



Full wwPDB EM Validation Report ⓘ

Mar 9, 2026 – 04:13 AM UTC

PDB ID : 4V4N / pdb_00004v4n
EMDB ID : EMD-5691
Title : Structure of the Methanococcus jannaschii ribosome-SecYEBeta channel complex
Authors : Menetret, J.F.; Park, E.; Gumbart, J.C.; Ludtke, S.J.; Li, W.; Whynot, A.; Rapoport, T.A.; Akey, C.W.
Deposited on : 2013-06-17
Resolution : 9.00 Å (reported)
Based on initial models : 3J21, 3J2L, 3J20, 1RHZ

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

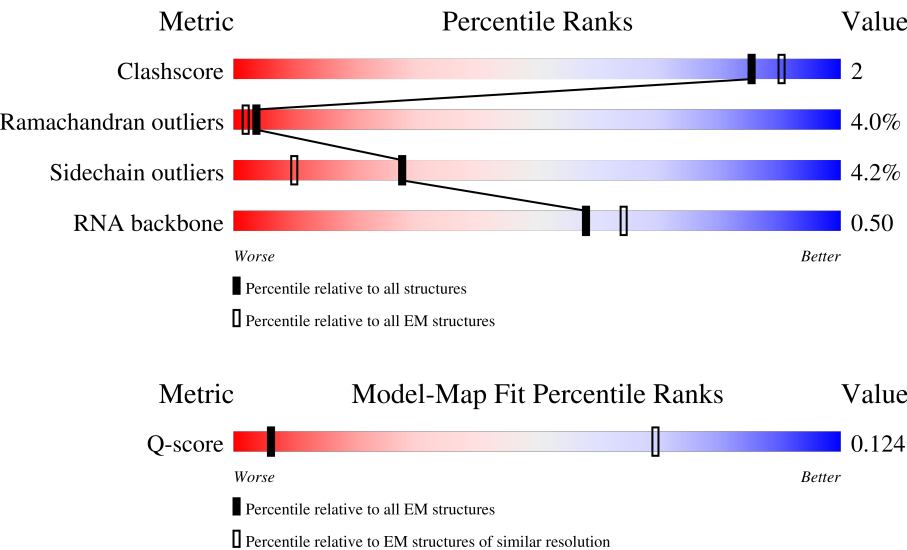
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh &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

1 Overall quality at a glance i

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

The reported resolution of this entry is 9.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	257 (8.50 - 9.50)

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 $\leq 5\%$. 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	A7	67	7% 45% 48% ...
2	A8	52	27% 31% 38%
3	Af	51	65% 31% 53% 16%

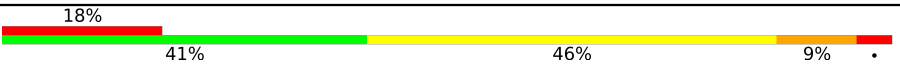
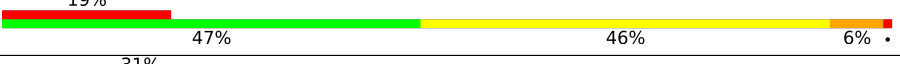
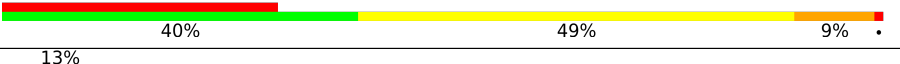
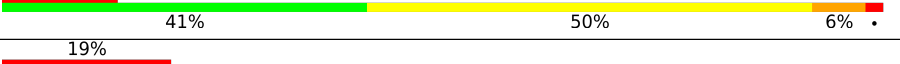
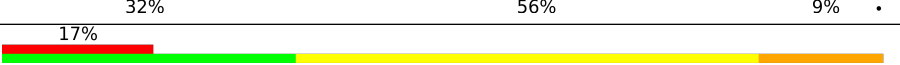
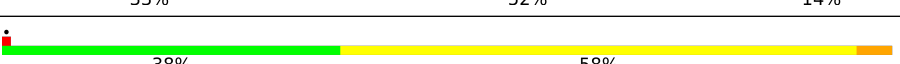
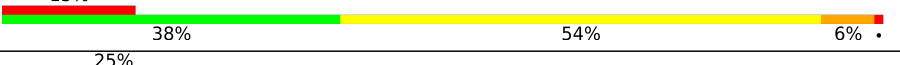
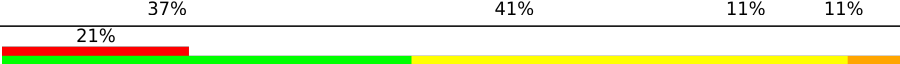
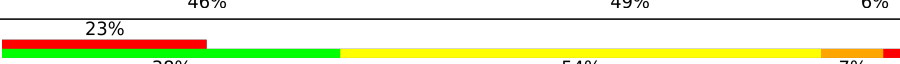
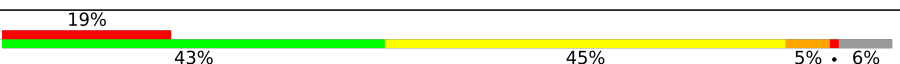
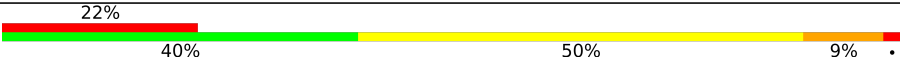
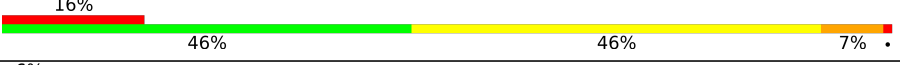
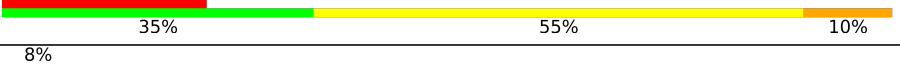
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Mol	Chain	Length	Quality of chain
4	AQ	150	
5	AS	150	
6	AT	84	
7	AU	121	
8	AW	72	
9	AX	436	
10	B1	77	
11	B2	1495	
12	AG	123	
12	B3	123	
13	BA	190	
14	BB	202	
15	BC	186	
16	BD	172	
17	BE	241	
18	BF	217	
19	BG	125	
20	BH	215	
21	BI	129	
22	BJ	127	
23	BK	135	
24	BL	102	
25	BM	133	
26	BN	145	
27	BO	148	

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Mol	Chain	Length	Quality of chain
28	BP	56	
29	BQ	158	
30	BR	113	
31	BS	67	
32	BT	111	
33	BU	144	
34	BV	99	
35	BW	63	
36	BX	71	
37	BY	50	
38	A1	3049	
39	A3	126	
40	A5	81	
40	AK	81	
41	AA	216	
42	Aa	92	
43	AB	239	
44	Ab	127	
45	AC	365	
46	AD	255	
47	Ad	89	
48	AE	186	
49	Ae	62	
50	AF	184	
51	Ag	45	

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Mol	Chain	Length	Quality of chain
52	AH	134	
53	Ah	24	
54	AI	142	
55	Ai	78	
56	AJ	132	
57	Aj	94	
58	Ak	212	
59	AL	147	
60	AM	194	
61	AN	168	
62	AO	197	
63	AP	120	
64	AR	95	
65	AV	66	
66	AY	155	
67	AZ	99	

2 Entry composition

There are 67 unique types of molecules in this entry. The entry contains 171094 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Preprotein translocase subunit SecE.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A7	65	Total	C	N	O	S	0	0
			525	348	85	91	1		

- Molecule 2 is a protein called Preprotein translocase subunit SecG.

Mol	Chain	Residues	Atoms				AltConf	Trace
2	A8	32	Total	C	N	O	0	0
			258	172	42	44		

- Molecule 3 is a protein called 50S ribosomal protein L39E.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	Af	51	Total	C	N	O	S	0	0
			445	284	98	62	1		

- Molecule 4 is a protein called 50S ribosomal protein L19E.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AQ	150	Total	C	N	O	S	0	0
			1256	794	255	202	5		

- Molecule 5 is a protein called 50S ribosomal protein L22P.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	AS	150	Total	C	N	O	S	0	0
			1200	764	230	202	4		

- Molecule 6 is a protein called 50S ribosomal protein L23P.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	AT	84	Total	C	N	O	0	0
			680	440	118	122		

- Molecule 7 is a protein called 50S ribosomal protein L24P.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AU	121	Total	C	N	O	S	0	0
			1008	637	195	172	4		

- Molecule 8 is a protein called 50S ribosomal protein L29P.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AW	66	Total	C	N	O	S	0	0
			546	338	105	99	4		

- Molecule 9 is a protein called Protein translocase subunit SecY.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AX	432	Total	C	N	O	S	0	0
			3309	2210	521	559	19		

- Molecule 10 is a RNA chain called E-tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	B1	77	Total	C	N	O	P	0	0
			1646	734	303	533	76		

- Molecule 11 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	B2	1495	Total	C	N	O	P	0	0
			32132	14297	5954	10387	1494		

- Molecule 12 is a protein called 30S ribosomal protein L7AE.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	B3	123	Total	C	N	O	S	0	0
			939	599	155	181	4		
12	AG	123	Total	C	N	O	S	0	0
			939	599	155	181	4		

- Molecule 13 is a protein called 30S ribosomal protein S3AE.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	BA	190	Total	C	N	O	S	0	0
			1559	1007	273	274	5		

- Molecule 14 is a protein called 30S ribosomal protein S2P.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	BB	202	Total	C	N	O	S	0	0
			1623	1046	282	290	5		

- Molecule 15 is a protein called 30S ribosomal protein S3P.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	BC	186	Total	C	N	O	S	0	0
			1460	933	271	252	4		

- Molecule 16 is a protein called 30S ribosomal protein S4P.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	BD	172	Total	C	N	O	S	0	0
			1434	902	273	255	4		

- Molecule 17 is a protein called 30S ribosomal protein S4E.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	BE	241	Total	C	N	O	S	0	0
			1976	1277	355	339	5		

- Molecule 18 is a protein called 30S ribosomal protein S5P.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	BF	217	Total	C	N	O	S	0	0
			1717	1084	319	306	8		

- Molecule 19 is a protein called 30S ribosomal protein S6E.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	BG	125	Total	C	N	O	S	0	0
			984	623	180	179	2		

- Molecule 20 is a protein called 30S ribosomal protein S7P.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	BH	215	Total	C	N	O	S	0	0
			1736	1100	326	302	8		

- Molecule 21 is a protein called 30S ribosomal protein S8P.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	BI	129	Total	C	N	O	S	0	0
			1028	668	178	180	2		

- Molecule 22 is a protein called 30S ribosomal protein S8E.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	BJ	127	Total	C	N	O	S	0	0
			1004	622	207	174	1		

- Molecule 23 is a protein called 30S ribosomal protein S9P.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	BK	135	Total	C	N	O	S	0	0
			1072	671	205	190	6		

- Molecule 24 is a protein called 30S ribosomal protein S10P.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	BL	102	Total	C	N	O	S	0	0
			822	507	159	152	4		

- Molecule 25 is a protein called 30S ribosomal protein S11P.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	BM	133	Total	C	N	O	S	0	0
			1004	623	200	179	2		

- Molecule 26 is a protein called 30S ribosomal protein S12P.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	BN	145	Total	C	N	O	S	0	0
			1141	722	223	193	3		

- Molecule 27 is a protein called 30S ribosomal protein S13P.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	BO	148	Total	C	N	O	S	0	0
			1189	746	237	200	6		

- Molecule 28 is a protein called 30S ribosomal protein S14P.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	BP	56	Total	C	N	O	S	0	0
			462	292	95	69	6		

- Molecule 29 is a protein called 30S ribosomal protein S15P/S13E.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	BQ	158	Total	C	N	O	S	0	0
			1310	834	250	221	5		

- Molecule 30 is a protein called 30S ribosomal protein S17P.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	BR	113	Total	C	N	O	S	0	0
			934	592	177	160	5		

- Molecule 31 is a protein called 30S ribosomal protein S17E.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	BS	67	Total	C	N	O	S	0	0
			556	353	105	95	3		

- Molecule 32 is a protein called 30S ribosomal protein S19P.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	BT	111	Total	C	N	O	S	0	0
			924	594	173	151	6		

- Molecule 33 is a protein called 30S ribosomal protein S19E.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	BU	144	Total	C	N	O	S	0	0
			1176	758	212	205	1		

- Molecule 34 is a protein called 30S ribosomal protein S24E.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	BV	99	Total	C	N	O	S	0	0
			823	532	134	154	3		

- Molecule 35 is a protein called 30S ribosomal protein S27E.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	BW	63	Total	C	N	O	S	0	0
			478	306	85	81	6		

- Molecule 36 is a protein called 30S ribosomal protein S28E.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	BX	71	Total	C	N	O	S	0	0
			568	345	115	107	1		

- Molecule 37 is a protein called 30S ribosomal protein S27AE.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	BY	50	Total	C	N	O	S	0	0
			409	262	75	66	6		

- Molecule 38 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	A1	2969	Total	C	N	O	P	0	0
			63885	28427	11905	20589	2964		

- Molecule 39 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	A3	126	Total	C	N	O	P	0	0
			2691	1199	492	875	125		

- Molecule 40 is a protein called 50S ribosomal protein L14E.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	A5	81	Total	C	N	O	S	0	0
			614	386	119	108	1		
40	AK	81	Total	C	N	O	S	0	0
			614	386	119	108	1		

- Molecule 41 is a protein called 50S ribosomal protein L1P.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	AA	216	Total	C	N	O	S	0	0
			1677	1068	300	304	5		

- Molecule 42 is a protein called 50S ribosomal protein L31E.

Mol	Chain	Residues	Atoms				AltConf	Trace
42	Aa	82	Total	C	N	O		
			677	444	126	107	0	0

- Molecule 43 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	AB	239	Total	C	N	O	S		
			1838	1169	347	317	5	0	0

- Molecule 44 is a protein called 50S ribosomal protein L32E.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Ab	127	Total	C	N	O	S		
			1075	689	217	168	1	0	0

- Molecule 45 is a protein called 50S ribosomal protein L3P.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	AC	342	Total	C	N	O	S		
			2717	1741	495	467	14	0	0

- Molecule 46 is a protein called 50S ribosomal protein L4P.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	AD	255	Total	C	N	O	S		
			2026	1288	391	342	5	0	0

- Molecule 47 is a protein called 50S ribosomal protein L34E.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	Ad	89	Total	C	N	O	S		
			740	463	158	108	11	0	0

- Molecule 48 is a protein called 50S ribosomal protein L5P.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	AE	186	Total	C	N	O	S		
			1489	937	278	265	9	0	0

- Molecule 49 is a protein called 50S ribosomal protein L37E.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	Ae	62	Total	C	N	O	S	0	0
			506	312	111	78	5		

- Molecule 50 is a protein called 50S ribosomal protein L6P.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	AF	184	Total	C	N	O	S	0	0
			1476	956	252	266	2		

- Molecule 51 is a protein called 50S ribosomal protein L40E.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	Ag	45	Total	C	N	O	S	0	0
			372	236	76	56	4		

- Molecule 52 is a protein called 50S ribosomal protein L11P.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	AH	134	Total	C	N	O	S	0	0
			989	635	164	184	6		

- Molecule 53 is a protein called 50S ribosomal protein L41E.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	Ah	24	Total	C	N	O	S	0	0
			230	147	54	28	1		

- Molecule 54 is a protein called 50S ribosomal protein L13P.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	AI	142	Total	C	N	O	S	0	0
			1150	737	215	195	3		

- Molecule 55 is a protein called 50S ribosomal protein L37AE.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	Ai	78	Total	C	N	O	S	0	0
			590	368	122	95	5		

- Molecule 56 is a protein called 50S ribosomal protein L14P.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	AJ	132	Total	C	N	O	S	0	0
			1014	631	204	176	3		

- Molecule 57 is a protein called 50S ribosomal protein L44E.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	Aj	94	Total	C	N	O	S	0	0
			788	499	162	122	5		

- Molecule 58 is a protein called 50S ribosomal protein P0/L10E.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	Ak	212	Total	C	N	O	S	0	0
			1633	1051	272	304	6		

- Molecule 59 is a protein called 50S ribosomal protein L15P.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	AL	147	Total	C	N	O	S	0	0
			1154	727	227	195	5		

- Molecule 60 is a protein called 50S ribosomal protein L15E.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	AM	194	Total	C	N	O	S	0	0
			1595	1020	316	253	6		

- Molecule 61 is a protein called 50S ribosomal protein L10E/L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	AN	168	Total	C	N	O	S	0	0
			1379	872	268	233	6		

- Molecule 62 is a protein called 50S ribosomal protein L18P.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	AO	197	Total	C	N	O	S	0	0
			1598	1021	299	275	3		

- Molecule 63 is a protein called 50S ribosomal protein L18E.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	AP	120	Total	C	N	O	S	0	0
			966	606	186	171	3		

- Molecule 64 is a protein called 50S ribosomal protein L21E.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	AR	95	Total	C	N	O	S	0	0
			787	501	160	125	1		

- Molecule 65 is a protein called 50S ribosomal protein L24E.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	AV	66	Total	C	N	O	S	0	0
			555	351	106	91	7		

- Molecule 66 is a protein called 50S ribosomal protein L30P.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	AY	155	Total	C	N	O	S	0	0
			1243	788	235	213	7		

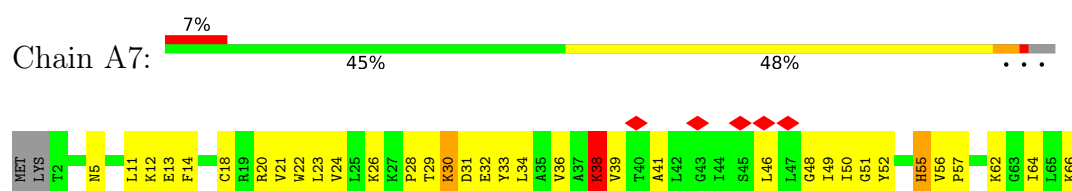
- Molecule 67 is a protein called 50S ribosomal protein L30E.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	AZ	99	Total	C	N	O	S	0	0
			754	489	121	142	2		

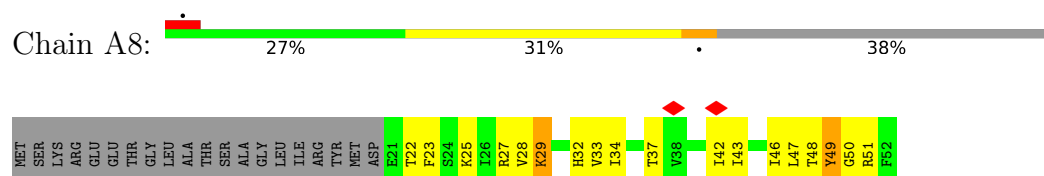
3 Residue-property plots [i](#)

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.

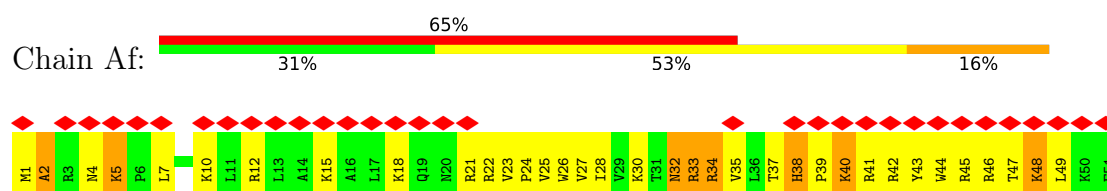
- Molecule 1: Preprotein translocase subunit SecE



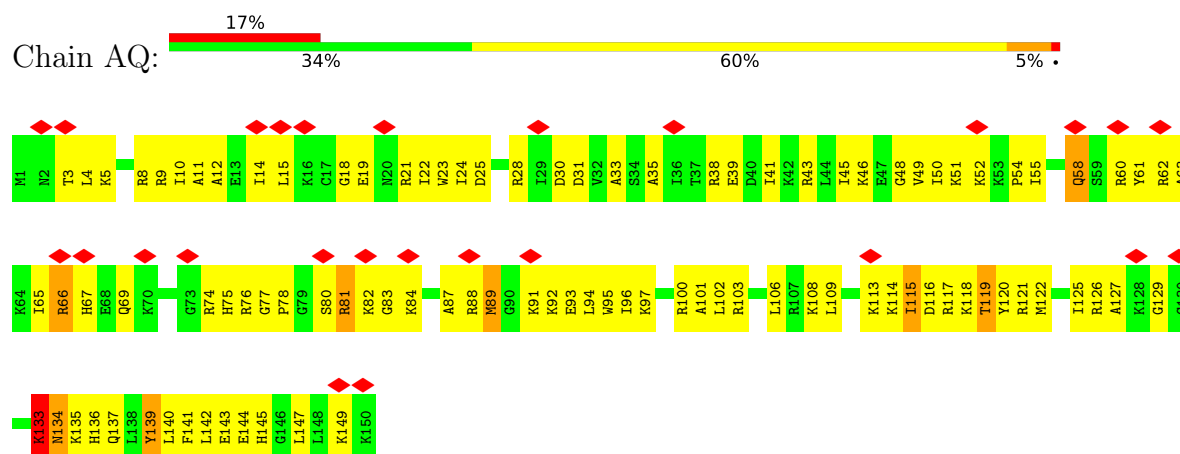
- Molecule 2: Preprotein translocase subunit SecG



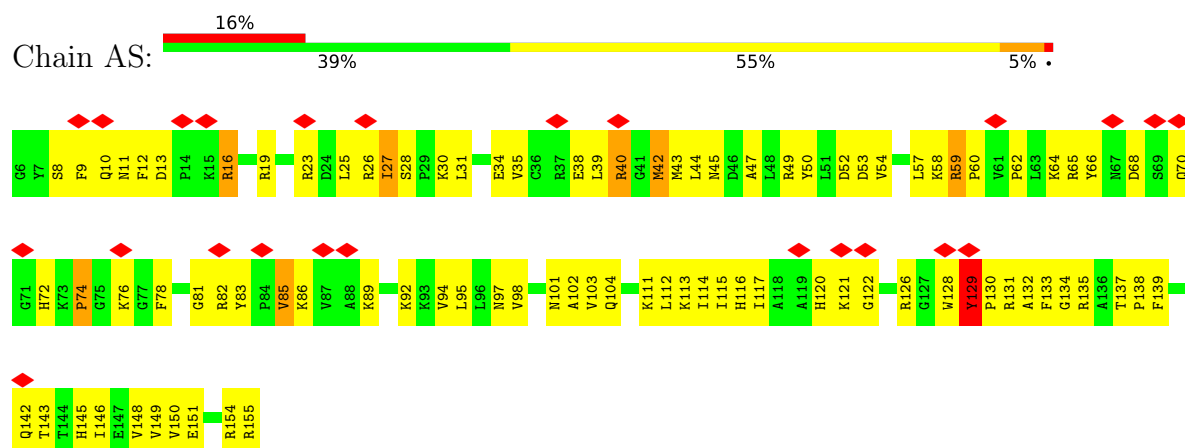
- Molecule 3: 50S ribosomal protein L39E



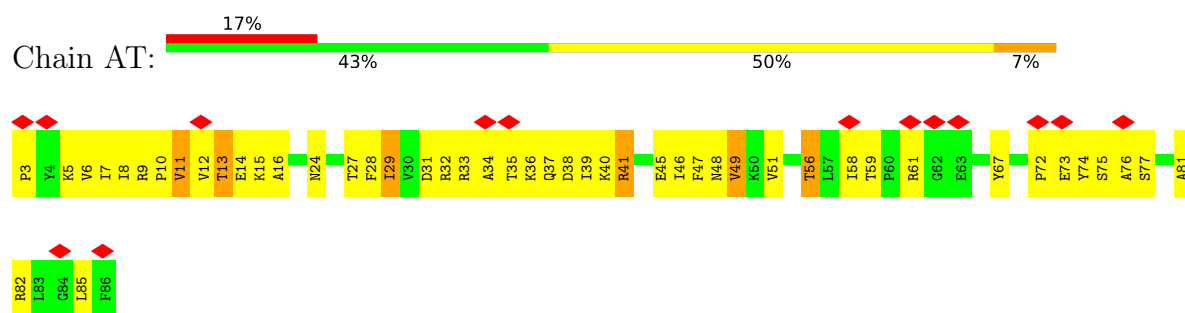
- Molecule 4: 50S ribosomal protein L19E



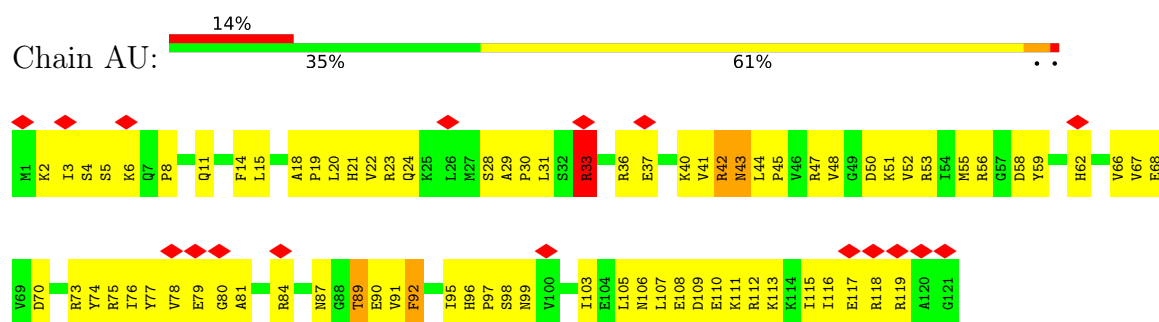
- Molecule 5: 50S ribosomal protein L22P



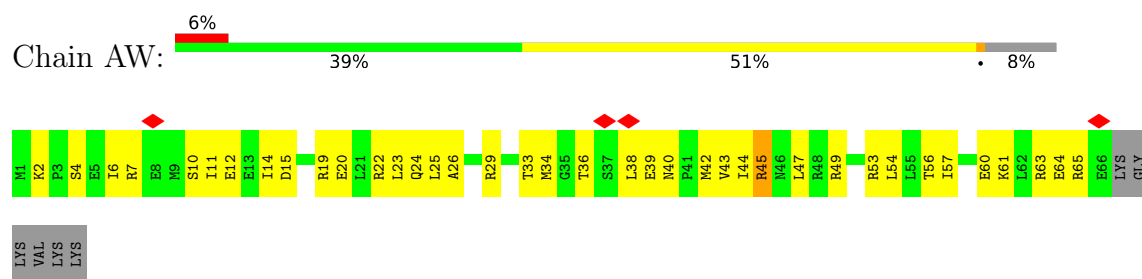
- Molecule 6: 50S ribosomal protein L23P



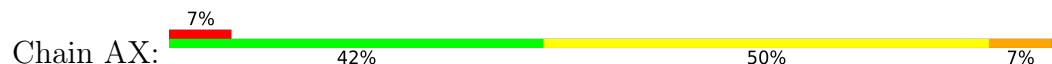
- Molecule 7: 50S ribosomal protein L24P

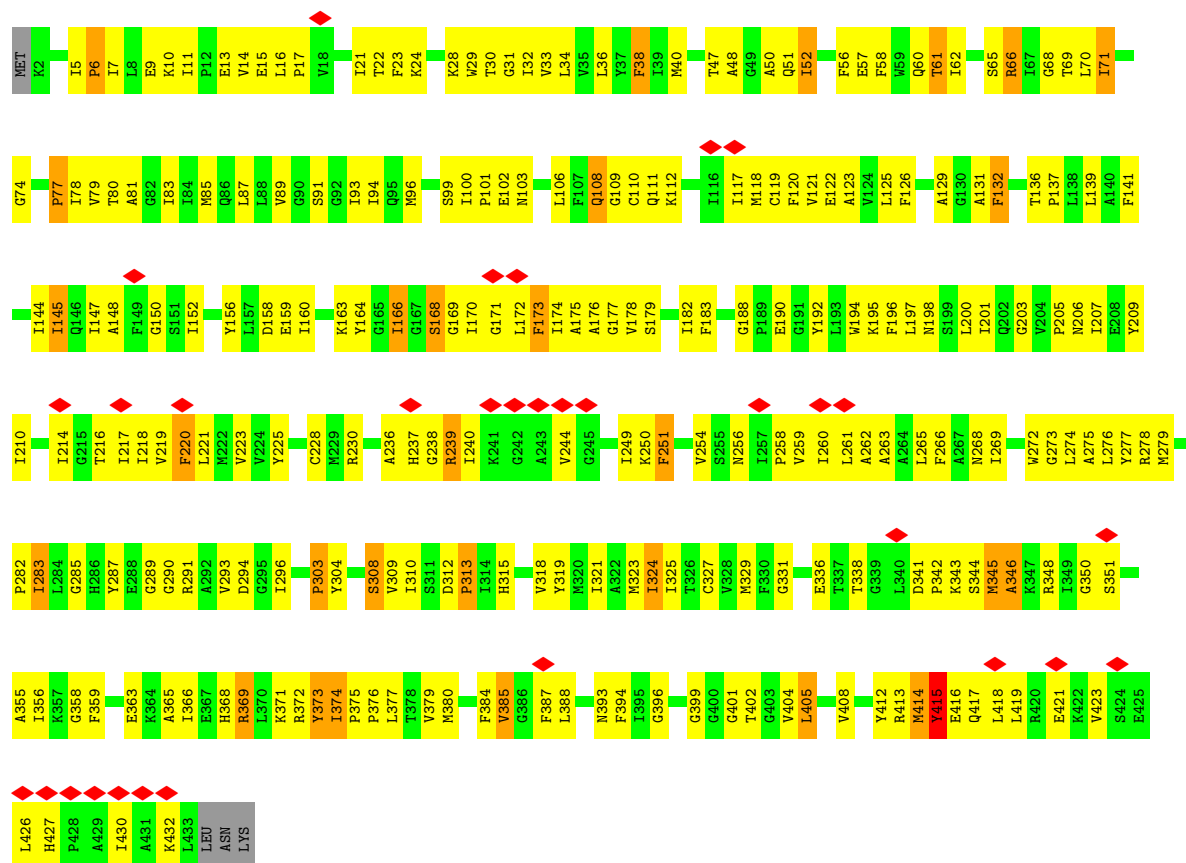


- Molecule 8: 50S ribosomal protein L29P

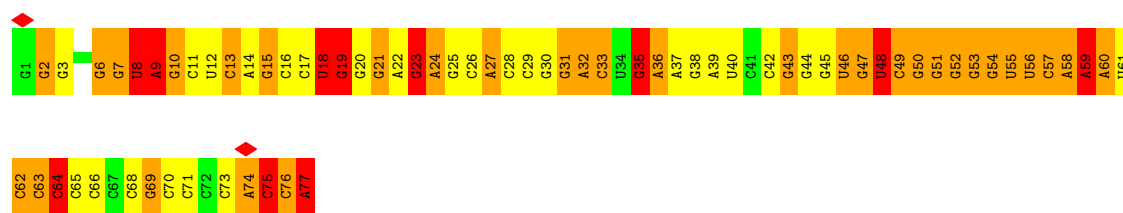


- Molecule 9: Protein translocase subunit SecY

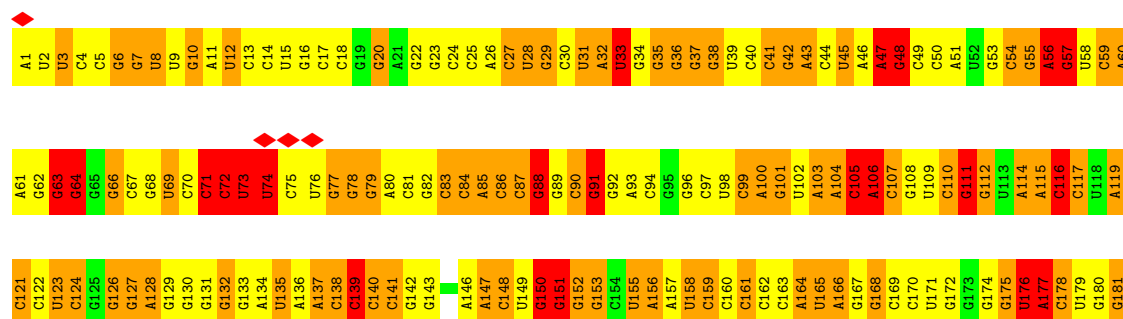




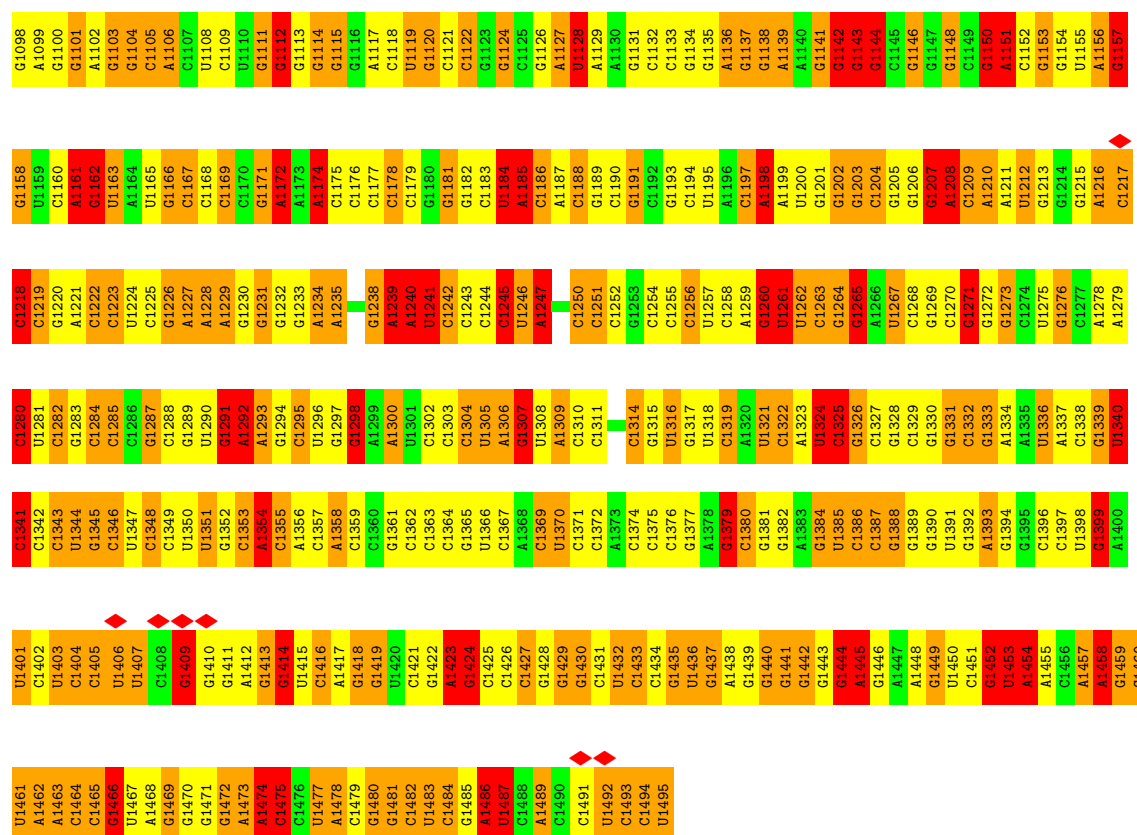
• Molecule 10: E-tRNA



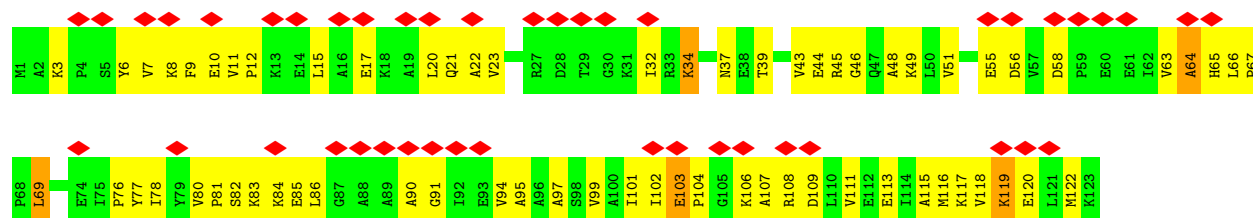
• Molecule 11: 16S ribosomal RNA



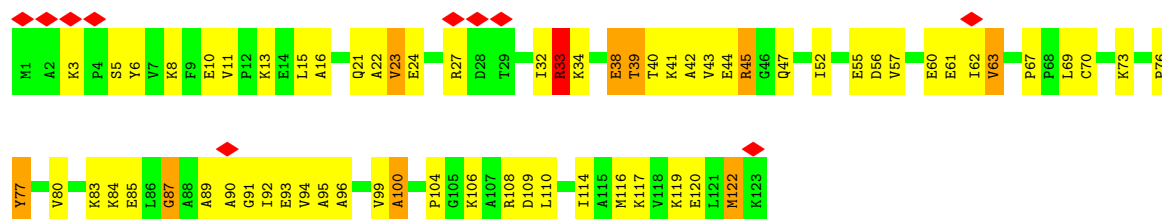
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C1038	A976	U915	C854	G791	G730	A669	U607	C545	A485	C425	C365	C304	G243	A183
A1040	G977	U916	C855	G792	A731	C670	G608	A548	A486	C426	C366	C305	G244	G185
C1041	G978	A917	G856	G793	G732	C671	G609	A549	U487	G427	C367	C306	U245	U186
U1042	G979	A918	C857	A794	C733	C672	G610	A549	A488	G428	C368	G307	A246	C187
U1043	U982	U919	A858	G795	G734	C673	A611	G550	C489	A429	C369	G308	G247	C188
A1044	G983	U920	A859	G796	A735	C674	G612	U551	C490	G430	A370	A309	U248	C189
C1045	G984	G921	C860	U797	A736	A675	G613	C552	G491	U431	U371	U312	U249	C190
U1046	C985	G922	C861	U798	G737	G676	G614	U555	C492	G432	G372	G250	G250	C191
U1047	G986	A923	C862	U799	G738	U677	G615	G556	C493	U433	G373	G314	G251	A191
G1048	G987	U924	U863	G800	G739	U678	G616	G557	G494	A434	G374	G192	U252	G192
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C1050	C989	U927	A867	C802	A741	C680	G618	C559	C496	A436	G376	G254	G254	C194
G1051	G990	A928	A868	C803	U742	G681	A619	G559	C497	A437	A377	A317	G255	C195
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A1053	G992	G930	U869	A805	A744	A683	G621	A561	G499	A439	A379	U319	U257	A197
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C1055	C994	C932	A871	G807	A746	G685	C623	U563	G501	U441	C381	A419	A259	A199
G1056	G995	G933	A872	C808	U747	C686	G624	C564	U502	C442	G382	G322	C260	G200
A1057	A996	G934	A873	C809	A748	G687	G625	C565	G503	C443	C383	A323	G261	G201
G1058	G997	G935	G874	G810	G749	C688	G626	C566	G504	G444	G384	C324	G262	G202
C1059	A998	A936	G875	G811	G752	C689	G627	A567	U505	G445	A385	A325	C263	A203
G1060	G999	A937	A876	U812	G753	C690	G628	C568	G506	G446	C386	C326	C264	G204
A1063	G1000	A938	A877	G813	G754	G691	U629	G569	G507	A447	G387	G327	C265	C205
C1064	A1001	C939	U878	G822	G755	G692	C632	G570	C508	A448	G388	G328	A266	C206
G1065	G1002	U940	U879	A823	U756	G693	C633	C571	C509	U449	G389	G329	C267	G207
C1066	C1003	C941	G880	U817	A756	G694	C634	U572	A510	A450	G390	U330	C268	C208
G1067	U1004	A942	C881	A818	G757	G695	C635	C573	U511	A451	G391	C331	A269	A209
C1068	G1005	G943	C882	G819	G758	G696	C636	A574	U512	G452	G392	C332	A270	A210
G1069	G1006	C944	G883	G820	C759	A697	G636	A575	A513	G453	A393	G333	G271	G211
A1007	G1007	G945	G884	G821	C760	G700	G639	C576	U514	G454	C394	G334	C272	G212
U1008	U1008	G946	C885	A822	U761	G701	U640	C577	U515	A455	C395	G335	G273	G213
C1071	G1009	G947	G886	A823	G762	G702	U641	U578	U517	U456	C396	C336	G274	C214
G1072	G1010	G948	C887	G824	G763	G703	A642	G457	U518	G458	C397	C337	A275	C215
C1073	C1011	G949	A888	C825	C764	U704	G643	G581	G519	G459	C398	U339	A276	G216
U1074	C1012	C950	G889	G826	U765	C705	G644	G582	G520	C460	A399	A340	G277	C217
A1075	G1013	G951	C890	G827	U766	G706	G645	G583	G521	A461	U401	C341	U278	C218
G1076	C1014	A952	C891	U828	U767	G707	U646	G584	G522	A462	G402	G342	C280	C219
U1077	C953	U953	C892	A829	A768	A707	U647	U585	C523	G463	C403	G343	G281	G220
C1078	G1015	G954	A894	G833	A769	G708	G647	C586	U524	G464	C404	G344	G282	A221
U1079	U1016	G955	C895	C834	A770	G709	A648	G587	A525	C465	G405	G345	U283	G222
C1080	C1018	G956	A896	G835	G771	G710	A649	C588	A526	C466	U406	C346	A284	G223
U1081	A1019	A957	A897	G836	G772	U711	U650	C589	A527	G467	G407	C347	C285	A224
A1082	G1020	G958	C896	C837	A773	G712	U651	U589	G528	G468	C408	G348	G286	U225
G1083	C1021	G959	G899	C838	U774	A713	C652	G590	C529	U469	C409	A349	G287	G226
U1084	U1022	A960	G900	G839	G775	G714	C653	G591	G530	G470	U410	G350	G288	C227
C1085	C1023	U961	G901	C840	C776	G715	U654	G592	G531	G471	C411	C351	C289	G228
G1086	G1024	G962	U902	C841	G777	G716	A655	G593	C532	C472	U412	A352	C290	G229
A1087	A963	A963	G903	U842	G778	G717	U656	U594	C533	A473	G413	G353	G291	C230
U1088	U964	G964	G904	G843	C780	G718	A657	U595	G534	G474	G414	G354	U292	G231
C1089	G965	A965	A905	G844	U781	G719	U658	A596	U535	C475	G415	C355	U293	G232
U1090	U1029	G966	G906	G845	A782	A720	C660	C597	A536	C476	C416	G356	A294	G233
C1091	C1030	C967	C907	G846	G783	G722	C661	U598	G537	G477	C417	C357	G295	G234
G1092	G1031	G1031	G908	A847	G784	G723	G662	G599	C538	G478	G418	G358	G296	G235
U1093	U1032	G970	U909	G848	U785	C724	G663	C600	C539	C479	G419	A359	C297	C236
C1094	G1033	G971	G910	U849	G786	C725	G664	G601	G540	C480	C420	A360	G298	C237
U1095	G1034	C972	C911	A850	U787	A726	G665	G602	G541	C481	G421	A361	G300	G238
G1096	C1035	U973	G912	C851	G788	G727	G666	G603	G542	C482	U422	C362	G301	A239
C1097	G1036	G974	G913	G852	G789	G728	G667	C604	C543	G483	U423	C363	A302	U241



• Molecule 12: 30S ribosomal protein L7AE

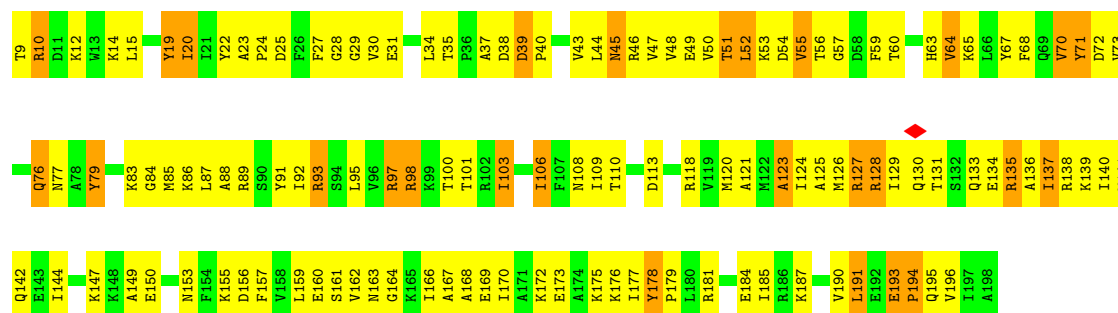


• Molecule 12: 30S ribosomal protein L7AE

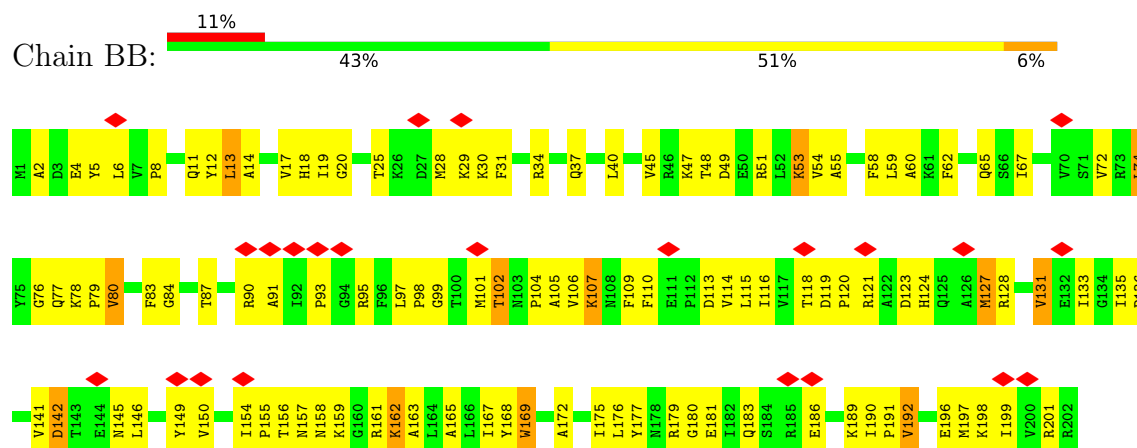


• Molecule 13: 30S ribosomal protein S3AE

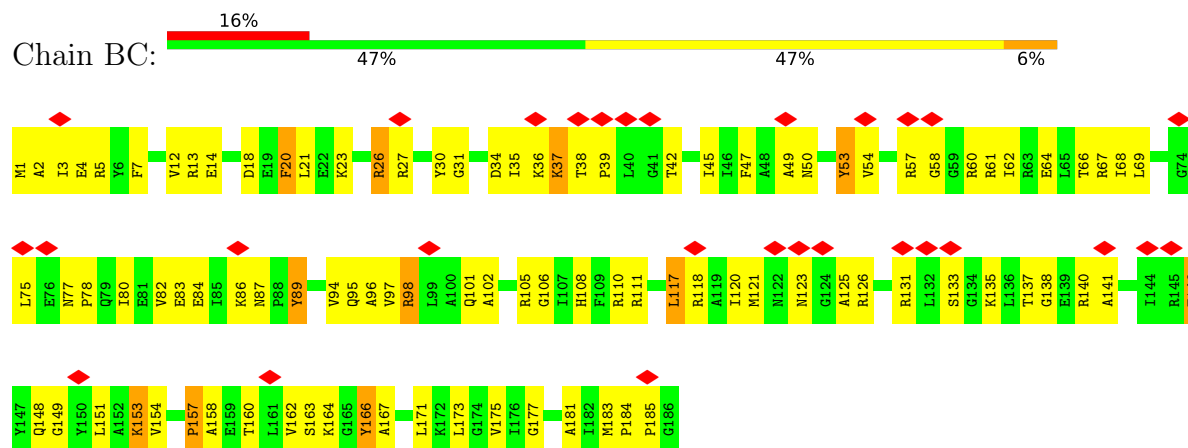




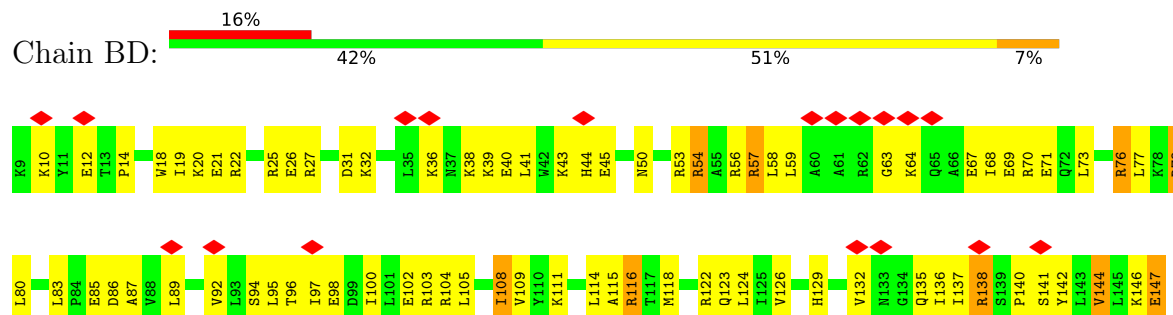
• Molecule 14: 30S ribosomal protein S2P

