ	115	LEU	CA-C-O	-5.32	116.25	122.37
35	BA	485	U	O4'-C1'-N1	5.32	116.18	108.20
35	BA	1030	U	O4'-C4'-C3'	5.32	109.32	104.00
35	BA	1373	G	O4'-C4'-C3'	5.32	109.32	104.00
2	AB	46	G	C5'-C4'-O4'	5.32	117.78	109.80
2	AB	2166	U	C1'-C2'-O2'	-5.32	100.42	108.40
2	AB	2724	U	C4'-C3'-C2'	5.32	107.92	102.60
2	AB	2731	G	C1'-O4'-C4'	-5.32	104.58	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AW	59	GLU	CA-C-N	5.32	130.93	122.74
23	AW	59	GLU	C-N-CA	5.32	130.93	122.74
35	BA	1075	U	C4'-C3'-C2'	-5.32	97.28	102.60
35	BA	1499	A	C3'-C2'-O2'	5.32	118.68	110.70
56	BV	28	LYS	CA-C-N	5.32	126.49	119.84
56	BV	28	LYS	C-N-CA	5.32	126.49	119.84
2	AB	100	U	C3'-C2'-O2'	5.32	118.68	110.70
11	AK	3	LYS	CA-C-N	5.32	129.63	122.93
11	AK	3	LYS	C-N-CA	5.32	129.63	122.93
35	BA	220	G	O4'-C1'-N9	5.32	116.47	108.50
35	BA	458	U	O4'-C1'-N1	5.32	116.47	108.50
40	BF	203	LYS	CA-C-O	-5.32	113.51	120.00
45	BK	108	GLY	N-CA-C	5.32	118.23	111.85
50	BP	21	ILE	CA-C-N	5.32	131.70	121.54
50	BP	21	ILE	C-N-CA	5.32	131.70	121.54
1	AA	47	C	C5'-C4'-C3'	-5.32	108.03	116.00
2	AB	582	A	N9-C1'-C2'	-5.32	104.03	112.00
2	AB	677	A	C5'-C4'-O4'	5.32	117.77	109.80
2	AB	1979	U	C5'-C4'-C3'	-5.32	108.03	116.00
2	AB	2108	A	O3'-P-O5'	-5.32	96.03	104.00
2	AB	2659	G	C4'-C3'-C2'	-5.32	97.28	102.60
33	A6	26	ALA	CA-C-N	5.32	130.11	122.40
33	A6	26	ALA	C-N-CA	5.32	130.11	122.40
35	BA	1283	U	C3'-C2'-C1'	5.32	106.62	101.30
39	BE	199	ILE	O-C-N	5.32	124.72	121.37
41	BG	53	GLN	CA-C-N	5.32	127.84	120.29
41	BG	53	GLN	C-N-CA	5.32	127.84	120.29
2	AB	67	U	C3'-C2'-O2'	5.31	118.67	110.70
2	AB	1470	A	O4'-C1'-C2'	-5.31	102.29	107.60
14	AN	115	GLU	CA-C-N	5.31	131.53	121.97
14	AN	115	GLU	C-N-CA	5.31	131.53	121.97
21	AU	48	LYS	CA-C-N	5.31	127.40	120.28
21	AU	48	LYS	C-N-CA	5.31	127.40	120.28
25	AY	60	ALA	CA-C-O	-5.31	115.04	120.99
35	BA	123	U	C4'-C3'-C2'	-5.31	97.29	102.60
39	BE	150	ILE	N-CA-CB	-5.31	102.46	111.23
57	BW	38	ILE	CA-C-N	5.31	127.84	120.29
57	BW	38	ILE	C-N-CA	5.31	127.84	120.29
2	AB	1874	C	O4'-C1'-N1	5.31	116.47	108.50
2	AB	2099	U	C3'-C2'-C1'	5.31	106.61	101.30
2	AB	2458	G	O4'-C4'-C3'	5.31	111.41	106.10
18	AR	96	LEU	O-C-N	-5.31	115.93	122.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	812	G	C3'-C2'-O2'	5.31	118.67	110.70
35	BA	1280	A	P-O3'-C3'	5.31	128.17	120.20
2	AB	447	A	O4'-C1'-N9	5.31	116.17	108.20
35	BA	72	A	C4'-C3'-C2'	-5.31	97.29	102.60
35	BA	237	G	O4'-C1'-N9	5.31	116.47	108.50
35	BA	617	G	P-O5'-C5'	5.31	128.87	120.90
1	AA	66	A	C5'-C4'-O4'	5.31	117.77	109.80
2	AB	558	U	C5'-C4'-O4'	-5.31	101.84	109.80
2	AB	2732	G	O3'-P-O5'	-5.31	96.04	104.00
3	AC	171	ILE	CA-CB-CG1	5.31	119.43	110.40
5	AE	16	THR	N-CA-C	-5.31	101.29	109.52
5	AE	134	HIS	CE1-NE2-CD2	-5.31	103.69	109.00
35	BA	713	G	C4'-C3'-C2'	-5.31	97.29	102.60
40	BF	136	ALA	CB-CA-C	5.31	119.14	110.96
48	BN	29	THR	CA-C-N	5.31	130.02	123.12
48	BN	29	THR	C-N-CA	5.31	130.02	123.12
55	BU	25	ILE	CA-CB-CG1	5.31	119.42	110.40
1	AA	93	C	C4'-C3'-C2'	-5.31	97.29	102.60
2	AB	162	U	C5'-C4'-C3'	-5.31	107.24	115.20
2	AB	1174	U	N1-C1'-C2'	5.31	119.96	112.00
2	AB	1445	G	O4'-C1'-C2'	5.31	112.91	107.60
2	AB	2152	G	C4'-C3'-C2'	-5.31	97.29	102.60
2	AB	2258	C	C1'-C2'-O2'	5.31	119.76	111.80
2	AB	2295	C	O4'-C1'-N1	5.31	116.46	108.50
2	AB	2535	G	C3'-C2'-C1'	-5.31	95.99	101.30
10	AJ	107	VAL	N-CA-C	-5.31	102.67	109.30
14	AN	29	LYS	CA-C-N	5.31	131.68	121.54
14	AN	29	LYS	C-N-CA	5.31	131.68	121.54
35	BA	107	G	C1'-O4'-C4'	-5.31	104.59	109.90
35	BA	389	A	C1'-C2'-O2'	5.31	116.36	108.40
35	BA	1224	U	C3'-C2'-C1'	5.31	106.81	101.50
2	AB	1451	C	O4'-C1'-C2'	5.31	111.11	105.80
2	AB	1471	G	C3'-C2'-C1'	5.31	106.61	101.30
2	AB	2086	U	N1-C1'-C2'	-5.31	104.04	112.00
2	AB	2725	A	C4'-C3'-O3'	-5.31	101.44	109.40
35	BA	734	G	C1'-O4'-C4'	5.31	115.21	109.90
1	AA	26	C	C4'-C3'-C2'	5.30	107.91	102.60
2	AB	883	G	O4'-C1'-C2'	5.30	112.90	107.60
2	AB	1449	G	C5'-C4'-C3'	-5.30	108.04	116.00
2	AB	2008	C	C4'-C3'-C2'	-5.30	97.30	102.60
2	AB	2488	G	C1'-O4'-C4'	-5.30	104.59	109.90
2	AB	2845	U	C4'-C3'-C2'	-5.30	97.30	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	162	GLN	N-CA-CB	-5.30	101.95	109.85
5	AE	62	LYS	CA-C-N	5.30	125.11	119.28
5	AE	62	LYS	C-N-CA	5.30	125.11	119.28
6	AF	189	THR	CA-C-N	5.30	128.37	120.31
6	AF	189	THR	C-N-CA	5.30	128.37	120.31
7	AG	177	ARG	NE-CZ-NH2	5.30	123.97	119.20
35	BA	1464	U	C1'-O4'-C4'	5.30	115.20	109.90
35	BA	1536	C	C5'-C4'-O4'	5.30	117.76	109.80
50	BP	49	GLU	N-CA-C	5.30	117.81	111.71
50	BP	69	ARG	CA-C-N	5.30	128.37	120.31
50	BP	69	ARG	C-N-CA	5.30	128.37	120.31
51	BQ	31	SER	CA-C-O	-5.30	113.03	119.61
1	AA	24	G	C1'-C2'-O2'	-5.30	103.84	111.80
2	AB	589	U	C5'-C4'-C3'	-5.30	108.05	116.00
2	AB	1450	G	O4'-C4'-C3'	5.30	109.30	104.00
2	AB	2685	G	C5'-C4'-O4'	5.30	117.75	109.80
29	A2	67	PRO	N-CA-CB	5.30	108.60	103.51
35	BA	933	G	C2'-C3'-O3'	-5.30	105.75	113.70
40	BF	123	LEU	CA-C-N	5.30	127.70	120.54
40	BF	123	LEU	C-N-CA	5.30	127.70	120.54
1	AA	35	C	C4'-C3'-C2'	-5.30	97.30	102.60
2	AB	587	C	N1-C1'-C2'	-5.30	106.05	114.00
2	AB	677	A	C3'-C2'-O2'	5.30	118.65	110.70
2	AB	912	C	C1'-O4'-C4'	-5.30	104.60	109.90
2	AB	1150	C	C4'-C3'-O3'	5.30	120.95	113.00
2	AB	2329	U	O3'-P-O5'	-5.30	96.05	104.00
4	AD	225	ASN	O-C-N	-5.30	115.59	121.53
6	AF	167	VAL	CB-CA-C	5.30	119.49	110.95
23	AW	10	VAL	CA-C-N	5.30	131.12	122.69
23	AW	10	VAL	C-N-CA	5.30	131.12	122.69
35	BA	1194	U	O4'-C1'-N1	5.30	116.45	108.50
40	BF	21	TRP	CE2-CD2-CG	5.30	113.56	107.20
40	BF	113	LYS	CA-C-O	-5.30	113.40	119.60
45	BK	46	GLU	CA-C-O	-5.30	114.88	120.55
45	BK	124	ILE	CA-CB-CG1	5.30	119.41	110.40
2	AB	984	A	C3'-C2'-O2'	-5.30	106.65	114.60
2	AB	1420	A	O4'-C1'-C2'	-5.30	102.30	107.60
2	AB	1752	C	C4'-C3'-C2'	-5.30	97.30	102.60
2	AB	2589	A	C5'-C4'-C3'	-5.30	108.05	116.00
2	AB	2781	A	C2'-C3'-O3'	5.30	121.65	113.70
14	AN	7	SER	CA-C-N	5.30	125.30	119.89
14	AN	7	SER	C-N-CA	5.30	125.30	119.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	AQ	103	VAL	CA-CB-CG1	5.30	119.41	110.40
35	BA	109	A	C1'-C2'-O2'	5.30	119.75	111.80
35	BA	662	U	C3'-C2'-O2'	5.30	118.65	110.70
35	BA	811	C	C4'-C3'-C2'	-5.30	97.30	102.60
35	BA	1369	C	C3'-C2'-C1'	5.30	106.60	101.30
54	BT	34	GLY	N-CA-C	5.30	122.58	115.59
2	AB	2455	G	O5'-C5'-C4'	5.30	119.45	111.50
16	AP	111	ALA	CA-C-O	5.30	126.75	120.66
41	BG	138	PRO	N-CA-CB	5.30	107.91	103.25
47	BM	21	ALA	N-CA-C	-5.30	105.58	111.36
49	BO	109	ARG	O-C-N	5.30	129.26	123.27
2	AB	402	A	O4'-C1'-N9	5.30	116.44	108.50
2	AB	881	G	P-O5'-C5'	5.30	128.85	120.90
2	AB	1100	C	C5'-C4'-C3'	-5.30	108.05	116.00
2	AB	2136	G	C5'-C4'-O4'	5.30	117.74	109.80
2	AB	2214	C	C4'-C3'-C2'	-5.30	97.30	102.60
2	AB	2228	G	C3'-C2'-O2'	-5.30	102.75	110.70
2	AB	2807	U	C4'-C3'-O3'	-5.30	105.06	113.00
2	AB	2857	G	O4'-C1'-N9	5.30	116.44	108.50
24	AX	92	VAL	N-CA-C	5.30	116.21	108.53
35	BA	9	G	O5'-C5'-C4'	5.30	119.44	111.50
35	BA	246	A	O4'-C1'-N9	5.30	116.14	108.20
35	BA	1403	C	C5'-C4'-C3'	-5.30	108.06	116.00
38	BD	75	C	C4'-C3'-O3'	-5.30	101.45	109.40
48	BN	45	THR	CA-C-N	5.30	131.57	122.09
48	BN	45	THR	C-N-CA	5.30	131.57	122.09
3	AC	67	HIS	ND1-CG-CD2	5.29	111.39	106.10
37	BC	51	C	C4'-C3'-O3'	-5.29	105.06	113.00
46	BL	40	ARG	O-C-N	5.29	129.12	122.55
2	AB	473	G	O4'-C1'-N9	5.29	116.44	108.50
2	AB	926	G	C5'-C4'-O4'	5.29	117.74	109.80
2	AB	2481	G	C4'-C3'-O3'	-5.29	105.06	113.00
2	AB	2511	U	O4'-C1'-N1	5.29	116.44	108.50
25	AY	79	ILE	CA-C-N	5.29	130.88	122.62
25	AY	79	ILE	C-N-CA	5.29	130.88	122.62
35	BA	110	C	O4'-C1'-N1	5.29	116.44	108.50
35	BA	231	U	O4'-C1'-N1	5.29	116.44	108.50
35	BA	846	G	O4'-C1'-C2'	-5.29	102.31	107.60
35	BA	1131	G	O3'-P-O5'	-5.29	96.06	104.00
36	BB	29	G	O4'-C1'-N9	5.29	116.44	108.50
49	BO	85	ARG	CB-CA-C	5.29	119.10	109.62
50	BP	44	ILE	CA-CB-CG2	5.29	119.50	110.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BU	54	LEU	CA-C-N	5.29	127.37	120.28
55	BU	54	LEU	C-N-CA	5.29	127.37	120.28
55	BU	73	HIS	CA-CB-CG	5.29	119.09	113.80
2	AB	837	C	N1-C1'-C2'	-5.29	104.06	112.00
2	AB	1011	G	O4'-C1'-N9	5.29	116.14	108.20
2	AB	1284	A	C3'-C2'-O2'	5.29	118.64	110.70
2	AB	2559	C	C5'-C4'-C3'	-5.29	108.06	116.00
11	AK	79	LEU	CA-C-N	5.29	127.32	120.44
11	AK	79	LEU	C-N-CA	5.29	127.32	120.44
19	AS	13	HIS	CA-CB-CG	-5.29	108.51	113.80
35	BA	8	A	C2'-C3'-O3'	5.29	117.44	109.50
35	BA	373	A	C3'-C2'-C1'	5.29	106.59	101.30
35	BA	578	C	C5'-C4'-O4'	5.29	117.74	109.80
35	BA	1165	U	O4'-C1'-C2'	-5.29	102.31	107.60
37	BC	52	U	O4'-C1'-N1	5.29	116.44	108.50
44	BJ	30	MET	O-C-N	5.29	129.23	123.04
57	BW	6	ALA	CA-C-O	5.29	126.74	120.66
2	AB	541	A	O4'-C1'-N9	5.29	116.43	108.50
2	AB	572	A	P-O3'-C3'	5.29	128.13	120.20
10	AJ	132	GLU	N-CA-C	5.29	117.13	111.36
32	A5	12	ARG	NE-CZ-NH1	-5.29	116.21	121.50
35	BA	378	G	N9-C1'-C2'	-5.29	104.07	112.00
35	BA	744	C	C4'-C3'-C2'	-5.29	97.31	102.60
35	BA	1049	U	C4'-C3'-C2'	5.29	107.89	102.60
35	BA	1447	A	C1'-O4'-C4'	5.29	114.99	109.70
2	AB	316	C	C4'-C3'-O3'	-5.29	105.07	113.00
2	AB	478	A	O4'-C4'-C3'	5.29	109.29	104.00
2	AB	1210	G	O4'-C1'-C2'	5.29	112.89	107.60
2	AB	1571	A	O4'-C1'-C2'	-5.29	102.31	107.60
2	AB	1822	C	C4'-C3'-C2'	-5.29	97.31	102.60
2	AB	2517	C	O3'-P-O5'	-5.29	96.07	104.00
3	AC	226	GLN	N-CA-C	5.29	116.18	108.14
33	A6	55	GLY	O-C-N	-5.29	117.11	122.19
35	BA	37	U	C3'-C2'-O2'	5.29	118.63	110.70
35	BA	560	A	N9-C1'-C2'	-5.29	106.07	114.00
35	BA	696	A	O4'-C1'-N9	5.29	116.43	108.50
35	BA	821	G	C4'-C3'-C2'	5.29	107.89	102.60
35	BA	1386	G	O4'-C1'-N9	5.29	116.43	108.50
2	AB	1679	A	C1'-C2'-O2'	-5.29	100.47	108.40
2	AB	1850	G	N9-C1'-C2'	5.29	119.93	112.00
2	AB	2835	A	C3'-C2'-O2'	-5.29	106.67	114.60
11	AK	108	ILE	CA-C-O	-5.29	115.45	120.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	AR	69	VAL	N-CA-CB	-5.29	103.02	111.58
47	BM	50	THR	CB-CA-C	5.29	119.82	109.35
2	AB	273	G	O5'-C5'-C4'	-5.29	103.57	111.50
2	AB	941	A	P-O3'-C3'	5.29	128.13	120.20
2	AB	2439	A	C4'-C3'-O3'	5.29	117.33	109.40
27	A0	2	LYS	CA-C-O	5.29	126.34	120.63
39	BE	104	LYS	N-CA-C	5.29	120.04	111.37
43	BI	92	THR	CA-C-N	5.29	128.85	121.24
43	BI	92	THR	C-N-CA	5.29	128.85	121.24
46	BL	115	VAL	CA-CB-CG2	5.29	119.39	110.40
2	AB	73	A	O4'-C4'-C3'	5.28	109.28	104.00
2	AB	335	C	C5'-C4'-C3'	-5.28	108.07	116.00
2	AB	1505	A	C4'-C3'-C2'	-5.28	97.32	102.60
2	AB	2469	A	C5'-C4'-C3'	-5.28	108.08	116.00
4	AD	270	ARG	O-C-N	-5.28	116.06	122.82
20	AT	72	VAL	CB-CA-C	5.28	119.29	111.31
35	BA	760	G	O5'-C5'-C4'	5.28	119.42	111.50
35	BA	940	C	C5'-C4'-C3'	-5.28	108.08	116.00
35	BA	1490	U	C3'-C2'-C1'	5.28	106.58	101.30
55	BU	63	TYR	CA-CB-CG	5.28	123.41	113.90
2	AB	2255	G	C2'-C3'-O3'	5.28	121.62	113.70
35	BA	795	C	O5'-C5'-C4'	5.28	119.42	111.50
35	BA	808	C	O4'-C1'-N1	5.28	116.42	108.50
2	AB	750	A	O4'-C1'-C2'	-5.28	102.32	107.60
2	AB	847	U	N1-C1'-C2'	5.28	119.92	112.00
2	AB	1061	U	C2'-C3'-O3'	5.28	117.42	109.50
2	AB	1114	C	C4'-C3'-C2'	-5.28	97.32	102.60
2	AB	1301	A	O4'-C1'-C2'	-5.28	100.52	105.80
2	AB	1557	C	C5'-C4'-O4'	-5.28	101.88	109.80
2	AB	1758	U	O5'-C5'-C4'	-5.28	103.78	111.70
2	AB	2340	A	C1'-O4'-C4'	5.28	115.18	109.90
2	AB	2594	C	N1-C1'-C2'	-5.28	104.08	112.00
2	AB	2754	U	O4'-C4'-C3'	5.28	109.28	104.00
2	AB	2893	A	C2'-C3'-O3'	5.28	117.42	109.50
4	AD	170	TYR	N-CA-CB	-5.28	103.13	111.05
14	AN	74	THR	CA-CB-OG1	5.28	117.52	109.60
35	BA	793	U	N1-C1'-C2'	5.28	119.92	112.00
35	BA	1379	G	C3'-C2'-C1'	-5.28	96.02	101.30
35	BA	1443	C	O4'-C1'-C2'	5.28	112.88	107.60
56	BV	33	TRP	O-C-N	5.28	129.34	122.42
58	BX	17	ARG	NH1-CZ-NH2	-5.28	112.44	119.30
2	AB	678	C	C4'-C3'-C2'	-5.28	97.32	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	922	C	O4'-C1'-N1	5.28	116.42	108.50
2	AB	2317	A	C5'-C4'-C3'	-5.28	108.08	116.00
35	BA	860	A	C4'-C3'-C2'	-5.28	97.32	102.60
38	BD	71	G	O4'-C1'-C2'	-5.28	102.32	107.60
2	AB	189	G	C3'-C2'-C1'	5.28	106.58	101.30
2	AB	824	U	O4'-C4'-C3'	-5.28	98.72	104.00
2	AB	1480	C	C3'-C2'-O2'	5.28	118.62	110.70
2	AB	1611	C	C5'-C4'-O4'	5.28	117.72	109.80
2	AB	2416	C	C3'-C2'-C1'	5.28	106.58	101.30
16	AP	97	ILE	CA-C-N	5.28	130.44	123.05
16	AP	97	ILE	C-N-CA	5.28	130.44	123.05
20	AT	32	THR	CA-C-N	5.28	129.58	122.93
20	AT	32	THR	C-N-CA	5.28	129.58	122.93
26	AZ	39	VAL	N-CA-C	-5.28	98.89	107.28
28	A1	34	THR	OG1-CB-CG2	-5.28	98.74	109.30
35	BA	816	A	C5'-C4'-O4'	5.28	117.72	109.80
44	BJ	100	MET	CA-C-N	5.28	127.35	120.28
44	BJ	100	MET	C-N-CA	5.28	127.35	120.28
54	BT	63	CYS	CA-C-O	-5.28	113.00	118.65
2	AB	216	A	C3'-C2'-O2'	5.28	118.61	110.70
2	AB	1142	A	O3'-P-O5'	5.28	111.92	104.00
2	AB	1278	C	C5'-C4'-C3'	-5.28	108.09	116.00
2	AB	1390	U	N1-C1'-C2'	-5.28	104.09	112.00
2	AB	1495	A	C3'-C2'-C1'	-5.28	96.03	101.30
2	AB	1725	U	P-O3'-C3'	5.28	128.11	120.20
2	AB	1752	C	O3'-P-O5'	-5.28	96.09	104.00
2	AB	2101	A	O4'-C1'-N9	5.28	116.41	108.50
2	AB	2276	G	C4'-C3'-C2'	5.28	107.88	102.60
2	AB	2322	A	C4'-C3'-C2'	-5.28	97.32	102.60
2	AB	2515	C	C4'-C3'-O3'	5.28	120.91	113.00
19	AS	83	LYS	CA-C-O	-5.28	114.96	120.55
23	AW	84	PHE	N-CA-C	5.28	116.99	108.34
35	BA	75	G	C1'-C2'-O2'	5.28	116.31	108.40
35	BA	1265	C	O4'-C1'-N1	5.28	116.41	108.50
38	BD	16	C	C5'-C4'-O4'	-5.28	101.19	109.10
49	BO	31	GLY	CA-C-N	5.28	128.94	121.66
49	BO	31	GLY	C-N-CA	5.28	128.94	121.66
56	BV	13	HIS	CA-C-N	5.28	130.37	121.14
56	BV	13	HIS	C-N-CA	5.28	130.37	121.14
1	AA	23	G	C3'-C2'-C1'	5.27	106.57	101.30
2	AB	786	C	N1-C1'-C2'	-5.27	104.09	112.00
2	AB	1865	U	O4'-C1'-N1	5.27	116.11	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	230	G	C1'-O4'-C4'	5.27	115.17	109.90
39	BE	17	HIS	O-C-N	5.27	129.60	122.59
48	BN	69	CYS	CA-C-N	5.27	128.08	120.38
48	BN	69	CYS	C-N-CA	5.27	128.08	120.38
2	AB	562	U	C4'-C3'-C2'	-5.27	97.33	102.60
2	AB	1132	U	C1'-C2'-O2'	-5.27	103.89	111.80
2	AB	1292	G	C1'-O4'-C4'	-5.27	104.63	109.90
2	AB	1753	G	C3'-C2'-O2'	5.27	118.61	110.70
2	AB	1856	U	C1'-C2'-O2'	-5.27	100.49	108.40
7	AG	47	LYS	N-CA-C	-5.27	105.12	112.45
14	AN	118	THR	CA-C-N	5.27	125.03	119.76
14	AN	118	THR	C-N-CA	5.27	125.03	119.76
25	AY	68	PHE	CA-CB-CG	5.27	119.07	113.80
35	BA	947	G	O4'-C4'-C3'	5.27	109.27	104.00
35	BA	1455	G	C5'-C4'-C3'	-5.27	108.09	116.00
39	BE	203	ASP	O-C-N	-5.27	115.18	122.46
2	AB	627	A	C3'-C2'-O2'	-5.27	106.69	114.60
2	AB	757	G	O4'-C1'-N9	5.27	116.41	108.50
2	AB	1147	A	C4'-C3'-C2'	-5.27	97.33	102.60
2	AB	2461	A	C1'-O4'-C4'	5.27	115.17	109.90
2	AB	2683	C	C4'-C3'-C2'	-5.27	97.33	102.60
5	AE	134	HIS	CB-CG-CD2	-5.27	124.35	131.20
35	BA	1019	A	C3'-C2'-O2'	5.27	118.61	110.70
35	BA	1125	U	C3'-C2'-C1'	-5.27	96.23	101.50
52	BR	29	ALA	CA-C-O	-5.27	113.91	119.97
2	AB	664	G	C3'-C2'-C1'	5.27	106.57	101.30
2	AB	921	C	C4'-C3'-C2'	-5.27	97.33	102.60
2	AB	1445	G	O4'-C1'-N9	5.27	116.41	108.50
3	AC	136	LEU	N-CA-C	5.27	116.71	110.97
21	AU	45	VAL	CA-CB-CG2	5.27	119.36	110.40
35	BA	361	G	O4'-C1'-N9	5.27	116.40	108.50
35	BA	430	A	O4'-C4'-C3'	5.27	109.27	104.00
35	BA	447	G	C5'-C4'-O4'	5.27	117.70	109.80
35	BA	1031	C	C5'-C4'-O4'	-5.27	101.20	109.10
35	BA	1225	A	C4'-C3'-O3'	-5.27	101.50	109.40
35	BA	1235	U	O4'-C1'-C2'	-5.27	102.33	107.60
35	BA	1278	G	C5'-C4'-O4'	5.27	117.00	109.10
35	BA	1452	C	O3'-P-O5'	5.27	111.90	104.00
2	AB	478	A	C3'-C2'-C1'	5.27	106.57	101.30
2	AB	494	G	C4'-C3'-O3'	5.27	120.90	113.00
2	AB	2769	U	O4'-C1'-N1	5.27	116.40	108.50
21	AU	6	LYS	CA-C-O	-5.27	115.21	121.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	AZ	56	ARG	NE-CZ-NH1	-5.27	116.23	121.50
35	BA	494	G	C1'-O4'-C4'	-5.27	104.63	109.90
35	BA	922	G	P-O5'-C5'	5.27	128.80	120.90
35	BA	1251	A	C3'-C2'-C1'	5.27	106.57	101.30
2	AB	1590	A	C4'-C3'-C2'	-5.27	97.33	102.60
2	AB	1688	U	C2'-C3'-O3'	-5.27	105.80	113.70
2	AB	2012	G	P-O3'-C3'	5.27	128.10	120.20
2	AB	2611	C	C1'-C2'-O2'	5.27	116.30	108.40
28	A1	55	LYS	N-CA-CB	5.27	118.82	110.55
35	BA	202	G	C5'-C4'-C3'	5.27	123.90	116.00
1	AA	6	G	C1'-O4'-C4'	5.26	115.17	109.90
2	AB	61	C	O5'-C5'-C4'	-5.26	103.60	111.50
2	AB	193	U	C3'-C2'-O2'	5.26	118.60	110.70
2	AB	576	U	C4'-C3'-C2'	-5.26	97.34	102.60
2	AB	1161	C	C3'-C2'-O2'	5.26	118.60	110.70
2	AB	1220	G	O4'-C1'-N9	5.26	116.40	108.50
2	AB	1519	G	C5'-C4'-C3'	-5.26	108.10	116.00
2	AB	2571	U	C4'-C3'-O3'	5.26	120.90	113.00
5	AE	146	ILE	CA-CB-CG1	5.26	119.35	110.40
8	AH	54	ARG	CA-C-N	5.26	128.35	120.87
8	AH	54	ARG	C-N-CA	5.26	128.35	120.87
11	AK	61	TYR	CA-C-N	5.26	127.65	120.54
11	AK	61	TYR	C-N-CA	5.26	127.65	120.54
14	AN	85	VAL	CA-C-N	5.26	131.59	121.54
14	AN	85	VAL	C-N-CA	5.26	131.59	121.54
19	AS	101	ASP	CB-CA-C	5.26	119.37	111.89
34	A7	36	ARG	CA-C-O	5.26	126.08	120.24
35	BA	797	C	N1-C1'-C2'	-5.26	104.10	112.00
35	BA	1041	G	O4'-C1'-N9	5.26	116.39	108.50
38	BD	49	C	O4'-C1'-N1	5.26	116.10	108.20
40	BF	221	ALA	CA-C-N	5.26	128.14	120.51
40	BF	221	ALA	C-N-CA	5.26	128.14	120.51
2	AB	15	G	C1'-O4'-C4'	-5.26	104.64	109.90
2	AB	2486	C	C3'-C2'-O2'	5.26	118.59	110.70
2	AB	760	G	C1'-O4'-C4'	-5.26	104.64	109.90
2	AB	1050	A	C5'-C4'-C3'	5.26	123.89	116.00
2	AB	1364	G	C4'-C3'-O3'	5.26	120.89	113.00
2	AB	2495	G	C5'-C4'-C3'	-5.26	108.11	116.00
26	AZ	56	ARG	NE-CZ-NH2	5.26	123.94	119.20
35	BA	618	C	C3'-C2'-O2'	5.26	118.59	110.70
38	BD	69	C	C2'-C3'-O3'	-5.26	105.81	113.70
40	BF	55	VAL	CB-CA-C	5.26	117.27	110.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	BH	86	GLY	O-C-N	-5.26	118.14	122.77
46	BL	79	ARG	NE-CZ-NH2	5.26	123.94	119.20
2	AB	83	A	C1'-O4'-C4'	-5.26	104.64	109.90
2	AB	1054	A	O4'-C1'-N9	5.26	116.39	108.50
2	AB	1247	A	O4'-C1'-C2'	-5.26	100.54	105.80
2	AB	1674	G	O3'-P-O5'	-5.26	96.11	104.00
2	AB	1866	A	C5'-C4'-C3'	-5.26	108.11	116.00
2	AB	2126	A	O4'-C4'-C3'	-5.26	100.84	106.10
2	AB	2242	G	O5'-C5'-C4'	-5.26	103.61	111.50
2	AB	2401	U	N1-C1'-C2'	-5.26	104.11	112.00
2	AB	2467	C	O3'-P-O5'	-5.26	96.11	104.00
2	AB	2741	A	P-O3'-C3'	5.26	128.09	120.20
35	BA	341	C	C5'-C4'-O4'	5.26	117.69	109.80
35	BA	1131	G	C4'-C3'-O3'	5.26	120.89	113.00
48	BN	1	ALA	CA-C-N	5.26	128.34	120.87
48	BN	1	ALA	C-N-CA	5.26	128.34	120.87
48	BN	121	ARG	NH1-CZ-NH2	-5.26	112.46	119.30
2	AB	1373	A	C3'-C2'-O2'	5.26	118.59	110.70
2	AB	1622	G	O5'-C5'-C4'	5.26	119.39	111.50
2	AB	1800	C	C1'-O4'-C4'	-5.26	104.44	109.70
2	AB	2419	U	C3'-C2'-C1'	5.26	106.56	101.30
2	AB	2555	U	O4'-C1'-C2'	-5.26	102.34	107.60
8	AH	120	ILE	CA-CB-CG1	5.26	119.34	110.40
48	BN	113	THR	CA-C-N	5.26	125.42	119.90
48	BN	113	THR	C-N-CA	5.26	125.42	119.90
2	AB	1136	G	N9-C1'-C2'	-5.26	104.11	112.00
2	AB	1511	G	C1'-O4'-C4'	-5.26	104.64	109.90
6	AF	97	ASN	CA-CB-CG	5.26	117.86	112.60
15	AO	45	GLN	CA-C-N	5.26	127.38	120.60
15	AO	45	GLN	C-N-CA	5.26	127.38	120.60
39	BE	169	HIS	CA-C-N	5.26	127.88	120.42
39	BE	169	HIS	C-N-CA	5.26	127.88	120.42
47	BM	87	LEU	CA-C-N	5.26	128.30	120.31
47	BM	87	LEU	C-N-CA	5.26	128.30	120.31
50	BP	19	THR	N-CA-C	-5.26	107.17	113.21
4	AD	51	ARG	CD-NE-CZ	5.25	131.76	124.40
10	AJ	161	LYS	CA-C-N	5.25	129.62	121.26
10	AJ	161	LYS	C-N-CA	5.25	129.62	121.26
11	AK	52	LEU	N-CA-C	-5.25	101.94	109.24
1	AA	120	U	C1'-O4'-C4'	-5.25	104.65	109.90
2	AB	901	C	C3'-C2'-C1'	-5.25	96.05	101.30
2	AB	913	U	C3'-C2'-C1'	5.25	106.75	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1241	A	C5'-C4'-C3'	-5.25	108.12	116.00
2	AB	2224	G	C4'-C3'-C2'	-5.25	97.35	102.60
5	AE	64	GLU	CA-C-N	5.25	127.75	120.29
5	AE	64	GLU	C-N-CA	5.25	127.75	120.29
26	AZ	10	ARG	O-C-N	-5.25	118.35	121.71
32	A5	19	ARG	NE-CZ-NH2	5.25	123.93	119.20
35	BA	87	C	C5'-C4'-O4'	-5.25	101.92	109.80
35	BA	245	U	N1-C1'-C2'	-5.25	104.12	112.00
35	BA	369	G	C3'-C2'-C1'	-5.25	96.05	101.30
35	BA	941	G	N9-C1'-C2'	-5.25	104.12	112.00
35	BA	1000	A	C1'-O4'-C4'	-5.25	104.65	109.90
35	BA	1458	G	O5'-C5'-C4'	5.25	119.38	111.50
39	BE	117	GLU	CA-C-N	5.25	128.29	120.31
39	BE	117	GLU	C-N-CA	5.25	128.29	120.31
55	BU	5	ARG	NE-CZ-NH1	-5.25	116.25	121.50
2	AB	652	U	C3'-C2'-O2'	5.25	118.58	110.70
2	AB	776	G	O4'-C1'-N9	5.25	116.08	108.20
2	AB	2574	G	C1'-O4'-C4'	5.25	115.15	109.90
35	BA	430	A	O5'-C5'-C4'	-5.25	103.62	111.50
35	BA	988	G	O4'-C1'-C2'	-5.25	102.35	107.60
35	BA	1340	A	C4'-C3'-O3'	-5.25	105.12	113.00
36	BB	28	C	C5'-C4'-O4'	5.25	117.68	109.80
37	BC	50	U	N1-C1'-C2'	5.25	119.88	112.00
57	BW	57	VAL	CA-CB-CG1	5.25	119.33	110.40
2	AB	2133	G	C2'-C3'-O3'	5.25	117.38	109.50
2	AB	2326	C	C4'-C3'-C2'	-5.25	97.35	102.60
35	BA	253	A	O4'-C1'-N9	5.25	116.38	108.50
2	AB	1558	C	C4'-C3'-O3'	5.25	117.27	109.40
2	AB	2070	A	C5'-C4'-O4'	5.25	117.67	109.80
7	AG	62	GLN	N-CA-CB	-5.25	102.31	110.29
11	AK	16	MET	O-C-N	-5.25	115.84	122.19
18	AR	30	TRP	CA-C-N	5.25	129.25	120.64
18	AR	30	TRP	C-N-CA	5.25	129.25	120.64
35	BA	1233	G	C1'-O4'-C4'	-5.25	104.65	109.90
2	AB	62	U	C5'-C4'-C3'	-5.25	108.13	116.00
2	AB	802	A	O3'-P-O5'	-5.25	96.13	104.00
2	AB	1134	A	O5'-C5'-C4'	-5.25	103.83	111.70
2	AB	1156	A	O4'-C4'-C3'	5.25	111.35	106.10
2	AB	2254	C	O4'-C1'-N1	5.25	116.37	108.50
7	AG	156	THR	CA-CB-CG2	5.25	119.42	110.50
20	AT	5	PHE	CA-C-O	-5.25	115.64	121.51
40	BF	121	SER	N-CA-C	-5.25	105.56	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	BH	150	GLU	N-CA-C	-5.25	106.90	113.72
47	BM	102	LEU	N-CA-C	5.25	117.65	109.52
2	AB	112	U	O4'-C1'-N1	5.25	116.37	108.50
2	AB	888	C	P-O3'-C3'	5.25	128.07	120.20
2	AB	1292	G	O4'-C1'-C2'	5.25	112.84	107.60
2	AB	1369	G	C1'-O4'-C4'	5.25	115.14	109.90
2	AB	1785	A	O4'-C1'-N9	5.25	116.37	108.50
2	AB	2451	A	O3'-P-O5'	5.25	111.87	104.00
10	AJ	149	LYS	CB-CG-CD	5.25	123.36	111.30
57	BW	82	ILE	CA-C-O	-5.25	115.81	121.27
2	AB	383	C	C1'-C2'-O2'	-5.24	100.54	108.40
2	AB	548	G	C5'-C4'-C3'	-5.24	107.34	115.20
2	AB	793	A	C5'-C4'-O4'	5.24	116.97	109.10
2	AB	1727	C	O3'-P-O5'	-5.24	96.13	104.00
2	AB	2595	G	O4'-C1'-C2'	-5.24	102.36	107.60
7	AG	42	ALA	N-CA-C	5.24	118.82	111.74
18	AR	27	VAL	N-CA-C	5.24	115.91	107.73
35	BA	641	U	C1'-O4'-C4'	-5.24	104.46	109.70
35	BA	643	C	O4'-C1'-N1	5.24	116.37	108.50
53	BS	34	GLU	CA-C-N	5.24	129.96	122.72
53	BS	34	GLU	C-N-CA	5.24	129.96	122.72
2	AB	567	U	O4'-C4'-C3'	5.24	109.24	104.00
2	AB	987	C	C3'-C2'-C1'	-5.24	96.06	101.30
2	AB	1866	A	C4'-C3'-O3'	5.24	120.86	113.00
2	AB	2132	U	C3'-C2'-O2'	5.24	118.56	110.70
2	AB	2309	A	C1'-C2'-O2'	-5.24	100.54	108.40
2	AB	2391	G	P-O3'-C3'	5.24	128.06	120.20
6	AF	129	PRO	N-CD-CG	5.24	111.06	103.20
19	AS	35	PHE	CA-CB-CG	-5.24	108.56	113.80
23	AW	33	VAL	CA-CB-CG2	5.24	119.31	110.40
35	BA	805	C	C3'-C2'-O2'	5.24	118.56	110.70
35	BA	1104	G	O4'-C4'-C3'	5.24	109.24	104.00
35	BA	1398	A	O4'-C1'-N9	5.24	116.36	108.50
1	AA	78	A	C1'-C2'-O2'	5.24	116.26	108.40
2	AB	959	A	C5'-C4'-C3'	-5.24	108.14	116.00
2	AB	1901	A	N9-C1'-C2'	-5.24	104.14	112.00
35	BA	167	A	C5'-C4'-O4'	5.24	117.66	109.80
35	BA	228	A	O4'-C4'-C3'	5.24	109.24	104.00
38	BD	43	G	O4'-C4'-C3'	-5.24	98.76	104.00
46	BL	64	ILE	CA-C-O	-5.24	114.81	120.36
2	AB	314	C	C2'-C3'-O3'	-5.24	105.84	113.70
2	AB	401	A	C1'-C2'-O2'	-5.24	100.54	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	AJ	5	GLN	OE1-CD-NE2	5.24	127.84	122.60
23	AW	10	VAL	CA-CB-CG1	5.24	119.31	110.40
35	BA	421	U	C3'-C2'-C1'	5.24	106.74	101.50
37	BC	27	A	O4'-C1'-C2'	-5.24	102.36	107.60
48	BN	75	GLU	CA-C-O	-5.24	113.61	119.79
52	BR	11	VAL	CB-CA-C	5.24	119.45	112.22
52	BR	80	LEU	CA-C-N	5.24	127.64	120.46
52	BR	80	LEU	C-N-CA	5.24	127.64	120.46
2	AB	216	A	C3'-C2'-C1'	-5.24	96.06	101.30
2	AB	2074	U	O5'-C5'-C4'	-5.24	103.64	111.50
7	AG	39	VAL	CB-CA-C	5.24	118.88	112.02
8	AH	19	ASN	CA-C-N	5.24	131.68	121.41
8	AH	19	ASN	C-N-CA	5.24	131.68	121.41
35	BA	76	G	C1'-O4'-C4'	-5.24	104.66	109.90
55	BU	53	GLN	N-CA-CB	5.24	118.00	110.20
2	AB	465	G	C3'-C2'-O2'	5.24	118.55	110.70
2	AB	2523	G	O3'-P-O5'	-5.24	96.15	104.00
2	AB	2724	U	O4'-C1'-C2'	5.24	112.84	107.60
35	BA	627	G	C5'-C4'-C3'	-5.24	108.14	116.00
35	BA	961	U	C5'-C4'-C3'	-5.24	108.15	116.00
35	BA	1023	U	C2'-C3'-O3'	5.24	121.55	113.70
35	BA	1514	G	C3'-C2'-O2'	5.24	118.55	110.70
39	BE	139	GLU	O-C-N	5.24	128.12	122.15
41	BG	195	ASN	CB-CA-C	5.24	119.23	111.17
49	BO	2	THR	CA-CB-OG1	-5.24	101.75	109.60
2	AB	2094	A	C1'-C2'-O2'	5.23	119.65	111.80
2	AB	2500	U	C1'-O4'-C4'	-5.23	104.67	109.90
2	AB	2664	G	P-O3'-C3'	5.23	128.05	120.20
4	AD	182	LYS	N-CA-C	5.23	118.75	109.96
24	AX	94	ALA	N-CA-CB	-5.23	102.55	110.40
50	BP	11	HIS	CA-C-N	5.23	131.03	122.81
50	BP	11	HIS	C-N-CA	5.23	131.03	122.81
2	AB	232	G	C2'-C3'-O3'	5.23	117.35	109.50
2	AB	1019	U	C3'-C2'-C1'	5.23	106.53	101.30
2	AB	2055	C	C3'-C2'-C1'	5.23	106.53	101.30
2	AB	2615	U	C5'-C4'-C3'	-5.23	108.15	116.00
8	AH	155	PRO	CA-C-N	5.23	131.53	121.54
8	AH	155	PRO	C-N-CA	5.23	131.53	121.54
37	BC	51	C	C2'-C3'-O3'	5.23	121.55	113.70
38	BD	67	C	C4'-C3'-C2'	-5.23	97.37	102.60
38	BD	69	C	C3'-C2'-O2'	5.23	118.55	110.70
39	BE	69	VAL	CA-CB-CG2	-5.23	101.51	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	BH	113	VAL	O-C-N	-5.23	116.78	121.91
45	BK	20	ASN	OD1-CG-ND2	-5.23	117.37	122.60
45	BK	33	VAL	CB-CA-C	5.23	118.40	111.70
51	BQ	1	ALA	CA-C-N	5.23	131.53	121.54
51	BQ	1	ALA	C-N-CA	5.23	131.53	121.54
2	AB	669	G	C1'-O4'-C4'	5.23	115.13	109.90
2	AB	2108	A	O4'-C4'-C3'	-5.23	98.77	104.00
2	AB	2378	A	C2'-C3'-O3'	-5.23	105.86	113.70
2	AB	2534	A	C3'-C2'-O2'	5.23	118.55	110.70
2	AB	2859	G	C5'-C4'-C3'	5.23	123.84	116.00
19	AS	96	ASP	CA-C-N	5.23	131.38	121.97
19	AS	96	ASP	C-N-CA	5.23	131.38	121.97
22	AV	69	ARG	CA-CB-CG	5.23	124.56	114.10
23	AW	72	PHE	CA-C-N	5.23	127.81	120.28
23	AW	72	PHE	C-N-CA	5.23	127.81	120.28
35	BA	272	C	O3'-P-O5'	-5.23	96.15	104.00
35	BA	321	A	O4'-C1'-N9	5.23	116.35	108.50
35	BA	1221	G	C2'-C3'-O3'	-5.23	105.85	113.70
35	BA	1477	U	C4'-C3'-C2'	-5.23	97.37	102.60
35	BA	1487	G	C2'-C3'-O3'	5.23	121.55	113.70
53	BS	43	ALA	CA-C-O	-5.23	116.12	121.87
2	AB	328	U	C5'-C4'-C3'	-5.23	108.16	116.00
2	AB	2111	U	O4'-C4'-C3'	5.23	111.33	106.10
11	AK	109	ALA	O-C-N	-5.23	116.58	122.12
16	AP	5	LYS	CA-C-N	5.23	130.44	121.87
16	AP	5	LYS	C-N-CA	5.23	130.44	121.87
25	AY	64	GLY	N-CA-C	5.23	117.90	110.74
47	BM	56	HIS	CB-CG-CD2	-5.23	124.40	131.20
2	AB	230	G	P-O3'-C3'	5.23	128.04	120.20
2	AB	351	C	O4'-C1'-N1	5.23	116.34	108.50
2	AB	874	G	N9-C1'-C2'	-5.23	104.16	112.00
2	AB	1043	C	C1'-O4'-C4'	5.23	115.13	109.90
2	AB	1379	U	O4'-C1'-N1	5.23	116.34	108.50
2	AB	2116	G	C5'-C4'-C3'	-5.23	108.16	116.00
2	AB	2834	G	O4'-C1'-N9	5.23	116.34	108.50
9	AI	92	GLY	CA-C-N	5.23	131.53	121.54
9	AI	92	GLY	C-N-CA	5.23	131.53	121.54
11	AK	130	GLY	CA-C-N	5.23	127.71	120.29
11	AK	130	GLY	C-N-CA	5.23	127.71	120.29
17	AQ	20	GLU	CA-C-N	5.23	129.45	120.72
17	AQ	20	GLU	C-N-CA	5.23	129.45	120.72
24	AX	30	ILE	O-C-N	5.23	128.58	122.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	AY	42	THR	CA-CB-CG2	5.23	119.39	110.50
35	BA	789	U	O4'-C1'-C2'	-5.23	102.37	107.60
35	BA	933	G	P-O3'-C3'	5.23	128.04	120.20
35	BA	952	U	O3'-P-O5'	-5.23	96.16	104.00
35	BA	1484	C	O4'-C1'-C2'	5.23	112.83	107.60
37	BC	15	G	O5'-C5'-C4'	-5.23	103.66	111.50
38	BD	27	G	O4'-C1'-C2'	-5.23	102.37	107.60
40	BF	15	LYS	CA-C-N	5.23	125.20	120.03
40	BF	15	LYS	C-N-CA	5.23	125.20	120.03
40	BF	68	HIS	CA-CB-CG	5.23	119.03	113.80
44	BJ	63	VAL	CA-C-N	5.23	127.60	120.54
44	BJ	63	VAL	C-N-CA	5.23	127.60	120.54
46	BL	44	ARG	NE-CZ-NH2	-5.23	114.50	119.20
54	BT	41	THR	N-CA-C	-5.23	100.78	109.46
2	AB	2278	A	O5'-C5'-C4'	5.23	119.34	111.50
35	BA	306	A	O3'-P-O5'	-5.23	96.16	104.00
35	BA	423	G	C2'-C3'-O3'	-5.23	105.86	113.70
35	BA	814	A	C5'-C4'-O4'	5.23	117.64	109.80
38	BD	7	G	C1'-O4'-C4'	5.23	115.13	109.90
2	AB	189	G	C1'-O4'-C4'	5.22	115.12	109.90
2	AB	492	A	C3'-C2'-C1'	5.22	106.53	101.30
2	AB	1020	A	C1'-C2'-O2'	-5.22	103.96	111.80
2	AB	1632	A	C4'-C3'-O3'	-5.22	105.16	113.00
2	AB	1716	U	C4'-C3'-C2'	-5.22	97.38	102.60
2	AB	1760	C	C5'-C4'-O4'	-5.22	101.96	109.80
2	AB	1826	G	O4'-C1'-N9	5.22	116.33	108.50
2	AB	2261	C	O4'-C4'-C3'	5.22	109.22	104.00
7	AG	73	VAL	CA-CB-CG1	5.22	119.28	110.40
32	A5	7	PRO	N-CA-C	5.22	123.23	112.47
35	BA	143	A	O4'-C1'-N9	5.22	116.34	108.50
35	BA	1244	G	O5'-C5'-C4'	-5.22	103.66	111.50
38	BD	48	U	N1-C1'-C2'	-5.22	106.16	114.00
40	BF	48	LYS	N-CA-CB	-5.22	102.29	110.44
41	BG	175	GLY	N-CA-C	-5.22	108.18	114.66
42	BH	82	HIS	CB-CG-CD2	-5.22	124.41	131.20
2	AB	2112	G	C2'-C3'-O3'	-5.22	105.87	113.70
2	AB	2425	A	P-O3'-C3'	5.22	128.03	120.20
2	AB	2698	U	O4'-C4'-C3'	5.22	109.22	104.00
7	AG	161	SER	CA-C-N	5.22	129.51	120.58
7	AG	161	SER	C-N-CA	5.22	129.51	120.58
10	AJ	137	ARG	NE-CZ-NH2	5.22	123.90	119.20
13	AM	69	VAL	CA-C-O	-5.22	114.43	121.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	272	C	C5'-C4'-O4'	5.22	117.63	109.80
35	BA	752	G	C1'-O4'-C4'	5.22	114.92	109.70
47	BM	58	ASN	CB-CA-C	5.22	120.81	110.42
49	BO	98	ARG	CA-C-O	5.22	125.80	119.38
2	AB	2548	U	C3'-C2'-C1'	5.22	106.52	101.30
15	AO	47	GLU	CB-CA-C	5.22	119.00	110.96
38	BD	64	G	P-O5'-C5'	5.22	128.73	120.90
2	AB	48	G	C1'-O4'-C4'	-5.22	104.68	109.90
2	AB	54	G	P-O5'-C5'	-5.22	113.07	120.90
2	AB	319	G	P-O5'-C5'	5.22	128.73	120.90
2	AB	871	U	C3'-C2'-O2'	-5.22	102.87	110.70
2	AB	1631	G	C5'-C4'-O4'	5.22	117.63	109.80
2	AB	1678	A	O3'-P-O5'	5.22	111.83	104.00
2	AB	2070	A	O4'-C1'-C2'	-5.22	102.38	107.60
4	AD	270	ARG	CD-NE-CZ	-5.22	117.09	124.40
10	AJ	67	PRO	O-C-N	5.22	128.93	123.03
35	BA	1329	A	O5'-C5'-C4'	-5.22	103.67	111.50
35	BA	1408	A	C5'-C4'-C3'	-5.22	108.17	116.00
44	BJ	91	ARG	NE-CZ-NH1	5.22	126.72	121.50
50	BP	44	ILE	CB-CG1-CD1	-5.22	102.84	113.80
1	AA	34	A	C4'-C3'-C2'	-5.22	97.38	102.60
2	AB	1266	G	C4'-C3'-C2'	-5.22	97.38	102.60
3	AC	8	MET	CA-C-N	5.22	127.27	120.28
3	AC	8	MET	C-N-CA	5.22	127.27	120.28
35	BA	555	U	C3'-C2'-O2'	5.22	118.53	110.70
2	AB	1576	U	O4'-C1'-N1	5.22	116.33	108.50
2	AB	2025	C	O4'-C1'-C2'	-5.22	102.38	107.60
2	AB	2751	G	C3'-C2'-C1'	-5.22	96.28	101.50
2	AB	2788	C	C3'-C2'-C1'	5.22	106.52	101.30
7	AG	62	GLN	CA-C-O	-5.22	115.47	121.47
17	AQ	19	GLN	OE1-CD-NE2	-5.22	117.38	122.60
18	AR	38	ARG	CD-NE-CZ	5.22	131.70	124.40
35	BA	138	G	O3'-P-O5'	-5.22	96.18	104.00
35	BA	523	A	C2'-C3'-O3'	-5.22	105.88	113.70
35	BA	1049	U	O3'-P-O5'	-5.22	96.18	104.00
36	BB	44	G	C4'-C3'-C2'	-5.22	97.38	102.60
49	BO	8	ARG	O-C-N	-5.22	115.34	122.33
2	AB	351	C	O4'-C1'-C2'	-5.21	102.39	107.60
2	AB	670	A	O4'-C1'-C2'	-5.21	100.58	105.80
2	AB	1300	G	P-O3'-C3'	5.21	128.02	120.20
2	AB	1384	A	O5'-C5'-C4'	5.21	119.32	111.50
2	AB	1422	G	O5'-C5'-C4'	5.21	119.32	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1968	G	N9-C1'-C2'	-5.21	104.18	112.00
15	AO	70	ASP	CA-CB-CG	5.21	117.81	112.60
19	AS	94	LEU	CA-C-N	5.21	130.60	122.26
19	AS	94	LEU	C-N-CA	5.21	130.60	122.26
25	AY	75	ASN	CA-CB-CG	5.21	117.81	112.60
26	AZ	55	MET	CA-C-N	5.21	127.69	120.29
26	AZ	55	MET	C-N-CA	5.21	127.69	120.29
35	BA	101	A	C5'-C4'-O4'	5.21	117.62	109.80
35	BA	137	U	C1'-O4'-C4'	5.21	115.11	109.90
35	BA	519	C	C1'-C2'-O2'	-5.21	100.58	108.40
35	BA	1163	A	C5'-C4'-O4'	5.21	117.62	109.80
2	AB	1914	C	N1-C1'-C2'	-5.21	104.18	112.00
2	AB	2044	C	O3'-P-O5'	-5.21	96.18	104.00
2	AB	2237	G	C2'-C3'-O3'	-5.21	105.88	113.70
2	AB	2425	A	C3'-C2'-C1'	-5.21	96.29	101.50
8	AH	128	THR	CA-CB-OG1	5.21	117.42	109.60
38	BD	63	C	C4'-C3'-C2'	5.21	107.81	102.60
2	AB	82	U	C1'-O4'-C4'	5.21	115.11	109.90
9	AI	86	ASP	O-C-N	5.21	128.68	122.27
35	BA	507	C	O4'-C1'-N1	5.21	116.32	108.50
35	BA	901	A	O4'-C4'-C3'	5.21	109.21	104.00
40	BF	145	ALA	CA-C-N	5.21	130.41	122.23
40	BF	145	ALA	C-N-CA	5.21	130.41	122.23
48	BN	6	ARG	CA-C-N	5.21	128.48	120.82
48	BN	6	ARG	C-N-CA	5.21	128.48	120.82
2	AB	250	G	O4'-C4'-C3'	5.21	109.21	104.00
2	AB	1140	C	O4'-C1'-C2'	-5.21	102.39	107.60
2	AB	1190	G	C4'-C3'-C2'	-5.21	97.39	102.60
19	AS	35	PHE	O-C-N	5.21	127.44	122.07
49	BO	18	SER	CA-C-N	5.21	131.49	121.54
49	BO	18	SER	C-N-CA	5.21	131.49	121.54
1	AA	58	A	C3'-C2'-O2'	5.21	118.51	110.70
2	AB	561	G	C1'-O4'-C4'	5.21	115.11	109.90
2	AB	859	G	C1'-C2'-O2'	5.21	119.61	111.80
2	AB	1010	A	C1'-C2'-O2'	5.21	116.21	108.40
2	AB	1018	U	C4'-C3'-C2'	-5.21	97.39	102.60
2	AB	1079	C	O4'-C1'-N1	5.21	116.31	108.50
2	AB	1098	A	C5'-C4'-O4'	5.21	117.61	109.80
2	AB	1816	C	P-O5'-C5'	5.21	128.71	120.90
2	AB	1893	C	C1'-O4'-C4'	5.21	115.11	109.90
2	AB	1898	U	O4'-C1'-N1	5.21	116.31	108.50
3	AC	166	ASP	CB-CA-C	5.21	120.78	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AC	209	ILE	CB-CA-C	5.21	119.83	111.29
4	AD	182	LYS	CG-CD-CE	5.21	123.28	111.30
8	AH	34	ARG	CB-CG-CD	5.21	123.28	111.30
35	BA	345	C	C4'-C3'-C2'	-5.21	97.39	102.60
35	BA	458	U	C5'-C4'-O4'	5.21	117.61	109.80
39	BE	121	GLN	OE1-CD-NE2	5.21	127.81	122.60
46	BL	57	VAL	O-C-N	5.21	127.01	121.91
46	BL	80	HIS	N-CA-CB	-5.21	102.50	110.26
2	AB	66	C	N1-C1'-C2'	-5.21	104.19	112.00
2	AB	1523	U	O5'-C5'-C4'	-5.21	103.69	111.50
2	AB	1767	G	C5'-C4'-C3'	-5.21	108.19	116.00
2	AB	2101	A	C1'-O4'-C4'	5.21	115.11	109.90
15	AO	88	ASN	OD1-CG-ND2	-5.21	117.39	122.60
35	BA	381	C	C4'-C3'-C2'	5.21	107.81	102.60
35	BA	1199	U	O3'-P-O5'	5.21	111.81	104.00
35	BA	1494	G	C1'-O4'-C4'	5.21	115.11	109.90
49	BO	71	HIS	CE1-NE2-CD2	-5.21	103.79	109.00
57	BW	74	HIS	CA-C-N	5.21	128.63	120.82
57	BW	74	HIS	C-N-CA	5.21	128.63	120.82
2	AB	474	G	C4'-C3'-C2'	5.21	107.81	102.60
49	BO	70	GLY	O-C-N	-5.21	115.93	122.70
56	BV	9	PHE	CA-C-N	5.21	127.92	122.14
56	BV	9	PHE	C-N-CA	5.21	127.92	122.14
1	AA	10	G	O4'-C4'-C3'	5.20	109.20	104.00
2	AB	1273	U	C3'-C2'-C1'	-5.20	96.10	101.30
2	AB	1416	G	P-O3'-C3'	5.20	128.00	120.20
2	AB	2271	G	C3'-C2'-O2'	-5.20	106.80	114.60
16	AP	40	LYS	CA-C-N	5.20	127.98	120.38
16	AP	40	LYS	C-N-CA	5.20	127.98	120.38
35	BA	313	A	O5'-C5'-C4'	-5.20	103.69	111.50
35	BA	620	C	O4'-C1'-N1	5.20	116.31	108.50
39	BE	38	HIS	ND1-CE1-NE2	5.20	113.60	108.40
42	BH	69	ASN	N-CA-CB	5.20	119.87	111.65
46	BL	123	ARG	O-C-N	-5.20	115.03	121.64
2	AB	2785	C	O4'-C4'-C3'	5.20	109.20	104.00
8	AH	44	HIS	CA-C-O	-5.20	113.65	119.79
10	AJ	95	PHE	O-C-N	5.20	128.67	122.27
36	BB	38	A	C5'-C4'-C3'	-5.20	108.20	116.00
2	AB	197	A	C3'-C2'-O2'	5.20	118.50	110.70
2	AB	231	A	N9-C1'-C2'	5.20	119.80	112.00
2	AB	422	A	O4'-C4'-C3'	5.20	109.20	104.00
2	AB	840	C	C3'-C2'-C1'	5.20	106.50	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1256	G	C4'-C3'-C2'	-5.20	97.40	102.60
2	AB	1825	U	C2'-C3'-O3'	-5.20	105.90	113.70
2	AB	2613	U	C4'-C3'-C2'	-5.20	97.40	102.60
2	AB	2724	U	C3'-C2'-C1'	-5.20	96.10	101.30
16	AP	45	ARG	NE-CZ-NH2	-5.20	114.52	119.20
22	AV	60	THR	CA-CB-CG2	5.20	119.34	110.50
35	BA	449	G	C5'-C4'-O4'	-5.20	102.00	109.80
35	BA	633	G	P-O3'-C3'	5.20	128.00	120.20
35	BA	1257	A	C4'-C3'-C2'	-5.20	97.40	102.60
35	BA	1306	A	N9-C1'-C2'	-5.20	104.20	112.00
48	BN	81	LEU	N-CA-C	5.20	117.29	109.23
2	AB	567	U	O4'-C1'-C2'	-5.20	102.40	107.60
2	AB	2083	G	O4'-C4'-C3'	5.20	109.20	104.00
2	AB	2654	A	C1'-O4'-C4'	-5.20	104.50	109.70
4	AD	16	VAL	CA-CB-CG2	5.20	119.24	110.40
35	BA	8	A	C4'-C3'-O3'	-5.20	101.60	109.40
35	BA	552	U	O4'-C1'-N1	5.20	116.30	108.50
35	BA	1303	C	C3'-C2'-C1'	5.20	106.50	101.30
45	BK	3	GLN	CB-CG-CD	5.20	121.44	112.60
54	BT	22	VAL	O-C-N	5.20	129.18	123.10
2	AB	1418	G	C4'-C3'-C2'	-5.20	97.40	102.60
2	AB	1558	C	O4'-C1'-N1	5.20	116.00	108.20
2	AB	2262	U	C1'-O4'-C4'	-5.20	104.70	109.90
2	AB	2372	U	C3'-C2'-C1'	5.20	106.50	101.30
2	AB	2464	G	C1'-C2'-O2'	-5.20	100.60	108.40
2	AB	2545	G	N9-C1'-C2'	-5.20	104.20	112.00
7	AG	55	ASP	CA-C-N	5.20	127.24	120.28
7	AG	55	ASP	C-N-CA	5.20	127.24	120.28
18	AR	61	ARG	O-C-N	5.20	129.14	123.27
50	BP	106	ARG	NH1-CZ-NH2	-5.20	112.54	119.30
2	AB	136	G	O5'-C5'-C4'	5.20	119.29	111.50
2	AB	1303	G	O4'-C1'-C2'	-5.20	102.40	107.60
2	AB	2618	G	P-O5'-C5'	5.20	128.69	120.90
14	AN	132	ARG	CA-C-O	-5.20	115.04	120.55
23	AW	53	GLN	CB-CA-C	5.20	118.02	109.97
35	BA	466	A	O4'-C1'-C2'	-5.20	102.41	107.60
35	BA	601	G	N9-C1'-C2'	-5.20	104.21	112.00
35	BA	991	U	O4'-C1'-C2'	5.20	111.00	105.80
35	BA	1464	U	O4'-C4'-C3'	-5.20	98.80	104.00
40	BF	39	ARG	NE-CZ-NH1	5.20	126.69	121.50
45	BK	98	LEU	N-CA-C	-5.20	105.70	111.36
2	AB	774	G	C1'-C2'-O2'	5.19	119.59	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	53	ILE	O-C-N	-5.19	117.02	123.10
35	BA	505	G	C1'-O4'-C4'	-5.19	104.71	109.90
35	BA	932	C	C4'-C3'-C2'	-5.19	97.41	102.60
2	AB	311	A	C4'-C3'-O3'	-5.19	101.61	109.40
2	AB	2391	G	C1'-O4'-C4'	5.19	114.89	109.70
2	AB	2712	C	C3'-C2'-C1'	5.19	106.69	101.50
3	AC	28	ALA	CA-C-N	5.19	127.50	120.44
3	AC	28	ALA	C-N-CA	5.19	127.50	120.44
5	AE	179	ARG	CA-C-N	-5.19	115.89	123.06
5	AE	179	ARG	C-N-CA	-5.19	115.89	123.06
11	AK	99	LYS	CA-C-O	5.19	126.81	120.99
14	AN	106	GLU	CA-C-O	5.19	124.47	118.55
16	AP	75	ILE	N-CA-CB	-5.19	102.79	110.58
17	AQ	80	GLU	N-CA-C	5.19	117.68	111.71
19	AS	110	GLU	O-C-N	5.19	127.62	122.12
22	AV	97	GLY	N-CA-C	5.19	120.38	114.67
35	BA	223	A	O4'-C1'-N9	5.19	116.29	108.50
35	BA	1012	A	C2'-C3'-O3'	-5.19	105.91	113.70
35	BA	1239	A	C4'-C3'-O3'	5.19	117.19	109.40
41	BG	85	THR	CA-C-N	5.19	125.71	120.00
41	BG	85	THR	C-N-CA	5.19	125.71	120.00
2	AB	1299	G	O4'-C1'-N9	5.19	116.28	108.50
2	AB	1665	A	N9-C1'-C2'	-5.19	104.22	112.00
2	AB	1808	A	C1'-C2'-O2'	-5.19	104.01	111.80
14	AN	8	PRO	N-CA-CB	5.19	107.68	103.32
35	BA	147	G	C4'-C3'-C2'	-5.19	97.41	102.60
35	BA	559	A	C5'-C4'-C3'	-5.19	107.41	115.20
35	BA	569	C	N1-C1'-C2'	-5.19	104.21	112.00
35	BA	785	G	C3'-C2'-C1'	-5.19	96.11	101.30
35	BA	1417	G	C4'-C3'-C2'	-5.19	97.41	102.60
54	BT	58	VAL	N-CA-C	5.19	116.38	108.80
2	AB	943	A	C3'-C2'-O2'	5.19	118.48	110.70
2	AB	1804	C	O4'-C1'-C2'	-5.19	102.41	107.60
2	AB	2630	G	C2'-C3'-O3'	5.19	121.48	113.70
20	AT	75	VAL	N-CA-CB	5.19	118.31	111.25
21	AU	95	ARG	O-C-N	5.19	129.11	123.04
35	BA	549	C	C3'-C2'-C1'	5.19	106.49	101.30
44	BJ	117	LEU	O-C-N	5.19	128.06	122.15
45	BK	12	ARG	CA-C-O	-5.19	115.05	120.55
2	AB	565	C	C5'-C4'-O4'	5.19	117.58	109.80
2	AB	896	A	O4'-C1'-C2'	-5.19	100.61	105.80
2	AB	1572	A	C4'-C3'-O3'	5.19	120.78	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2061	G	O3'-P-O5'	-5.19	96.22	104.00
2	AB	2165	C	O4'-C4'-C3'	5.19	109.19	104.00
23	AW	34	ILE	CB-CA-C	5.19	118.40	111.19
35	BA	805	C	C3'-C2'-C1'	5.19	106.49	101.30
37	BC	22	G	O4'-C1'-N9	5.19	115.98	108.20
41	BG	88	ASN	CA-CB-CG	-5.19	107.41	112.60
49	BO	88	ASP	CA-C-O	-5.19	115.05	120.55
50	BP	54	THR	N-CA-C	-5.19	105.62	111.28
2	AB	931	U	C5'-C4'-C3'	5.19	122.98	115.20
2	AB	1135	C	O4'-C1'-N1	5.19	116.28	108.50
2	AB	2745	C	O3'-P-O5'	-5.19	96.22	104.00
26	AZ	64	ASP	N-CA-C	5.18	117.60	111.33
35	BA	602	A	O4'-C1'-N9	5.18	116.28	108.50
35	BA	740	U	C1'-O4'-C4'	-5.18	104.72	109.90
35	BA	770	C	N1-C1'-C2'	-5.18	104.22	112.00
35	BA	1238	A	O3'-P-O5'	5.18	111.78	104.00
35	BA	1326	U	C4'-C3'-C2'	5.18	107.78	102.60
36	BB	9	A	P-O5'-C5'	5.18	128.68	120.90
37	BC	31	U	C3'-C2'-C1'	5.18	106.48	101.30
2	AB	1330	C	C3'-C2'-O2'	5.18	118.47	110.70
2	AB	1819	A	C5'-C4'-C3'	-5.18	107.43	115.20
2	AB	1826	G	O4'-C4'-C3'	5.18	109.18	104.00
6	AF	95	LYS	CA-C-N	5.18	131.30	121.97
6	AF	95	LYS	C-N-CA	5.18	131.30	121.97
19	AS	26	ALA	CA-C-N	5.18	127.95	120.38
19	AS	26	ALA	C-N-CA	5.18	127.95	120.38
19	AS	101	ASP	CA-CB-CG	5.18	117.78	112.60
35	BA	212	G	N9-C1'-C2'	-5.18	104.22	112.00
35	BA	717	U	C2'-C3'-O3'	5.18	121.47	113.70
42	BH	36	THR	CA-C-N	5.18	129.62	123.19
42	BH	36	THR	C-N-CA	5.18	129.62	123.19
2	AB	390	U	O4'-C1'-C2'	-5.18	100.62	105.80
2	AB	778	G	C3'-C2'-O2'	5.18	118.47	110.70
2	AB	2510	C	C4'-C3'-O3'	-5.18	105.23	113.00
7	AG	45	ASP	CA-C-N	5.18	129.70	122.08
7	AG	45	ASP	C-N-CA	5.18	129.70	122.08
35	BA	235	C	O4'-C4'-C3'	-5.18	98.82	104.00
2	AB	94	A	C3'-C2'-O2'	5.18	118.47	110.70
2	AB	1111	A	O4'-C4'-C3'	5.18	111.28	106.10
2	AB	2140	G	C5'-C4'-C3'	-5.18	108.23	116.00
2	AB	2440	C	C4'-C3'-C2'	-5.18	97.42	102.60
2	AB	2787	C	O4'-C4'-C3'	-5.18	98.82	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	AF	32	VAL	CA-C-N	5.18	128.79	120.30
6	AF	32	VAL	C-N-CA	5.18	128.79	120.30
10	AJ	59	LEU	N-CA-C	-5.18	105.64	111.28
35	BA	636	U	O4'-C4'-C3'	5.18	109.18	104.00
43	BI	4	TYR	CG-CD1-CE1	-5.18	113.43	121.20
2	AB	1094	U	O5'-C5'-C4'	-5.18	103.73	111.50
2	AB	1820	U	O4'-C1'-N1	5.18	115.97	108.20
2	AB	1865	U	C1'-C2'-O2'	5.18	119.57	111.80
2	AB	2568	U	C5'-C4'-C3'	-5.18	108.23	116.00
35	BA	1167	A	C5'-C4'-O4'	5.18	116.87	109.10
40	BF	129	PHE	N-CA-C	-5.18	106.26	112.58
2	AB	214	G	O4'-C1'-C2'	-5.18	102.42	107.60
2	AB	661	A	O4'-C1'-N9	5.18	116.27	108.50
2	AB	1173	U	C4'-C3'-O3'	-5.18	105.23	113.00
2	AB	1192	G	O4'-C4'-C3'	5.18	109.18	104.00
2	AB	1306	C	C3'-C2'-O2'	5.18	118.46	110.70
2	AB	1466	U	P-O3'-C3'	5.18	127.97	120.20
2	AB	1763	G	O4'-C4'-C3'	-5.18	98.82	104.00
9	AI	146	VAL	CA-CB-CG1	-5.18	101.60	110.40
18	AR	80	VAL	CA-CB-CG1	5.18	119.20	110.40
35	BA	1081	A	O5'-C5'-C4'	-5.18	103.73	111.50
35	BA	1197	A	O4'-C1'-C2'	-5.18	102.42	107.60
35	BA	1224	U	C2'-C3'-O3'	5.18	117.26	109.50
35	BA	1469	C	C2'-C3'-O3'	-5.18	105.94	113.70
40	BF	71	ARG	CA-C-N	5.18	124.97	119.28
40	BF	71	ARG	C-N-CA	5.18	124.97	119.28
2	AB	1064	C	O4'-C4'-C3'	5.17	109.17	104.00
2	AB	2137	U	O4'-C1'-N1	5.17	116.26	108.50
2	AB	2395	C	C1'-C2'-O2'	5.17	116.16	108.40
2	AB	2402	U	C3'-C2'-C1'	5.17	106.47	101.30
2	AB	2641	G	O4'-C4'-C3'	5.17	109.17	104.00
10	AJ	119	ALA	CA-C-N	5.17	127.64	120.29
10	AJ	119	ALA	C-N-CA	5.17	127.64	120.29
13	AM	57	VAL	CB-CA-C	5.17	118.07	110.98
22	AV	9	LYS	N-CA-CB	-5.17	101.75	110.49
36	BB	48	U	C1'-O4'-C4'	-5.17	104.72	109.90
42	BH	97	PRO	CB-CA-C	5.17	118.13	111.56
2	AB	758	C	P-O3'-C3'	5.17	127.96	120.20
2	AB	1792	G	C1'-C2'-O2'	-5.17	100.64	108.40
2	AB	2844	G	C1'-C2'-O2'	5.17	116.16	108.40
8	AH	144	ALA	N-CA-CB	-5.17	102.52	110.12
35	BA	370	C	P-O5'-C5'	5.17	128.66	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BV	12	LEU	N-CA-C	-5.17	105.64	111.28
2	AB	185	G	O4'-C1'-C2'	-5.17	102.43	107.60
2	AB	494	G	O4'-C1'-N9	5.17	116.26	108.50
2	AB	1930	G	C3'-C2'-O2'	5.17	118.46	110.70
2	AB	2725	A	O3'-P-O5'	-5.17	96.24	104.00
13	AM	7	MET	O-C-N	5.17	129.11	123.01
13	AM	54	LYS	CA-C-O	-5.17	115.03	120.92
23	AW	39	ASN	CA-CB-CG	-5.17	107.43	112.60
26	AZ	39	VAL	CA-C-O	-5.17	114.79	120.48
35	BA	198	G	O5'-C5'-C4'	-5.17	103.74	111.50
35	BA	1201	A	C1'-O4'-C4'	-5.17	104.53	109.70
38	BD	10	G	C5'-C4'-C3'	-5.17	108.24	116.00
56	BV	19	GLU	CA-C-O	-5.17	115.07	120.55
2	AB	2272	U	C5'-C4'-O4'	5.17	117.56	109.80
2	AB	2559	C	C1'-O4'-C4'	-5.17	104.73	109.90
2	AB	2838	G	C5'-C4'-O4'	5.17	117.56	109.80
29	A2	47	LYS	CA-C-N	5.17	127.72	120.28
29	A2	47	LYS	C-N-CA	5.17	127.72	120.28
2	AB	51	G	O4'-C4'-C3'	-5.17	100.93	106.10
2	AB	797	G	C2'-C3'-O3'	-5.17	105.95	113.70
2	AB	1309	G	O4'-C1'-C2'	5.17	112.77	107.60
2	AB	2802	G	C3'-C2'-C1'	-5.17	96.13	101.30
3	AC	91	GLY	N-CA-C	5.17	122.24	114.95
8	AH	34	ARG	NE-CZ-NH1	5.17	126.67	121.50
9	AI	85	GLY	CA-C-N	5.17	128.16	120.31
9	AI	85	GLY	C-N-CA	5.17	128.16	120.31
18	AR	103	THR	CA-CB-OG1	5.17	117.35	109.60
32	A5	45	SER	CA-C-N	5.17	131.00	121.70
32	A5	45	SER	C-N-CA	5.17	131.00	121.70
35	BA	337	G	P-O3'-C3'	5.17	127.95	120.20
35	BA	992	U	C1'-C2'-O2'	5.17	119.55	111.80
35	BA	1348	U	C3'-C2'-O2'	-5.17	102.95	110.70
35	BA	1398	A	O4'-C1'-C2'	-5.17	102.43	107.60
35	BA	1461	G	C5'-C4'-O4'	5.17	117.55	109.80
35	BA	1514	G	C4'-C3'-C2'	-5.17	97.43	102.60
58	BX	55	HIS	CB-CG-CD2	-5.17	124.48	131.20
2	AB	1302	A	C1'-O4'-C4'	-5.17	104.53	109.70
2	AB	1352	U	O3'-P-O5'	5.17	111.75	104.00
2	AB	1518	C	C1'-O4'-C4'	-5.17	104.73	109.90
2	AB	1933	G	O4'-C1'-N9	5.17	116.25	108.50
2	AB	2075	U	C1'-O4'-C4'	-5.17	104.73	109.90
2	AB	2558	C	C1'-O4'-C4'	5.17	115.07	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2683	C	C5'-C4'-C3'	-5.17	108.25	116.00
10	AJ	159	ASP	O-C-N	5.17	128.95	122.23
16	AP	13	ASN	CA-CB-CG	5.17	117.77	112.60
35	BA	306	A	C1'-O4'-C4'	-5.17	104.53	109.70
35	BA	442	G	N9-C1'-C2'	5.17	119.75	112.00
2	AB	2530	A	C3'-C2'-C1'	-5.17	96.14	101.30
10	AJ	70	CYS	CA-C-N	5.17	130.35	122.24
10	AJ	70	CYS	C-N-CA	5.17	130.35	122.24
35	BA	1095	U	O4'-C1'-N1	5.17	116.25	108.50
36	BB	57	G	C4'-C3'-C2'	5.17	107.77	102.60
46	BL	76	GLY	CA-C-N	5.17	127.62	120.29
46	BL	76	GLY	C-N-CA	5.17	127.62	120.29
57	BW	43	LYS	CB-CG-CD	5.17	123.18	111.30
2	AB	156	A	C5'-C4'-C3'	-5.16	108.25	116.00
2	AB	202	U	C1'-O4'-C4'	5.16	115.06	109.90
2	AB	1045	C	O3'-P-O5'	-5.16	96.25	104.00
2	AB	1336	A	O4'-C4'-C3'	-5.16	98.84	104.00
18	AR	6	GLN	CA-C-N	5.16	128.16	120.31
18	AR	6	GLN	C-N-CA	5.16	128.16	120.31
28	A1	35	VAL	O-C-N	-5.16	117.22	122.75
35	BA	166	U	O5'-C5'-C4'	5.16	119.25	111.50
35	BA	492	C	C4'-C3'-C2'	-5.16	97.44	102.60
35	BA	852	G	C1'-O4'-C4'	5.16	115.06	109.90
35	BA	1106	G	C3'-C2'-C1'	-5.16	96.14	101.30
46	BL	105	ARG	CA-C-O	-5.16	115.38	121.16
47	BM	52	LEU	N-CA-CB	-5.16	103.27	110.29
2	AB	2278	A	N9-C1'-C2'	-5.16	104.26	112.00
11	AK	108	ILE	N-CA-C	-5.16	105.35	110.62
40	BF	64	ARG	O-C-N	-5.16	117.18	123.27
2	AB	916	G	C3'-C2'-C1'	-5.16	96.14	101.30
2	AB	1264	A	O4'-C4'-C3'	5.16	109.16	104.00
16	AP	37	THR	O-C-N	-5.16	116.77	122.86
35	BA	930	C	O4'-C1'-C2'	-5.16	102.44	107.60
38	BD	54	G	O5'-C5'-C4'	-5.16	103.76	111.50
43	BI	60	VAL	O-C-N	5.16	128.64	123.07
46	BL	69	GLY	N-CA-C	5.16	121.66	112.22
58	BX	7	GLU	CB-CA-C	5.16	118.47	109.65
2	AB	429	A	O5'-C5'-C4'	5.16	119.24	111.50
2	AB	692	C	C5'-C4'-O4'	5.16	117.54	109.80
2	AB	754	U	C4'-C3'-O3'	-5.16	105.26	113.00
2	AB	2593	U	O4'-C1'-C2'	5.16	112.76	107.60
2	AB	2689	U	C2'-C3'-O3'	5.16	117.24	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	AP	116	VAL	CA-CB-CG1	5.16	119.17	110.40
17	AQ	72	ALA	CA-C-O	5.16	125.89	120.42
35	BA	155	A	O4'-C1'-N9	5.16	116.24	108.50
44	BJ	142	ARG	N-CA-C	5.16	116.98	111.36
47	BM	13	PHE	CA-CB-CG	5.16	118.96	113.80
2	AB	166	U	C4'-C3'-O3'	5.16	120.73	113.00
2	AB	1482	G	C5'-C4'-C3'	-5.16	108.26	116.00
2	AB	1802	A	C4'-C3'-O3'	-5.16	105.26	113.00
14	AN	3	LEU	CA-C-O	5.16	127.88	120.51
14	AN	75	ALA	N-CA-C	5.16	116.91	109.07
35	BA	128	G	P-O3'-C3'	5.16	127.94	120.20
35	BA	192	A	O4'-C4'-C3'	5.16	109.16	104.00
35	BA	649	A	O3'-P-O5'	5.16	111.74	104.00
37	BC	43	U	C1'-O4'-C4'	-5.16	104.54	109.70
2	AB	208	C	O4'-C1'-N1	5.16	116.23	108.50
2	AB	214	G	C3'-C2'-O2'	5.16	118.43	110.70
2	AB	271	G	O5'-C5'-C4'	-5.16	103.97	111.70
2	AB	1585	C	O4'-C4'-C3'	5.16	109.16	104.00
2	AB	1776	G	P-O5'-C5'	-5.16	113.17	120.90
2	AB	2156	G	C1'-C2'-O2'	5.16	116.13	108.40
2	AB	2670	A	O4'-C1'-N9	5.16	116.23	108.50
6	AF	4	VAL	CB-CA-C	5.16	117.11	111.08
6	AF	61	ARG	CA-CB-CG	5.16	124.41	114.10
11	AK	1	ALA	CA-C-N	5.16	127.70	120.28
11	AK	1	ALA	C-N-CA	5.16	127.70	120.28
11	AK	55	PRO	N-CA-CB	5.16	107.90	103.31
14	AN	64	PHE	CA-CB-CG	5.16	118.96	113.80
26	AZ	19	HIS	CB-CG-CD2	-5.16	124.50	131.20
35	BA	42	G	C1'-C2'-O2'	5.16	116.13	108.40
35	BA	502	A	O4'-C1'-N9	5.16	116.23	108.50
35	BA	1409	C	O4'-C1'-N1	5.16	116.23	108.50
37	BC	31	U	O4'-C1'-N1	5.16	116.23	108.50
51	BQ	90	GLY	CA-C-N	5.16	128.15	120.31
51	BQ	90	GLY	C-N-CA	5.16	128.15	120.31
52	BR	57	ARG	CA-C-O	-5.16	115.59	121.00
2	AB	859	G	C1'-O4'-C4'	5.15	114.85	109.70
12	AL	98	GLU	N-CA-CB	-5.15	102.33	110.06
13	AM	3	GLN	N-CA-CB	-5.15	102.52	110.56
13	AM	64	ARG	NE-CZ-NH2	-5.15	114.56	119.20
35	BA	475	C	C1'-O4'-C4'	5.15	115.05	109.90
35	BA	843	U	C1'-C2'-O2'	5.15	119.53	111.80
42	BH	137	ARG	NE-CZ-NH1	5.15	126.65	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
43	BI	94	HIS	CE1-NE2-CD2	-5.15	103.85	109.00
2	AB	318	C	O4'-C1'-N1	5.15	116.23	108.50
2	AB	1145	C	O4'-C1'-N1	5.15	116.23	108.50
2	AB	1446	C	C4'-C3'-C2'	-5.15	97.45	102.60
2	AB	1526	C	C5'-C4'-C3'	5.15	123.73	116.00
2	AB	1721	G	O4'-C1'-N9	5.15	115.93	108.20
2	AB	2298	A	N9-C1'-C2'	-5.15	104.27	112.00
6	AF	32	VAL	N-CA-C	-5.15	105.34	112.50
10	AJ	152	ARG	CD-NE-CZ	5.15	131.61	124.40
15	AO	78	LEU	CA-C-O	5.15	125.72	119.49
18	AR	8	GLU	CB-CA-C	5.15	119.61	110.85
21	AU	60	HIS	ND1-CE1-NE2	5.15	113.55	108.40
35	BA	219	U	N1-C1'-C2'	-5.15	104.27	112.00
35	BA	745	G	C1'-O4'-C4'	5.15	115.05	109.90
35	BA	751	U	C3'-C2'-O2'	5.15	118.43	110.70
35	BA	1215	G	C1'-O4'-C4'	-5.15	104.75	109.90
35	BA	1462	C	O3'-P-O5'	5.15	111.73	104.00
2	AB	49	A	C3'-C2'-C1'	5.15	106.65	101.50
2	AB	164	C	C3'-C2'-C1'	5.15	106.45	101.30
2	AB	956	G	C3'-C2'-C1'	-5.15	96.15	101.30
2	AB	1280	G	C4'-C3'-C2'	-5.15	97.45	102.60
2	AB	2395	C	C4'-C3'-C2'	-5.15	97.45	102.60
2	AB	2783	U	O4'-C1'-N1	5.15	116.23	108.50
35	BA	92	U	O4'-C1'-N1	5.15	116.23	108.50
35	BA	272	C	C1'-O4'-C4'	-5.15	104.75	109.90
35	BA	479	U	C4'-C3'-C2'	-5.15	97.45	102.60
35	BA	1054	C	C2'-C3'-O3'	5.15	117.23	109.50
40	BF	142	ARG	CD-NE-CZ	5.15	131.61	124.40
2	AB	1074	G	C2'-C3'-O3'	-5.15	105.98	113.70
2	AB	1188	U	O4'-C1'-C2'	-5.15	102.45	107.60
2	AB	2641	G	C5'-C4'-C3'	5.15	123.72	116.00
18	AR	72	VAL	N-CA-CB	-5.15	105.41	111.90
35	BA	578	C	C4'-C3'-O3'	-5.15	105.28	113.00
52	BR	65	LEU	CA-C-O	-5.15	114.05	119.97
2	AB	19	A	O5'-C5'-C4'	5.15	119.22	111.50
2	AB	520	G	C3'-C2'-O2'	5.15	118.42	110.70
2	AB	576	U	N1-C1'-C2'	-5.15	104.28	112.00
2	AB	651	G	C1'-C2'-O2'	5.15	116.12	108.40
2	AB	1268	A	P-O5'-C5'	5.15	128.62	120.90
2	AB	1918	A	P-O3'-C3'	5.15	127.92	120.20
2	AB	1938	A	C3'-C2'-C1'	5.15	106.65	101.50
2	AB	2028	U	O4'-C1'-N1	5.15	116.22	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2422	C	O5'-C5'-C4'	-5.15	103.78	111.50
15	AO	32	GLY	CA-C-N	5.15	130.26	123.05
15	AO	32	GLY	C-N-CA	5.15	130.26	123.05
18	AR	97	TYR	O-C-N	-5.15	116.67	122.12
35	BA	560	A	O4'-C1'-N9	5.15	115.92	108.20
35	BA	611	C	C5'-C4'-O4'	5.15	117.52	109.80
46	BL	43	ALA	CA-C-N	5.15	128.13	120.31
46	BL	43	ALA	C-N-CA	5.15	128.13	120.31
2	AB	1034	G	C4'-C3'-C2'	-5.15	97.45	102.60
2	AB	1655	A	C5'-C4'-O4'	5.15	117.52	109.80
2	AB	2500	U	C3'-C2'-C1'	5.15	106.45	101.30
15	AO	88	ASN	O-C-N	5.15	128.93	122.86
35	BA	449	G	C2'-C3'-O3'	5.15	121.42	113.70
35	BA	1304	G	C1'-O4'-C4'	-5.15	104.75	109.90
2	AB	285	G	N9-C1'-C2'	-5.14	104.28	112.00
2	AB	437	U	N1-C1'-C2'	-5.14	104.28	112.00
2	AB	1852	U	C1'-O4'-C4'	-5.14	104.76	109.90
2	AB	2236	U	C2'-C3'-O3'	5.14	121.42	113.70
3	AC	18	THR	CA-CB-CG2	5.14	119.25	110.50
35	BA	40	C	O5'-C5'-C4'	-5.14	103.78	111.50
35	BA	1411	C	C4'-C3'-C2'	-5.14	97.46	102.60
40	BF	133	MET	CA-C-N	5.14	127.59	120.29
40	BF	133	MET	C-N-CA	5.14	127.59	120.29
43	BI	102	MET	CA-C-N	5.14	127.04	120.56
43	BI	102	MET	C-N-CA	5.14	127.04	120.56
51	BQ	84	ARG	O-C-N	-5.14	116.67	122.12
58	BX	67	THR	CA-C-N	5.14	131.37	121.54
58	BX	67	THR	C-N-CA	5.14	131.37	121.54
2	AB	616	A	O5'-C5'-C4'	-5.14	103.79	111.50
2	AB	737	C	C3'-C2'-C1'	5.14	106.44	101.30
2	AB	1459	G	O4'-C1'-N9	5.14	116.21	108.50
2	AB	1714	U	C5'-C4'-C3'	-5.14	107.49	115.20
2	AB	2306	C	O4'-C4'-C3'	5.14	109.14	104.00
2	AB	2706	A	C1'-C2'-O2'	-5.14	100.69	108.40
4	AD	257	ARG	CA-C-O	5.14	126.78	120.92
21	AU	89	ALA	N-CA-C	5.14	121.75	110.80
31	A4	28	THR	N-CA-C	5.14	117.79	111.82
32	A5	39	ARG	NE-CZ-NH2	-5.14	114.57	119.20
35	BA	122	G	C1'-O4'-C4'	-5.14	104.76	109.90
35	BA	166	U	O4'-C4'-C3'	5.14	109.14	104.00
35	BA	821	G	C3'-C2'-O2'	5.14	118.41	110.70
35	BA	1062	U	O3'-P-O5'	5.14	111.71	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1169	A	C1'-O4'-C4'	-5.14	104.76	109.90
35	BA	1241	G	O3'-P-O5'	-5.14	96.29	104.00
36	BB	35	C	O4'-C1'-N1	5.14	116.21	108.50
26	AZ	36	ARG	N-CA-C	5.14	117.75	110.50
28	A1	15	ARG	NE-CZ-NH1	-5.14	116.36	121.50
35	BA	213	G	P-O3'-C3'	-5.14	112.49	120.20
39	BE	66	ILE	CA-C-O	-5.14	114.86	120.72
2	AB	169	G	O3'-P-O5'	-5.14	96.29	104.00
2	AB	189	G	C4'-C3'-C2'	-5.14	97.46	102.60
2	AB	327	G	C3'-C2'-C1'	-5.14	96.16	101.30
2	AB	399	U	C3'-C2'-O2'	5.14	118.41	110.70
2	AB	1237	A	C3'-C2'-O2'	-5.14	106.89	114.60
2	AB	2854	G	C1'-C2'-O2'	5.14	116.11	108.40
8	AH	100	ASN	OD1-CG-ND2	-5.14	117.46	122.60
35	BA	447	G	O4'-C4'-C3'	5.14	109.14	104.00
49	BO	3	VAL	O-C-N	5.14	127.12	121.83
2	AB	1263	U	C5'-C4'-C3'	-5.14	108.29	116.00
2	AB	1832	C	C1'-C2'-O2'	5.14	116.11	108.40
3	AC	38	PHE	CA-CB-CG	5.14	118.94	113.80
18	AR	77	SER	CA-C-N	5.14	124.75	119.56
18	AR	77	SER	C-N-CA	5.14	124.75	119.56
32	A5	31	LEU	N-CA-C	-5.14	105.68	111.28
35	BA	797	C	C1'-O4'-C4'	5.14	115.04	109.90
2	AB	1166	G	C3'-C2'-O2'	5.14	118.41	110.70
2	AB	1996	C	O3'-P-O5'	-5.14	96.30	104.00
2	AB	2509	G	C5'-C4'-C3'	-5.14	108.30	116.00
4	AD	175	LEU	O-C-N	-5.14	116.69	123.21
9	AI	58	LEU	N-CA-CB	-5.14	102.32	110.28
35	BA	241	G	P-O5'-C5'	5.14	128.60	120.90
35	BA	354	G	O4'-C4'-C3'	5.14	109.14	104.00
35	BA	583	A	P-O3'-C3'	5.14	127.91	120.20
35	BA	1192	C	N1-C1'-C2'	-5.14	104.30	112.00
46	BL	43	ALA	CA-C-O	-5.14	113.28	119.49
56	BV	4	LEU	CB-CA-C	5.14	119.29	111.02
2	AB	77	G	C4'-C3'-O3'	-5.13	105.30	113.00
2	AB	261	G	O3'-P-O5'	5.13	111.70	104.00
2	AB	1607	C	C1'-O4'-C4'	-5.13	104.57	109.70
19	AS	29	ARG	NE-CZ-NH2	5.13	123.82	119.20
22	AV	58	VAL	CA-C-O	5.13	125.34	120.31
27	A0	53	VAL	N-CA-C	5.13	115.86	110.62
35	BA	359	G	C3'-C2'-C1'	5.13	106.43	101.30
35	BA	1053	G	C4'-C3'-C2'	-5.13	97.47	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1265	C	C4'-C3'-O3'	-5.13	105.30	113.00
2	AB	456	C	P-O5'-C5'	5.13	128.60	120.90
2	AB	1325	U	O3'-P-O5'	-5.13	96.30	104.00
8	AH	22	VAL	CB-CA-C	5.13	117.82	111.15
2	AB	207	A	C4'-C3'-O3'	5.13	120.70	113.00
2	AB	484	C	C4'-C3'-C2'	-5.13	97.47	102.60
2	AB	1067	A	C1'-C2'-O2'	-5.13	100.70	108.40
2	AB	1496	A	C1'-O4'-C4'	5.13	115.03	109.90
2	AB	2076	U	O4'-C1'-N1	5.13	115.90	108.20
2	AB	2615	U	O4'-C1'-C2'	-5.13	102.47	107.60
4	AD	133	ASN	CA-CB-CG	-5.13	107.47	112.60
35	BA	760	G	C1'-O4'-C4'	-5.13	104.77	109.90
35	BA	1014	A	C2'-C3'-O3'	5.13	121.40	113.70
35	BA	1048	G	C5'-C4'-C3'	-5.13	108.30	116.00
35	BA	1393	U	C3'-C2'-C1'	-5.13	96.17	101.30
55	BU	21	ASP	CB-CA-C	5.13	118.90	109.46
2	AB	576	U	C1'-O4'-C4'	5.13	115.03	109.90
2	AB	1072	C	O4'-C4'-C3'	-5.13	98.87	104.00
2	AB	1657	U	O4'-C1'-N1	5.13	116.19	108.50
44	BJ	155	TRP	NE1-CE2-CZ2	5.13	137.79	130.10
54	BT	65	PRO	N-CA-CB	5.13	108.11	103.34
2	AB	190	A	O4'-C1'-N9	5.13	116.19	108.50
2	AB	1591	A	C5'-C4'-C3'	-5.13	108.31	116.00
2	AB	2900	A	O4'-C1'-C2'	-5.13	102.47	107.60
28	A1	17	PRO	CA-C-N	5.13	127.15	120.28
28	A1	17	PRO	C-N-CA	5.13	127.15	120.28
35	BA	199	A	O4'-C4'-C3'	5.13	109.13	104.00
35	BA	415	A	C4'-C3'-C2'	-5.13	97.47	102.60
35	BA	1178	G	C3'-C2'-C1'	5.13	106.43	101.30
35	BA	1384	C	O5'-C5'-C4'	-5.13	103.81	111.50
35	BA	1524	C	O4'-C1'-C2'	-5.13	102.47	107.60
37	BC	50	U	C2'-C3'-O3'	5.13	121.39	113.70
38	BD	67	C	O4'-C1'-N1	5.13	116.19	108.50
2	AB	568	U	C1'-C2'-O2'	-5.13	100.71	108.40
2	AB	983	A	C3'-C2'-C1'	-5.13	96.17	101.30
35	BA	244	U	O3'-P-O5'	5.13	111.69	104.00
35	BA	1313	U	C4'-C3'-O3'	5.13	120.69	113.00
2	AB	900	A	O5'-C5'-C4'	-5.12	103.81	111.50
2	AB	1307	A	O4'-C1'-C2'	-5.12	102.47	107.60
35	BA	345	C	O4'-C4'-C3'	5.12	111.22	106.10
35	BA	562	U	O4'-C1'-N1	5.12	115.89	108.20
35	BA	1128	C	C5'-C4'-C3'	-5.12	108.31	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	BW	64	GLY	CA-C-O	-5.12	112.69	119.25
2	AB	171	U	O4'-C1'-N1	5.12	116.19	108.50
2	AB	2755	C	O4'-C1'-N1	5.12	116.19	108.50
3	AC	148	ASN	CA-CB-CG	5.12	117.72	112.60
9	AI	3	VAL	CA-CB-CG2	5.12	119.11	110.40
11	AK	38	CYS	CA-C-O	-5.12	115.12	120.55
19	AS	28	SER	N-CA-CB	-5.12	103.08	110.56
35	BA	103	U	C3'-C2'-C1'	-5.12	96.18	101.30
35	BA	322	C	C3'-C2'-C1'	-5.12	96.18	101.30
35	BA	1384	C	C3'-C2'-C1'	5.12	106.42	101.30
38	BD	61	U	O3'-P-O5'	-5.12	96.31	104.00
2	AB	1136	G	C4'-C3'-C2'	5.12	107.72	102.60
2	AB	1808	A	C3'-C2'-C1'	5.12	106.62	101.50
18	AR	61	ARG	CB-CA-C	5.12	118.20	109.75
35	BA	1102	A	C5'-C4'-O4'	5.12	117.48	109.80
36	BB	10	G	O5'-C5'-C4'	5.12	119.18	111.50
37	BC	37	G	O5'-C5'-C4'	5.12	119.18	111.50
2	AB	942	G	O3'-P-O5'	5.12	111.68	104.00
2	AB	2773	C	O4'-C4'-C3'	5.12	109.12	104.00
35	BA	839	C	O3'-P-O5'	5.12	111.68	104.00
35	BA	1351	U	O4'-C1'-C2'	-5.12	102.48	107.60
39	BE	45	THR	N-CA-CB	-5.12	102.45	110.44
46	BL	49	GLN	O-C-N	-5.12	115.90	120.71
2	AB	115	C	C4'-C3'-C2'	-5.12	97.48	102.60
2	AB	928	A	C4'-C3'-C2'	-5.12	97.48	102.60
2	AB	1608	A	O4'-C1'-C2'	5.12	110.92	105.80
2	AB	2647	U	O4'-C1'-N1	5.12	116.18	108.50
12	AL	6	ALA	N-CA-CB	5.12	118.23	110.45
14	AN	71	ALA	CA-C-O	-5.12	115.19	120.92
27	A0	5	GLU	N-CA-CB	-5.12	103.09	110.56
35	BA	32	A	N9-C1'-C2'	-5.12	104.32	112.00
35	BA	598	U	O4'-C4'-C3'	5.12	109.12	104.00
35	BA	1176	A	O4'-C1'-C2'	-5.12	102.48	107.60
36	BB	38	A	O4'-C4'-C3'	5.12	109.12	104.00
58	BX	60	ALA	CA-C-O	-5.12	114.31	120.10
2	AB	916	G	O3'-P-O5'	-5.12	96.33	104.00
2	AB	1863	G	O4'-C1'-N9	5.12	116.18	108.50
2	AB	2004	G	O4'-C1'-C2'	-5.12	102.48	107.60
2	AB	2385	C	C2'-C3'-O3'	5.12	121.38	113.70
8	AH	165	ASP	CA-C-O	-5.12	114.93	120.81
12	AL	100	VAL	CA-C-N	5.12	128.74	120.55
12	AL	100	VAL	C-N-CA	5.12	128.74	120.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	123	LYS	CA-C-N	5.12	128.14	122.77
12	AL	123	LYS	C-N-CA	5.12	128.14	122.77
35	BA	1346	A	O4'-C1'-C2'	-5.12	100.68	105.80
2	AB	452	G	C5'-C4'-C3'	-5.12	108.33	116.00
2	AB	511	U	C5'-C4'-C3'	-5.12	108.33	116.00
2	AB	1367	A	C4'-C3'-C2'	-5.12	97.48	102.60
2	AB	1517	G	C4'-C3'-C2'	-5.12	97.48	102.60
2	AB	2305	U	O4'-C1'-N1	5.12	116.17	108.50
2	AB	2594	C	O4'-C4'-C3'	-5.12	98.89	104.00
2	AB	2757	A	O5'-C5'-C4'	5.12	119.17	111.50
2	AB	2878	U	O4'-C1'-N1	5.12	116.17	108.50
21	AU	8	ARG	CA-CB-CG	-5.12	103.87	114.10
26	AZ	71	ARG	NE-CZ-NH2	5.12	123.80	119.20
35	BA	88	U	C4'-C3'-C2'	5.12	107.72	102.60
35	BA	965	U	C2'-C3'-O3'	5.12	117.17	109.50
39	BE	131	LYS	CA-C-O	-5.12	115.45	120.82
52	BR	14	PHE	O-C-N	-5.12	116.50	123.15
55	BU	13	THR	N-CA-C	-5.12	106.20	112.90
57	BW	74	HIS	CB-CG-CD2	-5.12	124.55	131.20
2	AB	255	A	P-O3'-C3'	5.11	127.87	120.20
2	AB	669	G	N9-C1'-C2'	-5.11	104.33	112.00
2	AB	1049	C	O3'-P-O5'	5.11	111.67	104.00
2	AB	1129	A	O4'-C4'-C3'	-5.11	100.99	106.10
2	AB	2737	G	C4'-C3'-O3'	5.11	120.67	113.00
2	AB	2798	U	O5'-C5'-C4'	-5.11	104.03	111.70
18	AR	30	TRP	CZ3-CH2-CZ2	-5.11	114.85	121.50
35	BA	325	A	C1'-C2'-O2'	-5.11	104.13	111.80
35	BA	455	G	O3'-P-O5'	-5.11	96.33	104.00
35	BA	665	A	O5'-C5'-C4'	-5.11	103.83	111.50
35	BA	877	G	C3'-C2'-O2'	5.11	118.37	110.70
38	BD	17	C	O4'-C1'-N1	5.11	115.87	108.20
44	BJ	163	HIS	ND1-CG-CD2	5.11	111.21	106.10
48	BN	100	ASN	N-CA-C	-5.11	105.89	111.82
2	AB	1104	C	C1'-C2'-O2'	-5.11	100.73	108.40
2	AB	1287	A	O4'-C4'-C3'	5.11	109.11	104.00
4	AD	146	LYS	O-C-N	-5.11	118.27	121.85
35	BA	1396	A	P-O3'-C3'	5.11	127.87	120.20
35	BA	1399	C	C1'-C2'-O2'	5.11	119.47	111.80
2	AB	57	C	P-O3'-C3'	5.11	127.86	120.20
2	AB	1076	C	C3'-C2'-O2'	-5.11	103.03	110.70
2	AB	1838	C	C2'-C3'-O3'	5.11	117.17	109.50
2	AB	2122	U	O4'-C4'-C3'	5.11	109.11	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2284	A	C4'-C3'-O3'	-5.11	105.33	113.00
22	AV	18	GLU	CA-C-N	5.11	129.32	121.19
22	AV	18	GLU	C-N-CA	5.11	129.32	121.19
29	A2	61	ASN	OD1-CG-ND2	-5.11	117.49	122.60
47	BM	59	LYS	CA-C-N	5.11	127.38	120.38
47	BM	59	LYS	C-N-CA	5.11	127.38	120.38
2	AB	779	U	C5'-C4'-O4'	-5.11	102.14	109.80
2	AB	888	C	C4'-C3'-O3'	-5.11	105.34	113.00
20	AT	38	VAL	CB-CA-C	5.11	117.25	110.91
35	BA	564	C	O4'-C1'-N1	5.11	116.16	108.50
2	AB	270	A	N9-C1'-C2'	-5.11	104.34	112.00
2	AB	289	G	C4'-C3'-C2'	-5.11	97.49	102.60
14	AN	50	PHE	CA-C-N	5.11	130.57	122.60
14	AN	50	PHE	C-N-CA	5.11	130.57	122.60
20	AT	61	ALA	CA-C-O	-5.11	115.73	121.40
35	BA	637	C	C1'-O4'-C4'	-5.11	104.79	109.90
35	BA	1048	G	O5'-C5'-C4'	5.11	119.16	111.50
35	BA	1079	G	O4'-C1'-C2'	-5.11	102.49	107.60
35	BA	1317	C	C2'-C3'-O3'	5.11	117.16	109.50
42	BH	118	GLY	CA-C-O	-5.11	113.35	119.02
52	BR	3	SER	CA-C-N	5.11	127.12	120.28
52	BR	3	SER	C-N-CA	5.11	127.12	120.28
55	BU	54	LEU	O-C-N	-5.11	116.25	122.22
2	AB	426	C	O4'-C1'-C2'	5.11	112.70	107.60
2	AB	736	C	C2'-C3'-O3'	-5.11	106.04	113.70
2	AB	1734	G	O4'-C1'-N9	5.11	116.16	108.50
2	AB	2154	A	C3'-C2'-C1'	5.11	106.41	101.30
19	AS	86	SER	O-C-N	5.11	129.03	123.01
35	BA	103	U	C1'-C2'-O2'	5.11	116.06	108.40
35	BA	902	G	C1'-O4'-C4'	5.11	115.01	109.90
39	BE	190	SER	CA-C-O	-5.11	115.93	121.44