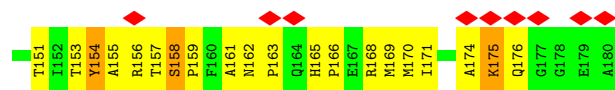


• Molecule 15: 30S ribosomal protein S3P

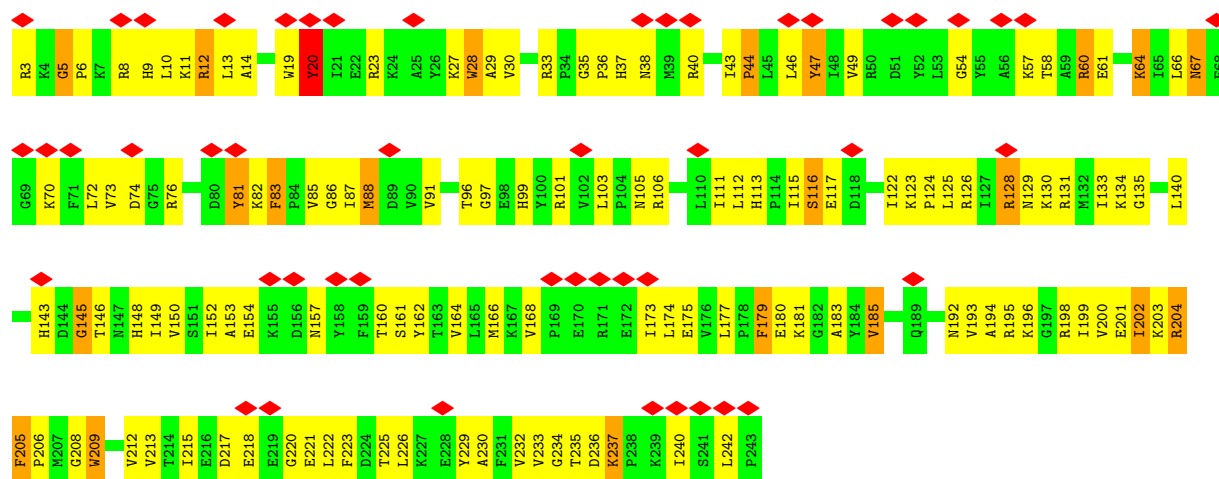
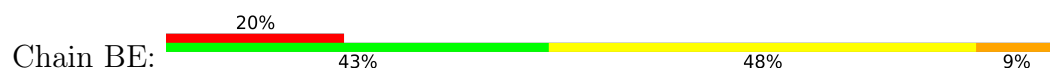


• Molecule 16: 30S ribosomal protein S4P

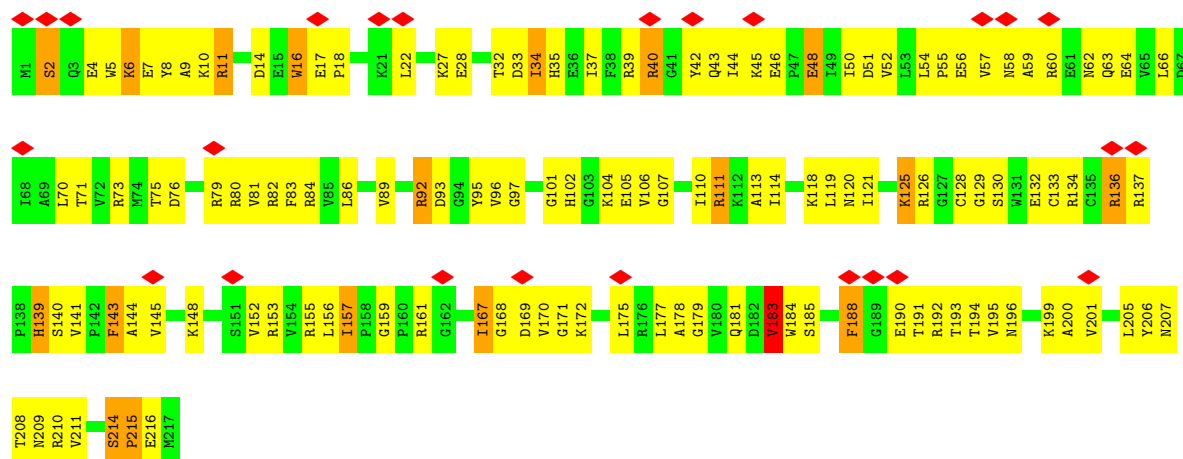




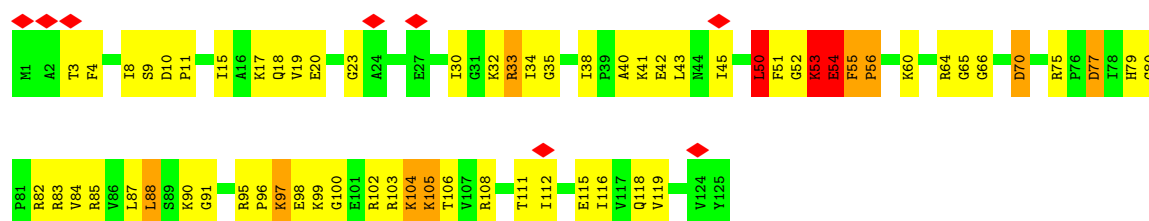
• Molecule 17: 30S ribosomal protein S4E



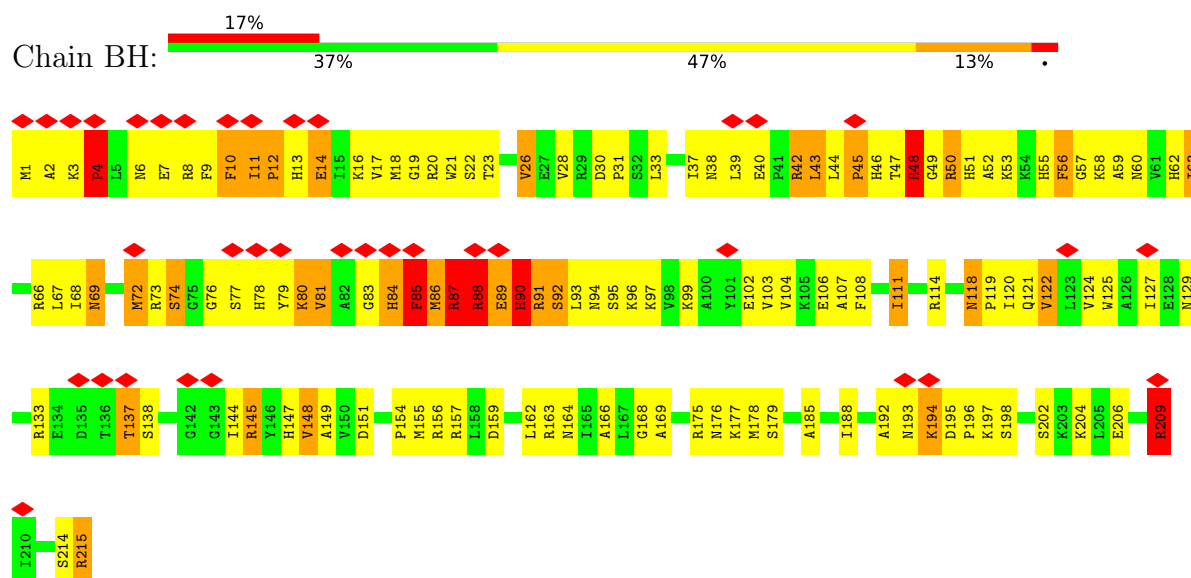
• Molecule 18: 30S ribosomal protein S5P



• Molecule 19: 30S ribosomal protein S6E



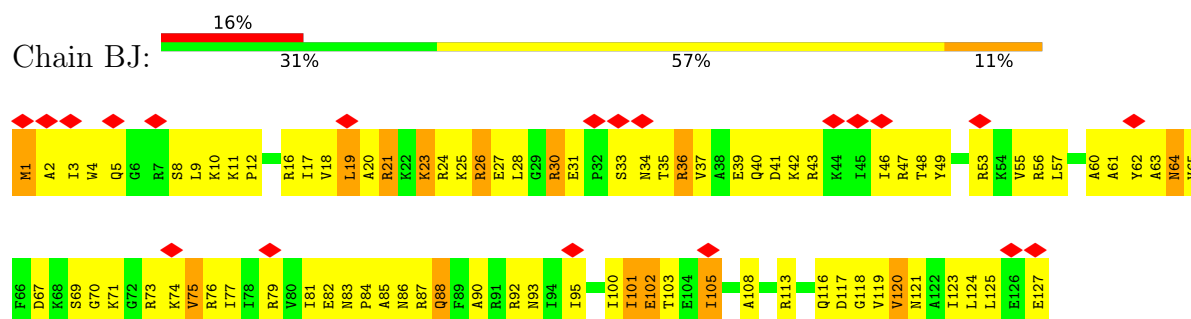
- Molecule 20: 30S ribosomal protein S7P



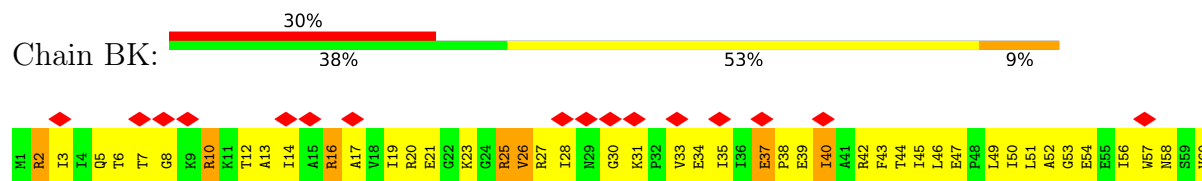
- Molecule 21: 30S ribosomal protein S8P

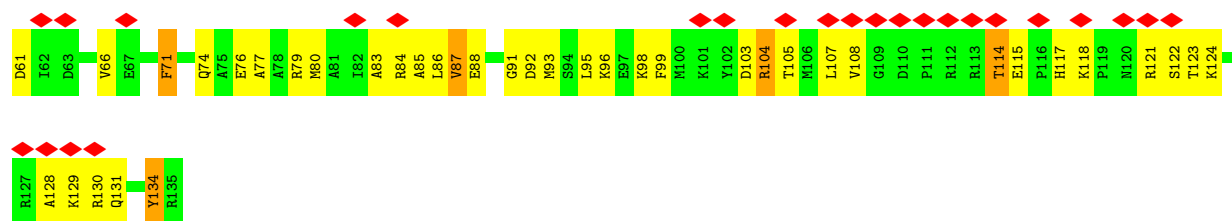


- Molecule 22: 30S ribosomal protein S8E

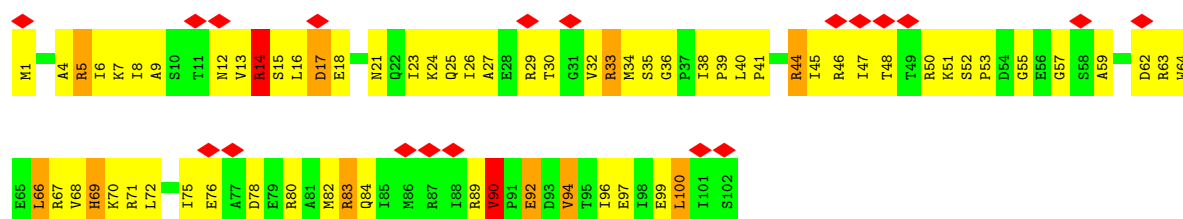


- Molecule 23: 30S ribosomal protein S9P

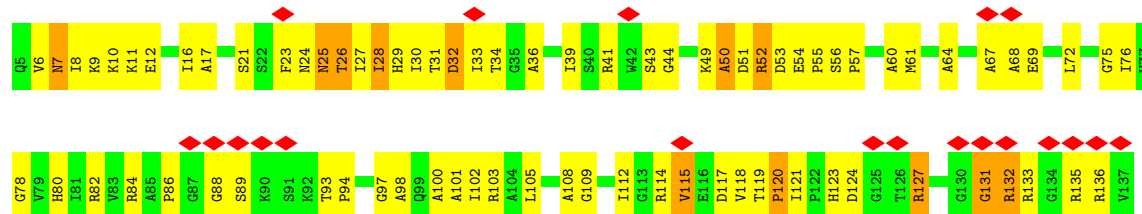




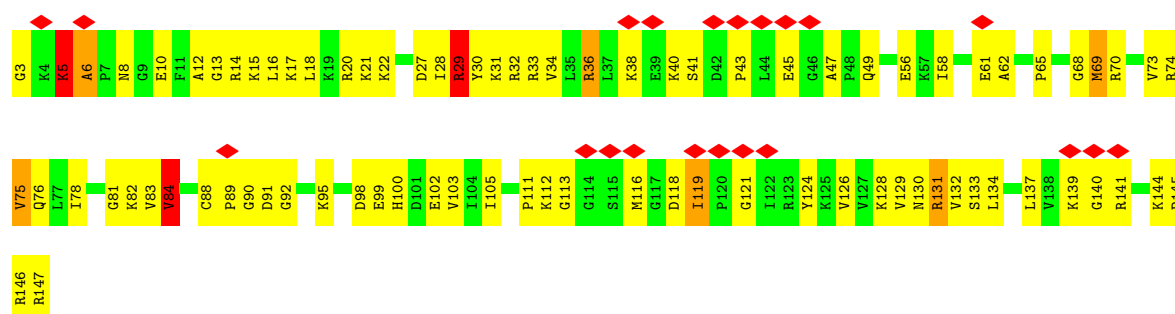
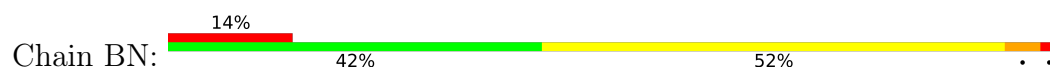
• Molecule 24: 30S ribosomal protein S10P



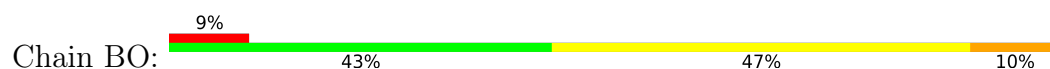
• Molecule 25: 30S ribosomal protein S11P

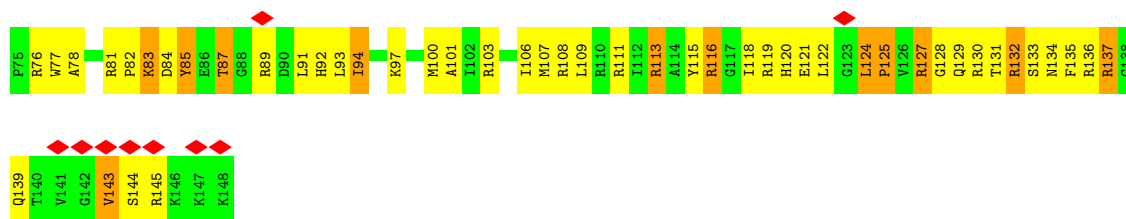


• Molecule 26: 30S ribosomal protein S12P

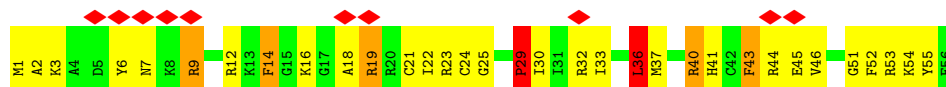
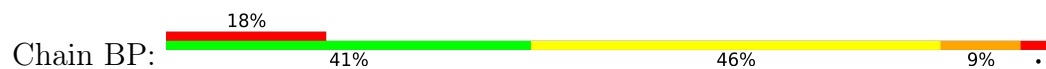


• Molecule 27: 30S ribosomal protein S13P

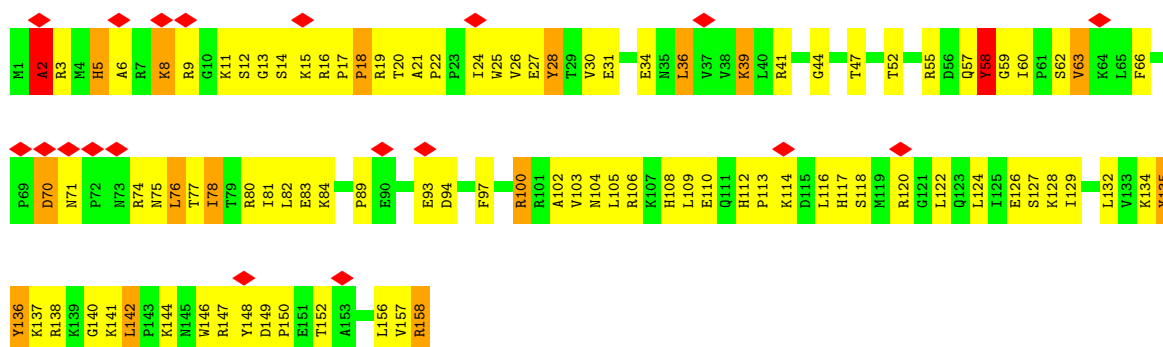
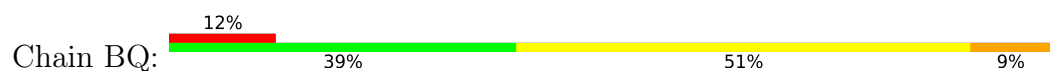




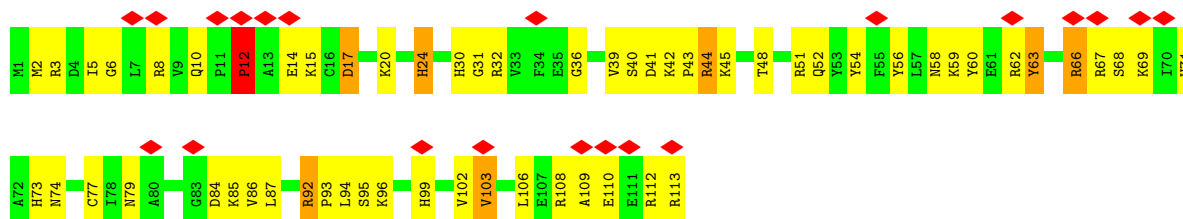
• Molecule 28: 30S ribosomal protein S14P



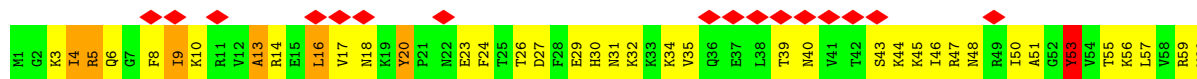
• Molecule 29: 30S ribosomal protein S15P/S13E



• Molecule 30: 30S ribosomal protein S17P

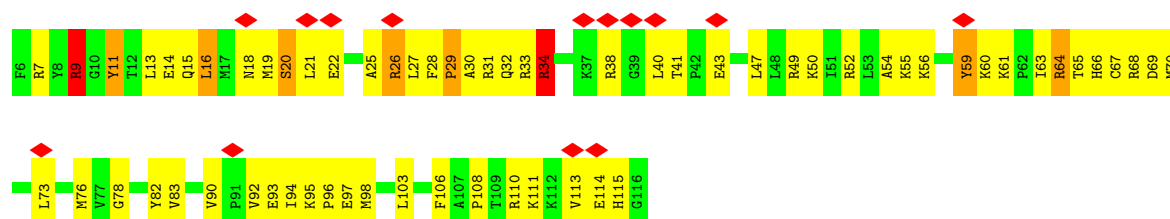
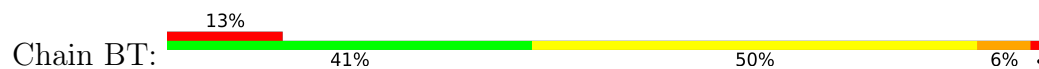


• Molecule 31: 30S ribosomal protein S17E

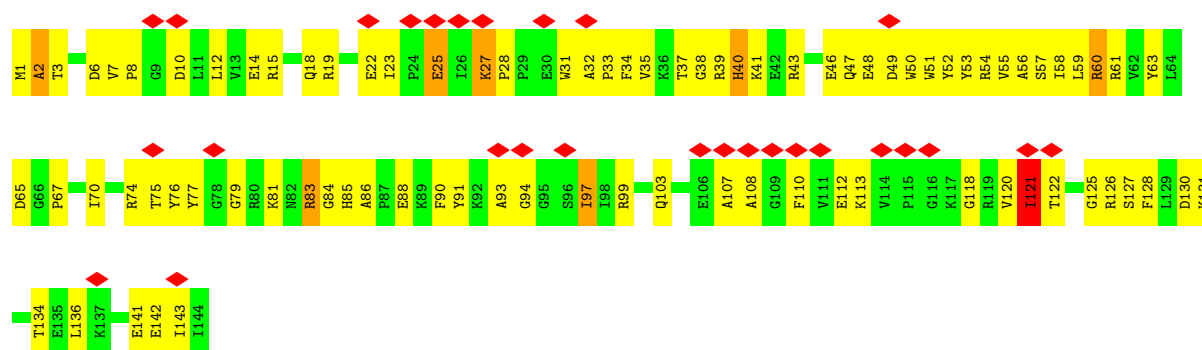




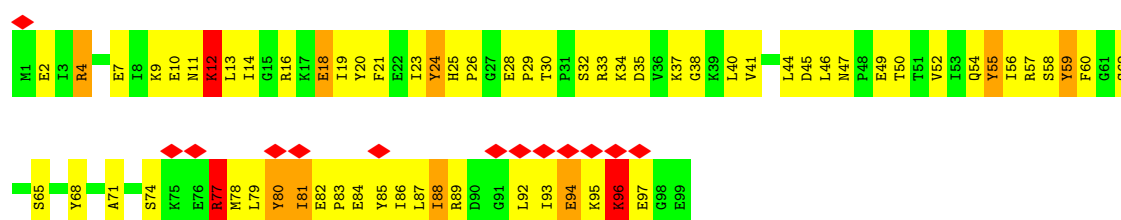
- Molecule 32: 30S ribosomal protein S19P



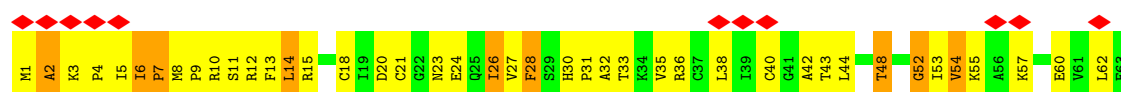
- Molecule 33: 30S ribosomal protein S19E



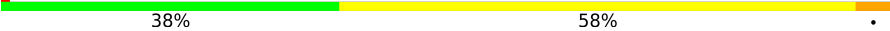
- Molecule 34: 30S ribosomal protein S24E

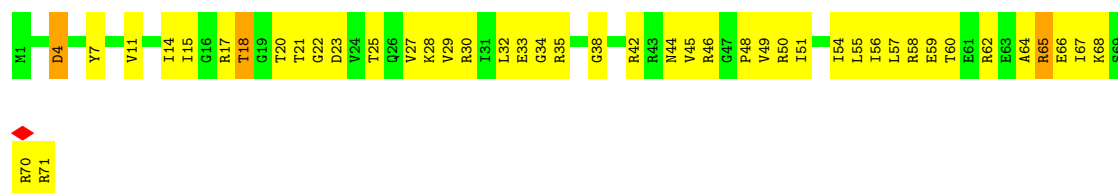


- Molecule 35: 30S ribosomal protein S27E



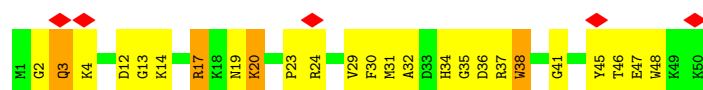
- Molecule 36: 30S ribosomal protein S28E

Chain BX: 



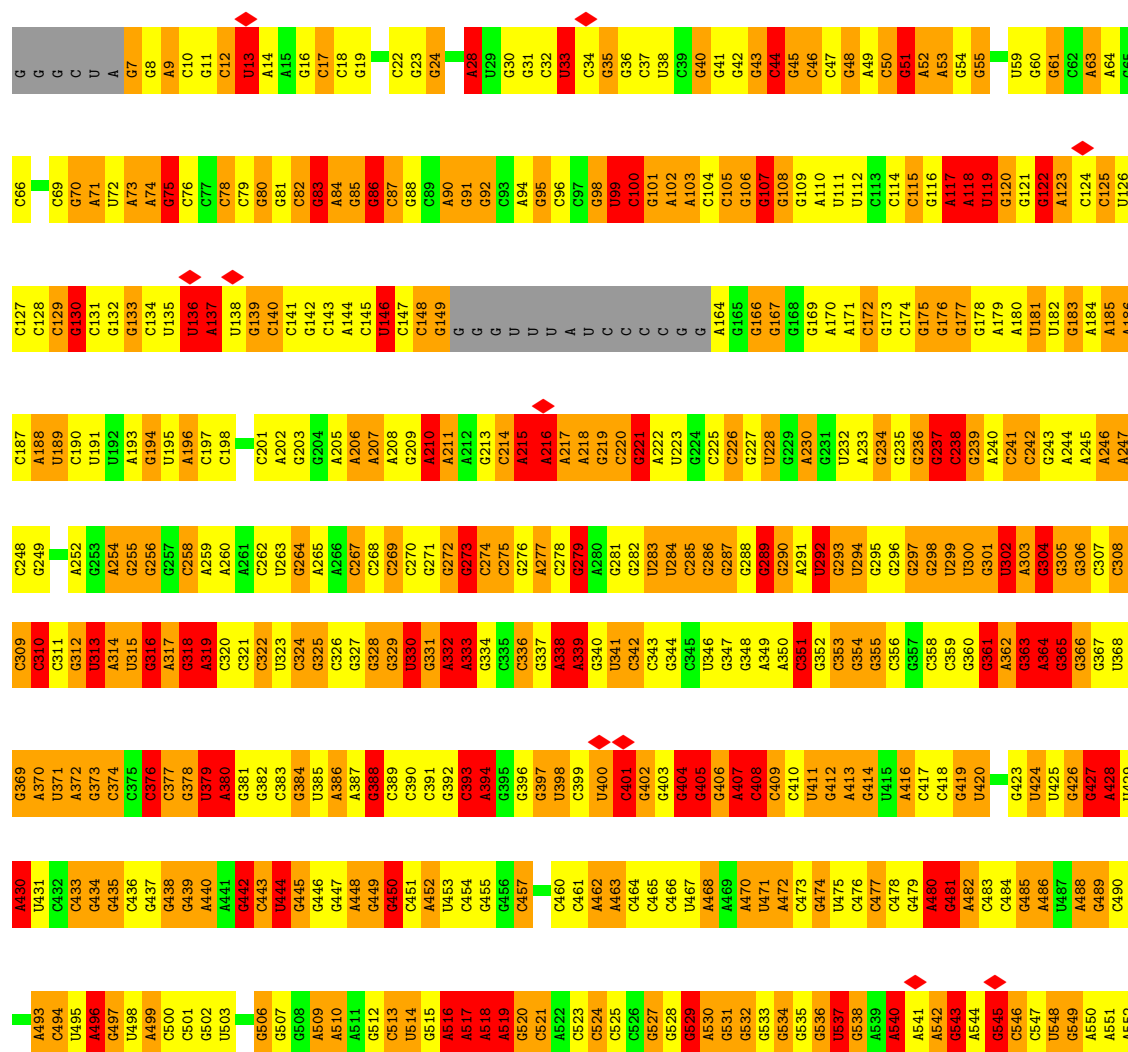
- Molecule 37: 30S ribosomal protein S27AE

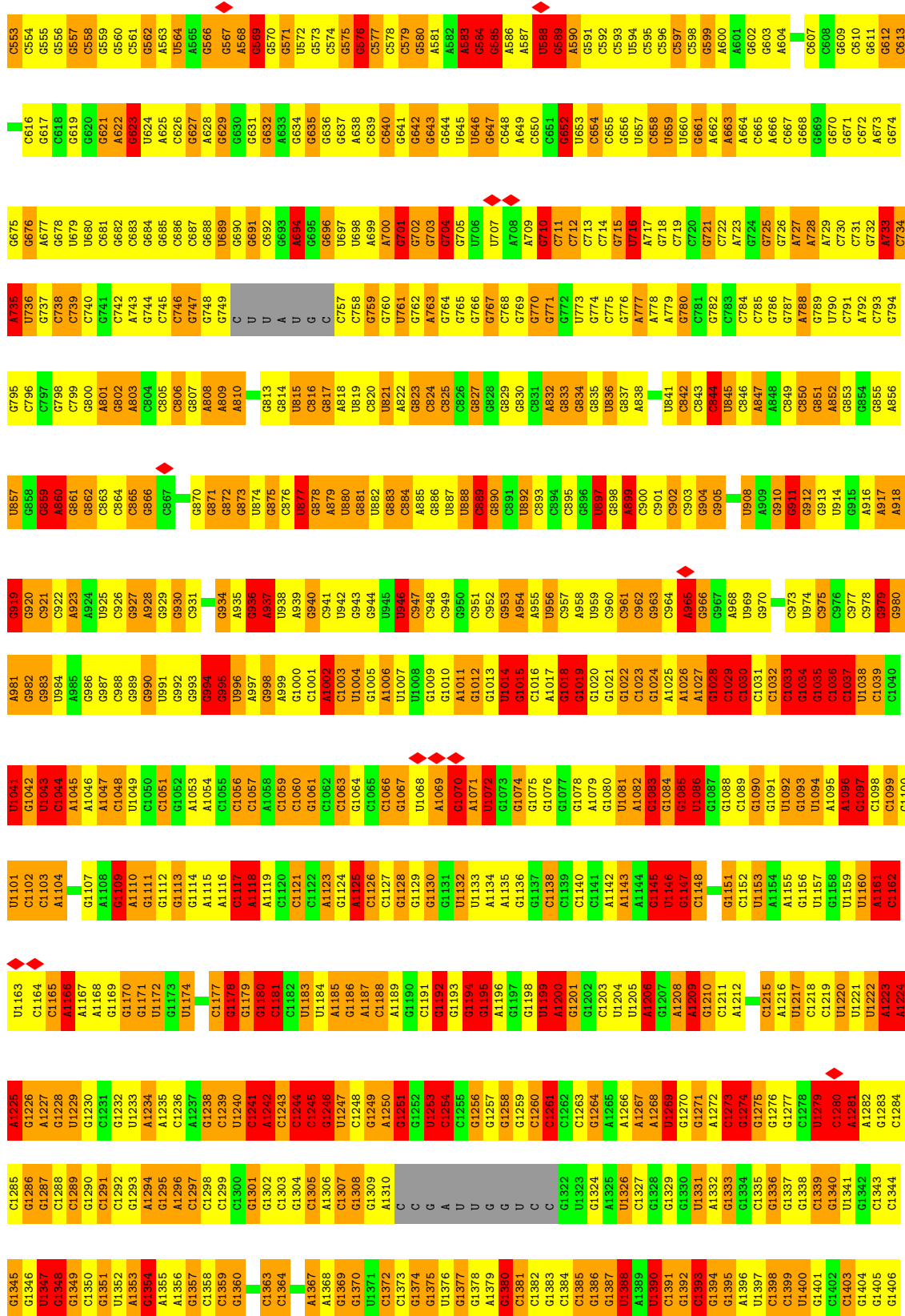
Chain BY: 



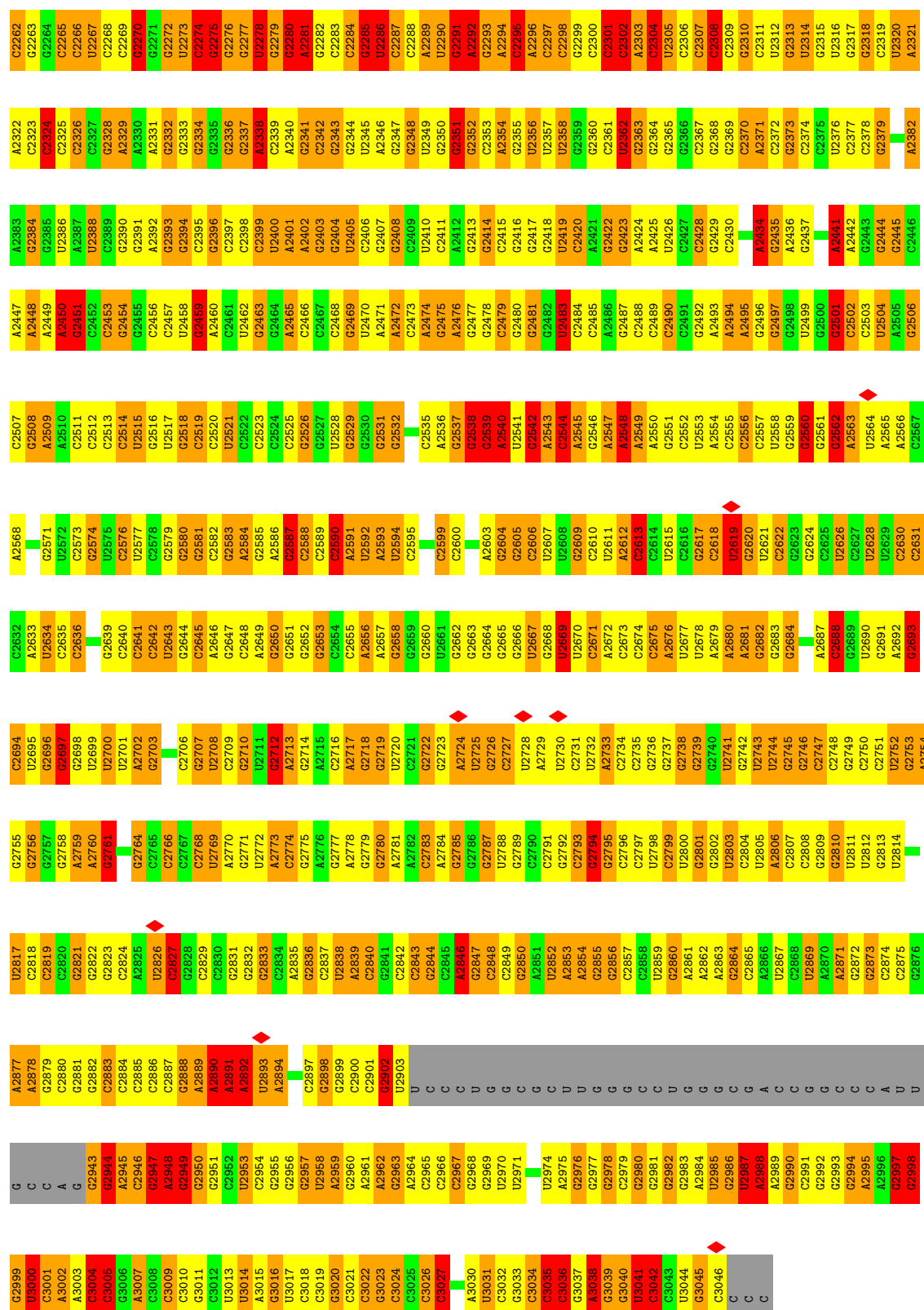
- Molecule 38: 23S ribosomal RNA

Chain A1: 



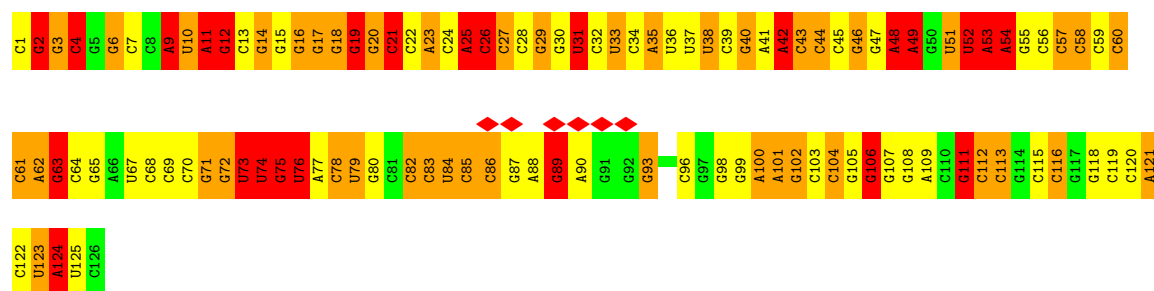


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C2204	C2143	G1899	A1835	G1775	G1714	G1854	C1531	G1471	U1409
A2205	U2144	U1900	A1836	G1776	G1715	G1855	G1593	U1472	A1410
G2206	G2145	G1902	G1840	G1777	G1716	G1856	G1595	C1473	G1411
C2207	C2146	A1903	G1841	U1778	G1717	G1857	G1534	A1474	G1412
G2208	A2147	G1904	G1842	C1779	C1718	G1858	U1535	G1475	A1413
U2209	U2148	G1905	C1843	G1780	G1719	G1859	U1539	C1476	G1414
G2210	C2149	U1906	C1844	C1781	G1720	A1860	G1600	C1477	C1415
C2211	G2150	G1907	C1845	U1782	U1721	A1661	U1541	U1478	G1416
G2212	C2151	U1908	C1846	G1783	G1722	C1662	U1542	U1479	U1417
U2213	U2091	C1909	G1847	G1784	A1723	G1663	C1602	G1480	A1418
G2214	G2092	G1910	U1847	U1785	A1724	G1664	G1603	G1481	U1419
A2093	A2093	C1911	A1848	A1786	A1725	G1665	G1544	G1482	U1420
C2155	A2156	A1912	C1850	U1787	G1726	G1666	C1545	U1483	C1421
G2216	C2157	G1913	U1851	G1788	G1727	U1667	G1546	U1484	G1422
U2158	G2158	C1914	U1852	A1789	C1728	G1668	U1547	G1485	G1423
C2159	C2038	G1915	U1853	G1790	G1729	A1669	A1548	G1486	G1424
G2160	U2039	G1916	G1854	U1791	C1730	A1670	C1549	U1487	U1425
A2161	A2040	U1917	G1855	A1792	U1731	G1611	C1550	C1488	G1426
C2162	A2041	G1918	G1856	G1793	G1732	A1672	G1551	G1489	A1427
G2163	A2042	U1919	U1857	C1794	C1733	G1673	C1552	G1490	G1428
A2164	A2043	A1920	A1858	C1795	A1613	G1674	G1553	U1491	A1429
C2165	C2044	G1921	U1859	U1796	G1735	G1675	G1554	C1492	C1430
G2226	G2045	C1922	U1860	A1797	G1736	G1676	G1555	C1493	U1431
C2166	C2046	C1923	A1861	U1798	A1737	A1677	G1556	U1494	C1432
C2167	U2047	G1924	G1862	A1799	U1738	U1678	G1557	A1495	C1433
G2228	C2048	U1925	U1863	G1800	U1739	A1679	U1558	G1496	C1434
C2229	U2108	A1926	G1864	U1801	U1740	G1680	A1559	C1497	G1435
G2230	C2109	C1927	U1865	G1802	G1741	G1681	C1560	C1498	A1436
C2231	U2110	U1928	U1866	U1803	C1742	C1682	G1561	C1499	G1437
U2232	A2051	C1929	U1867	G1804	G1743	G1622	U1562	C1500	G1438
G2233	G2052	U1930	U1868	U1805	A1744	C1623	G1563	G1501	A1439
C2234	G2053	G1931	U1869	C1806	C1745	A1624	C1564	C1502	C1440
G2235	C2114	A1932	U1870	U1746	G1746	A1625	G1565	C1503	C1441
C2236	U2115	C1933	U1871	C1747	C1747	A1626	G1566	G1504	G1442
A2237	G2116	U1934	U1872	C1748	C1748	G1627	C1567	G1505	G1443
G2238	U2117	C1935	G1873	C1749	C1749	C1628	G1568	U1506	A1444
C2239	C2057	G1936	U1874	U1809	G1888	G1629	A1569	A1507	G1445
G2240	G2058	A1937	G1875	G1810	U1889	U1630	C1570	C1508	G1446
U2241	C2059	C1938	G1876	A1811	U1891	A1631	G1571	C1509	G1447
A2242	A2060	G1939	G1877	A1812	G1750	U1632	C1572	U1510	G1448
C2181	A2061	U1940	U1878	A1813	G1752	A1633	G1573	C1511	C1449
A2182	G2000	A1941	U1879	C1814	G1753	A1634	A1574	G1512	C1450
G2183	U2001	G1942	A1880	C1815	A1754	G1635	G1575	G1513	A1451
A2184	A2062	G1943	U1881	C1816	G1755	C1636	C1576	C1514	G1452
G2245	U2063	C2002	C1882	G1817	U1756	G1637	C1577	G1515	G1453
A2185	U2064	A2003	C1883	A1818	A1758	C1638	C1578	C1516	G1454
G2246	C2065	A2004	G1884	G1819	C1760	G1639	G1579	G1517	C1455
C2186	G2066	C2005	G1885	C1820	G1761	U1700	U1580	G1518	C1458
G2248	U2067	G1946	C1886	G1821	C1762	C1701	A1581	G1519	A1459
A2188	U2068	A1947	A1887	G1822	U1763	C1702	G1582	G1520	G1460
C2189	G2069	G2008	G1888	A1823	A1764	G1703	G1583	G1521	G1461
A2190	U2070	G2009	U1889	G1824	C1765	C1704	G1584	A1522	G1462
U2191	C2071	G2010	U1890	G1825	A1766	U1645	U1585	A1523	A1465
G2192	G2072	U2011	G1891	G1826	G1767	G1706	G1586	A1524	U1466
U2254	G2073	G2012	C1891	A1827	C1768	U1707	G1587	G1525	G1467
C2195	U2074	A2013	G1892	A1828	G1769	U1708	C1588	G1526	C1468
G2196	G2075	C2014	C1893	G1829	A1770	C1709	G1589	G1527	
A2197	A2076	G2015	A1894	U1830	A1771	G1710	C1590	A1528	
U2198	A2077	C2016	U1895	G1831	A1772	C1711			
G2259	A2078	U2016	U1896	G1832					
C2260	U2079	A2017	U1896	A1772					
G2261									

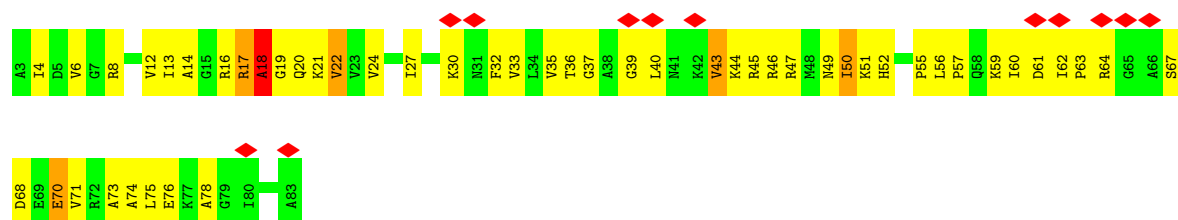


Molecule 39: 5S ribosomal RNA

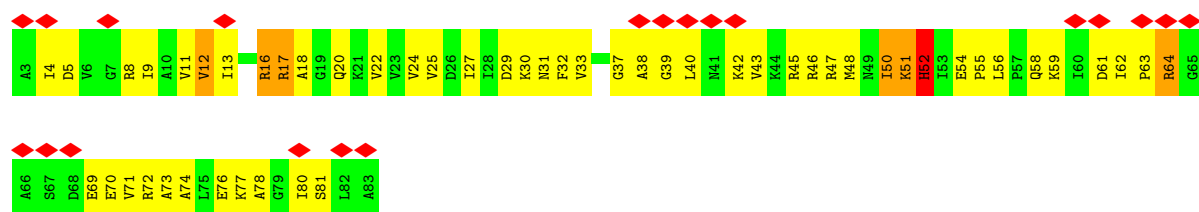




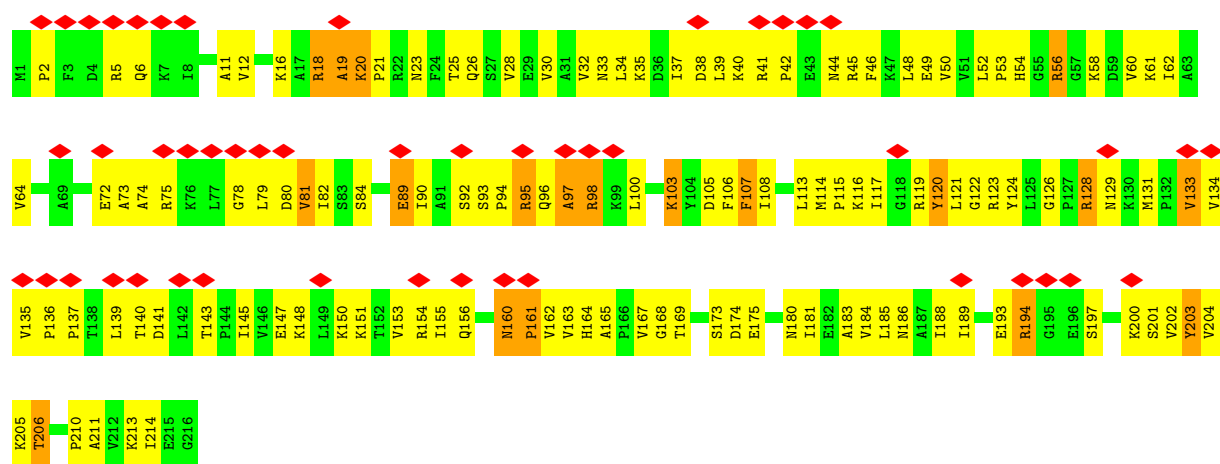
- Molecule 40: 50S ribosomal protein L14E



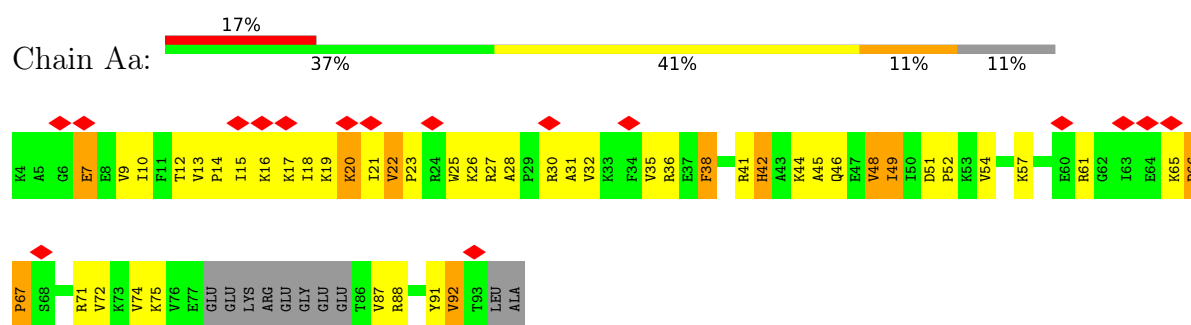
- Molecule 40: 50S ribosomal protein L14E



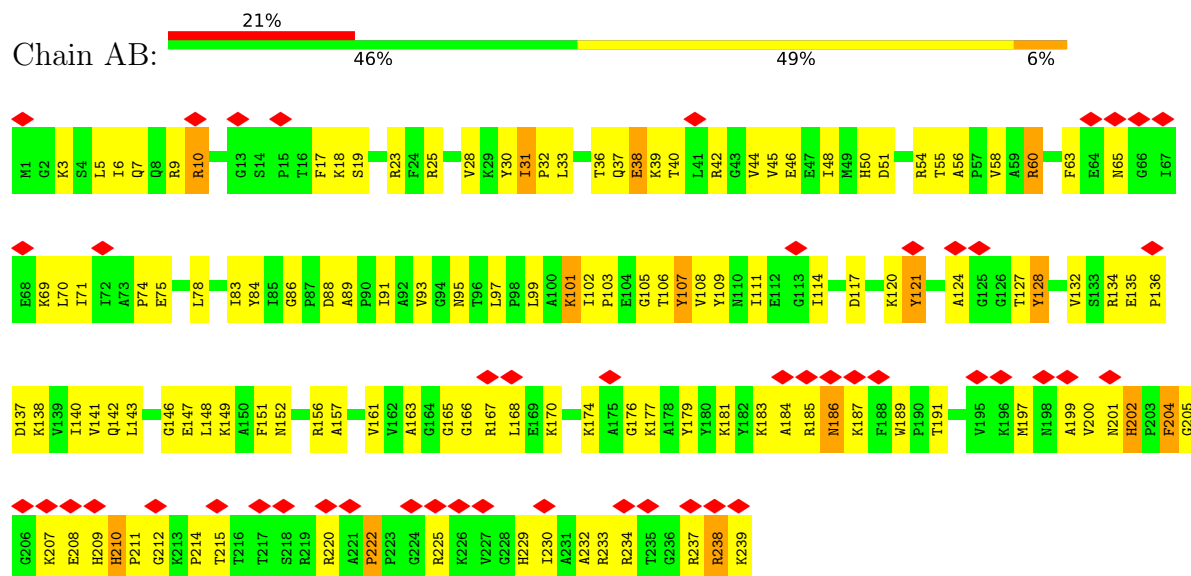
- Molecule 41: 50S ribosomal protein L1P