11	AK	55	PRO	N-CD-CG	5.10	110.86	103.20
35	BA	802	A	O4'-C1'-N9	5.10	116.16	108.50
55	BU	52	ARG	CA-C-N	5.10	129.31	120.58
55	BU	52	ARG	C-N-CA	5.10	129.31	120.58
2	AB	89	A	P-O3'-C3'	5.10	127.85	120.20
2	AB	103	A	P-O5'-C5'	5.10	128.55	120.90
2	AB	1085	A	C4'-C3'-O3'	-5.10	105.34	113.00
2	AB	2663	G	C5'-C4'-C3'	5.10	123.65	116.00
35	BA	54	C	C4'-C3'-C2'	-5.10	97.50	102.60
35	BA	123	U	C1'-O4'-C4'	5.10	115.00	109.90
35	BA	431	A	O4'-C1'-C2'	5.10	112.70	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	742	G	C5'-C4'-C3'	-5.10	108.34	116.00
35	BA	1532	U	C1'-O4'-C4'	-5.10	104.80	109.90
44	BJ	5	VAL	CA-CB-CG1	5.10	119.08	110.40
48	BN	95	THR	CA-C-N	5.10	126.99	120.56
48	BN	95	THR	C-N-CA	5.10	126.99	120.56
49	BO	110	LYS	N-CA-C	-5.10	105.13	113.19
55	BU	52	ARG	NE-CZ-NH2	-5.10	114.61	119.20
2	AB	1305	C	O4'-C1'-N1	5.10	116.15	108.50
14	AN	8	PRO	CA-C-N	5.10	128.45	120.75
14	AN	8	PRO	C-N-CA	5.10	128.45	120.75
35	BA	20	U	C1'-C2'-O2'	-5.10	100.75	108.40
35	BA	616	G	C1'-O4'-C4'	-5.10	104.80	109.90
38	BD	73	A	P-O3'-C3'	5.10	127.85	120.20
39	BE	90	PHE	CA-CB-CG	5.10	118.90	113.80
50	BP	83	GLY	O-C-N	5.10	128.65	122.32
57	BW	30	PHE	N-CA-CB	5.10	117.62	110.12
2	AB	134	G	C3'-C2'-O2'	5.10	118.35	110.70
2	AB	1004	U	C3'-C2'-C1'	5.10	106.40	101.30
2	AB	1563	U	C4'-C3'-C2'	-5.10	97.50	102.60
2	AB	2288	A	P-O5'-C5'	5.10	128.55	120.90
2	AB	2384	U	C1'-C2'-O2'	5.10	119.45	111.80
2	AB	2532	G	O4'-C1'-N9	5.10	116.15	108.50
2	AB	2681	C	C5'-C4'-C3'	-5.10	107.55	115.20
3	AC	27	ILE	CA-CB-CG1	5.10	119.07	110.40
22	AV	39	THR	CA-C-O	-5.10	113.22	120.51
35	BA	1332	A	O4'-C4'-C3'	5.10	109.10	104.00
35	BA	1529	G	C3'-C2'-C1'	5.10	106.60	101.50
37	BC	41	A	P-O5'-C5'	5.10	128.55	120.90
38	BD	12	G	N9-C1'-C2'	-5.10	104.35	112.00
55	BU	51	GLN	CA-C-N	5.10	127.11	120.28
55	BU	51	GLN	C-N-CA	5.10	127.11	120.28
1	AA	35	C	C5'-C4'-C3'	-5.10	108.35	116.00
2	AB	784	G	O4'-C4'-C3'	-5.10	98.90	104.00
2	AB	1391	U	C5'-C4'-O4'	5.10	116.75	109.10
2	AB	1473	G	C5'-C4'-O4'	5.10	117.45	109.80
5	AE	33	ARG	NE-CZ-NH1	-5.10	116.40	121.50
11	AK	24	GLY	CA-C-N	5.10	126.21	119.84
11	AK	24	GLY	C-N-CA	5.10	126.21	119.84
35	BA	26	A	C5'-C4'-C3'	-5.10	108.35	116.00
35	BA	40	C	C5'-C4'-C3'	5.10	123.65	116.00
35	BA	781	A	O4'-C1'-N9	5.10	116.15	108.50
35	BA	798	U	C4'-C3'-C2'	5.10	107.70	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1109	C	O4'-C4'-C3'	-5.10	98.90	104.00
35	BA	1150	A	C4'-C3'-C2'	-5.10	97.50	102.60
39	BE	105	THR	CA-C-O	-5.10	115.15	120.55
48	BN	21	HIS	CB-CG-ND1	5.10	130.35	122.70
2	AB	714	U	C4'-C3'-C2'	-5.10	97.50	102.60
2	AB	1020	A	O4'-C1'-N9	5.10	115.84	108.20
2	AB	1196	C	C1'-O4'-C4'	-5.10	104.80	109.90
2	AB	1493	C	C1'-C2'-O2'	5.10	116.04	108.40
2	AB	1558	C	P-O3'-C3'	5.10	127.84	120.20
2	AB	2214	C	C5'-C4'-C3'	-5.10	108.36	116.00
24	AX	1	MET	CB-CA-C	5.10	119.78	110.10
35	BA	276	G	C4'-C3'-C2'	-5.10	97.50	102.60
2	AB	1207	C	N1-C1'-C2'	-5.09	104.36	112.00
2	AB	1500	G	O4'-C4'-C3'	5.09	109.09	104.00
2	AB	2084	C	N1-C1'-C2'	-5.09	104.36	112.00
2	AB	2528	U	P-O3'-C3'	5.09	127.84	120.20
2	AB	2621	G	O4'-C4'-C3'	-5.09	98.91	104.00
13	AM	108	ARG	CD-NE-CZ	5.09	131.53	124.40
17	AQ	72	ALA	N-CA-CB	-5.09	102.62	110.16
35	BA	146	G	O4'-C1'-N9	5.09	116.14	108.50
35	BA	331	G	O5'-C5'-C4'	-5.09	103.86	111.50
2	AB	69	C	C5'-C4'-O4'	5.09	117.44	109.80
2	AB	1318	U	O4'-C1'-C2'	5.09	112.69	107.60
22	AV	53	VAL	CA-CB-CG2	5.09	119.06	110.40
35	BA	13	U	O4'-C1'-C2'	-5.09	100.71	105.80
35	BA	723	U	P-O3'-C3'	5.09	127.84	120.20
49	BO	10	PRO	N-CA-C	5.09	118.61	111.33
2	AB	1366	A	C5'-C4'-C3'	5.09	123.64	116.00
2	AB	1407	G	O4'-C1'-N9	5.09	116.14	108.50
2	AB	2234	G	O4'-C1'-C2'	-5.09	102.51	107.60
2	AB	2649	C	C3'-C2'-C1'	5.09	106.39	101.30
3	AC	14	LYS	CA-C-O	-5.09	113.12	119.38
12	AL	131	ASN	OD1-CG-ND2	-5.09	117.51	122.60
23	AW	86	PHE	CA-CB-CG	5.09	118.89	113.80
33	A6	43	LEU	O-C-N	-5.09	116.72	122.12
35	BA	431	A	C1'-O4'-C4'	-5.09	104.81	109.90
35	BA	1129	C	O3'-P-O5'	-5.09	96.36	104.00
35	BA	1415	G	C4'-C3'-C2'	-5.09	97.51	102.60
39	BE	192	PRO	CA-N-CD	-5.09	104.87	112.00
1	AA	5	U	P-O3'-C3'	5.09	127.83	120.20
2	AB	875	G	C5'-C4'-O4'	5.09	117.44	109.80
2	AB	916	G	C5'-C4'-C3'	-5.09	108.37	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	1615	C	O4'-C1'-C2'	-5.09	100.71	105.80
6	AF	69	ARG	N-CA-CB	-5.09	102.39	110.28
6	AF	120	VAL	CA-CB-CG1	5.09	119.05	110.40
17	AQ	94	ARG	CA-C-N	5.09	129.78	122.40
17	AQ	94	ARG	C-N-CA	5.09	129.78	122.40
25	AY	5	ALA	N-CA-C	5.09	121.64	110.80
28	A1	26	LEU	CA-C-N	5.09	130.64	120.77
28	A1	26	LEU	C-N-CA	5.09	130.64	120.77
35	BA	91	U	C3'-C2'-C1'	5.09	106.39	101.30
35	BA	178	C	C4'-C3'-O3'	5.09	120.63	113.00
35	BA	307	C	P-O3'-C3'	5.09	127.83	120.20
35	BA	346	G	O4'-C1'-N9	5.09	116.14	108.50
45	BK	41	GLU	O-C-N	-5.09	116.35	122.15
2	AB	2051	A	C5'-C4'-O4'	5.09	116.73	109.10
2	AB	2447	G	C1'-C2'-O2'	5.09	119.43	111.80
13	AM	71	ARG	CD-NE-CZ	5.09	131.52	124.40
24	AX	11	GLU	CA-CB-CG	5.09	124.28	114.10
49	BO	68	GLY	CA-C-N	5.09	128.43	120.75
49	BO	68	GLY	C-N-CA	5.09	128.43	120.75
50	BP	78	ARG	CA-C-O	-5.09	115.48	120.82
2	AB	125	A	C2'-C3'-O3'	5.09	121.33	113.70
2	AB	976	G	C3'-C2'-C1'	5.09	106.39	101.30
2	AB	1799	G	C5'-C4'-O4'	5.09	116.73	109.10
2	AB	2830	C	O3'-P-O5'	-5.09	96.37	104.00
5	AE	100	LEU	N-CA-CB	-5.09	102.40	110.28
6	AF	7	ASP	N-CA-C	5.09	116.63	111.14
17	AQ	15	ARG	NH1-CZ-NH2	-5.09	112.69	119.30
26	AZ	70	LEU	CD1-CG-CD2	-5.09	99.61	110.80
35	BA	172	A	N9-C1'-C2'	-5.09	104.37	112.00
35	BA	1318	A	C1'-O4'-C4'	-5.09	104.81	109.90
48	BN	20	ALA	CA-C-O	-5.09	115.36	121.11
53	BS	3	THR	CA-CB-OG1	-5.09	101.97	109.60
54	BT	74	LEU	CB-CA-C	5.09	117.48	110.16
2	AB	1802	A	C3'-C2'-C1'	5.08	106.39	101.30
7	AG	120	SER	CA-C-N	5.08	127.93	120.71
7	AG	120	SER	C-N-CA	5.08	127.93	120.71
9	AI	9	VAL	CA-C-N	5.08	131.25	121.54
9	AI	9	VAL	C-N-CA	5.08	131.25	121.54
18	AR	72	VAL	CB-CA-C	5.08	117.60	110.99
35	BA	1399	C	O4'-C1'-N1	5.08	115.83	108.20
35	BA	1408	A	C4'-C3'-O3'	5.08	120.63	113.00
49	BO	35	ARG	NH1-CZ-NH2	-5.08	112.69	119.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	22	C	C5'-C4'-O4'	5.08	117.42	109.80
2	AB	248	G	C4'-C3'-C2'	-5.08	97.52	102.60
2	AB	286	U	O4'-C4'-C3'	5.08	109.08	104.00
2	AB	332	A	C5'-C4'-O4'	5.08	116.73	109.10
2	AB	2270	A	O5'-C5'-C4'	-5.08	103.87	111.50
6	AF	145	ASP	CA-CB-CG	5.08	117.68	112.60
19	AS	105	PHE	N-CA-CB	5.08	119.08	110.49
35	BA	397	A	C5'-C4'-C3'	-5.08	108.37	116.00
2	AB	339	U	O4'-C1'-N1	5.08	116.12	108.50
2	AB	897	C	C1'-C2'-O2'	-5.08	100.78	108.40
2	AB	974	G	C4'-C3'-C2'	-5.08	97.52	102.60
2	AB	1026	G	O5'-C5'-C4'	5.08	119.12	111.50
2	AB	1034	G	O3'-P-O5'	-5.08	96.38	104.00
2	AB	1623	G	C2'-C3'-O3'	5.08	121.32	113.70
2	AB	2009	A	C4'-C3'-C2'	-5.08	97.52	102.60
2	AB	2367	G	O3'-P-O5'	5.08	111.62	104.00
4	AD	259	ASN	CA-C-N	5.08	131.03	123.05
4	AD	259	ASN	C-N-CA	5.08	131.03	123.05
14	AN	93	ASN	OD1-CG-ND2	5.08	127.68	122.60
35	BA	57	G	O4'-C1'-N9	5.08	116.12	108.50
35	BA	529	G	C4'-C3'-C2'	-5.08	97.52	102.60
35	BA	1373	G	N9-C1'-C2'	-5.08	104.38	112.00
35	BA	1475	G	O4'-C4'-C3'	5.08	109.08	104.00
37	BC	49	U	C4'-C3'-O3'	-5.08	105.38	113.00
44	BJ	94	ARG	N-CA-CB	-5.08	102.12	110.40
50	BP	104	ASN	CA-C-N	5.08	131.05	122.26
50	BP	104	ASN	C-N-CA	5.08	131.05	122.26
2	AB	2651	C	C2'-C3'-O3'	5.08	121.32	113.70
35	BA	33	A	C5'-C4'-C3'	-5.08	108.38	116.00
35	BA	1340	A	O4'-C1'-N9	5.08	116.12	108.50
2	AB	612	G	P-O3'-C3'	5.08	127.82	120.20
2	AB	1435	G	C5'-C4'-C3'	-5.08	108.38	116.00
2	AB	1994	C	C1'-O4'-C4'	5.08	114.98	109.90
2	AB	2000	C	C4'-C3'-C2'	-5.08	97.52	102.60
15	AO	20	LEU	CA-C-N	5.08	130.78	122.81
15	AO	20	LEU	C-N-CA	5.08	130.78	122.81
35	BA	328	C	P-O3'-C3'	5.08	127.82	120.20
35	BA	610	U	C4'-C3'-O3'	5.08	120.62	113.00
35	BA	668	G	P-O3'-C3'	5.08	127.82	120.20
35	BA	1240	U	O4'-C1'-C2'	-5.08	100.72	105.80
35	BA	1265	C	C1'-O4'-C4'	5.08	114.98	109.90
35	BA	1284	C	C5'-C4'-O4'	5.08	117.42	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	BC	42	U	O3'-P-O5'	-5.08	96.38	104.00
42	BH	129	SER	CA-C-N	5.08	130.75	122.67
42	BH	129	SER	C-N-CA	5.08	130.75	122.67
52	BR	52	ARG	CD-NE-CZ	5.08	131.51	124.40
2	AB	480	A	C5'-C4'-O4'	5.08	117.42	109.80
2	AB	758	C	O4'-C4'-C3'	-5.08	98.92	104.00
2	AB	2039	U	C5'-C4'-O4'	5.08	117.42	109.80
2	AB	2355	G	C4'-C3'-C2'	-5.08	97.52	102.60
2	AB	682	G	P-O3'-C3'	5.08	127.81	120.20
2	AB	1934	C	O4'-C1'-N1	5.08	116.11	108.50
2	AB	2075	U	C3'-C2'-O2'	5.08	118.31	110.70
2	AB	2240	U	O4'-C4'-C3'	-5.08	98.92	104.00
18	AR	114	ASN	OD1-CG-ND2	5.08	127.67	122.60
19	AS	64	ILE	CA-C-N	5.08	127.04	120.44
19	AS	64	ILE	C-N-CA	5.08	127.04	120.44
35	BA	263	A	C4'-C3'-O3'	-5.08	105.39	113.00
35	BA	837	U	C4'-C3'-O3'	5.08	120.61	113.00
35	BA	1092	A	C2'-C3'-O3'	-5.08	106.09	113.70
35	BA	1197	A	O4'-C4'-C3'	5.08	109.08	104.00
2	AB	1135	C	C1'-C2'-O2'	-5.07	100.79	108.40
2	AB	1822	C	O4'-C4'-C3'	5.07	109.07	104.00
2	AB	1990	C	O4'-C1'-N1	5.07	116.11	108.50
2	AB	2586	U	C4'-C3'-O3'	5.07	117.01	109.40
2	AB	2692	G	O4'-C1'-N9	5.07	116.11	108.50
9	AI	44	ILE	CA-C-O	-5.07	114.99	120.47
11	AK	128	ILE	CA-C-N	5.07	127.39	120.54
11	AK	128	ILE	C-N-CA	5.07	127.39	120.54
18	AR	101	GLU	CA-C-O	-5.07	113.33	119.27
35	BA	504	C	O4'-C4'-C3'	5.07	109.07	104.00
43	BI	113	ARG	NE-CZ-NH1	-5.07	116.43	121.50
2	AB	784	G	O3'-P-O5'	-5.07	96.39	104.00
2	AB	2881	U	C1'-C2'-O2'	-5.07	100.79	108.40
20	AT	92	TRP	NE1-CE2-CZ2	5.07	137.71	130.10
35	BA	550	G	O4'-C4'-C3'	5.07	109.07	104.00
2	AB	407	G	O4'-C4'-C3'	-5.07	98.93	104.00
2	AB	584	C	O5'-C5'-C4'	5.07	119.11	111.50
2	AB	683	U	C4'-C3'-C2'	-5.07	97.53	102.60
2	AB	712	G	C2'-C3'-O3'	-5.07	106.10	113.70
2	AB	1439	A	C5'-C4'-C3'	-5.07	108.39	116.00
2	AB	2324	U	O4'-C1'-N1	5.07	115.81	108.20
2	AB	2559	C	C4'-C3'-C2'	-5.07	97.53	102.60
35	BA	20	U	O4'-C1'-N1	5.07	116.11	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	32	A	C4'-C3'-O3'	-5.07	105.39	113.00
35	BA	91	U	O4'-C1'-C2'	-5.07	102.53	107.60
35	BA	462	G	O4'-C1'-N9	5.07	115.81	108.20
35	BA	756	C	P-O3'-C3'	5.07	127.81	120.20
35	BA	912	C	C4'-C3'-O3'	5.07	120.61	113.00
35	BA	1112	C	C4'-C3'-C2'	-5.07	97.53	102.60
35	BA	1123	U	C2'-C3'-O3'	5.07	121.31	113.70
44	BJ	137	ARG	CG-CD-NE	5.07	123.16	112.00
8	AH	102	ILE	CA-C-N	5.07	129.51	122.77
8	AH	102	ILE	C-N-CA	5.07	129.51	122.77
35	BA	118	U	C4'-C3'-O3'	5.07	120.60	113.00
2	AB	28	A	O3'-P-O5'	-5.07	96.40	104.00
2	AB	90	U	O4'-C1'-N1	5.07	116.10	108.50
2	AB	904	G	C5'-C4'-C3'	-5.07	108.40	116.00
2	AB	1036	G	C5'-C4'-C3'	5.07	123.60	116.00
2	AB	1183	U	O4'-C1'-N1	5.07	116.10	108.50
2	AB	1280	G	O5'-C5'-C4'	5.07	119.10	111.50
2	AB	1716	U	O3'-P-O5'	-5.07	96.40	104.00
13	AM	31	ARG	NE-CZ-NH1	-5.07	116.43	121.50
17	AQ	19	GLN	CA-C-O	-5.07	115.05	120.42
35	BA	872	A	P-O3'-C3'	5.07	127.80	120.20
1	AA	95	U	P-O3'-C3'	5.07	127.80	120.20
2	AB	995	C	C4'-C3'-O3'	5.07	117.00	109.40
2	AB	1190	G	C5'-C4'-C3'	-5.07	108.40	116.00
2	AB	1424	G	O4'-C4'-C3'	5.07	109.07	104.00
8	AH	114	HIS	CB-CG-ND1	5.07	130.30	122.70
35	BA	639	G	C1'-O4'-C4'	-5.07	104.83	109.90
35	BA	1022	A	C3'-C2'-C1'	5.07	106.37	101.30
35	BA	1186	G	C2'-C3'-O3'	-5.07	106.10	113.70
40	BF	130	ARG	NE-CZ-NH1	5.07	126.56	121.50
2	AB	203	A	C2'-C3'-O3'	-5.06	106.11	113.70
2	AB	330	A	C3'-C2'-O2'	-5.06	107.00	114.60
2	AB	425	G	O3'-P-O5'	5.06	111.60	104.00
2	AB	1657	U	C5'-C4'-O4'	5.06	117.40	109.80
2	AB	2427	C	P-O5'-C5'	5.06	128.50	120.90
2	AB	2771	C	C1'-C2'-O2'	5.06	116.00	108.40
2	AB	335	C	C5'-C4'-O4'	5.06	117.39	109.80
2	AB	885	C	O3'-P-O5'	-5.06	96.41	104.00
2	AB	969	G	C5'-C4'-C3'	5.06	123.59	116.00
2	AB	1188	U	C4'-C3'-C2'	-5.06	97.54	102.60
2	AB	1669	A	N9-C1'-C2'	5.06	119.59	112.00
6	AF	140	ASP	O-C-N	5.06	127.92	122.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	AK	123	ALA	CA-C-O	-5.06	115.48	120.90
26	AZ	5	GLN	N-CA-C	5.06	118.23	111.75
30	A3	5	ASN	OD1-CG-ND2	-5.06	117.54	122.60
35	BA	448	A	O5'-C5'-C4'	5.06	119.09	111.50
35	BA	852	G	C5'-C4'-C3'	-5.06	108.41	116.00
35	BA	1213	A	C4'-C3'-O3'	5.06	120.59	113.00
46	BL	45	MET	CA-C-N	5.06	126.94	120.56
46	BL	45	MET	C-N-CA	5.06	126.94	120.56
47	BM	26	VAL	CA-C-O	-5.06	115.69	120.95
2	AB	1485	U	C2'-C3'-O3'	-5.06	106.11	113.70
2	AB	2124	G	C5'-C4'-C3'	-5.06	108.41	116.00
2	AB	2690	U	C4'-C3'-C2'	-5.06	97.54	102.60
4	AD	146	LYS	CA-CB-CG	5.06	124.22	114.10
7	AG	24	VAL	N-CA-C	5.06	118.15	111.17
53	BS	59	HIS	CA-C-N	5.06	127.37	120.54
53	BS	59	HIS	C-N-CA	5.06	127.37	120.54
2	AB	179	C	O5'-C5'-C4'	5.06	119.09	111.50
2	AB	1041	G	C4'-C3'-O3'	5.06	120.59	113.00
2	AB	1414	C	C4'-C3'-C2'	-5.06	97.54	102.60
2	AB	1535	A	O4'-C1'-N9	5.06	115.79	108.20
2	AB	1625	C	O5'-C5'-C4'	-5.06	103.91	111.50
2	AB	2263	C	O4'-C4'-C3'	5.06	109.06	104.00
6	AF	59	PRO	N-CA-CB	5.06	108.90	103.33
6	AF	96	VAL	CA-CB-CG2	5.06	119.00	110.40
15	AO	104	GLU	CA-C-O	5.06	127.03	121.11
18	AR	8	GLU	CA-C-O	-5.06	115.06	120.42
19	AS	68	ALA	CA-C-N	5.06	127.48	120.29
19	AS	68	ALA	C-N-CA	5.06	127.48	120.29
21	AU	97	LEU	N-CA-CB	5.06	118.49	110.55
29	A2	15	SER	N-CA-CB	-5.06	103.66	111.65
35	BA	346	G	C4'-C3'-C2'	-5.06	97.54	102.60
35	BA	1118	U	C4'-C3'-C2'	5.06	107.66	102.60
1	AA	44	G	C4'-C3'-O3'	-5.06	101.81	109.40
2	AB	53	A	O4'-C4'-C3'	-5.06	98.94	104.00
2	AB	431	U	C4'-C3'-C2'	-5.06	97.54	102.60
2	AB	1308	A	O4'-C1'-C2'	-5.06	102.54	107.60
2	AB	1477	A	O4'-C4'-C3'	5.06	109.06	104.00
2	AB	1569	A	O5'-C5'-C4'	-5.06	103.91	111.50
2	AB	1743	G	C4'-C3'-C2'	-5.06	97.54	102.60
2	AB	1899	A	C3'-C2'-C1'	5.06	106.36	101.30
2	AB	2452	C	C5'-C4'-C3'	-5.06	108.42	116.00
2	AB	2802	G	C1'-C2'-O2'	5.06	115.99	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2885	G	O4'-C1'-C2'	-5.06	102.54	107.60
3	AC	75	VAL	CA-CB-CG1	5.06	119.00	110.40
5	AE	66	GLY	N-CA-C	-5.06	106.59	113.37
35	BA	1181	G	O4'-C1'-N9	5.06	115.79	108.20
40	BF	172	VAL	CA-C-N	5.06	124.96	119.85
40	BF	172	VAL	C-N-CA	5.06	124.96	119.85
2	AB	653	U	O4'-C1'-C2'	-5.06	102.54	107.60
2	AB	928	A	C1'-O4'-C4'	5.06	114.96	109.90
2	AB	970	U	O4'-C1'-N1	5.06	116.08	108.50
2	AB	1726	C	C4'-C3'-C2'	-5.06	97.54	102.60
2	AB	2031	A	C5'-C4'-O4'	5.06	116.68	109.10
15	AO	4	PRO	CA-N-CD	-5.06	104.92	112.00
22	AV	89	GLU	O-C-N	-5.06	115.76	122.74
35	BA	948	C	N1-C1'-C2'	-5.06	104.42	112.00
2	AB	945	A	O4'-C4'-C3'	5.05	111.16	106.10
2	AB	1197	G	C5'-C4'-O4'	5.05	117.38	109.80
2	AB	2102	G	O3'-P-O5'	-5.05	96.42	104.00
2	AB	2867	G	C4'-C3'-O3'	5.05	116.98	109.40
2	AB	2869	G	P-O3'-C3'	5.05	127.78	120.20
5	AE	33	ARG	CB-CG-CD	5.05	122.93	111.30
5	AE	137	SER	N-CA-C	5.05	116.72	108.63
11	AK	22	PRO	N-CA-CB	5.05	108.88	103.52
12	AL	96	ARG	NE-CZ-NH1	-5.05	116.45	121.50
22	AV	70	HIS	ND1-CG-CD2	5.05	111.15	106.10
32	A5	38	GLY	CA-C-N	5.05	127.95	120.82
32	A5	38	GLY	C-N-CA	5.05	127.95	120.82
35	BA	219	U	O4'-C1'-N1	5.05	116.08	108.50
35	BA	463	U	C4'-C3'-C2'	-5.05	97.55	102.60
35	BA	1099	G	O4'-C1'-C2'	-5.05	102.55	107.60
36	BB	36	A	C5'-C4'-C3'	-5.05	108.42	116.00
50	BP	17	ALA	CA-C-O	-5.05	113.38	119.49
2	AB	299	A	O4'-C1'-C2'	-5.05	102.55	107.60
2	AB	918	A	C5'-C4'-C3'	5.05	123.58	116.00
2	AB	2248	C	C4'-C3'-O3'	-5.05	105.42	113.00
3	AC	144	THR	N-CA-C	-5.05	107.07	113.18
35	BA	82	G	O4'-C4'-C3'	5.05	109.05	104.00
35	BA	645	G	C4'-C3'-C2'	-5.05	97.55	102.60
2	AB	351	C	C2'-C3'-O3'	5.05	121.28	113.70
2	AB	645	C	O4'-C4'-C3'	5.05	111.15	106.10
2	AB	913	U	O4'-C4'-C3'	5.05	111.15	106.10
2	AB	983	A	C1'-O4'-C4'	-5.05	104.85	109.90
2	AB	2212	A	P-O3'-C3'	5.05	127.78	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1004	A	C5'-C4'-C3'	-5.05	108.42	116.00
2	AB	604	G	C1'-O4'-C4'	5.05	114.95	109.90
2	AB	1786	A	O4'-C4'-C3'	-5.05	101.05	106.10
2	AB	2267	A	C4'-C3'-O3'	-5.05	105.43	113.00
4	AD	162	GLN	CA-C-N	5.05	127.85	120.98
4	AD	162	GLN	C-N-CA	5.05	127.85	120.98
5	AE	142	VAL	CA-CB-CG2	5.05	118.98	110.40
6	AF	184	ASP	CB-CA-C	5.05	119.27	110.79
10	AJ	127	THR	OG1-CB-CG2	-5.05	99.20	109.30
36	BB	72	U	C1'-O4'-C4'	-5.05	104.65	109.70
37	BC	54	U	O5'-C5'-C4'	-5.05	103.93	111.50
38	BD	63	C	C5'-C4'-C3'	5.05	123.57	116.00
39	BE	200	PRO	O-C-N	5.05	128.82	123.01
44	BJ	129	ASN	O-C-N	5.05	128.64	122.58
48	BN	51	PHE	N-CA-C	5.05	117.52	111.71
2	AB	1385	A	O3'-P-O5'	-5.05	96.43	104.00
2	AB	1392	A	P-O5'-C5'	5.05	128.47	120.90
8	AH	80	GLU	CA-C-O	5.05	125.89	119.78
35	BA	167	A	C4'-C3'-C2'	-5.05	97.55	102.60
35	BA	753	A	C5'-C4'-C3'	-5.05	107.63	115.20
2	AB	107	G	O4'-C4'-C3'	5.05	109.05	104.00
2	AB	582	A	C3'-C2'-O2'	5.05	118.27	110.70
2	AB	1108	U	C3'-C2'-C1'	5.05	106.35	101.30
2	AB	1240	U	C3'-C2'-C1'	-5.05	96.25	101.30
2	AB	1813	G	O4'-C1'-C2'	-5.05	102.55	107.60
2	AB	1905	C	O3'-P-O5'	-5.05	96.43	104.00
2	AB	1938	A	O4'-C4'-C3'	5.05	111.15	106.10
2	AB	2407	A	P-O3'-C3'	5.05	127.77	120.20
4	AD	16	VAL	CB-CA-C	5.05	118.27	110.50
14	AN	60	ARG	NH1-CZ-NH2	5.05	125.86	119.30
15	AO	69	PRO	N-CA-CB	5.05	106.41	102.73
19	AS	95	ALA	O-C-N	5.05	129.04	122.38
32	A5	21	ARG	N-CA-C	-5.05	107.25	113.41
35	BA	174	A	C5'-C4'-O4'	5.05	117.37	109.80
35	BA	840	C	C4'-C3'-C2'	-5.05	97.55	102.60
2	AB	180	G	C1'-O4'-C4'	-5.04	104.86	109.90
2	AB	2026	U	O4'-C1'-C2'	-5.04	102.56	107.60
2	AB	2367	G	N9-C1'-C2'	-5.04	104.43	112.00
35	BA	970	C	C3'-C2'-O2'	-5.04	107.03	114.60
2	AB	654	A	P-O3'-C3'	5.04	127.77	120.20
2	AB	1738	G	O4'-C1'-C2'	5.04	110.84	105.80
3	AC	134	ARG	CB-CG-CD	5.04	122.90	111.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AG	62	GLN	O-C-N	5.04	128.66	122.96
15	AO	63	ILE	CA-C-O	-5.04	114.99	120.84
37	BC	20	G	C2'-C3'-O3'	5.04	121.27	113.70
45	BK	70	VAL	CA-CB-CG2	5.04	118.97	110.40
2	AB	867	C	O4'-C1'-C2'	5.04	112.64	107.60
2	AB	1609	A	O3'-P-O5'	5.04	111.56	104.00
2	AB	1636	U	C5'-C4'-O4'	5.04	117.36	109.80
2	AB	2252	G	C4'-C3'-O3'	-5.04	101.84	109.40
2	AB	2344	U	C4'-C3'-C2'	-5.04	97.56	102.60
5	AE	189	VAL	CA-C-N	5.04	127.45	120.29
5	AE	189	VAL	C-N-CA	5.04	127.45	120.29
33	A6	37	THR	O-C-N	5.04	127.26	122.07
35	BA	341	C	C4'-C3'-C2'	5.04	107.64	102.60
2	AB	59	U	O5'-C5'-C4'	-5.04	103.94	111.50
2	AB	637	A	P-O5'-C5'	5.04	128.46	120.90
2	AB	686	U	C2'-C3'-O3'	5.04	117.06	109.50
2	AB	1811	G	C5'-C4'-O4'	5.04	117.36	109.80
2	AB	2331	G	C1'-O4'-C4'	-5.04	104.86	109.90
10	AJ	43	ALA	O-C-N	5.04	128.47	122.27
15	AO	56	ALA	O-C-N	5.04	128.78	122.23
26	AZ	63	ILE	O-C-N	5.04	126.98	121.94
35	BA	168	G	C5'-C4'-C3'	-5.04	108.44	116.00
35	BA	571	U	O4'-C1'-N1	5.04	116.06	108.50
35	BA	1022	A	C5'-C4'-C3'	-5.04	108.44	116.00
35	BA	1094	G	C4'-C3'-C2'	-5.04	97.56	102.60
38	BD	19	G	O4'-C1'-N9	5.04	115.76	108.20
56	BV	14	LEU	CA-C-N	5.04	127.45	120.29
56	BV	14	LEU	C-N-CA	5.04	127.45	120.29
2	AB	681	G	O3'-P-O5'	-5.04	96.44	104.00
2	AB	2350	C	P-O5'-C5'	5.04	128.46	120.90
35	BA	139	A	C5'-C4'-C3'	-5.04	108.44	116.00
35	BA	875	U	P-O5'-C5'	5.04	128.46	120.90
35	BA	902	G	O4'-C1'-C2'	-5.04	102.56	107.60
2	AB	2062	A	C1'-O4'-C4'	5.04	114.74	109.70
2	AB	2708	G	O4'-C1'-C2'	-5.04	102.56	107.60
6	AF	91	ASP	CA-C-O	5.04	127.52	120.52
35	BA	170	U	O4'-C4'-C3'	5.04	109.04	104.00
43	BI	115	ASP	CA-C-O	-5.04	115.21	120.55
2	AB	87	U	C5'-C4'-O4'	5.04	117.35	109.80
2	AB	584	C	O4'-C4'-C3'	5.04	109.03	104.00
2	AB	2418	A	C1'-C2'-O2'	5.04	115.95	108.40
2	AB	2623	G	C4'-C3'-C2'	-5.04	97.56	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2625	G	C3'-C2'-O2'	5.04	118.25	110.70
14	AN	122	VAL	CG1-CB-CG2	-5.04	99.72	110.80
27	A0	45	GLN	CA-C-O	-5.04	116.15	121.94
35	BA	186	C	C4'-C3'-O3'	-5.04	105.45	113.00
35	BA	620	C	O4'-C1'-C2'	-5.04	102.56	107.60
38	BD	67	C	O4'-C1'-C2'	-5.04	102.56	107.60
41	BG	97	LEU	CA-C-O	5.04	125.89	120.55
51	BQ	34	ASN	OD1-CG-ND2	-5.04	117.56	122.60
2	AB	380	G	O5'-C5'-C4'	5.03	119.05	111.50
2	AB	454	A	O4'-C1'-C2'	5.03	110.83	105.80
2	AB	591	U	C5'-C4'-C3'	5.03	123.55	116.00
2	AB	1508	A	O4'-C1'-N9	5.03	115.75	108.20
35	BA	488	C	O4'-C1'-N1	5.03	116.05	108.50
35	BA	927	G	C3'-C2'-O2'	5.03	118.25	110.70
35	BA	1422	G	C4'-C3'-O3'	5.03	120.55	113.00
35	BA	1534	A	C3'-C2'-O2'	5.03	118.25	110.70
49	BO	113	ARG	CB-CG-CD	5.03	122.88	111.30
2	AB	48	G	C5'-C4'-O4'	5.03	117.35	109.80
35	BA	819	A	O5'-C5'-C4'	5.03	119.25	111.70
2	AB	317	G	C5'-C4'-C3'	5.03	123.55	116.00
2	AB	909	A	O5'-C5'-C4'	5.03	119.05	111.50
2	AB	1413	A	O4'-C1'-N9	5.03	116.04	108.50
2	AB	2617	U	C4'-C3'-O3'	5.03	120.55	113.00
2	AB	2864	G	O4'-C4'-C3'	5.03	109.03	104.00
3	AC	183	ASP	CA-CB-CG	5.03	117.63	112.60
15	AO	59	ARG	O-C-N	5.03	129.28	122.59
21	AU	77	ASP	CA-CB-CG	5.03	117.63	112.60
35	BA	29	U	O4'-C1'-N1	5.03	116.04	108.50
35	BA	496	A	N9-C1'-C2'	5.03	119.55	112.00
39	BE	62	ARG	NE-CZ-NH1	5.03	126.53	121.50
47	BM	55	PRO	N-CD-CG	5.03	110.75	103.20
58	BX	51	ALA	N-CA-C	5.03	117.66	111.82
2	AB	1745	A	N9-C1'-C2'	-5.03	104.46	112.00
2	AB	2159	G	O4'-C1'-C2'	-5.03	102.57	107.60
2	AB	2754	U	C5'-C4'-C3'	-5.03	108.46	116.00
2	AB	285	G	O4'-C1'-N9	5.03	116.04	108.50
2	AB	334	C	O4'-C1'-N1	5.03	116.04	108.50
2	AB	1082	U	O4'-C1'-N1	5.03	116.04	108.50
2	AB	2055	C	O4'-C1'-N1	5.03	116.04	108.50
3	AC	9	ARG	NE-CZ-NH2	-5.03	114.68	119.20
4	AD	20	ASN	CA-C-N	5.03	126.12	119.84
4	AD	20	ASN	C-N-CA	5.03	126.12	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	AI	112	LYS	N-CA-CB	-5.03	102.72	110.01
12	AL	27	ARG	NH1-CZ-NH2	5.03	125.83	119.30
35	BA	471	U	C4'-C3'-C2'	-5.03	97.57	102.60
35	BA	1302	C	C4'-C3'-O3'	5.03	120.54	113.00
35	BA	1405	G	C4'-C3'-O3'	5.03	120.54	113.00
40	BF	176	THR	O-C-N	5.03	129.18	122.95
41	BG	35	GLN	CB-CG-CD	5.03	121.15	112.60
43	BI	130	GLU	OE1-CD-OE2	5.03	134.97	122.90
2	AB	253	C	C2'-C3'-O3'	5.03	121.24	113.70
2	AB	2096	C	O4'-C4'-C3'	-5.03	98.97	104.00
2	AB	2869	G	C4'-C3'-C2'	-5.03	97.57	102.60
23	AW	54	PRO	N-CD-CG	5.03	110.74	103.20
35	BA	7	A	N9-C1'-C2'	5.03	119.54	112.00
35	BA	56	U	O4'-C4'-C3'	5.03	109.03	104.00
35	BA	536	C	O3'-P-O5'	-5.03	96.46	104.00
35	BA	854	U	C4'-C3'-O3'	-5.03	105.46	113.00
45	BK	53	ASP	CA-CB-CG	5.03	117.62	112.60
1	AA	4	C	P-O5'-C5'	5.02	128.44	120.90
2	AB	403	U	O4'-C1'-N1	5.02	116.04	108.50
2	AB	2409	G	N9-C1'-C2'	5.02	119.53	112.00
5	AE	9	VAL	CA-C-O	-5.02	114.50	120.78
7	AG	78	ILE	CA-CB-CG1	5.02	118.94	110.40
25	AY	73	PRO	CB-CA-C	5.02	117.66	111.23
35	BA	850	U	O4'-C1'-N1	5.02	116.04	108.50
2	AB	78	U	C4'-C3'-C2'	-5.02	97.58	102.60
2	AB	353	C	O4'-C1'-C2'	-5.02	102.58	107.60
2	AB	427	U	N1-C1'-C2'	5.02	119.53	112.00
2	AB	748	G	C1'-O4'-C4'	-5.02	104.88	109.90
2	AB	1266	G	P-O3'-C3'	5.02	127.73	120.20
2	AB	2208	C	C4'-C3'-O3'	5.02	120.53	113.00
9	AI	39	ALA	O-C-N	5.02	129.41	122.08
16	AP	80	PHE	CA-C-N	5.02	129.02	120.88
16	AP	80	PHE	C-N-CA	5.02	129.02	120.88
21	AU	84	ARG	NE-CZ-NH1	-5.02	116.48	121.50
35	BA	486	U	O4'-C1'-N1	5.02	116.03	108.50
35	BA	663	A	C3'-C2'-C1'	5.02	106.32	101.30
35	BA	876	C	O4'-C4'-C3'	-5.02	98.98	104.00
35	BA	1013	G	C4'-C3'-C2'	-5.02	97.58	102.60
35	BA	1490	U	C3'-C2'-O2'	5.02	118.23	110.70
39	BE	104	LYS	CA-C-N	5.02	127.01	120.28
39	BE	104	LYS	C-N-CA	5.02	127.01	120.28
40	BF	4	VAL	CA-C-O	5.02	126.76	121.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	BO	71	HIS	CA-C-N	5.02	130.26	121.52
49	BO	71	HIS	C-N-CA	5.02	130.26	121.52
2	AB	981	A	C3'-C2'-C1'	-5.02	96.28	101.30
2	AB	1896	G	O3'-P-O5'	5.02	111.53	104.00
2	AB	2788	C	O4'-C1'-C2'	-5.02	102.58	107.60
4	AD	176	ARG	CD-NE-CZ	5.02	131.43	124.40
7	AG	28	PRO	CA-C-N	5.02	132.02	123.03
7	AG	28	PRO	C-N-CA	5.02	132.02	123.03
14	AN	80	SER	O-C-N	5.02	127.31	122.09
24	AX	81	PRO	O-C-N	5.02	128.25	122.23
35	BA	920	U	N1-C1'-C2'	5.02	119.53	112.00
2	AB	518	G	C2'-C3'-O3'	-5.02	106.17	113.70
2	AB	571	U	C5'-C4'-C3'	-5.02	107.67	115.20
2	AB	800	A	O4'-C4'-C3'	-5.02	101.08	106.10
2	AB	1687	G	C3'-C2'-O2'	5.02	118.23	110.70
2	AB	1957	C	N1-C1'-C2'	-5.02	104.47	112.00
4	AD	7	PRO	N-CA-CB	5.02	105.76	102.25
7	AG	34	THR	CA-CB-OG1	-5.02	102.07	109.60
20	AT	81	LYS	CA-C-N	5.02	129.32	122.34
20	AT	81	LYS	C-N-CA	5.02	129.32	122.34
35	BA	1370	G	O4'-C1'-N9	5.02	116.03	108.50
35	BA	1424	U	O4'-C1'-N1	5.02	116.03	108.50
40	BF	200	TRP	O-C-N	-5.02	117.50	123.22
43	BI	110	ARG	CB-CG-CD	5.02	122.84	111.30
48	BN	127	ARG	N-CA-C	5.02	119.27	113.20
55	BU	42	ARG	NE-CZ-NH2	-5.02	114.68	119.20
2	AB	1273	U	C5'-C4'-C3'	-5.02	108.47	116.00
2	AB	1708	C	O5'-C5'-C4'	-5.02	103.97	111.50
2	AB	2043	C	C4'-C3'-O3'	5.02	120.53	113.00
6	AF	188	MET	CA-C-O	5.02	127.69	120.51
9	AI	134	VAL	CA-C-O	-5.02	115.20	120.57
13	AM	114	LYS	O-C-N	5.02	127.87	122.15
18	AR	76	HIS	ND1-CE1-NE2	5.02	113.42	108.40
35	BA	413	G	P-O5'-C5'	5.02	128.43	120.90
44	BJ	124	SER	CA-C-N	5.02	127.41	120.29
44	BJ	124	SER	C-N-CA	5.02	127.41	120.29
49	BO	21	PRO	CA-C-O	-5.02	116.15	123.07
2	AB	1307	A	O4'-C4'-C3'	-5.02	98.98	104.00
2	AB	1322	A	O4'-C4'-C3'	5.02	109.02	104.00
2	AB	1980	G	C1'-O4'-C4'	5.02	114.72	109.70
2	AB	2800	A	O3'-P-O5'	5.02	111.53	104.00
5	AE	8	LYS	CA-C-O	5.02	126.40	120.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	AH	55	ASP	N-CA-CB	5.02	117.34	109.97
35	BA	317	U	P-O5'-C5'	5.02	128.42	120.90
35	BA	427	U	C5'-C4'-O4'	-5.02	102.28	109.80
51	BQ	39	ASP	CB-CA-C	5.02	120.40	110.42
2	AB	141	G	O4'-C4'-C3'	5.01	109.01	104.00
2	AB	296	U	O4'-C1'-C2'	-5.01	102.58	107.60
2	AB	531	C	N1-C1'-C2'	5.01	121.52	114.00
2	AB	983	A	C4'-C3'-C2'	-5.01	97.58	102.60
2	AB	1213	A	O4'-C1'-C2'	-5.01	102.59	107.60
2	AB	1253	A	C5'-C4'-C3'	-5.01	107.68	115.20
2	AB	1728	C	C1'-O4'-C4'	5.01	114.92	109.90
14	AN	30	THR	N-CA-C	5.01	121.48	110.80
17	AQ	55	GLU	CA-C-N	5.01	127.41	120.29
17	AQ	55	GLU	C-N-CA	5.01	127.41	120.29
29	A2	23	LYS	CA-C-N	5.01	128.26	120.34
29	A2	23	LYS	C-N-CA	5.01	128.26	120.34
35	BA	1072	G	N9-C1'-C2'	-5.01	104.48	112.00
36	BB	71	C	C4'-C3'-O3'	5.01	120.52	113.00
38	BD	36	A	N9-C1'-C2'	5.01	119.52	112.00
1	AA	27	C	O3'-P-O5'	5.01	111.52	104.00
2	AB	1060	U	C4'-C3'-C2'	-5.01	97.59	102.60
2	AB	2106	U	C1'-C2'-O2'	-5.01	100.88	108.40
4	AD	100	ARG	CG-CD-NE	5.01	123.03	112.00
9	AI	25	TYR	CA-C-O	-5.01	114.04	120.31
35	BA	1316	G	O4'-C1'-C2'	-5.01	102.59	107.60
39	BE	230	SER	CA-C-O	-5.01	115.11	120.42
2	AB	163	C	O4'-C1'-N1	5.01	116.02	108.50
2	AB	197	A	C5'-C4'-C3'	-5.01	108.48	116.00
2	AB	286	U	C1'-C2'-O2'	5.01	115.92	108.40
2	AB	327	G	C1'-O4'-C4'	-5.01	104.89	109.90
2	AB	1211	C	O4'-C1'-C2'	-5.01	100.79	105.80
2	AB	1652	A	O3'-P-O5'	5.01	111.52	104.00
2	AB	1710	G	O4'-C1'-N9	5.01	116.02	108.50
2	AB	2361	G	C4'-C3'-C2'	-5.01	97.59	102.60
6	AF	141	MET	N-CA-C	-5.01	107.14	113.20
10	AJ	85	MET	CA-C-N	5.01	130.56	122.29
10	AJ	85	MET	C-N-CA	5.01	130.56	122.29
12	AL	20	ALA	CB-CA-C	5.01	118.64	110.17
18	AR	74	GLN	N-CA-C	5.01	116.92	109.25
35	BA	373	A	O3'-P-O5'	-5.01	96.48	104.00
35	BA	781	A	C1'-C2'-O2'	-5.01	100.88	108.40
35	BA	1001	C	N1-C1'-C2'	-5.01	104.48	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	BG	121	ALA	CB-CA-C	5.01	117.49	109.07
50	BP	13	HIS	CB-CG-CD2	-5.01	124.68	131.20
54	BT	58	VAL	CA-CB-CG2	5.01	118.92	110.40
2	AB	717	C	C3'-C2'-C1'	5.01	106.31	101.30
2	AB	1488	C	O4'-C4'-C3'	5.01	109.01	104.00
2	AB	1525	A	C1'-O4'-C4'	5.01	114.91	109.90
2	AB	1769	U	C5'-C4'-O4'	-5.01	102.28	109.80
2	AB	2213	U	C4'-C3'-O3'	5.01	116.92	109.40
2	AB	2295	C	C1'-C2'-O2'	-5.01	100.89	108.40
2	AB	2685	G	C3'-C2'-O2'	-5.01	103.19	110.70
2	AB	2704	C	C4'-C3'-O3'	-5.01	105.48	113.00
35	BA	161	A	O4'-C1'-C2'	-5.01	102.59	107.60
35	BA	225	C	C3'-C2'-O2'	5.01	118.22	110.70
35	BA	774	G	O4'-C1'-C2'	-5.01	102.59	107.60
35	BA	1521	C	C4'-C3'-O3'	-5.01	105.49	113.00
37	BC	25	U	O4'-C4'-C3'	5.01	109.01	104.00
45	BK	103	VAL	CA-CB-CG1	5.01	118.92	110.40
52	BR	46	LYS	CA-C-N	5.01	130.66	122.65
52	BR	46	LYS	C-N-CA	5.01	130.66	122.65
2	AB	1347	A	C2'-C3'-O3'	-5.01	106.19	113.70
5	AE	164	GLN	CB-CA-C	5.01	119.97	110.51
10	AJ	37	MET	O-C-N	5.01	127.86	122.15
16	AP	42	LYS	N-CA-CB	5.01	117.57	110.16
25	AY	2	HIS	CE1-NE2-CD2	-5.01	103.99	109.00
35	BA	211	G	C5'-C4'-C3'	-5.01	108.49	116.00
35	BA	459	A	O3'-P-O5'	5.01	111.51	104.00
2	AB	784	G	O4'-C1'-C2'	-5.01	102.59	107.60
2	AB	1749	A	O4'-C4'-C3'	5.01	109.01	104.00
2	AB	2649	C	C1'-C2'-O2'	5.01	115.91	108.40
2	AB	2873	A	C4'-C3'-C2'	-5.01	97.59	102.60
5	AE	157	LYS	CA-C-O	-5.01	115.68	121.19
35	BA	259	G	N9-C1'-C2'	-5.01	104.49	112.00
35	BA	274	A	C1'-C2'-O2'	5.01	119.31	111.80
35	BA	874	G	O4'-C4'-C3'	5.01	109.01	104.00
36	BB	39	A	O5'-C5'-C4'	-5.01	103.99	111.50
37	BC	38	G	C1'-O4'-C4'	-5.01	104.89	109.90
41	BG	54	LEU	CA-C-N	5.01	126.99	120.28
41	BG	54	LEU	C-N-CA	5.01	126.99	120.28
54	BT	33	TYR	N-CA-C	5.01	119.15	113.19
2	AB	1607	C	C4'-C3'-C2'	-5.00	97.59	102.60
7	AG	142	TYR	CA-CB-CG	5.00	122.91	113.90
12	AL	110	PRO	CA-N-CD	-5.00	104.99	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	450	G	P-O3'-C3'	5.00	127.71	120.20
35	BA	1231	G	C3'-C2'-C1'	5.00	106.31	101.30
2	AB	37	C	C5'-C4'-C3'	-5.00	108.50	116.00
2	AB	159	G	C4'-C3'-O3'	-5.00	105.50	113.00
2	AB	832	U	O3'-P-O5'	5.00	111.50	104.00
2	AB	1165	A	O4'-C1'-N9	5.00	116.01	108.50
2	AB	1609	A	O4'-C1'-N9	5.00	116.00	108.50
2	AB	2334	U	O4'-C4'-C3'	-5.00	99.00	104.00
2	AB	2651	C	C3'-C2'-C1'	5.00	106.30	101.30
23	AW	98	ASN	OD1-CG-ND2	-5.00	117.60	122.60
23	AW	100	GLU	CA-C-N	5.00	129.50	122.09
23	AW	100	GLU	C-N-CA	5.00	129.50	122.09
35	BA	709	U	O4'-C1'-N1	5.00	116.00	108.50
35	BA	822	U	C4'-C3'-O3'	5.00	120.51	113.00
35	BA	1025	U	P-O3'-C3'	5.00	127.70	120.20
35	BA	1144	G	O5'-C5'-C4'	5.00	119.00	111.50
2	AB	649	G	C2'-C3'-O3'	-5.00	106.20	113.70
2	AB	1067	A	C3'-C2'-C1'	5.00	106.30	101.30
2	AB	2512	C	O4'-C1'-C2'	-5.00	102.60	107.60
4	AD	191	LEU	CA-C-N	5.00	131.21	121.41
4	AD	191	LEU	C-N-CA	5.00	131.21	121.41
16	AP	13	ASN	OD1-CG-ND2	-5.00	117.60	122.60
35	BA	192	A	O3'-P-O5'	-5.00	96.50	104.00
35	BA	1074	G	C3'-C2'-C1'	5.00	106.30	101.30
35	BA	1134	G	C5'-C4'-O4'	5.00	117.30	109.80
36	BB	19	G	O4'-C4'-C3'	5.00	109.00	104.00
37	BC	28	U	O3'-P-O5'	-5.00	96.50	104.00
48	BN	3	ALA	CA-C-N	5.00	126.09	119.84
48	BN	3	ALA	C-N-CA	5.00	126.09	119.84

There are no chirality outliers.

All (2936) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
27	A0	10	SER	Mainchain
27	A0	46	VAL	Mainchain
27	A0	47	ARG	Sidechain
27	A0	48	ARG	Sidechain
28	A1	30	ARG	Peptide
29	A2	30	HIS	Peptide
29	A2	64	PHE	Peptide
29	A2	9	TYR	Sidechain

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Mol	Chain	Res	Type	Group
30	A3	37	HIS	Peptide
30	A3	47	TYR	Sidechain
30	A3	9	ARG	Sidechain
31	A4	43	ARG	Sidechain
31	A4	48	TYR	Sidechain
33	A6	29	ARG	Sidechain
33	A6	41	ARG	Sidechain
33	A6	42	HIS	Sidechain
33	A6	6	VAL	Peptide
33	A6	63	TYR	Sidechain
1	AA	103	U	Sidechain
1	AA	106	G	Sidechain
1	AA	107	G	Sidechain
1	AA	110	C	Sidechain
1	AA	111	U	Sidechain
1	AA	112	G	Sidechain
1	AA	115	A	Sidechain
1	AA	116	G	Sidechain
1	AA	117	G	Sidechain
1	AA	119	A	Sidechain
1	AA	12	C	Sidechain
1	AA	120	U	Sidechain
1	AA	14	U	Sidechain
1	AA	15	A	Sidechain
1	AA	17	C	Sidechain
1	AA	18	G	Sidechain
1	AA	2	G	Sidechain
1	AA	21	G	Sidechain
1	AA	22	U	Sidechain
1	AA	23	G	Sidechain
1	AA	24	G	Sidechain
1	AA	26	C	Sidechain
1	AA	27	C	Sidechain
1	AA	28	C	Sidechain
1	AA	29	A	Sidechain
1	AA	30	C	Sidechain
1	AA	31	C	Sidechain
1	AA	32	U	Sidechain
1	AA	33	G	Sidechain
1	AA	35	C	Sidechain
1	AA	37	C	Sidechain
1	AA	38	C	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	39	A	Sidechain
1	AA	41	G	Sidechain
1	AA	43	C	Sidechain
1	AA	44	G	Sidechain
1	AA	46	A	Sidechain
1	AA	50	A	Sidechain
1	AA	51	G	Sidechain
1	AA	55	U	Sidechain
1	AA	6	G	Sidechain
1	AA	61	G	Sidechain
1	AA	62	C	Sidechain
1	AA	63	C	Sidechain
1	AA	64	G	Sidechain
1	AA	65	U	Sidechain
1	AA	67	G	Sidechain
1	AA	68	C	Sidechain
1	AA	69	G	Sidechain
1	AA	7	G	Sidechain
1	AA	70	C	Sidechain
1	AA	72	G	Sidechain
1	AA	73	A	Sidechain
1	AA	74	U	Sidechain
1	AA	78	A	Sidechain
1	AA	79	G	Sidechain
1	AA	81	G	Sidechain
1	AA	82	U	Sidechain
1	AA	84	G	Sidechain
1	AA	86	G	Sidechain
1	AA	87	U	Sidechain
1	AA	88	C	Sidechain
1	AA	89	U	Sidechain
1	AA	9	G	Sidechain
1	AA	93	C	Sidechain
1	AA	95	U	Sidechain
1	AA	96	G	Sidechain
1	AA	98	G	Sidechain
2	AB	1	G	Sidechain
2	AB	10	A	Sidechain
2	AB	100	U	Sidechain
2	AB	1000	A	Sidechain
2	AB	1003	G	Sidechain
2	AB	1004	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1005	C	Sidechain
2	AB	1006	C	Sidechain
2	AB	1009	A	Sidechain
2	AB	101	A	Sidechain
2	AB	1011	G	Sidechain
2	AB	1013	C	Sidechain
2	AB	1014	A	Sidechain
2	AB	1015	U	Sidechain
2	AB	1016	G	Sidechain
2	AB	1019	U	Sidechain
2	AB	1020	A	Sidechain
2	AB	1021	A	Sidechain
2	AB	1023	U	Sidechain
2	AB	1024	G	Sidechain
2	AB	1025	G	Sidechain
2	AB	1026	G	Sidechain
2	AB	1028	A	Sidechain
2	AB	1029	A	Sidechain
2	AB	1030	C	Sidechain
2	AB	1031	G	Sidechain
2	AB	1032	A	Sidechain
2	AB	1034	G	Sidechain
2	AB	1036	G	Sidechain
2	AB	1038	G	Sidechain
2	AB	104	A	Sidechain
2	AB	1042	G	Sidechain
2	AB	1044	C	Sidechain
2	AB	1045	C	Sidechain
2	AB	1047	G	Sidechain
2	AB	1049	C	Sidechain
2	AB	1051	G	Sidechain
2	AB	1052	C	Sidechain
2	AB	1053	C	Sidechain
2	AB	1056	G	Sidechain
2	AB	1059	G	Sidechain
2	AB	106	C	Sidechain
2	AB	1060	U	Sidechain
2	AB	1062	G	Sidechain
2	AB	1063	G	Sidechain
2	AB	1066	U	Sidechain
2	AB	1067	A	Sidechain
2	AB	107	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1070	A	Sidechain
2	AB	1071	G	Sidechain
2	AB	1072	C	Sidechain
2	AB	1076	C	Sidechain
2	AB	1077	A	Sidechain
2	AB	1078	U	Sidechain
2	AB	108	G	Sidechain
2	AB	1084	A	Sidechain
2	AB	1086	A	Sidechain
2	AB	1087	G	Sidechain
2	AB	1091	G	Sidechain
2	AB	1092	C	Sidechain
2	AB	1093	G	Sidechain
2	AB	1094	U	Sidechain
2	AB	1095	A	Sidechain
2	AB	1097	U	Sidechain
2	AB	1098	A	Sidechain
2	AB	1099	G	Sidechain
2	AB	110	G	Sidechain
2	AB	1102	C	Sidechain
2	AB	1104	C	Sidechain
2	AB	1106	G	Sidechain
2	AB	1108	U	Sidechain
2	AB	1110	G	Sidechain
2	AB	1112	G	Sidechain
2	AB	1113	U	Sidechain
2	AB	1118	C	Sidechain
2	AB	112	U	Sidechain
2	AB	1120	G	Sidechain
2	AB	1122	G	Sidechain
2	AB	1123	C	Sidechain
2	AB	1125	G	Sidechain
2	AB	1126	A	Sidechain
2	AB	1127	A	Sidechain
2	AB	1129	A	Sidechain
2	AB	1132	U	Sidechain
2	AB	1133	A	Sidechain
2	AB	1134	A	Sidechain
2	AB	1135	C	Sidechain
2	AB	1137	G	Sidechain
2	AB	1138	G	Sidechain
2	AB	1139	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1140	C	Sidechain
2	AB	1141	U	Sidechain
2	AB	1142	A	Sidechain
2	AB	1145	C	Sidechain
2	AB	1147	A	Sidechain
2	AB	1148	U	Sidechain
2	AB	1151	A	Sidechain
2	AB	1153	C	Sidechain
2	AB	1154	G	Sidechain
2	AB	1156	A	Sidechain
2	AB	1159	U	Sidechain
2	AB	116	C	Sidechain
2	AB	1162	G	Sidechain
2	AB	1165	A	Sidechain
2	AB	1167	C	Sidechain
2	AB	1168	G	Sidechain
2	AB	1169	A	Sidechain
2	AB	117	G	Sidechain
2	AB	1171	G	Sidechain
2	AB	1172	C	Sidechain
2	AB	1173	U	Sidechain
2	AB	1176	U	Sidechain
2	AB	1177	G	Sidechain
2	AB	1178	C	Sidechain
2	AB	1179	G	Sidechain
2	AB	1180	U	Sidechain
2	AB	1181	U	Sidechain
2	AB	1183	U	Sidechain
2	AB	1184	U	Sidechain
2	AB	1185	G	Sidechain
2	AB	1187	G	Sidechain
2	AB	1190	G	Sidechain
2	AB	1192	G	Sidechain
2	AB	1194	A	Sidechain
2	AB	1195	G	Sidechain
2	AB	1196	C	Sidechain
2	AB	1197	G	Sidechain
2	AB	1201	U	Sidechain
2	AB	1202	G	Sidechain
2	AB	1203	U	Sidechain
2	AB	1204	A	Sidechain
2	AB	1205	A	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1206	G	Sidechain
2	AB	1209	U	Sidechain
2	AB	121	G	Sidechain
2	AB	1210	G	Sidechain
2	AB	1213	A	Sidechain
2	AB	1214	A	Sidechain
2	AB	1215	G	Sidechain
2	AB	1216	G	Sidechain
2	AB	1217	U	Sidechain
2	AB	1218	G	Sidechain
2	AB	1220	G	Sidechain
2	AB	1222	U	Sidechain
2	AB	1223	G	Sidechain
2	AB	1224	U	Sidechain
2	AB	1226	A	Sidechain
2	AB	1228	G	Sidechain
2	AB	1229	C	Sidechain
2	AB	123	G	Sidechain
2	AB	1230	A	Sidechain
2	AB	1231	U	Sidechain
2	AB	1232	G	Sidechain
2	AB	1236	G	Sidechain
2	AB	1238	G	Sidechain
2	AB	124	G	Sidechain
2	AB	1240	U	Sidechain
2	AB	1241	A	Sidechain
2	AB	1242	U	Sidechain
2	AB	1244	A	Sidechain
2	AB	1245	G	Sidechain
2	AB	1246	A	Sidechain
2	AB	1248	G	Sidechain
2	AB	1249	U	Sidechain
2	AB	1253	A	Sidechain
2	AB	1254	A	Sidechain
2	AB	1255	U	Sidechain
2	AB	1256	G	Sidechain
2	AB	1257	C	Sidechain
2	AB	1259	G	Sidechain
2	AB	1262	A	Sidechain
2	AB	1263	U	Sidechain
2	AB	1264	A	Sidechain
2	AB	1265	A	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1267	U	Sidechain
2	AB	1269	A	Sidechain
2	AB	127	A	Sidechain
2	AB	1270	C	Sidechain
2	AB	1271	G	Sidechain
2	AB	1272	A	Sidechain
2	AB	1273	U	Sidechain
2	AB	1274	A	Sidechain
2	AB	1275	A	Sidechain
2	AB	1276	A	Sidechain
2	AB	1278	C	Sidechain
2	AB	1281	G	Sidechain
2	AB	1284	A	Sidechain
2	AB	1285	A	Sidechain
2	AB	1287	A	Sidechain
2	AB	1289	C	Sidechain
2	AB	129	C	Sidechain
2	AB	1294	U	Sidechain
2	AB	1295	C	Sidechain
2	AB	1296	G	Sidechain
2	AB	130	C	Sidechain
2	AB	1300	G	Sidechain
2	AB	1302	A	Sidechain
2	AB	1306	C	Sidechain
2	AB	1308	A	Sidechain
2	AB	1309	G	Sidechain
2	AB	1312	U	Sidechain
2	AB	1316	U	Sidechain
2	AB	1317	G	Sidechain
2	AB	1319	C	Sidechain
2	AB	1321	A	Sidechain
2	AB	1322	A	Sidechain
2	AB	1323	C	Sidechain
2	AB	1324	G	Sidechain
2	AB	1325	U	Sidechain
2	AB	1327	A	Sidechain
2	AB	1328	A	Sidechain
2	AB	1330	C	Sidechain
2	AB	1332	G	Sidechain
2	AB	1333	G	Sidechain
2	AB	1334	G	Sidechain
2	AB	1339	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	134	G	Sidechain
2	AB	1341	G	Sidechain
2	AB	1342	A	Sidechain
2	AB	1346	G	Sidechain
2	AB	1347	A	Sidechain
2	AB	1349	C	Sidechain
2	AB	1351	C	Sidechain
2	AB	1352	U	Sidechain
2	AB	1354	A	Sidechain
2	AB	1355	G	Sidechain
2	AB	1356	G	Sidechain
2	AB	1357	C	Sidechain
2	AB	1358	G	Sidechain
2	AB	136	G	Sidechain
2	AB	1360	G	Sidechain
2	AB	1361	G	Sidechain
2	AB	1363	C	Sidechain
2	AB	1364	G	Sidechain
2	AB	1365	A	Sidechain
2	AB	1367	A	Sidechain
2	AB	1368	G	Sidechain
2	AB	1369	G	Sidechain
2	AB	137	U	Sidechain
2	AB	1370	C	Sidechain
2	AB	1371	G	Sidechain
2	AB	1372	U	Sidechain
2	AB	1376	C	Sidechain
2	AB	1377	G	Sidechain
2	AB	138	U	Sidechain
2	AB	1382	G	Sidechain
2	AB	1383	A	Sidechain
2	AB	1384	A	Sidechain
2	AB	1385	A	Sidechain
2	AB	1386	C	Sidechain
2	AB	1389	G	Sidechain
2	AB	139	U	Sidechain
2	AB	1390	U	Sidechain
2	AB	1391	U	Sidechain
2	AB	1392	A	Sidechain
2	AB	1394	U	Sidechain
2	AB	1395	A	Sidechain
2	AB	1396	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1397	U	Sidechain
2	AB	1399	C	Sidechain
2	AB	1400	U	Sidechain
2	AB	1401	G	Sidechain
2	AB	1402	U	Sidechain
2	AB	1403	A	Sidechain
2	AB	1404	C	Sidechain
2	AB	1405	U	Sidechain
2	AB	1406	U	Sidechain
2	AB	1407	G	Sidechain
2	AB	1409	U	Sidechain
2	AB	141	G	Sidechain
2	AB	1410	G	Sidechain
2	AB	1411	U	Sidechain
2	AB	1412	U	Sidechain
2	AB	1413	A	Sidechain
2	AB	1414	C	Sidechain
2	AB	1415	U	Sidechain
2	AB	1416	G	Sidechain
2	AB	1417	C	Sidechain
2	AB	1418	G	Sidechain
2	AB	142	A	Sidechain
2	AB	1421	G	Sidechain
2	AB	1422	G	Sidechain
2	AB	1424	G	Sidechain
2	AB	1425	G	Sidechain
2	AB	1426	G	Sidechain
2	AB	143	C	Sidechain
2	AB	1433	A	Sidechain
2	AB	1434	A	Sidechain
2	AB	1435	G	Sidechain
2	AB	1436	G	Sidechain
2	AB	1438	U	Sidechain
2	AB	1439	A	Sidechain
2	AB	1440	U	Sidechain
2	AB	1441	G	Sidechain
2	AB	1442	U	Sidechain
2	AB	1443	U	Sidechain
2	AB	1444	G	Sidechain
2	AB	1447	C	Sidechain
2	AB	1448	G	Sidechain
2	AB	1450	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1451	C	Sidechain
2	AB	1452	G	Sidechain
2	AB	1454	C	Sidechain
2	AB	1455	G	Sidechain
2	AB	1458	U	Sidechain
2	AB	1459	G	Sidechain
2	AB	146	A	Sidechain
2	AB	1460	U	Sidechain
2	AB	1464	G	Sidechain
2	AB	1465	G	Sidechain
2	AB	1466	U	Sidechain
2	AB	147	C	Sidechain
2	AB	1470	A	Sidechain
2	AB	1471	G	Sidechain
2	AB	1472	C	Sidechain
2	AB	1473	G	Sidechain
2	AB	1474	U	Sidechain
2	AB	1475	G	Sidechain
2	AB	1477	A	Sidechain
2	AB	1478	G	Sidechain
2	AB	148	U	Sidechain
2	AB	1480	C	Sidechain
2	AB	1481	U	Sidechain
2	AB	1482	G	Sidechain
2	AB	1483	G	Sidechain
2	AB	1484	U	Sidechain
2	AB	1486	U	Sidechain
2	AB	1488	C	Sidechain
2	AB	1489	C	Sidechain
2	AB	1490	A	Sidechain
2	AB	1491	G	Sidechain
2	AB	1494	A	Sidechain
2	AB	1495	A	Sidechain
2	AB	1498	C	Sidechain
2	AB	1499	C	Sidechain
2	AB	15	G	Sidechain
2	AB	1500	G	Sidechain
2	AB	1505	A	Sidechain
2	AB	1508	A	Sidechain
2	AB	1511	G	Sidechain
2	AB	1512	C	Sidechain
2	AB	1513	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1514	G	Sidechain
2	AB	1516	G	Sidechain
2	AB	1517	G	Sidechain
2	AB	1521	G	Sidechain
2	AB	1522	A	Sidechain
2	AB	1523	U	Sidechain
2	AB	1524	G	Sidechain
2	AB	1527	G	Sidechain
2	AB	1531	C	Sidechain
2	AB	1532	A	Sidechain
2	AB	1534	U	Sidechain
2	AB	1536	C	Sidechain
2	AB	1538	G	Sidechain
2	AB	1542	U	Sidechain
2	AB	1543	G	Sidechain
2	AB	1545	A	Sidechain
2	AB	1546	G	Sidechain
2	AB	1548	A	Sidechain
2	AB	1549	A	Sidechain
2	AB	1551	A	Sidechain
2	AB	1552	A	Sidechain
2	AB	1553	A	Sidechain
2	AB	1554	U	Sidechain
2	AB	1556	C	Sidechain
2	AB	1557	C	Sidechain
2	AB	1558	C	Sidechain
2	AB	1559	U	Sidechain
2	AB	1560	G	Sidechain
2	AB	1562	U	Sidechain
2	AB	1563	U	Sidechain
2	AB	1566	A	Sidechain
2	AB	1567	G	Sidechain
2	AB	1568	G	Sidechain
2	AB	1569	A	Sidechain
2	AB	1572	A	Sidechain
2	AB	1573	G	Sidechain
2	AB	1574	C	Sidechain
2	AB	1578	U	Sidechain
2	AB	1579	A	Sidechain
2	AB	158	U	Sidechain
2	AB	1581	G	Sidechain
2	AB	1586	A	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	159	G	Sidechain
2	AB	1591	A	Sidechain
2	AB	1592	C	Sidechain
2	AB	1594	U	Sidechain
2	AB	1596	A	Sidechain
2	AB	1597	A	Sidechain
2	AB	1603	A	Sidechain
2	AB	1604	C	Sidechain
2	AB	1605	C	Sidechain
2	AB	1607	C	Sidechain
2	AB	1608	A	Sidechain
2	AB	1611	C	Sidechain
2	AB	1612	C	Sidechain
2	AB	1613	G	Sidechain
2	AB	1615	C	Sidechain
2	AB	1619	G	Sidechain
2	AB	1622	G	Sidechain
2	AB	1623	G	Sidechain
2	AB	1624	U	Sidechain
2	AB	1625	C	Sidechain
2	AB	1626	A	Sidechain
2	AB	1627	G	Sidechain
2	AB	1629	U	Sidechain
2	AB	1631	G	Sidechain
2	AB	1632	A	Sidechain
2	AB	1633	G	Sidechain
2	AB	1636	U	Sidechain
2	AB	1637	A	Sidechain
2	AB	1638	C	Sidechain
2	AB	1642	G	Sidechain
2	AB	1643	G	Sidechain
2	AB	1644	C	Sidechain
2	AB	1645	G	Sidechain
2	AB	1646	C	Sidechain
2	AB	1648	U	Sidechain
2	AB	1649	G	Sidechain
2	AB	1651	G	Sidechain
2	AB	1653	G	Sidechain
2	AB	1654	A	Sidechain
2	AB	1656	C	Sidechain
2	AB	1657	U	Sidechain
2	AB	1658	C	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1662	U	Sidechain
2	AB	1664	A	Sidechain
2	AB	1667	G	Sidechain
2	AB	1668	A	Sidechain
2	AB	1671	U	Sidechain
2	AB	1672	A	Sidechain
2	AB	1674	G	Sidechain
2	AB	1675	C	Sidechain
2	AB	1676	A	Sidechain
2	AB	1677	A	Sidechain
2	AB	1680	U	Sidechain
2	AB	1681	G	Sidechain
2	AB	1682	G	Sidechain
2	AB	1683	U	Sidechain
2	AB	1684	G	Sidechain
2	AB	1686	C	Sidechain
2	AB	1687	G	Sidechain
2	AB	1689	A	Sidechain
2	AB	1694	C	Sidechain
2	AB	1695	G	Sidechain
2	AB	1699	G	Sidechain
2	AB	170	U	Sidechain
2	AB	1703	G	Sidechain
2	AB	1704	C	Sidechain
2	AB	1706	C	Sidechain
2	AB	1708	C	Sidechain
2	AB	1709	U	Sidechain
2	AB	171	U	Sidechain
2	AB	1710	G	Sidechain
2	AB	1711	A	Sidechain
2	AB	1714	U	Sidechain
2	AB	1715	G	Sidechain
2	AB	1716	U	Sidechain
2	AB	1717	A	Sidechain
2	AB	1718	G	Sidechain
2	AB	1719	G	Sidechain
2	AB	1720	U	Sidechain
2	AB	1721	G	Sidechain
2	AB	1723	G	Sidechain
2	AB	1726	C	Sidechain
2	AB	1727	C	Sidechain
2	AB	1728	C	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1729	U	Sidechain
2	AB	1732	C	Sidechain
2	AB	1733	G	Sidechain
2	AB	1734	G	Sidechain
2	AB	1736	U	Sidechain
2	AB	1738	G	Sidechain
2	AB	1739	A	Sidechain
2	AB	1741	C	Sidechain
2	AB	1742	U	Sidechain
2	AB	1743	G	Sidechain
2	AB	1744	A	Sidechain
2	AB	1747	U	Sidechain
2	AB	175	G	Sidechain
2	AB	1750	G	Sidechain
2	AB	1751	U	Sidechain
2	AB	1753	G	Sidechain
2	AB	1754	A	Sidechain
2	AB	1757	A	Sidechain
2	AB	1759	A	Sidechain
2	AB	1761	C	Sidechain
2	AB	1762	A	Sidechain
2	AB	1763	G	Sidechain
2	AB	1765	U	Sidechain
2	AB	1767	G	Sidechain
2	AB	1769	U	Sidechain
2	AB	177	G	Sidechain
2	AB	1772	A	Sidechain
2	AB	1775	U	Sidechain
2	AB	1777	U	Sidechain
2	AB	1778	U	Sidechain
2	AB	1779	U	Sidechain
2	AB	1780	A	Sidechain
2	AB	1782	U	Sidechain
2	AB	1783	A	Sidechain
2	AB	1789	A	Sidechain
2	AB	179	C	Sidechain
2	AB	1792	G	Sidechain
2	AB	1793	C	Sidechain
2	AB	1797	G	Sidechain
2	AB	18	U	Sidechain
2	AB	180	G	Sidechain
2	AB	1802	A	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1804	C	Sidechain
2	AB	1806	C	Sidechain
2	AB	1807	G	Sidechain
2	AB	181	A	Sidechain
2	AB	1810	A	Sidechain
2	AB	1811	G	Sidechain
2	AB	1813	G	Sidechain
2	AB	1814	G	Sidechain
2	AB	1817	G	Sidechain
2	AB	1821	A	Sidechain
2	AB	1822	C	Sidechain
2	AB	1824	G	Sidechain
2	AB	1825	U	Sidechain
2	AB	1827	U	Sidechain
2	AB	1830	C	Sidechain
2	AB	1831	G	Sidechain
2	AB	1832	C	Sidechain
2	AB	1833	C	Sidechain
2	AB	1837	C	Sidechain
2	AB	1838	C	Sidechain
2	AB	1839	G	Sidechain
2	AB	1840	G	Sidechain
2	AB	1841	U	Sidechain
2	AB	1848	A	Sidechain
2	AB	1849	G	Sidechain
2	AB	185	G	Sidechain
2	AB	1850	G	Sidechain
2	AB	1853	A	Sidechain
2	AB	1855	U	Sidechain
2	AB	1857	G	Sidechain
2	AB	1858	A	Sidechain
2	AB	186	G	Sidechain
2	AB	1862	G	Sidechain
2	AB	1863	G	Sidechain
2	AB	1868	C	Sidechain
2	AB	1869	G	Sidechain
2	AB	187	G	Sidechain
2	AB	1873	G	Sidechain
2	AB	1875	G	Sidechain
2	AB	1877	A	Sidechain
2	AB	1878	G	Sidechain
2	AB	1880	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	1882	U	Sidechain
2	AB	1883	U	Sidechain
2	AB	1885	A	Sidechain
2	AB	1886	U	Sidechain
2	AB	189	G	Sidechain
2	AB	1890	A	Sidechain
2	AB	1893	C	Sidechain
2	AB	1895	C	Sidechain
2	AB	1896	G	Sidechain
2	AB	1899	A	Sidechain
2	AB	190	A	Sidechain
2	AB	1904	G	Sidechain
2	AB	1905	C	Sidechain
2	AB	1907	G	Sidechain
2	AB	1908	C	Sidechain
2	AB	1910	G	Sidechain
2	AB	1912	A	Sidechain
2	AB	1913	A	Sidechain
2	AB	1914	C	Sidechain
2	AB	1916	A	Sidechain
2	AB	1918	A	Sidechain
2	AB	1919	A	Sidechain
2	AB	1920	C	Sidechain
2	AB	1921	G	Sidechain
2	AB	1922	G	Sidechain
2	AB	1926	U	Sidechain
2	AB	1927	A	Sidechain
2	AB	1928	A	Sidechain
2	AB	1929	G	Sidechain
2	AB	193	U	Sidechain
2	AB	1930	G	Sidechain
2	AB	1932	A	Sidechain
2	AB	1933	G	Sidechain
2	AB	1934	C	Sidechain
2	AB	1937	A	Sidechain
2	AB	194	G	Sidechain
2	AB	1940	U	Sidechain
2	AB	1942	C	Sidechain
2	AB	1944	U	Sidechain
2	AB	1945	G	Sidechain
2	AB	1946	U	Sidechain
2	AB	1947	C	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	195	A	Sidechain
2	AB	1951	U	Sidechain
2	AB	1954	G	Sidechain
2	AB	1955	U	Sidechain
2	AB	1956	U	Sidechain
2	AB	1957	C	Sidechain
2	AB	1959	G	Sidechain
2	AB	1964	G	Sidechain
2	AB	1966	A	Sidechain
2	AB	1967	C	Sidechain
2	AB	1968	G	Sidechain
2	AB	1969	A	Sidechain
2	AB	1970	A	Sidechain
2	AB	1971	U	Sidechain
2	AB	1972	G	Sidechain
2	AB	1975	G	Sidechain
2	AB	1978	A	Sidechain
2	AB	1979	U	Sidechain
2	AB	1980	G	Sidechain
2	AB	1981	A	Sidechain
2	AB	1982	U	Sidechain
2	AB	1983	G	Sidechain
2	AB	1985	C	Sidechain
2	AB	1988	G	Sidechain
2	AB	1989	G	Sidechain
2	AB	1991	U	Sidechain
2	AB	1992	G	Sidechain
2	AB	1995	U	Sidechain
2	AB	1996	C	Sidechain
2	AB	1997	C	Sidechain
2	AB	1999	C	Sidechain
2	AB	2	G	Sidechain
2	AB	20	C	Sidechain
2	AB	2001	C	Sidechain
2	AB	2002	G	Sidechain
2	AB	2004	G	Sidechain
2	AB	2005	A	Sidechain
2	AB	2007	U	Sidechain
2	AB	2008	C	Sidechain
2	AB	201	C	Sidechain
2	AB	2010	G	Sidechain
2	AB	2014	A	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2015	A	Sidechain
2	AB	2016	U	Sidechain
2	AB	2019	A	Sidechain
2	AB	2022	U	Sidechain
2	AB	2023	C	Sidechain
2	AB	2026	U	Sidechain
2	AB	2027	G	Sidechain
2	AB	2028	U	Sidechain
2	AB	2029	G	Sidechain
2	AB	2032	G	Sidechain
2	AB	2034	U	Sidechain
2	AB	2035	G	Sidechain
2	AB	2036	C	Sidechain
2	AB	2038	G	Sidechain
2	AB	2039	U	Sidechain
2	AB	204	A	Sidechain
2	AB	2042	A	Sidechain
2	AB	2044	C	Sidechain
2	AB	2046	G	Sidechain
2	AB	2047	C	Sidechain
2	AB	2048	G	Sidechain
2	AB	205	G	Sidechain
2	AB	2050	C	Sidechain
2	AB	2053	G	Sidechain
2	AB	2054	A	Sidechain
2	AB	2055	C	Sidechain
2	AB	2056	G	Sidechain
2	AB	2057	G	Sidechain
2	AB	2059	A	Sidechain
2	AB	206	U	Sidechain
2	AB	2061	G	Sidechain
2	AB	2062	A	Sidechain
2	AB	2063	C	Sidechain
2	AB	2065	C	Sidechain
2	AB	2067	G	Sidechain
2	AB	207	A	Sidechain
2	AB	2070	A	Sidechain
2	AB	2071	A	Sidechain
2	AB	2072	C	Sidechain
2	AB	2075	U	Sidechain
2	AB	208	C	Sidechain
2	AB	2081	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2082	A	Sidechain
2	AB	2083	G	Sidechain
2	AB	2084	C	Sidechain
2	AB	2085	U	Sidechain
2	AB	2087	G	Sidechain
2	AB	2090	A	Sidechain
2	AB	2091	C	Sidechain
2	AB	2092	U	Sidechain
2	AB	2094	A	Sidechain
2	AB	2098	U	Sidechain
2	AB	2100	G	Sidechain
2	AB	2101	A	Sidechain
2	AB	2102	G	Sidechain
2	AB	2103	C	Sidechain
2	AB	2104	C	Sidechain
2	AB	2105	U	Sidechain
2	AB	2107	G	Sidechain
2	AB	2108	A	Sidechain
2	AB	2109	U	Sidechain
2	AB	211	C	Sidechain
2	AB	2111	U	Sidechain
2	AB	2112	G	Sidechain
2	AB	2114	A	Sidechain
2	AB	2115	G	Sidechain
2	AB	2116	G	Sidechain
2	AB	2118	U	Sidechain
2	AB	212	G	Sidechain
2	AB	2120	G	Sidechain
2	AB	2121	G	Sidechain
2	AB	2125	G	Sidechain
2	AB	2126	A	Sidechain
2	AB	2128	G	Sidechain
2	AB	2131	U	Sidechain
2	AB	2138	G	Sidechain
2	AB	214	G	Sidechain
2	AB	2141	G	Sidechain
2	AB	2143	C	Sidechain
2	AB	2144	G	Sidechain
2	AB	2147	A	Sidechain
2	AB	2149	U	Sidechain
2	AB	2150	C	Sidechain
2	AB	2152	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2153	C	Sidechain
2	AB	2155	U	Sidechain
2	AB	2156	G	Sidechain
2	AB	2157	G	Sidechain
2	AB	2159	G	Sidechain
2	AB	2161	C	Sidechain
2	AB	2162	G	Sidechain
2	AB	2163	A	Sidechain
2	AB	2164	C	Sidechain
2	AB	217	A	Sidechain
2	AB	2170	A	Sidechain
2	AB	2171	A	Sidechain
2	AB	2172	U	Sidechain
2	AB	2173	A	Sidechain
2	AB	2179	C	Sidechain
2	AB	2181	U	Sidechain
2	AB	2184	A	Sidechain
2	AB	2185	U	Sidechain
2	AB	2187	U	Sidechain
2	AB	2188	U	Sidechain
2	AB	2189	U	Sidechain
2	AB	219	A	Sidechain
2	AB	2190	G	Sidechain
2	AB	2191	A	Sidechain
2	AB	2193	G	Sidechain
2	AB	2194	U	Sidechain
2	AB	2196	C	Sidechain
2	AB	2197	U	Sidechain
2	AB	2198	A	Sidechain
2	AB	220	G	Sidechain
2	AB	2200	C	Sidechain
2	AB	2204	G	Sidechain
2	AB	2207	C	Sidechain
2	AB	2208	C	Sidechain
2	AB	2209	G	Sidechain
2	AB	221	A	Sidechain
2	AB	2211	A	Sidechain
2	AB	2212	A	Sidechain
2	AB	2213	U	Sidechain
2	AB	2214	C	Sidechain
2	AB	2216	G	Sidechain
2	AB	2217	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2218	G	Sidechain
2	AB	2220	U	Sidechain
2	AB	2221	G	Sidechain
2	AB	2223	G	Sidechain
2	AB	2224	G	Sidechain
2	AB	2227	A	Sidechain
2	AB	2228	G	Sidechain
2	AB	223	A	Sidechain
2	AB	2230	G	Sidechain
2	AB	2231	U	Sidechain
2	AB	2233	U	Sidechain
2	AB	2236	U	Sidechain
2	AB	2237	G	Sidechain
2	AB	2239	G	Sidechain
2	AB	2241	A	Sidechain
2	AB	2243	U	Sidechain
2	AB	2246	G	Sidechain
2	AB	2247	A	Sidechain
2	AB	2250	G	Sidechain
2	AB	2252	G	Sidechain
2	AB	2253	G	Sidechain
2	AB	2255	G	Sidechain
2	AB	2256	G	Sidechain
2	AB	2258	C	Sidechain
2	AB	2259	U	Sidechain
2	AB	226	A	Sidechain
2	AB	2260	C	Sidechain
2	AB	2261	C	Sidechain
2	AB	2265	U	Sidechain
2	AB	227	A	Sidechain
2	AB	2271	G	Sidechain
2	AB	2273	A	Sidechain
2	AB	2274	A	Sidechain
2	AB	2277	G	Sidechain
2	AB	2278	A	Sidechain
2	AB	2279	G	Sidechain
2	AB	228	C	Sidechain
2	AB	2280	G	Sidechain
2	AB	2283	C	Sidechain
2	AB	2287	A	Sidechain
2	AB	2288	A	Sidechain
2	AB	2289	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2293	G	Sidechain
2	AB	2294	G	Sidechain
2	AB	2297	A	Sidechain
2	AB	2299	U	Sidechain
2	AB	23	G	Sidechain
2	AB	230	G	Sidechain
2	AB	2303	G	Sidechain
2	AB	2304	G	Sidechain
2	AB	2305	U	Sidechain
2	AB	2306	C	Sidechain
2	AB	2307	G	Sidechain
2	AB	2308	G	Sidechain
2	AB	2315	G	Sidechain
2	AB	2316	G	Sidechain
2	AB	2318	G	Sidechain
2	AB	232	G	Sidechain
2	AB	2320	U	Sidechain
2	AB	2323	G	Sidechain
2	AB	2325	G	Sidechain
2	AB	2326	C	Sidechain
2	AB	2327	A	Sidechain
2	AB	2331	G	Sidechain
2	AB	2333	A	Sidechain
2	AB	2335	A	Sidechain
2	AB	2337	G	Sidechain
2	AB	2338	C	Sidechain
2	AB	2341	G	Sidechain
2	AB	2344	U	Sidechain
2	AB	2345	G	Sidechain
2	AB	2349	G	Sidechain
2	AB	235	U	Sidechain
2	AB	2350	C	Sidechain
2	AB	2352	A	Sidechain
2	AB	2353	G	Sidechain
2	AB	2354	C	Sidechain
2	AB	2358	A	Sidechain
2	AB	236	C	Sidechain
2	AB	2360	G	Sidechain
2	AB	2363	G	Sidechain
2	AB	2364	C	Sidechain
2	AB	2365	G	Sidechain
2	AB	2367	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	237	C	Sidechain
2	AB	2370	G	Sidechain
2	AB	2373	G	Sidechain
2	AB	2374	C	Sidechain
2	AB	2375	G	Sidechain
2	AB	2376	A	Sidechain
2	AB	2377	A	Sidechain
2	AB	2378	A	Sidechain
2	AB	238	C	Sidechain
2	AB	2382	G	Sidechain
2	AB	2383	G	Sidechain
2	AB	2384	U	Sidechain
2	AB	2385	C	Sidechain
2	AB	2387	U	Sidechain
2	AB	2388	A	Sidechain
2	AB	2389	G	Sidechain
2	AB	239	C	Sidechain
2	AB	2391	G	Sidechain
2	AB	2393	U	Sidechain
2	AB	2395	C	Sidechain
2	AB	2397	G	Sidechain
2	AB	2400	G	Sidechain
2	AB	2401	U	Sidechain
2	AB	2404	U	Sidechain
2	AB	2405	G	Sidechain
2	AB	2409	G	Sidechain
2	AB	2410	G	Sidechain
2	AB	2411	A	Sidechain
2	AB	2412	A	Sidechain
2	AB	2414	G	Sidechain
2	AB	2415	G	Sidechain
2	AB	2417	C	Sidechain
2	AB	242	G	Sidechain
2	AB	2420	C	Sidechain
2	AB	2421	G	Sidechain
2	AB	2423	U	Sidechain
2	AB	2424	C	Sidechain
2	AB	2425	A	Sidechain
2	AB	2428	G	Sidechain
2	AB	2429	G	Sidechain
2	AB	243	U	Sidechain
2	AB	2431	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2433	A	Sidechain
2	AB	2434	A	Sidechain
2	AB	2436	G	Sidechain
2	AB	2437	G	Sidechain
2	AB	2438	U	Sidechain
2	AB	2439	A	Sidechain
2	AB	2440	C	Sidechain
2	AB	2441	U	Sidechain
2	AB	2444	G	Sidechain
2	AB	2447	G	Sidechain
2	AB	245	G	Sidechain
2	AB	2451	A	Sidechain
2	AB	2452	C	Sidechain
2	AB	2453	A	Sidechain
2	AB	2455	G	Sidechain
2	AB	2456	C	Sidechain
2	AB	2458	G	Sidechain
2	AB	2461	A	Sidechain
2	AB	2466	C	Sidechain
2	AB	2467	C	Sidechain
2	AB	2469	A	Sidechain
2	AB	2472	G	Sidechain
2	AB	2473	U	Sidechain
2	AB	2474	U	Sidechain
2	AB	2475	C	Sidechain
2	AB	2477	U	Sidechain
2	AB	2478	A	Sidechain
2	AB	2479	U	Sidechain
2	AB	248	G	Sidechain
2	AB	2481	G	Sidechain
2	AB	2484	G	Sidechain
2	AB	2485	G	Sidechain
2	AB	2486	C	Sidechain
2	AB	2487	G	Sidechain
2	AB	2488	G	Sidechain
2	AB	249	C	Sidechain
2	AB	2490	G	Sidechain
2	AB	2491	U	Sidechain
2	AB	2492	U	Sidechain
2	AB	2493	U	Sidechain
2	AB	2494	G	Sidechain
2	AB	2495	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2496	C	Sidechain
2	AB	2497	A	Sidechain
2	AB	2500	U	Sidechain
2	AB	2502	G	Sidechain
2	AB	2505	G	Sidechain
2	AB	2506	U	Sidechain
2	AB	2507	C	Sidechain
2	AB	2508	G	Sidechain
2	AB	2509	G	Sidechain
2	AB	2511	U	Sidechain
2	AB	2512	C	Sidechain
2	AB	2516	A	Sidechain
2	AB	2517	C	Sidechain
2	AB	2518	A	Sidechain
2	AB	2519	U	Sidechain
2	AB	2521	C	Sidechain
2	AB	2522	U	Sidechain
2	AB	2523	G	Sidechain
2	AB	2524	G	Sidechain
2	AB	2525	G	Sidechain
2	AB	2526	G	Sidechain
2	AB	2528	U	Sidechain
2	AB	2529	G	Sidechain
2	AB	2538	C	Sidechain
2	AB	2543	G	Sidechain
2	AB	2544	G	Sidechain
2	AB	2545	G	Sidechain
2	AB	2546	U	Sidechain
2	AB	2548	U	Sidechain
2	AB	2549	G	Sidechain
2	AB	255	A	Sidechain
2	AB	2553	G	Sidechain
2	AB	2554	U	Sidechain
2	AB	2555	U	Sidechain
2	AB	2556	C	Sidechain
2	AB	2557	G	Sidechain
2	AB	2558	C	Sidechain
2	AB	256	A	Sidechain
2	AB	2561	U	Sidechain
2	AB	2563	U	Sidechain
2	AB	2564	A	Sidechain
2	AB	2568	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2569	G	Sidechain
2	AB	2570	G	Sidechain
2	AB	2573	C	Sidechain
2	AB	2576	G	Sidechain
2	AB	2577	A	Sidechain
2	AB	2578	G	Sidechain
2	AB	2579	C	Sidechain
2	AB	258	G	Sidechain
2	AB	2581	G	Sidechain
2	AB	2582	G	Sidechain
2	AB	2583	G	Sidechain
2	AB	2585	U	Sidechain
2	AB	2586	U	Sidechain
2	AB	2588	G	Sidechain
2	AB	259	G	Sidechain
2	AB	2590	A	Sidechain
2	AB	2591	C	Sidechain
2	AB	2592	G	Sidechain
2	AB	2593	U	Sidechain
2	AB	2595	G	Sidechain
2	AB	2596	U	Sidechain
2	AB	2597	G	Sidechain
2	AB	2598	A	Sidechain
2	AB	2599	G	Sidechain
2	AB	26	G	Sidechain
2	AB	260	G	Sidechain
2	AB	2602	A	Sidechain
2	AB	2606	C	Sidechain
2	AB	2607	G	Sidechain
2	AB	2610	C	Sidechain
2	AB	2613	U	Sidechain
2	AB	2614	A	Sidechain
2	AB	2616	C	Sidechain
2	AB	2617	U	Sidechain
2	AB	262	A	Sidechain
2	AB	2621	G	Sidechain
2	AB	2622	U	Sidechain
2	AB	2624	G	Sidechain
2	AB	2625	G	Sidechain
2	AB	2626	C	Sidechain
2	AB	2628	C	Sidechain
2	AB	2629	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	263	G	Sidechain
2	AB	2631	G	Sidechain
2	AB	2633	G	Sidechain
2	AB	2634	A	Sidechain
2	AB	2636	C	Sidechain
2	AB	2638	G	Sidechain
2	AB	264	C	Sidechain
2	AB	2640	G	Sidechain
2	AB	2641	G	Sidechain
2	AB	2642	G	Sidechain
2	AB	2645	G	Sidechain
2	AB	2649	C	Sidechain
2	AB	2650	U	Sidechain
2	AB	2652	C	Sidechain
2	AB	2653	U	Sidechain
2	AB	2655	G	Sidechain
2	AB	2656	U	Sidechain
2	AB	2657	A	Sidechain
2	AB	2659	G	Sidechain
2	AB	266	G	Sidechain
2	AB	2660	A	Sidechain
2	AB	2661	G	Sidechain
2	AB	2662	A	Sidechain
2	AB	2663	G	Sidechain
2	AB	2664	G	Sidechain
2	AB	2665	A	Sidechain
2	AB	2667	C	Sidechain
2	AB	2668	G	Sidechain
2	AB	2669	G	Sidechain
2	AB	267	C	Sidechain
2	AB	2670	A	Sidechain
2	AB	2673	G	Sidechain
2	AB	2674	G	Sidechain
2	AB	2675	A	Sidechain
2	AB	2676	C	Sidechain
2	AB	2677	G	Sidechain
2	AB	268	C	Sidechain
2	AB	2681	C	Sidechain
2	AB	2684	U	Sidechain
2	AB	2685	G	Sidechain
2	AB	2688	G	Sidechain
2	AB	2689	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2690	U	Sidechain
2	AB	2692	G	Sidechain
2	AB	2694	G	Sidechain
2	AB	2695	U	Sidechain
2	AB	2696	U	Sidechain
2	AB	2697	G	Sidechain
2	AB	2699	C	Sidechain
2	AB	27	G	Sidechain
2	AB	2702	G	Sidechain
2	AB	2703	C	Sidechain
2	AB	2706	A	Sidechain
2	AB	2707	U	Sidechain
2	AB	2708	G	Sidechain
2	AB	271	G	Sidechain
2	AB	2712	C	Sidechain
2	AB	2714	G	Sidechain
2	AB	2716	C	Sidechain
2	AB	2717	C	Sidechain
2	AB	2719	G	Sidechain
2	AB	2720	U	Sidechain
2	AB	2722	G	Sidechain
2	AB	2723	C	Sidechain
2	AB	2724	U	Sidechain
2	AB	2725	A	Sidechain
2	AB	2726	A	Sidechain
2	AB	2727	A	Sidechain
2	AB	273	G	Sidechain
2	AB	2731	G	Sidechain
2	AB	2732	G	Sidechain
2	AB	2733	A	Sidechain
2	AB	2735	G	Sidechain
2	AB	2737	G	Sidechain
2	AB	2739	U	Sidechain
2	AB	274	C	Sidechain
2	AB	2740	A	Sidechain
2	AB	2742	G	Sidechain
2	AB	2743	U	Sidechain
2	AB	2744	G	Sidechain
2	AB	2746	U	Sidechain
2	AB	2748	A	Sidechain
2	AB	2751	G	Sidechain
2	AB	2753	A	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2754	U	Sidechain
2	AB	2756	U	Sidechain
2	AB	2757	A	Sidechain
2	AB	2759	G	Sidechain
2	AB	276	U	Sidechain
2	AB	2760	C	Sidechain
2	AB	2763	G	Sidechain
2	AB	2764	A	Sidechain
2	AB	2766	A	Sidechain
2	AB	2767	C	Sidechain
2	AB	2768	U	Sidechain
2	AB	2769	U	Sidechain
2	AB	277	G	Sidechain
2	AB	2770	G	Sidechain
2	AB	2773	C	Sidechain
2	AB	2774	C	Sidechain
2	AB	2775	G	Sidechain
2	AB	2776	A	Sidechain
2	AB	2777	G	Sidechain
2	AB	2780	G	Sidechain
2	AB	2781	A	Sidechain
2	AB	2782	G	Sidechain
2	AB	2783	U	Sidechain
2	AB	2784	U	Sidechain
2	AB	2785	C	Sidechain
2	AB	2786	U	Sidechain
2	AB	2788	C	Sidechain
2	AB	2791	G	Sidechain
2	AB	2795	C	Sidechain
2	AB	2797	U	Sidechain
2	AB	2798	U	Sidechain
2	AB	28	A	Sidechain
2	AB	2801	G	Sidechain
2	AB	2802	G	Sidechain
2	AB	2803	G	Sidechain
2	AB	2805	C	Sidechain
2	AB	2806	C	Sidechain
2	AB	2808	G	Sidechain
2	AB	281	C	Sidechain
2	AB	2810	A	Sidechain
2	AB	2811	G	Sidechain
2	AB	2813	A	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	2816	G	Sidechain
2	AB	2818	U	Sidechain
2	AB	2819	G	Sidechain
2	AB	282	A	Sidechain
2	AB	2820	A	Sidechain
2	AB	2824	C	Sidechain
2	AB	2825	G	Sidechain
2	AB	2828	G	Sidechain
2	AB	283	G	Sidechain
2	AB	2831	G	Sidechain
2	AB	2832	U	Sidechain
2	AB	2833	U	Sidechain
2	AB	2835	A	Sidechain
2	AB	2836	U	Sidechain
2	AB	2838	G	Sidechain
2	AB	2839	G	Sidechain
2	AB	2841	C	Sidechain
2	AB	2844	G	Sidechain
2	AB	2845	U	Sidechain
2	AB	2847	U	Sidechain
2	AB	2848	G	Sidechain
2	AB	2850	A	Sidechain
2	AB	2852	G	Sidechain
2	AB	2854	G	Sidechain
2	AB	2855	C	Sidechain
2	AB	2856	A	Sidechain
2	AB	2857	G	Sidechain
2	AB	2858	C	Sidechain
2	AB	2859	G	Sidechain
2	AB	2860	A	Sidechain
2	AB	2863	C	Sidechain
2	AB	2865	U	Sidechain
2	AB	2866	U	Sidechain
2	AB	2867	G	Sidechain
2	AB	2868	A	Sidechain
2	AB	2869	G	Sidechain
2	AB	2871	U	Sidechain
2	AB	2872	A	Sidechain
2	AB	288	U	Sidechain
2	AB	2881	U	Sidechain
2	AB	2885	G	Sidechain
2	AB	2888	C	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	289	G	Sidechain
2	AB	2891	U	Sidechain
2	AB	2894	G	Sidechain
2	AB	2895	G	Sidechain
2	AB	2897	U	Sidechain
2	AB	2899	A	Sidechain
2	AB	29	U	Sidechain
2	AB	2901	C	Sidechain
2	AB	291	G	Sidechain
2	AB	292	U	Sidechain
2	AB	293	U	Sidechain
2	AB	298	G	Sidechain
2	AB	299	A	Sidechain
2	AB	30	G	Sidechain
2	AB	301	G	Sidechain
2	AB	302	C	Sidechain
2	AB	303	G	Sidechain
2	AB	304	U	Sidechain
2	AB	305	C	Sidechain
2	AB	307	G	Sidechain
2	AB	308	G	Sidechain
2	AB	31	C	Sidechain
2	AB	311	A	Sidechain
2	AB	312	G	Sidechain
2	AB	313	G	Sidechain
2	AB	315	G	Sidechain
2	AB	316	C	Sidechain
2	AB	317	G	Sidechain
2	AB	318	C	Sidechain
2	AB	320	A	Sidechain
2	AB	321	U	Sidechain
2	AB	322	A	Sidechain
2	AB	323	C	Sidechain
2	AB	324	A	Sidechain
2	AB	325	G	Sidechain
2	AB	326	G	Sidechain
2	AB	327	G	Sidechain
2	AB	329	G	Sidechain
2	AB	330	A	Sidechain
2	AB	331	C	Sidechain
2	AB	333	G	Sidechain
2	AB	335	C	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	336	C	Sidechain
2	AB	338	G	Sidechain
2	AB	34	U	Sidechain
2	AB	341	C	Sidechain
2	AB	343	C	Sidechain
2	AB	344	A	Sidechain
2	AB	345	A	Sidechain
2	AB	348	A	Sidechain
2	AB	349	U	Sidechain
2	AB	353	C	Sidechain
2	AB	355	U	Sidechain
2	AB	357	C	Sidechain
2	AB	358	U	Sidechain
2	AB	36	G	Sidechain
2	AB	360	U	Sidechain
2	AB	361	G	Sidechain
2	AB	364	C	Sidechain
2	AB	366	C	Sidechain
2	AB	367	G	Sidechain
2	AB	370	G	Sidechain
2	AB	371	A	Sidechain
2	AB	372	G	Sidechain
2	AB	373	U	Sidechain
2	AB	374	A	Sidechain
2	AB	377	G	Sidechain
2	AB	379	G	Sidechain
2	AB	380	G	Sidechain
2	AB	381	G	Sidechain
2	AB	383	C	Sidechain
2	AB	384	A	Sidechain
2	AB	385	C	Sidechain
2	AB	386	G	Sidechain
2	AB	387	U	Sidechain
2	AB	388	G	Sidechain
2	AB	389	G	Sidechain
2	AB	391	A	Sidechain
2	AB	392	U	Sidechain
2	AB	394	C	Sidechain
2	AB	395	U	Sidechain
2	AB	396	G	Sidechain
2	AB	398	C	Sidechain
2	AB	399	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	400	G	Sidechain
2	AB	401	A	Sidechain
2	AB	402	A	Sidechain
2	AB	405	U	Sidechain
2	AB	406	G	Sidechain
2	AB	407	G	Sidechain
2	AB	408	G	Sidechain
2	AB	41	C	Sidechain
2	AB	410	G	Sidechain
2	AB	411	G	Sidechain
2	AB	412	A	Sidechain
2	AB	414	C	Sidechain
2	AB	415	A	Sidechain
2	AB	417	C	Sidechain
2	AB	419	U	Sidechain
2	AB	423	A	Sidechain
2	AB	424	G	Sidechain
2	AB	427	U	Sidechain
2	AB	428	A	Sidechain
2	AB	43	G	Sidechain
2	AB	430	A	Sidechain
2	AB	432	A	Sidechain
2	AB	433	C	Sidechain
2	AB	434	U	Sidechain
2	AB	436	C	Sidechain
2	AB	438	G	Sidechain
2	AB	439	A	Sidechain
2	AB	443	A	Sidechain
2	AB	444	C	Sidechain
2	AB	445	C	Sidechain
2	AB	446	G	Sidechain
2	AB	450	G	Sidechain
2	AB	451	U	Sidechain
2	AB	452	G	Sidechain
2	AB	453	A	Sidechain
2	AB	454	A	Sidechain
2	AB	457	A	Sidechain
2	AB	458	G	Sidechain
2	AB	464	U	Sidechain
2	AB	466	A	Sidechain
2	AB	468	G	Sidechain
2	AB	469	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	470	A	Sidechain
2	AB	472	A	Sidechain
2	AB	473	G	Sidechain
2	AB	475	C	Sidechain
2	AB	476	G	Sidechain
2	AB	477	A	Sidechain
2	AB	480	A	Sidechain
2	AB	481	G	Sidechain
2	AB	483	A	Sidechain
2	AB	487	C	Sidechain
2	AB	488	G	Sidechain
2	AB	489	G	Sidechain
2	AB	493	G	Sidechain
2	AB	496	G	Sidechain
2	AB	497	A	Sidechain
2	AB	498	G	Sidechain
2	AB	499	U	Sidechain
2	AB	50	U	Sidechain
2	AB	500	G	Sidechain
2	AB	501	A	Sidechain
2	AB	502	A	Sidechain
2	AB	503	A	Sidechain
2	AB	507	A	Sidechain
2	AB	508	A	Sidechain
2	AB	510	C	Sidechain
2	AB	512	G	Sidechain
2	AB	513	A	Sidechain
2	AB	514	A	Sidechain
2	AB	516	C	Sidechain
2	AB	518	G	Sidechain
2	AB	52	A	Sidechain
2	AB	520	G	Sidechain
2	AB	522	A	Sidechain
2	AB	524	G	Sidechain
2	AB	527	C	Sidechain
2	AB	528	A	Sidechain
2	AB	529	A	Sidechain
2	AB	532	A	Sidechain
2	AB	533	G	Sidechain
2	AB	535	G	Sidechain
2	AB	536	G	Sidechain
2	AB	537	G	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	54	G	Sidechain
2	AB	544	C	Sidechain
2	AB	545	U	Sidechain
2	AB	547	A	Sidechain
2	AB	549	G	Sidechain
2	AB	551	G	Sidechain
2	AB	554	U	Sidechain
2	AB	555	G	Sidechain
2	AB	558	U	Sidechain
2	AB	559	G	Sidechain
2	AB	561	G	Sidechain
2	AB	562	U	Sidechain
2	AB	563	A	Sidechain
2	AB	565	C	Sidechain
2	AB	567	U	Sidechain
2	AB	568	U	Sidechain
2	AB	570	G	Sidechain
2	AB	573	U	Sidechain
2	AB	575	A	Sidechain
2	AB	577	G	Sidechain
2	AB	579	G	Sidechain
2	AB	580	U	Sidechain
2	AB	581	C	Sidechain
2	AB	583	G	Sidechain
2	AB	584	C	Sidechain
2	AB	586	A	Sidechain
2	AB	587	C	Sidechain
2	AB	588	U	Sidechain
2	AB	591	U	Sidechain
2	AB	593	U	Sidechain
2	AB	595	C	Sidechain
2	AB	596	U	Sidechain
2	AB	597	G	Sidechain
2	AB	599	A	Sidechain
2	AB	601	C	Sidechain
2	AB	602	A	Sidechain
2	AB	604	G	Sidechain
2	AB	605	G	Sidechain
2	AB	606	U	Sidechain
2	AB	607	U	Sidechain
2	AB	608	A	Sidechain
2	AB	610	C	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	612	G	Sidechain
2	AB	613	A	Sidechain
2	AB	615	U	Sidechain
2	AB	617	G	Sidechain
2	AB	618	G	Sidechain
2	AB	619	G	Sidechain
2	AB	62	U	Sidechain
2	AB	620	G	Sidechain
2	AB	622	G	Sidechain
2	AB	624	C	Sidechain
2	AB	625	G	Sidechain
2	AB	626	A	Sidechain
2	AB	627	A	Sidechain
2	AB	628	G	Sidechain
2	AB	629	G	Sidechain
2	AB	63	A	Sidechain
2	AB	630	G	Sidechain
2	AB	631	A	Sidechain
2	AB	636	G	Sidechain
2	AB	637	A	Sidechain
2	AB	639	U	Sidechain
2	AB	64	A	Sidechain
2	AB	641	U	Sidechain
2	AB	644	A	Sidechain
2	AB	646	U	Sidechain
2	AB	647	G	Sidechain
2	AB	648	G	Sidechain
2	AB	649	G	Sidechain
2	AB	65	U	Sidechain
2	AB	652	U	Sidechain
2	AB	654	A	Sidechain
2	AB	656	G	Sidechain
2	AB	658	U	Sidechain
2	AB	659	G	Sidechain
2	AB	661	A	Sidechain
2	AB	662	G	Sidechain
2	AB	663	G	Sidechain
2	AB	665	U	Sidechain
2	AB	666	A	Sidechain
2	AB	667	U	Sidechain
2	AB	668	A	Sidechain
2	AB	67	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	671	C	Sidechain
2	AB	672	C	Sidechain
2	AB	673	C	Sidechain
2	AB	674	G	Sidechain
2	AB	676	A	Sidechain
2	AB	677	A	Sidechain
2	AB	678	C	Sidechain
2	AB	679	C	Sidechain
2	AB	680	C	Sidechain
2	AB	682	G	Sidechain
2	AB	684	G	Sidechain
2	AB	685	A	Sidechain
2	AB	686	U	Sidechain
2	AB	687	C	Sidechain
2	AB	688	U	Sidechain
2	AB	69	C	Sidechain
2	AB	690	G	Sidechain
2	AB	693	A	Sidechain
2	AB	695	G	Sidechain
2	AB	696	G	Sidechain
2	AB	698	C	Sidechain
2	AB	7	G	Sidechain
2	AB	70	G	Sidechain
2	AB	701	G	Sidechain
2	AB	707	G	Sidechain
2	AB	709	U	Sidechain
2	AB	71	A	Sidechain
2	AB	710	U	Sidechain
2	AB	711	G	Sidechain
2	AB	712	G	Sidechain
2	AB	713	G	Sidechain
2	AB	714	U	Sidechain
2	AB	716	A	Sidechain
2	AB	721	A	Sidechain
2	AB	724	U	Sidechain
2	AB	727	A	Sidechain
2	AB	728	G	Sidechain
2	AB	73	A	Sidechain
2	AB	730	A	Sidechain
2	AB	733	G	Sidechain
2	AB	736	C	Sidechain
2	AB	737	C	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	738	G	Sidechain
2	AB	739	A	Sidechain
2	AB	74	A	Sidechain
2	AB	740	C	Sidechain
2	AB	741	U	Sidechain
2	AB	742	A	Sidechain
2	AB	744	U	Sidechain
2	AB	748	G	Sidechain
2	AB	75	G	Sidechain
2	AB	750	A	Sidechain
2	AB	752	A	Sidechain
2	AB	753	A	Sidechain
2	AB	755	U	Sidechain
2	AB	756	A	Sidechain
2	AB	758	C	Sidechain
2	AB	76	C	Sidechain
2	AB	760	G	Sidechain
2	AB	761	A	Sidechain
2	AB	762	U	Sidechain
2	AB	763	G	Sidechain
2	AB	764	A	Sidechain
2	AB	765	C	Sidechain
2	AB	766	U	Sidechain
2	AB	767	U	Sidechain
2	AB	77	G	Sidechain
2	AB	770	G	Sidechain
2	AB	771	G	Sidechain
2	AB	772	C	Sidechain
2	AB	773	U	Sidechain
2	AB	774	G	Sidechain
2	AB	776	G	Sidechain
2	AB	778	G	Sidechain
2	AB	779	U	Sidechain
2	AB	78	U	Sidechain
2	AB	780	G	Sidechain
2	AB	783	A	Sidechain
2	AB	784	G	Sidechain
2	AB	785	G	Sidechain
2	AB	787	C	Sidechain
2	AB	789	A	Sidechain
2	AB	791	C	Sidechain
2	AB	793	A	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	794	A	Sidechain
2	AB	795	C	Sidechain
2	AB	797	G	Sidechain
2	AB	798	G	Sidechain
2	AB	80	G	Sidechain
2	AB	800	A	Sidechain
2	AB	801	G	Sidechain
2	AB	802	A	Sidechain
2	AB	803	U	Sidechain
2	AB	804	A	Sidechain
2	AB	805	G	Sidechain
2	AB	808	G	Sidechain
2	AB	81	G	Sidechain
2	AB	811	U	Sidechain
2	AB	812	C	Sidechain
2	AB	813	U	Sidechain
2	AB	814	C	Sidechain
2	AB	815	C	Sidechain
2	AB	816	C	Sidechain
2	AB	818	G	Sidechain
2	AB	819	A	Sidechain
2	AB	82	U	Sidechain
2	AB	820	A	Sidechain
2	AB	823	C	Sidechain
2	AB	827	U	Sidechain
2	AB	828	U	Sidechain
2	AB	829	A	Sidechain
2	AB	83	A	Sidechain
2	AB	830	G	Sidechain
2	AB	831	G	Sidechain
2	AB	832	U	Sidechain
2	AB	834	G	Sidechain
2	AB	836	G	Sidechain
2	AB	837	C	Sidechain
2	AB	838	C	Sidechain
2	AB	839	U	Sidechain
2	AB	84	A	Sidechain
2	AB	842	U	Sidechain
2	AB	843	G	Sidechain
2	AB	846	U	Sidechain
2	AB	847	U	Sidechain
2	AB	848	C	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	85	G	Sidechain
2	AB	850	U	Sidechain
2	AB	851	C	Sidechain
2	AB	855	G	Sidechain
2	AB	856	G	Sidechain
2	AB	857	G	Sidechain
2	AB	858	G	Sidechain
2	AB	86	G	Sidechain
2	AB	862	G	Sidechain
2	AB	864	G	Sidechain
2	AB	867	C	Sidechain
2	AB	868	U	Sidechain
2	AB	870	U	Sidechain
2	AB	874	G	Sidechain
2	AB	877	A	Sidechain
2	AB	88	G	Sidechain
2	AB	881	G	Sidechain
2	AB	882	G	Sidechain
2	AB	883	G	Sidechain
2	AB	884	U	Sidechain
2	AB	885	C	Sidechain
2	AB	887	U	Sidechain
2	AB	890	C	Sidechain
2	AB	894	U	Sidechain
2	AB	896	A	Sidechain
2	AB	899	A	Sidechain
2	AB	9	G	Sidechain
2	AB	90	U	Sidechain
2	AB	900	A	Sidechain
2	AB	902	C	Sidechain
2	AB	903	C	Sidechain
2	AB	904	G	Sidechain
2	AB	906	U	Sidechain
2	AB	907	G	Sidechain
2	AB	909	A	Sidechain
2	AB	91	A	Sidechain
2	AB	910	A	Sidechain
2	AB	912	C	Sidechain
2	AB	913	U	Sidechain
2	AB	915	C	Sidechain
2	AB	918	A	Sidechain
2	AB	919	U	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	921	C	Sidechain
2	AB	922	C	Sidechain
2	AB	923	G	Sidechain
2	AB	924	G	Sidechain
2	AB	925	A	Sidechain
2	AB	926	G	Sidechain
2	AB	927	A	Sidechain
2	AB	931	U	Sidechain
2	AB	936	A	Sidechain
2	AB	938	G	Sidechain
2	AB	939	G	Sidechain
2	AB	94	A	Sidechain
2	AB	940	G	Sidechain
2	AB	942	G	Sidechain
2	AB	945	A	Sidechain
2	AB	946	C	Sidechain
2	AB	947	A	Sidechain
2	AB	948	C	Sidechain
2	AB	949	G	Sidechain
2	AB	951	C	Sidechain
2	AB	953	G	Sidechain
2	AB	956	G	Sidechain
2	AB	958	U	Sidechain
2	AB	959	A	Sidechain
2	AB	96	C	Sidechain
2	AB	960	A	Sidechain
2	AB	961	C	Sidechain
2	AB	962	G	Sidechain
2	AB	965	C	Sidechain
2	AB	968	C	Sidechain
2	AB	97	C	Sidechain
2	AB	971	G	Sidechain
2	AB	972	A	Sidechain
2	AB	973	A	Sidechain
2	AB	974	G	Sidechain
2	AB	976	G	Sidechain
2	AB	977	G	Sidechain
2	AB	978	G	Sidechain
2	AB	98	G	Sidechain
2	AB	980	A	Sidechain
2	AB	983	A	Sidechain
2	AB	984	A	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	985	C	Sidechain
2	AB	988	A	Sidechain
2	AB	989	G	Sidechain
2	AB	99	U	Sidechain
2	AB	994	C	Sidechain
2	AB	997	G	Sidechain
2	AB	998	C	Sidechain
2	AB	999	U	Sidechain
3	AC	21	TYR	Sidechain
3	AC	78	PHE	Sidechain
4	AD	101	ARG	Peptide
4	AD	13	ARG	Sidechain
4	AD	144	GLU	Mainchain
4	AD	176	ARG	Sidechain
4	AD	211	ARG	Sidechain
4	AD	232	GLY	Peptide
4	AD	29	PHE	Sidechain
4	AD	52	HIS	Peptide
4	AD	62	ARG	Sidechain
4	AD	82	TYR	Sidechain
4	AD	95	TYR	Sidechain
5	AE	113	SER	Peptide
5	AE	124	ARG	Sidechain
5	AE	128	ARG	Sidechain
5	AE	136	ASN	Mainchain
5	AE	179	ARG	Sidechain
5	AE	32	ASN	Mainchain
5	AE	33	ARG	Sidechain
5	AE	40	LEU	Peptide
5	AE	59	ARG	Sidechain
5	AE	77	ARG	Sidechain
5	AE	90	PHE	Peptide
6	AF	101	TYR	Sidechain
6	AF	70	SER	Peptide
6	AF	85	PHE	Sidechain
7	AG	102	LEU	Peptide
7	AG	111	ARG	Sidechain
7	AG	113	PHE	Sidechain
7	AG	137	PHE	Peptide
7	AG	142	TYR	Sidechain
7	AG	149	ARG	Peptide
7	AG	177	ARG	Sidechain