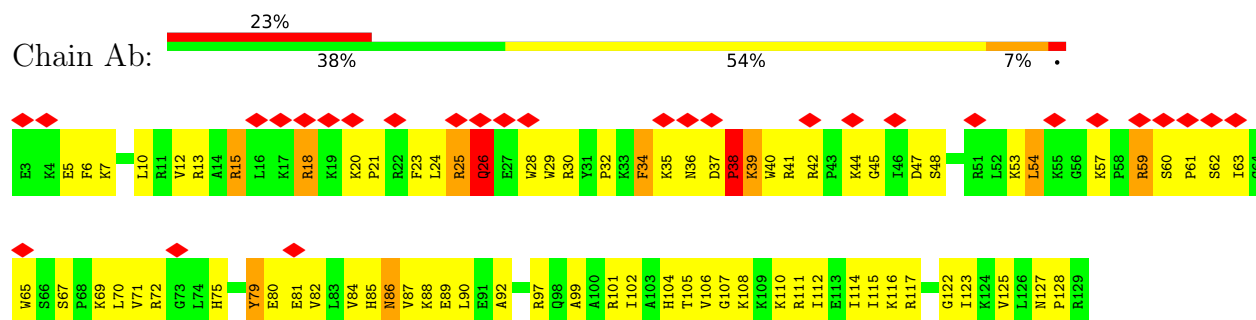
- Molecule 42: 50S ribosomal protein L31E



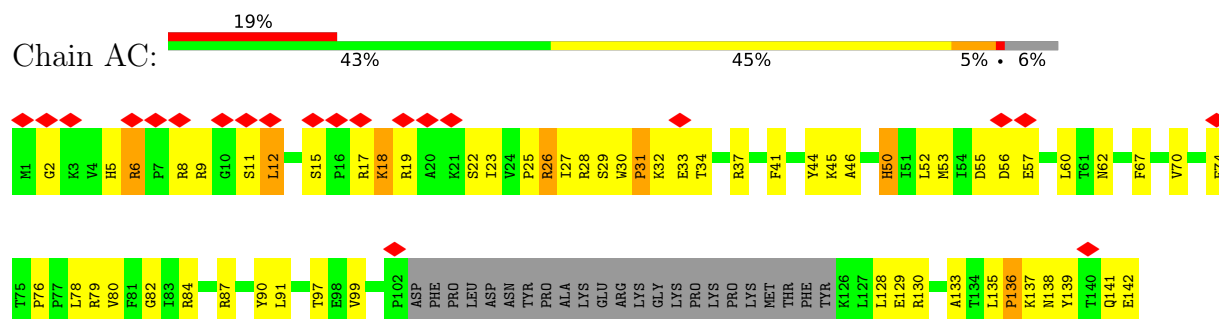
• Molecule 43: 50S ribosomal protein L2

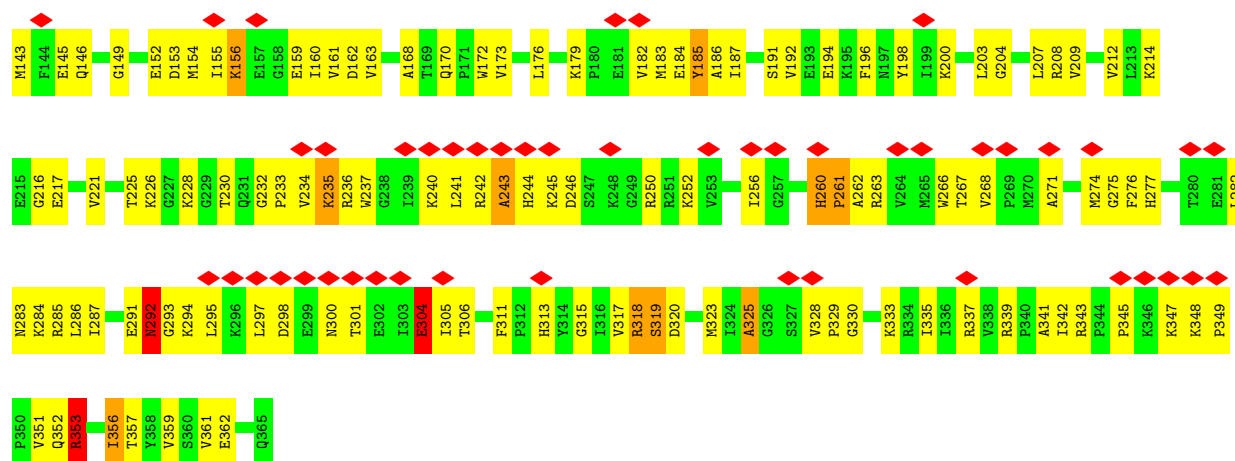


• Molecule 44: 50S ribosomal protein L32E

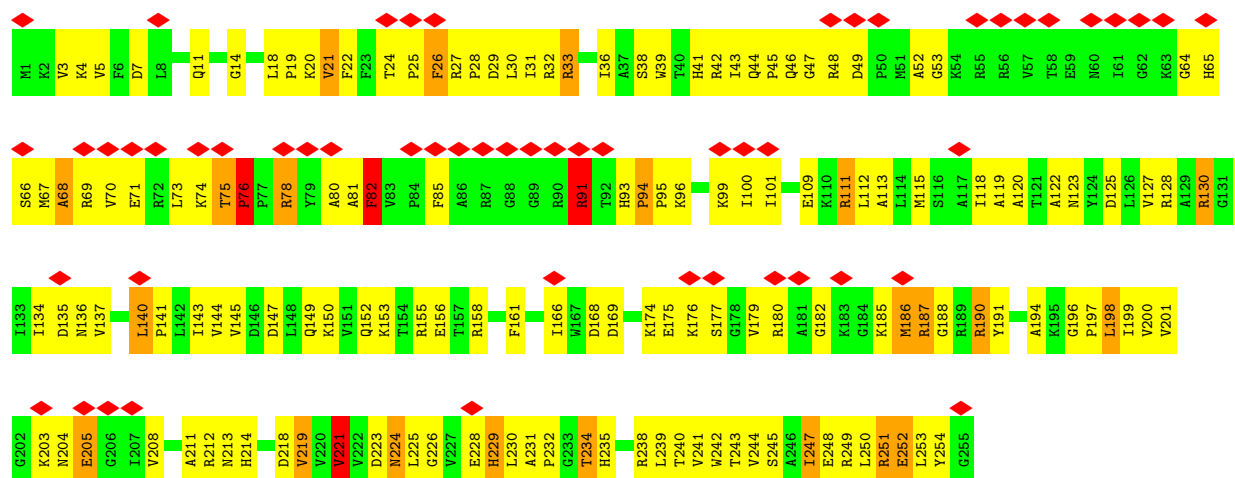


• Molecule 45: 50S ribosomal protein L3P

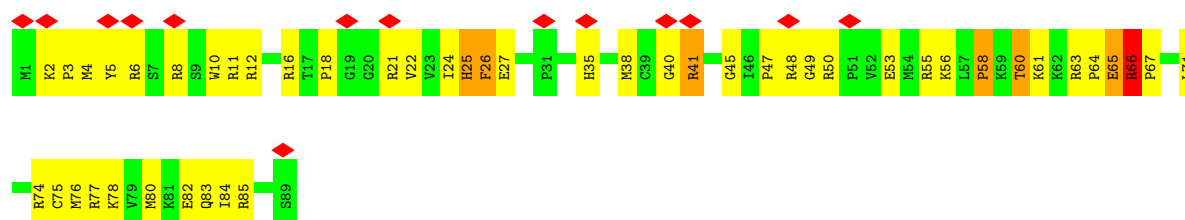




• Molecule 46: 50S ribosomal protein L4P

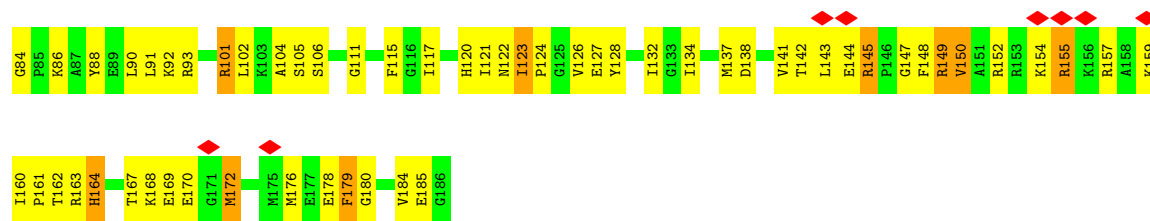


• Molecule 47: 50S ribosomal protein L34E

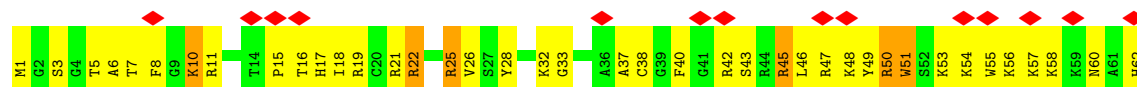


• Molecule 48: 50S ribosomal protein L5P

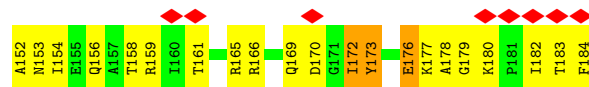
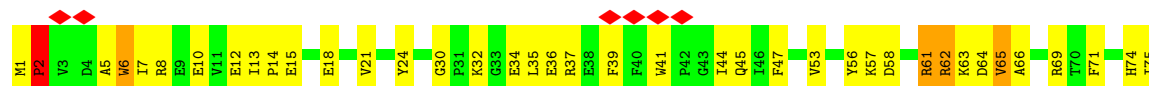




• Molecule 49: 50S ribosomal protein L37E



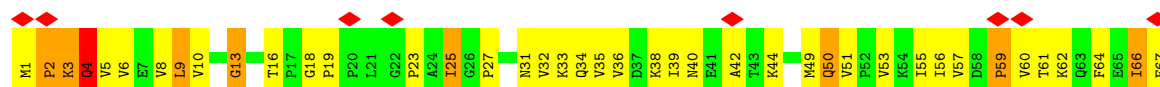
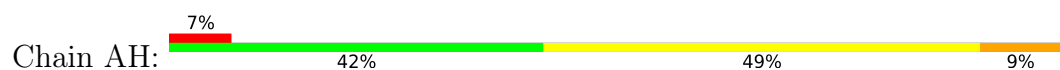
• Molecule 50: 50S ribosomal protein L6P



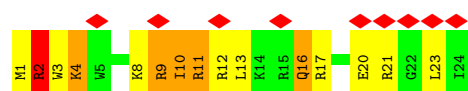
• Molecule 51: 50S ribosomal protein L40E



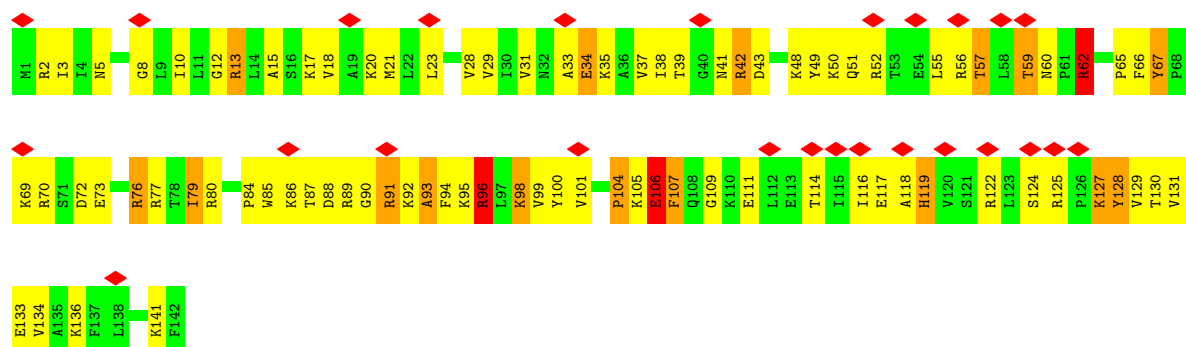
• Molecule 52: 50S ribosomal protein L11P



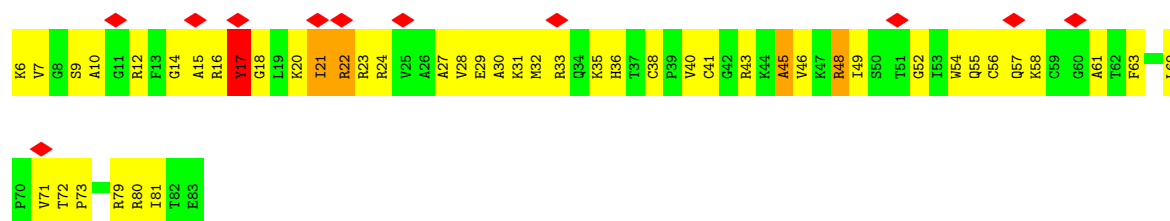
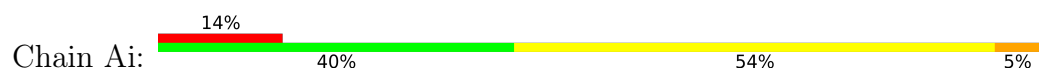
• Molecule 53: 50S ribosomal protein L41E



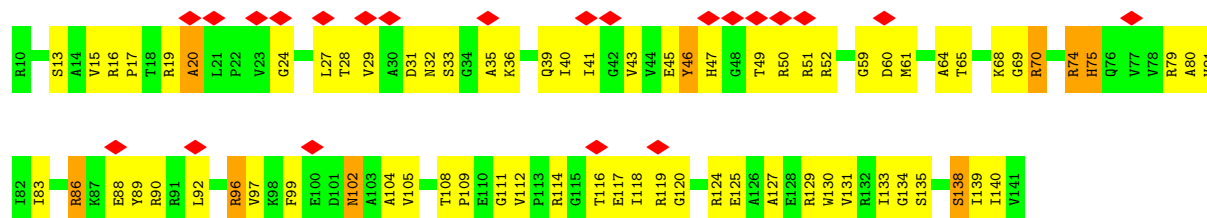
• Molecule 54: 50S ribosomal protein L13P



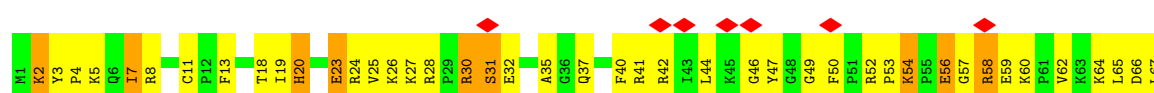
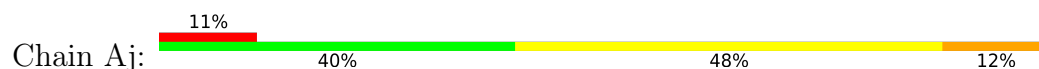
• Molecule 55: 50S ribosomal protein L37AE



• Molecule 56: 50S ribosomal protein L14P

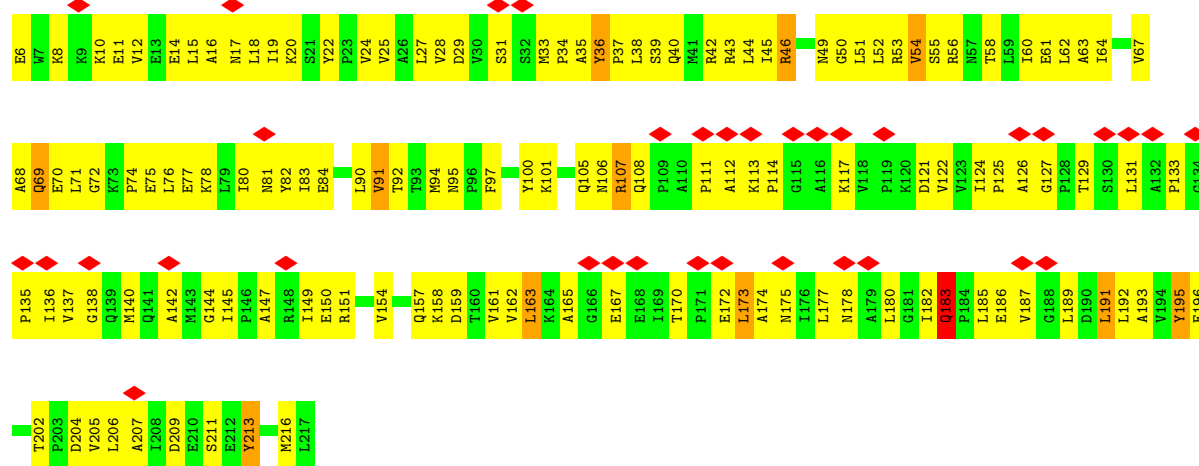


• Molecule 57: 50S ribosomal protein L44E

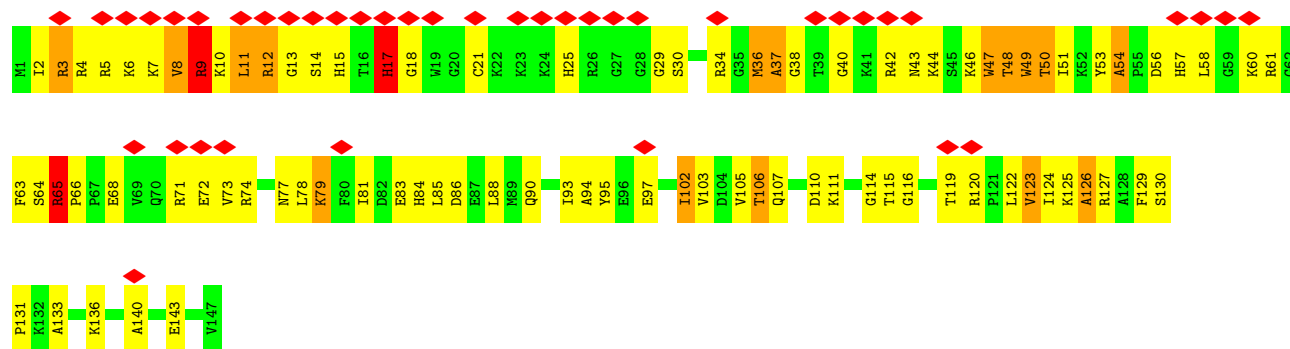




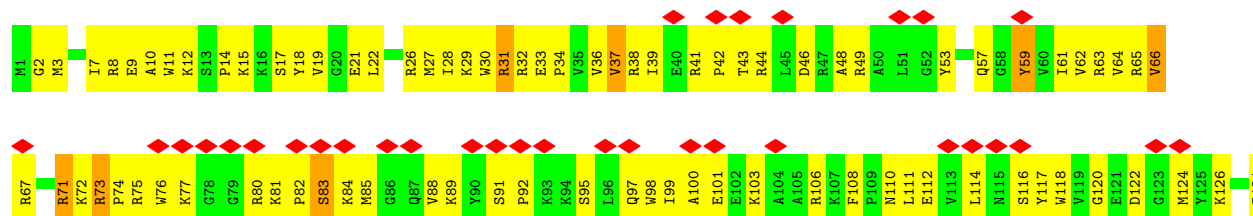
• Molecule 58: 50S ribosomal protein P0/L10E

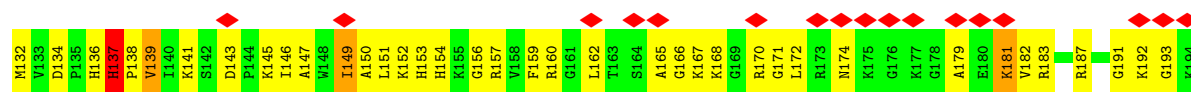


• Molecule 59: 50S ribosomal protein L15P

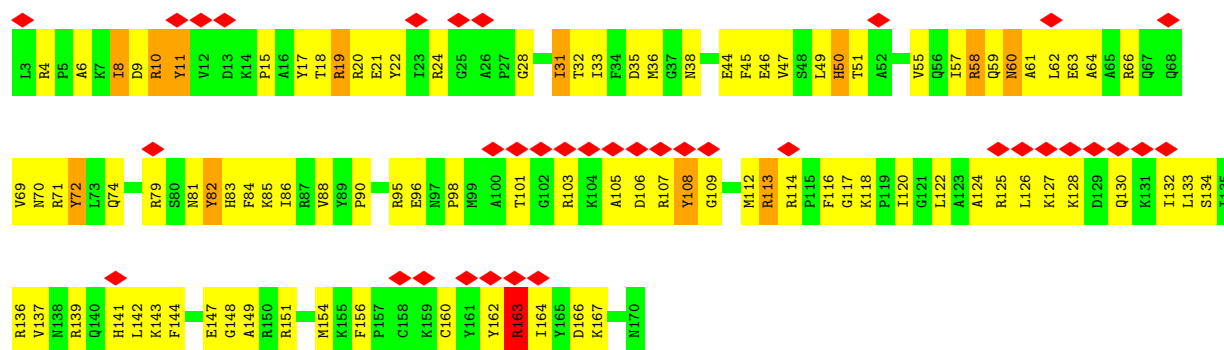
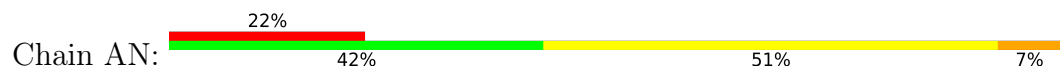


• Molecule 60: 50S ribosomal protein L15E

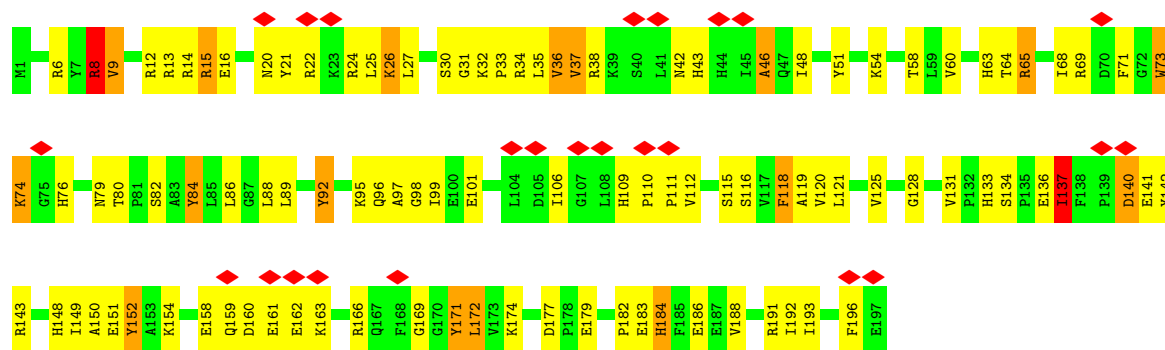




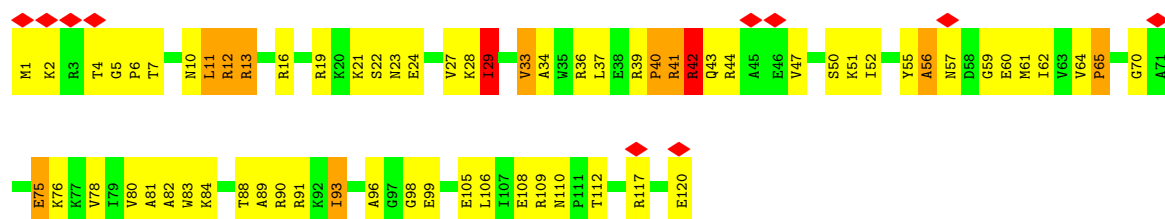
• Molecule 61: 50S ribosomal protein L10E/L16



• Molecule 62: 50S ribosomal protein L18P

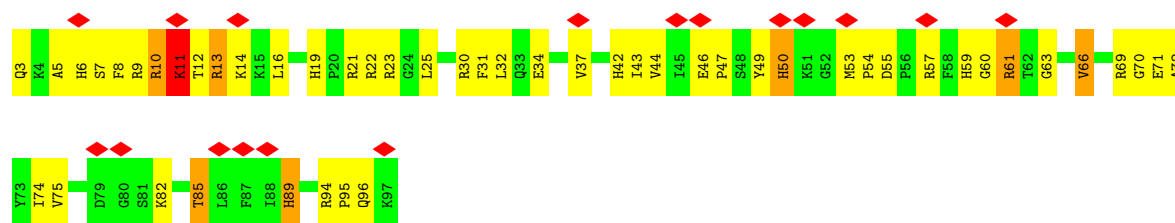


• Molecule 63: 50S ribosomal protein L18E

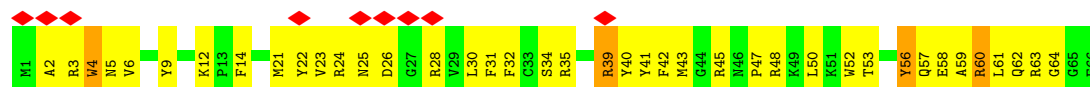


• Molecule 64: 50S ribosomal protein L21E

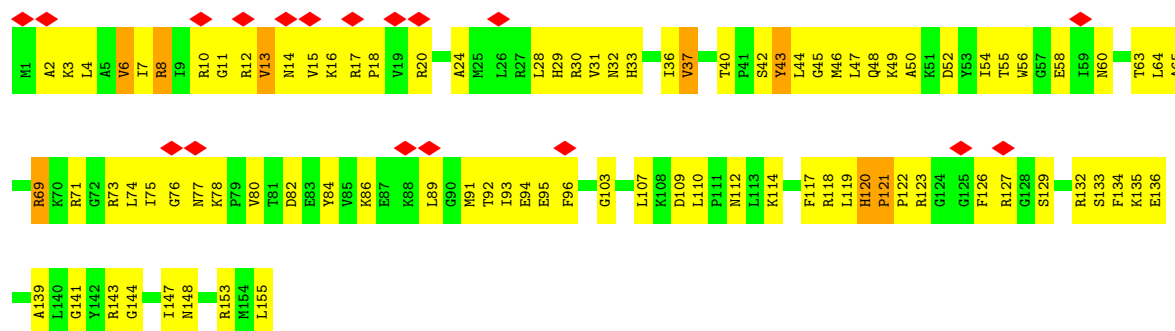




• Molecule 65: 50S ribosomal protein L24E



• Molecule 66: 50S ribosomal protein L30P



• Molecule 67: 50S ribosomal protein L30E



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	37000	Depositor
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	per micrograph	Depositor
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	51000	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	3.556	Depositor
Minimum map value	-0.752	Depositor
Average map value	0.060	Depositor
Map value standard deviation	0.270	Depositor
Recommended contour level	0.93	Depositor
Map size ($\text{\AA}$)	444.99, 444.99, 442.26	wwPDB
Map dimensions	163, 163, 162	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	2.73, 2.73, 2.73	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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	A7	2.22	15/534 (2.8%)	2.54	33/719 (4.6%)
2	A8	2.38	15/263 (5.7%)	2.51	20/354 (5.6%)
3	Af	2.47	24/453 (5.3%)	2.54	46/603 (7.6%)
4	AQ	2.35	57/1272 (4.5%)	2.64	108/1676 (6.4%)
5	AS	2.41	60/1226 (4.9%)	2.54	103/1649 (6.2%)
6	AT	2.12	15/689 (2.2%)	2.48	50/924 (5.4%)
7	AU	2.34	46/1024 (4.5%)	2.42	75/1365 (5.5%)
8	AW	2.35	26/547 (4.8%)	2.47	35/725 (4.8%)
9	AX	2.28	126/3383 (3.7%)	2.59	273/4593 (5.9%)
10	B1	2.02	35/1840 (1.9%)	1.92	69/2869 (2.4%)
11	B2	2.02	719/35963 (2.0%)	1.88	1249/56134 (2.2%)
12	AG	2.34	41/951 (4.3%)	2.46	59/1281 (4.6%)
12	B3	2.24	42/951 (4.4%)	2.35	46/1281 (3.6%)
13	BA	2.24	60/1585 (3.8%)	2.50	122/2124 (5.7%)
14	BB	2.27	60/1654 (3.6%)	2.52	126/2233 (5.6%)
15	BC	2.38	64/1481 (4.3%)	2.43	94/1985 (4.7%)
16	BD	2.32	58/1457 (4.0%)	2.55	102/1953 (5.2%)
17	BE	2.26	68/2025 (3.4%)	2.44	132/2732 (4.8%)
18	BF	2.37	85/1746 (4.9%)	2.51	124/2350 (5.3%)
19	BG	2.27	30/999 (3.0%)	2.37	52/1337 (3.9%)
20	BH	2.35	68/1773 (3.8%)	2.69	163/2381 (6.8%)
21	BI	2.30	42/1049 (4.0%)	2.44	67/1408 (4.8%)
22	BJ	2.42	55/1013 (5.4%)	2.49	67/1349 (5.0%)
23	BK	2.33	49/1088 (4.5%)	2.51	84/1455 (5.8%)
24	BL	2.38	40/830 (4.8%)	2.48	53/1113 (4.8%)
25	BM	2.47	52/1022 (5.1%)	2.43	68/1375 (4.9%)
26	BN	2.30	49/1157 (4.2%)	2.51	84/1536 (5.5%)
27	BO	2.29	42/1208 (3.5%)	2.55	95/1619 (5.9%)
28	BP	2.38	22/471 (4.7%)	2.46	33/620 (5.3%)
29	BQ	2.30	57/1338 (4.3%)	2.54	91/1797 (5.1%)
30	BR	2.28	34/956 (3.6%)	2.46	66/1287 (5.1%)
31	BS	2.19	16/562 (2.8%)	2.68	50/744 (6.7%)
32	BT	2.29	36/943 (3.8%)	2.64	79/1257 (6.3%)
33	BU	2.33	43/1204 (3.6%)	2.44	74/1621 (4.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
34	BV	2.30	38/839 (4.5%)	2.50	59/1122 (5.3%)
35	BW	2.24	20/485 (4.1%)	2.38	25/651 (3.8%)
36	BX	2.41	29/570 (5.1%)	2.41	30/760 (3.9%)
37	BY	2.06	10/421 (2.4%)	2.41	25/558 (4.5%)
38	A1	2.01	1404/71524 (2.0%)	1.86	2313/111652 (2.1%)
39	A3	2.03	64/3007 (2.1%)	1.95	115/4689 (2.5%)
40	A5	2.52	45/618 (7.3%)	2.45	34/829 (4.1%)
40	AK	2.20	20/618 (3.2%)	2.61	54/829 (6.5%)
41	AA	2.25	60/1702 (3.5%)	2.55	146/2293 (6.4%)
42	Aa	2.19	22/690 (3.2%)	2.61	58/926 (6.3%)
43	AB	2.36	83/1883 (4.4%)	2.43	107/2540 (4.2%)
44	Ab	2.39	50/1100 (4.5%)	2.55	81/1466 (5.5%)
45	AC	2.26	88/2774 (3.2%)	2.44	175/3727 (4.7%)
46	AD	2.31	87/2068 (4.2%)	2.51	153/2787 (5.5%)
47	Ad	2.27	26/758 (3.4%)	2.53	54/1007 (5.4%)
48	AE	2.27	57/1513 (3.8%)	2.38	88/2026 (4.3%)
49	Ae	2.34	24/517 (4.6%)	2.42	30/681 (4.4%)
50	AF	2.23	50/1507 (3.3%)	2.37	85/2033 (4.2%)
51	Ag	2.33	15/381 (3.9%)	2.45	23/504 (4.6%)
52	AH	2.25	44/1002 (4.4%)	2.65	93/1351 (6.9%)
53	Ah	2.33	8/233 (3.4%)	2.51	18/301 (6.0%)
54	AI	2.31	52/1168 (4.5%)	2.48	84/1561 (5.4%)
55	Ai	2.43	30/599 (5.0%)	2.60	51/798 (6.4%)
56	AJ	2.47	53/1027 (5.2%)	2.42	54/1385 (3.9%)
57	Aj	2.32	34/806 (4.2%)	2.50	47/1065 (4.4%)
58	Ak	2.32	66/1660 (4.0%)	2.53	132/2253 (5.9%)
59	AL	2.36	51/1175 (4.3%)	2.52	95/1563 (6.1%)
60	AM	2.30	66/1634 (4.0%)	2.64	144/2179 (6.6%)
61	AN	2.33	60/1410 (4.3%)	2.51	106/1890 (5.6%)
62	AO	2.27	61/1636 (3.7%)	2.48	98/2196 (4.5%)
63	AP	2.29	31/980 (3.2%)	2.49	74/1313 (5.6%)
64	AR	2.39	41/808 (5.1%)	2.48	52/1080 (4.8%)
65	AV	2.31	24/570 (4.2%)	2.52	40/758 (5.3%)
66	AY	2.27	50/1262 (4.0%)	2.49	100/1687 (5.9%)
67	AZ	2.29	34/764 (4.5%)	2.45	49/1028 (4.8%)
All	All	2.13	5148/184366 (2.8%)	2.12	8884/271937 (3.3%)

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
2	A8	0	1
3	Af	0	6
4	AQ	0	5
5	AS	0	5
6	AT	0	2
7	AU	0	4
9	AX	0	9
10	B1	0	35
11	B2	0	725
12	AG	0	2
13	BA	0	11
14	BB	0	2
15	BC	0	8
16	BD	0	7
17	BE	0	9
18	BF	0	3
19	BG	1	4
20	BH	4	13
21	BI	0	3
22	BJ	0	6
23	BK	0	7
24	BL	0	8
25	BM	0	2
26	BN	0	4
27	BO	0	5
28	BP	0	1
29	BQ	0	7
30	BR	0	3
31	BS	0	2
32	BT	0	5
33	BU	0	4
34	BV	0	12
35	BW	0	1
36	BX	0	3
37	BY	0	3
38	A1	2	1412
39	A3	0	55
40	A5	0	2
40	AK	0	2
41	AA	0	4
42	Aa	0	2
43	AB	0	8
44	Ab	0	9

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Mol	Chain	#Chirality outliers	#Planarity outliers
45	AC	0	7
46	AD	0	9
47	Ad	0	1
48	AE	0	6
49	Ae	1	9
50	AF	0	3
51	Ag	1	5
52	AH	1	2
53	Ah	0	2
54	AI	0	7
55	Ai	0	2
56	AJ	0	4
57	Aj	0	7
58	Ak	0	4
59	AL	2	10
60	AM	0	4
61	AN	0	7
62	AO	0	10
63	AP	0	4
64	AR	0	1
65	AV	0	5
66	AY	0	2
67	AZ	0	1
All	All	12	2533

All (5148) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	BC	177	GLY	CA-C	-14.95	1.41	1.52
7	AU	108	GLU	N-CA	-14.54	1.33	1.46
16	BD	161	ALA	C-N	13.67	1.43	1.33
41	AA	135	VAL	CA-CB	13.41	1.60	1.54
9	AX	65	SER	CA-C	-12.71	1.36	1.52
56	AJ	17	PRO	CA-C	-12.31	1.39	1.52
58	Ak	43	ARG	CD-NE	11.50	1.62	1.46
18	BF	54	LEU	CA-CB	11.23	1.65	1.53
9	AX	11	ILE	CA-C	-11.11	1.41	1.52
44	Ab	102	ILE	CA-C	-10.85	1.40	1.52
13	BA	37	ALA	N-CA	-10.84	1.33	1.46
43	AB	44	VAL	C-N	10.83	1.44	1.33
64	AR	30	ARG	C-N	10.70	1.48	1.33
50	AF	120	ARG	NE-CZ	10.65	1.44	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2063	U	C5'-C4'	10.62	1.67	1.51
67	AZ	91	SER	CA-C	-10.59	1.40	1.52
33	BU	6	ASP	C-N	10.55	1.41	1.33
62	AO	115	SER	CA-C	-10.49	1.39	1.52
17	BE	43	ILE	CA-CB	10.37	1.63	1.54
9	AX	52	ILE	N-CA	-10.32	1.38	1.46
44	Ab	122	GLY	C-N	10.25	1.46	1.33
2	A8	34	ILE	CA-C	-10.21	1.40	1.52
9	AX	10	LYS	C-N	10.13	1.44	1.33
58	Ak	145	ILE	N-CA	-10.07	1.38	1.46
22	BJ	125	LEU	N-CA	-10.06	1.34	1.45
29	BQ	22	PRO	CA-C	10.04	1.58	1.52
67	AZ	25	ARG	CD-NE	10.02	1.60	1.46
5	AS	82	ARG	NE-CZ	9.99	1.44	1.33
6	AT	9	ARG	NE-CZ	9.98	1.44	1.33
27	BO	133	SER	CA-C	-9.95	1.41	1.52
11	B2	1394	G	C4'-O4'	9.94	1.60	1.45
45	AC	353	ARG	CD-NE	9.91	1.60	1.46
30	BR	43	PRO	CA-CB	9.83	1.65	1.53
25	BM	132	ARG	CA-C	-9.77	1.39	1.52
23	BK	16	ARG	NE-CZ	9.76	1.43	1.33
11	B2	1407	U	C5'-C4'	9.73	1.66	1.51
50	AF	18	GLU	CA-C	-9.72	1.40	1.52
48	AE	90	LEU	CA-C	-9.70	1.40	1.52
33	BU	121	ILE	CA-CB	-9.67	1.43	1.54
12	AG	11	VAL	CA-C	-9.66	1.45	1.53
17	BE	105	ASN	CA-CB	9.56	1.68	1.53
9	AX	173	PHE	C-N	9.55	1.45	1.33
49	Ae	57	LYS	CA-C	-9.55	1.40	1.52
11	B2	393	A	C5'-C4'	9.52	1.65	1.51
1	A7	20	ARG	NE-CZ	9.50	1.43	1.33
43	AB	5	LEU	N-CA	-9.49	1.34	1.45
66	AY	33	HIS	ND1-CE1	9.46	1.42	1.32
15	BC	87	ASN	CA-CB	9.42	1.61	1.53
40	A5	47	ARG	NE-CZ	9.42	1.43	1.33
45	AC	28	ARG	N-CA	-9.39	1.36	1.46
45	AC	168	ALA	CA-C	-9.34	1.41	1.52
26	BN	61	GLU	C-N	9.26	1.46	1.33
64	AR	30	ARG	NE-CZ	9.24	1.43	1.33
38	A1	437	G	C4'-C3'	9.24	1.66	1.52
13	BA	128	ARG	CD-NE	9.21	1.59	1.46
43	AB	54	ARG	NE-CZ	9.21	1.43	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1157	U	C1'-N1	9.19	1.62	1.48
58	Ak	149	ILE	CA-C	-9.19	1.41	1.52
12	AG	100	ALA	CA-C	-9.18	1.41	1.52
56	AJ	74	ARG	CD-NE	9.18	1.59	1.46
38	A1	1264	G	C5'-C4'	9.17	1.65	1.51
51	Ag	10	ARG	CD-NE	9.14	1.59	1.46
25	BM	98	ALA	CA-C	-9.13	1.41	1.52
11	B2	390	G	O4'-C1'	9.07	1.55	1.41
65	AV	48	ARG	CA-C	-9.06	1.41	1.52
11	B2	1201	G	P-O5'	-9.05	1.46	1.59
37	BY	17	ARG	N-CA	-9.05	1.35	1.46
32	BT	82	TYR	CA-C	-9.04	1.41	1.52
11	B2	281	G	C4'-O4'	9.04	1.59	1.45
43	AB	25	ARG	NE-CZ	9.03	1.43	1.33
11	B2	1388	G	P-O5'	9.03	1.73	1.59
27	BO	72	HIS	ND1-CE1	9.03	1.41	1.32
11	B2	1377	G	O3'-P	-9.02	1.47	1.61
17	BE	202	ILE	CA-C	9.02	1.64	1.52
11	B2	879	U	C1'-N1	9.01	1.61	1.48
22	BJ	83	ASN	C-N	-9.01	1.26	1.33
59	AL	12	ARG	C-N	9.00	1.45	1.33
18	BF	216	GLU	CA-C	-8.98	1.42	1.52
56	AJ	96	ARG	CD-NE	8.96	1.58	1.46
11	B2	781	U	O3'-P	-8.95	1.47	1.61
14	BB	199	ILE	C-N	8.92	1.41	1.33
38	A1	2958	U	C5'-C4'	8.92	1.64	1.51
39	A3	6	G	C3'-O3'	8.91	1.55	1.42
38	A1	2950	G	C5'-C4'	8.89	1.64	1.51
14	BB	131	VAL	CA-CB	-8.87	1.44	1.54
9	AX	385	VAL	CA-CB	-8.86	1.42	1.54
38	A1	2269	C	C3'-O3'	8.85	1.55	1.42
11	B2	532	C	C1'-N1	8.84	1.61	1.48
55	Ai	43	ARG	CZ-NH2	8.83	1.45	1.33
38	A1	368	U	O3'-P	-8.81	1.48	1.61
45	AC	337	ARG	CD-NE	8.81	1.58	1.46
5	AS	121	LYS	CA-CB	8.80	1.64	1.53
16	BD	53	ARG	CD-NE	8.76	1.58	1.46
42	Aa	65	LYS	CA-CB	8.73	1.67	1.53
59	AL	94	ALA	CA-C	-8.73	1.42	1.53
63	AP	51	LYS	C-N	8.71	1.44	1.33
38	A1	680	U	P-O5'	-8.71	1.46	1.59
43	AB	141	VAL	CA-C	-8.71	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AQ	62	ARG	NE-CZ	8.70	1.42	1.33
38	A1	2642	C	C2'-C1'	-8.69	1.40	1.53
4	AQ	28	ARG	NE-CZ	8.67	1.42	1.33
50	AF	180	LYS	N-CA	-8.66	1.38	1.46
42	Aa	45	ALA	N-CA	-8.65	1.35	1.46
38	A1	116	G	C5'-C4'	8.63	1.64	1.51
38	A1	1868	C	C1'-N1	8.62	1.61	1.48
52	AH	96	GLY	C-N	8.61	1.44	1.33
8	AW	7	ARG	CD-NE	8.59	1.58	1.46
46	AD	64	GLY	CA-C	-8.59	1.39	1.51
38	A1	1789	A	C2'-C1'	-8.59	1.40	1.53
38	A1	2184	G	O3'-P	-8.57	1.48	1.61
38	A1	2745	G	C5'-C4'	8.57	1.64	1.51
33	BU	61	ARG	NE-CZ	8.54	1.42	1.33
35	BW	55	LYS	C-N	8.54	1.42	1.32
38	A1	1293	G	C5'-C4'	8.53	1.64	1.51
38	A1	2490	C	C5'-C4'	8.51	1.64	1.51
20	BH	66	ARG	N-CA	-8.50	1.36	1.46
39	A3	11	A	C5'-C4'	8.49	1.64	1.51
53	Ah	16	GLN	CA-C	-8.49	1.41	1.52
48	AE	18	HIS	C-N	8.49	1.40	1.33
60	AM	147	ALA	N-CA	-8.49	1.39	1.47
19	BG	119	VAL	CA-C	-8.48	1.42	1.52
34	BV	77	ARG	CA-C	-8.47	1.41	1.52
38	A1	2391	G	C2'-C1'	-8.45	1.40	1.53
17	BE	60	ARG	NE-CZ	8.45	1.42	1.33
36	BX	51	ILE	CA-CB	8.45	1.62	1.54
44	Ab	84	VAL	N-CA	-8.43	1.35	1.46
38	A1	221	G	C5'-C4'	8.42	1.64	1.51
1	A7	32	GLU	CA-C	-8.40	1.42	1.52
18	BF	40	ARG	NE-CZ	8.40	1.42	1.33
15	BC	181	ALA	N-CA	-8.39	1.36	1.46
15	BC	78	PRO	CA-C	-8.39	1.42	1.52
38	A1	627	G	C5'-C4'	-8.39	1.38	1.51
15	BC	108	HIS	ND1-CE1	8.39	1.41	1.32
22	BJ	41	ASP	CA-C	-8.39	1.42	1.52
13	BA	181	ARG	NE-CZ	8.38	1.42	1.33
48	AE	18	HIS	ND1-CE1	8.37	1.41	1.32
9	AX	52	ILE	CA-C	-8.36	1.46	1.53
26	BN	8	ASN	CA-C	-8.35	1.41	1.52
17	BE	235	THR	CA-C	-8.34	1.40	1.52
46	AD	46	GLN	CA-C	-8.34	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	Ak	11	GLU	N-CA	-8.33	1.36	1.46
5	AS	78	PHE	CA-C	-8.33	1.42	1.52
38	A1	2185	A	C5'-C4'	8.33	1.63	1.51
30	BR	62	ARG	NE-CZ	8.31	1.42	1.33
3	Af	21	ARG	CA-C	-8.31	1.42	1.52
14	BB	180	GLY	C-N	8.30	1.40	1.33
61	AN	24	ARG	CD-NE	8.30	1.57	1.46
4	AQ	145	HIS	ND1-CE1	8.30	1.40	1.32
38	A1	2695	U	C5'-C4'	8.30	1.63	1.51
21	BI	86	PHE	CA-CB	8.29	1.66	1.53
12	AG	45	ARG	CZ-NH1	8.29	1.44	1.32
23	BK	84	ARG	NE-CZ	8.29	1.42	1.33
38	A1	2900	C	C5'-C4'	8.28	1.63	1.51
45	AC	333	LYS	N-CA	8.27	1.56	1.46
38	A1	658	C	O4'-C1'	8.26	1.54	1.41
38	A1	2880	C	C5'-C4'	8.26	1.63	1.51
56	AJ	31	ASP	CA-C	-8.26	1.43	1.52
9	AX	145	ILE	C-N	8.26	1.43	1.33
46	AD	70	VAL	N-CA	-8.26	1.36	1.46
38	A1	1899	C	C1'-N1	8.25	1.60	1.48
11	B2	228	G	C5'-C4'	8.24	1.63	1.51
16	BD	25	ARG	NE-CZ	8.24	1.42	1.33
45	AC	6	ARG	CD-NE	8.23	1.57	1.46
9	AX	216	THR	C-N	8.23	1.43	1.33
50	AF	2	PRO	N-CA	-8.22	1.36	1.47
5	AS	113	LYS	N-CA	-8.21	1.35	1.45
11	B2	1466	G	C4'-O4'	-8.21	1.33	1.45
60	AM	183	ARG	NE-CZ	8.21	1.42	1.33
9	AX	159	GLU	C-N	8.20	1.43	1.33
11	B2	143	G	C5'-C4'	8.20	1.63	1.51
11	B2	1473	A	C5'-C4'	8.20	1.63	1.51
60	AM	75	ARG	NE-CZ	8.18	1.42	1.33
28	BP	23	ARG	CD-NE	8.17	1.57	1.46
11	B2	199	A	C1'-N9	8.17	1.59	1.47
38	A1	1662	C	C5'-C4'	8.16	1.63	1.51
27	BO	137	ARG	CD-NE	8.15	1.57	1.46
48	AE	121	ILE	CA-CB	-8.15	1.44	1.54
41	AA	164	HIS	N-CA	-8.13	1.35	1.46
52	AH	71	PRO	CA-C	8.13	1.59	1.52
11	B2	1184	U	C1'-N1	8.13	1.59	1.47
38	A1	194	G	C5'-C4'	8.12	1.63	1.51
47	Ad	41	ARG	CD-NE	8.10	1.57	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	BF	155	ARG	CD-NE	8.10	1.57	1.46
20	BH	148	VAL	CA-CB	8.10	1.65	1.54
29	BQ	157	VAL	CA-C	8.08	1.62	1.52
38	A1	2606	C	C5'-C4'	8.07	1.63	1.51
5	AS	23	ARG	CZ-NH2	8.07	1.44	1.33
36	BX	71	ARG	CD-NE	8.06	1.57	1.46
61	AN	163	ARG	CD-NE	8.06	1.57	1.46
38	A1	371	U	C5'-C4'	8.06	1.63	1.51
16	BD	54	ARG	NE-CZ	8.06	1.42	1.33
24	BL	80	ARG	CZ-NH1	8.06	1.44	1.32
15	BC	42	THR	CA-C	-8.05	1.43	1.52
13	BA	67	TYR	N-CA	-8.05	1.36	1.46
9	AX	203	GLY	C-N	8.05	1.42	1.33
38	A1	98	G	C5'-C4'	8.05	1.63	1.51
60	AM	91	SER	CA-CB	8.05	1.64	1.54
38	A1	597	C	C4'-C3'	8.04	1.64	1.52
9	AX	358	GLY	C-N	8.03	1.43	1.33
26	BN	99	GLU	CA-C	-8.02	1.42	1.52
32	BT	27	LEU	CA-C	8.02	1.63	1.52
38	A1	319	A	C4'-C3'	8.02	1.64	1.52
13	BA	98	ARG	CZ-NH1	8.01	1.44	1.32
12	AG	24	GLU	C-N	8.01	1.44	1.33
38	A1	2707	G	C4'-C3'	8.01	1.64	1.52
17	BE	185	VAL	N-CA	-8.00	1.36	1.46
38	A1	1082	A	O3'-P	-8.00	1.49	1.61
61	AN	107	ARG	NE-CZ	8.00	1.41	1.33
11	B2	312	U	C1'-N1	7.99	1.60	1.48
30	BR	51	ARG	NE-CZ	7.99	1.41	1.33
60	AM	64	VAL	N-CA	-7.99	1.37	1.46
23	BK	130	ARG	CA-C	-7.98	1.42	1.52
24	BL	24	LYS	C-N	7.97	1.44	1.33
28	BP	19	ARG	CA-C	-7.97	1.42	1.53
57	Aj	46	GLY	CA-C	-7.97	1.40	1.51
7	AU	42	ARG	CD-NE	7.96	1.57	1.46
58	Ak	94	MET	CA-C	-7.96	1.42	1.52
44	Ab	72	ARG	NE-CZ	7.96	1.41	1.33
66	AY	14	ASN	CA-CB	7.96	1.65	1.53
30	BR	99	HIS	ND1-CE1	7.96	1.40	1.32
62	AO	65	ARG	C-N	7.96	1.45	1.33
43	AB	199	ALA	C-N	7.95	1.44	1.33
12	B3	91	GLY	C-N	7.95	1.43	1.33
33	BU	84	GLY	CA-C	-7.94	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	932	C	C1'-N1	7.94	1.60	1.48
38	A1	102	A	C2'-C1'	-7.93	1.41	1.53
7	AU	36	ARG	NE-CZ	7.93	1.41	1.33
44	Ab	13	ARG	NE-CZ	7.93	1.41	1.33
16	BD	19	ILE	CA-CB	-7.93	1.46	1.54
45	AC	26	ARG	NE-CZ	7.93	1.41	1.33
27	BO	145	ARG	CA-CB	7.92	1.69	1.53
52	AH	60	VAL	CA-CB	7.92	1.63	1.54
11	B2	1055	C	C2'-C1'	-7.92	1.41	1.53
38	A1	3033	G	C4'-O4'	-7.92	1.33	1.45
43	AB	185	ARG	NE-CZ	7.92	1.41	1.33
11	B2	22	G	C3'-O3'	7.91	1.54	1.42
24	BL	5	ARG	NE-CZ	7.91	1.41	1.33
11	B2	1188	C	O3'-P	-7.91	1.49	1.61
38	A1	2665	G	C1'-N9	-7.91	1.36	1.48
4	AQ	94	LEU	CA-CB	7.91	1.65	1.53
25	BM	114	ARG	CD-NE	7.90	1.57	1.46
29	BQ	59	GLY	CA-C	-7.90	1.41	1.51
13	BA	91	TYR	C-N	7.90	1.43	1.33
55	Ai	36	HIS	ND1-CE1	7.89	1.40	1.32
67	AZ	85	ILE	N-CA	-7.89	1.36	1.46
58	Ak	211	SER	CA-C	-7.89	1.42	1.52
17	BE	195	ARG	CD-NE	7.89	1.57	1.46
56	AJ	51	ARG	CA-C	-7.89	1.45	1.53
39	A3	21	C	C3'-O3'	-7.88	1.31	1.43
15	BC	167	ALA	C-N	7.88	1.44	1.33
38	A1	3001	C	C4'-C3'	7.88	1.64	1.52
22	BJ	24	ARG	NE-CZ	7.87	1.41	1.33
38	A1	2442	A	C2'-C1'	-7.87	1.41	1.53
38	A1	2063	U	O4'-C1'	7.87	1.53	1.41
21	BI	109	GLY	C-O	-7.87	1.18	1.24
11	B2	56	A	O3'-P	-7.86	1.49	1.61
38	A1	1396	A	C1'-N9	7.86	1.59	1.48
18	BF	209	ASN	C-N	7.86	1.44	1.33
4	AQ	60	ARG	NE-CZ	7.85	1.41	1.33
40	A5	68	ASP	CA-C	-7.85	1.46	1.53
9	AX	168	SER	CA-CB	7.84	1.66	1.53
11	B2	1436	U	C5'-C4'	7.84	1.63	1.51
21	BI	39	ARG	CD-NE	7.83	1.57	1.46
46	AD	253	LEU	CA-C	-7.83	1.43	1.52
20	BH	50	ARG	NE-CZ	7.83	1.41	1.33
46	AD	80	ALA	CA-C	-7.82	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	AH	103	VAL	C-N	7.82	1.43	1.33
38	A1	1721	U	O3'-P	-7.82	1.49	1.61
62	AO	48	ILE	CA-C	-7.81	1.43	1.52
39	A3	65	G	C4'-C3'	7.81	1.64	1.52
52	AH	112	ASP	CA-CB	7.81	1.65	1.53
4	AQ	95	TRP	N-CA	-7.80	1.36	1.46
52	AH	36	VAL	CA-CB	-7.80	1.45	1.54
56	AJ	50	ARG	CD-NE	7.80	1.57	1.46
62	AO	15	ARG	NE-CZ	7.80	1.41	1.33
24	BL	55	GLY	CA-C	-7.79	1.40	1.51
34	BV	57	ARG	CZ-NH2	7.79	1.43	1.33
5	AS	135	ARG	CD-NE	7.79	1.57	1.46
9	AX	291	ARG	NE-CZ	7.79	1.41	1.33
12	B3	94	VAL	CA-C	-7.79	1.42	1.52
17	BE	232	VAL	C-N	7.79	1.43	1.33
25	BM	114	ARG	NE-CZ	7.79	1.41	1.33
16	BD	132	VAL	CA-C	-7.78	1.42	1.52
38	A1	2785	G	C2'-C1'	-7.78	1.41	1.53
10	B1	70	C	O4'-C1'	7.78	1.53	1.41
60	AM	166	GLY	CA-C	-7.77	1.43	1.52
64	AR	94	ARG	CA-C	-7.76	1.44	1.52
11	B2	242	A	O3'-P	-7.76	1.49	1.61
30	BR	71	HIS	ND1-CE1	7.76	1.40	1.32
67	AZ	48	ASP	CA-C	-7.76	1.43	1.52
59	AL	2	ILE	N-CA	-7.75	1.36	1.46
33	BU	108	ALA	N-CA	-7.75	1.35	1.45
62	AO	34	ARG	NE-CZ	7.75	1.41	1.33
43	AB	233	ARG	NE-CZ	7.74	1.41	1.33
60	AM	81	LYS	C-N	-7.74	1.25	1.33
5	AS	9	PHE	CA-C	-7.74	1.43	1.52
18	BF	79	ARG	CA-CB	7.74	1.63	1.53
33	BU	49	ASP	C-N	7.74	1.43	1.33
50	AF	13	ILE	N-CA	-7.74	1.39	1.46
32	BT	28	PHE	CG-CD2	7.73	1.55	1.38
46	AD	155	ARG	CA-CB	7.73	1.65	1.53
7	AU	90	GLU	CA-CB	7.73	1.64	1.53
38	A1	1270	G	P-O5'	-7.73	1.48	1.59
45	AC	325	ALA	N-CA	-7.72	1.36	1.46
11	B2	463	G	C5'-C4'	7.72	1.62	1.51
12	B3	108	ARG	NE-CZ	7.72	1.41	1.33
38	A1	1305	C	C1'-N1	7.72	1.60	1.48
52	AH	77	ILE	C-N	7.72	1.44	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	AO	34	ARG	CD-NE	7.72	1.57	1.46
11	B2	221	A	C5'-C4'	7.71	1.62	1.51
19	BG	34	ILE	CA-C	-7.71	1.42	1.52
66	AY	58	GLU	CA-C	-7.71	1.43	1.52
38	A1	167	G	C1'-N9	-7.70	1.36	1.48
55	Ai	33	ARG	CD-NE	7.70	1.57	1.46
25	BM	75	GLY	CA-C	7.69	1.62	1.51
59	AL	5	ARG	CD-NE	7.69	1.57	1.46
2	A8	48	THR	CA-C	-7.69	1.46	1.53
10	B1	24	A	C4'-C3'	7.69	1.64	1.52
11	B2	1085	C	C1'-N1	7.69	1.59	1.48
13	BA	160	GLU	C-N	7.69	1.44	1.33
11	B2	970	G	C1'-N9	7.69	1.59	1.48
38	A1	86	G	C5'-C4'	7.69	1.62	1.51
45	AC	291	GLU	CA-C	-7.68	1.42	1.52
5	AS	12	PHE	CA-C	-7.68	1.45	1.53
27	BO	113	ARG	CZ-NH2	7.68	1.43	1.33
20	BH	151	ASP	CA-CB	7.67	1.64	1.53
66	AY	15	VAL	CA-C	-7.67	1.43	1.52
25	BM	101	ALA	N-CA	-7.66	1.36	1.46
32	BT	7	ARG	NE-CZ	7.66	1.41	1.33
18	BF	136	ARG	CZ-NH1	7.66	1.43	1.32
41	AA	147	GLU	CA-CB	7.66	1.65	1.53
20	BH	73	ARG	NE-CZ	7.65	1.41	1.33
11	B2	976	A	C4'-C3'	7.65	1.64	1.52
54	AI	31	VAL	CA-CB	-7.65	1.44	1.54
34	BV	16	ARG	NE-CZ	7.65	1.41	1.33
60	AM	84	LYS	CA-C	-7.64	1.43	1.52
25	BM	80	HIS	CD2-NE2	7.64	1.46	1.37
5	AS	13	ASP	C-N	-7.64	1.27	1.33
41	AA	119	ARG	NE-CZ	7.63	1.41	1.33
46	AD	185	LYS	C-N	7.63	1.44	1.33
38	A1	1005	G	C5'-C4'	7.63	1.62	1.51
64	AR	69	ARG	NE-CZ	7.62	1.41	1.33
15	BC	61	ARG	CD-NE	7.62	1.56	1.46
11	B2	1150	G	P-O5'	-7.62	1.48	1.59
62	AO	27	LEU	CA-C	-7.61	1.43	1.52
38	A1	624	U	C3'-C2'	-7.61	1.41	1.52
61	AN	86	ILE	N-CA	-7.61	1.36	1.46
17	BE	201	GLU	C-N	7.61	1.42	1.33
15	BC	3	ILE	CA-CB	-7.60	1.46	1.54
58	Ak	42	ARG	NE-CZ	7.59	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	BB	201	ARG	CA-C	-7.59	1.43	1.52
22	BJ	83	ASN	C-O	-7.58	1.18	1.25
6	AT	28	PHE	N-CA	-7.57	1.36	1.45
46	AD	111	ARG	CA-CB	7.57	1.65	1.53
38	A1	137	A	C1'-N9	7.57	1.59	1.48
40	AK	58	GLN	CA-CB	7.57	1.65	1.53
63	AP	109	ARG	CD-NE	7.57	1.56	1.46
52	AH	123	ALA	C-N	7.56	1.43	1.33
38	A1	1620	C	C1'-N1	7.56	1.59	1.48
40	A5	8	ARG	CD-NE	7.56	1.56	1.46
12	AG	96	ALA	C-N	7.56	1.44	1.33
56	AJ	114	ARG	NE-CZ	7.56	1.41	1.33
34	BV	41	VAL	CA-C	7.56	1.62	1.52
4	AQ	144	GLU	CA-CB	7.55	1.65	1.53
56	AJ	70	ARG	CZ-NH2	7.55	1.43	1.33
38	A1	218	A	C4'-C3'	7.54	1.63	1.52
60	AM	49	ARG	CD-NE	7.54	1.56	1.46
61	AN	19	ARG	CD-NE	7.54	1.56	1.46
22	BJ	33	SER	C-N	7.53	1.43	1.33
33	BU	22	GLU	C-N	7.53	1.41	1.33
2	A8	37	THR	CA-C	-7.53	1.42	1.52
48	AE	179	PHE	CA-C	-7.53	1.42	1.52
59	AL	124	ILE	N-CA	-7.52	1.37	1.46
12	AG	33	ARG	NE-CZ	7.52	1.41	1.33
62	AO	166	ARG	CD-NE	7.51	1.56	1.46
20	BH	188	ILE	N-CA	7.50	1.55	1.46
39	A3	25	A	C2'-C1'	-7.50	1.42	1.53
40	A5	51	LYS	C-N	7.50	1.44	1.33
10	B1	62	C	C1'-N1	7.50	1.59	1.48
38	A1	2837	C	P-O5'	-7.50	1.48	1.59
11	B2	337	C	C4'-C3'	7.50	1.63	1.52
38	A1	3000	U	P-O5'	-7.50	1.48	1.59
62	AO	46	ALA	C-N	7.49	1.44	1.33
14	BB	172	ALA	CA-C	-7.49	1.43	1.52
11	B2	627	G	O5'-C5'	7.49	1.53	1.42
46	AD	47	GLY	CA-C	-7.48	1.41	1.51
38	A1	517	A	C3'-C2'	7.48	1.64	1.52
38	A1	17	C	C5'-C4'	7.48	1.62	1.51
11	B2	1168	C	C1'-N1	7.48	1.59	1.48
21	BI	26	TYR	C-N	7.47	1.43	1.33
27	BO	18	ASN	CA-CB	7.47	1.65	1.53
30	BR	45	LYS	C-N	7.47	1.43	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	AG	92	ILE	N-CA	7.47	1.54	1.46
45	AC	353	ARG	CA-C	-7.47	1.43	1.52
11	B2	544	C	C2'-C1'	-7.47	1.42	1.53
38	A1	1775	G	C4'-C3'	7.47	1.63	1.52
38	A1	1376	U	C4'-C3'	7.47	1.63	1.52
14	BB	181	GLU	CA-C	7.46	1.57	1.53
23	BK	121	ARG	CD-NE	7.46	1.56	1.46
26	BN	141	ARG	NE-CZ	7.46	1.41	1.33
25	BM	82	ARG	NE-CZ	7.46	1.41	1.33
11	B2	1324	U	C5'-C4'	7.46	1.62	1.51
16	BD	79	ARG	CZ-NH1	7.46	1.43	1.32
13	BA	138	ARG	CD-NE	7.46	1.56	1.46
38	A1	2980	G	C5'-C4'	7.45	1.62	1.51
39	A3	123	U	C1'-N1	7.45	1.58	1.47
11	B2	791	G	C1'-N9	7.45	1.59	1.48
11	B2	1194	C	O3'-P	-7.45	1.50	1.61
58	Ak	159	ASP	N-CA	-7.45	1.35	1.45
58	Ak	46	ARG	NE-CZ	7.45	1.41	1.33
66	AY	82	ASP	CA-C	-7.44	1.43	1.52
43	AB	174	LYS	CA-C	-7.44	1.43	1.52
9	AX	221	LEU	CA-CB	7.44	1.65	1.53
40	A5	52	HIS	ND1-CE1	7.44	1.40	1.32
36	BX	59	GLU	CA-C	-7.43	1.43	1.52
55	Ai	56	CYS	CA-C	-7.43	1.43	1.52
11	B2	621	G	C5'-C4'	7.42	1.62	1.51
48	AE	105	SER	N-CA	-7.42	1.39	1.46
61	AN	35	ASP	CA-C	-7.42	1.43	1.52
23	BK	25	ARG	NE-CZ	7.42	1.41	1.33
17	BE	82	LYS	N-CA	-7.41	1.37	1.46
25	BM	78	GLY	CA-C	-7.41	1.46	1.52
58	Ak	107	ARG	NE-CZ	7.41	1.41	1.33
11	B2	1021	C	O3'-P	-7.41	1.50	1.61
38	A1	312	G	C2'-C1'	-7.40	1.42	1.53
38	A1	120	G	C2'-C1'	-7.40	1.42	1.53
43	AB	120	LYS	C-N	7.39	1.43	1.33
11	B2	704	C	C5'-C4'	7.39	1.62	1.51
38	A1	1634	A	C5'-C4'	7.39	1.62	1.51
11	B2	516	A	O3'-P	-7.39	1.50	1.61
38	A1	1386	G	P-O5'	-7.38	1.48	1.59
19	BG	88	LEU	CA-C	-7.38	1.43	1.53
18	BF	80	ARG	NE-CZ	7.38	1.41	1.33
38	A1	1618	G	C2'-C1'	-7.37	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	AB	3	LYS	CA-C	-7.37	1.43	1.52
38	A1	1436	A	O4'-C1'	7.37	1.52	1.41
15	BC	95	GLN	CA-C	-7.36	1.43	1.52
37	BY	20	LYS	CA-CB	7.36	1.65	1.53
12	AG	99	VAL	N-CA	7.36	1.54	1.46
11	B2	307	G	O3'-P	-7.35	1.50	1.61
58	Ak	192	LEU	C-N	7.35	1.42	1.33
33	BU	126	ARG	CD-NE	7.35	1.56	1.46
54	AI	59	THR	CA-C	-7.35	1.43	1.52
9	AX	415	TYR	N-CA	-7.35	1.37	1.46
63	AP	33	VAL	CA-C	7.35	1.62	1.52
13	BA	39	ASP	CA-CB	7.35	1.65	1.53
63	AP	91	ARG	NE-CZ	7.35	1.41	1.33
2	A8	27	ARG	CD-NE	7.34	1.56	1.46
9	AX	71	ILE	C-N	7.34	1.43	1.33
22	BJ	2	ALA	CA-C	-7.34	1.43	1.52
38	A1	330	U	P-O5'	-7.34	1.48	1.59
4	AQ	76	ARG	CD-NE	7.34	1.56	1.46
36	BX	58	ARG	NE-CZ	7.34	1.41	1.33
11	B2	234	G	C5'-C4'	7.33	1.62	1.51
65	AV	56	TYR	C-N	7.33	1.43	1.33
11	B2	1492	U	C3'-O3'	7.33	1.53	1.42
63	AP	91	ARG	CD-NE	7.33	1.56	1.46
30	BR	3	ARG	CD-NE	7.33	1.56	1.46
38	A1	1637	C	C2'-C1'	-7.33	1.42	1.53
17	BE	76	ARG	NE-CZ	7.32	1.41	1.33
13	BA	135	ARG	NE-CZ	7.31	1.41	1.33
38	A1	372	A	C5'-C4'	7.31	1.62	1.51
23	BK	25	ARG	CZ-NH2	7.31	1.43	1.33
41	AA	122	GLY	C-N	7.30	1.43	1.33
36	BX	56	ILE	CA-C	-7.30	1.43	1.52
11	B2	24	C	P-O5'	-7.30	1.48	1.59
9	AX	171	GLY	CA-C	-7.29	1.41	1.51
45	AC	330	GLY	CA-C	-7.29	1.47	1.52
66	AY	143	ARG	CA-C	-7.29	1.43	1.52
23	BK	26	VAL	CA-CB	-7.29	1.44	1.53
58	Ak	53	ARG	N-CA	-7.29	1.36	1.45
38	A1	2590	C	C1'-N1	7.28	1.59	1.48
43	AB	140	ILE	CA-CB	-7.28	1.45	1.54
46	AD	4	LYS	CA-C	-7.28	1.43	1.52
60	AM	131	ILE	N-CA	-7.28	1.37	1.46
11	B2	500	A	O3'-P	-7.28	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1245	C	C1'-N1	7.28	1.58	1.47
11	B2	411	C	C4'-O4'	-7.27	1.34	1.45
11	B2	729	G	C5'-C4'	7.27	1.62	1.51
38	A1	1798	A	C5'-C4'	7.27	1.62	1.51
43	AB	127	THR	CA-C	-7.27	1.44	1.52
7	AU	118	ARG	NE-CZ	7.27	1.41	1.33
46	AD	244	VAL	CA-CB	-7.26	1.45	1.54
65	AV	3	ARG	NE-CZ	7.26	1.41	1.33
45	AC	271	ALA	CA-C	-7.26	1.44	1.52
11	B2	427	G	C3'-C2'	7.26	1.63	1.52
24	BL	45	ILE	C-N	7.26	1.43	1.33
47	Ad	56	LYS	C-N	7.25	1.42	1.33
11	B2	3	U	C1'-N1	7.25	1.58	1.47
62	AO	196	PHE	CA-CB	7.25	1.64	1.53
32	BT	93	GLU	CA-C	-7.25	1.43	1.52
11	B2	342	G	C4'-C3'	7.25	1.63	1.52
43	AB	60	ARG	NE-CZ	7.25	1.41	1.33
7	AU	22	VAL	CA-C	-7.24	1.42	1.52
37	BY	4	LYS	C-N	7.24	1.42	1.33
46	AD	212	ARG	NE-CZ	7.24	1.41	1.33
48	AE	149	ARG	N-CA	-7.24	1.37	1.46
40	A5	64	ARG	CD-NE	7.24	1.56	1.46
45	AC	242	ARG	NE-CZ	7.24	1.41	1.33
21	BI	13	HIS	ND1-CE1	7.23	1.39	1.32
46	AD	48	ARG	NE-CZ	7.23	1.41	1.33
40	A5	43	VAL	CA-CB	-7.23	1.45	1.54
11	B2	54	C	O3'-P	-7.23	1.50	1.61
9	AX	21	ILE	C-N	7.23	1.43	1.33
7	AU	50	ASP	CA-C	-7.22	1.44	1.52
38	A1	2032	G	C5'-C4'	7.22	1.62	1.51
38	A1	2297	C	C1'-N1	7.22	1.59	1.48
67	AZ	50	TYR	CA-CB	7.22	1.64	1.53
4	AQ	33	ALA	CA-C	-7.22	1.43	1.52
31	BS	45	LYS	C-N	7.22	1.43	1.33
38	A1	974	U	C1'-N1	7.22	1.59	1.48
38	A1	2254	U	C5'-C4'	7.22	1.62	1.51
42	Aa	22	VAL	CA-CB	-7.22	1.44	1.54
11	B2	971	G	C2'-C1'	-7.21	1.42	1.53
40	A5	35	VAL	CA-CB	-7.21	1.45	1.54
60	AM	162	LEU	C-N	7.21	1.43	1.33
18	BF	82	ARG	CZ-NH1	7.21	1.42	1.32
8	AW	22	ARG	CD-NE	7.21	1.56	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	Af	38	HIS	ND1-CE1	7.20	1.39	1.32
11	B2	524	U	O3'-P	-7.20	1.50	1.61
56	AJ	39	GLN	CA-C	-7.20	1.44	1.52
66	AY	71	ARG	CD-NE	7.20	1.56	1.46
59	AL	74	ARG	CA-CB	7.20	1.64	1.53
52	AH	44	LYS	C-N	7.20	1.42	1.33
38	A1	1035	G	C2'-C1'	-7.19	1.42	1.53
38	A1	1561	G	C5'-C4'	7.19	1.62	1.51
67	AZ	44	GLU	CA-C	-7.19	1.43	1.52
9	AX	359	PHE	CA-C	-7.19	1.46	1.53
11	B2	431	U	C1'-N1	7.19	1.59	1.48
5	AS	116	HIS	ND1-CE1	7.18	1.39	1.32
38	A1	1488	C	C2'-C1'	-7.18	1.42	1.53
20	BH	85	PHE	CA-C	-7.18	1.43	1.52
38	A1	2233	G	C1'-N9	7.18	1.57	1.47
47	Ad	85	ARG	CD-NE	7.18	1.56	1.46
11	B2	177	A	O3'-P	-7.18	1.50	1.61
50	AF	8	ARG	CZ-NH1	7.18	1.42	1.32
17	BE	97	GLY	C-N	7.17	1.43	1.33
4	AQ	43	ARG	CA-C	-7.17	1.43	1.52
11	B2	1303	C	C5'-C4'	7.17	1.62	1.51
8	AW	14	ILE	CA-C	7.17	1.61	1.52
17	BE	9	HIS	CD2-NE2	7.17	1.45	1.37
20	BH	73	ARG	C-N	7.17	1.43	1.33
23	BK	10	ARG	N-CA	-7.17	1.37	1.46
11	B2	361	A	C5'-C4'	7.17	1.61	1.51
11	B2	1012	C	C1'-N1	-7.16	1.37	1.48
38	A1	1162	C	C2'-C1'	-7.16	1.42	1.53
40	AK	52	HIS	C-N	7.16	1.42	1.33
25	BM	109	GLY	CA-C	-7.16	1.41	1.51
46	AD	93	HIS	C-N	7.16	1.41	1.33
5	AS	49	ARG	N-CA	-7.15	1.37	1.46
60	AM	182	VAL	CA-CB	-7.15	1.46	1.54
4	AQ	60	ARG	CD-NE	7.15	1.56	1.46
56	AJ	79	ARG	NE-CZ	7.15	1.41	1.33
64	AR	71	GLU	CA-C	-7.15	1.43	1.52
12	B3	9	PHE	CA-C	-7.15	1.43	1.52
19	BG	45	ILE	C-N	7.14	1.42	1.33
38	A1	785	C	O4'-C1'	7.14	1.52	1.41
38	A1	2867	U	O4'-C1'	7.14	1.52	1.41
9	AX	393	ASN	C-N	7.14	1.43	1.33
23	BK	74	GLN	CA-C	-7.14	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1562	U	C1'-N1	7.14	1.59	1.48
33	BU	85	HIS	C-N	7.14	1.44	1.33
38	A1	673	A	C3'-C2'	-7.14	1.42	1.52
47	Ad	45	GLY	CA-C	-7.14	1.42	1.51
26	BN	45	GLU	N-CA	-7.13	1.35	1.46
61	AN	126	LEU	CA-C	-7.13	1.44	1.52
44	Ab	112	ILE	CA-CB	-7.13	1.45	1.54
58	Ak	38	LEU	CA-C	-7.12	1.43	1.52
18	BF	156	LEU	CA-C	-7.12	1.44	1.52
38	A1	2797	C	P-O5'	7.12	1.70	1.59
17	BE	154	GLU	CA-C	-7.12	1.43	1.52
38	A1	355	G	C1'-N9	7.11	1.58	1.48
38	A1	1178	G	O5'-C5'	7.11	1.53	1.42
36	BX	70	ARG	CA-C	-7.11	1.43	1.52
3	Af	33	ARG	CD-NE	7.11	1.56	1.46
10	B1	2	G	O3'-P	-7.11	1.50	1.61
11	B2	84	C	O3'-P	-7.11	1.50	1.61
60	AM	15	LYS	N-CA	-7.11	1.36	1.46
6	AT	58	ILE	CA-C	-7.11	1.44	1.52
43	AB	63	PHE	C-N	7.10	1.43	1.33
61	AN	6	ALA	CA-C	-7.10	1.43	1.52
62	AO	119	ALA	CA-C	-7.10	1.43	1.52
14	BB	51	ARG	CD-NE	7.10	1.56	1.46
60	AM	85	MET	C-N	7.10	1.40	1.33
11	B2	962	G	C4'-O4'	-7.09	1.34	1.45
34	BV	68	TYR	N-CA	-7.09	1.36	1.45
18	BF	206	TYR	CA-C	-7.09	1.43	1.52
19	BG	32	LYS	CA-CB	7.09	1.64	1.53
45	AC	87	ARG	NE-CZ	7.09	1.40	1.33
46	AD	26	PHE	C-N	7.08	1.39	1.33
38	A1	3000	U	C5'-C4'	7.08	1.61	1.51
21	BI	77	PRO	N-CD	-7.08	1.37	1.47
23	BK	28	ILE	CA-C	-7.08	1.43	1.52
8	AW	39	GLU	CA-CB	7.08	1.63	1.53
38	A1	1858	G	C5'-C4'	7.08	1.61	1.51
46	AD	82	PHE	CA-CB	7.07	1.64	1.53
19	BG	85	ARG	NE-CZ	7.07	1.40	1.33
7	AU	89	THR	CA-C	-7.07	1.44	1.52
33	BU	99	ARG	CD-NE	7.06	1.56	1.46
50	AF	173	TYR	C-N	7.06	1.41	1.33
58	Ak	192	LEU	CA-C	-7.06	1.44	1.52
59	AL	3	ARG	CD-NE	7.06	1.56	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	AC	342	ILE	C-N	7.06	1.41	1.33
64	AR	89	HIS	ND1-CE1	7.06	1.39	1.32
39	A3	113	C	C5'-C4'	7.06	1.61	1.51
64	AR	37	VAL	CA-C	7.05	1.61	1.52
38	A1	2354	A	O3'-P	-7.05	1.50	1.61
50	AF	37	ARG	NE-CZ	7.05	1.40	1.33
53	Ah	2	ARG	NE-CZ	7.05	1.40	1.33
45	AC	277	HIS	ND1-CE1	7.04	1.39	1.32
15	BC	131	ARG	CZ-NH1	7.04	1.42	1.32
11	B2	1480	G	C2'-C1'	-7.04	1.42	1.53
5	AS	58	LYS	N-CA	-7.04	1.38	1.46
11	B2	15	U	O4'-C1'	-7.04	1.31	1.41
21	BI	58	ALA	CA-C	-7.04	1.43	1.52
38	A1	1525	G	C5'-C4'	7.04	1.61	1.51
65	AV	58	GLU	CA-C	-7.04	1.43	1.52
29	BQ	57	GLN	CA-C	-7.04	1.44	1.52
28	BP	12	ARG	CZ-NH1	7.04	1.42	1.32
38	A1	2732	U	O4'-C1'	-7.04	1.31	1.41
29	BQ	120	ARG	CZ-NH2	7.03	1.42	1.33
38	A1	1602	C	O3'-P	-7.03	1.50	1.61
38	A1	2624	G	C2'-C1'	-7.03	1.42	1.53
38	A1	408	C	O3'-P	-7.03	1.50	1.61
14	BB	115	LEU	N-CA	-7.03	1.37	1.46
38	A1	301	G	C5'-C4'	7.03	1.61	1.51
26	BN	95	LYS	N-CA	7.03	1.54	1.46
22	BJ	21	ARG	CD-NE	7.03	1.56	1.46
40	AK	73	ALA	N-CA	-7.03	1.37	1.46
38	A1	2787	G	C2'-C1'	-7.02	1.42	1.53
14	BB	6	LEU	C-N	7.02	1.43	1.33
38	A1	1335	C	O3'-P	-7.02	1.50	1.61
56	AJ	49	THR	CA-C	-7.02	1.43	1.52
8	AW	25	LEU	CA-CB	7.01	1.64	1.53
11	B2	978	G	O5'-C5'	7.01	1.52	1.42
14	BB	146	LEU	N-CA	-7.01	1.37	1.46
33	BU	50	TRP	N-CA	-7.01	1.38	1.46
15	BC	123	ASN	CA-CB	7.01	1.65	1.53
21	BI	100	GLY	CA-C	-7.01	1.41	1.51
41	AA	193	GLU	C-N	7.01	1.43	1.33
57	Aj	20	HIS	ND1-CE1	7.01	1.39	1.32
38	A1	213	G	C1'-N9	7.00	1.58	1.48
38	A1	2295	C	C4'-O4'	-7.00	1.35	1.45
43	AB	163	ALA	CA-C	-7.00	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	BR	48	THR	CA-C	-7.00	1.44	1.52
46	AD	52	ALA	CA-C	-7.00	1.43	1.52
4	AQ	80	SER	C-N	7.00	1.43	1.33
38	A1	379	U	O3'-P	-6.99	1.50	1.61
20	BH	202	SER	CA-CB	6.99	1.64	1.53
62	AO	8	ARG	CA-C	-6.99	1.43	1.52
25	BM	41	ARG	CD-NE	6.99	1.56	1.46
38	A1	63	A	C2'-C1'	-6.99	1.42	1.53
38	A1	562	G	C5'-C4'	6.99	1.61	1.51
11	B2	1033	G	O4'-C1'	6.99	1.52	1.41
18	BF	44	ILE	CA-C	-6.99	1.44	1.52
18	BF	120	ASN	C-N	6.99	1.42	1.33
38	A1	822	A	C3'-O3'	6.99	1.52	1.42
11	B2	1006	C	C5'-C4'	6.98	1.61	1.51
30	BR	95	SER	CA-C	-6.98	1.43	1.52
50	AF	69	ARG	C-N	6.98	1.43	1.33
5	AS	92	LYS	CA-CB	6.98	1.64	1.53
11	B2	754	G	C5'-C4'	6.98	1.61	1.51
14	BB	197	MET	CA-CB	6.98	1.64	1.53
30	BR	40	SER	CA-C	-6.98	1.44	1.52
11	B2	22	G	C5'-C4'	6.97	1.61	1.51
38	A1	871	G	C2'-C1'	-6.97	1.42	1.53
57	Aj	58	ARG	CD-NE	6.97	1.56	1.46
11	B2	711	U	C4'-O4'	6.97	1.56	1.45
45	AC	161	VAL	N-CA	6.97	1.52	1.46
41	AA	186	ASN	N-CA	-6.97	1.37	1.46
38	A1	430	A	P-O5'	-6.96	1.49	1.59
62	AO	182	PRO	C-N	6.96	1.43	1.33
11	B2	407	G	C5'-C4'	6.96	1.61	1.51
38	A1	746	C	C1'-N1	6.96	1.58	1.48
38	A1	1470	C	C4'-C3'	6.96	1.62	1.52
38	A1	2634	U	C5'-C4'	6.96	1.61	1.51
11	B2	120	C	O4'-C1'	6.95	1.52	1.41
11	B2	370	A	C1'-N9	6.95	1.58	1.48
11	B2	440	C	O4'-C1'	6.95	1.52	1.41
50	AF	34	GLU	N-CA	-6.95	1.37	1.45
20	BH	147	HIS	ND1-CE1	6.95	1.39	1.32
42	Aa	36	ARG	CD-NE	6.94	1.55	1.46
49	Ae	42	ARG	C-N	6.94	1.42	1.33
11	B2	1414	G	C5'-C4'	6.94	1.61	1.51
16	BD	126	VAL	CA-CB	-6.94	1.46	1.54
56	AJ	124	ARG	NE-CZ	6.94	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	291	G	C3'-C2'	-6.94	1.42	1.52
38	A1	794	G	C2'-C1'	-6.94	1.43	1.53
56	AJ	130	TRP	CA-C	-6.93	1.44	1.52
38	A1	1701	C	C1'-N1	6.93	1.58	1.48
46	AD	128	ARG	CD-NE	6.93	1.55	1.46
50	AF	118	ALA	CA-CB	6.93	1.64	1.54
15	BC	167	ALA	CA-C	-6.93	1.44	1.52
38	A1	1021	G	P-O5'	-6.93	1.49	1.59
38	A1	1407	A	O3'-P	-6.92	1.50	1.61
45	AC	283	ASN	CA-CB	6.92	1.63	1.53
11	B2	1154	G	C2'-C1'	-6.92	1.43	1.53
12	AG	27	ARG	CZ-NH1	6.92	1.42	1.32
11	B2	1455	A	C5'-C4'	6.92	1.61	1.51
18	BF	113	ALA	C-N	6.92	1.42	1.33
38	A1	2100	U	C5'-C4'	6.92	1.61	1.51
18	BF	11	ARG	NE-CZ	6.92	1.40	1.33
11	B2	685	G	C2'-C1'	-6.92	1.43	1.53
38	A1	2063	U	C1'-N1	6.92	1.58	1.48
61	AN	60	ASN	C-O	-6.92	1.16	1.24
11	B2	1482	C	P-O5'	-6.91	1.49	1.59
14	BB	95	ARG	CA-CB	6.91	1.61	1.53
38	A1	626	C	C3'-O3'	6.91	1.52	1.42
30	BR	86	VAL	N-CA	-6.91	1.38	1.46
38	A1	2609	G	C3'-O3'	6.91	1.52	1.42
34	BV	59	TYR	CA-C	-6.91	1.44	1.52
66	AY	44	LEU	CA-C	-6.90	1.43	1.52
11	B2	1437	G	C3'-C2'	6.90	1.63	1.52
11	B2	482	G	C1'-N9	6.90	1.58	1.48
38	A1	104	C	O3'-P	-6.90	1.50	1.61
62	AO	8	ARG	NE-CZ	6.90	1.40	1.33
17	BE	146	THR	CA-C	-6.90	1.44	1.52
38	A1	1341	U	P-O5'	-6.89	1.49	1.59
43	AB	215	THR	CA-C	-6.89	1.44	1.52
5	AS	49	ARG	CD-NE	6.89	1.55	1.46
38	A1	744	G	C2'-C1'	-6.89	1.43	1.53
59	AL	54	ALA	CA-CB	6.89	1.64	1.53
16	BD	36	LYS	C-N	6.89	1.42	1.33
22	BJ	2	ALA	CA-CB	6.89	1.65	1.53
26	BN	20	ARG	N-CA	-6.89	1.38	1.46
33	BU	99	ARG	CA-CB	6.89	1.64	1.53
52	AH	34	GLN	N-CA	-6.88	1.37	1.46
64	AR	61	ARG	CD-NE	6.88	1.55	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	69	U	C5'-C4'	6.88	1.61	1.51
4	AQ	119	THR	C-N	6.88	1.42	1.33
38	A1	2164	G	C4'-C3'	6.88	1.62	1.52
66	AY	126	PHE	CA-C	-6.88	1.44	1.52
61	AN	143	LYS	CA-CB	6.88	1.64	1.53
17	BE	230	ALA	N-CA	6.88	1.54	1.46
11	B2	351	C	O3'-P	6.87	1.71	1.61
11	B2	1111	G	C4'-O4'	-6.87	1.35	1.45
34	BV	38	GLY	C-N	6.87	1.43	1.34
38	A1	2544	C	C2'-C1'	-6.87	1.43	1.53
11	B2	415	C	C5'-C4'	6.87	1.61	1.51
12	AG	76	PRO	C-N	6.87	1.43	1.33
32	BT	60	LYS	CA-C	-6.87	1.44	1.52
45	AC	28	ARG	NE-CZ	6.87	1.40	1.33
26	BN	33	ARG	CD-NE	6.86	1.55	1.46
65	AV	34	SER	CA-C	6.86	1.60	1.52
36	BX	17	ARG	CD-NE	6.86	1.55	1.46