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Mol	Chain	Res	Type	Group
7	AG	82	TYR	Sidechain
8	AH	156	TYR	Sidechain
8	AH	167	VAL	Peptide,Mainchain
8	AH	93	TYR	Mainchain
8	AH	94	ARG	Sidechain
9	AI	123	ARG	Sidechain
9	AI	47	PHE	Sidechain
9	AI	97	ARG	Sidechain
10	AJ	112	PHE	Sidechain
10	AJ	61	ARG	Sidechain
10	AJ	79	THR	Peptide
11	AK	133	ARG	Sidechain
11	AK	61	TYR	Sidechain
12	AL	34	ARG	Sidechain
12	AL	44	TYR	Sidechain
12	AL	74	TYR	Sidechain
12	AL	83	GLY	Peptide
13	AM	32	TYR	Sidechain
13	AM	4	GLU	Peptide
13	AM	49	ARG	Sidechain
13	AM	76	VAL	Peptide
13	AM	79	PHE	Sidechain
14	AN	45	GLY	Peptide
14	AN	64	PHE	Sidechain
14	AN	66	PHE	Mainchain
14	AN	78	ARG	Sidechain
15	AO	103	TYR	Sidechain
15	AO	55	ARG	Sidechain
15	AO	91	TYR	Sidechain
16	AP	118	ARG	Sidechain
16	AP	122	ALA	Mainchain
16	AP	123	GLU	Peptide
16	AP	2	ARG	Sidechain
16	AP	4	ARG	Sidechain
16	AP	63	ARG	Sidechain
16	AP	71	ARG	Sidechain
16	AP	96	ARG	Sidechain
17	AQ	33	ARG	Sidechain
17	AQ	64	TYR	Sidechain
18	AR	20	ARG	Sidechain
18	AR	61	ARG	Sidechain
18	AR	76	HIS	Sidechain

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Mol	Chain	Res	Type	Group
18	AR	87	ARG	Sidechain
18	AR	96	LEU	Peptide,Mainchain
18	AR	98	TYR	Sidechain
19	AS	31	TYR	Sidechain
19	AS	32	ARG	Sidechain
19	AS	44	TYR	Sidechain
19	AS	69	ARG	Sidechain
19	AS	75	TYR	Sidechain
20	AT	5	PHE	Sidechain
20	AT	53	PHE	Sidechain
20	AT	77	PHE	Sidechain
20	AT	83	TYR	Sidechain
20	AT	84	ARG	Sidechain
21	AU	38	TYR	Sidechain
21	AU	8	ARG	Sidechain
22	AV	55	VAL	Mainchain
23	AW	93	ARG	Sidechain
24	AX	9	ARG	Sidechain
25	AY	13	ARG	Peptide
25	AY	14	ASP	Mainchain
25	AY	16	GLU	Peptide
25	AY	17	ALA	Peptide
25	AY	19	ARG	Peptide
25	AY	24	ARG	Sidechain
25	AY	54	ARG	Sidechain
26	AZ	10	ARG	Sidechain
26	AZ	56	ARG	Sidechain
35	BA	10	A	Sidechain
35	BA	100	G	Sidechain
35	BA	1000	A	Sidechain
35	BA	1002	G	Sidechain
35	BA	1003	G	Sidechain
35	BA	1006	G	Sidechain
35	BA	1009	U	Sidechain
35	BA	101	A	Sidechain
35	BA	1012	A	Sidechain
35	BA	1013	G	Sidechain
35	BA	1015	G	Sidechain
35	BA	1016	A	Sidechain
35	BA	1017	U	Sidechain
35	BA	1018	G	Sidechain
35	BA	1019	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	102	G	Sidechain
35	BA	1020	G	Sidechain
35	BA	1021	A	Sidechain
35	BA	1022	A	Sidechain
35	BA	1023	U	Sidechain
35	BA	1024	G	Sidechain
35	BA	1025	U	Sidechain
35	BA	1026	G	Sidechain
35	BA	103	U	Sidechain
35	BA	1030	U	Sidechain
35	BA	1032	G	Sidechain
35	BA	1033	G	Sidechain
35	BA	1034	G	Sidechain
35	BA	1036	A	Sidechain
35	BA	1037	C	Sidechain
35	BA	1039	G	Sidechain
35	BA	1040	U	Sidechain
35	BA	1041	G	Sidechain
35	BA	1043	G	Sidechain
35	BA	1044	A	Sidechain
35	BA	1045	C	Sidechain
35	BA	1046	A	Sidechain
35	BA	1048	G	Sidechain
35	BA	1050	G	Sidechain
35	BA	1051	C	Sidechain
35	BA	1053	G	Sidechain
35	BA	1054	C	Sidechain
35	BA	1056	U	Sidechain
35	BA	1057	G	Sidechain
35	BA	1058	G	Sidechain
35	BA	1059	C	Sidechain
35	BA	1061	G	Sidechain
35	BA	1062	U	Sidechain
35	BA	1063	C	Sidechain
35	BA	1064	G	Sidechain
35	BA	1065	U	Sidechain
35	BA	1067	A	Sidechain
35	BA	1068	G	Sidechain
35	BA	107	G	Sidechain
35	BA	1070	U	Sidechain
35	BA	1071	C	Sidechain
35	BA	1072	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1073	U	Sidechain
35	BA	1074	G	Sidechain
35	BA	1075	U	Sidechain
35	BA	1076	U	Sidechain
35	BA	1077	G	Sidechain
35	BA	1078	U	Sidechain
35	BA	1079	G	Sidechain
35	BA	108	G	Sidechain
35	BA	1080	A	Sidechain
35	BA	1082	A	Sidechain
35	BA	1084	G	Sidechain
35	BA	1085	U	Sidechain
35	BA	1088	G	Sidechain
35	BA	109	A	Sidechain
35	BA	1090	U	Sidechain
35	BA	1093	A	Sidechain
35	BA	1094	G	Sidechain
35	BA	1095	U	Sidechain
35	BA	1096	C	Sidechain
35	BA	1098	C	Sidechain
35	BA	1099	G	Sidechain
35	BA	110	C	Sidechain
35	BA	1101	A	Sidechain
35	BA	1104	G	Sidechain
35	BA	1106	G	Sidechain
35	BA	111	G	Sidechain
35	BA	1112	C	Sidechain
35	BA	1113	C	Sidechain
35	BA	1114	C	Sidechain
35	BA	1115	U	Sidechain
35	BA	1116	U	Sidechain
35	BA	1119	C	Sidechain
35	BA	112	G	Sidechain
35	BA	1124	G	Sidechain
35	BA	1126	U	Sidechain
35	BA	1127	G	Sidechain
35	BA	1128	C	Sidechain
35	BA	113	G	Sidechain
35	BA	1132	C	Sidechain
35	BA	1133	G	Sidechain
35	BA	1135	U	Sidechain
35	BA	1136	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1137	C	Sidechain
35	BA	1138	G	Sidechain
35	BA	114	U	Sidechain
35	BA	1142	G	Sidechain
35	BA	1144	G	Sidechain
35	BA	1146	A	Sidechain
35	BA	1147	C	Sidechain
35	BA	1150	A	Sidechain
35	BA	1151	A	Sidechain
35	BA	1159	U	Sidechain
35	BA	1161	C	Sidechain
35	BA	1162	C	Sidechain
35	BA	1163	A	Sidechain
35	BA	1164	G	Sidechain
35	BA	1165	U	Sidechain
35	BA	1166	G	Sidechain
35	BA	1167	A	Sidechain
35	BA	1168	U	Sidechain
35	BA	1169	A	Sidechain
35	BA	1170	A	Sidechain
35	BA	1171	A	Sidechain
35	BA	1173	U	Sidechain
35	BA	1174	G	Sidechain
35	BA	1175	G	Sidechain
35	BA	1176	A	Sidechain
35	BA	1177	G	Sidechain
35	BA	1178	G	Sidechain
35	BA	1181	G	Sidechain
35	BA	1182	G	Sidechain
35	BA	1183	U	Sidechain
35	BA	1184	G	Sidechain
35	BA	1185	G	Sidechain
35	BA	1186	G	Sidechain
35	BA	1187	G	Sidechain
35	BA	1188	A	Sidechain
35	BA	1189	U	Sidechain
35	BA	1190	G	Sidechain
35	BA	1193	G	Sidechain
35	BA	1196	A	Sidechain
35	BA	1198	G	Sidechain
35	BA	120	A	Sidechain
35	BA	1201	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1202	U	Sidechain
35	BA	1203	C	Sidechain
35	BA	1204	A	Sidechain
35	BA	1211	U	Sidechain
35	BA	1213	A	Sidechain
35	BA	1214	C	Sidechain
35	BA	1216	A	Sidechain
35	BA	1219	A	Sidechain
35	BA	122	G	Sidechain
35	BA	1220	G	Sidechain
35	BA	1221	G	Sidechain
35	BA	1222	G	Sidechain
35	BA	1225	A	Sidechain
35	BA	1226	C	Sidechain
35	BA	1228	C	Sidechain
35	BA	123	U	Sidechain
35	BA	1230	C	Sidechain
35	BA	1232	U	Sidechain
35	BA	1233	G	Sidechain
35	BA	1235	U	Sidechain
35	BA	1237	C	Sidechain
35	BA	1238	A	Sidechain
35	BA	1239	A	Sidechain
35	BA	1240	U	Sidechain
35	BA	1241	G	Sidechain
35	BA	1242	G	Sidechain
35	BA	1244	G	Sidechain
35	BA	1246	A	Sidechain
35	BA	1247	U	Sidechain
35	BA	125	U	Sidechain
35	BA	1250	A	Sidechain
35	BA	1251	A	Sidechain
35	BA	1253	G	Sidechain
35	BA	1254	A	Sidechain
35	BA	1255	G	Sidechain
35	BA	1257	A	Sidechain
35	BA	126	G	Sidechain
35	BA	1260	G	Sidechain
35	BA	1261	A	Sidechain
35	BA	1263	C	Sidechain
35	BA	1264	U	Sidechain
35	BA	1267	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1268	G	Sidechain
35	BA	1269	A	Sidechain
35	BA	127	G	Sidechain
35	BA	1270	G	Sidechain
35	BA	1276	G	Sidechain
35	BA	1277	C	Sidechain
35	BA	1278	G	Sidechain
35	BA	1282	C	Sidechain
35	BA	1285	A	Sidechain
35	BA	1286	U	Sidechain
35	BA	1287	A	Sidechain
35	BA	1289	A	Sidechain
35	BA	129	A	Sidechain
35	BA	1291	U	Sidechain
35	BA	1292	G	Sidechain
35	BA	1295	U	Sidechain
35	BA	1296	C	Sidechain
35	BA	1297	G	Sidechain
35	BA	1298	U	Sidechain
35	BA	1299	A	Sidechain
35	BA	130	A	Sidechain
35	BA	1301	U	Sidechain
35	BA	1302	C	Sidechain
35	BA	1304	G	Sidechain
35	BA	1305	G	Sidechain
35	BA	1306	A	Sidechain
35	BA	1308	U	Sidechain
35	BA	1311	A	Sidechain
35	BA	1312	G	Sidechain
35	BA	1313	U	Sidechain
35	BA	1315	U	Sidechain
35	BA	1316	G	Sidechain
35	BA	1317	C	Sidechain
35	BA	1321	U	Sidechain
35	BA	1322	C	Sidechain
35	BA	1323	G	Sidechain
35	BA	1324	A	Sidechain
35	BA	1325	C	Sidechain
35	BA	1329	A	Sidechain
35	BA	1330	U	Sidechain
35	BA	1333	A	Sidechain
35	BA	1334	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1337	G	Sidechain
35	BA	1339	A	Sidechain
35	BA	134	G	Sidechain
35	BA	1340	A	Sidechain
35	BA	1345	U	Sidechain
35	BA	1346	A	Sidechain
35	BA	1349	A	Sidechain
35	BA	1351	U	Sidechain
35	BA	1352	C	Sidechain
35	BA	1353	G	Sidechain
35	BA	1354	U	Sidechain
35	BA	1355	G	Sidechain
35	BA	1356	G	Sidechain
35	BA	1357	A	Sidechain
35	BA	1358	U	Sidechain
35	BA	136	C	Sidechain
35	BA	1364	U	Sidechain
35	BA	1366	C	Sidechain
35	BA	137	U	Sidechain
35	BA	1370	G	Sidechain
35	BA	1371	G	Sidechain
35	BA	1372	U	Sidechain
35	BA	1373	G	Sidechain
35	BA	1375	A	Sidechain
35	BA	1378	C	Sidechain
35	BA	1379	G	Sidechain
35	BA	138	G	Sidechain
35	BA	1380	U	Sidechain
35	BA	1382	C	Sidechain
35	BA	1383	C	Sidechain
35	BA	1385	G	Sidechain
35	BA	1387	G	Sidechain
35	BA	1388	C	Sidechain
35	BA	1392	G	Sidechain
35	BA	1393	U	Sidechain
35	BA	1394	A	Sidechain
35	BA	1397	C	Sidechain
35	BA	1398	A	Sidechain
35	BA	14	U	Sidechain
35	BA	140	U	Sidechain
35	BA	1400	C	Sidechain
35	BA	1403	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1404	C	Sidechain
35	BA	1409	C	Sidechain
35	BA	1410	A	Sidechain
35	BA	1413	A	Sidechain
35	BA	1414	U	Sidechain
35	BA	1415	G	Sidechain
35	BA	1416	G	Sidechain
35	BA	1417	G	Sidechain
35	BA	1419	G	Sidechain
35	BA	142	G	Sidechain
35	BA	1421	G	Sidechain
35	BA	1422	G	Sidechain
35	BA	1424	U	Sidechain
35	BA	1425	U	Sidechain
35	BA	1426	G	Sidechain
35	BA	1427	C	Sidechain
35	BA	1428	A	Sidechain
35	BA	143	A	Sidechain
35	BA	1430	A	Sidechain
35	BA	1431	A	Sidechain
35	BA	1432	G	Sidechain
35	BA	1435	G	Sidechain
35	BA	1436	U	Sidechain
35	BA	144	G	Sidechain
35	BA	1440	U	Sidechain
35	BA	1441	A	Sidechain
35	BA	1443	C	Sidechain
35	BA	1444	U	Sidechain
35	BA	1445	U	Sidechain
35	BA	1446	A	Sidechain
35	BA	1447	A	Sidechain
35	BA	1448	C	Sidechain
35	BA	1449	C	Sidechain
35	BA	1451	U	Sidechain
35	BA	1454	G	Sidechain
35	BA	1455	G	Sidechain
35	BA	1457	G	Sidechain
35	BA	146	G	Sidechain
35	BA	1460	C	Sidechain
35	BA	1463	U	Sidechain
35	BA	1464	U	Sidechain
35	BA	1467	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1469	C	Sidechain
35	BA	147	G	Sidechain
35	BA	1470	U	Sidechain
35	BA	1471	U	Sidechain
35	BA	1473	G	Sidechain
35	BA	1474	U	Sidechain
35	BA	1476	A	Sidechain
35	BA	1477	U	Sidechain
35	BA	1478	U	Sidechain
35	BA	1479	C	Sidechain
35	BA	1480	A	Sidechain
35	BA	1482	G	Sidechain
35	BA	1483	A	Sidechain
35	BA	1485	U	Sidechain
35	BA	1486	G	Sidechain
35	BA	1488	G	Sidechain
35	BA	1489	G	Sidechain
35	BA	1491	G	Sidechain
35	BA	1492	A	Sidechain
35	BA	1494	G	Sidechain
35	BA	15	G	Sidechain
35	BA	1503	A	Sidechain
35	BA	1504	G	Sidechain
35	BA	1506	U	Sidechain
35	BA	1507	A	Sidechain
35	BA	1509	C	Sidechain
35	BA	151	A	Sidechain
35	BA	1511	G	Sidechain
35	BA	1512	U	Sidechain
35	BA	1513	A	Sidechain
35	BA	1514	G	Sidechain
35	BA	1515	G	Sidechain
35	BA	1517	G	Sidechain
35	BA	152	A	Sidechain
35	BA	1525	G	Sidechain
35	BA	1527	U	Sidechain
35	BA	1528	U	Sidechain
35	BA	1529	G	Sidechain
35	BA	1530	G	Sidechain
35	BA	1533	C	Sidechain
35	BA	1534	A	Sidechain
35	BA	1536	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1537	U	Sidechain
35	BA	1538	C	Sidechain
35	BA	1541	U	Sidechain
35	BA	1542	A	Sidechain
35	BA	155	A	Sidechain
35	BA	156	C	Sidechain
35	BA	157	U	Sidechain
35	BA	158	G	Sidechain
35	BA	162	A	Sidechain
35	BA	163	C	Sidechain
35	BA	164	G	Sidechain
35	BA	165	G	Sidechain
35	BA	166	U	Sidechain
35	BA	168	G	Sidechain
35	BA	169	C	Sidechain
35	BA	17	U	Sidechain
35	BA	170	U	Sidechain
35	BA	171	A	Sidechain
35	BA	172	A	Sidechain
35	BA	173	U	Sidechain
35	BA	174	A	Sidechain
35	BA	178	C	Sidechain
35	BA	179	A	Sidechain
35	BA	180	U	Sidechain
35	BA	181	A	Sidechain
35	BA	183	C	Sidechain
35	BA	184	G	Sidechain
35	BA	187	G	Sidechain
35	BA	188	C	Sidechain
35	BA	191	G	Sidechain
35	BA	192	A	Sidechain
35	BA	195	A	Sidechain
35	BA	196	A	Sidechain
35	BA	199	A	Sidechain
35	BA	2	A	Sidechain
35	BA	200	G	Sidechain
35	BA	201	G	Sidechain
35	BA	202	G	Sidechain
35	BA	203	G	Sidechain
35	BA	204	G	Sidechain
35	BA	205	A	Sidechain
35	BA	206	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	208	U	Sidechain
35	BA	209	U	Sidechain
35	BA	21	G	Sidechain
35	BA	212	G	Sidechain
35	BA	213	G	Sidechain
35	BA	214	C	Sidechain
35	BA	220	G	Sidechain
35	BA	222	C	Sidechain
35	BA	225	C	Sidechain
35	BA	228	A	Sidechain
35	BA	229	U	Sidechain
35	BA	23	C	Sidechain
35	BA	230	G	Sidechain
35	BA	231	U	Sidechain
35	BA	232	G	Sidechain
35	BA	233	C	Sidechain
35	BA	234	C	Sidechain
35	BA	236	A	Sidechain
35	BA	237	G	Sidechain
35	BA	239	U	Sidechain
35	BA	24	U	Sidechain
35	BA	240	G	Sidechain
35	BA	241	G	Sidechain
35	BA	242	G	Sidechain
35	BA	247	G	Sidechain
35	BA	248	C	Sidechain
35	BA	249	U	Sidechain
35	BA	25	C	Sidechain
35	BA	250	A	Sidechain
35	BA	251	G	Sidechain
35	BA	252	U	Sidechain
35	BA	253	A	Sidechain
35	BA	254	G	Sidechain
35	BA	255	G	Sidechain
35	BA	256	U	Sidechain
35	BA	257	G	Sidechain
35	BA	258	G	Sidechain
35	BA	26	A	Sidechain
35	BA	261	U	Sidechain
35	BA	263	A	Sidechain
35	BA	268	U	Sidechain
35	BA	269	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	27	G	Sidechain
35	BA	272	C	Sidechain
35	BA	274	A	Sidechain
35	BA	275	G	Sidechain
35	BA	278	G	Sidechain
35	BA	28	A	Sidechain
35	BA	281	G	Sidechain
35	BA	283	U	Sidechain
35	BA	284	C	Sidechain
35	BA	285	C	Sidechain
35	BA	287	U	Sidechain
35	BA	29	U	Sidechain
35	BA	290	C	Sidechain
35	BA	291	U	Sidechain
35	BA	293	G	Sidechain
35	BA	294	U	Sidechain
35	BA	297	G	Sidechain
35	BA	298	A	Sidechain
35	BA	299	G	Sidechain
35	BA	3	A	Sidechain
35	BA	30	U	Sidechain
35	BA	303	A	Sidechain
35	BA	31	G	Sidechain
35	BA	311	C	Sidechain
35	BA	315	A	Sidechain
35	BA	322	C	Sidechain
35	BA	323	U	Sidechain
35	BA	325	A	Sidechain
35	BA	328	C	Sidechain
35	BA	33	A	Sidechain
35	BA	330	C	Sidechain
35	BA	331	G	Sidechain
35	BA	332	G	Sidechain
35	BA	335	C	Sidechain
35	BA	337	G	Sidechain
35	BA	342	C	Sidechain
35	BA	343	U	Sidechain
35	BA	347	G	Sidechain
35	BA	348	G	Sidechain
35	BA	35	G	Sidechain
35	BA	351	G	Sidechain
35	BA	354	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	355	C	Sidechain
35	BA	356	A	Sidechain
35	BA	358	U	Sidechain
35	BA	359	G	Sidechain
35	BA	36	C	Sidechain
35	BA	360	G	Sidechain
35	BA	362	G	Sidechain
35	BA	364	A	Sidechain
35	BA	365	U	Sidechain
35	BA	366	A	Sidechain
35	BA	367	U	Sidechain
35	BA	368	U	Sidechain
35	BA	369	G	Sidechain
35	BA	37	U	Sidechain
35	BA	372	C	Sidechain
35	BA	374	A	Sidechain
35	BA	377	G	Sidechain
35	BA	379	C	Sidechain
35	BA	38	G	Sidechain
35	BA	380	G	Sidechain
35	BA	381	C	Sidechain
35	BA	384	G	Sidechain
35	BA	385	C	Sidechain
35	BA	386	C	Sidechain
35	BA	388	G	Sidechain
35	BA	389	A	Sidechain
35	BA	391	G	Sidechain
35	BA	392	C	Sidechain
35	BA	393	A	Sidechain
35	BA	394	G	Sidechain
35	BA	398	U	Sidechain
35	BA	399	G	Sidechain
35	BA	402	G	Sidechain
35	BA	403	C	Sidechain
35	BA	405	U	Sidechain
35	BA	406	G	Sidechain
35	BA	408	A	Sidechain
35	BA	409	U	Sidechain
35	BA	410	G	Sidechain
35	BA	411	A	Sidechain
35	BA	412	A	Sidechain
35	BA	413	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	416	G	Sidechain
35	BA	417	G	Sidechain
35	BA	418	C	Sidechain
35	BA	42	G	Sidechain
35	BA	420	U	Sidechain
35	BA	423	G	Sidechain
35	BA	426	U	Sidechain
35	BA	428	G	Sidechain
35	BA	431	A	Sidechain
35	BA	434	U	Sidechain
35	BA	435	A	Sidechain
35	BA	437	U	Sidechain
35	BA	438	U	Sidechain
35	BA	439	U	Sidechain
35	BA	44	A	Sidechain
35	BA	441	A	Sidechain
35	BA	442	G	Sidechain
35	BA	443	C	Sidechain
35	BA	444	G	Sidechain
35	BA	445	G	Sidechain
35	BA	446	G	Sidechain
35	BA	447	G	Sidechain
35	BA	448	A	Sidechain
35	BA	449	G	Sidechain
35	BA	450	G	Sidechain
35	BA	451	A	Sidechain
35	BA	452	A	Sidechain
35	BA	457	G	Sidechain
35	BA	458	U	Sidechain
35	BA	459	A	Sidechain
35	BA	460	A	Sidechain
35	BA	461	A	Sidechain
35	BA	463	U	Sidechain
35	BA	464	U	Sidechain
35	BA	465	A	Sidechain
35	BA	469	C	Sidechain
35	BA	47	C	Sidechain
35	BA	470	C	Sidechain
35	BA	471	U	Sidechain
35	BA	472	U	Sidechain
35	BA	474	G	Sidechain
35	BA	475	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	477	C	Sidechain
35	BA	478	A	Sidechain
35	BA	482	A	Sidechain
35	BA	484	G	Sidechain
35	BA	488	C	Sidechain
35	BA	491	G	Sidechain
35	BA	493	A	Sidechain
35	BA	494	G	Sidechain
35	BA	495	A	Sidechain
35	BA	496	A	Sidechain
35	BA	497	G	Sidechain
35	BA	498	A	Sidechain
35	BA	499	A	Sidechain
35	BA	500	G	Sidechain
35	BA	501	C	Sidechain
35	BA	504	C	Sidechain
35	BA	505	G	Sidechain
35	BA	506	G	Sidechain
35	BA	509	A	Sidechain
35	BA	51	A	Sidechain
35	BA	510	A	Sidechain
35	BA	511	C	Sidechain
35	BA	515	G	Sidechain
35	BA	517	G	Sidechain
35	BA	519	C	Sidechain
35	BA	522	C	Sidechain
35	BA	523	A	Sidechain
35	BA	524	G	Sidechain
35	BA	525	C	Sidechain
35	BA	529	G	Sidechain
35	BA	53	A	Sidechain
35	BA	530	G	Sidechain
35	BA	533	A	Sidechain
35	BA	534	U	Sidechain
35	BA	535	A	Sidechain
35	BA	536	C	Sidechain
35	BA	539	A	Sidechain
35	BA	54	C	Sidechain
35	BA	541	G	Sidechain
35	BA	542	G	Sidechain
35	BA	545	C	Sidechain
35	BA	546	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	55	A	Sidechain
35	BA	550	G	Sidechain
35	BA	551	U	Sidechain
35	BA	552	U	Sidechain
35	BA	554	A	Sidechain
35	BA	556	C	Sidechain
35	BA	557	G	Sidechain
35	BA	558	G	Sidechain
35	BA	559	A	Sidechain
35	BA	560	A	Sidechain
35	BA	561	U	Sidechain
35	BA	562	U	Sidechain
35	BA	563	A	Sidechain
35	BA	564	C	Sidechain
35	BA	566	G	Sidechain
35	BA	567	G	Sidechain
35	BA	568	G	Sidechain
35	BA	57	G	Sidechain
35	BA	571	U	Sidechain
35	BA	572	A	Sidechain
35	BA	574	A	Sidechain
35	BA	575	G	Sidechain
35	BA	576	C	Sidechain
35	BA	577	G	Sidechain
35	BA	578	C	Sidechain
35	BA	579	A	Sidechain
35	BA	58	C	Sidechain
35	BA	582	C	Sidechain
35	BA	584	G	Sidechain
35	BA	587	G	Sidechain
35	BA	588	G	Sidechain
35	BA	589	U	Sidechain
35	BA	590	U	Sidechain
35	BA	592	G	Sidechain
35	BA	593	U	Sidechain
35	BA	594	U	Sidechain
35	BA	595	A	Sidechain
35	BA	599	C	Sidechain
35	BA	60	A	Sidechain
35	BA	601	G	Sidechain
35	BA	602	A	Sidechain
35	BA	603	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	604	G	Sidechain
35	BA	606	G	Sidechain
35	BA	607	A	Sidechain
35	BA	61	G	Sidechain
35	BA	610	U	Sidechain
35	BA	614	C	Sidechain
35	BA	616	G	Sidechain
35	BA	618	C	Sidechain
35	BA	619	U	Sidechain
35	BA	620	C	Sidechain
35	BA	621	A	Sidechain
35	BA	622	A	Sidechain
35	BA	623	C	Sidechain
35	BA	625	U	Sidechain
35	BA	627	G	Sidechain
35	BA	628	G	Sidechain
35	BA	629	A	Sidechain
35	BA	63	C	Sidechain
35	BA	630	A	Sidechain
35	BA	633	G	Sidechain
35	BA	635	A	Sidechain
35	BA	637	C	Sidechain
35	BA	639	G	Sidechain
35	BA	64	G	Sidechain
35	BA	641	U	Sidechain
35	BA	642	A	Sidechain
35	BA	643	C	Sidechain
35	BA	644	U	Sidechain
35	BA	645	G	Sidechain
35	BA	646	G	Sidechain
35	BA	648	A	Sidechain
35	BA	649	A	Sidechain
35	BA	650	G	Sidechain
35	BA	655	A	Sidechain
35	BA	656	G	Sidechain
35	BA	657	U	Sidechain
35	BA	661	G	Sidechain
35	BA	662	U	Sidechain
35	BA	667	G	Sidechain
35	BA	670	G	Sidechain
35	BA	673	A	Sidechain
35	BA	674	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	675	A	Sidechain
35	BA	676	A	Sidechain
35	BA	677	U	Sidechain
35	BA	678	U	Sidechain
35	BA	679	C	Sidechain
35	BA	680	C	Sidechain
35	BA	681	A	Sidechain
35	BA	682	G	Sidechain
35	BA	683	G	Sidechain
35	BA	684	U	Sidechain
35	BA	686	U	Sidechain
35	BA	687	A	Sidechain
35	BA	688	G	Sidechain
35	BA	689	C	Sidechain
35	BA	690	G	Sidechain
35	BA	691	G	Sidechain
35	BA	692	U	Sidechain
35	BA	693	G	Sidechain
35	BA	695	A	Sidechain
35	BA	697	U	Sidechain
35	BA	7	A	Sidechain
35	BA	70	U	Sidechain
35	BA	700	G	Sidechain
35	BA	702	A	Sidechain
35	BA	703	G	Sidechain
35	BA	705	G	Sidechain
35	BA	711	G	Sidechain
35	BA	713	G	Sidechain
35	BA	714	G	Sidechain
35	BA	715	A	Sidechain
35	BA	72	A	Sidechain
35	BA	720	C	Sidechain
35	BA	721	G	Sidechain
35	BA	722	G	Sidechain
35	BA	723	U	Sidechain
35	BA	724	G	Sidechain
35	BA	727	G	Sidechain
35	BA	728	A	Sidechain
35	BA	731	G	Sidechain
35	BA	732	C	Sidechain
35	BA	733	G	Sidechain
35	BA	734	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	735	C	Sidechain
35	BA	736	C	Sidechain
35	BA	737	C	Sidechain
35	BA	738	C	Sidechain
35	BA	74	A	Sidechain
35	BA	740	U	Sidechain
35	BA	742	G	Sidechain
35	BA	744	C	Sidechain
35	BA	745	G	Sidechain
35	BA	748	G	Sidechain
35	BA	749	A	Sidechain
35	BA	750	C	Sidechain
35	BA	751	U	Sidechain
35	BA	754	C	Sidechain
35	BA	755	G	Sidechain
35	BA	761	G	Sidechain
35	BA	762	U	Sidechain
35	BA	764	C	Sidechain
35	BA	765	G	Sidechain
35	BA	768	A	Sidechain
35	BA	77	A	Sidechain
35	BA	772	U	Sidechain
35	BA	775	G	Sidechain
35	BA	776	G	Sidechain
35	BA	778	G	Sidechain
35	BA	779	C	Sidechain
35	BA	78	A	Sidechain
35	BA	781	A	Sidechain
35	BA	782	A	Sidechain
35	BA	783	C	Sidechain
35	BA	785	G	Sidechain
35	BA	787	A	Sidechain
35	BA	788	U	Sidechain
35	BA	790	A	Sidechain
35	BA	791	G	Sidechain
35	BA	794	A	Sidechain
35	BA	796	C	Sidechain
35	BA	797	C	Sidechain
35	BA	798	U	Sidechain
35	BA	8	A	Sidechain
35	BA	80	A	Sidechain
35	BA	800	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	802	A	Sidechain
35	BA	803	G	Sidechain
35	BA	806	C	Sidechain
35	BA	809	G	Sidechain
35	BA	810	C	Sidechain
35	BA	812	G	Sidechain
35	BA	814	A	Sidechain
35	BA	815	A	Sidechain
35	BA	816	A	Sidechain
35	BA	817	C	Sidechain
35	BA	82	G	Sidechain
35	BA	820	U	Sidechain
35	BA	821	G	Sidechain
35	BA	822	U	Sidechain
35	BA	823	C	Sidechain
35	BA	824	G	Sidechain
35	BA	827	U	Sidechain
35	BA	829	G	Sidechain
35	BA	83	C	Sidechain
35	BA	830	G	Sidechain
35	BA	831	A	Sidechain
35	BA	832	G	Sidechain
35	BA	833	G	Sidechain
35	BA	836	G	Sidechain
35	BA	837	U	Sidechain
35	BA	838	G	Sidechain
35	BA	839	C	Sidechain
35	BA	84	U	Sidechain
35	BA	841	C	Sidechain
35	BA	844	G	Sidechain
35	BA	845	A	Sidechain
35	BA	847	G	Sidechain
35	BA	849	G	Sidechain
35	BA	850	U	Sidechain
35	BA	852	G	Sidechain
35	BA	853	C	Sidechain
35	BA	854	U	Sidechain
35	BA	856	C	Sidechain
35	BA	857	C	Sidechain
35	BA	86	G	Sidechain
35	BA	860	A	Sidechain
35	BA	862	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	864	A	Sidechain
35	BA	865	A	Sidechain
35	BA	867	G	Sidechain
35	BA	868	C	Sidechain
35	BA	869	G	Sidechain
35	BA	87	C	Sidechain
35	BA	871	U	Sidechain
35	BA	872	A	Sidechain
35	BA	873	A	Sidechain
35	BA	874	G	Sidechain
35	BA	875	U	Sidechain
35	BA	878	A	Sidechain
35	BA	879	C	Sidechain
35	BA	88	U	Sidechain
35	BA	880	C	Sidechain
35	BA	881	G	Sidechain
35	BA	882	C	Sidechain
35	BA	884	U	Sidechain
35	BA	885	G	Sidechain
35	BA	886	G	Sidechain
35	BA	887	G	Sidechain
35	BA	888	G	Sidechain
35	BA	889	A	Sidechain
35	BA	89	U	Sidechain
35	BA	890	G	Sidechain
35	BA	892	A	Sidechain
35	BA	893	C	Sidechain
35	BA	894	G	Sidechain
35	BA	898	G	Sidechain
35	BA	899	C	Sidechain
35	BA	900	A	Sidechain
35	BA	901	A	Sidechain
35	BA	902	G	Sidechain
35	BA	903	G	Sidechain
35	BA	905	U	Sidechain
35	BA	906	A	Sidechain
35	BA	907	A	Sidechain
35	BA	909	A	Sidechain
35	BA	91	U	Sidechain
35	BA	910	C	Sidechain
35	BA	914	A	Sidechain
35	BA	916	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	919	A	Sidechain
35	BA	921	U	Sidechain
35	BA	922	G	Sidechain
35	BA	924	C	Sidechain
35	BA	925	G	Sidechain
35	BA	926	G	Sidechain
35	BA	927	G	Sidechain
35	BA	928	G	Sidechain
35	BA	93	U	Sidechain
35	BA	930	C	Sidechain
35	BA	932	C	Sidechain
35	BA	937	A	Sidechain
35	BA	938	A	Sidechain
35	BA	939	G	Sidechain
35	BA	94	G	Sidechain
35	BA	942	G	Sidechain
35	BA	943	U	Sidechain
35	BA	944	G	Sidechain
35	BA	945	G	Sidechain
35	BA	946	A	Sidechain
35	BA	949	A	Sidechain
35	BA	95	C	Sidechain
35	BA	950	U	Sidechain
35	BA	951	G	Sidechain
35	BA	953	G	Sidechain
35	BA	955	U	Sidechain
35	BA	956	U	Sidechain
35	BA	957	U	Sidechain
35	BA	960	U	Sidechain
35	BA	963	G	Sidechain
35	BA	968	A	Sidechain
35	BA	969	A	Sidechain
35	BA	972	C	Sidechain
35	BA	973	G	Sidechain
35	BA	974	A	Sidechain
35	BA	975	A	Sidechain
35	BA	976	G	Sidechain
35	BA	977	A	Sidechain
35	BA	978	A	Sidechain
35	BA	979	C	Sidechain
35	BA	980	C	Sidechain
35	BA	982	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	983	A	Sidechain
35	BA	984	C	Sidechain
35	BA	985	C	Sidechain
35	BA	988	G	Sidechain
35	BA	989	U	Sidechain
35	BA	99	C	Sidechain
35	BA	990	C	Sidechain
35	BA	991	U	Sidechain
35	BA	992	U	Sidechain
35	BA	993	G	Sidechain
35	BA	994	A	Sidechain
35	BA	995	C	Sidechain
35	BA	998	C	Sidechain
36	BB	1	A	Sidechain
36	BB	10	G	Sidechain
36	BB	12	U	Sidechain
36	BB	18	G	Sidechain
36	BB	2	G	Sidechain
36	BB	21	A	Sidechain
36	BB	22	G	Sidechain
36	BB	23	A	Sidechain
36	BB	26	A	Sidechain
36	BB	29	G	Sidechain
36	BB	3	G	Sidechain
36	BB	31	U	Sidechain
36	BB	33	U	Sidechain
36	BB	35	C	Sidechain
36	BB	38	A	Sidechain
36	BB	39	A	Sidechain
36	BB	40	C	Sidechain
36	BB	41	C	Sidechain
36	BB	43	G	Sidechain
36	BB	45	U	Sidechain
36	BB	47	U	Sidechain
36	BB	49	G	Sidechain
36	BB	50	G	Sidechain
36	BB	51	G	Sidechain
36	BB	52	A	Sidechain
36	BB	53	G	Sidechain
36	BB	56	C	Sidechain
36	BB	57	G	Sidechain
36	BB	58	A	Sidechain