13	BA	131	THR	C-N	6.86	1.43	1.33
11	B2	429	A	C1'-N9	6.86	1.58	1.48
9	AX	13	GLU	CA-C	-6.86	1.43	1.53
9	AX	319	TYR	C-N	6.86	1.42	1.33
38	A1	1063	C	O5'-C5'	6.86	1.52	1.42
38	A1	2134	G	C2-N3	6.85	1.46	1.32
38	A1	647	G	C2'-C1'	-6.85	1.43	1.53
54	AI	12	GLY	N-CA	-6.85	1.37	1.45
11	B2	1115	G	C2'-C1'	-6.85	1.43	1.53
52	AH	64	PHE	CA-C	-6.85	1.44	1.52
30	BR	113	ARG	NE-CZ	6.84	1.40	1.33
58	Ak	151	ARG	NE-CZ	6.84	1.40	1.33
38	A1	2710	G	C2'-C1'	-6.84	1.43	1.53
10	B1	61	U	C5'-C4'	6.84	1.61	1.51
11	B2	1190	C	P-O5'	-6.84	1.49	1.59
58	Ak	68	ALA	C-N	6.84	1.43	1.33
38	A1	207	A	C2'-C1'	-6.84	1.43	1.53
5	AS	65	ARG	NE-CZ	6.84	1.40	1.33
38	A1	1246	G	C5'-C4'	6.83	1.61	1.51
38	A1	2173	U	C1'-N1	6.83	1.58	1.48
11	B2	552	C	C3'-C2'	6.83	1.63	1.52
40	A5	18	ALA	C-N	6.83	1.43	1.33
38	A1	475	U	C5'-C4'	6.83	1.61	1.51
9	AX	17	PRO	CA-C	-6.83	1.44	1.52
5	AS	60	PRO	C-N	6.83	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	AE	184	VAL	CA-CB	-6.83	1.46	1.54
38	A1	1210	G	O4'-C1'	-6.83	1.31	1.41
11	B2	514	U	C3'-O3'	6.82	1.52	1.42
38	A1	1104	A	P-O5'	-6.82	1.49	1.59
33	BU	112	GLU	C-N	6.82	1.42	1.33
38	A1	1403	C	C2'-C1'	-6.82	1.43	1.53
42	Aa	25	TRP	NE1-CE2	6.82	1.45	1.37
43	AB	114	ILE	C-N	6.82	1.41	1.33
38	A1	1633	A	C1'-N9	6.82	1.58	1.48
4	AQ	121	ARG	C-O	-6.82	1.16	1.24
9	AX	331	GLY	CA-C	-6.82	1.44	1.52
11	B2	464	G	O4'-C1'	6.82	1.52	1.42
43	AB	19	SER	CA-C	-6.82	1.45	1.53
45	AC	170	GLN	CA-C	-6.82	1.44	1.52
29	BQ	147	ARG	CA-C	-6.81	1.44	1.52
48	AE	92	LYS	CA-CB	6.81	1.64	1.53
9	AX	164	TYR	CA-C	-6.81	1.44	1.52
11	B2	43	A	C4'-C3'	6.81	1.62	1.52
11	B2	932	C	C4'-C3'	6.81	1.62	1.52
11	B2	988	A	C4'-O4'	-6.81	1.35	1.45
38	A1	534	G	P-O5'	-6.80	1.49	1.59
50	AF	44	ILE	N-CA	-6.80	1.38	1.46
11	B2	1074	C	C5'-C4'	6.80	1.61	1.51
18	BF	35	HIS	CB-CG	-6.80	1.40	1.50
24	BL	89	ARG	CD-NE	6.80	1.55	1.46
5	AS	131	ARG	NE-CZ	6.80	1.40	1.33
20	BH	84	HIS	CA-C	-6.80	1.44	1.52
24	BL	100	LEU	CA-C	-6.80	1.44	1.52
11	B2	1081	C	C4'-C3'	6.80	1.63	1.53
21	BI	113	HIS	CA-C	-6.80	1.44	1.53
38	A1	575	G	C2'-C1'	-6.80	1.43	1.53
11	B2	124	C	C5'-C4'	6.80	1.61	1.51
11	B2	196	G	O3'-P	-6.80	1.50	1.61
38	A1	2548	A	O3'-P	-6.80	1.50	1.61
11	B2	576	C	C5'-C4'	6.79	1.61	1.51
2	A8	22	THR	CA-C	-6.79	1.43	1.52
38	A1	1569	A	C1'-N9	6.79	1.58	1.48
33	BU	19	ARG	N-CA	-6.79	1.36	1.46
5	AS	28	SER	CA-C	6.79	1.60	1.53
11	B2	668	G	C2'-C1'	-6.79	1.43	1.53
38	A1	2509	A	C1'-N9	-6.79	1.37	1.48
38	A1	101	G	C3'-C2'	-6.79	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	864	C	O4'-C1'	6.78	1.51	1.41
9	AX	254	VAL	C-N	6.78	1.43	1.33
43	AB	211	PRO	CA-CB	6.78	1.63	1.53
11	B2	800	G	C5'-C4'	6.78	1.61	1.51
11	B2	1018	C	O3'-P	-6.78	1.50	1.61
38	A1	123	A	C1'-N9	6.78	1.58	1.48
38	A1	1587	A	C2'-C1'	-6.78	1.42	1.53
1	A7	55	HIS	CA-CB	6.78	1.65	1.53
14	BB	135	ILE	CA-C	-6.78	1.45	1.52
38	A1	12	C	C5'-C4'	6.78	1.61	1.51
55	Ai	10	ALA	N-CA	-6.78	1.37	1.46
10	B1	15	G	O3'-P	-6.77	1.50	1.61
11	B2	1311	C	O5'-C5'	6.77	1.52	1.42
24	BL	18	GLU	CA-C	-6.77	1.42	1.52
43	AB	185	ARG	CZ-NH1	6.77	1.42	1.32
38	A1	1620	C	C5'-C4'	6.77	1.61	1.51
38	A1	1661	A	O5'-C5'	6.77	1.52	1.42
38	A1	2120	C	C4'-C3'	6.77	1.63	1.53
11	B2	336	C	O3'-P	-6.77	1.50	1.61
53	Ah	17	ARG	NE-CZ	6.77	1.40	1.33
38	A1	1852	U	C1'-N1	6.76	1.57	1.47
38	A1	2978	G	C1'-N9	6.76	1.58	1.48
18	BF	11	ARG	CD-NE	6.76	1.55	1.46
22	BJ	39	GLU	N-CA	-6.76	1.37	1.46
4	AQ	106	LEU	CA-C	-6.76	1.44	1.52
35	BW	18	CYS	CA-C	-6.76	1.44	1.53
9	AX	372	ARG	NE-CZ	6.76	1.40	1.33
26	BN	20	ARG	CZ-NH2	6.76	1.42	1.33
45	AC	196	PHE	N-CA	-6.76	1.38	1.46
10	B1	55	U	C1'-N1	6.76	1.58	1.48
60	AM	91	SER	N-CA	-6.76	1.41	1.46
16	BD	138	ARG	CZ-NH1	6.76	1.42	1.32
38	A1	1746	C	C5'-C4'	6.75	1.61	1.51
11	B2	893	U	C2'-C1'	-6.75	1.43	1.53
38	A1	683	C	P-O5'	6.75	1.69	1.59
38	A1	770	G	C4'-C3'	6.75	1.62	1.52
45	AC	293	GLY	C-N	6.75	1.43	1.33
11	B2	862	C	O3'-P	-6.75	1.51	1.61
6	AT	29	ILE	CA-C	-6.75	1.44	1.52
9	AX	291	ARG	CD-NE	6.75	1.55	1.46
29	BQ	36	LEU	C-N	6.74	1.42	1.33
38	A1	1188	C	C1'-N1	6.74	1.58	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2041	U	C5'-C4'	6.74	1.61	1.51
67	AZ	84	ALA	CA-C	-6.74	1.44	1.52
38	A1	2168	C	O4'-C1'	6.74	1.51	1.41
36	BX	23	ASP	N-CA	-6.74	1.37	1.46
5	AS	103	VAL	CA-C	6.73	1.61	1.52
13	BA	153	ASN	CA-CB	6.73	1.64	1.53
8	AW	20	GLU	N-CA	6.73	1.54	1.46
25	BM	132	ARG	NE-CZ	6.73	1.40	1.33
41	AA	210	PRO	CA-CB	-6.73	1.44	1.53
45	AC	237	TRP	CA-CB	6.73	1.64	1.53
62	AO	63	HIS	CB-CG	6.73	1.59	1.50
11	B2	1126	G	C3'-C2'	6.73	1.62	1.52
23	BK	117	HIS	ND1-CE1	6.73	1.39	1.32
38	A1	995	G	C5'-C4'	6.73	1.61	1.51
60	AM	17	SER	C-N	6.73	1.42	1.33
18	BF	63	GLN	CA-C	6.72	1.61	1.52
38	A1	604	A	C2'-C1'	-6.72	1.43	1.53
67	AZ	67	SER	C-N	6.72	1.42	1.33
11	B2	974	G	O3'-P	-6.72	1.51	1.61
46	AD	201	VAL	N-CA	-6.72	1.38	1.46
60	AM	8	ARG	CD-NE	6.72	1.55	1.46
22	BJ	43	ARG	CD-NE	6.71	1.55	1.46
42	Aa	87	VAL	CA-C	-6.71	1.45	1.52
12	B3	63	VAL	CA-C	-6.71	1.44	1.52
28	BP	40	ARG	NE-CZ	6.71	1.40	1.33
32	BT	113	VAL	CA-C	-6.71	1.44	1.52
9	AX	336	GLU	C-N	6.71	1.42	1.33
15	BC	57	ARG	CA-C	-6.71	1.43	1.52
23	BK	27	ARG	CZ-NH1	6.71	1.42	1.32
34	BV	4	ARG	NE-CZ	6.71	1.40	1.33
29	BQ	17	PRO	CA-C	-6.70	1.46	1.52
38	A1	1780	C	C4'-C3'	6.70	1.62	1.52
38	A1	2085	C	C1'-N1	6.70	1.58	1.48
47	Ad	6	ARG	CD-NE	6.70	1.55	1.46
18	BF	196	ASN	N-CA	6.70	1.54	1.46
38	A1	585	G	P-O5'	-6.70	1.49	1.59
46	AD	78	ARG	CD-NE	6.70	1.55	1.46
56	AJ	129	ARG	CA-CB	6.70	1.63	1.53
40	A5	8	ARG	NE-CZ	6.70	1.40	1.33
30	BR	112	ARG	CZ-NH2	6.70	1.42	1.33
38	A1	397	G	C5'-C4'	6.70	1.61	1.51
41	AA	33	ASN	CA-CB	6.69	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1434	C	P-O5'	-6.69	1.49	1.59
42	Aa	65	LYS	C-N	6.69	1.41	1.33
11	B2	1304	C	C1'-N1	6.69	1.58	1.48
38	A1	2141	C	C1'-N1	6.69	1.58	1.48
9	AX	371	LYS	C-N	6.69	1.42	1.33
11	B2	264	C	O3'-P	-6.69	1.51	1.61
38	A1	634	G	O3'-P	-6.69	1.51	1.61
60	AM	41	ARG	C-N	6.69	1.42	1.33
13	BA	124	ILE	C-N	6.69	1.42	1.33
30	BR	108	ARG	CA-C	-6.69	1.44	1.52
11	B2	1359	C	C1'-N1	6.68	1.57	1.47
41	AA	54	HIS	CA-C	-6.68	1.45	1.52
52	AH	38	LYS	CA-CB	6.68	1.64	1.53
9	AX	230	ARG	NE-CZ	6.68	1.40	1.33
38	A1	2850	G	C2'-C1'	-6.68	1.43	1.53
26	BN	34	VAL	C-N	6.68	1.42	1.33
38	A1	22	C	C2'-C1'	-6.68	1.43	1.53
54	AI	50	LYS	CA-C	-6.68	1.44	1.52
58	Ak	45	ILE	CA-CB	-6.68	1.46	1.54
56	AJ	15	VAL	CA-C	-6.68	1.44	1.52
11	B2	877	A	C2'-C1'	-6.68	1.43	1.53
38	A1	1280	C	C4-N4	6.68	1.47	1.33
43	AB	84	TYR	CA-C	-6.68	1.44	1.52
59	AL	131	PRO	CA-C	-6.68	1.41	1.52
58	Ak	69	GLN	CA-C	-6.67	1.43	1.52
64	AR	19	HIS	ND1-CE1	6.67	1.39	1.32
44	Ab	37	ASP	CA-C	6.67	1.61	1.52
38	A1	735	A	C5'-C4'	6.67	1.61	1.51
38	A1	2655	C	C2'-C1'	-6.67	1.43	1.53
38	A1	583	A	O3'-P	-6.67	1.51	1.61
64	AR	34	GLU	N-CA	-6.67	1.38	1.45
12	B3	84	LYS	CA-C	-6.67	1.44	1.52
11	B2	1219	C	C5'-C4'	6.67	1.61	1.51
38	A1	574	C	O3'-P	-6.66	1.51	1.61
64	AR	61	ARG	NE-CZ	6.66	1.40	1.33
16	BD	73	LEU	CA-C	-6.66	1.44	1.52
48	AE	38	GLY	CA-C	6.66	1.61	1.51
11	B2	1487	U	C1'-N1	6.66	1.58	1.48
65	AV	28	ARG	CZ-NH1	6.66	1.42	1.32
11	B2	197	A	C2'-C1'	-6.66	1.43	1.53
18	BF	60	ARG	NE-CZ	6.66	1.40	1.33
41	AA	164	HIS	CA-C	-6.66	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1642	G	C5'-C4'	6.66	1.61	1.51
38	A1	2823	G	O3'-P	-6.66	1.51	1.61
29	BQ	157	VAL	CA-CB	-6.66	1.46	1.54
38	A1	221	G	C2'-C1'	-6.66	1.43	1.53
38	A1	2016	C	C5'-C4'	6.66	1.61	1.51
64	AR	14	LYS	C-N	6.66	1.42	1.33
22	BJ	41	ASP	N-CA	-6.65	1.37	1.46
59	AL	56	ASP	N-CA	-6.65	1.37	1.46
43	AB	134	ARG	NE-CZ	6.65	1.40	1.33
61	AN	9	ASP	CA-CB	6.65	1.64	1.53
38	A1	363	G	C5'-C4'	6.65	1.61	1.51
1	A7	21	VAL	CA-CB	-6.64	1.46	1.54
38	A1	388	G	C5'-C4'	6.64	1.61	1.51
3	Af	24	PRO	C-N	6.64	1.42	1.33
33	BU	10	ASP	C-N	6.64	1.43	1.33
61	AN	24	ARG	NE-CZ	6.64	1.40	1.33
31	BS	5	ARG	N-CA	-6.64	1.37	1.46
38	A1	1668	G	C4'-C3'	6.64	1.63	1.53
9	AX	236	ALA	C-N	6.64	1.42	1.33
38	A1	1332	A	C3'-O3'	6.64	1.52	1.42
4	AQ	22	ILE	C-N	6.63	1.42	1.33
11	B2	1045	A	O4'-C1'	6.63	1.51	1.41
38	A1	1333	G	C5'-C4'	6.63	1.61	1.51
38	A1	2844	G	C2'-C1'	-6.63	1.43	1.53
39	A3	47	G	O5'-C5'	6.63	1.52	1.42
20	BH	114	ARG	N-CA	-6.63	1.38	1.46
38	A1	1760	C	C5'-C4'	6.63	1.61	1.51
38	A1	1810	G	C2'-C1'	-6.63	1.43	1.53
38	A1	1479	U	C3'-C2'	-6.63	1.42	1.52
38	A1	2549	A	C1'-N9	6.63	1.56	1.47
18	BF	35	HIS	ND1-CE1	6.62	1.39	1.32
38	A1	1452	G	C2'-C1'	-6.62	1.43	1.53
66	AY	40	THR	CA-C	6.62	1.60	1.52
32	BT	40	LEU	CA-CB	6.62	1.62	1.53
39	A3	96	C	C5'-C4'	6.62	1.61	1.51
42	Aa	25	TRP	CA-C	-6.62	1.44	1.52
46	AD	229	HIS	ND1-CE1	6.62	1.39	1.32
38	A1	2750	C	O4'-C1'	6.62	1.51	1.41
11	B2	77	G	C5'-C4'	6.62	1.61	1.51
24	BL	39	PRO	N-CA	-6.62	1.39	1.47
54	AI	122	ARG	NE-CZ	6.62	1.40	1.33
38	A1	2276	G	C5'-C4'	6.61	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	AD	69	ARG	NE-CZ	6.61	1.40	1.33
52	AH	5	VAL	CA-CB	-6.61	1.46	1.54
11	B2	281	G	C1'-N9	6.61	1.57	1.48
11	B2	223	G	C3'-O3'	6.61	1.52	1.42
48	AE	86	LYS	N-CA	-6.61	1.38	1.46
12	AG	104	PRO	CA-CB	-6.61	1.44	1.53
38	A1	1630	U	C1'-N1	6.61	1.58	1.48
46	AD	113	ALA	N-CA	-6.61	1.38	1.46
46	AD	245	SER	C-N	6.61	1.42	1.33
11	B2	738	C	C1'-N1	6.61	1.58	1.48
11	B2	964	A	C1'-N9	6.61	1.56	1.47
22	BJ	26	ARG	CD-NE	6.61	1.55	1.46
17	BE	222	LEU	CA-CB	6.61	1.62	1.53
38	A1	1060	C	O3'-P	-6.61	1.51	1.61
38	A1	1236	C	P-O5'	-6.61	1.49	1.59
36	BX	20	THR	C-N	6.60	1.43	1.33
11	B2	266	A	C1'-N9	6.60	1.57	1.48
12	B3	49	LYS	C-N	6.60	1.42	1.33
29	BQ	134	LYS	CA-C	-6.60	1.44	1.52
38	A1	731	C	C4'-C3'	6.60	1.62	1.52
51	Ag	6	GLU	CA-C	-6.60	1.44	1.52
23	BK	131	GLN	N-CA	-6.60	1.37	1.45
56	AJ	36	LYS	C-N	6.60	1.43	1.33
63	AP	7	THR	CA-C	-6.60	1.44	1.52
38	A1	175	G	C2'-C1'	-6.59	1.43	1.53
38	A1	657	U	P-O5'	-6.59	1.49	1.59
38	A1	2402	A	C4'-C3'	6.59	1.63	1.53
12	AG	10	GLU	N-CA	6.59	1.54	1.46
3	Af	42	ARG	N-CA	-6.59	1.38	1.46
12	B3	34	LYS	C-N	6.59	1.41	1.33
41	AA	93	SER	CA-CB	6.59	1.63	1.54
45	AC	17	ARG	NE-CZ	6.59	1.40	1.33
11	B2	574	A	C5'-C4'	6.59	1.61	1.51
12	B3	116	MET	CA-C	-6.59	1.47	1.52
21	BI	30	ALA	N-CA	-6.59	1.38	1.46
38	A1	1192	G	O3'-P	-6.59	1.51	1.61
38	A1	1422	G	C3'-O3'	6.59	1.52	1.42
39	A3	124	A	O3'-P	-6.59	1.51	1.61
46	AD	29	ASP	N-CA	-6.59	1.38	1.46
38	A1	1863	G	C4'-O4'	6.59	1.55	1.45
40	A5	13	ILE	CA-C	6.59	1.61	1.52
58	Ak	105	GLN	C-N	6.59	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	BR	44	ARG	NE-CZ	6.58	1.40	1.33
41	AA	141	ASP	CA-C	-6.58	1.44	1.52
17	BE	126	ARG	CD-NE	6.58	1.55	1.46
39	A3	48	A	O3'-P	-6.58	1.51	1.61
43	AB	70	LEU	C-N	6.58	1.43	1.33
7	AU	33	ARG	CA-CB	6.58	1.63	1.53
38	A1	1875	U	C1'-N1	6.58	1.58	1.48
64	AR	75	VAL	CA-C	-6.58	1.44	1.52
38	A1	1415	C	C2'-C1'	-6.58	1.43	1.53
17	BE	130	LYS	CA-C	6.58	1.60	1.52
30	BR	14	GLU	CA-CB	6.57	1.61	1.53
38	A1	2102	A	C3'-O3'	6.57	1.52	1.42
38	A1	1519	G	O5'-C5'	6.57	1.52	1.42
14	BB	146	LEU	CA-C	-6.57	1.44	1.52
19	BG	50	LEU	C-N	6.57	1.43	1.33
25	BM	136	ARG	N-CA	-6.57	1.37	1.45
39	A3	47	G	C4'-O4'	6.57	1.55	1.45
43	AB	207	LYS	C-N	6.57	1.42	1.33
38	A1	1990	U	C5'-C4'	6.57	1.61	1.51
43	AB	10	ARG	CZ-NH2	6.57	1.42	1.33
13	BA	35	THR	N-CA	-6.57	1.39	1.46
38	A1	2376	U	C4'-C3'	-6.57	1.42	1.52
16	BD	22	ARG	CA-C	-6.56	1.44	1.52
38	A1	1393	C	C3'-C2'	-6.56	1.43	1.52
10	B1	42	C	C1'-N1	6.56	1.58	1.48
38	A1	829	G	C4'-C3'	6.56	1.62	1.52
50	AF	30	GLY	N-CA	-6.56	1.35	1.44
43	AB	209	HIS	ND1-CE1	6.56	1.39	1.32
11	B2	641	A	C5'-C4'	6.56	1.61	1.51
46	AD	27	ARG	CZ-NH2	6.56	1.42	1.33
57	Aj	3	TYR	CA-C	-6.55	1.45	1.52
22	BJ	42	LYS	CA-C	-6.55	1.45	1.52
40	AK	29	ASP	CA-C	6.55	1.61	1.52
11	B2	899	G	O4'-C1'	6.55	1.51	1.41
34	BV	65	SER	CA-C	-6.55	1.44	1.52
38	A1	609	G	C3'-O3'	6.55	1.51	1.42
35	BW	31	PRO	CA-C	-6.55	1.44	1.52
46	AD	239	LEU	CA-CB	6.55	1.64	1.53
25	BM	94	PRO	N-CA	-6.54	1.39	1.47
58	Ak	101	LYS	C-N	6.54	1.42	1.33
34	BV	89	ARG	CA-C	-6.54	1.44	1.52
38	A1	2859	U	C2'-C1'	-6.54	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	AC	297	LEU	N-CA	6.54	1.54	1.46
57	Aj	58	ARG	NE-CZ	6.54	1.40	1.33
3	Af	35	VAL	CA-C	-6.54	1.44	1.52
11	B2	435	A	C5'-C4'	6.54	1.61	1.51
11	B2	1012	C	C3'-C2'	-6.54	1.43	1.52
22	BJ	18	VAL	CA-CB	-6.54	1.46	1.54
22	BJ	92	ARG	NE-CZ	6.54	1.40	1.33
44	Ab	54	LEU	C-N	6.54	1.42	1.33
47	Ad	41	ARG	NE-CZ	6.54	1.40	1.33
11	B2	37	G	C5'-C4'	6.54	1.61	1.51
5	AS	26	ARG	C-N	6.54	1.41	1.33
38	A1	275	C	O3'-P	6.54	1.71	1.61
38	A1	1999	G	C1'-N9	6.54	1.57	1.48
45	AC	79	ARG	NE-CZ	6.54	1.40	1.33
53	Ah	4	LYS	C-N	6.54	1.42	1.33
46	AD	190	ARG	CD-NE	6.54	1.55	1.46
57	Aj	87	LYS	N-CA	-6.54	1.36	1.45
38	A1	1206	A	C1'-N9	-6.54	1.38	1.48
54	AI	86	LYS	C-N	6.54	1.42	1.33
32	BT	90	VAL	CA-C	-6.53	1.47	1.52
38	A1	1915	G	C3'-C2'	-6.53	1.43	1.52
38	A1	2167	C	C2'-C1'	-6.53	1.43	1.53
44	Ab	117	ARG	CD-NE	6.53	1.55	1.46
11	B2	849	U	C2'-C1'	-6.53	1.43	1.53
32	BT	92	VAL	C-O	-6.53	1.17	1.24
10	B1	59	A	O3'-P	-6.53	1.51	1.61
21	BI	24	GLU	C-N	6.53	1.42	1.33
28	BP	23	ARG	NE-CZ	6.53	1.40	1.33
46	AD	32	ARG	CA-CB	6.53	1.63	1.53
11	B2	1357	C	C5'-C4'	6.53	1.61	1.51
62	AO	24	ARG	N-CA	-6.52	1.38	1.46
11	B2	1078	U	C1'-N1	6.52	1.58	1.48
33	BU	136	LEU	CA-C	-6.52	1.44	1.52
38	A1	1758	U	C3'-C2'	6.52	1.62	1.52
55	Ai	18	GLY	N-CA	-6.52	1.35	1.45
29	BQ	158	ARG	CA-CB	6.52	1.66	1.53
38	A1	202	A	C5'-C4'	6.52	1.61	1.51
38	A1	2005	A	C4'-C3'	6.52	1.62	1.52
51	Ag	38	ARG	CZ-NH1	6.52	1.41	1.32
11	B2	401	U	C1'-N1	6.52	1.58	1.48
55	Ai	79	ARG	NE-CZ	6.52	1.40	1.33
44	Ab	80	GLU	N-CA	6.51	1.53	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	AZ	30	GLY	C-N	6.51	1.41	1.33
11	B2	1150	G	C5'-C4'	6.51	1.61	1.51
38	A1	564	U	C5'-C4'	6.51	1.61	1.51
38	A1	3011	G	C2'-C1'	-6.51	1.43	1.53
31	BS	6	GLN	CA-CB	6.51	1.64	1.53
38	A1	471	U	O3'-P	-6.51	1.51	1.61
9	AX	80	THR	C-N	-6.51	1.26	1.33
38	A1	761	U	N3-C4	6.51	1.51	1.38
11	B2	1043	U	C1'-N1	6.51	1.58	1.48
9	AX	348	ARG	CZ-NH2	6.51	1.42	1.33
33	BU	54	ARG	C-N	6.51	1.42	1.33
38	A1	243	G	C5'-C4'	6.51	1.61	1.51
41	AA	194	ARG	CA-CB	6.51	1.63	1.53
48	AE	74	GLU	C-N	-6.51	1.25	1.33
11	B2	509	C	C4'-C3'	6.50	1.62	1.52
38	A1	2169	C	C1'-N1	6.50	1.58	1.48
21	BI	125	LEU	CA-C	-6.50	1.44	1.52
25	BM	29	HIS	CA-C	-6.50	1.44	1.52
38	A1	1688	C	C2'-C1'	-6.50	1.43	1.53
38	A1	2558	U	O3'-P	-6.50	1.51	1.61
27	BO	42	VAL	C-N	6.50	1.43	1.34
7	AU	79	GLU	CA-C	-6.50	1.44	1.52
38	A1	1757	G	O3'-P	-6.50	1.51	1.61
26	BN	31	LYS	C-N	6.50	1.42	1.33
38	A1	433	C	P-O5'	-6.50	1.50	1.59
38	A1	1370	G	P-O5'	-6.50	1.50	1.59
40	A5	61	ASP	C-N	6.50	1.40	1.33
38	A1	2102	A	C2'-C1'	-6.49	1.43	1.53
56	AJ	134	GLY	C-N	6.49	1.43	1.34
38	A1	1704	C	C4'-C3'	6.49	1.62	1.52
32	BT	115	HIS	N-CA	-6.49	1.38	1.45
58	AK	17	ASN	N-CA	-6.49	1.38	1.46
60	AM	65	ARG	CZ-NH1	6.49	1.41	1.32
11	B2	977	G	O3'-P	-6.49	1.51	1.61
25	BM	76	ILE	C-O	-6.49	1.17	1.23
38	A1	2356	U	C3'-O3'	6.49	1.51	1.42
44	Ab	45	GLY	C-N	6.49	1.42	1.33
38	A1	579	C	C5'-C4'	6.49	1.61	1.51
63	AP	41	ARG	CA-CB	6.49	1.64	1.53
9	AX	32	ILE	CA-C	-6.49	1.44	1.52
20	BH	215	ARG	CD-NE	6.48	1.55	1.46
11	B2	1283	G	C2'-C1'	-6.48	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	AM	73	ARG	NE-CZ	6.48	1.40	1.33
60	AM	126	LYS	CA-C	-6.48	1.45	1.52
14	BB	121	ARG	CD-NE	6.48	1.55	1.46
38	A1	1165	C	C4'-O4'	-6.48	1.35	1.45
54	AI	133	GLU	CA-C	-6.48	1.44	1.52
8	AW	47	LEU	N-CA	-6.48	1.38	1.46
18	BF	192	ARG	CZ-NH2	6.48	1.41	1.33
23	BK	51	LEU	N-CA	-6.48	1.40	1.46
11	B2	1262	U	C1'-N1	6.47	1.57	1.47
13	BA	121	ALA	CA-C	-6.47	1.44	1.52
17	BE	37	HIS	CD2-NE2	6.47	1.45	1.37
24	BL	35	SER	N-CA	-6.47	1.38	1.46
24	BL	5	ARG	CA-C	-6.47	1.44	1.52
38	A1	85	G	P-O5'	-6.47	1.50	1.59
38	A1	844	C	O4'-C1'	6.47	1.51	1.41
38	A1	3035	C	O5'-C5'	6.47	1.52	1.42
11	B2	479	C	C3'-O3'	6.47	1.51	1.42
15	BC	61	ARG	CZ-NH2	6.47	1.41	1.33
29	BQ	138	ARG	CD-NE	6.47	1.55	1.46
11	B2	387	G	C4'-C3'	6.47	1.62	1.52
38	A1	1168	A	C2'-C1'	-6.47	1.43	1.53
38	A1	2545	A	C1'-N9	6.47	1.57	1.48
65	AV	32	PHE	C-N	6.47	1.43	1.33
18	BF	28	GLU	N-CA	-6.47	1.37	1.46
39	A3	44	C	C1'-N1	6.47	1.58	1.48
7	AU	73	ARG	CZ-NH2	6.47	1.41	1.33
59	AL	119	THR	N-CA	-6.46	1.37	1.46
29	BQ	3	ARG	C-N	6.46	1.43	1.33
5	AS	25	LEU	C-N	6.46	1.42	1.33
11	B2	1280	C	C5'-C4'	6.46	1.60	1.51
20	BH	206	GLU	CA-C	-6.46	1.44	1.52
44	Ab	127	ASN	N-CA	-6.46	1.39	1.45
24	BL	83	ARG	CD-NE	6.46	1.55	1.46
15	BC	5	ARG	CA-C	-6.46	1.43	1.52
38	A1	830	G	P-O5'	-6.46	1.50	1.59
38	A1	1014	U	C1'-N1	6.46	1.57	1.47
38	A1	1688	C	C1'-N1	6.46	1.58	1.48
3	Af	22	ARG	NE-CZ	6.46	1.40	1.33
11	B2	674	C	O4'-C1'	6.46	1.51	1.41
38	A1	374	C	C2'-C1'	-6.46	1.43	1.53
52	AH	122	ALA	N-CA	-6.46	1.38	1.46
62	AO	110	PRO	CA-CB	-6.46	1.45	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1139	A	C5'-C4'	6.46	1.60	1.51
11	B2	922	G	C2'-C1'	-6.45	1.43	1.53
23	BK	121	ARG	NE-CZ	6.45	1.40	1.33
27	BO	111	ARG	NE-CZ	6.45	1.40	1.33
38	A1	1384	C	C4'-C3'	6.45	1.62	1.52
38	A1	1492	C	C1'-N1	6.45	1.58	1.48
12	AG	15	LEU	N-CA	-6.45	1.38	1.46
38	A1	2588	C	C1'-N1	6.45	1.58	1.48
10	B1	32	A	P-O5'	-6.45	1.50	1.59
11	B2	150	G	O3'-P	-6.45	1.51	1.61
64	AR	30	ARG	CA-CB	6.45	1.64	1.53
32	BT	26	ARG	NE-CZ	6.45	1.40	1.33
38	A1	316	G	C2'-C1'	-6.45	1.43	1.53
49	Ae	22	ARG	CZ-NH2	6.45	1.41	1.33
11	B2	1067	G	C4'-C3'	6.45	1.62	1.52
15	BC	166	TYR	N-CA	-6.45	1.38	1.46
18	BF	42	TYR	N-CA	-6.45	1.37	1.45
38	A1	2024	A	C5'-C4'	6.44	1.61	1.51
58	Ak	45	ILE	N-CA	6.44	1.54	1.46
13	BA	77	ASN	CA-C	-6.44	1.44	1.52
38	A1	553	C	C2'-C1'	-6.44	1.43	1.53
38	A1	1089	C	C1'-N1	6.44	1.58	1.48
38	A1	2270	G	C5'-C4'	6.44	1.60	1.51
22	BJ	43	ARG	NE-CZ	6.44	1.40	1.33
23	BK	5	GLN	CA-C	-6.44	1.45	1.52
3	Af	12	ARG	CA-CB	6.44	1.63	1.53
51	Ag	42	LYS	CA-C	-6.44	1.47	1.53
60	AM	71	ARG	NE-CZ	6.44	1.40	1.33
11	B2	682	A	C1'-N9	6.43	1.57	1.48
25	BM	133	ARG	N-CA	-6.43	1.39	1.46
11	B2	137	A	O4'-C1'	6.43	1.51	1.41
21	BI	62	ARG	CD-NE	6.43	1.55	1.46
28	BP	24	CYS	C-N	6.43	1.42	1.33
38	A1	1847	U	C5'-C4'	6.43	1.60	1.51
40	A5	13	ILE	C-N	6.43	1.42	1.33
38	A1	1293	G	O4'-C1'	-6.43	1.32	1.41
38	A1	1785	G	C1'-N9	6.42	1.57	1.48
38	A1	1949	A	O3'-P	-6.42	1.51	1.61
22	BJ	73	ARG	N-CA	-6.42	1.38	1.45
11	B2	1267	U	C4'-C3'	6.42	1.62	1.52
25	BM	133	ARG	CD-NE	6.42	1.55	1.46
25	BM	135	ARG	CD-NE	6.42	1.55	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1723	A	C1'-N9	6.42	1.57	1.48
11	B2	803	C	C5'-C4'	6.42	1.60	1.51
18	BF	44	ILE	N-CA	-6.42	1.38	1.46
38	A1	592	C	C1'-N1	6.42	1.58	1.48
44	Ab	60	SER	CA-C	-6.42	1.44	1.53
38	A1	893	C	C5'-C4'	6.42	1.60	1.51
38	A1	2813	G	C3'-O3'	6.42	1.51	1.42
42	Aa	41	ARG	NE-CZ	6.42	1.40	1.33
11	B2	306	C	O3'-P	-6.41	1.51	1.61
38	A1	563	A	C5'-C4'	6.41	1.60	1.51
38	A1	2529	G	C5'-C4'	6.41	1.60	1.51
38	A1	172	C	C5'-C4'	6.41	1.60	1.51
11	B2	470	G	N9-C8	6.41	1.50	1.37
38	A1	1309	G	C1'-N9	6.41	1.57	1.48
54	AI	94	PHE	N-CA	-6.41	1.38	1.46
54	AI	125	ARG	CD-NE	6.41	1.55	1.46
11	B2	949	G	C3'-O3'	6.41	1.51	1.42
32	BT	108	PRO	N-CA	-6.41	1.39	1.47
38	A1	242	C	O3'-P	-6.41	1.51	1.61
13	BA	109	ILE	N-CA	-6.41	1.39	1.46
24	BL	33	ARG	NE-CZ	6.41	1.40	1.33
38	A1	1657	G	C2'-C1'	-6.41	1.43	1.53
14	BB	20	GLY	CA-C	-6.41	1.45	1.52
17	BE	23	ARG	CD-NE	6.41	1.55	1.46
32	BT	64	ARG	CZ-NH2	6.41	1.41	1.33
50	AF	32	LYS	CA-C	-6.41	1.44	1.52
41	AA	128	ARG	CZ-NH2	6.40	1.41	1.33
50	AF	66	ALA	C-N	6.40	1.42	1.33
18	BF	111	ARG	CD-NE	6.40	1.55	1.46
59	AL	94	ALA	N-CA	-6.40	1.37	1.46
61	AN	10	ARG	NE-CZ	6.40	1.40	1.33
38	A1	40	G	C5'-C4'	6.40	1.60	1.51
43	AB	201	ASN	CA-C	-6.40	1.44	1.52
49	Ae	21	ARG	CD-NE	6.40	1.55	1.46
38	A1	881	G	C1'-N9	6.40	1.57	1.48
41	AA	202	VAL	N-CA	-6.40	1.38	1.46
59	AL	102	ILE	C-N	6.40	1.41	1.33
38	A1	1254	C	C5'-C4'	6.40	1.60	1.51
55	Ai	30	ALA	CA-C	-6.40	1.44	1.52
11	B2	561	A	C5'-C4'	-6.39	1.41	1.51
34	BV	58	SER	N-CA	-6.39	1.38	1.46
38	A1	991	U	C2'-C1'	-6.39	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	BE	204	ARG	CD-NE	6.39	1.55	1.46
25	BM	50	ALA	N-CA	-6.39	1.38	1.46
38	A1	1326	U	O4'-C1'	6.39	1.51	1.41
39	A3	12	G	C2'-C1'	-6.39	1.43	1.53
45	AC	8	ARG	CD-NE	6.39	1.55	1.46
45	AC	84	ARG	NE-CZ	6.39	1.40	1.33
64	AR	21	ARG	CD-NE	6.39	1.55	1.46
20	BH	42	ARG	NE-CZ	6.39	1.40	1.33
5	AS	35	VAL	CA-CB	-6.39	1.46	1.54
11	B2	472	C	P-O5'	-6.39	1.50	1.59
38	A1	768	C	C2'-C1'	-6.39	1.43	1.53
38	A1	2823	G	C2'-C1'	-6.39	1.43	1.53
11	B2	646	U	C1'-N1	6.39	1.58	1.48
7	AU	112	ARG	C-N	6.39	1.42	1.33
10	B1	70	C	C4'-C3'	6.38	1.62	1.52
38	A1	60	G	C5'-C4'	6.38	1.60	1.51
5	AS	94	VAL	N-CA	-6.38	1.39	1.46
36	BX	35	ARG	NE-CZ	6.38	1.40	1.33
46	AD	168	ASP	CA-CB	6.38	1.63	1.53
12	AG	114	ILE	N-CA	6.38	1.54	1.46
55	Ai	36	HIS	CG-CD2	6.38	1.42	1.35
38	A1	2943	G	O3'-P	-6.38	1.51	1.61
49	Ae	56	LYS	C-N	6.38	1.42	1.33
27	BO	111	ARG	CD-NE	6.38	1.55	1.46
46	AD	187	ARG	CD-NE	6.38	1.55	1.46
55	Ai	80	ARG	NE-CZ	6.38	1.40	1.33
66	AY	112	ASN	C-N	6.38	1.41	1.33
16	BD	69	GLU	CA-CB	6.38	1.63	1.53
38	A1	141	C	C2'-C1'	-6.38	1.43	1.53
48	AE	71	ARG	NE-CZ	6.38	1.40	1.33
6	AT	56	THR	CA-C	6.38	1.60	1.52
38	A1	521	C	C2'-C1'	-6.38	1.43	1.53
11	B2	291	G	C4'-C3'	6.37	1.62	1.52
11	B2	376	G	C5'-C4'	6.37	1.60	1.51
21	BI	75	ILE	N-CA	-6.37	1.38	1.46
27	BO	87	THR	C-N	6.37	1.37	1.33
38	A1	1845	C	O3'-P	-6.37	1.51	1.61
43	AB	205	GLY	CA-C	-6.37	1.42	1.52
45	AC	160	ILE	CA-C	-6.37	1.44	1.52
56	AJ	35	ALA	CA-C	-6.37	1.45	1.52
60	AM	57	GLN	C-N	6.37	1.42	1.33
31	BS	60	MET	C-N	6.37	1.42	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	675	A	C4'-C3'	-6.37	1.43	1.53
11	B2	1315	G	C5'-C4'	6.37	1.60	1.51
60	AM	38	ARG	CD-NE	6.37	1.55	1.46
38	A1	307	C	O3'-P	-6.37	1.51	1.61
38	A1	2147	C	O4'-C1'	6.37	1.51	1.41
14	BB	25	THR	C-N	6.36	1.42	1.33
38	A1	1557	G	O3'-P	-6.36	1.51	1.61
56	AJ	29	VAL	CA-C	-6.36	1.44	1.52
38	A1	619	G	C3'-C2'	6.36	1.62	1.52
38	A1	1445	G	C5'-C4'	6.36	1.60	1.51
38	A1	2626	U	O3'-P	-6.36	1.51	1.61
48	AE	161	PRO	N-CD	6.36	1.56	1.47
25	BM	54	GLU	CA-C	6.36	1.60	1.52
38	A1	471	U	C1'-N1	6.36	1.57	1.48
38	A1	1768	C	P-O5'	-6.36	1.50	1.59
64	AR	5	ALA	N-CA	-6.36	1.40	1.46
11	B2	61	A	O3'-P	-6.36	1.51	1.61
20	BH	48	HIS	ND1-CE1	6.36	1.39	1.32
37	BY	17	ARG	CZ-NH2	6.36	1.41	1.33
11	B2	869	U	C2'-O2'	-6.35	1.32	1.42
24	BL	14	ARG	CD-NE	6.35	1.55	1.46
55	Ai	38	CYS	C-N	-6.35	1.27	1.34
49	Ae	54	LYS	N-CA	-6.35	1.38	1.46
58	Ak	101	LYS	CA-CB	6.35	1.63	1.53
13	BA	45	ASN	C-N	6.35	1.41	1.33
38	A1	1183	U	C4'-O4'	-6.35	1.36	1.45
38	A1	2026	C	C2'-C1'	-6.34	1.43	1.53
38	A1	2256	G	C5'-C4'	6.34	1.60	1.51
40	A5	52	HIS	CE1-NE2	6.34	1.38	1.32
46	AD	31	ILE	C-N	6.34	1.42	1.33
9	AX	388	LEU	CA-C	-6.34	1.44	1.52
32	BT	7	ARG	CA-C	-6.34	1.44	1.52
38	A1	1351	G	C1'-N9	6.34	1.57	1.48
33	BU	130	ASP	N-CA	-6.34	1.40	1.46
60	AM	168	LYS	CA-C	6.34	1.60	1.52
29	BQ	82	LEU	CA-C	-6.34	1.44	1.52
55	Ai	48	ARG	NE-CZ	6.34	1.40	1.33
56	AJ	112	VAL	CA-CB	-6.34	1.46	1.54
38	A1	1549	C	C5'-C4'	6.34	1.60	1.51
38	A1	2096	G	C3'-C2'	6.34	1.62	1.52
17	BE	12	ARG	CZ-NH1	6.34	1.41	1.32
38	A1	785	C	C4'-C3'	6.34	1.62	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1684	C	C5'-C4'	6.34	1.60	1.51
38	A1	1832	G	O5'-C5'	6.34	1.51	1.42
38	A1	2604	G	C5'-C4'	6.33	1.60	1.51
38	A1	2681	A	C4'-C3'	6.33	1.62	1.53
11	B2	380	C	C5'-C4'	6.33	1.60	1.51
24	BL	38	ILE	CA-C	-6.33	1.47	1.53
38	A1	1729	C	O4'-C1'	6.33	1.51	1.41
30	BR	32	ARG	C-N	6.33	1.42	1.33
38	A1	198	C	C1'-N1	6.33	1.57	1.48
38	A1	1372	C	C3'-C2'	6.33	1.62	1.52
66	AY	133	SER	CA-CB	6.33	1.63	1.53
38	A1	130	G	C4'-O4'	6.33	1.55	1.45
38	A1	3022	C	C5'-C4'	6.33	1.60	1.51
15	BC	138	GLY	CA-C	-6.33	1.45	1.51
24	BL	76	GLU	N-CA	-6.33	1.38	1.46
37	BY	23	PRO	C-O	6.33	1.32	1.24
39	A3	123	U	O3'-P	-6.33	1.51	1.61
63	AP	110	ASN	N-CA	-6.33	1.40	1.46
11	B2	273	C	C3'-C2'	-6.33	1.43	1.52
38	A1	1094	U	C1'-N1	6.33	1.57	1.48
38	A1	2656	A	C2'-O2'	-6.33	1.32	1.42
43	AB	165	GLY	N-CA	6.33	1.52	1.45
18	BF	92	ARG	CD-NE	6.32	1.55	1.46
12	AG	3	LYS	CA-CB	6.32	1.57	1.52
57	Aj	77	ALA	C-O	-6.32	1.15	1.23
60	AM	157	ARG	CZ-NH1	6.32	1.41	1.32
61	AN	114	ARG	C-N	-6.32	1.27	1.34
13	BA	141	MET	CA-C	-6.32	1.44	1.52
20	BH	20	ARG	N-CA	-6.32	1.40	1.46
38	A1	1185	A	C3'-O3'	6.32	1.51	1.42
38	A1	2266	C	C5'-C4'	6.32	1.60	1.51
64	AR	6	HIS	CE1-NE2	-6.32	1.26	1.32
11	B2	298	C	O3'-P	-6.32	1.51	1.61
12	AG	21	GLN	CA-CB	6.32	1.63	1.53
38	A1	996	U	O4'-C1'	6.31	1.51	1.41
62	AO	43	HIS	CB-CG	-6.31	1.41	1.50
11	B2	73	U	O5'-C5'	6.31	1.51	1.42
11	B2	1403	U	C4'-C3'	6.31	1.62	1.52
25	BM	133	ARG	CZ-NH2	6.31	1.41	1.33
27	BO	136	ARG	CZ-NH2	6.31	1.41	1.33
44	Ab	111	ARG	N-CA	-6.31	1.38	1.46
56	AJ	105	VAL	N-CA	-6.31	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	AL	126	ALA	CA-C	-6.31	1.44	1.52
11	B2	1163	U	C2'-O2'	-6.31	1.32	1.42
24	BL	84	GLN	CA-C	-6.31	1.44	1.52
60	AM	63	ARG	CZ-NH2	6.31	1.41	1.33
45	AC	217	GLU	CA-CB	6.31	1.63	1.53
56	AJ	140	ILE	CA-C	6.31	1.60	1.52
38	A1	2027	G	C3'-C2'	6.31	1.62	1.52
56	AJ	117	GLU	C-N	6.31	1.41	1.33
4	AQ	109	LEU	C-N	6.30	1.42	1.33
14	BB	123	ASP	C-N	6.30	1.42	1.34
8	AW	29	ARG	NE-CZ	6.30	1.40	1.33
11	B2	548	A	O4'-C1'	6.30	1.51	1.42
17	BE	11	LYS	N-CA	-6.30	1.38	1.45
11	B2	1247	A	O4'-C1'	-6.30	1.32	1.41
16	BD	156	ARG	CD-NE	6.30	1.55	1.46
23	BK	61	ASP	CA-C	-6.30	1.45	1.52
24	BL	8	ILE	C-O	-6.30	1.17	1.24
47	Ad	50	ARG	NE-CZ	6.30	1.40	1.33
12	AG	57	VAL	N-CA	-6.30	1.38	1.46
1	A7	12	LYS	C-N	6.30	1.41	1.33
15	BC	126	ARG	CZ-NH1	6.30	1.41	1.32
11	B2	608	G	C1'-N9	6.29	1.57	1.48
55	Ai	36	HIS	CE1-NE2	6.29	1.38	1.32
59	AL	66	PRO	CA-C	-6.29	1.46	1.52
10	B1	54	G	P-O5'	6.29	1.69	1.59
12	B3	23	VAL	CA-C	6.29	1.60	1.52
38	A1	1863	G	C5'-C4'	6.29	1.60	1.51
54	AI	37	VAL	C-N	6.29	1.41	1.33
60	AM	170	ARG	CZ-NH2	6.29	1.41	1.33
11	B2	1076	G	C4'-O4'	-6.29	1.36	1.45
21	BI	116	ALA	CA-C	-6.29	1.44	1.52
30	BR	12	PRO	CA-C	6.29	1.61	1.52
38	A1	2132	C	C4'-C3'	6.29	1.61	1.52
46	AD	33	ARG	NE-CZ	6.29	1.40	1.33
66	AY	7	ILE	CA-CB	6.29	1.62	1.54
20	BH	20	ARG	CD-NE	6.28	1.55	1.46
29	BQ	39	LYS	N-CA	-6.28	1.38	1.46
38	A1	2684	G	C3'-O3'	6.28	1.51	1.42
38	A1	181	U	C1'-N1	6.28	1.57	1.48
34	BV	47	ASN	CA-CB	6.28	1.63	1.53
38	A1	745	C	C5'-C4'	6.28	1.60	1.51
11	B2	936	A	O4'-C1'	-6.28	1.32	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2727	C	C4'-C3'	6.28	1.61	1.52
50	AF	150	THR	N-CA	6.28	1.53	1.46
38	A1	2856	G	C4'-O4'	6.27	1.54	1.45
43	AB	157	ALA	C-N	6.27	1.42	1.33
25	BM	136	ARG	CD-NE	6.27	1.55	1.46
38	A1	393	C	C4'-O4'	6.27	1.54	1.45
43	AB	189	TRP	NE1-CE2	-6.27	1.30	1.37
38	A1	1470	C	O3'-P	-6.27	1.51	1.61
56	AJ	81	VAL	CA-CB	-6.27	1.46	1.54
4	AQ	5	LYS	C-N	6.27	1.42	1.33
8	AW	60	GLU	N-CA	6.27	1.53	1.46
11	B2	891	A	O3'-P	-6.27	1.51	1.61
20	BH	48	HIS	CB-CG	6.27	1.58	1.50
18	BF	145	VAL	N-CA	-6.27	1.38	1.46
44	Ab	80	GLU	CA-C	-6.27	1.45	1.52
67	AZ	98	LYS	N-CA	-6.27	1.38	1.46
20	BH	155	MET	C-N	6.27	1.42	1.33
38	A1	2354	A	C2'-C1'	-6.27	1.44	1.53
39	A3	109	A	O3'-P	-6.27	1.51	1.61
58	Ak	121	ASP	CA-CB	6.27	1.64	1.53
18	BF	18	PRO	N-CA	-6.26	1.39	1.47
38	A1	2655	C	C5'-C4'	6.26	1.60	1.51
41	AA	145	ILE	C-N	6.26	1.41	1.33
42	Aa	7	GLU	N-CA	-6.26	1.38	1.46
38	A1	727	A	C4'-C3'	6.26	1.61	1.52
38	A1	920	G	C5'-C4'	6.26	1.60	1.51
41	AA	92	SER	C-N	6.26	1.41	1.33
62	AO	16	GLU	C-N	6.26	1.41	1.33
3	Af	12	ARG	NE-CZ	6.26	1.40	1.33
58	Ak	182	ILE	C-N	6.26	1.42	1.33
38	A1	118	A	O3'-P	-6.26	1.51	1.61
38	A1	2743	U	C2'-C1'	-6.26	1.44	1.53
44	Ab	26	GLN	CA-CB	6.26	1.64	1.53
46	AD	238	ARG	CZ-NH1	6.26	1.41	1.32
61	AN	71	ARG	CA-C	-6.26	1.44	1.52
25	BM	34	THR	CA-C	-6.26	1.44	1.52
11	B2	461	A	C4'-C3'	-6.26	1.43	1.52
45	AC	186	ALA	C-O	-6.26	1.16	1.23
8	AW	12	GLU	C-N	6.25	1.42	1.33
60	AM	100	ALA	C-N	6.25	1.42	1.33
60	AM	154	HIS	CA-CB	6.25	1.64	1.53
9	AX	278	ARG	NE-CZ	6.25	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1773	C	P-O5'	-6.25	1.50	1.59
12	B3	83	LYS	C-N	6.25	1.42	1.33
42	Aa	71	ARG	CD-NE	6.25	1.55	1.46
44	Ab	15	ARG	CD-NE	6.25	1.55	1.46
39	A3	52	U	C1'-N1	6.25	1.56	1.47
36	BX	48	PRO	CA-C	6.25	1.60	1.52
44	Ab	108	LYS	C-N	6.25	1.42	1.33
40	AK	71	VAL	CA-C	-6.25	1.44	1.53
62	AO	42	ASN	N-CA	6.25	1.52	1.47
11	B2	693	C	C5'-C4'	6.25	1.60	1.51
11	B2	875	G	C1'-N9	6.25	1.57	1.48
11	B2	1349	C	C3'-O3'	6.25	1.51	1.42
20	BH	88	ARG	CZ-NH1	6.25	1.41	1.32
58	Ak	196	GLU	CA-C	-6.25	1.45	1.52
24	BL	75	ILE	CA-C	-6.25	1.44	1.52
11	B2	555	U	C4'-O4'	-6.24	1.36	1.45
19	BG	112	ILE	CA-CB	-6.24	1.46	1.54
25	BM	120	PRO	C-N	6.24	1.40	1.33
38	A1	1647	C	C1'-N1	6.24	1.57	1.48
41	AA	78	GLY	C-N	6.24	1.41	1.33
63	AP	80	VAL	CA-CB	-6.24	1.47	1.54
10	B1	58	A	C4'-C3'	6.24	1.61	1.52
11	B2	806	G	C3'-O3'	6.24	1.51	1.42
17	BE	99	HIS	C-N	6.24	1.43	1.33
38	A1	2576	C	O3'-P	-6.24	1.51	1.61
13	BA	45	ASN	N-CA	-6.24	1.38	1.46
14	BB	19	ILE	CA-C	6.24	1.60	1.52
38	A1	1900	U	C4'-C3'	6.24	1.61	1.52
33	BU	46	GLU	C-N	6.24	1.41	1.33
38	A1	1409	U	C5'-C4'	-6.24	1.41	1.51
4	AQ	28	ARG	CZ-NH1	6.24	1.41	1.32
38	A1	956	U	C3'-O3'	6.24	1.51	1.42
38	A1	1228	G	O5'-C5'	6.24	1.52	1.42
14	BB	201	ARG	CD-NE	6.24	1.54	1.46
38	A1	1846	G	C2'-C1'	-6.24	1.44	1.53
45	AC	18	LYS	C-N	6.24	1.42	1.33
38	A1	480	A	C5'-C4'	6.23	1.60	1.51
26	BN	69	MET	N-CA	-6.23	1.38	1.46
54	AI	96	ARG	CZ-NH1	6.23	1.41	1.32
48	AE	93	ARG	CZ-NH1	6.23	1.41	1.32
5	AS	16	ARG	NE-CZ	6.23	1.40	1.33
38	A1	2709	C	O3'-P	-6.23	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2736	G	C5'-C4'	6.23	1.60	1.51
29	BQ	122	LEU	N-CA	-6.22	1.38	1.46
61	AN	49	LEU	CA-C	-6.22	1.45	1.52
23	BK	20	ARG	C-N	6.22	1.41	1.33
38	A1	1238	G	C5-C6	-6.22	1.29	1.42
48	AE	17	ALA	CA-C	-6.22	1.44	1.52
29	BQ	117	HIS	ND1-CE1	6.22	1.38	1.32
38	A1	2404	G	C3'-C2'	-6.22	1.43	1.52
48	AE	164	HIS	N-CA	-6.22	1.38	1.46
4	AQ	8	ARG	C-N	6.22	1.42	1.33
17	BE	183	ALA	CA-C	-6.22	1.44	1.53
34	BV	88	ILE	C-N	6.22	1.42	1.33
39	A3	33	U	C5'-C4'	6.22	1.60	1.51
62	AO	13	ARG	NE-CZ	6.22	1.39	1.33
11	B2	1238	G	O3'-P	-6.21	1.51	1.61
9	AX	78	ILE	N-CA	6.21	1.54	1.46
10	B1	12	U	C3'-O3'	6.21	1.51	1.42
58	AK	189	LEU	CA-C	-6.21	1.44	1.52
16	BD	25	ARG	CD-NE	6.21	1.54	1.46
38	A1	2056	A	C1'-N9	6.21	1.57	1.48
11	B2	1309	A	P-O5'	-6.21	1.50	1.59
30	BR	2	MET	CA-C	6.21	1.60	1.52
38	A1	1129	G	C2'-C1'	-6.21	1.44	1.53
11	B2	1337	A	C4'-C3'	-6.21	1.43	1.52
25	BM	52	ARG	N-CA	-6.21	1.37	1.46
35	BW	4	PRO	CA-C	-6.21	1.43	1.52
38	A1	1772	A	P-O5'	-6.21	1.50	1.59
46	AD	218	ASP	CA-C	-6.21	1.45	1.52
63	AP	13	ARG	NE-CZ	6.21	1.39	1.33
49	Ae	25	ARG	CD-NE	6.21	1.54	1.46
21	BI	116	ALA	CA-CB	6.20	1.63	1.53
38	A1	984	U	C5'-C4'	-6.20	1.42	1.51
38	A1	2712	G	C3'-O3'	6.20	1.51	1.42
4	AQ	11	ALA	CA-C	-6.20	1.44	1.52
11	B2	1027	C	C4'-C3'	6.20	1.61	1.52
11	B2	1433	C	C4'-C3'	6.20	1.61	1.52
18	BF	161	ARG	CD-NE	6.20	1.54	1.46
11	B2	903	G	O3'-P	-6.20	1.51	1.61
38	A1	131	C	O4'-C1'	6.20	1.50	1.41
38	A1	1218	C	C4'-C3'	6.20	1.61	1.52
38	A1	1101	U	C1'-N1	6.20	1.57	1.48
38	A1	2390	G	C2'-C1'	-6.20	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	BT	66	HIS	C-N	6.20	1.42	1.33
17	BE	195	ARG	NE-CZ	6.19	1.39	1.33
11	B2	215	C	C2'-C1'	-6.19	1.44	1.53
11	B2	454	G	C5'-C4'	6.19	1.60	1.51
11	B2	1272	G	C5'-C4'	6.19	1.60	1.51
28	BP	44	ARG	CD-NE	6.19	1.54	1.46
38	A1	1588	C	C2'-C1'	-6.19	1.43	1.53
60	AM	101	GLU	N-CA	-6.19	1.39	1.46
11	B2	349	A	C4'-O4'	-6.19	1.36	1.45
67	AZ	21	ASN	C-N	6.19	1.42	1.33
5	AS	150	VAL	N-CA	-6.19	1.39	1.46
11	B2	67	C	C4-N4	6.19	1.46	1.33
18	BF	92	ARG	CZ-NH2	6.19	1.41	1.33
27	BO	28	ILE	CA-CB	6.19	1.61	1.54
29	BQ	140	GLY	CA-C	-6.19	1.42	1.51
38	A1	1220	U	C2'-C1'	-6.19	1.44	1.53
39	A3	82	C	C2'-C1'	-6.19	1.44	1.53
57	Aj	86	VAL	CA-CB	-6.19	1.46	1.54
13	BA	38	ASP	CA-C	-6.19	1.45	1.52
39	A3	123	U	C4'-C3'	6.19	1.62	1.53
41	AA	173	SER	CA-C	6.18	1.61	1.52
38	A1	2472	A	C5'-C4'	6.18	1.60	1.51
58	Ak	131	LEU	CA-C	-6.18	1.45	1.52
62	AO	37	VAL	CA-CB	-6.18	1.47	1.54
11	B2	1446	G	C2'-C1'	-6.18	1.44	1.53
15	BC	140	ARG	C-N	6.18	1.42	1.33
18	BF	181	GLN	C-N	6.18	1.41	1.33
38	A1	1916	U	O3'-P	-6.18	1.51	1.61
22	BJ	56	ARG	CA-C	-6.18	1.45	1.52
11	B2	343	G	C4'-C3'	6.18	1.61	1.52
8	AW	29	ARG	CD-NE	6.17	1.54	1.46
18	BF	63	GLN	N-CA	-6.17	1.38	1.46
26	BN	132	VAL	CA-C	-6.17	1.45	1.52
30	BR	42	LYS	CA-C	6.17	1.60	1.52
44	Ab	75	HIS	CG-CD2	6.17	1.42	1.35
38	A1	966	G	C5'-C4'	6.17	1.60	1.51
61	AN	84	PHE	C-N	6.17	1.42	1.33
38	A1	289	G	C2'-C1'	-6.17	1.44	1.53
38	A1	2469	G	N1-C2	6.17	1.50	1.37
38	A1	2691	G	O4'-C1'	6.17	1.50	1.41
41	AA	150	LYS	C-N	6.17	1.42	1.33
38	A1	535	G	C4'-C3'	6.17	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1199	U	O4'-C1'	6.17	1.51	1.42
41	AA	75	ARG	NE-CZ	6.17	1.39	1.33
11	B2	79	G	C5'-C4'	6.17	1.60	1.51
15	BC	5	ARG	N-CA	-6.17	1.38	1.46
25	BM	68	ALA	C-N	6.17	1.42	1.33
52	AH	13	GLY	C-N	6.17	1.42	1.33
38	A1	1715	G	P-O5'	-6.17	1.50	1.59
43	AB	95	ASN	N-CA	-6.17	1.38	1.45
1	A7	28	PRO	N-CA	-6.16	1.39	1.47
22	BJ	48	THR	CA-C	-6.16	1.44	1.52
26	BN	105	ILE	N-CA	-6.16	1.39	1.46
29	BQ	120	ARG	NE-CZ	6.16	1.39	1.33
38	A1	404	G	C4'-O4'	-6.16	1.36	1.45
59	AL	131	PRO	C-N	6.16	1.42	1.33
11	B2	456	U	C4'-O4'	6.16	1.54	1.45
11	B2	839	G	O4'-C1'	6.16	1.50	1.41
34	BV	19	ILE	CA-CB	6.16	1.63	1.54
38	A1	2465	A	C6-N6	6.16	1.46	1.33
49	Ae	60	ASN	CA-C	6.16	1.60	1.52
45	AC	87	ARG	CD-NE	6.16	1.54	1.46
7	AU	113	LYS	C-N	6.16	1.42	1.33
9	AX	308	SER	CA-C	-6.15	1.44	1.52
25	BM	17	ALA	CA-C	-6.15	1.45	1.52
4	AQ	31	ASP	N-CA	6.15	1.53	1.46
38	A1	1261	C	C4'-C3'	6.15	1.61	1.52
38	A1	1540	A	C3'-C2'	6.15	1.61	1.52
44	Ab	41	ARG	NE-CZ	6.15	1.39	1.33
62	AO	32	LYS	CA-C	6.15	1.60	1.53
66	AY	6	VAL	C-N	6.15	1.41	1.33
11	B2	545	C	O4'-C1'	6.15	1.50	1.41
9	AX	31	GLY	C-N	6.15	1.41	1.33
11	B2	1133	C	C2'-C1'	-6.15	1.44	1.53
38	A1	864	C	C3'-C2'	6.15	1.61	1.52
61	AN	84	PHE	N-CA	-6.15	1.38	1.46
11	B2	692	G	C4'-C3'	6.14	1.61	1.52
18	BF	62	ASN	C-O	-6.14	1.16	1.24
29	BQ	27	GLU	C-N	6.14	1.41	1.33
38	A1	542	A	O3'-P	-6.14	1.51	1.61
38	A1	2373	G	C5'-C4'	6.14	1.60	1.51
5	AS	112	LEU	C-N	6.14	1.42	1.33
11	B2	54	C	C4'-C3'	6.14	1.61	1.52
20	BH	58	LYS	C-N	6.14	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	BH	155	MET	C-O	-6.14	1.17	1.24
38	A1	889	C	C1'-N1	6.14	1.57	1.48
38	A1	1780	C	O4'-C1'	6.14	1.50	1.41
38	A1	2459	G	C5'-C4'	6.14	1.60	1.51
38	A1	2840	C	C1'-N1	6.14	1.56	1.47
49	Ae	62	HIS	ND1-CE1	6.14	1.38	1.32
12	AG	120	GLU	C-N	6.14	1.42	1.33
57	Aj	56	GLU	C-N	6.14	1.42	1.33
62	AO	58	THR	CA-CB	-6.14	1.44	1.53
32	BT	65	THR	CA-C	-6.14	1.44	1.52
34	BV	59	TYR	CA-CB	6.14	1.63	1.53
38	A1	271	G	C1'-N9	-6.14	1.38	1.48
39	A3	115	C	C3'-O3'	6.14	1.51	1.42
44	Ab	107	GLY	CA-C	-6.14	1.44	1.52
45	AC	74	GLU	CA-CB	6.14	1.60	1.53
26	BN	30	TYR	CA-C	6.14	1.60	1.52
38	A1	905	G	O3'-P	-6.14	1.51	1.61
29	BQ	39	LYS	CA-C	-6.13	1.45	1.52
38	A1	362	A	C4'-C3'	6.13	1.62	1.53
38	A1	736	U	O3'-P	-6.13	1.51	1.61
46	AD	226	GLY	C-O	-6.13	1.16	1.24
25	BM	123	HIS	CB-CG	6.13	1.58	1.50
23	BK	130	ARG	CZ-NH2	6.13	1.41	1.33
63	AP	6	PRO	CA-C	-6.13	1.44	1.52
25	BM	123	HIS	CA-C	-6.13	1.44	1.52
38	A1	339	A	P-O5'	6.13	1.69	1.59
54	AI	130	THR	CA-C	-6.13	1.44	1.52
11	B2	33	U	O4'-C1'	-6.13	1.32	1.41
15	BC	98	ARG	C-N	6.13	1.42	1.33
58	Ak	122	VAL	N-CA	-6.13	1.39	1.46
61	AN	96	GLU	CA-C	6.13	1.59	1.52
61	AN	136	ARG	NE-CZ	6.13	1.39	1.33
62	AO	65	ARG	NE-CZ	6.13	1.39	1.33
64	AR	50	HIS	CA-C	-6.13	1.45	1.52
38	A1	1609	G	C2'-C1'	-6.12	1.44	1.53
38	A1	1707	A	C4'-C3'	6.12	1.61	1.52
9	AX	117	ILE	CA-C	-6.12	1.45	1.52
44	Ab	79	TYR	CA-CB	6.12	1.64	1.53
11	B2	204	G	P-O5'	-6.12	1.50	1.59
38	A1	1840	G	C5'-C4'	6.12	1.60	1.51
38	A1	2805	U	P-O5'	-6.12	1.50	1.59
39	A3	30	G	O3'-P	-6.12	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1006	C	P-O5'	6.12	1.69	1.59
31	BS	57	LEU	N-CA	-6.12	1.39	1.46
45	AC	294	LYS	N-CA	-6.12	1.37	1.46
11	B2	436	A	C1'-N9	6.12	1.57	1.48
13	BA	190	VAL	CA-C	-6.12	1.47	1.53
49	Ae	19	ARG	CZ-NH1	6.12	1.41	1.32
63	AP	37	LEU	CA-CB	6.12	1.63	1.53
16	BD	116	ARG	CD-NE	6.11	1.54	1.46
17	BE	198	ARG	CZ-NH2	6.11	1.41	1.33
38	A1	636	G	C5'-C4'	6.11	1.60	1.51
45	AC	6	ARG	NE-CZ	6.11	1.39	1.33
40	AK	46	ARG	NE-CZ	6.11	1.39	1.33
23	BK	56	ILE	N-CA	-6.11	1.39	1.46
35	BW	12	ARG	CD-NE	6.11	1.54	1.46
65	AV	30	LEU	C-N	6.11	1.42	1.33
14	BB	161	ARG	CZ-NH2	6.11	1.41	1.33
16	BD	105	LEU	CA-C	-6.11	1.44	1.52
11	B2	1033	G	C2'-C1'	-6.11	1.44	1.53
38	A1	1666	G	C2'-C1'	-6.11	1.44	1.53
11	B2	211	G	O3'-P	-6.11	1.51	1.61
11	B2	787	U	C1'-N1	-6.11	1.39	1.48
11	B2	921	G	C5'-C4'	6.11	1.60	1.51
38	A1	1112	G	C1'-N9	6.11	1.57	1.48
42	Aa	15	ILE	CA-C	-6.11	1.45	1.52
46	AD	166	ILE	CA-C	-6.11	1.45	1.52
40	A5	70	GLU	C-N	6.11	1.41	1.33
44	Ab	63	ILE	CA-C	-6.11	1.45	1.52
59	AL	143	GLU	C-N	6.11	1.41	1.33
11	B2	618	G	C3'-O3'	6.10	1.51	1.42
57	Aj	41	ARG	CZ-NH2	6.10	1.41	1.33
17	BE	179	PHE	C-N	-6.10	1.28	1.33
38	A1	401	C	O3'-P	-6.10	1.51	1.61
38	A1	1226	G	O3'-P	-6.10	1.51	1.61
11	B2	1243	C	C4'-O4'	6.10	1.54	1.45
20	BH	6	ASN	C-N	6.10	1.42	1.33
38	A1	2494	A	C5'-C4'	6.10	1.60	1.51
67	AZ	8	ARG	CA-C	-6.10	1.44	1.52
34	BV	89	ARG	CZ-NH2	6.10	1.41	1.33
36	BX	15	ILE	C-N	6.10	1.39	1.33
38	A1	540	A	C3'-O3'	6.10	1.52	1.43
38	A1	1824	G	C2'-C1'	-6.10	1.44	1.53
38	A1	1940	U	P-O5'	6.10	1.68	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	AA	90	ILE	CA-C	-6.10	1.45	1.52
64	AR	9	ARG	CD-NE	6.10	1.54	1.46
5	AS	117	ILE	CA-C	-6.10	1.44	1.52
7	AU	6	LYS	CA-C	-6.10	1.44	1.52
50	AF	166	ARG	C-N	6.10	1.42	1.33
53	Ah	9	ARG	CA-C	-6.10	1.45	1.52
59	AL	71	ARG	NE-CZ	6.09	1.39	1.33
27	BO	23	TRP	NE1-CE2	6.09	1.44	1.37
29	BQ	74	ARG	C-N	6.09	1.42	1.33
11	B2	500	A	C4'-C3'	6.09	1.62	1.53
38	A1	1711	C	O5'-C5'	-6.09	1.33	1.42
38	A1	2514	C	C2'-C1'	-6.09	1.44	1.53
28	BP	54	LYS	CA-C	-6.09	1.45	1.52
38	A1	1978	A	O5'-C5'	6.09	1.51	1.42
48	AE	55	LYS	CA-C	6.09	1.59	1.53
11	B2	564	C	O3'-P	-6.09	1.52	1.61
48	AE	144	GLU	CA-C	-6.09	1.45	1.52
51	Ag	16	VAL	C-N	6.09	1.41	1.33
38	A1	1641	G	O5'-C5'	6.08	1.51	1.42
38	A1	2590	C	C5'-C4'	6.08	1.60	1.51
18	BF	128	CYS	CA-C	-6.08	1.44	1.52
38	A1	1565	G	C5'-C4'	6.08	1.60	1.51
58	Ak	49	ASN	CA-CB	6.08	1.62	1.53
58	Ak	80	ILE	CA-CB	6.08	1.62	1.54
11	B2	894	A	O4'-C1'	6.08	1.50	1.41
11	B2	963	A	C1'-N9	6.08	1.56	1.47
14	BB	179	ARG	NE-CZ	6.08	1.39	1.33
38	A1	1061	G	C5'-C4'	6.08	1.60	1.51
38	A1	359	C	C5'-C4'	6.08	1.60	1.51
11	B2	213	C	C1'-N1	6.08	1.57	1.48
11	B2	990	G	C4'-C3'	6.08	1.61	1.52
14	BB	154	ILE	C-N	6.08	1.40	1.33
38	A1	1253	U	O5'-C5'	6.08	1.51	1.42
64	AR	12	THR	CA-C	-6.08	1.45	1.52
33	BU	7	VAL	CA-C	-6.08	1.48	1.52
11	B2	494	G	C3'-C2'	6.08	1.61	1.52
11	B2	556	G	C1'-N9	6.08	1.57	1.48
57	Aj	92	VAL	CA-C	-6.08	1.46	1.52
61	AN	20	ARG	NE-CZ	6.08	1.39	1.33
11	B2	791	G	C4'-O4'	-6.07	1.36	1.45
18	BF	84	ARG	NE-CZ	6.07	1.39	1.33
38	A1	929	G	C5'-C4'	6.07	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2038	C	C2'-O2'	-6.07	1.33	1.42
38	A1	2222	C	C4'-C3'	6.07	1.61	1.52
59	AL	84	HIS	ND1-CE1	6.07	1.38	1.32
63	AP	112	THR	C-O	-6.07	1.16	1.24
38	A1	2092	G	C1'-N9	6.07	1.57	1.48
7	AU	44	LEU	C-N	6.07	1.39	1.33
38	A1	502	G	C2-N3	6.07	1.44	1.32
19	BG	102	ARG	NE-CZ	6.07	1.39	1.33
45	AC	306	THR	N-CA	-6.07	1.38	1.46
50	AF	69	ARG	NE-CZ	6.07	1.39	1.33
37	BY	19	ASN	CA-C	-6.07	1.45	1.52
39	A3	54	A	C5'-C4'	6.07	1.60	1.51
47	Ad	16	ARG	CD-NE	6.07	1.54	1.46
50	AF	41	TRP	CA-C	-6.07	1.46	1.52
10	B1	3	G	C1'-N9	6.06	1.57	1.48
11	B2	1122	C	C2'-C1'	-6.06	1.44	1.53
38	A1	748	G	O4'-C1'	6.06	1.50	1.41
38	A1	2352	G	O4'-C1'	6.06	1.50	1.41
3	Af	49	LEU	CA-C	-6.06	1.44	1.52
38	A1	418	C	C2'-C1'	-6.06	1.44	1.53
41	AA	74	ALA	C-N	6.06	1.42	1.33
46	AD	238	ARG	CD-NE	6.06	1.54	1.46
55	Ai	7	VAL	CA-CB	6.06	1.63	1.54
15	BC	34	ASP	CA-CB	6.06	1.61	1.53
38	A1	2837	C	C1'-N1	6.06	1.57	1.48
51	Ag	40	ARG	CD-NE	6.06	1.54	1.46
58	Ak	50	GLY	C-N	6.06	1.41	1.33
62	AO	37	VAL	N-CA	-6.06	1.38	1.46
38	A1	1094	U	O5'-C5'	6.06	1.51	1.42
38	A1	3014	U	C1'-N1	6.06	1.57	1.48
15	BC	27	ARG	NE-CZ	6.05	1.39	1.33
38	A1	1617	G	O4'-C1'	-6.05	1.32	1.41
57	Aj	54	LYS	CA-C	6.05	1.60	1.52
11	B2	304	C	C5'-C4'	6.05	1.60	1.51
17	BE	222	LEU	CA-C	-6.05	1.45	1.52
19	BG	66	GLY	CA-C	-6.05	1.46	1.52
38	A1	53	A	C2'-C1'	-6.05	1.44	1.53
11	B2	468	G	C3'-C2'	6.05	1.61	1.52
38	A1	1044	C	C3'-O3'	6.05	1.51	1.42
38	A1	1639	G	O3'-P	-6.05	1.52	1.61
44	Ab	48	SER	N-CA	-6.05	1.39	1.46
65	AV	35	ARG	NE-CZ	6.05	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AS	131	ARG	CZ-NH2	6.05	1.41	1.33
11	B2	140	C	O3'-P	6.05	1.70	1.61
6	AT	51	VAL	N-CA	-6.05	1.39	1.46
36	BX	66	GLU	C-N	6.05	1.40	1.33
39	A3	76	U	C5'-C4'	6.05	1.60	1.51
66	AY	52	ASP	CA-CB	6.05	1.63	1.53
22	BJ	86	ASN	N-CA	-6.04	1.38	1.46
38	A1	1386	G	C5'-C4'	6.04	1.60	1.51
46	AD	5	VAL	CA-C	-6.04	1.45	1.52
19	BG	75	ARG	NE-CZ	6.04	1.39	1.33
36	BX	49	VAL	C-N	6.04	1.41	1.33
9	AX	415	TYR	C-N	6.04	1.41	1.33
11	B2	825	C	C4'-O4'	6.04	1.54	1.45
11	B2	838	C	C4'-C3'	-6.04	1.43	1.52
38	A1	233	A	P-O5'	6.04	1.68	1.59
38	A1	2422	G	O3'-P	-6.04	1.52	1.61
47	Ad	38	MET	CA-C	-6.04	1.46	1.52
18	BF	93	ASP	N-CA	-6.04	1.38	1.46
61	AN	141	HIS	CB-CG	-6.04	1.41	1.50
17	BE	220	GLY	CA-C	-6.04	1.43	1.51
46	AD	81	ALA	CA-C	-6.04	1.45	1.52
54	AI	106	GLU	N-CA	-6.04	1.39	1.46
14	BB	189	LYS	C-N	6.04	1.40	1.33
18	BF	92	ARG	NE-CZ	6.04	1.39	1.33
21	BI	103	ILE	CA-CB	6.04	1.61	1.54
38	A1	802	G	P-O5'	-6.04	1.50	1.59
38	A1	1720	G	O5'-C5'	6.03	1.51	1.42
63	AP	27	VAL	CA-C	-6.03	1.45	1.52
10	B1	33	C	C4-N4	6.03	1.46	1.33
19	BG	104	LYS	CA-CB	6.03	1.60	1.52
64	AR	13	ARG	NE-CZ	6.03	1.39	1.33
7	AU	42	ARG	CA-C	-6.03	1.45	1.52
38	A1	256	G	O3'-P	-6.03	1.52	1.61
38	A1	1624	U	C4'-O4'	6.03	1.54	1.45
38	A1	474	G	C6-N1	6.03	1.51	1.39
38	A1	1446	G	C2'-O2'	-6.03	1.33	1.42
38	A1	1726	A	P-O5'	-6.03	1.50	1.59
9	AX	15	GLU	CA-C	-6.03	1.44	1.53
11	B2	881	G	O5'-C5'	6.03	1.51	1.42
39	A3	100	A	C2'-C1'	-6.03	1.44	1.53
12	AG	89	ALA	CA-CB	6.03	1.62	1.53
65	AV	14	PHE	N-CA	-6.03	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	708	C	C2'-C1'	-6.02	1.44	1.53
57	Aj	19	ILE	C-N	6.02	1.42	1.33
11	B2	141	C	O4'-C1'	6.02	1.50	1.41
11	B2	1099	A	C4'-C3'	6.02	1.61	1.52
11	B2	1144	G	C4'-O4'	-6.02	1.36	1.45
38	A1	1600	G	O3'-P	-6.02	1.52	1.61
38	A1	2615	U	C1'-N1	6.02	1.57	1.48
5	AS	52	ASP	C-N	6.02	1.42	1.33
11	B2	1321	U	C1'-N1	6.02	1.57	1.48
38	A1	2778	A	O5'-C5'	6.02	1.51	1.42
45	AC	56	ASP	C-N	6.02	1.42	1.33
46	AD	205	GLU	CA-C	-6.02	1.44	1.52
8	AW	45	ARG	N-CA	-6.02	1.39	1.46
13	BA	70	VAL	CA-CB	-6.02	1.46	1.53
34	BV	28	GLU	CA-C	-6.01	1.46	1.52
38	A1	1989	G	O3'-P	-6.01	1.52	1.61
61	AN	125	ARG	CZ-NH1	6.01	1.41	1.32
21	BI	8	ALA	CA-C	-6.01	1.45	1.52
38	A1	1612	G	C2'-O2'	-6.01	1.33	1.42
38	A1	2694	C	C1'-N1	6.01	1.57	1.48
14	BB	149	TYR	N-CA	-6.01	1.37	1.46
22	BJ	81	ILE	CA-C	-6.01	1.45	1.52
58	Ak	97	PHE	C-N	6.01	1.41	1.33
14	BB	18	HIS	ND1-CE1	6.01	1.38	1.32
38	A1	1251	G	C5'-C4'	6.01	1.60	1.51
11	B2	899	G	C5'-C4'	6.01	1.60	1.51
33	BU	134	THR	C-N	6.01	1.42	1.34
38	A1	2630	C	O4'-C1'	6.01	1.50	1.41
42	Aa	52	PRO	C-N	6.01	1.41	1.33
63	AP	16	ARG	CZ-NH2	6.01	1.41	1.33
30	BR	99	HIS	CB-CG	6.00	1.58	1.50
45	AC	78	LEU	CA-C	-6.00	1.45	1.52
59	AL	3	ARG	NE-CZ	6.00	1.39	1.33
11	B2	1120	G	O3'-P	-6.00	1.52	1.61
11	B2	1137	G	C2-N3	6.00	1.44	1.32
12	AG	76	PRO	N-CA	-6.00	1.39	1.47
21	BI	68	ARG	C-N	6.00	1.41	1.33
29	BQ	36	LEU	CA-C	-6.00	1.45	1.52
38	A1	2702	A	C3'-O3'	6.00	1.51	1.42
9	AX	351	SER	N-CA	6.00	1.53	1.46
11	B2	450	A	C1'-N9	-6.00	1.39	1.48
23	BK	92	ASP	N-CA	-6.00	1.38	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	146	U	C4'-C3'	6.00	1.61	1.52
38	A1	1228	G	C5'-C4'	6.00	1.60	1.51
16	BD	116	ARG	NE-CZ	6.00	1.39	1.33
62	AO	106	ILE	N-CA	-6.00	1.38	1.46
66	AY	37	VAL	CA-C	-6.00	1.45	1.52
15	BC	26	ARG	CD-NE	6.00	1.54	1.46
38	A1	857	U	O3'-P	-6.00	1.52	1.61
38	A1	2766	C	P-O5'	6.00	1.68	1.59
40	A5	12	VAL	C-N	6.00	1.41	1.33
59	AL	115	THR	C-O	-6.00	1.16	1.23
14	BB	162	LYS	CA-CB	6.00	1.64	1.53
38	A1	767	G	C5'-C4'	6.00	1.60	1.51
12	B3	55	GLU	CA-C	-5.99	1.45	1.52
24	BL	63	ARG	NE-CZ	5.99	1.39	1.33
41	AA	136	PRO	CA-C	5.99	1.57	1.52
52	AH	69	GLY	C-N	5.99	1.40	1.33
11	B2	89	G	C2-N3	5.99	1.44	1.32
43	AB	186	ASN	CA-C	-5.99	1.44	1.52
45	AC	284	LYS	CA-C	5.99	1.59	1.52
59	AL	57	HIS	ND1-CE1	5.99	1.38	1.32
32	BT	34	ARG	N-CA	-5.99	1.39	1.46
38	A1	128	C	O5'-C5'	5.99	1.51	1.42
38	A1	857	U	C2'-C1'	-5.99	1.44	1.53
38	A1	1469	U	C1'-N1	5.99	1.57	1.48
50	AF	39	PHE	N-CA	-5.99	1.39	1.46
59	AL	18	GLY	CA-C	-5.99	1.41	1.51
67	AZ	73	LEU	N-CA	5.99	1.54	1.45
8	AW	60	GLU	CA-CB	5.99	1.62	1.53
11	B2	1008	U	O5'-C5'	5.99	1.51	1.42
11	B2	1339	G	C2'-C1'	-5.99	1.44	1.53
38	A1	2037	A	C4'-C3'	5.99	1.61	1.52
38	A1	2103	C	C2'-C1'	-5.99	1.44	1.53
50	AF	138	ILE	C-N	5.99	1.41	1.33
61	AN	66	ARG	CD-NE	5.99	1.54	1.46
57	Aj	44	LEU	CA-C	-5.99	1.45	1.52
2	A8	50	GLY	C-N	5.99	1.42	1.33
18	BF	4	GLU	N-CA	-5.99	1.38	1.46
21	BI	87	GLU	CA-C	-5.98	1.45	1.52
38	A1	942	U	C1'-N1	5.98	1.57	1.48
52	AH	8	VAL	CA-C	-5.98	1.45	1.52
20	BH	162	LEU	N-CA	-5.98	1.39	1.46
26	BN	61	GLU	CA-C	-5.98	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	A5	44	LYS	C-N	5.98	1.41	1.33
47	Ad	16	ARG	CA-C	-5.98	1.45	1.52
65	AV	59	ALA	CA-C	-5.98	1.44	1.52
28	BP	9	ARG	C-N	5.98	1.42	1.33
38	A1	2448	A	O4'-C1'	-5.98	1.32	1.41
46	AD	247	ILE	CA-CB	-5.98	1.47	1.54
36	BX	35	ARG	C-N	5.98	1.41	1.33
54	AI	127	LYS	C-N	5.98	1.41	1.33
22	BJ	67	ASP	CA-C	-5.98	1.45	1.53
26	BN	140	GLY	C-O	-5.98	1.17	1.23
38	A1	1720	G	C2'-C1'	-5.98	1.44	1.53
50	AF	154	ILE	C-N	5.98	1.41	1.33
66	AY	143	ARG	CA-CB	5.98	1.63	1.53
38	A1	2043	A	C5'-C4'	5.98	1.60	1.51
63	AP	65	PRO	CA-C	-5.98	1.44	1.52
31	BS	5	ARG	CD-NE	5.97	1.54	1.46
54	AI	136	LYS	CA-CB	5.97	1.62	1.53
4	AQ	35	ALA	C-N	5.97	1.41	1.33
16	BD	161	ALA	CA-C	-5.97	1.44	1.52
16	BD	165	HIS	ND1-CE1	5.97	1.38	1.32
38	A1	1021	G	O3'-P	-5.97	1.52	1.61
38	A1	1806	C	O4'-C1'	5.97	1.50	1.41
39	A3	100	A	O3'-P	-5.97	1.52	1.61
7	AU	73	ARG	CD-NE	5.97	1.54	1.46
11	B2	616	G	C4'-C3'	5.97	1.61	1.52
12	B3	7	VAL	CA-C	-5.97	1.45	1.52
57	Aj	86	VAL	CA-C	-5.97	1.45	1.52
11	B2	90	C	O3'-P	-5.97	1.52	1.61
16	BD	18	TRP	N-CA	5.97	1.52	1.46
38	A1	1799	G	C4'-O4'	-5.97	1.36	1.45
40	A5	24	VAL	C-N	5.97	1.40	1.33
45	AC	23	ILE	C-N	5.97	1.40	1.33
59	AL	123	VAL	CA-CB	5.97	1.61	1.53
38	A1	1752	C	O5'-C5'	5.97	1.51	1.42
5	AS	104	GLN	CA-C	-5.97	1.45	1.52
38	A1	996	U	C5'-C4'	5.97	1.60	1.51
61	AN	60	ASN	N-CA	-5.97	1.39	1.46
64	AR	21	ARG	CZ-NH2	5.97	1.41	1.33
24	BL	29	ARG	CD-NE	5.96	1.54	1.46
38	A1	354	G	C3'-C2'	5.96	1.61	1.52
38	A1	529	G	O3'-P	-5.96	1.52	1.61
41	AA	128	ARG	NE-CZ	5.96	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AS	47	ALA	CA-C	-5.96	1.45	1.52
14	BB	179	ARG	CZ-NH2	5.96	1.41	1.33
15	BC	141	ALA	N-CA	-5.96	1.38	1.46
14	BB	74	LEU	CA-C	-5.96	1.44	1.52
23	BK	38	PRO	CA-C	-5.96	1.45	1.52
38	A1	1391	C	O3'-P	-5.96	1.52	1.61
44	Ab	42	ARG	CZ-NH1	5.96	1.41	1.32
38	A1	1746	C	C1'-N1	5.96	1.57	1.48
38	A1	2214	U	C4'-O4'	-5.96	1.36	1.45
47	Ad	24	ILE	N-CA	-5.96	1.39	1.46
58	Ak	126	ALA	N-CA	-5.96	1.38	1.46
9	AX	131	ALA	N-CA	-5.96	1.39	1.46
11	B2	63	G	O3'-P	-5.96	1.52	1.61
11	B2	1040	A	P-O5'	-5.96	1.50	1.59
24	BL	76	GLU	CA-CB	5.96	1.62	1.53
28	BP	12	ARG	CD-NE	5.96	1.54	1.46
38	A1	121	G	C1'-N9	5.96	1.56	1.48
38	A1	1133	U	C5'-C4'	5.96	1.60	1.51
41	AA	12	VAL	CA-CB	-5.96	1.46	1.54
11	B2	571	C	C3'-O3'	5.96	1.51	1.42
15	BC	26	ARG	CZ-NH2	5.96	1.41	1.33
17	BE	180	GLU	N-CA	-5.96	1.39	1.46
28	BP	53	ARG	NE-CZ	5.96	1.39	1.33
23	BK	92	ASP	CA-C	-5.96	1.45	1.52
11	B2	91	G	C4'-C3'	5.95	1.61	1.52
43	AB	5	LEU	CA-C	-5.95	1.45	1.53
43	AB	51	ASP	CA-CB	5.95	1.62	1.52
43	AB	91	ILE	C-N	5.95	1.40	1.33
56	AJ	102	ASN	C-N	5.95	1.40	1.33
15	BC	173	LEU	N-CA	-5.95	1.37	1.45
38	A1	444	U	O4'-C1'	-5.95	1.33	1.42
38	A1	1291	C	C1'-N1	5.95	1.57	1.48
38	A1	1615	G	C5'-C4'	5.95	1.60	1.51
38	A1	2129	G	C3'-C2'	-5.95	1.43	1.52
11	B2	923	A	C5'-C4'	5.95	1.60	1.51
13	BA	71	TYR	N-CA	-5.95	1.39	1.46
38	A1	1997	C	C3'-O3'	5.95	1.51	1.42
3	Af	23	VAL	C-N	5.95	1.40	1.33
11	B2	368	C	C4'-O4'	5.95	1.54	1.45
11	B2	789	G	C3'-C2'	-5.95	1.43	1.52
11	B2	1387	C	O3'-P	-5.95	1.52	1.61
30	BR	51	ARG	CD-NE	5.95	1.54	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	100	C	O3'-P	-5.95	1.52	1.61
65	AV	52	TRP	CA-CB	5.95	1.63	1.53
9	AX	196	PHE	CA-C	-5.95	1.45	1.52
11	B2	1481	G	C4'-C3'	5.95	1.61	1.52
61	AN	59	GLN	N-CA	-5.95	1.39	1.46
9	AX	282	PRO	C-N	5.95	1.38	1.33
38	A1	881	G	C3'-O3'	5.95	1.51	1.42
45	AC	84	ARG	CZ-NH2	5.95	1.41	1.33
50	AF	36	GLU	C-N	5.95	1.42	1.33
29	BQ	127	SER	CA-C	-5.94	1.45	1.52
38	A1	337	G	C2'-O2'	-5.94	1.33	1.42
38	A1	1967	G	C4'-C3'	5.94	1.62	1.53
39	A3	43	C	C1'-N1	5.94	1.57	1.48
43	AB	69	LYS	N-CA	-5.94	1.38	1.45
4	AQ	134	ASN	C-O	-5.94	1.16	1.24
11	B2	778	G	O3'-P	-5.94	1.52	1.61
11	B2	937	A	C4'-C3'	5.94	1.61	1.52
38	A1	1070	G	C4'-O4'	-5.94	1.36	1.45
41	AA	162	VAL	CA-C	-5.94	1.45	1.52
47	Ad	21	ARG	CZ-NH1	5.94	1.41	1.32
15	BC	86	LYS	N-CA	-5.94	1.38	1.46
20	BH	78	HIS	ND1-CE1	5.94	1.38	1.32
38	A1	2223	G	C3'-O3'	5.94	1.51	1.42
38	A1	2706	C	C1'-N1	5.94	1.57	1.48
38	A1	2752	U	C5'-C4'	5.94	1.60	1.51
9	AX	195	LYS	C-N	5.94	1.42	1.33
38	A1	1114	G	C4'-C3'	5.94	1.61	1.52
38	A1	1385	C	O5'-C5'	5.94	1.51	1.42
38	A1	1454	G	O3'-P	-5.94	1.52	1.61
43	AB	42	ARG	NE-CZ	5.94	1.39	1.33
46	AD	31	ILE	CA-C	-5.94	1.45	1.52
54	AI	131	VAL	CA-C	-5.94	1.45	1.52
58	Ak	125	PRO	C-N	5.94	1.42	1.33
59	AL	9	ARG	CD-NE	5.94	1.54	1.46
25	BM	69	GLU	C-N	5.94	1.41	1.33
38	A1	2017	A	C2'-C1'	-5.94	1.44	1.53
31	BS	14	ARG	CZ-NH1	5.93	1.41	1.32
38	A1	1477	C	O3'-P	5.93	1.70	1.61
62	AO	30	SER	C-N	5.93	1.43	1.33
17	BE	101	ARG	NE-CZ	5.93	1.39	1.33
20	BH	66	ARG	NE-CZ	5.93	1.39	1.33
38	A1	879	A	P-O5'	-5.93	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	BB	104	PRO	N-CA	-5.93	1.40	1.47
32	BT	49	ARG	CZ-NH2	5.93	1.41	1.33
38	A1	2403	G	C2'-C1'	-5.93	1.44	1.53
9	AX	69	THR	CA-C	5.93	1.60	1.52
11	B2	115	A	P-O5'	5.93	1.68	1.59
38	A1	470	A	O3'-P	-5.93	1.52	1.61
38	A1	2612	A	P-O5'	-5.93	1.50	1.59
11	B2	9	U	C2'-C1'	-5.93	1.44	1.53
32	BT	30	ALA	N-CA	-5.93	1.39	1.46
34	BV	33	ARG	CD-NE	5.93	1.54	1.46
38	A1	502	G	C3'-C2'	5.93	1.61	1.52
38	A1	1003	C	O3'-P	-5.93	1.52	1.61
38	A1	1771	C	O5'-C5'	5.93	1.51	1.42
63	AP	29	ILE	CA-CB	5.93	1.61	1.54
38	A1	1127	C	C1'-N1	5.92	1.57	1.48
38	A1	2699	U	O3'-P	-5.92	1.52	1.61
59	AL	47	TRP	NE1-CE2	5.92	1.44	1.37
31	BS	10	LYS	CA-CB	5.92	1.62	1.53
39	A3	52	U	O3'-P	-5.92	1.52	1.61
57	Aj	11	CYS	C-N	5.92	1.41	1.34
11	B2	178	C	C3'-C2'	5.92	1.61	1.52
14	BB	154	ILE	CA-CB	5.92	1.61	1.54
15	BC	36	LYS	CA-CB	5.92	1.61	1.53
38	A1	2073	G	C4'-O4'	5.92	1.54	1.45
38	A1	2880	C	C2'-C1'	-5.92	1.44	1.53
41	AA	64	VAL	CA-C	5.92	1.59	1.52
57	Aj	69	PHE	CA-C	-5.92	1.45	1.52
9	AX	259	VAL	C-N	5.92	1.41	1.34
11	B2	1380	C	C2'-C1'	-5.92	1.44	1.53
18	BF	132	GLU	CA-CB	5.92	1.63	1.53
38	A1	2457	C	C5'-C4'	5.92	1.60	1.51
38	A1	2981	G	C2'-C1'	-5.92	1.44	1.53
46	AD	127	VAL	N-CA	-5.92	1.39	1.46
6	AT	12	VAL	CA-CB	-5.92	1.46	1.54
15	BC	158	ALA	CA-C	-5.92	1.44	1.52
20	BH	209	ARG	N-CA	-5.92	1.39	1.46
51	Ag	45	GLU	CA-CB	5.92	1.62	1.53
56	AJ	19	ARG	CZ-NH1	5.92	1.41	1.32
17	BE	3	ARG	NE-CZ	5.92	1.39	1.33
4	AQ	88	ARG	CD-NE	5.91	1.54	1.46
38	A1	1102	C	C1'-N1	5.91	1.57	1.48
38	A1	1520	G	C4'-O4'	5.91	1.54	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	AC	22	SER	C-N	5.91	1.40	1.34
45	AC	277	HIS	CA-C	-5.91	1.45	1.52
66	AY	153	ARG	NE-CZ	5.91	1.39	1.33
15	BC	26	ARG	NE-CZ	5.91	1.39	1.33
24	BL	76	GLU	C-N	5.91	1.41	1.33
42	Aa	51	ASP	N-CA	-5.91	1.37	1.45
7	AU	53	ARG	NE-CZ	5.91	1.39	1.33
11	B2	114	A	C4'-O4'	-5.91	1.36	1.45
11	B2	858	A	C5'-C4'	5.91	1.60	1.51
16	BD	44	HIS	C-N	5.91	1.41	1.33
38	A1	1066	C	C3'-O3'	5.91	1.51	1.42
38	A1	2202	U	C1'-N1	5.91	1.57	1.48
46	AD	125	ASP	C-N	5.91	1.41	1.33
46	AD	137	VAL	N-CA	-5.91	1.39	1.46
49	Ae	58	LYS	N-CA	-5.91	1.39	1.46
4	AQ	96	ILE	C-N	5.91	1.41	1.33
21	BI	39	ARG	NE-CZ	5.91	1.39	1.33
39	A3	14	G	C2'-C1'	-5.91	1.44	1.53
57	Aj	56	GLU	N-CA	-5.91	1.38	1.46
4	AQ	89	MET	C-N	5.90	1.41	1.33
23	BK	114	THR	CA-CB	5.90	1.63	1.53
38	A1	2878	A	C2'-C1'	-5.90	1.44	1.53
3	Af	15	LYS	C-N	5.90	1.41	1.33
9	AX	350	GLY	N-CA	-5.90	1.38	1.45
11	B2	1265	G	C1'-N9	5.90	1.56	1.48
36	BX	32	LEU	N-CA	-5.90	1.39	1.46
38	A1	1294	A	C1'-N9	-5.90	1.39	1.48
50	AF	37	ARG	CD-NE	5.90	1.54	1.46
56	AJ	59	GLY	N-CA	-5.90	1.36	1.45
11	B2	198	A	O3'-P	-5.90	1.52	1.61
30	BR	51	ARG	CA-CB	5.90	1.61	1.53
11	B2	1106	A	C5'-C4'	5.90	1.60	1.51
38	A1	232	U	P-O5'	-5.90	1.50	1.59
11	B2	566	C	C2'-C1'	-5.90	1.44	1.53
11	B2	1161	A	O3'-P	-5.90	1.52	1.61
23	BK	134	TYR	CZ-OH	5.90	1.50	1.38
29	BQ	103	VAL	CA-CB	5.90	1.62	1.54
38	A1	687	C	C4'-O4'	5.90	1.54	1.45
38	A1	777	A	C3'-O3'	5.90	1.50	1.42
41	AA	167	VAL	C-N	5.90	1.39	1.33
59	AL	116	GLY	CA-C	-5.90	1.43	1.51
2	A8	51	ARG	NE-CZ	5.89	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	B1	74	A	O5'-C5'	5.89	1.51	1.42
29	BQ	16	ARG	NE-CZ	5.89	1.39	1.33
45	AC	9	ARG	CD-NE	5.89	1.54	1.46
22	BJ	53	ARG	NE-CZ	5.89	1.39	1.33
38	A1	1406	G	O3'-P	-5.89	1.52	1.61
60	AM	61	ILE	C-N	5.89	1.40	1.33
21	BI	53	ILE	CA-CB	-5.89	1.47	1.54
24	BL	33	ARG	N-CA	-5.89	1.39	1.46
29	BQ	106	ARG	N-CA	5.89	1.53	1.46
38	A1	3024	C	C2'-C1'	-5.89	1.44	1.53
48	AE	24	ARG	CD-NE	5.89	1.54	1.46
2	A8	27	ARG	NE-CZ	5.89	1.39	1.33
11	B2	567	A	P-O5'	-5.89	1.50	1.59
11	B2	1148	G	C3'-O3'	5.89	1.50	1.42
38	A1	1759	A	C1'-N9	5.89	1.56	1.48
50	AF	12	GLU	C-N	5.89	1.37	1.33
65	AV	30	LEU	CA-C	-5.89	1.45	1.52
43	AB	208	GLU	N-CA	-5.89	1.38	1.45
56	AJ	90	ARG	CA-C	-5.89	1.45	1.52
10	B1	52	G	C1'-N9	5.89	1.56	1.48
11	B2	381	C	C5'-C4'	5.89	1.60	1.51
11	B2	340	A	C3'-C2'	-5.88	1.44	1.52
11	B2	425	C	O4'-C1'	5.88	1.50	1.41
54	AI	77	ARG	C-N	5.88	1.42	1.33
66	AY	64	LEU	CA-CB	5.88	1.62	1.53
27	BO	108	ARG	CD-NE	5.88	1.54	1.46
7	AU	41	VAL	CA-CB	-5.88	1.47	1.54
12	B3	46	GLY	C-N	5.88	1.42	1.33
12	B3	103	GLU	CA-C	-5.88	1.45	1.52
45	AC	256	ILE	N-CA	-5.88	1.40	1.46
48	AE	149	ARG	CD-NE	5.88	1.54	1.46
55	Ai	12	ARG	CA-C	-5.88	1.45	1.52
9	AX	22	THR	N-CA	-5.88	1.38	1.45
11	B2	790	G	O3'-P	-5.88	1.52	1.61
52	AH	33	LYS	C-N	5.88	1.41	1.33
15	BC	162	VAL	C-N	5.88	1.41	1.33
34	BV	28	GLU	CA-CB	5.88	1.61	1.54
38	A1	2355	G	O3'-P	-5.88	1.52	1.61
16	BD	86	ASP	CA-C	-5.88	1.44	1.52
38	A1	2836	G	O5'-C5'	5.88	1.51	1.42
39	A3	57	C	C4-N4	5.88	1.45	1.33
67	AZ	49	ILE	C-N	5.88	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1036	G	C1'-N9	-5.88	1.39	1.48
11	B2	1231	G	C1'-N9	5.88	1.56	1.48
62	AO	99	ILE	CA-C	-5.88	1.45	1.52
11	B2	1122	C	C4'-C3'	5.87	1.61	1.52
11	B2	1302	C	P-O5'	-5.87	1.50	1.59
38	A1	255	G	N1-C2	5.87	1.49	1.37
38	A1	2239	C	C4-N4	5.87	1.45	1.33
1	A7	22	TRP	NE1-CE2	-5.87	1.30	1.37
14	BB	175	ILE	CA-CB	5.87	1.61	1.54
20	BH	40	GLU	CA-C	5.87	1.60	1.52
38	A1	1428	G	O4'-C1'	5.87	1.50	1.41
38	A1	2764	G	C5'-C4'	5.87	1.60	1.51
12	AG	119	LYS	CA-CB	5.87	1.62	1.53
11	B2	796	C	O3'-P	-5.87	1.52	1.61
14	BB	74	LEU	C-N	5.87	1.42	1.33
22	BJ	125	LEU	CA-C	-5.87	1.45	1.53
38	A1	2270	G	C4'-C3'	5.87	1.61	1.52
38	A1	2562	G	C3'-C2'	5.87	1.61	1.52
44	Ab	54	LEU	N-CA	-5.87	1.38	1.45
5	AS	98	VAL	CA-C	-5.87	1.45	1.52
38	A1	2512	C	P-O5'	5.87	1.68	1.59
59	AL	17	HIS	ND1-CE1	5.87	1.38	1.32
11	B2	502	U	C5'-C4'	5.87	1.60	1.51
11	B2	706	G	C5'-C4'	5.87	1.60	1.51
59	AL	110	ASP	CA-C	-5.87	1.45	1.52
40	A5	75	LEU	CA-CB	5.87	1.62	1.53
3	Af	46	ARG	CD-NE	5.86	1.54	1.46
44	Ab	82	VAL	N-CA	5.86	1.53	1.46
9	AX	163	LYS	C-O	5.86	1.31	1.23
46	AD	68	ALA	N-CA	-5.86	1.38	1.46
12	AG	13	LYS	N-CA	-5.86	1.39	1.46
38	A1	579	C	C2'-C1'	-5.86	1.44	1.53
38	A1	913	G	C2'-C1'	-5.86	1.44	1.53
38	A1	2794	G	O4'-C1'	5.86	1.50	1.41
60	AM	31	ARG	CZ-NH1	5.86	1.41	1.32
43	AB	229	HIS	CA-CB	5.86	1.60	1.53
5	AS	135	ARG	CA-C	-5.86	1.45	1.52
59	AL	120	ARG	NE-CZ	5.86	1.39	1.33
2	A8	46	ILE	N-CA	-5.86	1.38	1.45
11	B2	1434	C	C2'-C1'	-5.86	1.44	1.53