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Mol	Chain	Res	Type	Group
36	BB	59	G	Sidechain
36	BB	60	U	Sidechain
36	BB	61	C	Sidechain
36	BB	62	U	Sidechain
36	BB	67	G	Sidechain
36	BB	70	C	Sidechain
36	BB	72	U	Sidechain
36	BB	73	G	Sidechain
37	BC	16	A	Sidechain
37	BC	17	U	Sidechain
37	BC	18	A	Sidechain
37	BC	20	G	Sidechain
37	BC	21	U	Sidechain
37	BC	22	G	Sidechain
37	BC	23	C	Sidechain
37	BC	27	A	Sidechain
37	BC	28	U	Sidechain
37	BC	30	U	Sidechain
37	BC	31	U	Sidechain
37	BC	33	A	Sidechain
37	BC	34	U	Sidechain
37	BC	35	G	Sidechain
37	BC	38	G	Sidechain
37	BC	39	U	Sidechain
37	BC	40	G	Sidechain
37	BC	41	A	Sidechain
37	BC	42	U	Sidechain
37	BC	47	C	Sidechain
37	BC	48	C	Sidechain
37	BC	50	U	Sidechain
37	BC	52	U	Sidechain
37	BC	53	G	Sidechain
37	BC	54	U	Sidechain
37	BC	56	G	Sidechain
37	BC	57	C	Sidechain
37	BC	59	A	Sidechain
38	BD	1	C	Sidechain
38	BD	11	A	Sidechain
38	BD	12	G	Sidechain
38	BD	14	A	Sidechain
38	BD	15	G	Sidechain
38	BD	17	C	Sidechain

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Mol	Chain	Res	Type	Group
38	BD	18	U	Sidechain
38	BD	19	G	Sidechain
38	BD	20	G	Sidechain
38	BD	23	G	Sidechain
38	BD	25	U	Sidechain
38	BD	26	C	Sidechain
38	BD	27	G	Sidechain
38	BD	30	G	Sidechain
38	BD	31	G	Sidechain
38	BD	34	U	Sidechain
38	BD	35	C	Sidechain
38	BD	38	A	Sidechain
38	BD	39	A	Sidechain
38	BD	4	G	Sidechain
38	BD	40	C	Sidechain
38	BD	41	C	Sidechain
38	BD	42	C	Sidechain
38	BD	44	A	Sidechain
38	BD	46	G	Sidechain
38	BD	47	A	Sidechain
38	BD	48	U	Sidechain
38	BD	5	G	Sidechain
38	BD	50	G	Sidechain
38	BD	53	G	Sidechain
38	BD	54	G	Sidechain
38	BD	57	C	Sidechain
38	BD	58	A	Sidechain
38	BD	60	A	Sidechain
38	BD	63	C	Sidechain
38	BD	64	G	Sidechain
38	BD	67	C	Sidechain
38	BD	68	C	Sidechain
38	BD	70	C	Sidechain
38	BD	71	G	Sidechain
38	BD	72	C	Sidechain
38	BD	73	A	Sidechain
38	BD	74	A	Sidechain
38	BD	75	C	Sidechain
38	BD	9	G	Sidechain
39	BE	112	ARG	Sidechain
39	BE	197	PHE	Sidechain
39	BE	198	VAL	Peptide

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Mol	Chain	Res	Type	Group
39	BE	34	ARG	Sidechain
40	BF	135	ARG	Sidechain
40	BF	167	TYR	Sidechain
40	BF	17	TRP	Mainchain
40	BF	179	ALA	Peptide
40	BF	28	PHE	Sidechain
40	BF	39	ARG	Sidechain
40	BF	53	ARG	Sidechain
41	BG	12	ARG	Sidechain
41	BG	93	LEU	Mainchain
42	BH	137	ARG	Sidechain
42	BH	6	GLN	Peptide
42	BH	82	HIS	Sidechain
43	BI	111	GLU	Peptide
43	BI	25	TYR	Sidechain
43	BI	4	TYR	Sidechain
43	BI	64	VAL	Peptide
43	BI	94	HIS	Sidechain
44	BJ	118	ARG	Sidechain
44	BJ	153	TYR	Sidechain
44	BJ	176	TYR	Mainchain
44	BJ	69	ARG	Sidechain
44	BJ	78	ARG	Sidechain
44	BJ	94	ARG	Sidechain
45	BK	100	ILE	Peptide
45	BK	44	PHE	Peptide
45	BK	70	VAL	Mainchain
45	BK	79	ARG	Peptide
46	BL	102	PHE	Peptide
46	BL	126	PHE	Peptide
46	BL	6	TYR	Sidechain
46	BL	94	ARG	Sidechain
47	BM	62	ARG	Sidechain
47	BM	68	ARG	Sidechain
48	BN	104	PHE	Sidechain
48	BN	68	ARG	Sidechain
48	BN	76	TYR	Sidechain
49	BO	10	PRO	Mainchain
49	BO	113	ARG	Sidechain
49	BO	120	ARG	Sidechain
49	BO	30	ARG	Sidechain
49	BO	37	TYR	Peptide

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Mol	Chain	Res	Type	Group
49	BO	41	PRO	Peptide
49	BO	52	CYS	Peptide
49	BO	55	ARG	Sidechain
50	BP	40	GLU	Mainchain
50	BP	89	ARG	Sidechain
51	BQ	14	ALA	Mainchain
51	BQ	23	ARG	Sidechain
51	BQ	69	PRO	Mainchain
52	BR	83	ARG	Sidechain
53	BS	31	ARG	Sidechain
53	BS	32	PHE	Sidechain
53	BS	51	ARG	Sidechain
53	BS	77	GLU	Mainchain
54	BT	5	ARG	Sidechain
55	BU	10	CYS	Peptide
55	BU	3	TYR	Sidechain
55	BU	31	TYR	Sidechain
55	BU	4	PHE	Sidechain
55	BU	69	TYR	Peptide
56	BV	5	LYS	Peptide
56	BV	79	TYR	Sidechain
56	BV	82	HIS	Peptide,Mainchain
57	BW	24	ARG	Sidechain
57	BW	35	TYR	Sidechain
58	BX	37	TYR	Sidechain
58	BX	68	ARG	Sidechain
58	BX	69	LEU	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	2566	0	1294	0	0
2	AB	62351	0	31238	0	0
3	AC	1733	0	1824	0	0
4	AD	2092	0	2170	0	0
5	AE	1565	0	1616	0	0
6	AF	1552	0	1619	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	AG	1420	0	1460	0	0
8	AH	1323	0	1374	0	0
9	AI	1111	0	1148	0	0
10	AJ	1233	0	1283	0	0
11	AK	1032	0	1088	0	0
12	AL	1129	0	1162	0	0
13	AM	947	0	1023	0	0
14	AN	1053	0	1129	0	0
15	AO	1074	0	1157	0	0
16	AP	1008	0	1045	0	0
17	AQ	900	0	935	0	0
18	AR	917	0	965	0	0
19	AS	947	0	1022	0	0
20	AT	816	0	839	0	0
21	AU	857	0	922	0	0
22	AV	787	0	846	0	0
23	AW	789	0	847	0	0
24	AX	753	0	780	0	0
25	AY	634	0	656	0	0
26	AZ	625	0	655	0	0
27	A0	509	0	543	0	0
28	A1	449	0	491	0	0
29	A2	549	0	552	0	0
30	A3	444	0	461	0	0
31	A4	441	0	485	0	0
32	A5	377	0	418	0	0
33	A6	504	0	574	0	0
34	A7	302	0	343	0	0
35	BA	33089	0	16604	0	0
36	BB	1627	0	845	0	0
37	BC	993	0	499	0	0
38	BD	1641	0	841	0	0
39	BE	1872	0	1885	0	0
40	BF	1822	0	1913	0	0
41	BG	1643	0	1710	0	0
42	BH	1225	0	1273	0	0
43	BI	1101	0	1050	0	0
44	BJ	1400	0	1449	0	0
45	BK	979	0	1034	0	0
46	BL	1036	0	1084	0	0
47	BM	825	0	865	0	0
48	BN	965	0	997	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
49	BO	955	0	1019	0	0
50	BP	910	0	981	0	0
51	BQ	805	0	847	0	0
52	BR	716	0	742	0	0
53	BS	649	0	666	0	0
54	BT	672	0	716	0	0
55	BU	626	0	651	0	0
56	BV	727	0	769	0	0
57	BW	670	0	722	0	0
58	BX	590	0	631	0	0
59	AB	10	0	10	0	0
60	BB	14	0	9	0	0
All	All	152351	0	103776	0	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). Clashscore could not be calculated for this entry.

There are no clashes within the asymmetric unit.

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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
3	AC	232/234 (99%)	214 (92%)	12 (5%)	6 (3%)	4 25
4	AD	270/272 (99%)	237 (88%)	24 (9%)	9 (3%)	3 21
5	AE	207/209 (99%)	171 (83%)	28 (14%)	8 (4%)	2 19
6	AF	199/201 (99%)	172 (86%)	18 (9%)	9 (4%)	2 17
7	AG	176/178 (99%)	151 (86%)	16 (9%)	9 (5%)	1 15
8	AH	174/176 (99%)	158 (91%)	13 (8%)	3 (2%)	7 36
9	AI	147/149 (99%)	131 (89%)	10 (7%)	6 (4%)	2 18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	AJ	162/164 (99%)	156 (96%)	5 (3%)	1 (1%)	21	59
11	AK	139/141 (99%)	135 (97%)	4 (3%)	0	100	100
12	AL	140/142 (99%)	119 (85%)	16 (11%)	5 (4%)	2	20
13	AM	121/123 (98%)	107 (88%)	9 (7%)	5 (4%)	2	18
14	AN	142/144 (99%)	127 (89%)	12 (8%)	3 (2%)	5	30
15	AO	134/136 (98%)	123 (92%)	8 (6%)	3 (2%)	5	29
16	AP	125/127 (98%)	114 (91%)	10 (8%)	1 (1%)	16	54
17	AQ	115/117 (98%)	110 (96%)	5 (4%)	0	100	100
18	AR	112/114 (98%)	97 (87%)	13 (12%)	2 (2%)	6	34
19	AS	115/117 (98%)	107 (93%)	4 (4%)	4 (4%)	3	20
20	AT	101/103 (98%)	91 (90%)	8 (8%)	2 (2%)	6	31
21	AU	108/110 (98%)	100 (93%)	5 (5%)	3 (3%)	4	24
22	AV	98/100 (98%)	75 (76%)	20 (20%)	3 (3%)	3	22
23	AW	101/103 (98%)	89 (88%)	10 (10%)	2 (2%)	6	31
24	AX	92/94 (98%)	87 (95%)	4 (4%)	1 (1%)	11	46
25	AY	82/84 (98%)	63 (77%)	17 (21%)	2 (2%)	4	27
26	AZ	75/77 (97%)	66 (88%)	7 (9%)	2 (3%)	4	25
27	A0	61/63 (97%)	56 (92%)	4 (7%)	1 (2%)	7	38
28	A1	56/58 (97%)	54 (96%)	2 (4%)	0	100	100
29	A2	68/70 (97%)	64 (94%)	3 (4%)	1 (2%)	8	40
30	A3	54/56 (96%)	47 (87%)	4 (7%)	3 (6%)	1	14
31	A4	52/54 (96%)	49 (94%)	1 (2%)	2 (4%)	2	19
32	A5	44/46 (96%)	39 (89%)	3 (7%)	2 (4%)	2	17
33	A6	62/64 (97%)	59 (95%)	2 (3%)	1 (2%)	7	38
34	A7	36/38 (95%)	29 (81%)	5 (14%)	2 (6%)	1	14
39	BE	238/240 (99%)	220 (92%)	12 (5%)	6 (2%)	4	26
40	BF	230/232 (99%)	217 (94%)	8 (4%)	5 (2%)	5	29
41	BG	203/205 (99%)	189 (93%)	11 (5%)	3 (2%)	8	40
42	BH	164/166 (99%)	149 (91%)	13 (8%)	2 (1%)	10	44
43	BI	133/135 (98%)	123 (92%)	9 (7%)	1 (1%)	16	54
44	BJ	176/178 (99%)	164 (93%)	9 (5%)	3 (2%)	7	36

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
45	BK	127/129 (98%)	119 (94%)	7 (6%)	1 (1%)	16	54
46	BL	127/129 (98%)	115 (91%)	9 (7%)	3 (2%)	4	27
47	BM	101/103 (98%)	90 (89%)	6 (6%)	5 (5%)	1	16
48	BN	126/128 (98%)	112 (89%)	11 (9%)	3 (2%)	4	27
49	BO	121/123 (98%)	107 (88%)	12 (10%)	2 (2%)	7	36
50	BP	115/117 (98%)	110 (96%)	3 (3%)	2 (2%)	7	36
51	BQ	98/100 (98%)	84 (86%)	9 (9%)	5 (5%)	1	15
52	BR	86/88 (98%)	81 (94%)	4 (5%)	1 (1%)	10	44
53	BS	80/82 (98%)	77 (96%)	3 (4%)	0	100	100
54	BT	81/83 (98%)	72 (89%)	8 (10%)	1 (1%)	10	44
55	BU	72/74 (97%)	62 (86%)	7 (10%)	3 (4%)	2	17
56	BV	89/91 (98%)	82 (92%)	6 (7%)	1 (1%)	11	46
57	BW	84/86 (98%)	79 (94%)	4 (5%)	1 (1%)	10	44
58	BX	68/70 (97%)	61 (90%)	4 (6%)	3 (4%)	2	17
All	All	6319/6423 (98%)	5710 (90%)	457 (7%)	152 (2%)	7	27

All (152) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	AC	217	THR
4	AD	94	LEU
6	AF	62	GLN
6	AF	188	MET
7	AG	136	ILE
9	AI	3	VAL
18	AR	25	VAL
19	AS	88	GLU
21	AU	41	LYS
21	AU	65	ASP
22	AV	39	THR
22	AV	86	THR
23	AW	97	SER
34	A7	6	SER
41	BG	47	LEU
42	BH	77	ASN
47	BM	57	VAL
47	BM	62	ARG

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Mol	Chain	Res	Type
48	BN	52	ARG
51	BQ	2	LYS
55	BU	11	ARG
4	AD	35	LYS
4	AD	64	VAL
4	AD	140	VAL
4	AD	142	ASN
6	AF	79	ARG
7	AG	148	VAL
9	AI	113	SER
12	AL	14	ASP
12	AL	81	ILE
13	AM	71	ARG
14	AN	19	LEU
16	AP	107	ASN
19	AS	87	VAL
21	AU	89	ALA
22	AV	9	LYS
23	AW	74	ALA
26	AZ	18	SER
29	A2	43	PHE
31	A4	35	LEU
31	A4	52	LYS
39	BE	22	TRP
40	BF	14	VAL
40	BF	163	ARG
47	BM	42	LEU
47	BM	74	VAL
51	BQ	61	ASN
51	BQ	70	HIS
58	BX	3	ILE
3	AC	159	GLY
4	AD	37	SER
5	AE	119	ALA
5	AE	162	ALA
5	AE	173	GLN
6	AF	44	ARG
6	AF	68	ALA
6	AF	78	TRP
6	AF	96	VAL
7	AG	132	ARG
9	AI	27	ARG

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Mol	Chain	Res	Type
9	AI	122	LEU
12	AL	13	ARG
13	AM	6	THR
14	AN	36	LYS
14	AN	117	THR
15	AO	36	VAL
19	AS	5	ARG
20	AT	91	GLN
24	AX	71	LYS
26	AZ	27	ARG
30	A3	2	VAL
34	A7	16	ILE
39	BE	17	HIS
40	BF	179	ALA
44	BJ	13	PRO
45	BK	80	PRO
46	BL	106	ASP
46	BL	122	ARG
46	BL	128	LYS
49	BO	23	LEU
51	BQ	32	ASP
52	BR	87	ARG
54	BT	81	ALA
55	BU	5	ARG
56	BV	11	ASP
58	BX	9	GLU
3	AC	55	SER
3	AC	206	GLY
4	AD	123	ILE
8	AH	61	TRP
10	AJ	33	THR
12	AL	65	THR
13	AM	17	ARG
13	AM	46	ALA
25	AY	36	ILE
25	AY	52	CYS
39	BE	94	ARG
39	BE	205	ALA
42	BH	26	GLY
44	BJ	2	ARG
44	BJ	84	TYR
48	BN	13	LYS

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Mol	Chain	Res	Type
48	BN	118	ASN
57	BW	67	HIS
58	BX	24	LYS
3	AC	73	VAL
4	AD	204	LEU
5	AE	109	VAL
5	AE	113	SER
5	AE	168	GLU
5	AE	170	VAL
6	AF	183	PHE
7	AG	66	ILE
7	AG	145	VAL
8	AH	9	VAL
8	AH	94	ARG
9	AI	93	SER
15	AO	43	ALA
19	AS	105	PHE
32	A5	7	PRO
40	BF	3	LYS
40	BF	145	ALA
41	BG	27	ILE
43	BI	54	LEU
47	BM	75	ASP
55	BU	18	GLN
6	AF	46	GLN
7	AG	103	ILE
12	AL	79	GLY
15	AO	106	ASP
20	AT	101	ILE
30	A3	48	TYR
50	BP	22	TYR
51	BQ	62	ARG
5	AE	152	PRO
39	BE	13	VAL
39	BE	123	GLY
41	BG	37	PRO
49	BO	43	LYS
7	AG	88	VAL
18	AR	32	VAL
50	BP	6	ILE
7	AG	84	ILE
4	AD	40	GLY

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Mol	Chain	Res	Type
7	AG	38	GLY
13	AM	93	GLN
27	A0	46	VAL
30	A3	54	ILE
32	A5	44	VAL
33	A6	31	ILE
3	AC	81	GLY
9	AI	13	GLY

5.3.2 Protein sidechains

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
3	AC	181/181 (100%)	176 (97%)	5 (3%)	38	60
4	AD	217/217 (100%)	211 (97%)	6 (3%)	38	60
5	AE	164/164 (100%)	150 (92%)	14 (8%)	10	29
6	AF	165/165 (100%)	157 (95%)	8 (5%)	23	44
7	AG	149/149 (100%)	135 (91%)	14 (9%)	8	26
8	AH	137/137 (100%)	128 (93%)	9 (7%)	15	37
9	AI	114/114 (100%)	109 (96%)	5 (4%)	25	47
10	AJ	122/122 (100%)	110 (90%)	12 (10%)	7	24
11	AK	109/109 (100%)	103 (94%)	6 (6%)	19	41
12	AL	116/116 (100%)	105 (90%)	11 (10%)	8	25
13	AM	104/104 (100%)	97 (93%)	7 (7%)	15	36
14	AN	103/103 (100%)	99 (96%)	4 (4%)	28	49
15	AO	109/109 (100%)	106 (97%)	3 (3%)	38	60
16	AP	103/103 (100%)	100 (97%)	3 (3%)	37	58
17	AQ	87/87 (100%)	84 (97%)	3 (3%)	32	54
18	AR	99/99 (100%)	92 (93%)	7 (7%)	13	35
19	AS	89/89 (100%)	88 (99%)	1 (1%)	65	76

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
20	AT	84/84 (100%)	80 (95%)	4 (5%)	23 44
21	AU	93/93 (100%)	88 (95%)	5 (5%)	20 41
22	AV	84/84 (100%)	77 (92%)	7 (8%)	10 30
23	AW	84/84 (100%)	81 (96%)	3 (4%)	31 52
24	AX	78/78 (100%)	74 (95%)	4 (5%)	21 42
25	AY	62/62 (100%)	59 (95%)	3 (5%)	23 44
26	AZ	67/67 (100%)	61 (91%)	6 (9%)	9 27
27	A0	55/55 (100%)	52 (94%)	3 (6%)	19 41
28	A1	48/48 (100%)	47 (98%)	1 (2%)	47 65
29	A2	62/62 (100%)	60 (97%)	2 (3%)	34 56
30	A3	47/47 (100%)	45 (96%)	2 (4%)	26 47
31	A4	48/48 (100%)	41 (85%)	7 (15%)	3 13
32	A5	38/38 (100%)	34 (90%)	4 (10%)	6 21
33	A6	51/51 (100%)	51 (100%)	0	100 100
34	A7	34/34 (100%)	32 (94%)	2 (6%)	18 39
39	BE	198/198 (100%)	192 (97%)	6 (3%)	36 57
40	BF	189/189 (100%)	177 (94%)	12 (6%)	16 37
41	BG	172/172 (100%)	168 (98%)	4 (2%)	44 64
42	BH	125/125 (100%)	120 (96%)	5 (4%)	28 49
43	BI	116/116 (100%)	113 (97%)	3 (3%)	40 62
44	BJ	146/146 (100%)	135 (92%)	11 (8%)	12 33
45	BK	104/104 (100%)	96 (92%)	8 (8%)	12 32
46	BL	106/106 (100%)	98 (92%)	8 (8%)	12 33
47	BM	90/90 (100%)	85 (94%)	5 (6%)	19 40
48	BN	98/98 (100%)	94 (96%)	4 (4%)	27 49
49	BO	103/103 (100%)	97 (94%)	6 (6%)	18 40
50	BP	95/95 (100%)	84 (88%)	11 (12%)	5 18
51	BQ	83/83 (100%)	81 (98%)	2 (2%)	43 64
52	BR	76/76 (100%)	76 (100%)	0	100 100
53	BS	65/65 (100%)	64 (98%)	1 (2%)	57 72
54	BT	77/77 (100%)	73 (95%)	4 (5%)	21 42

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
55	BU	64/64 (100%)	63 (98%)	1 (2%)	55 70
56	BV	78/78 (100%)	72 (92%)	6 (8%)	12 32
57	BW	65/65 (100%)	63 (97%)	2 (3%)	35 56
58	BX	60/60 (100%)	56 (93%)	4 (7%)	15 36
All	All	5213/5213 (100%)	4939 (95%)	274 (5%)	22 41

All (274) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	AC	127	LEU
3	AC	131	LEU
3	AC	136	LEU
3	AC	170	ILE
3	AC	200	LYS
4	AD	100	ARG
4	AD	164	VAL
4	AD	172	THR
4	AD	198	GLU
4	AD	203	VAL
4	AD	268	ARG
5	AE	4	LEU
5	AE	36	GLN
5	AE	40	LEU
5	AE	59	ARG
5	AE	74	GLU
5	AE	89	GLU
5	AE	99	GLU
5	AE	112	THR
5	AE	113	SER
5	AE	142	VAL
5	AE	149	ASN
5	AE	151	THR
5	AE	164	GLN
5	AE	208	LYS
6	AF	9	GLN
6	AF	46	GLN
6	AF	69	ARG
6	AF	105	LEU
6	AF	127	GLU
6	AF	152	GLU
6	AF	165	HIS

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Mol	Chain	Res	Type
6	AF	188	MET
7	AG	3	LEU
7	AG	5	ASP
7	AG	12	VAL
7	AG	24	VAL
7	AG	29	ARG
7	AG	71	LYS
7	AG	91	ARG
7	AG	93	GLU
7	AG	97	GLU
7	AG	131	VAL
7	AG	145	VAL
7	AG	147	ARG
7	AG	148	VAL
7	AG	151	LEU
8	AH	28	LYS
8	AH	31	GLU
8	AH	34	ARG
8	AH	63	GLN
8	AH	87	GLN
8	AH	109	SER
8	AH	121	THR
8	AH	171	LYS
8	AH	172	GLU
9	AI	87	GLU
9	AI	91	PHE
9	AI	122	LEU
9	AI	125	THR
9	AI	132	PHE
10	AJ	29	SER
10	AJ	32	VAL
10	AJ	37	MET
10	AJ	58	LEU
10	AJ	69	GLU
10	AJ	71	LEU
10	AJ	72	LYS
10	AJ	80	LEU
10	AJ	86	GLU
10	AJ	96	LYS
10	AJ	107	VAL
10	AJ	133	GLU
11	AK	9	LYS

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Mol	Chain	Res	Type
11	AK	48	ILE
11	AK	56	VAL
11	AK	115	ASP
11	AK	116	MET
11	AK	129	GLU
12	AL	10	THR
12	AL	39	LYS
12	AL	48	VAL
12	AL	62	VAL
12	AL	75	TYR
12	AL	80	HIS
12	AL	96	ARG
12	AL	98	GLU
12	AL	106	LYS
12	AL	123	LYS
12	AL	136	GLN
13	AM	8	LEU
13	AM	10	VAL
13	AM	29	HIS
13	AM	39	ILE
13	AM	49	ARG
13	AM	107	LEU
13	AM	114	LYS
14	AN	6	LEU
14	AN	41	ARG
14	AN	126	ARG
14	AN	142	ILE
15	AO	2	LEU
15	AO	68	PHE
15	AO	108	VAL
16	AP	9	GLN
16	AP	33	ILE
16	AP	106	ASP
17	AQ	40	ILE
17	AQ	43	ASN
17	AQ	117	PHE
18	AR	14	GLN
18	AR	25	VAL
18	AR	27	VAL
18	AR	60	VAL
18	AR	67	GLU
18	AR	98	TYR

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Mol	Chain	Res	Type
18	AR	101	GLU
19	AS	8	ILE
20	AT	10	LYS
20	AT	12	HIS
20	AT	22	LEU
20	AT	62	GLU
21	AU	4	ILE
21	AU	45	VAL
21	AU	59	GLU
21	AU	65	ASP
21	AU	70	LYS
22	AV	5	GLU
22	AV	9	LYS
22	AV	31	VAL
22	AV	39	THR
22	AV	58	VAL
22	AV	72	GLN
22	AV	85	VAL
23	AW	33	VAL
23	AW	53	GLN
23	AW	99	SER
24	AX	11	GLU
24	AX	29	ILE
24	AX	53	LYS
24	AX	70	ILE
25	AY	9	THR
25	AY	59	PHE
25	AY	65	LYS
26	AZ	6	VAL
26	AZ	7	THR
26	AZ	24	THR
26	AZ	32	LEU
26	AZ	57	VAL
26	AZ	58	ILE
27	A0	11	VAL
27	A0	19	LEU
27	A0	59	GLU
28	A1	33	HIS
29	A2	24	ILE
29	A2	62	LYS
30	A3	11	LYS
30	A3	27	LEU

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Mol	Chain	Res	Type
31	A4	4	ILE
31	A4	7	LYS
31	A4	10	LEU
31	A4	11	VAL
31	A4	27	ARG
31	A4	45	HIS
31	A4	53	ILE
32	A5	7	PRO
32	A5	10	LEU
32	A5	30	VAL
32	A5	44	VAL
34	A7	2	LYS
34	A7	3	VAL
39	BE	38	HIS
39	BE	69	VAL
39	BE	71	THR
39	BE	77	GLU
39	BE	108	GLN
39	BE	202	ASN
40	BF	13	ILE
40	BF	25	THR
40	BF	46	LEU
40	BF	48	LYS
40	BF	107	LYS
40	BF	109	GLU
40	BF	151	GLU
40	BF	166	TRP
40	BF	195	ILE
40	BF	197	VAL
40	BF	201	ILE
40	BF	214	GLU
41	BG	8	LEU
41	BG	25	ARG
41	BG	59	LYS
41	BG	98	ASP
42	BH	13	LYS
42	BH	67	ARG
42	BH	125	LYS
42	BH	127	TYR
42	BH	150	GLU
43	BI	1	MET
43	BI	39	LEU

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Mol	Chain	Res	Type
43	BI	129	SER
44	BJ	9	ARG
44	BJ	10	LYS
44	BJ	22	LEU
44	BJ	31	VAL
44	BJ	41	ILE
44	BJ	82	SER
44	BJ	130	LYS
44	BJ	140	VAL
44	BJ	145	GLU
44	BJ	158	LEU
44	BJ	170	LYS
45	BK	11	THR
45	BK	47	ASP
45	BK	49	LYS
45	BK	55	LYS
45	BK	60	LEU
45	BK	65	PHE
45	BK	80	PRO
45	BK	113	ARG
46	BL	4	GLN
46	BL	13	SER
46	BL	21	LYS
46	BL	57	VAL
46	BL	58	GLU
46	BL	88	GLU
46	BL	90	ASP
46	BL	117	LEU
47	BM	24	GLU
47	BM	40	ILE
47	BM	46	LYS
47	BM	96	VAL
47	BM	102	LEU
48	BN	31	VAL
48	BN	88	PRO
48	BN	105	ARG
48	BN	126	ARG
49	BO	28	GLN
49	BO	41	PRO
49	BO	49	ARG
49	BO	69	GLU
49	BO	87	LYS

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Mol	Chain	Res	Type
49	BO	122	LYS
50	BP	6	ILE
50	BP	19	THR
50	BP	21	ILE
50	BP	44	ILE
50	BP	54	THR
50	BP	57	ASP
50	BP	82	LEU
50	BP	85	TYR
50	BP	95	PRO
50	BP	103	THR
50	BP	106	ARG
51	BQ	45	LEU
51	BQ	95	LEU
53	BS	47	GLU
54	BT	8	GLN
54	BT	14	ASP
54	BT	37	ILE
54	BT	68	LYS
55	BU	12	PHE
56	BV	1	PRO
56	BV	18	VAL
56	BV	28	LYS
56	BV	56	HIS
56	BV	80	ARG
56	BV	82	HIS
57	BW	34	VAL
57	BW	67	HIS
58	BX	7	GLU
58	BX	20	ARG
58	BX	61	ARG
58	BX	62	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	119/120 (99%)	18 (15%)	10 (8%)
2	AB	2901/2904 (99%)	556 (19%)	183 (6%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
35	BA	1541/1542 (99%)	307 (19%)	117 (7%)
36	BB	75/76 (98%)	28 (37%)	5 (6%)
37	BC	46/47 (97%)	16 (34%)	7 (15%)
38	BD	77/77 (100%)	15 (19%)	2 (2%)
All	All	4759/4766 (99%)	940 (19%)	324 (6%)

All (940) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	13	G
1	AA	14	U
1	AA	25	U
1	AA	26	C
1	AA	35	C
1	AA	41	G
1	AA	42	C
1	AA	44	G
1	AA	45	A
1	AA	51	G
1	AA	58	A
1	AA	66	A
1	AA	67	G
1	AA	73	A
1	AA	88	C
1	AA	90	C
1	AA	99	A
2	AB	13	A
2	AB	14	A
2	AB	18	U
2	AB	30	G
2	AB	35	G
2	AB	42	A
2	AB	45	G
2	AB	46	G
2	AB	49	A
2	AB	50	U
2	AB	71	A
2	AB	72	U
2	AB	74	A
2	AB	75	G
2	AB	91	A

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Mol	Chain	Res	Type
2	AB	92	U
2	AB	95	A
2	AB	101	A
2	AB	102	U
2	AB	103	A
2	AB	115	C
2	AB	119	A
2	AB	120	U
2	AB	125	A
2	AB	126	A
2	AB	128	C
2	AB	139	U
2	AB	140	C
2	AB	141	G
2	AB	194	G
2	AB	196	A
2	AB	197	A
2	AB	199	A
2	AB	200	U
2	AB	204	A
2	AB	205	G
2	AB	215	G
2	AB	216	A
2	AB	218	A
2	AB	222	A
2	AB	224	U
2	AB	225	C
2	AB	232	G
2	AB	242	G
2	AB	243	U
2	AB	248	G
2	AB	250	G
2	AB	255	A
2	AB	265	A
2	AB	266	G
2	AB	267	C
2	AB	271	G
2	AB	277	G
2	AB	295	G
2	AB	330	A
2	AB	332	A
2	AB	333	G

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Mol	Chain	Res	Type
2	AB	338	G
2	AB	368	A
2	AB	371	A
2	AB	372	G
2	AB	386	G
2	AB	387	U
2	AB	388	G
2	AB	389	G
2	AB	390	U
2	AB	391	A
2	AB	396	G
2	AB	403	U
2	AB	405	U
2	AB	406	G
2	AB	411	G
2	AB	418	C
2	AB	424	G
2	AB	428	A
2	AB	429	A
2	AB	431	U
2	AB	436	C
2	AB	447	A
2	AB	451	U
2	AB	452	G
2	AB	454	A
2	AB	456	C
2	AB	472	A
2	AB	479	A
2	AB	480	A
2	AB	481	G
2	AB	484	C
2	AB	489	G
2	AB	490	C
2	AB	504	A
2	AB	505	A
2	AB	508	A
2	AB	509	C
2	AB	527	C
2	AB	531	C
2	AB	532	A
2	AB	544	C
2	AB	545	U

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Mol	Chain	Res	Type
2	AB	546	U
2	AB	547	A
2	AB	550	C
2	AB	562	U
2	AB	563	A
2	AB	570	G
2	AB	571	U
2	AB	573	U
2	AB	574	A
2	AB	575	A
2	AB	603	A
2	AB	604	G
2	AB	612	G
2	AB	613	A
2	AB	615	U
2	AB	620	G
2	AB	621	A
2	AB	635	C
2	AB	637	A
2	AB	643	A
2	AB	644	A
2	AB	645	C
2	AB	654	A
2	AB	671	C
2	AB	675	A
2	AB	686	U
2	AB	696	G
2	AB	718	A
2	AB	719	C
2	AB	728	G
2	AB	730	A
2	AB	732	C
2	AB	736	C
2	AB	747	5MU
2	AB	751	A
2	AB	752	A
2	AB	753	A
2	AB	758	C
2	AB	763	G
2	AB	764	A
2	AB	775	G
2	AB	776	G

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Mol	Chain	Res	Type
2	AB	777	G
2	AB	782	A
2	AB	784	G
2	AB	786	C
2	AB	789	A
2	AB	793	A
2	AB	805	G
2	AB	812	C
2	AB	846	U
2	AB	847	U
2	AB	848	C
2	AB	859	G
2	AB	870	U
2	AB	888	C
2	AB	889	C
2	AB	894	U
2	AB	896	A
2	AB	897	C
2	AB	901	C
2	AB	910	A
2	AB	911	A
2	AB	915	C
2	AB	925	A
2	AB	932	U
2	AB	933	A
2	AB	938	G
2	AB	941	A
2	AB	945	A
2	AB	946	C
2	AB	961	C
2	AB	973	A
2	AB	974	G
2	AB	982	C
2	AB	985	C
2	AB	986	C
2	AB	990	A
2	AB	995	C
2	AB	996	A
2	AB	1002	G
2	AB	1003	G
2	AB	1005	C
2	AB	1008	A

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Mol	Chain	Res	Type
2	AB	1010	A
2	AB	1012	U
2	AB	1013	C
2	AB	1020	A
2	AB	1022	G
2	AB	1025	G
2	AB	1026	G
2	AB	1033	U
2	AB	1034	G
2	AB	1044	C
2	AB	1048	A
2	AB	1060	U
2	AB	1061	U
2	AB	1062	G
2	AB	1069	A
2	AB	1070	A
2	AB	1073	A
2	AB	1079	C
2	AB	1081	U
2	AB	1083	U
2	AB	1084	A
2	AB	1087	G
2	AB	1094	U
2	AB	1095	A
2	AB	1096	A
2	AB	1097	U
2	AB	1098	A
2	AB	1104	C
2	AB	1109	C
2	AB	1110	G
2	AB	1112	G
2	AB	1123	C
2	AB	1128	G
2	AB	1129	A
2	AB	1130	U
2	AB	1132	U
2	AB	1135	C
2	AB	1136	G
2	AB	1143	A
2	AB	1156	A
2	AB	1157	G
2	AB	1158	C

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Mol	Chain	Res	Type
2	AB	1173	U
2	AB	1177	G
2	AB	1184	U
2	AB	1204	A
2	AB	1211	C
2	AB	1236	G
2	AB	1237	A
2	AB	1238	G
2	AB	1239	G
2	AB	1241	A
2	AB	1253	A
2	AB	1254	A
2	AB	1255	U
2	AB	1256	G
2	AB	1266	G
2	AB	1272	A
2	AB	1274	A
2	AB	1275	A
2	AB	1283	G
2	AB	1284	A
2	AB	1288	G
2	AB	1289	C
2	AB	1300	G
2	AB	1301	A
2	AB	1302	A
2	AB	1303	G
2	AB	1307	A
2	AB	1308	A
2	AB	1318	U
2	AB	1321	A
2	AB	1322	A
2	AB	1323	C
2	AB	1329	U
2	AB	1330	C
2	AB	1341	G
2	AB	1349	C
2	AB	1354	A
2	AB	1362	C
2	AB	1363	C
2	AB	1365	A
2	AB	1368	G
2	AB	1378	A

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Mol	Chain	Res	Type
2	AB	1379	U
2	AB	1384	A
2	AB	1385	A
2	AB	1386	C
2	AB	1387	A
2	AB	1392	A
2	AB	1395	A
2	AB	1396	U
2	AB	1416	G
2	AB	1417	C
2	AB	1420	A
2	AB	1421	G
2	AB	1453	A
2	AB	1459	G
2	AB	1460	U
2	AB	1461	C
2	AB	1482	G
2	AB	1493	C
2	AB	1514	G
2	AB	1522	A
2	AB	1523	U
2	AB	1524	G
2	AB	1552	A
2	AB	1558	C
2	AB	1565	C
2	AB	1566	A
2	AB	1567	G
2	AB	1568	G
2	AB	1578	U
2	AB	1584	U
2	AB	1585	C
2	AB	1608	A
2	AB	1612	C
2	AB	1616	A
2	AB	1617	C
2	AB	1634	A
2	AB	1635	A
2	AB	1636	U
2	AB	1646	C
2	AB	1648	U
2	AB	1669	A
2	AB	1670	C

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Mol	Chain	Res	Type
2	AB	1674	G
2	AB	1676	A
2	AB	1677	A
2	AB	1693	U
2	AB	1694	C
2	AB	1699	G
2	AB	1700	A
2	AB	1713	A
2	AB	1714	U
2	AB	1715	G
2	AB	1724	G
2	AB	1730	C
2	AB	1737	G
2	AB	1758	U
2	AB	1762	A
2	AB	1763	G
2	AB	1764	C
2	AB	1773	A
2	AB	1778	U
2	AB	1779	U
2	AB	1780	A
2	AB	1781	U
2	AB	1783	A
2	AB	1786	A
2	AB	1787	A
2	AB	1799	G
2	AB	1800	C
2	AB	1808	A
2	AB	1809	A
2	AB	1815	A
2	AB	1816	C
2	AB	1825	U
2	AB	1830	C
2	AB	1831	G
2	AB	1833	C
2	AB	1851	U
2	AB	1873	G
2	AB	1900	A
2	AB	1912	A
2	AB	1913	A
2	AB	1914	C
2	AB	1928	A