38	A1	958	A	C5'-C4'	5.86	1.60	1.51
38	A1	2168	C	C5'-C4'	5.86	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	BF	102	HIS	ND1-CE1	5.85	1.38	1.32
21	BI	3	LEU	N-CA	-5.85	1.39	1.46
38	A1	2291	G	O3'-P	-5.85	1.52	1.61
38	A1	576	G	C1'-N9	5.85	1.56	1.48
38	A1	794	G	P-O5'	-5.85	1.50	1.59
43	AB	220	ARG	CD-NE	5.85	1.54	1.46
21	BI	24	GLU	CA-C	-5.85	1.45	1.52
38	A1	1623	C	C4-N4	5.85	1.45	1.33
38	A1	2098	C	C1'-N1	5.85	1.57	1.48
11	B2	122	C	C4'-C3'	5.85	1.61	1.52
38	A1	1338	G	C4'-O4'	5.85	1.54	1.45
38	A1	3039	G	O3'-P	-5.85	1.52	1.61
51	Ag	14	LYS	C-N	5.85	1.41	1.33
58	Ak	165	ALA	CA-C	-5.85	1.45	1.52
5	AS	81	GLY	CA-C	-5.85	1.45	1.51
11	B2	806	G	O5'-C5'	-5.85	1.33	1.42
16	BD	56	ARG	CZ-NH2	5.85	1.41	1.33
38	A1	1586	G	O4'-C1'	5.85	1.50	1.41
62	AO	172	LEU	C-N	5.85	1.41	1.33
48	AE	22	ARG	C-N	5.85	1.41	1.33
9	AX	376	PRO	N-CA	-5.84	1.40	1.47
18	BF	185	SER	CA-C	-5.84	1.45	1.52
22	BJ	61	ALA	CA-CB	5.84	1.63	1.53
38	A1	1037	C	C1'-N1	5.84	1.56	1.47
43	AB	135	GLU	CA-C	-5.84	1.45	1.52
61	AN	90	PRO	CA-C	5.84	1.59	1.52
11	B2	1393	A	O3'-P	-5.84	1.52	1.61
41	AA	103	LYS	C-N	5.84	1.41	1.33
65	AV	32	PHE	CA-C	-5.84	1.45	1.52
19	BG	111	THR	CA-C	-5.84	1.45	1.52
47	Ad	12	ARG	CZ-NH2	5.84	1.41	1.33
38	A1	759	G	C4'-C3'	5.84	1.61	1.52
40	A5	71	VAL	C-N	5.84	1.41	1.33
50	AF	159	ARG	NE-CZ	5.84	1.39	1.33
58	Ak	138	GLY	C-O	-5.84	1.17	1.23
64	AR	10	ARG	CA-CB	5.84	1.63	1.53
17	BE	131	ARG	NE-CZ	5.84	1.39	1.33
38	A1	1602	C	P-O5'	-5.84	1.50	1.59
38	A1	2736	G	O5'-C5'	-5.84	1.33	1.42
11	B2	782	A	P-O5'	5.83	1.68	1.59
16	BD	115	ALA	CA-C	-5.83	1.45	1.52
38	A1	1712	U	O3'-P	5.83	1.69	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	139	C	O4'-C1'	5.83	1.50	1.41
11	B2	1042	U	C1'-N1	5.83	1.57	1.48
13	BA	184	GLU	CA-C	-5.83	1.45	1.52
38	A1	247	A	O3'-P	-5.83	1.52	1.61
34	BV	54	GLN	CA-C	-5.83	1.45	1.52
38	A1	2373	G	O3'-P	-5.83	1.52	1.61
38	A1	3026	C	C3'-C2'	5.83	1.61	1.52
38	A1	2253	G	C4'-O4'	-5.83	1.36	1.45
9	AX	119	CYS	CA-C	-5.83	1.45	1.52
38	A1	762	G	C5'-C4'	5.83	1.59	1.51
59	AL	93	ILE	CA-C	5.83	1.60	1.52
20	BH	74	SER	CA-CB	5.83	1.61	1.53
55	Ai	45	ALA	CA-C	-5.83	1.45	1.52
62	AO	31	GLY	C-N	5.83	1.42	1.33
4	AQ	94	LEU	CA-C	-5.82	1.45	1.52
14	BB	196	GLU	C-O	-5.82	1.17	1.23
35	BW	23	ASN	N-CA	-5.82	1.39	1.46
38	A1	953	G	C5'-C4'	5.82	1.59	1.51
39	A3	73	U	C3'-O3'	5.82	1.50	1.42
61	AN	151	ARG	CZ-NH1	5.82	1.41	1.32
38	A1	1020	G	O4'-C1'	5.82	1.50	1.41
38	A1	1491	U	C5'-C4'	5.82	1.59	1.51
38	A1	1932	G	C2'-C1'	-5.82	1.44	1.53
11	B2	394	C	P-O5'	-5.82	1.51	1.59
24	BL	16	LEU	CA-C	5.82	1.60	1.52
38	A1	228	U	C5'-C4'	5.82	1.59	1.51
38	A1	1454	G	C5'-C4'	5.82	1.60	1.51
38	A1	1583	G	C4'-C3'	5.82	1.61	1.52
48	AE	64	THR	CA-C	-5.82	1.45	1.52
27	BO	5	ARG	CZ-NH1	5.82	1.40	1.32
38	A1	383	C	O4'-C1'	5.82	1.50	1.41
38	A1	998	G	C2'-O2'	-5.82	1.33	1.42
9	AX	192	TYR	CA-C	-5.82	1.45	1.52
17	BE	47	TYR	CA-CB	5.82	1.62	1.53
18	BF	118	LYS	C-N	5.82	1.41	1.33
23	BK	87	VAL	CA-C	5.82	1.60	1.52
38	A1	1533	G	C5'-C4'	5.82	1.59	1.51
38	A1	1737	A	C4'-C3'	5.82	1.61	1.52
11	B2	397	C	C2'-C1'	-5.82	1.44	1.53
11	B2	522	C	C2'-O2'	-5.82	1.33	1.42
11	B2	934	G	O3'-P	-5.82	1.52	1.61
50	AF	90	LEU	CA-C	5.82	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1141	G	C4'-C3'	-5.81	1.43	1.52
54	AI	48	LYS	CA-CB	5.81	1.62	1.53
11	B2	1322	C	C5'-C4'	5.81	1.59	1.51
11	B2	1386	C	C2'-C1'	-5.81	1.44	1.53
14	BB	116	ILE	N-CA	-5.81	1.39	1.46
60	AM	183	ARG	CD-NE	5.81	1.54	1.46
11	B2	632	C	C5'-C4'	5.81	1.59	1.51
58	Ak	10	LYS	N-CA	5.81	1.53	1.46
38	A1	295	G	P-O5'	-5.81	1.51	1.59
38	A1	723	A	O3'-P	-5.81	1.52	1.61
11	B2	941	C	O3'-P	-5.81	1.52	1.61
38	A1	1812	A	C4'-O4'	5.81	1.54	1.45
38	A1	1970	G	C3'-C2'	-5.81	1.44	1.52
34	BV	74	SER	C-N	5.81	1.42	1.34
38	A1	2901	C	C1'-N1	-5.81	1.39	1.48
60	AM	48	ALA	C-N	5.81	1.41	1.33
5	AS	131	ARG	CD-NE	5.80	1.54	1.46
18	BF	73	ARG	N-CA	-5.80	1.38	1.46
38	A1	604	A	C4'-O4'	-5.80	1.36	1.45
66	AY	8	ARG	NE-CZ	5.80	1.39	1.33
38	A1	1721	U	C2'-C1'	-5.80	1.44	1.53
11	B2	1166	G	P-O5'	-5.80	1.51	1.59
30	BR	96	LYS	C-N	5.80	1.42	1.33
38	A1	884	C	C3'-O3'	5.80	1.50	1.42
60	AM	67	ARG	C-N	5.80	1.41	1.33
67	AZ	61	TYR	CA-C	-5.80	1.45	1.52
33	BU	51	TRP	N-CA	-5.80	1.39	1.46
38	A1	2096	G	C3'-O3'	5.80	1.50	1.42
41	AA	33	ASN	CA-C	-5.80	1.45	1.52
64	AR	49	TYR	C-N	5.80	1.41	1.33
38	A1	223	U	C4'-O4'	5.80	1.54	1.45
41	AA	50	VAL	CA-C	-5.80	1.45	1.52
5	AS	31	LEU	N-CA	-5.80	1.38	1.46
9	AX	99	SER	N-CA	-5.80	1.38	1.46
11	B2	662	C	C5'-C4'	5.80	1.59	1.51
20	BH	48	HIS	CA-C	-5.80	1.45	1.52
22	BJ	101	ILE	N-CA	5.80	1.53	1.46
35	BW	52	GLY	CA-C	-5.80	1.47	1.52
38	A1	2050	U	O4'-C1'	5.80	1.50	1.42
54	AI	35	LYS	C-O	-5.79	1.16	1.24
5	AS	19	ARG	NE-CZ	5.79	1.39	1.33
11	B2	670	C	C1'-N1	5.79	1.57	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1041	C	C2'-C1'	-5.79	1.44	1.53
17	BE	221	GLU	CA-C	-5.79	1.45	1.52
65	AV	63	ARG	NE-CZ	5.79	1.39	1.33
66	AY	30	ARG	NE-CZ	5.79	1.39	1.33
11	B2	681	G	O5'-C5'	5.79	1.51	1.42
38	A1	2586	A	O5'-C5'	5.79	1.51	1.42
9	AX	125	LEU	C-N	5.79	1.41	1.33
27	BO	9	ARG	NE-CZ	5.79	1.39	1.33
38	A1	2735	C	C2'-O2'	-5.79	1.33	1.42
48	AE	102	LEU	C-N	-5.79	1.25	1.33
17	BE	199	ILE	C-O	-5.79	1.17	1.24
41	AA	116	LYS	N-CA	-5.79	1.39	1.46
45	AC	45	LYS	C-N	5.79	1.42	1.33
11	B2	55	G	C2-N3	5.79	1.44	1.32
11	B2	1055	C	C3'-O3'	5.79	1.50	1.42
11	B2	1105	C	C3'-O3'	5.79	1.50	1.42
38	A1	567	G	C4'-C3'	5.79	1.61	1.52
4	AQ	41	ILE	CA-C	-5.78	1.45	1.52
16	BD	38	LYS	CA-CB	5.78	1.62	1.53
38	A1	2878	A	C3'-O3'	5.78	1.50	1.42
16	BD	14	PRO	CA-C	-5.78	1.46	1.52
28	BP	21	CYS	CA-C	-5.78	1.45	1.52
38	A1	785	C	C2'-C1'	-5.78	1.44	1.53
38	A1	2755	G	C2'-C1'	-5.78	1.44	1.53
5	AS	114	ILE	CA-CB	5.78	1.59	1.53
5	AS	132	ALA	CA-CB	5.78	1.62	1.53
11	B2	314	G	C3'-C2'	-5.78	1.44	1.52
14	BB	51	ARG	C-N	-5.78	1.26	1.34
45	AC	5	HIS	CE1-NE2	5.78	1.38	1.32
63	AP	50	SER	CA-C	-5.78	1.44	1.52
6	AT	27	THR	C-N	5.78	1.41	1.33
12	AG	23	VAL	CA-CB	5.78	1.61	1.54
15	BC	141	ALA	CA-C	-5.78	1.45	1.52
28	BP	36	LEU	CA-CB	5.78	1.62	1.53
38	A1	2803	U	C3'-O3'	5.78	1.50	1.42
39	A3	73	U	C5'-C4'	5.78	1.59	1.51
39	A3	119	C	C5'-C4'	-5.78	1.42	1.51
26	BN	126	VAL	C-N	5.77	1.40	1.33
38	A1	2283	C	O5'-C5'	5.77	1.51	1.42
54	AI	124	SER	N-CA	-5.77	1.39	1.46
40	AK	45	ARG	CA-C	-5.77	1.45	1.52
22	BJ	47	ARG	CD-NE	5.77	1.54	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	BP	25	GLY	CA-C	-5.77	1.43	1.51
60	AM	157	ARG	CZ-NH2	5.77	1.41	1.33
19	BG	116	ILE	C-N	5.77	1.41	1.33
11	B2	944	C	O4'-C1'	5.77	1.50	1.41
23	BK	61	ASP	CA-CB	5.77	1.61	1.53
38	A1	133	G	C4'-O4'	5.77	1.54	1.45
38	A1	1160	U	C4'-C3'	-5.77	1.44	1.53
11	B2	259	A	C5'-C4'	5.77	1.59	1.51
11	B2	503	G	C2'-O2'	5.77	1.51	1.42
18	BF	140	SER	N-CA	5.77	1.53	1.45
33	BU	43	ARG	CA-C	-5.77	1.45	1.52
36	BX	62	ARG	CD-NE	5.77	1.54	1.46
38	A1	2388	U	N3-C4	5.77	1.50	1.38
52	AH	100	MET	CA-C	-5.77	1.45	1.52
64	AR	19	HIS	CA-C	-5.77	1.46	1.53
11	B2	844	G	P-O5'	-5.77	1.51	1.59
28	BP	32	ARG	CZ-NH2	5.77	1.41	1.33
38	A1	957	C	C2'-C1'	-5.77	1.44	1.53
11	B2	304	C	O4'-C1'	5.76	1.50	1.41
13	BA	97	ARG	CZ-NH2	5.76	1.41	1.33
18	BF	39	ARG	CD-NE	5.76	1.54	1.46
41	AA	82	ILE	CA-CB	-5.76	1.48	1.54
59	AL	25	HIS	ND1-CE1	5.76	1.38	1.32
11	B2	223	G	C2'-C1'	-5.76	1.44	1.53
4	AQ	116	ASP	CA-C	-5.76	1.45	1.53
7	AU	62	HIS	CA-CB	5.76	1.62	1.53
11	B2	101	G	O4'-C1'	-5.76	1.33	1.41
16	BD	168	ARG	CZ-NH1	5.76	1.40	1.32
38	A1	1218	C	C1'-N1	5.76	1.57	1.48
40	A5	68	ASP	N-CA	-5.76	1.39	1.46
46	AD	175	GLU	CA-C	-5.76	1.45	1.52
62	AO	184	HIS	ND1-CE1	5.76	1.38	1.32
11	B2	735	A	C5'-C4'	5.76	1.59	1.51
11	B2	763	G	O3'-P	-5.76	1.52	1.61
33	BU	33	PRO	N-CA	-5.76	1.40	1.47
43	AB	214	PRO	N-CD	5.76	1.55	1.47
56	AJ	65	THR	CA-C	-5.76	1.45	1.52
62	AO	141	GLU	CA-C	-5.76	1.45	1.52
11	B2	845	G	O3'-P	-5.75	1.52	1.61
16	BD	96	THR	CB-OG1	-5.75	1.34	1.43
38	A1	239	G	C4'-C3'	5.75	1.61	1.52
60	AM	31	ARG	CD-NE	5.75	1.54	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	AU	45	PRO	C-N	5.75	1.41	1.33
8	AW	57	ILE	CA-C	5.75	1.60	1.52
11	B2	771	G	C2-N2	5.75	1.46	1.34
11	B2	1099	A	C5'-C4'	5.75	1.59	1.51
20	BH	21	TRP	N-CA	-5.75	1.39	1.45
38	A1	682	G	O5'-C5'	5.75	1.51	1.42
38	A1	911	G	C1'-N9	5.75	1.55	1.47
38	A1	1025	A	C5'-C4'	5.75	1.59	1.51
38	A1	2501	G	C4'-O4'	5.75	1.54	1.45
44	Ab	23	PHE	CA-CB	5.75	1.61	1.53
49	Ae	50	ARG	NE-CZ	5.75	1.39	1.33
52	AH	27	PRO	N-CD	-5.75	1.39	1.47
12	B3	81	PRO	C-N	5.75	1.40	1.33
20	BH	39	LEU	CA-C	-5.75	1.45	1.52
38	A1	2670	U	C4'-C3'	-5.75	1.44	1.52
39	A3	109	A	P-O5'	-5.75	1.51	1.59
46	AD	244	VAL	C-N	5.75	1.41	1.33
11	B2	460	C	O3'-P	-5.75	1.52	1.61
21	BI	92	ARG	NE-CZ	5.75	1.39	1.33
26	BN	119	ILE	C-N	5.75	1.40	1.34
38	A1	2675	C	C4'-O4'	-5.75	1.36	1.45
45	AC	250	ARG	NE-CZ	5.75	1.39	1.33
66	AY	143	ARG	NE-CZ	5.75	1.39	1.33
38	A1	76	C	C1'-N1	5.75	1.57	1.48
38	A1	480	A	C4'-C3'	5.75	1.61	1.52
38	A1	931	C	O4'-C1'	5.75	1.50	1.41
38	A1	2734	C	C1'-N1	5.75	1.57	1.48
43	AB	55	THR	C-N	5.75	1.39	1.33
64	AR	57	ARG	NE-CZ	5.75	1.39	1.33
11	B2	256	G	C4'-C3'	5.74	1.61	1.52
11	B2	1270	C	C1'-N1	5.74	1.57	1.48
38	A1	1766	A	O3'-P	-5.74	1.52	1.61
50	AF	159	ARG	CZ-NH2	5.74	1.41	1.33
7	AU	75	ARG	CZ-NH2	5.74	1.41	1.33
38	A1	3002	A	C2'-O2'	-5.74	1.33	1.42
25	BM	112	ILE	CA-C	-5.74	1.45	1.52
35	BW	36	ARG	NE-CZ	5.74	1.39	1.33
41	AA	34	LEU	N-CA	-5.74	1.39	1.46
41	AA	184	VAL	N-CA	-5.74	1.39	1.46
56	AJ	88	GLU	CA-C	5.74	1.60	1.52
9	AX	237	HIS	ND1-CE1	5.74	1.38	1.32
25	BM	57	PRO	CA-CB	5.74	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	AC	133	ALA	CA-C	-5.74	1.45	1.52
46	AD	229	HIS	N-CA	5.74	1.53	1.46
48	AE	145	ARG	CZ-NH2	5.74	1.41	1.33
11	B2	18	C	C1'-N1	5.74	1.57	1.48
11	B2	910	G	C3'-C2'	5.74	1.61	1.52
38	A1	234	G	P-O5'	-5.74	1.51	1.59
38	A1	2785	G	O3'-P	-5.74	1.52	1.61
11	B2	1461	U	C3'-C2'	5.73	1.61	1.52
12	B3	12	PRO	N-CA	-5.73	1.40	1.47
38	A1	1586	G	O3'-P	-5.73	1.52	1.61
11	B2	219	C	C5'-C4'	5.73	1.59	1.51
11	B2	1036	G	C5'-C4'	5.73	1.59	1.51
13	BA	70	VAL	CA-C	-5.73	1.46	1.53
29	BQ	128	LYS	N-CA	-5.73	1.39	1.46
38	A1	425	U	C4'-C3'	-5.73	1.44	1.52
38	A1	2668	G	C1'-N9	5.73	1.56	1.48
12	AG	22	ALA	CA-CB	5.73	1.62	1.53
11	B2	1359	C	P-O5'	-5.73	1.51	1.59
38	A1	2029	C	O4'-C1'	5.73	1.50	1.41
41	AA	148	LYS	CA-C	-5.73	1.45	1.52
57	Aj	8	ARG	CD-NE	5.73	1.54	1.46
38	A1	90	A	O3'-P	-5.73	1.52	1.61
38	A1	191	U	O4'-C1'	5.73	1.50	1.41
38	A1	1181	C	O3'-P	-5.73	1.52	1.61
45	AC	53	MET	C-N	5.73	1.40	1.33
48	AE	83	ARG	CZ-NH2	5.73	1.40	1.33
57	Aj	70	ARG	NE-CZ	5.73	1.39	1.33
61	AN	66	ARG	CZ-NH1	5.73	1.40	1.32
66	AY	86	LYS	N-CA	-5.73	1.39	1.46
11	B2	809	C	O4'-C1'	5.73	1.50	1.41
38	A1	1685	C	C2'-C1'	-5.73	1.44	1.53
62	AO	166	ARG	NE-CZ	5.73	1.39	1.33
38	A1	1561	G	O4'-C1'	5.72	1.50	1.41
38	A1	1648	C	C1'-N1	5.72	1.57	1.48
38	A1	2404	G	O5'-C5'	5.72	1.51	1.42
48	AE	40	ARG	CZ-NH2	5.72	1.40	1.33
22	BJ	34	ASN	CA-CB	5.72	1.62	1.53
34	BV	52	VAL	C-N	5.72	1.41	1.33
38	A1	407	A	C2'-C1'	-5.72	1.44	1.53
38	A1	2563	A	C2'-O2'	-5.72	1.33	1.41
9	AX	343	LYS	CA-C	5.72	1.60	1.52
11	B2	1228	A	C4'-O4'	-5.72	1.36	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	923	A	O3'-P	-5.72	1.52	1.61
54	AI	29	VAL	N-CA	-5.72	1.39	1.46
40	AK	39	GLY	C-N	5.72	1.42	1.33
9	AX	315	HIS	CB-CG	5.72	1.58	1.50
9	AX	426	LEU	CA-C	-5.72	1.45	1.52
38	A1	1842	C	C3'-O3'	5.72	1.50	1.42
43	AB	134	ARG	CD-NE	5.72	1.54	1.46
44	Ab	104	HIS	ND1-CE1	5.72	1.38	1.32
18	BF	55	PRO	CA-C	-5.72	1.46	1.53
25	BM	23	PHE	CB-CG	5.72	1.63	1.50
12	B3	44	GLU	C-N	5.72	1.42	1.33
38	A1	2542	G	C2-N3	5.72	1.44	1.32
54	AI	42	ARG	CD-NE	5.72	1.54	1.46
54	AI	70	ARG	CA-C	-5.72	1.45	1.52
59	AL	114	GLY	C-N	5.71	1.41	1.33
3	Af	32	ASN	CA-C	-5.71	1.45	1.52
11	B2	9	U	C4'-O4'	5.71	1.54	1.45
14	BB	198	LYS	CA-C	-5.71	1.45	1.52
38	A1	534	G	O3'-P	-5.71	1.52	1.61
38	A1	689	U	C5'-C4'	5.71	1.59	1.51
38	A1	2551	G	C4'-O4'	5.71	1.54	1.45
43	AB	10	ARG	CA-C	-5.71	1.45	1.52
50	AF	77	ASN	CA-C	-5.71	1.45	1.52
56	AJ	20	ALA	C-N	5.71	1.39	1.33
56	AJ	112	VAL	CA-C	5.71	1.57	1.52
61	AN	118	LYS	N-CA	-5.71	1.38	1.46
38	A1	2581	G	C5'-C4'	5.71	1.59	1.51
11	B2	798	U	C1'-N1	5.71	1.56	1.47
30	BR	102	VAL	CA-C	5.71	1.59	1.52
38	A1	1072	U	C2'-C1'	5.71	1.61	1.53
38	A1	2230	G	C3'-O3'	5.71	1.50	1.42
38	A1	2898	G	C3'-O3'	5.71	1.50	1.42
55	Ai	23	ARG	CZ-NH2	5.71	1.40	1.33
56	AJ	119	ARG	C-N	5.71	1.42	1.33
62	AO	69	ARG	CA-C	-5.71	1.45	1.52
11	B2	447	A	C4'-O4'	5.71	1.54	1.45
13	BA	86	LYS	N-CA	-5.71	1.39	1.46
35	BW	14	LEU	CA-C	-5.71	1.45	1.52
38	A1	2902	G	C2'-C1'	-5.71	1.44	1.53
12	B3	45	ARG	CD-NE	5.71	1.54	1.46
13	BA	138	ARG	N-CA	5.71	1.53	1.46
38	A1	1117	C	O3'-P	-5.71	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	AF	172	ILE	CA-CB	5.71	1.61	1.54
11	B2	14	C	C2'-O2'	5.70	1.51	1.42
38	A1	829	G	O3'-P	-5.70	1.52	1.61
38	A1	2374	C	O3'-P	-5.70	1.52	1.61
48	AE	143	LEU	CA-C	-5.70	1.46	1.52
51	Ag	44	LYS	N-CA	-5.70	1.38	1.45
64	AR	66	VAL	N-CA	-5.70	1.39	1.46
17	BE	235	THR	N-CA	-5.70	1.40	1.46
38	A1	2338	A	O4'-C1'	5.70	1.50	1.42
11	B2	1460	G	C4'-O4'	5.70	1.54	1.45
38	A1	234	G	C1'-N9	5.70	1.56	1.48
38	A1	2903	U	C4'-C3'	5.70	1.61	1.52
39	A3	61	C	C1'-N1	5.70	1.57	1.48
44	Ab	101	ARG	NE-CZ	5.70	1.39	1.33
47	Ad	55	ARG	NE-CZ	5.70	1.39	1.33
11	B2	400	G	O5'-C5'	-5.70	1.33	1.42
11	B2	1046	G	P-O5'	5.70	1.68	1.59
24	BL	66	LEU	CA-C	-5.70	1.45	1.52
38	A1	2344	G	O4'-C1'	5.70	1.50	1.41
44	Ab	101	ARG	CZ-NH2	5.70	1.40	1.33
61	AN	6	ALA	N-CA	-5.70	1.39	1.46
16	BD	57	ARG	NE-CZ	5.70	1.39	1.33
59	AL	11	LEU	CA-C	5.70	1.60	1.52
6	AT	76	ALA	CA-CB	5.70	1.62	1.53
11	B2	1223	C	C1'-N1	5.70	1.56	1.48
36	BX	11	VAL	CA-C	-5.70	1.46	1.52
38	A1	1492	C	O3'-P	-5.70	1.52	1.61
50	AF	145	GLU	CA-CB	5.69	1.62	1.53
8	AW	65	ARG	C-N	5.69	1.41	1.33
9	AX	276	LEU	CA-CB	5.69	1.60	1.52
13	BA	159	LEU	CA-C	5.69	1.60	1.52
18	BF	178	ALA	N-CA	-5.69	1.41	1.46
34	BV	52	VAL	CA-C	-5.69	1.46	1.52
38	A1	50	C	P-O5'	5.69	1.68	1.59
11	B2	351	C	C4'-C3'	5.69	1.61	1.52
20	BH	66	ARG	CA-C	5.69	1.60	1.52
38	A1	1818	G	C2'-C1'	-5.69	1.44	1.53
38	A1	1745	U	C5'-C4'	5.69	1.59	1.51
9	AX	36	LEU	CA-CB	5.69	1.63	1.53
20	BH	37	ILE	C-N	5.69	1.41	1.33
18	BF	130	SER	CA-CB	5.69	1.64	1.52
7	AU	106	ASN	C-O	-5.68	1.17	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	266	A	C4'-O4'	5.68	1.54	1.45
11	B2	946	G	C1'-N9	-5.68	1.39	1.48
11	B2	1370	U	C2'-C1'	-5.68	1.44	1.53
38	A1	861	G	C1'-N9	5.68	1.55	1.47
44	Ab	41	ARG	CD-NE	5.68	1.54	1.46
67	AZ	18	LEU	C-N	5.68	1.41	1.33
29	BQ	9	ARG	CZ-NH1	5.68	1.40	1.32
38	A1	123	A	C5'-C4'	5.68	1.59	1.51
62	AO	143	ARG	NE-CZ	5.68	1.39	1.33
11	B2	83	C	C2'-C1'	-5.68	1.44	1.53
5	AS	128	TRP	NE1-CE2	5.68	1.43	1.37
11	B2	186	U	C1'-N1	5.68	1.56	1.48
38	A1	513	C	C2'-C1'	-5.68	1.44	1.53
38	A1	1338	G	C3'-O3'	5.68	1.50	1.42
38	A1	1432	C	C4'-O4'	-5.68	1.37	1.45
38	A1	2355	G	C2'-O2'	-5.68	1.33	1.42
54	AI	56	ARG	CD-NE	5.68	1.54	1.46
62	AO	74	LYS	CA-CB	5.68	1.63	1.53
11	B2	57	G	O3'-P	-5.68	1.52	1.61
11	B2	1111	G	C4'-C3'	5.68	1.61	1.53
33	BU	142	GLU	C-N	5.68	1.41	1.33
38	A1	1095	A	O3'-P	-5.68	1.52	1.61
44	Ab	86	ASN	CA-C	-5.68	1.45	1.52
62	AO	25	LEU	N-CA	-5.68	1.39	1.46
66	AY	123	ARG	NE-CZ	5.68	1.39	1.33
11	B2	580	G	C4'-C3'	5.68	1.61	1.52
11	B2	1181	G	C4'-C3'	5.68	1.61	1.52
32	BT	40	LEU	CA-C	-5.68	1.45	1.53
33	BU	110	PHE	CG-CD1	5.68	1.50	1.38
38	A1	340	G	O3'-P	-5.68	1.52	1.61
11	B2	577	C	C5'-C4'	5.67	1.59	1.51
29	BQ	14	SER	N-CA	5.67	1.53	1.45
3	Af	2	ALA	C-N	5.67	1.41	1.33
54	AI	128	TYR	CA-C	-5.67	1.45	1.52
28	BP	53	ARG	CZ-NH1	5.67	1.40	1.32
38	A1	1003	C	C4-N4	5.67	1.45	1.33
38	A1	1992	A	O3'-P	-5.67	1.52	1.61
50	AF	104	GLN	C-O	-5.67	1.17	1.24
65	AV	23	VAL	N-CA	-5.67	1.39	1.46
4	AQ	43	ARG	NE-CZ	5.67	1.39	1.33
11	B2	356	G	C4'-O4'	5.67	1.54	1.45
11	B2	736	A	P-O5'	5.67	1.68	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	BL	68	VAL	CA-CB	-5.67	1.47	1.54
32	BT	55	LYS	CA-C	-5.67	1.44	1.52
33	BU	6	ASP	CA-C	-5.67	1.44	1.52
38	A1	827	G	O3'-P	-5.67	1.52	1.61
38	A1	1239	C	C5'-C4'	5.67	1.59	1.51
12	AG	3	LYS	C-O	5.67	1.26	1.23
61	AN	143	LYS	C-N	5.67	1.41	1.33
21	BI	110	VAL	CA-CB	-5.67	1.47	1.54
38	A1	1613	A	C1'-N9	5.67	1.56	1.48
38	A1	2196	C	C5'-C4'	5.67	1.59	1.51
38	A1	2540	A	O5'-C5'	5.67	1.50	1.42
67	AZ	48	ASP	C-N	5.67	1.41	1.33
67	AZ	54	LYS	C-N	5.67	1.41	1.33
12	AG	87	GLY	CA-C	-5.67	1.45	1.52
52	AH	34	GLN	CA-C	-5.67	1.45	1.53
3	Af	32	ASN	C-N	5.66	1.41	1.33
9	AX	9	GLU	N-CA	-5.66	1.38	1.46
9	AX	220	PHE	C-N	5.66	1.41	1.33
9	AX	404	VAL	C-N	5.66	1.41	1.33
11	B2	237	C	P-O5'	5.66	1.68	1.59
15	BC	38	THR	CA-C	-5.66	1.46	1.52
23	BK	37	GLU	CA-C	-5.66	1.45	1.52
38	A1	650	C	C4'-O4'	5.66	1.54	1.45
38	A1	2581	G	O3'-P	-5.66	1.52	1.61
44	Ab	25	ARG	CZ-NH1	5.66	1.40	1.32
57	Aj	44	LEU	CA-CB	5.66	1.62	1.53
7	AU	76	ILE	N-CA	-5.66	1.39	1.46
11	B2	934	G	O5'-C5'	5.66	1.50	1.42
11	B2	988	A	C6-N6	5.66	1.45	1.33
22	BJ	19	LEU	CA-C	-5.66	1.46	1.52
38	A1	1570	C	C1'-N1	-5.66	1.40	1.48
39	A3	79	U	P-O5'	-5.66	1.51	1.59
49	Ae	18	ILE	C-O	5.66	1.30	1.23
1	A7	49	ILE	N-CA	5.66	1.53	1.46
11	B2	1353	C	O5'-C5'	5.66	1.50	1.42
18	BF	155	ARG	C-N	5.66	1.41	1.33
38	A1	716	U	O5'-C5'	5.66	1.51	1.42
38	A1	1912	A	C1'-N9	5.66	1.56	1.48
41	AA	98	ARG	CZ-NH2	5.66	1.40	1.33
58	Ak	54	VAL	CA-C	5.66	1.59	1.52
11	B2	172	G	C4'-C3'	5.66	1.61	1.52
14	BB	106	VAL	CA-C	-5.66	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	BM	55	PRO	CA-C	-5.66	1.46	1.52
38	A1	2872	G	O4'-C1'	5.66	1.50	1.41
60	AM	66	VAL	CA-C	5.66	1.59	1.52
13	BA	127	ARG	NE-CZ	5.66	1.39	1.33
38	A1	338	A	P-O5'	-5.66	1.51	1.59
20	BH	162	LEU	C-N	5.66	1.41	1.33
38	A1	1387	G	C5'-C4'	5.66	1.59	1.51
38	A1	1735	G	C5'-C4'	5.66	1.59	1.51
38	A1	2105	A	C5'-C4'	5.66	1.59	1.51
65	AV	24	ARG	CZ-NH2	5.66	1.40	1.33
9	AX	266	PHE	C-N	5.65	1.41	1.33
11	B2	219	C	C3'-O3'	5.65	1.50	1.42
15	BC	75	LEU	N-CA	-5.65	1.39	1.46
38	A1	282	G	C1'-N9	5.65	1.56	1.48
38	A1	2142	U	O4'-C1'	5.65	1.50	1.41
58	Ak	80	ILE	CA-C	-5.65	1.46	1.52
38	A1	1535	U	C1'-N1	5.65	1.56	1.48
38	A1	2321	A	C5'-C4'	5.65	1.59	1.51
43	AB	99	LEU	CA-C	-5.65	1.45	1.52
43	AB	199	ALA	CA-CB	-5.65	1.43	1.53
50	AF	145	GLU	CA-C	-5.65	1.45	1.52
25	BM	26	THR	N-CA	-5.65	1.39	1.46
45	AC	323	MET	CA-C	-5.65	1.46	1.52
11	B2	230	C	C5'-C4'	5.65	1.59	1.51
32	BT	106	PHE	CA-CB	5.65	1.62	1.53
42	Aa	57	LYS	CA-CB	5.65	1.62	1.53
60	AM	187	ARG	CD-NE	5.65	1.54	1.46
61	AN	139	ARG	CZ-NH1	5.65	1.40	1.32
7	AU	56	ARG	CD-NE	5.65	1.54	1.46
34	BV	62	SER	N-CA	-5.65	1.38	1.46
20	BH	99	LYS	CA-CB	5.64	1.62	1.53
33	BU	107	ALA	CA-C	-5.64	1.44	1.52
34	BV	56	ILE	N-CA	-5.64	1.39	1.46
18	BF	190	GLU	CA-C	-5.64	1.45	1.53
38	A1	136	U	C3'-O3'	5.64	1.50	1.42
38	A1	2212	C	C4-N4	5.64	1.45	1.33
56	AJ	96	ARG	NE-CZ	5.64	1.39	1.33
61	AN	133	LEU	N-CA	-5.64	1.39	1.46
18	BF	71	THR	C-N	5.64	1.41	1.33
38	A1	28	A	C1'-N9	5.64	1.56	1.48
38	A1	2324	C	C2'-O2'	-5.64	1.33	1.42
57	Aj	26	LYS	CA-C	-5.64	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	BB	141	VAL	C-O	-5.64	1.18	1.24
20	BH	193	ASN	C-N	5.64	1.41	1.33
27	BO	77	TRP	NE1-CE2	5.64	1.43	1.37
38	A1	1030	C	C4'-C3'	5.64	1.61	1.52
6	AT	82	ARG	CA-CB	5.64	1.62	1.53
11	B2	881	G	O3'-P	-5.64	1.52	1.61
17	BE	103	LEU	C-N	5.64	1.40	1.33
18	BF	95	TYR	CA-C	-5.64	1.45	1.52
26	BN	58	ILE	CA-C	-5.64	1.46	1.52
27	BO	77	TRP	N-CA	5.64	1.51	1.46
38	A1	1506	U	C3'-O3'	5.64	1.50	1.42
38	A1	1825	G	C2-N3	5.64	1.44	1.32
39	A3	77	A	C4'-O4'	-5.64	1.37	1.45
48	AE	8	LYS	C-N	5.64	1.41	1.33
40	AK	8	ARG	CA-CB	5.64	1.61	1.53
59	AL	81	ILE	C-N	5.64	1.41	1.33
62	AO	68	ILE	N-CA	-5.64	1.39	1.46
12	B3	116	MET	N-CA	-5.63	1.42	1.47
35	BW	30	HIS	N-CA	-5.63	1.39	1.46
38	A1	846	C	O5'-C5'	5.63	1.50	1.42
38	A1	2953	U	P-O5'	-5.63	1.51	1.59
32	BT	111	LYS	CA-CB	5.63	1.60	1.53
38	A1	210	A	O3'-P	-5.63	1.52	1.61
11	B2	1260	G	C5'-C4'	5.63	1.59	1.51
11	B2	1403	U	C5'-C4'	5.63	1.59	1.51
22	BJ	47	ARG	CZ-NH1	5.63	1.40	1.32
34	BV	33	ARG	CZ-NH2	5.63	1.40	1.33
38	A1	2195	G	C2'-C1'	-5.63	1.45	1.53
38	A1	2506	G	C4'-O4'	5.63	1.53	1.45
49	Ae	21	ARG	C-N	5.63	1.41	1.33
56	AJ	139	ILE	CA-C	-5.63	1.45	1.52
3	Af	25	VAL	CA-C	-5.63	1.45	1.52
20	BH	129	ASN	N-CA	-5.63	1.39	1.46
31	BS	3	LYS	N-CA	-5.63	1.39	1.46
38	A1	78	C	C4'-O4'	5.63	1.53	1.45
38	A1	554	C	P-O5'	-5.63	1.51	1.59
46	AD	186	MET	N-CA	-5.63	1.39	1.46
50	AF	64	ASP	C-N	5.63	1.40	1.34
4	AQ	141	PHE	CA-C	-5.63	1.45	1.52
7	AU	43	ASN	CA-CB	5.63	1.64	1.53
15	BC	118	ARG	CZ-NH1	5.63	1.40	1.32
38	A1	1812	A	C5'-C4'	5.63	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1845	C	C1'-N1	5.63	1.56	1.48
38	A1	2252	C	C3'-C2'	5.63	1.61	1.52
50	AF	139	VAL	CA-C	-5.63	1.46	1.52
50	AF	156	GLN	CA-C	-5.63	1.45	1.52
21	BI	112	SER	C-N	5.63	1.41	1.33
25	BM	80	HIS	CA-C	-5.63	1.45	1.52
43	AB	63	PHE	CA-C	-5.63	1.45	1.53
57	Aj	25	VAL	CA-C	-5.63	1.46	1.52
11	B2	233	C	O4'-C1'	5.62	1.50	1.41
3	Af	5	LYS	N-CA	-5.62	1.39	1.46
4	AQ	115	ILE	CA-CB	-5.62	1.47	1.54
29	BQ	28	TYR	N-CA	-5.62	1.39	1.45
38	A1	2377	C	C5'-C4'	5.62	1.59	1.51
11	B2	267	C	C3'-C2'	5.62	1.61	1.52
38	A1	1118	A	C3'-C2'	5.62	1.61	1.52
38	A1	1291	C	C4'-O4'	-5.62	1.37	1.45
38	A1	1919	A	C4'-C3'	5.62	1.61	1.53
38	A1	2687	A	C4'-C3'	5.62	1.60	1.52
38	A1	2869	U	C5'-C4'	5.62	1.59	1.51
11	B2	879	U	C4'-O4'	5.62	1.53	1.45
11	B2	1354	A	O3'-P	5.62	1.69	1.61
33	BU	125	GLY	N-CA	-5.62	1.36	1.45
11	B2	629	U	O3'-P	-5.62	1.52	1.61
11	B2	1233	G	C4'-C3'	5.62	1.60	1.52
20	BH	157	ARG	CD-NE	5.62	1.54	1.46
38	A1	379	U	C5'-C4'	5.62	1.59	1.51
38	A1	973	C	C5'-C4'	5.62	1.59	1.51
38	A1	2222	C	C4'-O4'	5.62	1.53	1.45
38	A1	1663	C	C1'-N1	5.62	1.56	1.48
38	A1	2399	C	O5'-C5'	5.62	1.50	1.42
38	A1	3003	A	P-O5'	-5.62	1.51	1.59
60	AM	151	LEU	C-N	5.62	1.41	1.33
11	B2	770	A	N7-C5	-5.62	1.28	1.39
38	A1	179	A	C1'-N9	5.62	1.56	1.48
38	A1	191	U	P-O5'	-5.62	1.51	1.59
38	A1	254	A	O4'-C1'	5.62	1.50	1.42
38	A1	1001	C	C5'-C4'	5.62	1.59	1.51
38	A1	2451	G	C5'-C4'	5.62	1.59	1.51
49	Ae	22	ARG	CD-NE	5.62	1.54	1.46
38	A1	953	G	C4'-O4'	-5.61	1.37	1.45
38	A1	1970	G	C5'-C4'	5.61	1.59	1.51
38	A1	2667	U	O5'-C5'	-5.61	1.34	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	AM	37	VAL	N-CA	-5.61	1.39	1.46
60	AM	42	PRO	CA-C	-5.61	1.45	1.52
64	AR	53	MET	CA-C	-5.61	1.46	1.52
4	AQ	103	ARG	NE-CZ	5.61	1.39	1.33
38	A1	397	G	C4'-O4'	5.61	1.53	1.45
43	AB	225	ARG	NE-CZ	5.61	1.39	1.33
58	Ak	76	LEU	CA-CB	5.61	1.62	1.53
11	B2	196	G	C2-N2	5.61	1.45	1.34
11	B2	373	C	C5'-C4'	5.61	1.59	1.51
52	AH	76	LEU	C-N	5.61	1.40	1.33
38	A1	125	C	C4-N4	5.61	1.45	1.33
43	AB	78	LEU	C-N	5.61	1.40	1.33
46	AD	155	ARG	NE-CZ	5.61	1.39	1.33
9	AX	126	PHE	CA-CB	5.61	1.62	1.53
9	AX	325	ILE	N-CA	-5.61	1.39	1.46
11	B2	26	A	C2'-C1'	-5.61	1.45	1.53
19	BG	38	ILE	N-CA	-5.61	1.40	1.46
35	BW	62	LEU	CA-CB	5.61	1.60	1.53
38	A1	311	C	C2'-C1'	-5.61	1.45	1.53
38	A1	2509	A	C3'-C2'	5.61	1.61	1.52
48	AE	66	ARG	CD-NE	5.61	1.54	1.46
60	AM	65	ARG	CD-NE	5.61	1.54	1.46
62	AO	89	LEU	C-N	5.61	1.41	1.33
11	B2	612	C	O5'-C5'	5.61	1.50	1.42
29	BQ	81	ILE	C-N	5.61	1.41	1.33
31	BS	27	ASP	CA-CB	5.61	1.61	1.53
38	A1	462	A	C1'-N9	-5.61	1.39	1.48
38	A1	583	A	O5'-C5'	5.61	1.50	1.42
55	Ai	43	ARG	C-N	5.61	1.41	1.33
11	B2	299	G	O4'-C1'	-5.60	1.33	1.41
45	AC	317	VAL	CA-C	-5.60	1.46	1.52
64	AR	85	THR	C-N	5.60	1.41	1.33
7	AU	84	ARG	NE-CZ	5.60	1.39	1.33
11	B2	192	G	C2'-C1'	-5.60	1.45	1.53
11	B2	926	C	C5'-C4'	5.60	1.59	1.51
15	BC	118	ARG	NE-CZ	5.60	1.39	1.33
20	BH	144	ILE	CA-C	-5.60	1.46	1.52
39	A3	78	C	C4'-C3'	5.60	1.60	1.52
12	AG	116	MET	C-O	-5.60	1.17	1.24
52	AH	97	ASN	CG-ND2	5.60	1.45	1.33
67	AZ	64	GLU	CA-C	-5.60	1.44	1.52
5	AS	145	HIS	ND1-CE1	5.60	1.38	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	BN	10	GLU	CA-C	-5.60	1.45	1.52
38	A1	334	G	C2'-C1'	-5.60	1.45	1.53
60	AM	2	GLY	CA-C	-5.60	1.45	1.52
1	A7	50	ILE	CB-CG1	5.60	1.64	1.53
4	AQ	39	GLU	CA-C	-5.60	1.45	1.52
16	BD	80	LEU	N-CA	-5.60	1.39	1.46
16	BD	108	ILE	N-CA	-5.60	1.39	1.46
38	A1	1180	G	C4'-C3'	5.60	1.60	1.52
38	A1	2062	A	C3'-C2'	5.60	1.61	1.52
66	AY	134	PHE	CA-C	-5.60	1.45	1.52
17	BE	87	ILE	CA-C	-5.60	1.45	1.52
21	BI	35	GLY	CA-C	5.60	1.58	1.52
25	BM	21	SER	N-CA	-5.60	1.39	1.46
26	BN	29	ARG	C-N	5.60	1.41	1.33
38	A1	418	C	C4-N4	5.60	1.45	1.33
43	AB	142	GLN	CA-C	-5.60	1.46	1.52
57	Aj	42	ARG	NE-CZ	5.60	1.39	1.33
38	A1	1086	U	P-O5'	-5.60	1.51	1.59
38	A1	2665	G	P-O5'	-5.60	1.51	1.59
11	B2	543	C	O4'-C1'	5.59	1.50	1.41
11	B2	872	A	O4'-C1'	-5.59	1.33	1.41
26	BN	91	ASP	CA-CB	5.59	1.60	1.53
30	BR	60	TYR	CA-CB	5.59	1.62	1.53
38	A1	537	U	C3'-C2'	-5.59	1.44	1.52
42	Aa	21	ILE	C-N	5.59	1.39	1.33
46	AD	91	ARG	CZ-NH1	5.59	1.40	1.32
3	Af	46	ARG	CA-C	-5.59	1.45	1.52
6	AT	34	ALA	CA-C	-5.59	1.46	1.52
11	B2	576	C	C4'-O4'	5.59	1.53	1.45
34	BV	96	LYS	C-N	5.59	1.41	1.33
38	A1	1746	C	C3'-C2'	5.59	1.61	1.52
38	A1	2745	G	C1'-N9	5.59	1.56	1.48
43	AB	17	PHE	C-N	5.59	1.41	1.33
15	BC	13	ARG	NE-CZ	5.59	1.39	1.33
19	BG	82	ARG	CZ-NH2	5.59	1.40	1.33
23	BK	17	ALA	CA-C	-5.59	1.46	1.52
32	BT	68	ARG	NE-CZ	5.59	1.39	1.33
38	A1	1027	A	C5'-C4'	5.59	1.59	1.51
38	A1	2556	C	O3'-P	-5.59	1.52	1.61
38	A1	2564	U	C2'-O2'	-5.59	1.33	1.41
57	Aj	69	PHE	N-CA	-5.59	1.39	1.46
20	BH	214	SER	CA-C	5.59	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	BL	44	ARG	CZ-NH1	5.59	1.40	1.32
29	BQ	11	LYS	CA-CB	5.59	1.62	1.53
11	B2	530	G	N1-C2	5.59	1.49	1.37
13	BA	134	GLU	CA-C	5.59	1.59	1.52
22	BJ	36	ARG	NE-CZ	5.59	1.39	1.33
38	A1	1637	C	O3'-P	5.59	1.69	1.61
42	Aa	16	LYS	C-N	5.59	1.41	1.33
52	AH	132	SER	CA-C	-5.59	1.45	1.53
11	B2	379	A	C5'-C4'	5.58	1.59	1.51
16	BD	87	ALA	CA-C	-5.58	1.44	1.52
18	BF	50	ILE	C-N	5.58	1.41	1.33
29	BQ	16	ARG	CA-C	-5.58	1.46	1.53
32	BT	49	ARG	CA-CB	5.58	1.62	1.53
38	A1	382	G	C4'-C3'	5.58	1.60	1.52
38	A1	1916	U	C3'-O3'	5.58	1.50	1.42
40	A5	46	ARG	NE-CZ	5.58	1.39	1.33
50	AF	74	HIS	CG-CD2	5.58	1.42	1.35
6	AT	11	VAL	C-N	5.58	1.40	1.33
6	AT	67	TYR	N-CA	-5.58	1.39	1.46
38	A1	1039	C	C1'-N1	5.58	1.56	1.48
38	A1	1993	A	O3'-P	-5.58	1.52	1.61
44	Ab	6	PHE	CA-C	-5.58	1.45	1.53
11	B2	153	G	O3'-P	-5.58	1.52	1.61
39	A3	63	G	C5'-C4'	5.58	1.59	1.51
4	AQ	21	ARG	CA-C	-5.58	1.45	1.52
9	AX	290	GLY	N-CA	-5.58	1.36	1.45
11	B2	650	A	C3'-O3'	-5.58	1.33	1.42
12	B3	69	LEU	CA-C	-5.58	1.45	1.52
38	A1	547	C	C4'-O4'	5.58	1.53	1.45
38	A1	2489	C	C2'-C1'	-5.58	1.45	1.53
61	AN	117	GLY	CA-C	-5.58	1.44	1.51
20	BH	145	ARG	CD-NE	5.58	1.54	1.46
27	BO	101	ALA	CA-CB	5.58	1.62	1.53
38	A1	2993	G	C4'-C3'	5.58	1.60	1.52
40	A5	17	ARG	NE-CZ	5.58	1.39	1.33
60	AM	118	TRP	C-N	5.58	1.39	1.33
61	AN	32	THR	C-N	5.58	1.40	1.33
62	AO	68	ILE	C-N	5.58	1.41	1.33
4	AQ	122	MET	N-CA	-5.57	1.39	1.46
7	AU	91	VAL	CA-C	-5.57	1.45	1.52
11	B2	737	C	O3'-P	-5.57	1.52	1.61
28	BP	43	PHE	N-CA	-5.57	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	BQ	70	ASP	C-N	5.57	1.39	1.33
38	A1	1905	G	O5'-C5'	5.57	1.50	1.42
45	AC	291	GLU	C-N	5.57	1.41	1.33
40	AK	56	LEU	CA-CB	5.57	1.62	1.53
16	BD	31	ASP	N-CA	-5.57	1.40	1.46
38	A1	355	G	C2-N3	5.57	1.43	1.32
11	B2	659	U	C2'-C1'	-5.57	1.45	1.53
29	BQ	41	ARG	C-N	5.57	1.41	1.34
38	A1	2854	A	C2'-C1'	-5.57	1.45	1.53
43	AB	97	LEU	CA-CB	5.57	1.61	1.53
54	AI	122	ARG	CD-NE	5.57	1.54	1.46
18	BF	44	ILE	CA-CB	5.57	1.61	1.54
38	A1	2565	A	C5'-C4'	5.57	1.59	1.51
11	B2	1283	G	C1'-N9	5.57	1.56	1.48
38	A1	991	U	C4'-O4'	-5.57	1.37	1.45
38	A1	1347	U	C1'-N1	5.57	1.56	1.48
38	A1	1669	A	C4'-C3'	-5.57	1.44	1.52
58	AK	173	LEU	CA-C	-5.57	1.45	1.52
9	AX	254	VAL	CA-CB	5.57	1.60	1.54
11	B2	1262	U	C5'-C4'	5.57	1.59	1.51
13	BA	15	LEU	CA-C	-5.57	1.45	1.52
25	BM	103	ARG	NE-CZ	5.57	1.39	1.33
27	BO	10	VAL	C-N	5.57	1.41	1.33
38	A1	785	C	O3'-P	-5.57	1.52	1.61
38	A1	1119	A	O3'-P	-5.57	1.52	1.61
38	A1	2289	A	O3'-P	-5.57	1.52	1.61
55	AI	58	LYS	C-N	5.57	1.42	1.33
9	AX	377	LEU	C-N	5.56	1.41	1.33