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Mol	Chain	Res	Type
2	AB	1930	G
2	AB	1937	A
2	AB	1941	C
2	AB	1952	A
2	AB	1953	A
2	AB	1954	G
2	AB	1955	U
2	AB	1956	U
2	AB	1963	U
2	AB	1964	G
2	AB	1965	C
2	AB	1967	C
2	AB	1968	G
2	AB	1970	A
2	AB	1971	U
2	AB	1972	G
2	AB	1982	U
2	AB	1993	U
2	AB	1996	C
2	AB	1997	C
2	AB	2004	G
2	AB	2012	G
2	AB	2020	A
2	AB	2021	C
2	AB	2023	C
2	AB	2030	6MZ
2	AB	2031	A
2	AB	2032	G
2	AB	2034	U
2	AB	2040	G
2	AB	2043	C
2	AB	2048	G
2	AB	2055	C
2	AB	2056	G
2	AB	2059	A
2	AB	2061	G
2	AB	2062	A
2	AB	2069	7MG
2	AB	2077	A
2	AB	2093	G
2	AB	2095	A
2	AB	2107	G

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Mol	Chain	Res	Type
2	AB	2111	U
2	AB	2112	G
2	AB	2113	U
2	AB	2118	U
2	AB	2119	A
2	AB	2127	G
2	AB	2128	G
2	AB	2130	U
2	AB	2132	U
2	AB	2134	A
2	AB	2137	U
2	AB	2143	C
2	AB	2145	C
2	AB	2147	A
2	AB	2148	G
2	AB	2154	A
2	AB	2158	A
2	AB	2163	A
2	AB	2165	C
2	AB	2198	A
2	AB	2199	A
2	AB	2203	U
2	AB	2204	G
2	AB	2211	A
2	AB	2212	A
2	AB	2214	C
2	AB	2215	C
2	AB	2224	G
2	AB	2225	A
2	AB	2237	G
2	AB	2238	G
2	AB	2239	G
2	AB	2246	G
2	AB	2249	U
2	AB	2250	G
2	AB	2253	G
2	AB	2254	C
2	AB	2266	A
2	AB	2267	A
2	AB	2282	G
2	AB	2283	C
2	AB	2287	A

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Mol	Chain	Res	Type
2	AB	2288	A
2	AB	2305	U
2	AB	2306	C
2	AB	2309	A
2	AB	2311	A
2	AB	2312	U
2	AB	2321	U
2	AB	2322	A
2	AB	2325	G
2	AB	2335	A
2	AB	2336	A
2	AB	2337	G
2	AB	2340	A
2	AB	2345	G
2	AB	2346	A
2	AB	2347	C
2	AB	2350	C
2	AB	2354	C
2	AB	2383	G
2	AB	2385	C
2	AB	2386	A
2	AB	2389	G
2	AB	2390	U
2	AB	2402	U
2	AB	2406	A
2	AB	2407	A
2	AB	2411	A
2	AB	2426	A
2	AB	2427	C
2	AB	2428	G
2	AB	2429	G
2	AB	2432	A
2	AB	2433	A
2	AB	2435	A
2	AB	2441	U
2	AB	2450	A
2	AB	2472	G
2	AB	2474	U
2	AB	2476	A
2	AB	2478	A
2	AB	2486	C
2	AB	2491	U

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Mol	Chain	Res	Type
2	AB	2493	U
2	AB	2494	G
2	AB	2502	G
2	AB	2503	2MA
2	AB	2504	PSU
2	AB	2505	G
2	AB	2515	C
2	AB	2516	A
2	AB	2518	A
2	AB	2519	U
2	AB	2530	A
2	AB	2547	A
2	AB	2566	A
2	AB	2567	G
2	AB	2572	A
2	AB	2573	C
2	AB	2580	PSU
2	AB	2581	G
2	AB	2586	U
2	AB	2587	A
2	AB	2588	G
2	AB	2599	G
2	AB	2603	G
2	AB	2608	G
2	AB	2609	U
2	AB	2611	C
2	AB	2613	U
2	AB	2616	C
2	AB	2628	C
2	AB	2629	U
2	AB	2639	A
2	AB	2650	U
2	AB	2654	A
2	AB	2655	G
2	AB	2656	U
2	AB	2664	G
2	AB	2685	G
2	AB	2689	U
2	AB	2690	U
2	AB	2714	G
2	AB	2737	G
2	AB	2739	U

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Mol	Chain	Res	Type
2	AB	2742	G
2	AB	2744	G
2	AB	2757	A
2	AB	2765	A
2	AB	2766	A
2	AB	2769	U
2	AB	2771	C
2	AB	2772	C
2	AB	2774	C
2	AB	2777	G
2	AB	2778	A
2	AB	2779	U
2	AB	2780	G
2	AB	2782	G
2	AB	2791	G
2	AB	2800	A
2	AB	2807	U
2	AB	2825	G
2	AB	2832	U
2	AB	2833	U
2	AB	2835	A
2	AB	2836	U
2	AB	2842	G
2	AB	2849	U
2	AB	2861	U
2	AB	2864	G
2	AB	2867	G
2	AB	2868	A
2	AB	2879	A
2	AB	2880	C
2	AB	2883	A
2	AB	2885	G
2	AB	2886	A
2	AB	2889	C
2	AB	2893	A
2	AB	2895	G
2	AB	2903	U
35	BA	4	U
35	BA	6	G
35	BA	7	A
35	BA	8	A
35	BA	9	G

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Mol	Chain	Res	Type
35	BA	31	G
35	BA	32	A
35	BA	36	C
35	BA	48	C
35	BA	52	C
35	BA	53	A
35	BA	54	C
35	BA	60	A
35	BA	61	G
35	BA	65	A
35	BA	66	A
35	BA	83	C
35	BA	84	U
35	BA	85	U
35	BA	98	A
35	BA	108	G
35	BA	120	A
35	BA	121	U
35	BA	122	G
35	BA	123	U
35	BA	129	A
35	BA	131	A
35	BA	153	C
35	BA	164	G
35	BA	166	U
35	BA	171	A
35	BA	174	A
35	BA	182	A
35	BA	184	G
35	BA	188	C
35	BA	189	A
35	BA	197	A
35	BA	204	G
35	BA	209	U
35	BA	211	G
35	BA	212	G
35	BA	225	C
35	BA	228	A
35	BA	229	U
35	BA	240	G
35	BA	244	U
35	BA	245	U

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Mol	Chain	Res	Type
35	BA	247	G
35	BA	250	A
35	BA	251	G
35	BA	252	U
35	BA	262	A
35	BA	266	G
35	BA	267	C
35	BA	272	C
35	BA	273	U
35	BA	280	C
35	BA	282	A
35	BA	288	A
35	BA	289	G
35	BA	293	G
35	BA	306	A
35	BA	307	C
35	BA	308	C
35	BA	316	C
35	BA	317	U
35	BA	319	G
35	BA	326	G
35	BA	328	C
35	BA	329	A
35	BA	344	A
35	BA	352	C
35	BA	353	A
35	BA	354	G
35	BA	365	U
35	BA	367	U
35	BA	372	C
35	BA	373	A
35	BA	374	A
35	BA	381	C
35	BA	382	A
35	BA	384	G
35	BA	389	A
35	BA	390	U
35	BA	392	C
35	BA	395	C
35	BA	398	U
35	BA	406	G
35	BA	411	A

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Mol	Chain	Res	Type
35	BA	412	A
35	BA	415	A
35	BA	429	U
35	BA	444	G
35	BA	463	U
35	BA	464	U
35	BA	466	A
35	BA	467	U
35	BA	468	A
35	BA	479	U
35	BA	481	G
35	BA	485	U
35	BA	486	U
35	BA	496	A
35	BA	497	G
35	BA	498	A
35	BA	505	G
35	BA	508	U
35	BA	510	A
35	BA	518	C
35	BA	527	7MG
35	BA	528	C
35	BA	532	A
35	BA	533	A
35	BA	534	U
35	BA	535	A
35	BA	547	A
35	BA	552	U
35	BA	553	A
35	BA	566	G
35	BA	572	A
35	BA	573	A
35	BA	575	G
35	BA	576	C
35	BA	577	G
35	BA	578	C
35	BA	583	A
35	BA	615	G
35	BA	620	C
35	BA	631	C
35	BA	632	U
35	BA	633	G

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Mol	Chain	Res	Type
35	BA	636	U
35	BA	642	A
35	BA	650	G
35	BA	653	U
35	BA	654	G
35	BA	687	A
35	BA	688	G
35	BA	702	A
35	BA	718	A
35	BA	721	G
35	BA	724	G
35	BA	755	G
35	BA	760	G
35	BA	765	G
35	BA	766	A
35	BA	777	A
35	BA	783	C
35	BA	790	A
35	BA	791	G
35	BA	793	U
35	BA	794	A
35	BA	805	C
35	BA	810	C
35	BA	812	G
35	BA	815	A
35	BA	816	A
35	BA	817	C
35	BA	820	U
35	BA	821	G
35	BA	828	U
35	BA	829	G
35	BA	840	C
35	BA	841	C
35	BA	842	U
35	BA	843	U
35	BA	845	A
35	BA	846	G
35	BA	870	U
35	BA	871	U
35	BA	873	A
35	BA	874	G
35	BA	876	C

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Mol	Chain	Res	Type
35	BA	890	G
35	BA	899	C
35	BA	900	A
35	BA	910	C
35	BA	914	A
35	BA	926	G
35	BA	927	G
35	BA	933	G
35	BA	935	A
35	BA	938	A
35	BA	939	G
35	BA	945	G
35	BA	960	U
35	BA	961	U
35	BA	962	C
35	BA	966	2MG
35	BA	968	A
35	BA	969	A
35	BA	970	C
35	BA	971	G
35	BA	973	G
35	BA	974	A
35	BA	975	A
35	BA	978	A
35	BA	980	C
35	BA	982	U
35	BA	983	A
35	BA	992	U
35	BA	993	G
35	BA	994	A
35	BA	995	C
35	BA	1004	A
35	BA	1006	G
35	BA	1015	G
35	BA	1026	G
35	BA	1028	C
35	BA	1030	U
35	BA	1031	C
35	BA	1050	G
35	BA	1055	A
35	BA	1064	G
35	BA	1065	U

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Mol	Chain	Res	Type
35	BA	1081	A
35	BA	1092	A
35	BA	1093	A
35	BA	1094	G
35	BA	1095	U
35	BA	1101	A
35	BA	1118	U
35	BA	1135	U
35	BA	1137	C
35	BA	1143	G
35	BA	1149	C
35	BA	1152	A
35	BA	1154	G
35	BA	1159	U
35	BA	1168	U
35	BA	1169	A
35	BA	1181	G
35	BA	1183	U
35	BA	1184	G
35	BA	1190	G
35	BA	1196	A
35	BA	1197	A
35	BA	1198	G
35	BA	1200	C
35	BA	1201	A
35	BA	1202	U
35	BA	1208	C
35	BA	1212	U
35	BA	1214	C
35	BA	1215	G
35	BA	1226	C
35	BA	1227	A
35	BA	1228	C
35	BA	1238	A
35	BA	1239	A
35	BA	1240	U
35	BA	1241	G
35	BA	1250	A
35	BA	1253	G
35	BA	1254	A
35	BA	1256	A
35	BA	1257	A

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Mol	Chain	Res	Type
35	BA	1258	G
35	BA	1264	U
35	BA	1267	C
35	BA	1268	G
35	BA	1270	G
35	BA	1280	A
35	BA	1290	G
35	BA	1300	G
35	BA	1301	U
35	BA	1303	C
35	BA	1305	G
35	BA	1315	U
35	BA	1317	C
35	BA	1318	A
35	BA	1319	A
35	BA	1322	C
35	BA	1340	A
35	BA	1345	U
35	BA	1346	A
35	BA	1347	G
35	BA	1348	U
35	BA	1360	A
35	BA	1362	A
35	BA	1363	A
35	BA	1364	U
35	BA	1365	G
35	BA	1368	A
35	BA	1378	C
35	BA	1400	C
35	BA	1401	G
35	BA	1431	A
35	BA	1432	G
35	BA	1437	A
35	BA	1446	A
35	BA	1448	C
35	BA	1454	G
35	BA	1490	U
35	BA	1492	A
35	BA	1493	A
35	BA	1494	G
35	BA	1502	A
35	BA	1503	A

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Mol	Chain	Res	Type
35	BA	1506	U
35	BA	1507	A
35	BA	1529	G
35	BA	1530	G
35	BA	1536	C
35	BA	1537	U
35	BA	1539	C
35	BA	1540	U
36	BB	8	4SU
36	BB	9	A
36	BB	10	G
36	BB	11	U
36	BB	17	H2U
36	BB	20	H2U
36	BB	21	A
36	BB	23	A
36	BB	24	G
36	BB	34	C
36	BB	35	C
36	BB	36	A
36	BB	37	MIA
36	BB	38	A
36	BB	39	A
36	BB	46	7MG
36	BB	47	U
36	BB	48	U
36	BB	49	G
36	BB	58	A
36	BB	59	G
36	BB	60	U
36	BB	61	C
36	BB	65	C
36	BB	73	G
36	BB	74	C
36	BB	75	C
36	BB	76	A
37	BC	17	U
37	BC	18	A
37	BC	21	U
37	BC	23	C
37	BC	26	U
37	BC	27	A

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Mol	Chain	Res	Type
37	BC	30	U
37	BC	33	A
37	BC	34	U
37	BC	40	G
37	BC	44	U
37	BC	47	C
37	BC	48	C
37	BC	53	G
37	BC	54	U
37	BC	56	G
38	BD	2	G
38	BD	8	4SU
38	BD	9	G
38	BD	10	G
38	BD	18	U
38	BD	19	G
38	BD	20	G
38	BD	22	A
38	BD	38	A
38	BD	48	U
38	BD	49	C
38	BD	50	G
38	BD	75	C
38	BD	76	C
38	BD	77	A

All (324) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	25	U
1	AA	34	A
1	AA	35	C
1	AA	36	C
1	AA	41	G
1	AA	44	G
1	AA	57	A
1	AA	66	A
1	AA	87	U
1	AA	106	G
2	AB	12	U
2	AB	13	A
2	AB	29	U

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Mol	Chain	Res	Type
2	AB	34	U
2	AB	48	G
2	AB	49	A
2	AB	63	A
2	AB	69	C
2	AB	71	A
2	AB	72	U
2	AB	91	A
2	AB	94	A
2	AB	96	C
2	AB	114	U
2	AB	125	A
2	AB	139	U
2	AB	140	C
2	AB	172	A
2	AB	196	A
2	AB	199	A
2	AB	205	G
2	AB	228	C
2	AB	231	A
2	AB	241	A
2	AB	242	G
2	AB	265	A
2	AB	332	A
2	AB	387	U
2	AB	389	G
2	AB	390	U
2	AB	428	A
2	AB	445	C
2	AB	453	A
2	AB	463	G
2	AB	476	G
2	AB	479	A
2	AB	505	A
2	AB	534	U
2	AB	544	C
2	AB	561	G
2	AB	570	G
2	AB	573	U
2	AB	575	A
2	AB	603	A
2	AB	611	C

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Mol	Chain	Res	Type
2	AB	620	G
2	AB	625	G
2	AB	628	G
2	AB	643	A
2	AB	645	C
2	AB	680	C
2	AB	689	A
2	AB	776	G
2	AB	789	A
2	AB	847	U
2	AB	870	U
2	AB	900	A
2	AB	912	C
2	AB	945	A
2	AB	983	A
2	AB	990	A
2	AB	1012	U
2	AB	1033	U
2	AB	1035	U
2	AB	1040	A
2	AB	1049	C
2	AB	1061	U
2	AB	1068	G
2	AB	1069	A
2	AB	1083	U
2	AB	1095	A
2	AB	1128	G
2	AB	1129	A
2	AB	1133	A
2	AB	1134	A
2	AB	1135	C
2	AB	1142	A
2	AB	1157	G
2	AB	1200	C
2	AB	1210	G
2	AB	1239	G
2	AB	1254	A
2	AB	1284	A
2	AB	1288	G
2	AB	1300	G
2	AB	1321	A
2	AB	1323	C

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Mol	Chain	Res	Type
2	AB	1329	U
2	AB	1386	C
2	AB	1391	U
2	AB	1395	A
2	AB	1416	G
2	AB	1451	C
2	AB	1460	U
2	AB	1476	U
2	AB	1494	A
2	AB	1566	A
2	AB	1567	G
2	AB	1582	C
2	AB	1608	A
2	AB	1616	A
2	AB	1634	A
2	AB	1675	C
2	AB	1693	U
2	AB	1697	G
2	AB	1699	G
2	AB	1715	G
2	AB	1723	G
2	AB	1734	G
2	AB	1778	U
2	AB	1786	A
2	AB	1799	G
2	AB	1806	C
2	AB	1807	G
2	AB	1832	C
2	AB	1888	G
2	AB	1912	A
2	AB	1913	A
2	AB	1927	A
2	AB	1939	5MU
2	AB	1940	U
2	AB	1953	A
2	AB	1955	U
2	AB	1966	A
2	AB	2019	A
2	AB	2058	A
2	AB	2061	G
2	AB	2068	U
2	AB	2079	U

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Mol	Chain	Res	Type
2	AB	2106	U
2	AB	2112	G
2	AB	2118	U
2	AB	2162	G
2	AB	2213	U
2	AB	2223	G
2	AB	2225	A
2	AB	2236	U
2	AB	2238	G
2	AB	2249	U
2	AB	2253	G
2	AB	2263	C
2	AB	2268	A
2	AB	2282	G
2	AB	2287	A
2	AB	2311	A
2	AB	2321	U
2	AB	2336	A
2	AB	2374	C
2	AB	2385	C
2	AB	2406	A
2	AB	2425	A
2	AB	2427	C
2	AB	2432	A
2	AB	2434	A
2	AB	2440	C
2	AB	2515	C
2	AB	2518	A
2	AB	2550	G
2	AB	2554	U
2	AB	2571	U
2	AB	2580	PSU
2	AB	2587	A
2	AB	2608	G
2	AB	2613	U
2	AB	2616	C
2	AB	2628	C
2	AB	2629	U
2	AB	2649	C
2	AB	2655	G
2	AB	2663	G
2	AB	2705	A

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Mol	Chain	Res	Type
2	AB	2756	U
2	AB	2758	A
2	AB	2765	A
2	AB	2771	C
2	AB	2777	G
2	AB	2802	G
2	AB	2806	C
2	AB	2835	A
2	AB	2842	G
2	AB	2861	U
2	AB	2867	G
2	AB	2879	A
35	BA	7	A
35	BA	31	G
35	BA	39	G
35	BA	51	A
35	BA	84	U
35	BA	97	G
35	BA	101	A
35	BA	122	G
35	BA	128	G
35	BA	129	A
35	BA	164	G
35	BA	173	U
35	BA	178	C
35	BA	181	A
35	BA	187	G
35	BA	188	C
35	BA	204	G
35	BA	206	C
35	BA	224	U
35	BA	239	U
35	BA	243	A
35	BA	244	U
35	BA	249	U
35	BA	251	G
35	BA	272	C
35	BA	279	A
35	BA	281	G
35	BA	288	A
35	BA	306	A
35	BA	307	C

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Mol	Chain	Res	Type
35	BA	328	C
35	BA	366	A
35	BA	372	C
35	BA	381	C
35	BA	410	G
35	BA	429	U
35	BA	466	A
35	BA	485	U
35	BA	497	G
35	BA	524	G
35	BA	533	A
35	BA	552	U
35	BA	562	U
35	BA	578	C
35	BA	582	C
35	BA	622	A
35	BA	631	C
35	BA	632	U
35	BA	633	G
35	BA	653	U
35	BA	681	A
35	BA	700	G
35	BA	717	U
35	BA	744	C
35	BA	764	C
35	BA	765	G
35	BA	782	A
35	BA	793	U
35	BA	815	A
35	BA	840	C
35	BA	842	U
35	BA	845	A
35	BA	870	U
35	BA	897	C
35	BA	899	C
35	BA	926	G
35	BA	931	C
35	BA	937	A
35	BA	944	G
35	BA	960	U
35	BA	968	A
35	BA	969	A

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Mol	Chain	Res	Type
35	BA	970	C
35	BA	974	A
35	BA	977	A
35	BA	982	U
35	BA	992	U
35	BA	993	G
35	BA	1014	A
35	BA	1028	C
35	BA	1029	U
35	BA	1030	U
35	BA	1092	A
35	BA	1108	G
35	BA	1129	C
35	BA	1143	G
35	BA	1159	U
35	BA	1167	A
35	BA	1183	U
35	BA	1196	A
35	BA	1201	A
35	BA	1213	A
35	BA	1214	C
35	BA	1226	C
35	BA	1239	A
35	BA	1240	U
35	BA	1253	G
35	BA	1258	G
35	BA	1267	C
35	BA	1289	A
35	BA	1302	C
35	BA	1310	G
35	BA	1318	A
35	BA	1323	G
35	BA	1329	A
35	BA	1346	A
35	BA	1347	G
35	BA	1362	A
35	BA	1364	U
35	BA	1404	C
35	BA	1491	G
35	BA	1492	A
35	BA	1502	A
35	BA	1509	C

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Mol	Chain	Res	Type
35	BA	1513	A
35	BA	1525	G
35	BA	1529	G
36	BB	9	A
36	BB	34	C
36	BB	38	A
36	BB	58	A
36	BB	59	G
37	BC	22	G
37	BC	29	G
37	BC	39	U
37	BC	43	U
37	BC	52	U
37	BC	53	G
37	BC	55	A
38	BD	1	C
38	BD	75	C

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

49 non-standard protein/DNA/RNA residues are 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	$\#\|Z\|>2$
36	7MG	BB	46	36	23,26,27	5.61	3 (13%)	27,39,42	1.39	4 (14%)
35	2MG	BA	1516	35	23,26,27	1.36	3 (13%)	33,38,41	1.78	6 (18%)
2	OMC	AB	2498	2	19,22,23	1.09	2 (10%)	25,31,34	1.45	4 (16%)
35	MA6	BA	1518	35	23,26,27	1.47	2 (8%)	33,38,41	1.34	3 (9%)
2	CH	AB	2575	2	16,21,22	1.10	0	19,30,33	1.38	3 (15%)
2	PSU	AB	1911	2	18,21,22	2.01	4 (22%)	21,30,33	2.09	7 (33%)
35	7MG	BA	527	35	23,26,27	4.75	6 (26%)	27,39,42	1.50	3 (11%)
36	4SU	BB	8	36	18,21,22	2.30	5 (27%)	25,30,33	3.23	9 (36%)
38	PSU	BD	56	38	18,21,22	1.97	4 (22%)	21,30,33	1.66	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	5MC	AB	1962	2	19,22,23	1.97	7 (36%)	26,32,35	2.71	10 (38%)
2	PSU	AB	746	2	18,21,22	1.24	1 (5%)	21,30,33	1.85	3 (14%)
38	H2U	BD	21	38	18,21,22	1.00	1 (5%)	19,30,33	1.41	2 (10%)
2	2MA	AB	2503	2	22,25,26	1.01	1 (4%)	32,37,40	1.54	6 (18%)
38	OMC	BD	33	38	19,22,23	1.10	1 (5%)	25,31,34	1.58	3 (12%)
36	OMC	BB	32	36	19,22,23	1.02	2 (10%)	25,31,34	1.79	6 (24%)
2	3TD	AB	1915	2	19,22,23	1.93	5 (26%)	23,32,35	1.56	4 (17%)
35	4OC	BA	1402	35	20,23,24	1.52	3 (15%)	25,32,35	2.07	7 (28%)
2	2MG	AB	2445	2	23,26,27	1.82	4 (17%)	33,38,41	1.24	5 (15%)
36	H2U	BB	17	36	18,21,22	1.28	3 (16%)	19,30,33	2.18	7 (36%)
36	5MU	BB	54	36	19,22,23	1.44	4 (21%)	27,32,35	2.45	5 (18%)
2	PSU	AB	2580	2	18,21,22	2.36	6 (33%)	21,30,33	2.80	5 (23%)
35	5MC	BA	967	35	19,22,23	1.34	3 (15%)	26,32,35	1.85	5 (19%)
36	PSU	BB	55	36	18,21,22	2.03	5 (27%)	21,30,33	2.73	12 (57%)
2	PSU	AB	2457	2	18,21,22	1.85	6 (33%)	21,30,33	1.76	6 (28%)
2	OMG	AB	2251	2,38	23,26,27	1.20	2 (8%)	32,38,41	0.90	0
38	5MU	BD	55	38	19,22,23	1.45	4 (21%)	27,32,35	1.60	4 (14%)
2	2MG	AB	1835	2	23,26,27	1.30	2 (8%)	33,38,41	1.49	8 (24%)
2	6MZ	AB	1618	2	22,25,26	1.56	3 (13%)	29,36,39	2.14	7 (24%)
2	H2U	AB	2449	2	18,21,22	1.55	3 (16%)	19,30,33	1.50	3 (15%)
36	H2U	BB	20	36	18,21,22	1.91	5 (27%)	19,30,33	1.69	3 (15%)
36	H2U	BB	16	36	18,21,22	1.48	4 (22%)	19,30,33	1.43	5 (26%)
35	MA6	BA	1519	35	23,26,27	1.20	3 (13%)	33,38,41	1.31	3 (9%)
2	6MZ	AB	2030	2	22,25,26	1.25	2 (9%)	29,36,39	2.17	7 (24%)
35	PSU	BA	516	35	18,21,22	1.64	5 (27%)	21,30,33	2.25	8 (38%)
35	2MG	BA	1207	35	23,26,27	1.86	5 (21%)	33,38,41	1.30	3 (9%)
2	7MG	AB	2069	2	23,26,27	4.55	5 (21%)	27,39,42	1.56	6 (22%)
2	PSU	AB	2605	2	18,21,22	1.22	2 (11%)	21,30,33	1.45	3 (14%)
2	PSU	AB	955	2	18,21,22	1.84	4 (22%)	21,30,33	2.51	3 (14%)
35	UR3	BA	1498	35	19,22,23	1.24	2 (10%)	26,32,35	1.41	4 (15%)
2	PSU	AB	1917	2	18,21,22	1.61	4 (22%)	21,30,33	1.69	2 (9%)
35	2MG	BA	966	35	23,26,27	1.94	4 (17%)	33,38,41	1.25	5 (15%)
2	PSU	AB	2504	2	18,21,22	1.92	4 (22%)	21,30,33	1.75	4 (19%)
38	4SU	BD	8	38	18,21,22	2.04	4 (22%)	25,30,33	1.51	6 (24%)
2	5MU	AB	747	2	19,22,23	1.52	4 (21%)	27,32,35	2.36	9 (33%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
35	5MC	BA	1407	35	19,22,23	1.43	2 (10%)	26,32,35	1.62	6 (23%)
2	1MG	AB	745	2	23,26,27	1.43	4 (17%)	33,39,42	1.64	11 (33%)
2	5MU	AB	1939	2	19,22,23	1.51	4 (21%)	27,32,35	1.66	7 (25%)
36	MIA	BB	37	36	28,31,32	1.70	4 (14%)	38,44,47	1.58	5 (13%)
2	OMU	AB	2552	2	19,22,23	1.60	4 (21%)	25,31,34	1.66	9 (36%)

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
36	7MG	BB	46	36	-	0/7/37/38	0/3/3/3
35	2MG	BA	1516	35	-	2/9/27/28	0/3/3/3
2	OMC	AB	2498	2	-	1/9/27/28	0/2/2/2
35	MA6	BA	1518	35	-	0/11/29/30	0/3/3/3
2	CH	AB	2575	2	-	0/5/25/26	0/2/2/2
2	PSU	AB	1911	2	-	1/7/25/26	0/2/2/2
35	7MG	BA	527	35	-	2/7/37/38	0/3/3/3
36	4SU	BB	8	36	-	1/7/25/26	0/2/2/2
38	PSU	BD	56	38	-	0/7/25/26	0/2/2/2
2	5MC	AB	1962	2	-	0/7/25/26	0/2/2/2
2	PSU	AB	746	2	-	2/7/25/26	0/2/2/2
38	H2U	BD	21	38	-	0/7/38/39	0/2/2/2
2	2MA	AB	2503	2	-	2/7/25/26	0/3/3/3
38	OMC	BD	33	38	-	0/9/27/28	0/2/2/2
36	OMC	BB	32	36	-	0/9/27/28	0/2/2/2
2	3TD	AB	1915	2	-	0/7/25/26	0/2/2/2
35	4OC	BA	1402	35	-	0/9/29/30	0/2/2/2
2	2MG	AB	2445	2	-	0/9/27/28	0/3/3/3
36	H2U	BB	17	36	-	0/7/38/39	0/2/2/2
36	5MU	BB	54	36	-	0/7/25/26	0/2/2/2
2	PSU	AB	2580	2	-	2/7/25/26	0/2/2/2
35	5MC	BA	967	35	-	1/7/25/26	0/2/2/2
36	PSU	BB	55	36	-	1/7/25/26	0/2/2/2
2	PSU	AB	2457	2	-	0/7/25/26	0/2/2/2
2	OMG	AB	2251	2,38	-	0/9/27/28	0/3/3/3
38	5MU	BD	55	38	-	0/7/25/26	0/2/2/2
2	2MG	AB	1835	2	-	0/9/27/28	0/3/3/3
2	6MZ	AB	1618	2	-	0/9/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	H2U	AB	2449	2	-	0/7/38/39	0/2/2/2
36	H2U	BB	20	36	-	0/7/38/39	0/2/2/2
36	H2U	BB	16	36	-	0/7/38/39	0/2/2/2
35	MA6	BA	1519	35	-	0/11/29/30	0/3/3/3
2	6MZ	AB	2030	2	-	3/9/27/28	0/3/3/3
35	PSU	BA	516	35	-	0/7/25/26	0/2/2/2
35	2MG	BA	1207	35	-	0/9/27/28	0/3/3/3
2	7MG	AB	2069	2	-	0/7/37/38	0/3/3/3
2	PSU	AB	2605	2	-	0/7/25/26	0/2/2/2
2	PSU	AB	955	2	-	0/7/25/26	0/2/2/2
35	UR3	BA	1498	35	-	1/7/25/26	0/2/2/2
2	PSU	AB	1917	2	-	0/7/25/26	0/2/2/2
35	2MG	BA	966	35	-	0/9/27/28	0/3/3/3
2	PSU	AB	2504	2	-	0/7/25/26	0/2/2/2
38	4SU	BD	8	38	-	1/7/25/26	0/2/2/2
2	5MU	AB	747	2	-	0/7/25/26	0/2/2/2
35	5MC	BA	1407	35	-	0/7/25/26	0/2/2/2
2	1MG	AB	745	2	-	0/7/25/26	0/3/3/3
2	5MU	AB	1939	2	-	0/7/25/26	0/2/2/2
36	MIA	BB	37	36	-	3/15/33/34	0/3/3/3
2	OMU	AB	2552	2	-	0/9/27/28	0/2/2/2

All (170) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BB	46	7MG	C8-N9	-26.03	1.29	1.45
35	BA	527	7MG	C8-N9	-20.92	1.32	1.45
2	AB	2069	7MG	C8-N9	-20.54	1.32	1.45
36	BB	8	4SU	C4-N3	6.97	1.44	1.37
2	AB	1911	PSU	C2-N1	6.30	1.44	1.36
35	BA	1207	2MG	C2-N1	5.90	1.46	1.36
35	BA	966	2MG	C2-N1	5.88	1.46	1.36
2	AB	2445	2MG	C2-N1	5.78	1.45	1.36
36	BB	37	MIA	C2-S10	5.29	1.80	1.75
38	BD	56	PSU	C2-N1	5.11	1.43	1.36
2	AB	2580	PSU	O4'-C1'	-5.08	1.36	1.43
38	BD	8	4SU	C5-C4	-5.05	1.36	1.42
2	AB	2580	PSU	C2-N1	5.01	1.43	1.36
35	BA	527	7MG	C5-N7	4.66	1.41	1.35
2	AB	1915	3TD	C10-N3	4.64	1.55	1.47
2	AB	955	PSU	C2-N1	4.55	1.42	1.36
35	BA	966	2MG	CM2-N2	4.46	1.53	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	2552	OMU	C2-N1	4.42	1.45	1.38
36	BB	20	H2U	C5-C4	4.39	1.59	1.50
2	AB	2580	PSU	C6-C5	4.39	1.40	1.35
2	AB	2504	PSU	C2-N3	4.39	1.44	1.37
2	AB	1618	6MZ	C6-N6	4.27	1.39	1.34
2	AB	2449	H2U	C5-C4	4.24	1.59	1.50
2	AB	1915	3TD	C2-N1	4.05	1.42	1.37
2	AB	2504	PSU	C2-N1	3.98	1.41	1.36
2	AB	1962	5MC	C6-C5	3.95	1.41	1.34
36	BB	8	4SU	C5-C4	-3.84	1.37	1.42
38	BD	8	4SU	C4-S4	-3.77	1.62	1.68
35	BA	527	7MG	C1'-N9	3.72	1.53	1.46
35	BA	1407	5MC	O2'-C2'	-3.72	1.33	1.43
2	AB	2069	7MG	C5-N7	3.72	1.40	1.35
36	BB	55	PSU	C6-N1	3.64	1.42	1.36
36	BB	55	PSU	O4'-C4'	-3.62	1.36	1.45
2	AB	1962	5MC	O4'-C1'	3.62	1.50	1.42
2	AB	1917	PSU	C2-N1	3.54	1.41	1.36
35	BA	527	7MG	C4-N9	-3.35	1.33	1.37
2	AB	955	PSU	C6-C5	3.34	1.39	1.35
35	BA	1207	2MG	C4-N9	3.31	1.46	1.38
2	AB	1915	3TD	C6-N1	3.30	1.41	1.36
35	BA	1518	MA6	C1'-N9	3.27	1.55	1.46
38	BD	55	5MU	C4-C5	-3.25	1.39	1.44
2	AB	745	1MG	C2-N3	3.24	1.38	1.33
36	BB	8	4SU	C6-N1	3.23	1.45	1.38
2	AB	2069	7MG	O4'-C1'	3.23	1.49	1.42
38	BD	8	4SU	C3'-C4'	-3.15	1.45	1.53
38	BD	33	OMC	O4'-C4'	-3.11	1.38	1.45
2	AB	1618	6MZ	C8-N9	-3.11	1.32	1.37
2	AB	2251	OMG	O3'-C3'	-3.08	1.35	1.43
2	AB	1917	PSU	C6-C5	-3.07	1.31	1.35
38	BD	8	4SU	C2-N1	3.07	1.43	1.38
36	BB	37	MIA	C2-N3	3.05	1.38	1.34
2	AB	747	5MU	C2-N1	3.04	1.43	1.38
2	AB	2457	PSU	C6-C5	3.01	1.38	1.35
38	BD	56	PSU	C4-N3	3.01	1.44	1.38
2	AB	2457	PSU	C2'-C1'	-3.00	1.49	1.53
35	BA	967	5MC	C1'-N1	2.95	1.55	1.47
35	BA	1498	UR3	C4-N3	2.94	1.46	1.40
36	BB	20	H2U	C4-N3	-2.94	1.32	1.37
36	BB	46	7MG	C5-N7	-2.92	1.32	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BB	16	H2U	O4'-C4'	-2.91	1.38	1.45
35	BA	1402	4OC	O5'-C5'	-2.89	1.35	1.44
35	BA	516	PSU	C2-N1	2.87	1.40	1.36
35	BA	1516	2MG	O4'-C4'	-2.87	1.38	1.45
2	AB	1962	5MC	C5-C4	-2.87	1.41	1.44
2	AB	2445	2MG	O4'-C4'	-2.85	1.38	1.45
36	BB	16	H2U	C5-C4	2.84	1.56	1.50
35	BA	1516	2MG	C2-N1	2.84	1.41	1.36
36	BB	55	PSU	C2-N3	2.83	1.42	1.37
2	AB	745	1MG	O2'-C2'	2.82	1.49	1.43
2	AB	2449	H2U	O4'-C4'	-2.82	1.38	1.45
2	AB	2580	PSU	C2-N3	2.81	1.42	1.37
2	AB	1911	PSU	O3'-C3'	-2.77	1.36	1.43
2	AB	1939	5MU	C6-C5	2.77	1.39	1.34
2	AB	2445	2MG	C4-N3	2.77	1.40	1.34
38	BD	21	H2U	C4-N3	-2.77	1.33	1.37
2	AB	747	5MU	O2-C2	2.76	1.28	1.23
2	AB	747	5MU	O2'-C2'	-2.76	1.36	1.43
35	BA	966	2MG	O2'-C2'	-2.75	1.36	1.43
36	BB	46	7MG	C1'-N9	2.74	1.51	1.46
35	BA	527	7MG	C4-N3	2.74	1.40	1.34
36	BB	54	5MU	C6-C5	2.73	1.39	1.34
2	AB	1962	5MC	O2'-C2'	-2.69	1.36	1.43
36	BB	55	PSU	C2-N1	2.68	1.40	1.36
35	BA	1207	2MG	C5'-C4'	2.67	1.59	1.51
2	AB	1835	2MG	C2-N2	2.66	1.38	1.33
2	AB	2030	6MZ	C6-N6	2.66	1.37	1.34
2	AB	2069	7MG	C8-N7	-2.64	1.29	1.42
36	BB	17	H2U	C5-C4	2.64	1.55	1.50
2	AB	1915	3TD	C5'-C4'	2.64	1.59	1.51
2	AB	1939	5MU	C1'-N1	2.62	1.55	1.47
38	BD	56	PSU	O4-C4	-2.62	1.18	1.23
2	AB	2457	PSU	C2-N3	2.60	1.41	1.37
36	BB	37	MIA	C16-C14	2.60	1.57	1.50
36	BB	8	4SU	C2-N1	2.59	1.42	1.38
36	BB	32	OMC	O4'-C4'	-2.58	1.39	1.45
2	AB	1939	5MU	O4'-C4'	-2.58	1.39	1.45
2	AB	955	PSU	C1'-C5	2.58	1.56	1.50
2	AB	2069	7MG	O3'-C3'	-2.58	1.36	1.43
2	AB	2457	PSU	O4'-C1'	-2.58	1.40	1.43
2	AB	2457	PSU	O4'-C4'	-2.57	1.39	1.45
38	BD	55	5MU	O4'-C4'	-2.57	1.39	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	527	7MG	C6-N1	2.57	1.43	1.38
2	AB	2251	OMG	O4'-C4'	-2.57	1.39	1.45
2	AB	2503	2MA	C6-N1	2.56	1.38	1.35
35	BA	516	PSU	C6-N1	2.56	1.40	1.36
38	BD	56	PSU	C6-C5	2.55	1.38	1.35
36	BB	54	5MU	O4'-C1'	2.55	1.47	1.42
35	BA	1519	MA6	C2-N1	-2.53	1.29	1.33
35	BA	1519	MA6	C4-N9	2.53	1.42	1.37
2	AB	1962	5MC	O5'-C5'	-2.52	1.36	1.44
35	BA	1402	4OC	CM4-N4	2.52	1.50	1.45
35	BA	516	PSU	O4'-C1'	2.48	1.47	1.43
2	AB	2504	PSU	C6-C5	2.42	1.38	1.35
36	BB	20	H2U	O4-C4	-2.42	1.18	1.23
2	AB	745	1MG	C5-C6	-2.41	1.39	1.45
2	AB	1618	6MZ	C3'-C4'	2.41	1.59	1.53
36	BB	55	PSU	C5'-C4'	2.41	1.58	1.51
36	BB	17	H2U	O4'-C4'	-2.39	1.39	1.45
2	AB	2504	PSU	C4-C5	2.39	1.51	1.44
2	AB	2552	OMU	C2-N3	2.39	1.42	1.38
35	BA	1518	MA6	O3'-C3'	2.39	1.48	1.43
38	BD	55	5MU	C5M-C5	2.38	1.56	1.50
36	BB	54	5MU	O4'-C4'	-2.37	1.39	1.45
36	BB	20	H2U	C3'-C4'	2.37	1.59	1.53
35	BA	1402	4OC	C2-N3	2.36	1.41	1.36
2	AB	2580	PSU	O4-C4	-2.36	1.19	1.23
2	AB	1917	PSU	O2'-C2'	-2.35	1.37	1.43
38	BD	55	5MU	O4'-C1'	-2.35	1.36	1.42
35	BA	967	5MC	O3'-C3'	-2.35	1.37	1.43
2	AB	1835	2MG	C8-N7	2.34	1.39	1.32
35	BA	1207	2MG	C3'-C4'	-2.33	1.47	1.53
2	AB	746	PSU	O4'-C4'	-2.31	1.39	1.45
2	AB	2030	6MZ	C5'-C4'	2.31	1.58	1.51
36	BB	37	MIA	C11-S10	2.31	1.88	1.79
2	AB	1911	PSU	C2'-C1'	2.30	1.56	1.53
2	AB	1962	5MC	C2-N3	2.29	1.40	1.36
2	AB	2449	H2U	C1'-N1	-2.26	1.42	1.46
2	AB	2445	2MG	CM2-N2	2.23	1.49	1.45
35	BA	1407	5MC	C1'-N1	2.23	1.53	1.47
2	AB	1911	PSU	C5'-C4'	2.22	1.58	1.51
36	BB	17	H2U	O2'-C2'	-2.22	1.37	1.43
2	AB	747	5MU	C2'-C1'	2.22	1.60	1.53
36	BB	16	H2U	O2-C2	2.21	1.27	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BB	54	5MU	C1'-N1	2.20	1.53	1.47
35	BA	516	PSU	O5'-C5'	-2.19	1.37	1.44
35	BA	516	PSU	C2'-C1'	-2.18	1.50	1.53
2	AB	2605	PSU	C2-N3	2.17	1.41	1.37
2	AB	1939	5MU	C5M-C5	2.16	1.55	1.50
36	BB	8	4SU	O5'-C5'	-2.16	1.37	1.44
2	AB	1962	5MC	CM5-C5	2.16	1.55	1.50
2	AB	2580	PSU	C6-N1	2.15	1.39	1.36
2	AB	1915	3TD	O2-C2	2.13	1.26	1.23
2	AB	2457	PSU	C4-N3	2.13	1.42	1.38
2	AB	2552	OMU	C3'-C4'	-2.12	1.47	1.53
2	AB	2498	OMC	C2'-C1'	-2.11	1.47	1.53
2	AB	1917	PSU	C2-N3	2.09	1.40	1.37
2	AB	2498	OMC	C1'-N1	2.08	1.53	1.47
36	BB	20	H2U	O4'-C4'	-2.07	1.40	1.45
2	AB	2605	PSU	O4'-C4'	-2.06	1.40	1.45
35	BA	1207	2MG	O5'-C5'	-2.05	1.38	1.44
2	AB	745	1MG	CM1-N1	2.05	1.50	1.47
36	BB	32	OMC	O4'-C1'	2.05	1.46	1.42
2	AB	2552	OMU	C4-N3	2.02	1.42	1.38
35	BA	966	2MG	C5-N7	-2.02	1.35	1.39
2	AB	955	PSU	C6-N1	2.02	1.39	1.36
35	BA	1516	2MG	C2-N3	2.02	1.35	1.32
35	BA	1498	UR3	C3U-N3	2.01	1.50	1.47
35	BA	1519	MA6	C5-C4	-2.01	1.35	1.39
36	BB	16	H2U	O5'-C5'	-2.00	1.38	1.44
35	BA	967	5MC	O4'-C1'	2.00	1.46	1.42

All (260) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2580	PSU	C3'-C2'-C1'	10.15	113.66	101.69
36	BB	8	4SU	S4-C4-N3	-10.02	109.72	120.20
2	AB	955	PSU	C3'-C2'-C1'	-8.53	91.61	101.69
36	BB	8	4SU	C5-C4-N3	8.27	122.44	114.75
2	AB	1962	5MC	CM5-C5-C6	-7.59	112.57	122.85
2	AB	2030	6MZ	C9-N6-C6	7.57	129.87	122.85
36	BB	55	PSU	C6-C5-C4	6.89	122.82	118.17
36	BB	54	5MU	C6-C5-C4	6.39	123.29	118.02
36	BB	54	5MU	C5-C6-N1	-6.07	116.72	123.31
36	BB	37	MIA	C11-S10-C2	6.05	106.79	102.25
2	AB	747	5MU	C5M-C5-C6	-6.00	114.73	122.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	955	PSU	O4'-C1'-C2'	6.00	113.45	105.15
35	BA	527	7MG	N9-C8-N7	5.79	111.58	103.37
36	BB	54	5MU	C5M-C5-C6	-5.41	115.53	122.85
2	AB	2030	6MZ	O4'-C1'-N9	5.29	118.26	108.09
2	AB	746	PSU	C6-C5-C4	5.17	121.66	118.17
2	AB	1962	5MC	C5-C6-N1	-5.10	117.77	123.31
35	BA	967	5MC	C5-C6-N1	-5.04	117.84	123.31
2	AB	747	5MU	C5M-C5-C4	5.02	124.14	118.78
35	BA	516	PSU	C6-C5-C4	5.01	121.55	118.17
2	AB	2504	PSU	C3'-C2'-C1'	4.98	107.57	101.69
2	AB	1911	PSU	C6-N1-C2	4.96	127.29	122.69
36	BB	8	4SU	C4-N3-C2	-4.94	122.58	127.31
36	BB	54	5MU	O2-C2-N1	4.89	129.17	122.80
2	AB	1917	PSU	C6-C5-C4	4.81	121.42	118.17
36	BB	17	H2U	C3'-C2'-C1'	4.73	110.41	101.46
2	AB	746	PSU	C3'-C2'-C1'	-4.70	96.14	101.69
2	AB	1618	6MZ	C4-C5-C6	4.67	120.66	116.78
35	BA	1516	2MG	C2-N1-C6	-4.63	118.96	124.55
2	AB	1911	PSU	N1-C2-N3	-4.62	110.28	115.17
2	AB	1618	6MZ	C5-C4-N9	4.59	110.81	105.81
36	BB	55	PSU	O4'-C1'-C2'	4.58	111.49	105.15
36	BB	55	PSU	O2-C2-N1	-4.57	118.07	122.79
35	BA	1402	4OC	O2-C2-N3	-4.52	115.21	122.33
35	BA	1402	4OC	O4'-C1'-N1	4.51	118.59	108.36
2	AB	1962	5MC	CM5-C5-C4	4.45	127.82	120.51
38	BD	55	5MU	C2'-C3'-C4'	-4.43	94.06	102.61
2	AB	1618	6MZ	C9-N6-C6	4.42	126.95	122.85
35	BA	516	PSU	O2-C2-N1	-4.41	118.24	122.79
2	AB	1962	5MC	O2-C2-N3	-4.40	115.39	122.33
2	AB	1618	6MZ	C4-N9-C8	-4.36	101.16	105.74
2	AB	1917	PSU	O4'-C1'-C2'	4.35	111.17	105.15
35	BA	967	5MC	CM5-C5-C6	-4.35	116.97	122.85
38	BD	33	OMC	C4-N3-C2	4.35	127.10	120.26
35	BA	1519	MA6	C2-N1-C6	4.25	122.21	111.83
36	BB	17	H2U	C2'-C3'-C4'	-4.22	94.45	102.61
2	AB	1915	3TD	C6-C5-C4	4.20	121.01	118.19
2	AB	1618	6MZ	C5-C4-N3	-4.20	120.93	126.72
2	AB	747	5MU	O2-C2-N1	-4.18	117.35	122.80
2	AB	745	1MG	C3'-C2'-C1'	4.14	109.30	101.46
35	BA	1402	4OC	C6-C5-C4	4.03	121.86	117.00
38	BD	56	PSU	C6-N1-C2	3.96	126.37	122.69
35	BA	1516	2MG	C2-N3-C4	3.95	116.95	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2580	PSU	C6-C5-C4	3.93	120.82	118.17
35	BA	967	5MC	C6-N1-C2	3.93	126.19	120.95
2	AB	1962	5MC	O4'-C1'-N1	3.90	117.19	108.36
35	BA	1402	4OC	C2'-C1'-N1	-3.86	106.91	114.24
35	BA	1516	2MG	N1-C2-N2	-3.86	112.62	116.56
36	BB	32	OMC	O4'-C4'-C3'	-3.81	97.59	105.15
36	BB	8	4SU	C6-C5-C4	-3.78	116.67	119.95
36	BB	20	H2U	C3'-C2'-C1'	-3.73	94.41	101.46
2	AB	2605	PSU	O4-C4-N3	3.72	127.12	120.11
2	AB	747	5MU	C6-C5-C4	3.72	121.08	118.02
2	AB	2580	PSU	O4'-C4'-C3'	3.71	112.52	105.15
36	BB	32	OMC	C3'-C2'-C1'	-3.70	95.73	102.81
2	AB	2449	H2U	O4'-C1'-N1	3.69	114.33	109.30
36	BB	54	5MU	O2-C2-N3	-3.68	114.70	121.49
2	AB	2498	OMC	O2-C2-N3	-3.64	116.59	122.33
2	AB	2504	PSU	O2'-C2'-C1'	-3.63	102.58	111.21
36	BB	8	4SU	O2-C2-N1	3.61	127.50	122.80
36	BB	20	H2U	O4'-C1'-C2'	3.59	114.30	106.62
2	AB	2457	PSU	N1-C2-N3	-3.53	111.44	115.17
35	BA	516	PSU	C6-N1-C2	-3.53	119.41	122.69
2	AB	2069	7MG	N9-C8-N7	3.52	108.35	103.37
2	AB	1915	3TD	O4'-C1'-C2'	3.51	110.01	105.15
2	AB	2457	PSU	C6-C5-C4	3.46	120.51	118.17
38	BD	21	H2U	O4'-C1'-N1	3.45	114.00	109.30
2	AB	747	5MU	O3'-C3'-C2'	3.41	122.74	111.82
36	BB	37	MIA	C2'-C3'-C4'	3.40	109.19	102.61
35	BA	1407	5MC	C3'-C2'-C1'	-3.39	95.04	101.46
38	BD	8	4SU	C5-C4-N3	3.39	117.90	114.75
2	AB	1962	5MC	C1'-N1-C6	-3.37	115.59	121.15
2	AB	2580	PSU	C2'-C3'-C4'	-3.36	96.11	102.61
35	BA	1407	5MC	CM5-C5-C4	3.32	125.97	120.51
2	AB	2503	2MA	N9-C8-N7	-3.31	109.24	113.94
2	AB	747	5MU	N3-C2-N1	3.30	119.18	114.89
36	BB	46	7MG	N9-C8-N7	3.28	108.02	103.37
2	AB	1911	PSU	C3'-C2'-C1'	-3.27	97.83	101.69
35	BA	966	2MG	CM2-N2-C2	3.23	130.59	123.65
2	AB	747	5MU	C4-N3-C2	-3.23	123.11	127.34
2	AB	1939	5MU	O2-C2-N3	-3.19	115.60	121.49
2	AB	1962	5MC	C4-N3-C2	-3.18	116.39	120.81
36	BB	55	PSU	C5'-C4'-C3'	-3.18	103.77	115.21
35	BA	1498	UR3	O4'-C1'-C2'	-3.17	99.83	106.62
36	BB	32	OMC	CM2-O2'-C2'	3.15	122.56	114.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1518	MA6	C2-N1-C6	3.12	119.45	111.83
38	BD	55	5MU	O2-C2-N1	3.11	126.85	122.80
35	BA	516	PSU	C3'-C2'-C1'	3.09	105.33	101.69
35	BA	1518	MA6	N1-C6-N6	3.07	120.60	116.86
2	AB	1939	5MU	O3'-C3'-C4'	-3.03	102.38	111.08
2	AB	2503	2MA	O4'-C1'-N9	3.03	113.90	108.09
35	BA	1407	5MC	C5-C4-N3	3.02	124.86	121.75
35	BA	1518	MA6	O4'-C1'-N9	3.02	113.88	108.09
36	BB	17	H2U	O4'-C1'-N1	3.00	113.38	109.30
38	BD	33	OMC	C2'-C1'-N1	-2.98	108.59	114.24
35	BA	1516	2MG	N2-C2-N3	2.96	124.27	120.51
2	AB	1835	2MG	C2-N3-C4	2.95	115.69	112.00
2	AB	746	PSU	C5-C4-N3	-2.92	110.13	116.55
2	AB	2552	OMU	O4-C4-N3	2.92	123.50	119.27
36	BB	8	4SU	O4'-C4'-C5'	2.90	118.63	109.33
36	BB	17	H2U	O4-C4-N3	2.90	124.77	120.30
35	BA	1498	UR3	O4'-C1'-N1	2.89	114.91	108.36
2	AB	1939	5MU	C6-N1-C2	-2.89	118.42	121.30
35	BA	1207	2MG	O3'-C3'-C2'	2.88	121.06	111.82
38	BD	8	4SU	C5-C4-S4	-2.85	121.05	124.31
2	AB	2504	PSU	O4'-C1'-C2'	-2.84	101.23	105.15
2	AB	2504	PSU	C4'-O4'-C1'	2.83	115.53	108.44
36	BB	32	OMC	O4'-C1'-N1	2.82	114.75	108.36
36	BB	17	H2U	C5-C4-N3	-2.81	113.70	116.69
2	AB	2552	OMU	O4-C4-C5	-2.77	120.38	125.16
2	AB	1939	5MU	C4-N3-C2	-2.77	123.71	127.34
2	AB	2605	PSU	O2'-C2'-C1'	-2.76	104.66	111.21
2	AB	1939	5MU	O2-C2-N1	2.75	126.38	122.80
2	AB	2457	PSU	C4'-O4'-C1'	2.73	115.28	108.44
2	AB	2445	2MG	C2-N3-C4	2.72	115.40	112.00
2	AB	2449	H2U	O3'-C3'-C2'	-2.72	103.11	111.82
2	AB	2030	6MZ	C1'-N9-C8	2.70	133.09	127.09
2	AB	2069	7MG	N2-C2-N1	2.70	122.46	116.76
36	BB	16	H2U	O3'-C3'-C4'	2.70	118.83	111.08
2	AB	1835	2MG	N9-C8-N7	-2.70	108.40	113.40
35	BA	527	7MG	O4'-C1'-N9	2.70	112.97	109.30
2	AB	2457	PSU	O4'-C4'-C3'	-2.69	99.82	105.15
2	AB	2552	OMU	C4-N3-C2	-2.68	123.29	126.61
36	BB	16	H2U	C2'-C3'-C4'	-2.67	97.44	102.61
2	AB	1835	2MG	C3'-C2'-C1'	-2.67	96.41	101.46
2	AB	745	1MG	C5-C4-N3	-2.67	124.14	128.39
36	BB	46	7MG	C2'-C3'-C4'	-2.66	97.46	102.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BD	55	5MU	O2'-C2'-C1'	2.66	119.25	110.10
35	BA	516	PSU	C5'-C4'-C3'	2.66	124.77	115.21
2	AB	2030	6MZ	C4-N9-C1'	-2.63	120.48	126.63
2	AB	2498	OMC	C5-C4-N4	-2.63	116.03	120.63
2	AB	1618	6MZ	C4-C5-N7	-2.63	107.58	110.58
2	AB	2069	7MG	C6-C5-N7	2.63	136.00	131.93
36	BB	55	PSU	O2-C2-N3	2.61	126.51	121.86
2	AB	2552	OMU	O4'-C1'-N1	2.60	114.25	108.36
35	BA	516	PSU	O2'-C2'-C1'	2.59	117.37	111.21
2	AB	2605	PSU	O4-C4-C5	-2.59	117.56	124.01
2	AB	2069	7MG	O2'-C2'-C1'	-2.59	101.19	110.10
35	BA	527	7MG	C2'-C3'-C4'	2.58	107.60	102.61
2	AB	2503	2MA	N6-C6-N1	2.58	120.51	117.03
36	BB	37	MIA	N3-C4-N9	-2.58	123.72	126.99
35	BA	1519	MA6	C5-N7-C8	2.57	107.50	103.45
2	AB	2030	6MZ	C3'-C2'-C1'	-2.57	96.60	101.46
35	BA	1407	5MC	O4'-C4'-C3'	-2.57	100.06	105.15
2	AB	2552	OMU	O2'-C2'-C1'	2.56	113.86	108.99
2	AB	745	1MG	C2'-C3'-C4'	-2.53	97.71	102.61
35	BA	516	PSU	O4'-C1'-C2'	-2.53	101.65	105.15
2	AB	2575	CH	C5-C4-N3	2.52	119.48	118.04
38	BD	56	PSU	O2-C2-N1	2.52	125.38	122.79
35	BA	1516	2MG	N9-C8-N7	2.51	118.06	113.40
35	BA	1402	4OC	O2-C2-N1	2.50	123.80	118.90
2	AB	2457	PSU	C6-N1-C2	2.50	125.01	122.69
36	BB	17	H2U	O3'-C3'-C2'	2.50	119.82	111.82
38	BD	56	PSU	O2'-C2'-C1'	-2.49	105.30	111.21
2	AB	745	1MG	O3'-C3'-C4'	2.49	118.22	111.08
36	BB	55	PSU	O3'-C3'-C4'	2.48	118.22	111.08
35	BA	967	5MC	CM5-C5-C4	2.48	124.58	120.51
35	BA	1498	UR3	O3'-C3'-C2'	-2.46	103.93	111.82
2	AB	1911	PSU	O2-C2-N1	2.45	125.31	122.79
2	AB	1911	PSU	O3'-C3'-C2'	2.44	119.65	111.82
38	BD	8	4SU	O4'-C1'-C2'	-2.43	101.41	106.62
2	AB	2498	OMC	O4'-C4'-C5'	2.43	117.12	109.33
36	BB	32	OMC	N4-C4-N3	-2.43	113.57	117.91
36	BB	55	PSU	C5-C6-N1	-2.42	118.78	122.14
36	BB	20	H2U	O4-C4-N3	2.42	124.03	120.30
36	BB	8	4SU	C2'-C1'-N1	2.41	119.96	113.25
38	BD	21	H2U	C2'-C3'-C4'	-2.41	97.96	102.61
36	BB	16	H2U	C5-C4-N3	-2.40	114.13	116.69
38	BD	55	5MU	O4-C4-C5	2.39	127.65	124.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	2498	OMC	O2'-C2'-C1'	-2.39	104.44	108.99
2	AB	1939	5MU	N3-C2-N1	2.39	118.00	114.89
2	AB	2552	OMU	C1'-N1-C2	2.39	121.89	117.59
2	AB	2552	OMU	CM2-O2'-C2'	2.39	120.60	114.47
2	AB	2069	7MG	C6-C5-C4	-2.38	118.21	122.40
35	BA	967	5MC	O4'-C1'-N1	2.38	113.76	108.36
35	BA	966	2MG	C2-N3-C4	2.38	114.98	112.00
36	BB	16	H2U	O4'-C1'-N1	2.37	112.53	109.30
2	AB	745	1MG	O4'-C1'-C2'	-2.36	101.56	106.62
2	AB	2580	PSU	C5-C6-N1	-2.36	118.86	122.14
2	AB	1835	2MG	N2-C2-N3	2.35	123.51	120.51
2	AB	745	1MG	N2-C2-N1	2.33	120.66	118.79
35	BA	1402	4OC	CM4-N4-C4	2.33	127.01	122.45
2	AB	1911	PSU	C5-C6-N1	-2.32	118.92	122.14
2	AB	2445	2MG	N9-C4-N3	2.32	130.59	125.95
2	AB	1939	5MU	C2'-C3'-C4'	2.30	107.05	102.61
36	BB	37	MIA	C6-C5-N7	2.30	134.93	132.43
36	BB	46	7MG	O3'-C3'-C2'	2.30	119.18	111.82
2	AB	1835	2MG	N9-C4-N3	2.29	130.54	125.95
38	BD	33	OMC	O2'-C2'-C1'	-2.28	104.66	108.99
2	AB	747	5MU	C6-N1-C2	-2.28	119.03	121.30
35	BA	1407	5MC	C5-C4-N4	-2.27	118.19	121.39
2	AB	1962	5MC	C5-C4-N4	-2.27	118.19	121.39
2	AB	2575	CH	O4'-C4'-C5'	2.27	116.60	109.33
2	AB	2503	2MA	CM2-C2-N1	-2.27	113.73	117.13
36	BB	8	4SU	C5-C4-S4	2.27	126.89	124.31
38	BD	56	PSU	N1-C2-N3	-2.27	112.77	115.17
2	AB	2449	H2U	O4-C4-N3	2.25	123.77	120.30
2	AB	1915	3TD	O3'-C3'-C4'	-2.24	104.65	111.08
2	AB	2503	2MA	C5-N7-C8	2.24	106.97	103.45
35	BA	966	2MG	C4-C5-N7	-2.24	107.12	110.67
36	BB	8	4SU	O3'-C3'-C2'	2.24	118.98	111.82
2	AB	2069	7MG	O6-C6-N1	2.23	124.31	120.11
2	AB	1835	2MG	C5-C4-N3	-2.23	124.85	128.39
36	BB	55	PSU	O3'-C3'-C2'	2.22	118.95	111.82
2	AB	1915	3TD	C1'-C5-C4	2.22	120.97	117.61
2	AB	745	1MG	N9-C4-N3	2.22	130.39	125.95
2	AB	745	1MG	O4'-C1'-N9	2.20	113.36	108.36
35	BA	1498	UR3	O4-C4-N3	2.20	122.34	119.66
38	BD	8	4SU	C6-N1-C2	-2.20	118.32	121.00
2	AB	745	1MG	O4'-C4'-C3'	2.19	109.51	105.15
2	AB	1962	5MC	O4'-C4'-C3'	2.19	109.50	105.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	BB	55	PSU	O4-C4-C5	2.19	129.44	124.01
2	AB	2030	6MZ	O4'-C1'-C2'	-2.19	101.93	106.62
38	BD	8	4SU	C5'-C4'-C3'	-2.19	107.34	115.21
36	BB	55	PSU	C2'-C3'-C4'	-2.18	98.39	102.61
2	AB	1835	2MG	C8-N9-C4	2.17	110.09	106.03
35	BA	1519	MA6	N1-C6-N6	2.16	119.49	116.86
2	AB	1962	5MC	O2-C2-N1	2.16	123.14	118.90
2	AB	2552	OMU	O3'-C3'-C4'	-2.16	104.88	111.08
2	AB	2445	2MG	N2-C2-N3	2.15	123.25	120.51
2	AB	2445	2MG	C5-C4-N3	-2.15	124.97	128.39
35	BA	1516	2MG	C4'-O4'-C1'	2.15	114.21	109.47
36	BB	32	OMC	O3'-C3'-C4'	-2.13	104.96	111.08
2	AB	1835	2MG	C6-C5-C4	2.13	122.03	118.83
36	BB	55	PSU	C5-C4-N3	-2.12	111.89	116.55
35	BA	1207	2MG	O2'-C2'-C3'	-2.11	105.06	111.82
2	AB	2445	2MG	N1-C2-N2	-2.10	114.42	116.56
2	AB	955	PSU	C5-C6-N1	-2.10	119.23	122.14
35	BA	966	2MG	C8-N7-C5	2.10	108.00	104.26
2	AB	1911	PSU	O4'-C1'-C2'	2.09	108.04	105.15
36	BB	17	H2U	O4'-C4'-C3'	2.09	109.29	105.15
2	AB	2457	PSU	C5-C4-N3	-2.08	111.97	116.55
2	AB	1618	6MZ	N9-C8-N7	2.08	116.89	113.94
2	AB	2552	OMU	O4'-C4'-C3'	2.08	109.28	105.15
2	AB	745	1MG	C5'-C4'-C3'	-2.07	107.75	115.21
35	BA	1402	4OC	C1'-N1-C6	2.07	125.20	120.78
35	BA	1207	2MG	N9-C4-N3	2.06	130.07	125.95
2	AB	2575	CH	C3'-C2'-C1'	-2.06	97.88	100.84
36	BB	46	7MG	O3'-C3'-C4'	2.06	116.99	111.08
35	BA	1407	5MC	O4'-C4'-C5'	2.04	115.89	109.33
35	BA	966	2MG	C6-C5-C4	2.04	121.90	118.83
36	BB	16	H2U	O4-C4-N3	2.04	123.44	120.30
2	AB	2503	2MA	C5-C4-N9	2.04	108.03	105.81
38	BD	8	4SU	C1'-N1-C6	2.04	125.13	120.78
2	AB	747	5MU	O2'-C2'-C1'	-2.03	103.10	110.10
2	AB	745	1MG	CM1-N1-C2	2.03	122.81	120.70
36	BB	37	MIA	O4'-C4'-C5'	-2.03	102.83	109.33
2	AB	2030	6MZ	C2'-C1'-N9	-2.03	108.26	113.30
35	BA	516	PSU	N1-C2-N3	2.02	117.29	115.17
36	BB	55	PSU	C6-N1-C2	-2.00	120.83	122.69

There are no chirality outliers.

All (23) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	AB	746	PSU	O4'-C1'-C5-C4
2	AB	746	PSU	O4'-C1'-C5-C6
2	AB	2503	2MA	O4'-C1'-N9-C8
2	AB	2503	2MA	O4'-C1'-N9-C4
2	AB	2580	PSU	O4'-C1'-C5-C4
2	AB	2580	PSU	O4'-C1'-C5-C6
35	BA	1516	2MG	N1-C2-N2-CM2
35	BA	1516	2MG	N3-C2-N2-CM2
36	BB	37	MIA	O4'-C4'-C5'-O5'
36	BB	37	MIA	C3'-C4'-C5'-O5'
2	AB	2030	6MZ	C2'-C1'-N9-C4
35	BA	527	7MG	C4'-C5'-O5'-P
2	AB	2030	6MZ	C2'-C1'-N9-C8
36	BB	55	PSU	O4'-C1'-C5-C4
36	BB	37	MIA	N6-C12-C13-C14
36	BB	8	4SU	C4'-C5'-O5'-P
35	BA	967	5MC	O4'-C4'-C5'-O5'
2	AB	2498	OMC	C2'-C1'-N1-C6
2	AB	2030	6MZ	O4'-C1'-N9-C8
35	BA	527	7MG	O4'-C4'-C5'-O5'
35	BA	1498	UR3	O4'-C4'-C5'-O5'
2	AB	1911	PSU	O4'-C4'-C5'-O5'
38	BD	8	4SU	O4'-C4'-C5'-O5'

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

2 ligands are 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	$\#\|Z\|>2$
60	TRP	BB	101	36,59	14,15,16	1.79	4 (28%)	15,20,22	3.01	8 (53%)
59	FME	AB	3001	60	8,9,10	1.92	2 (25%)	8,9,11	2.10	3 (37%)

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
60	TRP	BB	101	36,59	-	3/5/6/8	0/2/2/2
59	FME	AB	3001	60	-	3/7/9/11	-

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	AB	3001	FME	CA-N	-4.33	1.40	1.46
60	BB	101	TRP	CE3-CD2	3.28	1.44	1.39
60	BB	101	TRP	CD2-CE2	2.76	1.44	1.41
60	BB	101	TRP	CD1-NE1	2.72	1.41	1.37
59	AB	3001	FME	O-C	2.45	1.29	1.20
60	BB	101	TRP	CE2-NE1	-2.42	1.33	1.37

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	BB	101	TRP	CD2-CE2-NE1	-6.43	102.16	107.52
60	BB	101	TRP	CE2-NE1-CD1	5.83	114.26	109.08
59	AB	3001	FME	O-C-CA	-4.27	113.79	124.77
60	BB	101	TRP	CZ2-CE2-NE1	4.15	137.38	130.74
60	BB	101	TRP	CE2-CD2-CG	3.32	110.52	107.17
60	BB	101	TRP	CB-CG-CD2	3.32	133.07	126.70
59	AB	3001	FME	C-CA-N	2.84	114.98	109.50
60	BB	101	TRP	CB-CG-CD1	-2.50	122.09	126.97
60	BB	101	TRP	CZ2-CE2-CD2	-2.11	120.15	122.19
59	AB	3001	FME	CG-CB-CA	2.08	119.22	112.87
60	BB	101	TRP	CE3-CD2-CG	-2.01	130.85	133.85

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
59	AB	3001	FME	O1-CN-N-CA
59	AB	3001	FME	O-C-CA-CB
60	BB	101	TRP	O-C-CA-CB
60	BB	101	TRP	CA-CB-CG-CD1
60	BB	101	TRP	CA-CB-CG-CD2
59	AB	3001	FME	N-CA-CB-CG

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	AA	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	39:A	O3'	40:U	P	1.77

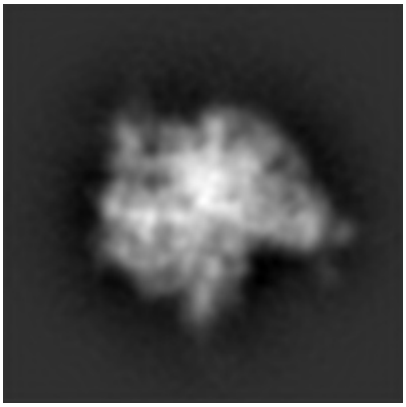
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-5361. These allow visual inspection of the internal detail of the map and identification of artifacts.

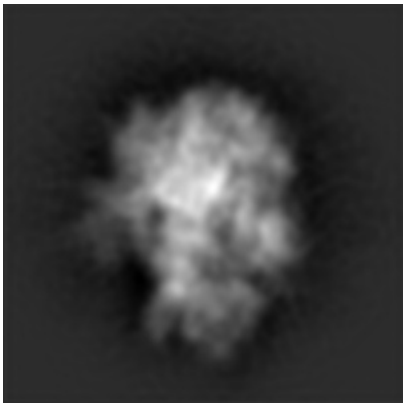
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

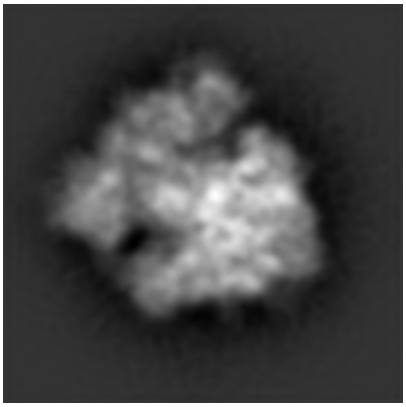
6.1.1 Primary map



X



Y

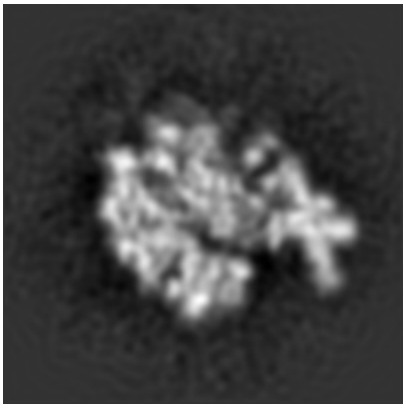


Z

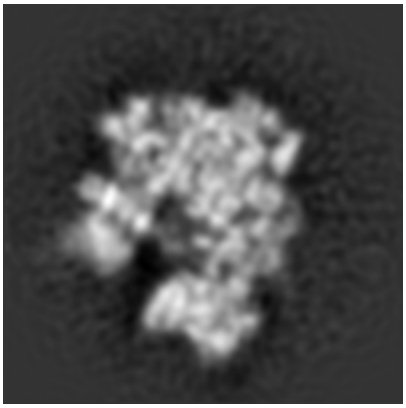
The images above show the map projected in three orthogonal directions.

6.2 Central slices

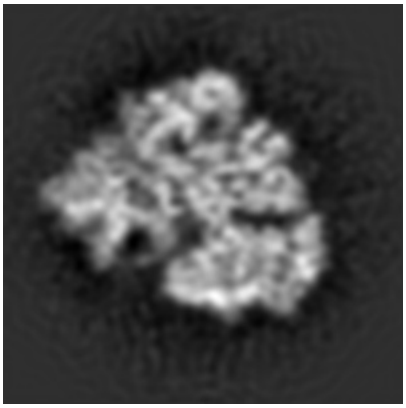
6.2.1 Primary map



X Index: 125



Y Index: 125

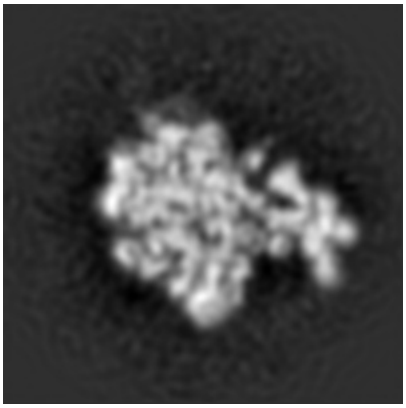


Z Index: 125

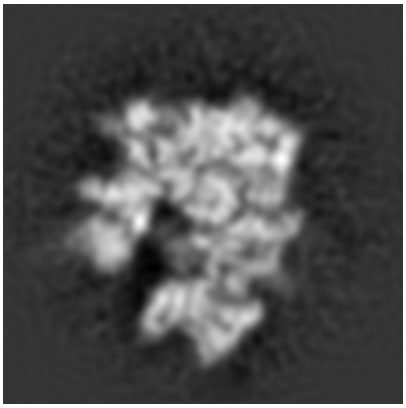
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

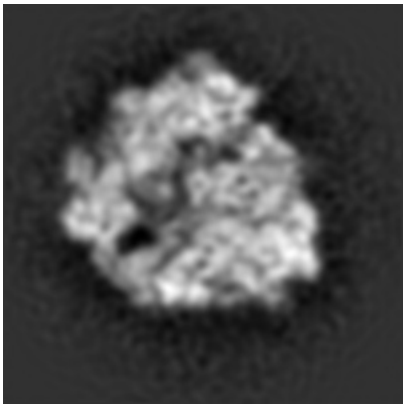
6.3.1 Primary map



X Index: 130



Y Index: 129

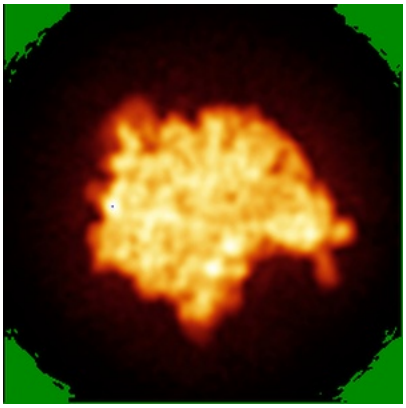


Z Index: 116

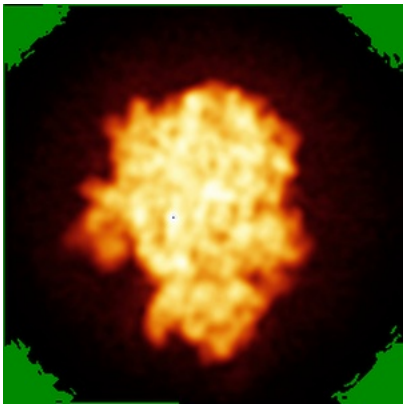
The images above show the largest variance slices of the map in three orthogonal directions.

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

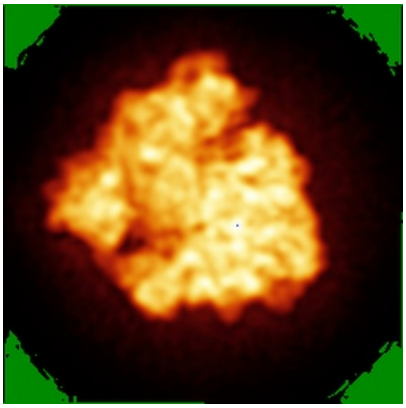
6.4.1 Primary map



X



Y

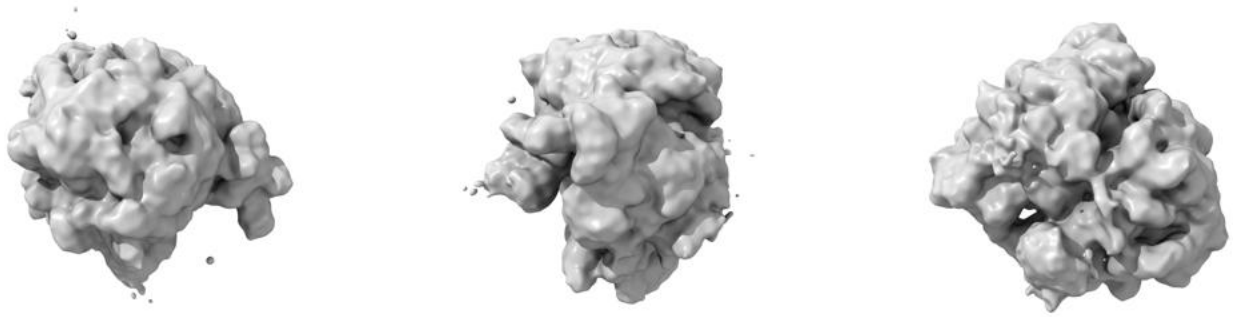


Z

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

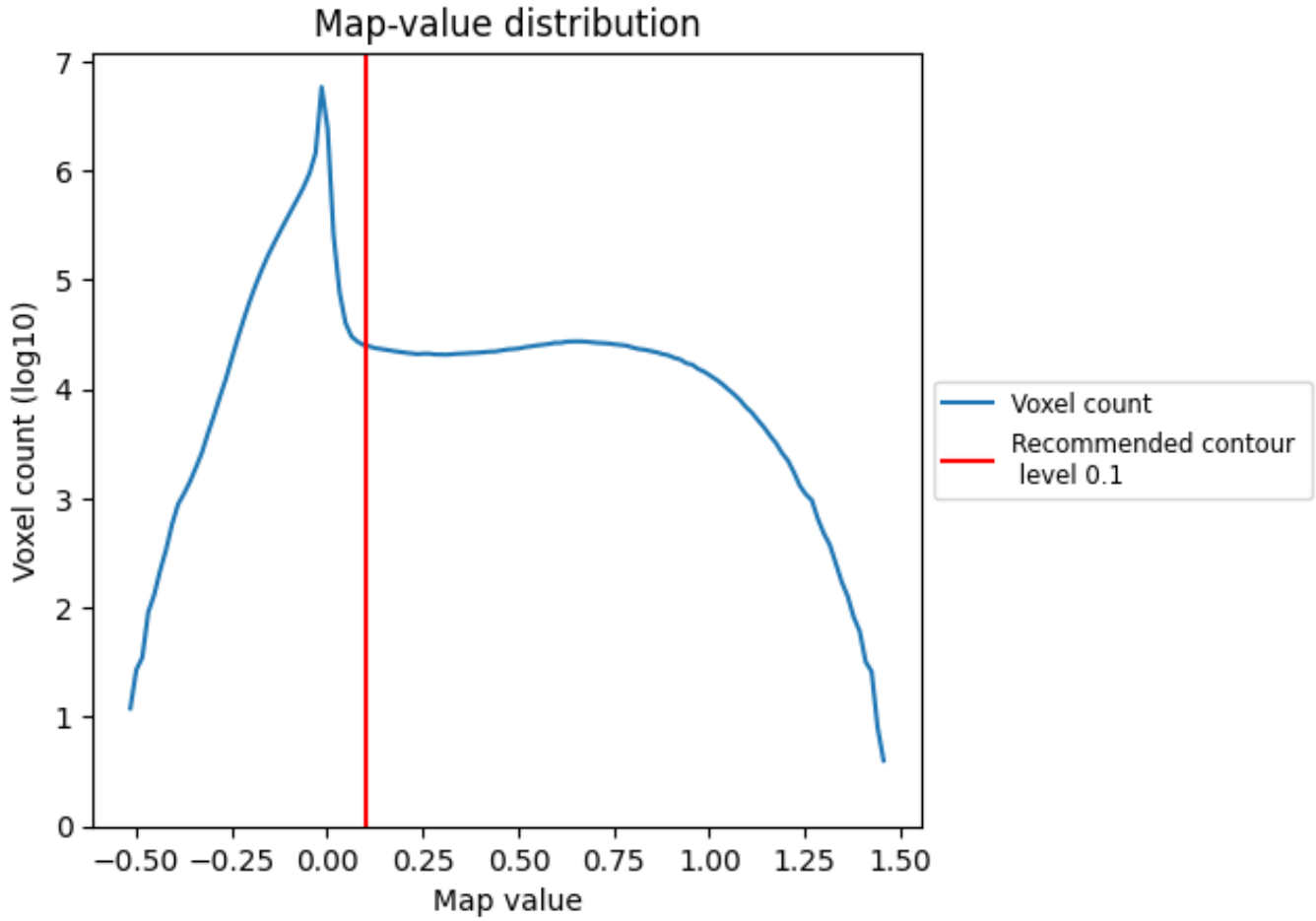
6.6 Mask visualisation (i)

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

7 Map analysis

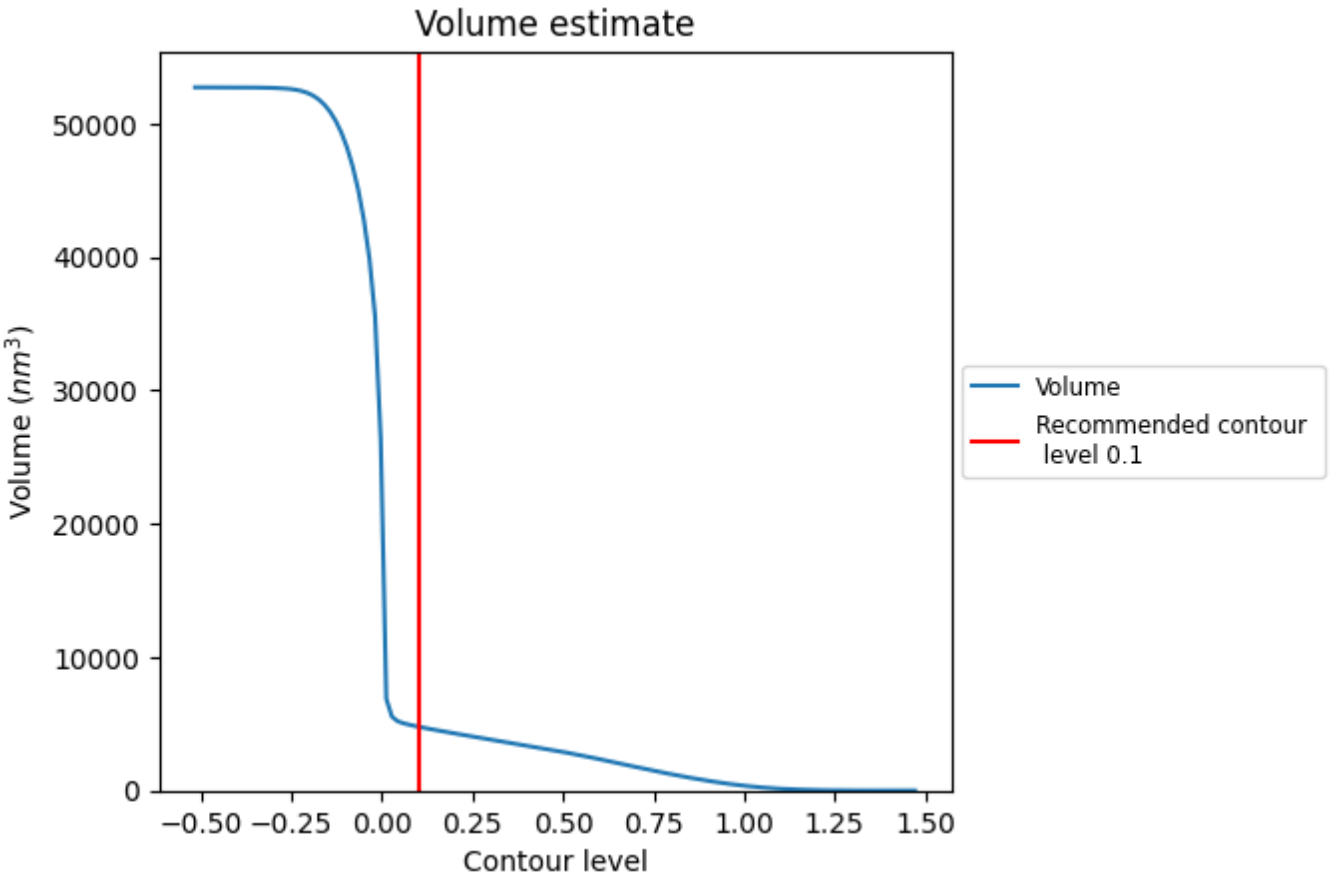
This section contains the results of statistical analysis of the map.

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.

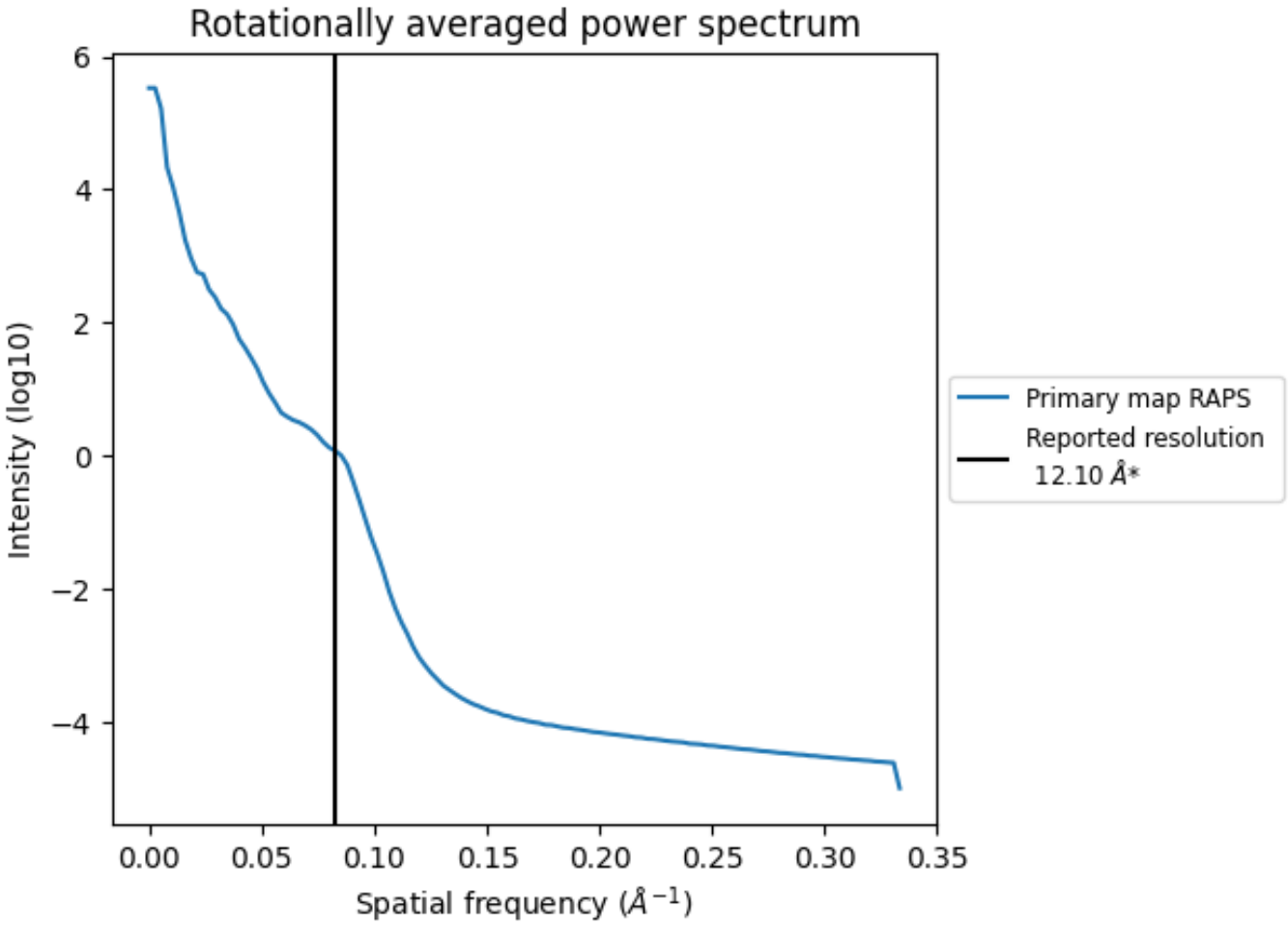
7.2 Volume estimate



The volume at the recommended contour level is 4792 nm^3; this corresponds to an approximate mass of 4329 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 0.083 Å^{-1}

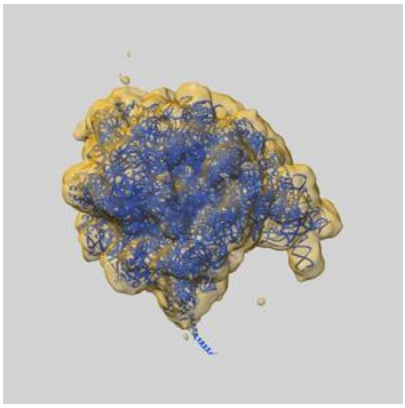
8 Fourier-Shell correlation (i)

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

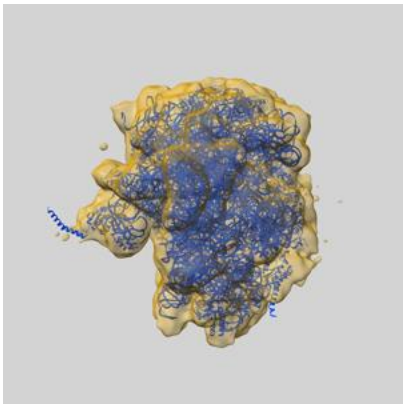
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-5361 and PDB model 4V6N. Per-residue inclusion information can be found in section 3 on page 16.

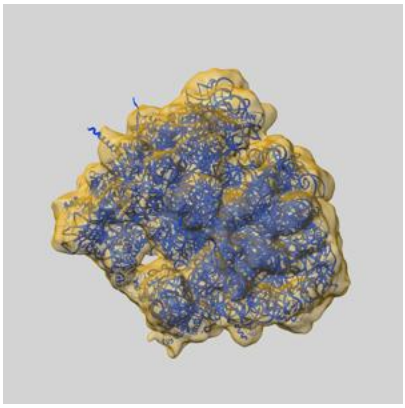
9.1 Map-model overlay



X



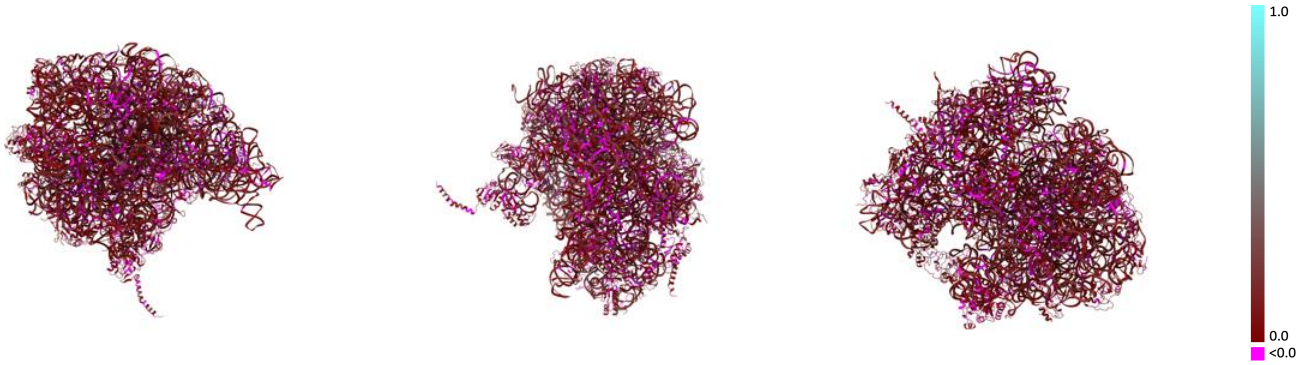
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.1 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.

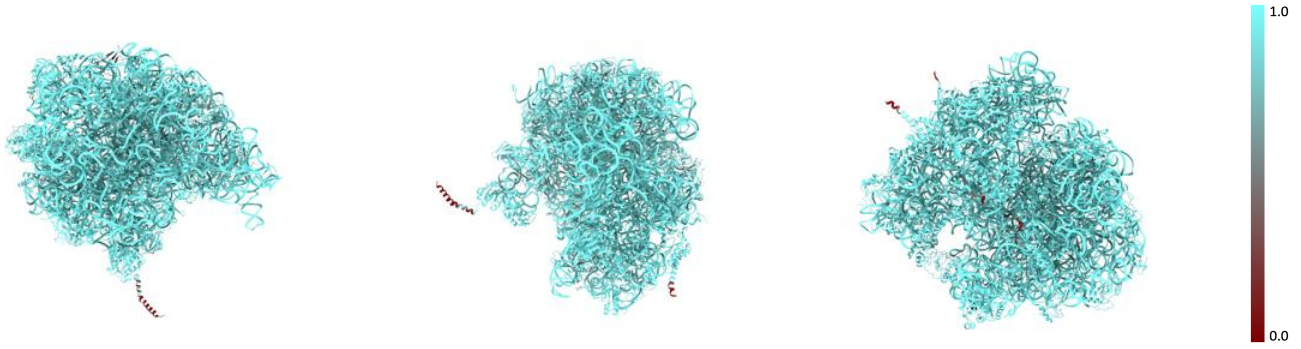
9.2 Q-score mapped to coordinate model



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.

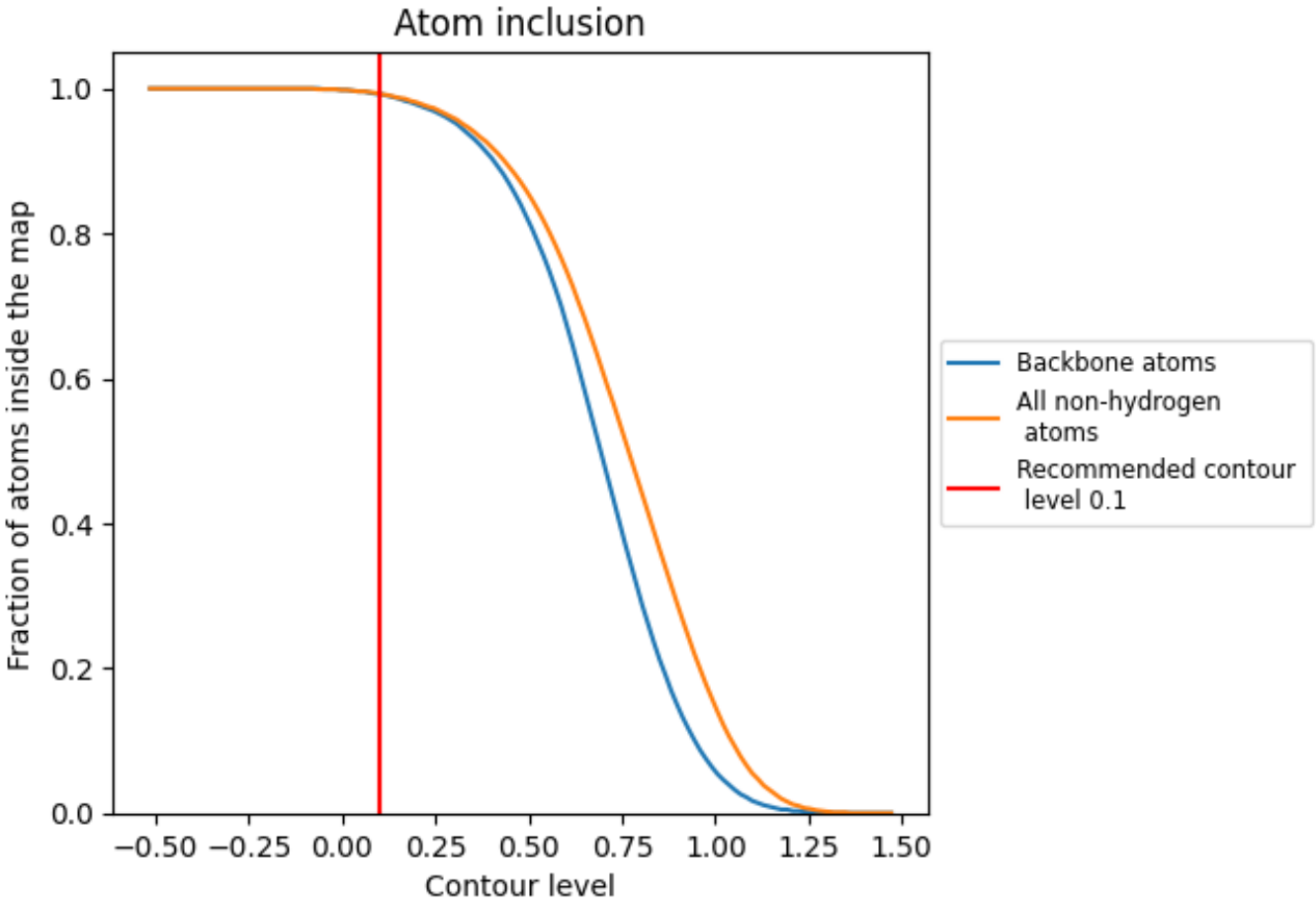
9.3 Atom inclusion mapped to coordinate model



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 (0.1).

9.4 Atom inclusion (i)



At the recommended contour level, 99% of all backbone atoms, 99% 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 (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9930	0.0770
A0	1.0000	0.0300
A1	0.9980	0.0550
A2	0.9570	0.0330
A3	1.0000	0.0210
A4	0.9910	0.0590
A5	1.0000	0.0300
A6	1.0000	-0.0280
A7	1.0000	0.0160
AA	1.0000	0.1100
AB	1.0000	0.0960
AC	0.9570	0.0360
AD	0.9990	0.0260
AE	1.0000	0.0340
AF	0.9990	0.0560
AG	0.9990	0.0640
AH	0.9990	0.0270
AI	0.8680	0.0300
AJ	0.8280	0.0480
AK	0.9790	0.0430
AL	1.0000	0.0270
AM	0.9940	0.0380
AN	1.0000	0.0070
AO	1.0000	0.0400
AP	1.0000	0.0310
AQ	0.9990	0.0630
AR	0.9880	0.0320
AS	1.0000	0.0200
AT	0.9960	0.0540
AU	0.9980	0.0440
AV	0.9990	0.0140
AW	1.0000	0.0530
AX	1.0000	0.0660
AY	1.0000	0.0020
AZ	1.0000	0.0440

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Chain	Atom inclusion	Q-score
BA	1.0000	0.0940
BB	0.9020	0.0390
BC	0.8390	0.0110
BD	0.9850	0.0780
BE	0.9590	0.0610
BF	0.9950	0.0750
BG	1.0000	0.0510
BH	0.9990	0.0410
BI	0.9680	0.0490
BJ	0.9960	0.0660
BK	1.0000	0.0410
BL	0.9880	0.0510
BM	1.0000	0.0420
BN	0.9530	0.0590
BO	0.9810	0.0230
BP	1.0000	0.0770
BQ	1.0000	0.0340
BR	1.0000	0.0520
BS	0.9980	0.0180
BT	1.0000	0.0580
BU	1.0000	0.0370
BV	0.9960	0.0330
BW	1.0000	0.0310
BX	0.9960	0.0380