13	BA	73	VAL	N-CA	-5.56	1.39	1.46
63	AP	117	ARG	NE-CZ	5.56	1.39	1.33
11	B2	680	C	C2'-O2'	-5.56	1.34	1.42
33	BU	108	ALA	C-N	5.56	1.41	1.33
38	A1	733	A	C5-C4	5.56	1.49	1.38
59	AL	97	GLU	C-N	5.56	1.41	1.33
11	B2	671	C	C4'-O4'	5.56	1.54	1.45
11	B2	1369	C	C1'-N1	5.56	1.56	1.48
13	BA	87	LEU	C-N	5.56	1.40	1.33
38	A1	1891	C	C5'-C4'	5.56	1.59	1.51
17	BE	12	ARG	NE-CZ	5.56	1.39	1.33
26	BN	40	LYS	CA-CB	5.56	1.62	1.53
27	BO	4	PHE	CA-CB	5.56	1.62	1.53
43	AB	176	GLY	C-N	5.56	1.41	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	AE	150	VAL	C-N	5.56	1.41	1.33
11	B2	10	G	C2-N2	5.56	1.45	1.34
11	B2	108	G	C2'-O2'	-5.56	1.34	1.42
11	B2	237	C	C4'-C3'	5.56	1.60	1.52
23	BK	6	THR	CA-C	5.56	1.59	1.52
38	A1	292	U	C4'-C3'	5.56	1.60	1.52
38	A1	351	C	C5'-C4'	5.56	1.59	1.51
45	AC	228	LYS	N-CA	-5.56	1.39	1.46
50	AF	21	VAL	CA-C	-5.56	1.46	1.52
38	A1	824	C	O4'-C1'	-5.56	1.33	1.41
51	Ag	3	ARG	CZ-NH1	5.56	1.40	1.32
11	B2	912	G	C2'-C1'	-5.55	1.45	1.53
19	BG	106	THR	N-CA	-5.55	1.39	1.46
26	BN	32	ARG	CA-CB	5.55	1.61	1.53
29	BQ	16	ARG	CD-NE	5.55	1.54	1.46
38	A1	119	U	C1'-N1	5.55	1.55	1.47
38	A1	650	C	C4'-C3'	-5.55	1.44	1.52
38	A1	2301	C	C1'-N1	5.55	1.56	1.48
38	A1	2998	G	C5'-C4'	5.55	1.59	1.51
54	AI	77	ARG	CD-NE	5.55	1.54	1.46
55	Ai	56	CYS	N-CA	-5.55	1.39	1.46
22	BJ	113	ARG	CA-C	5.55	1.60	1.52
38	A1	538	G	O5'-C5'	5.55	1.50	1.42
11	B2	387	G	C2'-C1'	-5.55	1.45	1.53
38	A1	1858	G	O3'-P	-5.55	1.52	1.61
57	Aj	28	ARG	CD-NE	5.55	1.54	1.46
11	B2	1112	G	C5'-C4'	5.55	1.59	1.51
16	BD	138	ARG	N-CA	-5.55	1.40	1.46
23	BK	88	GLU	C-N	5.55	1.41	1.34
43	AB	74	PRO	CA-C	-5.55	1.47	1.53
11	B2	1246	U	O4'-C1'	5.55	1.50	1.41
19	BG	18	GLN	N-CA	-5.55	1.39	1.46
26	BN	8	ASN	CA-CB	5.55	1.62	1.53
33	BU	2	ALA	CA-CB	5.55	1.62	1.53
35	BW	54	VAL	N-CA	-5.55	1.39	1.46
38	A1	641	G	C4'-O4'	-5.55	1.37	1.45
38	A1	1394	G	C5'-C4'	5.55	1.59	1.51
45	AC	353	ARG	NE-CZ	5.55	1.39	1.33
11	B2	914	U	C3'-O3'	5.54	1.50	1.42
64	AR	44	VAL	CA-CB	-5.54	1.47	1.54
11	B2	273	C	C5'-C4'	5.54	1.59	1.51
19	BG	40	ALA	CA-C	-5.54	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BW	40	CYS	C-N	5.54	1.40	1.33
38	A1	1103	C	C5'-C4'	5.54	1.59	1.51
48	AE	59	ARG	CA-C	-5.54	1.46	1.52
11	B2	1102	A	C2'-C1'	-5.54	1.45	1.53
38	A1	700	A	C2'-C1'	-5.54	1.45	1.53
38	A1	1693	G	C5'-C4'	5.54	1.59	1.51
38	A1	2348	G	N1-C2	5.54	1.48	1.37
38	A1	2717	A	C2'-C1'	-5.54	1.44	1.53
41	AA	211	ALA	N-CA	-5.54	1.39	1.46
43	AB	166	GLY	N-CA	5.54	1.53	1.45
12	AG	45	ARG	C-O	-5.54	1.17	1.24
14	BB	124	HIS	CA-C	-5.54	1.45	1.52
38	A1	1912	A	P-O5'	-5.54	1.51	1.59
4	AQ	147	LEU	CA-C	-5.54	1.45	1.52
9	AX	368	HIS	C-N	5.54	1.41	1.33
14	BB	51	ARG	CZ-NH2	5.54	1.40	1.33
16	BD	144	VAL	CA-C	-5.54	1.46	1.52
21	BI	2	THR	N-CA	5.54	1.56	1.46
34	BV	12	LYS	C-N	5.54	1.40	1.33
38	A1	2960	G	O3'-P	-5.54	1.52	1.61
12	AG	45	ARG	NE-CZ	5.54	1.39	1.33
51	Ag	19	ARG	NE-CZ	5.54	1.39	1.33
58	Ak	144	GLY	C-N	5.54	1.38	1.33
63	AP	90	ARG	CD-NE	5.54	1.54	1.46
66	AY	29	HIS	ND1-CE1	5.54	1.38	1.32
11	B2	325	A	C4'-O4'	-5.54	1.37	1.45
38	A1	870	G	O3'-P	-5.54	1.52	1.61
39	A3	72	G	O4'-C1'	5.54	1.50	1.41
41	AA	114	MET	CA-CB	5.54	1.61	1.53
11	B2	493	C	C1'-N1	5.54	1.56	1.48
15	BC	106	GLY	C-N	5.54	1.41	1.33
27	BO	21	LEU	CA-CB	5.54	1.61	1.53
28	BP	3	LYS	C-N	5.54	1.40	1.33
38	A1	1096	A	P-O5'	-5.54	1.51	1.59
38	A1	1275	G	C2'-C1'	-5.54	1.45	1.53
11	B2	189	C	C1'-N1	5.53	1.56	1.48
11	B2	315	A	C1'-N9	5.53	1.56	1.48
11	B2	446	G	C2'-C1'	-5.53	1.45	1.53
18	BF	34	ILE	C-O	-5.53	1.17	1.24
38	A1	1044	C	C1'-N1	5.53	1.56	1.48
38	A1	1728	C	C1'-N1	5.53	1.56	1.48
46	AD	140	LEU	CA-C	5.53	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	AD	153	LYS	CA-C	-5.53	1.46	1.52
54	AI	80	ARG	NE-CZ	5.53	1.39	1.33
11	B2	804	U	C1'-N1	5.53	1.56	1.48
27	BO	100	MET	CA-CB	5.53	1.62	1.53
38	A1	1229	U	C1'-N1	5.53	1.56	1.48
38	A1	1631	A	C4'-C3'	5.53	1.60	1.52
40	A5	57	PRO	C-N	5.53	1.41	1.33
9	AX	66	ARG	NE-CZ	5.53	1.39	1.33
11	B2	217	C	C4'-O4'	-5.53	1.37	1.45
11	B2	387	G	C5'-C4'	5.53	1.59	1.51
38	A1	481	G	C5'-C4'	5.53	1.59	1.51
38	A1	1376	U	C1'-N1	5.53	1.56	1.48
38	A1	2211	C	O4'-C1'	5.53	1.50	1.41
38	A1	2587	G	C5'-C4'	5.53	1.59	1.51
40	A5	46	ARG	CD-NE	5.53	1.53	1.46
44	Ab	23	PHE	CA-C	-5.53	1.46	1.53
46	AD	252	GLU	CA-C	5.53	1.60	1.52
9	AX	112	LYS	C-N	5.53	1.41	1.33
11	B2	1254	C	C1'-N1	5.53	1.56	1.48
27	BO	22	ARG	NE-CZ	5.53	1.39	1.33
38	A1	2002	A	C3'-C2'	5.53	1.61	1.52
45	AC	142	GLU	CA-C	-5.53	1.45	1.52
40	AK	70	GLU	CA-CB	5.53	1.62	1.53
5	AS	60	PRO	CA-C	-5.53	1.45	1.52
14	BB	34	ARG	CZ-NH2	5.53	1.40	1.33
67	AZ	10	ALA	C-O	-5.53	1.17	1.24
38	A1	2557	C	C3'-O3'	5.52	1.50	1.42
48	AE	28	VAL	C-O	-5.52	1.18	1.24
16	BD	135	GLN	C-N	5.52	1.39	1.33
20	BH	26	VAL	CA-CB	-5.52	1.47	1.54
30	BR	20	LYS	N-CA	-5.52	1.39	1.46
38	A1	573	G	N1-C2	5.52	1.48	1.37
38	A1	663	A	O3'-P	-5.52	1.52	1.61
48	AE	4	GLU	N-CA	-5.52	1.39	1.46
62	AO	24	ARG	NE-CZ	5.52	1.39	1.33
64	AR	19	HIS	CD2-NE2	5.52	1.44	1.37
11	B2	600	C	P-O5'	-5.52	1.51	1.59
46	AD	249	ARG	N-CA	-5.52	1.39	1.46
7	AU	15	LEU	N-CA	-5.52	1.39	1.46
11	B2	255	G	C5'-C4'	5.52	1.59	1.51
15	BC	183	MET	CA-C	-5.52	1.45	1.52
31	BS	14	ARG	NE-CZ	5.52	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2130	C	P-O5'	-5.52	1.51	1.59
38	A1	3013	U	C2'-C1'	-5.52	1.44	1.53
58	Ak	91	VAL	CA-C	-5.52	1.46	1.52
13	BA	140	ILE	N-CA	-5.52	1.39	1.46
19	BG	33	ARG	CA-C	-5.52	1.46	1.52
38	A1	50	C	C1'-N1	5.52	1.56	1.48
5	AS	86	LYS	N-CA	-5.52	1.39	1.46
23	BK	79	ARG	N-CA	-5.52	1.39	1.46
60	AM	174	ASN	C-N	5.52	1.41	1.33
11	B2	205	C	O4'-C1'	-5.51	1.33	1.41
11	B2	369	A	O3'-P	-5.51	1.52	1.61
11	B2	795	G	O5'-C5'	5.51	1.50	1.42
25	BM	123	HIS	C-N	5.51	1.42	1.33
38	A1	1121	C	O3'-P	-5.51	1.52	1.61
38	A1	1584	G	C5'-C4'	5.51	1.59	1.51
44	Ab	70	LEU	CA-CB	5.51	1.61	1.53
44	Ab	97	ARG	CA-CB	5.51	1.62	1.53
56	AJ	61	MET	CA-C	-5.51	1.46	1.52
11	B2	123	U	O4'-C1'	5.51	1.50	1.41
11	B2	390	G	C2'-C1'	-5.51	1.45	1.53
38	A1	795	G	C1'-N9	5.51	1.56	1.48
38	A1	2562	G	C2'-C1'	-5.51	1.44	1.53
38	A1	2750	C	O3'-P	-5.51	1.52	1.61
59	AL	7	LYS	C-N	5.51	1.40	1.34
27	BO	127	ARG	NE-CZ	5.51	1.39	1.33
38	A1	1165	C	C1'-N1	5.51	1.56	1.48
38	A1	2466	C	C5'-C4'	5.51	1.59	1.51
38	A1	3016	G	O3'-P	-5.51	1.52	1.61
44	Ab	97	ARG	CD-NE	5.51	1.53	1.46
11	B2	111	G	P-O5'	5.51	1.68	1.59
24	BL	44	ARG	N-CA	-5.51	1.39	1.46
29	BQ	105	LEU	CA-C	5.51	1.59	1.52
38	A1	820	C	C5'-C4'	5.51	1.59	1.51
39	A3	13	C	C4'-O4'	5.51	1.53	1.45
10	B1	57	C	P-O5'	-5.51	1.51	1.59
11	B2	340	A	O5'-C5'	5.51	1.50	1.42
38	A1	527	G	C5'-C4'	5.51	1.59	1.51
40	AK	47	ARG	CA-CB	5.51	1.61	1.53
11	B2	148	C	C3'-O3'	5.50	1.50	1.42
11	B2	881	G	P-O5'	-5.50	1.51	1.59
11	B2	1151	A	C4'-O4'	-5.50	1.37	1.45
29	BQ	83	GLU	CA-CB	5.50	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	AH	130	ALA	N-CA	-5.50	1.39	1.46
4	AQ	117	ARG	CZ-NH2	5.50	1.40	1.33
11	B2	1449	G	C5'-C4'	5.50	1.59	1.51
36	BX	62	ARG	NE-CZ	5.50	1.39	1.33
38	A1	2313	G	C5'-C4'	5.50	1.59	1.51
39	A3	84	U	C2-N3	5.50	1.48	1.37
9	AX	413	ARG	CZ-NH2	5.50	1.40	1.33
38	A1	2055	U	C4'-O4'	5.50	1.53	1.45
43	AB	233	ARG	CZ-NH1	5.50	1.40	1.32
57	Aj	74	CYS	CA-CB	5.50	1.62	1.53
38	A1	857	U	P-O5'	-5.50	1.51	1.59
38	A1	926	C	C5'-C4'	5.50	1.59	1.51
38	A1	1706	G	C4'-O4'	5.50	1.53	1.45
38	A1	2468	C	C5'-C4'	5.50	1.59	1.51
38	A1	2741	U	C2'-C1'	-5.50	1.45	1.53
47	Ad	56	LYS	N-CA	-5.50	1.40	1.46
52	AH	25	ILE	CA-C	5.50	1.59	1.52
54	AI	109	GLY	C-N	5.50	1.41	1.33
11	B2	153	G	C5'-C4'	5.50	1.59	1.51
11	B2	702	G	C4'-C3'	-5.50	1.44	1.52
16	BD	69	GLU	C-O	-5.50	1.17	1.24
38	A1	544	A	C4'-O4'	5.50	1.54	1.45
38	A1	930	G	C2'-C1'	-5.50	1.45	1.53
18	BF	153	ARG	NE-CZ	5.50	1.39	1.33
38	A1	1444	A	C5'-C4'	5.50	1.59	1.51
38	A1	2054	G	C4'-C3'	5.50	1.61	1.53
40	A5	45	ARG	CZ-NH2	5.50	1.40	1.33
54	AI	13	ARG	NE-CZ	5.50	1.39	1.33
14	BB	196	GLU	CA-C	-5.49	1.45	1.52
38	A1	346	U	O4'-C1'	-5.49	1.33	1.41
38	A1	2731	C	O3'-P	-5.49	1.52	1.61
60	AM	11	TRP	NE1-CE2	5.49	1.43	1.37
38	A1	1295	G	O5'-C5'	5.49	1.51	1.42
38	A1	1519	G	O4'-C1'	5.49	1.49	1.41
4	AQ	103	ARG	CZ-NH1	5.49	1.40	1.32
11	B2	448	A	C2'-C1'	-5.49	1.44	1.53
13	BA	72	ASP	N-CA	5.49	1.52	1.45
23	BK	123	THR	CA-C	-5.49	1.45	1.52
38	A1	548	U	O3'-P	-5.49	1.52	1.61
38	A1	2032	G	C4'-C3'	5.49	1.60	1.52
38	A1	2343	G	C1'-N9	5.49	1.56	1.48
43	AB	108	VAL	C-N	5.49	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	BN	137	LEU	C-N	5.49	1.40	1.33
38	A1	2379	G	O3'-P	-5.49	1.52	1.61
10	B1	39	A	O3'-P	-5.49	1.52	1.61
11	B2	1251	C	C4-N4	5.49	1.45	1.33
38	A1	1095	A	C4'-O4'	-5.49	1.37	1.45
38	A1	2257	A	N7-C5	-5.49	1.28	1.39
11	B2	1397	C	O4'-C1'	5.49	1.49	1.41
24	BL	92	GLU	CA-CB	5.49	1.62	1.53
38	A1	2666	G	C3'-O3'	5.49	1.50	1.42
38	A1	2766	C	O4'-C1'	-5.49	1.33	1.41
46	AD	111	ARG	CZ-NH2	5.49	1.40	1.33
50	AF	169	GLN	N-CA	-5.49	1.41	1.46
18	BF	137	ARG	CZ-NH1	5.48	1.40	1.32
47	Ad	67	PRO	C-N	5.48	1.40	1.33
3	Af	46	ARG	NE-CZ	5.48	1.39	1.33
5	AS	64	LYS	CA-C	-5.48	1.46	1.52
11	B2	966	G	O4'-C1'	5.48	1.49	1.41
15	BC	140	ARG	NE-CZ	5.48	1.39	1.33
18	BF	33	ASP	C-N	5.48	1.40	1.33
20	BH	114	ARG	CZ-NH1	5.48	1.40	1.32
28	BP	9	ARG	CZ-NH2	5.48	1.40	1.33
38	A1	259	A	C1'-N9	5.48	1.56	1.48
38	A1	1439	G	C1'-N9	5.48	1.56	1.48
57	Aj	2	LYS	C-O	-5.48	1.17	1.23
58	Ak	83	ILE	N-CA	-5.48	1.39	1.46
41	AA	50	VAL	N-CA	-5.48	1.39	1.46
56	AJ	118	ILE	CB-CG1	5.48	1.64	1.53
60	AM	132	MET	C-N	5.48	1.41	1.33
66	AY	109	ASP	CA-C	-5.48	1.45	1.52
38	A1	2133	G	P-O5'	-5.48	1.51	1.59
39	A3	10	U	C4'-C3'	5.48	1.61	1.53
38	A1	2396	G	O3'-P	-5.48	1.52	1.61
40	A5	27	ILE	CA-CB	-5.48	1.47	1.53
11	B2	126	G	C2'-C1'	-5.48	1.45	1.53
11	B2	397	C	O3'-P	-5.48	1.52	1.61
38	A1	1048	C	C1'-N1	-5.48	1.40	1.48
38	A1	2367	C	O3'-P	-5.48	1.52	1.61
50	AF	159	ARG	CZ-NH1	5.48	1.40	1.32
55	Ai	24	ARG	C-N	5.48	1.40	1.33
11	B2	59	C	C1'-N1	-5.47	1.40	1.48
11	B2	290	C	O4'-C1'	5.47	1.49	1.41
41	AA	5	ARG	CZ-NH2	5.47	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1198	A	C2'-C1'	-5.47	1.45	1.53
27	BO	76	ARG	CZ-NH2	5.47	1.40	1.33
28	BP	40	ARG	CD-NE	5.47	1.53	1.46
38	A1	402	G	C2-N2	5.47	1.45	1.34
44	Ab	61	PRO	CA-C	5.47	1.59	1.52
45	AC	320	ASP	C-N	5.47	1.40	1.33
54	AI	21	MET	CA-C	-5.47	1.45	1.52
64	AR	10	ARG	CD-NE	5.47	1.53	1.46
38	A1	856	A	C2'-C1'	-5.47	1.45	1.53
38	A1	2789	G	C5'-C4'	5.47	1.59	1.51
38	A1	2867	U	C3'-O3'	5.47	1.50	1.42
18	BF	86	LEU	CA-C	-5.47	1.46	1.52
19	BG	20	GLU	CA-C	-5.47	1.46	1.52
38	A1	1590	C	C5'-C4'	5.47	1.59	1.51
38	A1	3016	G	C4'-O4'	5.47	1.53	1.45
44	Ab	32	PRO	CA-C	-5.47	1.46	1.52
55	Ai	29	GLU	C-N	5.47	1.40	1.33
56	AJ	119	ARG	NE-CZ	5.47	1.39	1.33
63	AP	44	ARG	CD-NE	5.47	1.53	1.46
41	AA	128	ARG	CD-NE	5.47	1.53	1.46
54	AI	93	ALA	N-CA	-5.47	1.39	1.46
54	AI	94	PHE	CA-C	5.47	1.59	1.52
9	AX	163	LYS	CA-C	5.47	1.57	1.52
9	AX	240	ILE	CA-C	-5.47	1.46	1.52
11	B2	432	G	C5'-C4'	5.47	1.59	1.51
11	B2	623	C	C2'-C1'	-5.47	1.45	1.53
13	BA	128	ARG	CZ-NH1	5.47	1.40	1.32
17	BE	88	MET	C-N	5.47	1.41	1.33
19	BG	108	ARG	CZ-NH2	5.47	1.40	1.33
38	A1	1245	C	O3'-P	-5.47	1.52	1.61
38	A1	1353	A	P-O5'	-5.47	1.51	1.59
38	A1	2658	G	C4'-O4'	-5.47	1.37	1.45
41	AA	19	ALA	C-N	5.47	1.39	1.33
43	AB	25	ARG	CZ-NH2	5.47	1.40	1.33
9	AX	93	ILE	N-CA	-5.46	1.39	1.46
11	B2	185	G	C3'-C2'	5.46	1.60	1.52
38	A1	2667	U	C1'-N1	5.46	1.56	1.48
42	Aa	14	PRO	N-CA	-5.46	1.40	1.47
46	AD	41	HIS	N-CA	-5.46	1.39	1.46
52	AH	39	ILE	C-N	5.46	1.41	1.33
54	AI	89	ARG	NE-CZ	5.46	1.39	1.33
67	AZ	36	ILE	CA-C	-5.46	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B3	81	PRO	N-CA	-5.46	1.40	1.47
16	BD	156	ARG	C-N	5.46	1.41	1.33
38	A1	561	C	C4'-C3'	5.46	1.60	1.52
11	B2	1269	G	C3'-O3'	5.46	1.50	1.42
26	BN	73	VAL	CA-C	5.46	1.59	1.52
38	A1	3030	A	C4'-O4'	-5.46	1.37	1.45
58	Ak	81	ASN	C-N	5.46	1.42	1.33
7	AU	47	ARG	C-O	-5.46	1.17	1.24
11	B2	1491	C	O3'-P	-5.46	1.52	1.61
24	BL	57	GLY	CA-C	-5.46	1.44	1.51
41	AA	37	ILE	C-N	5.46	1.39	1.33
45	AC	6	ARG	C-N	-5.46	1.26	1.33
60	AM	36	VAL	CA-C	-5.46	1.45	1.52
15	BC	171	LEU	C-N	5.46	1.41	1.33
38	A1	1051	C	C5'-C4'	5.46	1.59	1.51
49	Ae	57	LYS	N-CA	5.46	1.52	1.46
3	Af	34	ARG	N-CA	-5.46	1.38	1.45
8	AW	24	GLN	C-N	5.46	1.41	1.33
9	AX	256	ASN	N-CA	-5.46	1.39	1.46
14	BB	84	GLY	C-N	5.46	1.41	1.33
44	Ab	92	ALA	C-N	5.46	1.41	1.33
58	Ak	202	THR	N-CA	-5.46	1.42	1.46
10	B1	38	G	O3'-P	-5.46	1.52	1.61
16	BD	21	GLU	N-CA	-5.46	1.39	1.46
23	BK	45	ILE	CA-C	5.46	1.60	1.52
23	BK	77	ALA	CA-C	-5.46	1.45	1.52
29	BQ	120	ARG	CD-NE	5.46	1.53	1.46
43	AB	45	VAL	CA-C	-5.46	1.46	1.53
15	BC	67	ARG	CZ-NH1	5.45	1.40	1.32
38	A1	109	G	C2'-C1'	-5.45	1.45	1.53
38	A1	380	A	O3'-P	-5.45	1.52	1.61
38	A1	464	C	C4'-C3'	5.45	1.60	1.52
38	A1	1638	C	O3'-P	-5.45	1.52	1.61
38	A1	2044	C	O4'-C1'	5.45	1.49	1.41
38	A1	3022	C	C4'-C3'	5.45	1.60	1.52
41	AA	129	ASN	C-N	5.45	1.41	1.33
11	B2	172	G	C1'-N9	5.45	1.56	1.48
38	A1	171	A	C4'-C3'	5.45	1.60	1.52
38	A1	1671	A	C3'-O3'	5.45	1.50	1.42
38	A1	2648	C	C5'-C4'	5.45	1.59	1.51
11	B2	105	C	C4-N4	5.45	1.44	1.33
11	B2	1319	C	C4'-O4'	-5.45	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	513	C	O5'-C5'	5.45	1.51	1.42
38	A1	2537	G	O5'-C5'	5.45	1.50	1.42
11	B2	1427	C	C1'-N1	5.45	1.56	1.48
12	B3	119	LYS	CA-CB	5.45	1.62	1.53
38	A1	1925	A	O4'-C1'	-5.45	1.33	1.42
38	A1	2307	C	C2'-O2'	-5.45	1.34	1.42
17	BE	37	HIS	ND1-CE1	5.45	1.38	1.32
18	BF	130	SER	CA-C	-5.45	1.45	1.53
61	AN	160	CYS	CA-CB	5.45	1.62	1.53
12	B3	109	ASP	CA-CB	5.45	1.61	1.53
38	A1	18	C	C1'-N1	5.45	1.56	1.48
38	A1	1683	C	O5'-C5'	5.45	1.50	1.42
38	A1	1974	G	O3'-P	-5.45	1.52	1.61
38	A1	2198	U	P-O5'	-5.45	1.51	1.59
38	A1	2529	G	O3'-P	-5.45	1.52	1.61
38	A1	2780	G	C2-N3	5.45	1.43	1.32
60	AM	171	GLY	CA-C	-5.45	1.44	1.51
15	BC	105	ARG	CD-NE	5.44	1.53	1.46
52	AH	66	ILE	CA-CB	-5.44	1.45	1.54
2	A8	47	LEU	CA-CB	5.44	1.62	1.53
9	AX	303	PRO	C-N	5.44	1.40	1.33
11	B2	982	U	C4'-O4'	5.44	1.53	1.45
30	BR	108	ARG	CA-CB	5.44	1.63	1.54
36	BX	46	ARG	CD-NE	5.44	1.53	1.46
38	A1	350	A	C2'-C1'	-5.44	1.44	1.53
38	A1	861	G	C4'-C3'	5.44	1.61	1.53
38	A1	1721	U	C4'-O4'	-5.44	1.37	1.45
11	B2	496	C	C5'-C4'	5.44	1.59	1.51
11	B2	708	C	O4'-C1'	-5.44	1.33	1.41
11	B2	736	A	C4'-O4'	5.44	1.53	1.45
38	A1	855	G	C5'-C4'	5.44	1.59	1.51
8	AW	53	ARG	C-O	-5.44	1.17	1.24
11	B2	1209	C	C3'-C2'	5.44	1.60	1.52
22	BJ	57	LEU	CA-CB	5.44	1.62	1.53
23	BK	16	ARG	CA-C	-5.44	1.46	1.53
59	AL	6	LYS	CA-CB	5.44	1.61	1.53
11	B2	1171	G	C5-C6	-5.44	1.31	1.42
11	B2	1443	G	N1-C2	5.44	1.48	1.37
21	BI	89	TRP	C-N	5.44	1.40	1.33
58	AK	154	VAL	CA-CB	-5.44	1.47	1.54
11	B2	384	G	O4'-C1'	5.44	1.50	1.42
11	B2	1132	C	C3'-C2'	5.44	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	BN	68	GLY	CA-C	-5.44	1.44	1.51
38	A1	2889	A	C4'-C3'	5.44	1.61	1.53
11	B2	1009	G	C4'-C3'	5.43	1.60	1.52
13	BA	150	GLU	CA-C	-5.43	1.45	1.52
20	BH	145	ARG	CZ-NH2	5.43	1.40	1.33
35	BW	8	MET	CA-C	-5.43	1.47	1.52
38	A1	149	G	O4'-C1'	-5.43	1.33	1.41
38	A1	1066	C	C1'-N1	5.43	1.56	1.48
38	A1	1119	A	C3'-C2'	5.43	1.60	1.52
38	A1	1404	G	C1'-N9	5.43	1.56	1.48
38	A1	2108	U	C5'-C4'	5.43	1.59	1.51
38	A1	2580	G	C4'-C3'	5.43	1.60	1.52
38	A1	2809	G	P-O5'	-5.43	1.51	1.59
38	A1	2991	C	C3'-O3'	5.43	1.50	1.42
49	Ae	62	HIS	CE1-NE2	-5.43	1.27	1.32
58	Ak	129	THR	CA-CB	-5.43	1.44	1.53
7	AU	47	ARG	CD-NE	5.43	1.53	1.46
11	B2	1477	U	C4'-C3'	5.43	1.60	1.52
13	BA	160	GLU	CA-C	-5.43	1.45	1.52
23	BK	10	ARG	CA-C	-5.43	1.46	1.52
38	A1	1079	A	C1'-N9	-5.43	1.39	1.48
38	A1	1964	G	C5'-C4'	5.43	1.59	1.51
38	A1	2469	G	C5'-C4'	5.43	1.59	1.51
48	AE	59	ARG	CZ-NH1	5.43	1.40	1.32
5	AS	94	VAL	CA-CB	-5.43	1.47	1.54
10	B1	54	G	C1'-N9	-5.43	1.39	1.48
11	B2	206	C	O3'-P	-5.43	1.53	1.61
12	B3	108	ARG	CZ-NH2	5.43	1.40	1.33
38	A1	189	U	C4-C5	5.43	1.54	1.43
38	A1	2483	U	O3'-P	-5.43	1.53	1.61
38	A1	2539	G	C2'-C1'	-5.43	1.45	1.53
54	AI	116	ILE	CA-C	-5.43	1.45	1.52
11	B2	38	G	O5'-C5'	-5.43	1.34	1.42
11	B2	1001	A	C5'-C4'	5.43	1.59	1.51
58	Ak	193	ALA	N-CA	-5.43	1.39	1.46
67	AZ	79	VAL	C-N	5.43	1.40	1.33
12	B3	17	GLU	C-N	5.43	1.41	1.33
20	BH	62	HIS	ND1-CE1	5.43	1.38	1.32
38	A1	367	G	C2-N3	5.43	1.43	1.32
38	A1	2068	U	C2'-C1'	-5.43	1.45	1.53
12	AG	108	ARG	NE-CZ	5.43	1.39	1.33
58	Ak	19	ILE	N-CA	-5.43	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	BC	80	ILE	C-N	5.42	1.41	1.33
38	A1	95	G	C2'-C1'	-5.42	1.45	1.53
38	A1	2147	C	O5'-C5'	5.42	1.50	1.42
46	AD	122	ALA	C-N	5.42	1.40	1.33
13	BA	100	THR	N-CA	-5.42	1.39	1.46
38	A1	1608	G	C2'-C1'	-5.42	1.45	1.53
52	AH	33	LYS	N-CA	-5.42	1.39	1.46
11	B2	836	G	C2'-C1'	-5.42	1.45	1.53
17	BE	101	ARG	C-N	5.42	1.40	1.33
27	BO	93	LEU	N-CA	-5.42	1.39	1.45
29	BQ	124	LEU	CA-CB	5.42	1.61	1.53
38	A1	404	G	N1-C2	5.42	1.48	1.37
38	A1	1130	G	C2'-C1'	-5.42	1.45	1.53
38	A1	1663	C	C4'-C3'	-5.42	1.44	1.52
40	A5	21	LYS	CA-C	5.42	1.59	1.52
48	AE	149	ARG	CZ-NH1	5.42	1.40	1.32
9	AX	396	GLY	N-CA	-5.42	1.37	1.45
15	BC	18	ASP	N-CA	-5.42	1.39	1.46
23	BK	108	VAL	C-N	5.42	1.39	1.33
38	A1	507	G	O4'-C1'	-5.42	1.33	1.41
12	AG	61	GLU	C-N	5.42	1.40	1.33
62	AO	8	ARG	C-N	5.42	1.39	1.33
9	AX	348	ARG	C-N	5.42	1.41	1.34
22	BJ	33	SER	CA-C	-5.42	1.46	1.52
30	BR	109	ALA	C-O	-5.42	1.17	1.23
7	AU	74	TYR	CA-CB	5.42	1.61	1.53
11	B2	122	C	P-O5'	-5.42	1.51	1.59
17	BE	161	SER	N-CA	-5.42	1.39	1.46
11	B2	1152	C	O3'-P	-5.42	1.53	1.61
38	A1	968	A	C5'-C4'	5.42	1.59	1.51
38	A1	2843	C	C2'-C1'	-5.42	1.45	1.53
50	AF	165	ARG	CZ-NH2	5.42	1.40	1.33
9	AX	200	LEU	CA-CB	5.41	1.61	1.53
38	A1	2693	G	C4'-C3'	-5.41	1.44	1.52
48	AE	141	VAL	CA-C	-5.41	1.45	1.52
11	B2	168	G	O3'-P	-5.41	1.53	1.61
27	BO	122	LEU	C-N	5.41	1.41	1.33
38	A1	394	A	C2'-C1'	-5.41	1.45	1.53
38	A1	1412	C	O3'-P	-5.41	1.53	1.61
38	A1	1470	C	C3'-O3'	-5.41	1.34	1.42
38	A1	2277	G	C5'-C4'	5.41	1.59	1.51
11	B2	737	C	P-O5'	-5.41	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	BG	35	GLY	C-N	5.41	1.40	1.33
38	A1	1671	A	C5'-C4'	5.41	1.59	1.51
38	A1	1701	C	O4'-C1'	5.41	1.49	1.41
38	A1	2247	G	C1'-N9	5.41	1.56	1.48
38	A1	2272	G	C2'-C1'	-5.41	1.45	1.53
66	AY	96	PHE	CA-CB	5.41	1.61	1.53
1	A7	18	CYS	CA-C	-5.41	1.46	1.52
9	AX	121	VAL	C-N	5.41	1.40	1.33
11	B2	597	C	O4'-C1'	5.41	1.49	1.41
11	B2	1063	A	C4'-O4'	-5.41	1.37	1.45
11	B2	1188	C	C5'-C4'	5.41	1.59	1.51
16	BD	153	THR	C-O	-5.41	1.18	1.24
29	BQ	158	ARG	NE-CZ	5.41	1.39	1.33
38	A1	466	C	C1'-N1	5.41	1.56	1.48
38	A1	472	A	C1'-N9	-5.41	1.39	1.48
45	AC	305	ILE	C-N	5.41	1.39	1.33
46	AD	3	VAL	N-CA	-5.41	1.39	1.46
48	AE	101	ARG	CD-NE	5.41	1.53	1.46
54	AI	33	ALA	CA-CB	5.41	1.61	1.53
38	A1	172	C	C3'-O3'	5.41	1.50	1.42
9	AX	183	PHE	CA-C	-5.41	1.45	1.52
35	BW	4	PRO	C-N	5.41	1.40	1.33
38	A1	2298	C	P-O5'	-5.41	1.51	1.59
51	Ag	36	TYR	CA-C	-5.41	1.46	1.52
61	AN	57	ILE	N-CA	-5.41	1.39	1.46
66	AY	46	MET	CA-CB	5.41	1.61	1.53
25	BM	93	THR	C-N	5.40	1.40	1.33
38	A1	816	C	C1'-N1	5.40	1.56	1.48
39	A3	39	C	O5'-C5'	5.40	1.50	1.42
45	AC	318	ARG	CA-C	-5.40	1.45	1.52
11	B2	586	C	P-O5'	-5.40	1.51	1.59
38	A1	939	A	O5'-C5'	5.40	1.50	1.42
38	A1	979	G	C1'-N9	-5.40	1.39	1.48
38	A1	1128	G	C4'-C3'	5.40	1.60	1.52
38	A1	1754	A	C6-N6	5.40	1.44	1.33
43	AB	165	GLY	CA-C	-5.40	1.45	1.52
67	AZ	82	SER	CA-C	-5.40	1.46	1.52
4	AQ	115	ILE	CA-C	-5.40	1.46	1.52
11	B2	545	C	C1'-N1	5.40	1.56	1.48
24	BL	39	PRO	CA-CB	5.40	1.60	1.53
34	BV	81	ILE	C-O	-5.40	1.18	1.24
38	A1	189	U	P-O5'	-5.40	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	624	U	O3'-P	-5.40	1.53	1.61
38	A1	1126	C	O4'-C1'	5.40	1.49	1.41
38	A1	1188	C	P-O5'	-5.40	1.51	1.59
38	A1	1530	A	O3'-P	-5.40	1.53	1.61
46	AD	224	ASN	CA-CB	5.40	1.60	1.53
47	Ad	11	ARG	CZ-NH1	5.40	1.40	1.32
32	BT	115	HIS	C-O	-5.40	1.17	1.23
38	A1	2794	G	C2'-C1'	-5.40	1.45	1.53
61	AN	132	ILE	CA-CB	-5.40	1.47	1.54
4	AQ	69	GLN	N-CA	-5.40	1.40	1.46
11	B2	635	C	O4'-C1'	5.40	1.49	1.41
16	BD	170	MET	CA-CB	5.40	1.61	1.53
38	A1	1204	U	O4'-C1'	-5.40	1.33	1.41
40	A5	8	ARG	CZ-NH2	5.40	1.40	1.33
44	Ab	18	ARG	NE-CZ	5.40	1.39	1.33
46	AD	39	TRP	CA-C	-5.40	1.45	1.52
7	AU	44	LEU	CA-CB	5.40	1.61	1.53
11	B2	940	U	C5'-C4'	5.40	1.59	1.51
14	BB	72	VAL	C-N	5.40	1.40	1.33
38	A1	1118	A	O4'-C1'	5.40	1.49	1.41
11	B2	434	A	O3'-P	-5.39	1.53	1.61
11	B2	467	G	P-O5'	-5.39	1.51	1.59
11	B2	1401	U	P-O5'	-5.39	1.51	1.59
18	BF	33	ASP	CA-C	-5.39	1.46	1.52
20	BH	90	HIS	CD2-NE2	-5.39	1.31	1.37
26	BN	56	GLU	CA-CB	5.39	1.62	1.53
38	A1	75	G	C4'-C3'	5.39	1.60	1.52
38	A1	193	A	O3'-P	-5.39	1.53	1.61
48	AE	157	ARG	CD-NE	5.39	1.53	1.46
37	BY	2	GLY	C-O	-5.39	1.18	1.24
38	A1	540	A	O3'-P	-5.39	1.53	1.61
38	A1	1626	A	O5'-C5'	5.39	1.50	1.42
38	A1	2132	C	C3'-O3'	5.39	1.50	1.42
38	A1	2684	G	N3-C4	-5.39	1.24	1.35
38	A1	575	G	C1'-N9	5.39	1.56	1.48
38	A1	1632	U	O4'-C1'	-5.39	1.33	1.41
4	AQ	9	ARG	NE-CZ	5.39	1.39	1.33
11	B2	20	G	C5'-C4'	5.39	1.59	1.51
11	B2	22	G	C4'-O4'	5.39	1.53	1.45
11	B2	1052	U	C4'-O4'	-5.39	1.37	1.45
11	B2	1494	C	C4-N4	5.39	1.44	1.33
38	A1	574	C	C4'-O4'	5.39	1.53	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2088	G	N1-C2	5.39	1.48	1.37
40	A5	62	ILE	N-CA	-5.39	1.40	1.46
1	A7	32	GLU	C-N	5.39	1.40	1.33
9	AX	251	PHE	C-N	5.39	1.39	1.33
11	B2	1422	G	C2'-C1'	-5.39	1.45	1.53
13	BA	86	LYS	CA-C	-5.39	1.46	1.52
38	A1	307	C	C4-N4	5.39	1.44	1.33
2	A8	37	THR	C-N	5.39	1.40	1.34
11	B2	244	G	C3'-C2'	-5.39	1.44	1.52
11	B2	1493	C	C4'-C3'	-5.39	1.44	1.52
27	BO	119	ARG	NE-CZ	5.39	1.39	1.33
38	A1	2282	G	C5'-C4'	5.39	1.59	1.51
46	AD	42	ARG	CZ-NH1	5.39	1.40	1.32
56	AJ	60	ASP	CA-C	-5.39	1.45	1.52
56	AJ	90	ARG	NE-CZ	5.39	1.39	1.33
60	AM	167	LYS	C-N	5.39	1.41	1.33
11	B2	1254	C	C4'-O4'	5.38	1.53	1.45
11	B2	1463	A	C1'-N9	5.38	1.56	1.48
38	A1	1246	G	O5'-C5'	5.38	1.50	1.42
38	A1	2761	G	C3'-O3'	5.38	1.50	1.42
38	A1	2849	C	C4'-O4'	5.38	1.53	1.45
40	AK	31	ASN	CA-C	-5.38	1.45	1.52
38	A1	1441	C	C5'-C4'	5.38	1.59	1.51
45	AC	261	PRO	C-N	5.38	1.41	1.33
55	Ai	12	ARG	CZ-NH2	5.38	1.40	1.33
56	AJ	27	LEU	N-CA	-5.38	1.39	1.45
11	B2	164	A	C6-N6	5.38	1.44	1.33
11	B2	1273	G	C2'-C1'	-5.38	1.45	1.53
22	BJ	56	ARG	C-N	5.38	1.41	1.33
38	A1	619	G	C2'-C1'	-5.38	1.45	1.53
38	A1	1370	G	O3'-P	-5.38	1.53	1.61
38	A1	1465	A	C4'-C3'	5.38	1.60	1.52
38	A1	2005	A	O3'-P	-5.38	1.53	1.61
54	AI	80	ARG	CZ-NH1	5.38	1.40	1.32
11	B2	498	C	C3'-C2'	5.38	1.60	1.52
11	B2	739	G	C3'-O3'	5.38	1.50	1.42
27	BO	5	ARG	NE-CZ	5.38	1.39	1.33
38	A1	175	G	O3'-P	-5.38	1.53	1.61
38	A1	1519	G	C4'-C3'	5.38	1.60	1.52
58	Ak	117	LYS	N-CA	-5.38	1.39	1.46
5	AS	62	PRO	CA-C	-5.38	1.45	1.52
11	B2	578	G	O4'-C1'	5.38	1.49	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	BN	102	GLU	CA-C	-5.38	1.46	1.52
38	A1	2139	A	C4'-C3'	5.38	1.60	1.52
38	A1	3033	G	C4'-C3'	5.38	1.60	1.52
39	A3	21	C	C3'-C2'	5.38	1.61	1.52
60	AM	172	LEU	C-N	5.38	1.41	1.33
62	AO	69	ARG	CD-NE	5.38	1.53	1.46
11	B2	619	A	C4'-O4'	-5.38	1.37	1.45
32	BT	21	LEU	C-O	5.38	1.30	1.23
38	A1	596	C	C5'-C4'	5.38	1.59	1.51
38	A1	1083	G	C2'-C1'	-5.38	1.45	1.53
38	A1	2802	G	C2'-C1'	-5.38	1.45	1.53
11	B2	1361	G	O4'-C1'	5.37	1.49	1.41
38	A1	1026	A	C2'-C1'	5.37	1.61	1.53
38	A1	1206	A	P-O5'	-5.37	1.51	1.59
38	A1	1601	G	C4'-O4'	-5.37	1.37	1.45
38	A1	1720	G	C2-N2	5.37	1.45	1.34
38	A1	2750	C	C3'-O3'	5.37	1.50	1.42
41	AA	183	ALA	CA-C	-5.37	1.45	1.52
62	AO	150	ALA	CA-CB	5.37	1.61	1.53
66	AY	135	LYS	N-CA	-5.37	1.39	1.46
67	AZ	48	ASP	CA-CB	5.37	1.61	1.53
11	B2	644	G	C4'-O4'	5.37	1.53	1.45
22	BJ	63	ALA	N-CA	-5.37	1.40	1.46
38	A1	146	U	C3'-C2'	5.37	1.60	1.52
38	A1	761	U	C5'-C4'	5.37	1.59	1.51
38	A1	1027	A	C2'-C1'	-5.37	1.45	1.53
40	AK	18	ALA	C-N	5.37	1.40	1.33
64	AR	49	TYR	CA-C	-5.37	1.46	1.52
7	AU	29	ALA	C-N	5.37	1.40	1.33
34	BV	87	LEU	CA-C	5.37	1.59	1.52
38	A1	319	A	C4'-O4'	5.37	1.53	1.45
38	A1	762	G	C3'-O3'	-5.37	1.34	1.42
4	AQ	54	PRO	C-O	5.37	1.30	1.23
11	B2	12	U	P-O5'	-5.37	1.51	1.59
20	BH	92	SER	CA-C	-5.37	1.45	1.52
31	BS	43	SER	CA-C	-5.37	1.46	1.52
38	A1	701	G	O3'-P	-5.37	1.53	1.61
38	A1	1169	G	O4'-C1'	5.37	1.49	1.41
38	A1	2980	G	C2'-C1'	-5.37	1.45	1.53
41	AA	194	ARG	CZ-NH2	5.37	1.40	1.33
54	AI	66	PHE	CA-C	-5.37	1.46	1.52
11	B2	783	G	O5'-C5'	5.37	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1157	G	C4'-C3'	5.37	1.60	1.52
16	BD	157	THR	CA-C	-5.37	1.45	1.52
38	A1	2462	U	C1'-N1	5.37	1.56	1.48
38	A1	2488	C	O3'-P	-5.37	1.53	1.61
38	A1	2949	G	C1'-N9	5.37	1.56	1.48
12	AG	117	LYS	C-N	5.37	1.40	1.33
59	AL	90	GLN	CA-C	-5.37	1.45	1.52
9	AX	230	ARG	CZ-NH1	5.37	1.40	1.32
11	B2	869	U	C3'-O3'	5.37	1.50	1.42
38	A1	910	G	N7-C5	-5.37	1.28	1.39
45	AC	9	ARG	CZ-NH1	5.37	1.40	1.32
11	B2	625	G	C3'-O3'	5.36	1.50	1.42
18	BF	107	GLY	C-N	5.36	1.40	1.33
38	A1	2261	C	C3'-C2'	5.36	1.60	1.52
43	AB	56	ALA	CA-C	-5.36	1.46	1.52
11	B2	1203	G	C3'-O3'	5.36	1.50	1.42
13	BA	84	GLY	N-CA	5.36	1.52	1.45
5	AS	155	ARG	CD-NE	5.36	1.53	1.46
6	AT	41	ARG	CA-C	-5.36	1.45	1.52
11	B2	479	C	C5'-C4'	5.36	1.59	1.51
11	B2	524	U	C1'-N1	5.36	1.56	1.48
11	B2	964	A	O3'-P	-5.36	1.53	1.61
11	B2	1381	G	O3'-P	-5.36	1.53	1.61
22	BJ	123	ILE	C-N	5.36	1.40	1.33
28	BP	3	LYS	CA-C	-5.36	1.45	1.52
38	A1	287	G	C4'-O4'	5.36	1.53	1.45
38	A1	1006	A	C6-N6	5.36	1.44	1.33
38	A1	2968	G	C3'-O3'	5.36	1.50	1.42
46	AD	251	ARG	CZ-NH1	5.36	1.40	1.32
9	AX	430	ILE	N-CA	-5.36	1.39	1.46
10	B1	27	A	O3'-P	-5.36	1.53	1.61
38	A1	2808	C	C5'-C4'	5.36	1.59	1.51
11	B2	5	C	P-O5'	5.36	1.67	1.59
20	BH	118	ASN	C-N	5.36	1.40	1.33
38	A1	354	G	N1-C2	5.36	1.48	1.37
38	A1	2531	G	C4'-O4'	5.36	1.53	1.45
38	A1	2582	C	O4'-C1'	5.36	1.49	1.41
38	A1	2814	U	C2'-C1'	-5.36	1.45	1.53
39	A3	115	C	P-O5'	-5.36	1.51	1.59
46	AD	242	TRP	CA-C	-5.36	1.45	1.52
10	B1	35	G	P-O5'	5.36	1.67	1.59
10	B1	47	G	C5'-C4'	5.36	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	270	A	P-O5'	-5.36	1.51	1.59
11	B2	957	A	C4'-O4'	-5.36	1.37	1.45
14	BB	48	THR	CA-CB	-5.36	1.45	1.53
38	A1	824	C	O3'-P	-5.36	1.53	1.61
59	AL	34	ARG	CZ-NH2	5.36	1.40	1.33
61	AN	134	SER	C-O	-5.36	1.17	1.23
13	BA	123	ALA	N-CA	5.35	1.52	1.46
38	A1	955	A	C5'-C4'	5.35	1.59	1.51
38	A1	1851	U	C1'-N1	5.35	1.56	1.48
38	A1	1885	G	P-O5'	5.35	1.67	1.59
40	AK	33	VAL	CA-C	-5.35	1.46	1.52
38	A1	50	C	C4-N4	5.35	1.44	1.33
38	A1	2173	U	P-O5'	5.35	1.67	1.59
38	A1	2372	C	C3'-C2'	5.35	1.60	1.52
38	A1	2501	G	C2'-C1'	-5.35	1.45	1.53
55	Ai	36	HIS	CA-C	-5.35	1.46	1.52
55	Ai	72	THR	CA-CB	5.35	1.65	1.54
22	BJ	37	VAL	CA-C	-5.35	1.46	1.52
33	BU	43	ARG	NE-CZ	5.35	1.39	1.33
46	AD	28	PRO	N-CA	-5.35	1.40	1.47
18	BF	55	PRO	C-N	5.35	1.40	1.33
26	BN	73	VAL	N-CA	-5.35	1.39	1.46
38	A1	1488	C	O4'-C1'	5.35	1.49	1.41
50	AF	82	VAL	C-N	5.35	1.41	1.33
54	AI	76	ARG	CA-CB	-5.35	1.44	1.53
66	AY	110	LEU	C-N	5.35	1.39	1.33
22	BJ	95	ILE	CA-CB	-5.35	1.48	1.54
29	BQ	117	HIS	CG-CD2	-5.35	1.29	1.35
38	A1	1153	U	C5'-C4'	5.35	1.59	1.51
38	A1	2074	U	O5'-C5'	5.35	1.50	1.42
58	Ak	111	PRO	C-N	5.35	1.40	1.33
4	AQ	88	ARG	CZ-NH1	5.34	1.40	1.32
11	B2	1469	G	C2-N2	5.34	1.45	1.34
18	BF	11	ARG	CB-CG	5.34	1.68	1.52
38	A1	532	G	C1'-N9	5.34	1.55	1.48
38	A1	591	G	C4'-C3'	5.34	1.60	1.52
38	A1	2083	G	C2'-O2'	-5.34	1.34	1.42
45	AC	37	ARG	C-N	5.34	1.40	1.33
66	AY	82	ASP	C-N	5.34	1.41	1.33
11	B2	86	C	O3'-P	-5.34	1.53	1.61
38	A1	2062	A	C6-N6	5.34	1.44	1.33
55	Ai	16	ARG	CD-NE	5.34	1.53	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	365	C	N1-C2	5.34	1.50	1.40
11	B2	1202	G	C4'-O4'	5.34	1.53	1.45
11	B2	1240	A	C1'-N9	5.34	1.54	1.47
21	BI	105	SER	N-CA	-5.34	1.39	1.46
42	Aa	52	PRO	CA-C	-5.34	1.42	1.52
25	BM	29	HIS	CB-CG	5.34	1.57	1.50
35	BW	44	LEU	CA-C	-5.34	1.46	1.52
35	BW	62	LEU	CA-C	-5.34	1.46	1.53
38	A1	803	A	C3'-O3'	5.34	1.51	1.43
38	A1	1155	A	O4'-C1'	5.34	1.49	1.41
38	A1	2700	U	C2'-C1'	-5.34	1.45	1.53
40	AK	8	ARG	CD-NE	5.34	1.53	1.46
11	B2	152	G	P-O5'	5.34	1.67	1.59
11	B2	1407	U	O3'-P	-5.34	1.53	1.61
38	A1	1269	U	C5'-C4'	5.34	1.59	1.51
38	A1	2503	C	C5'-C4'	5.34	1.59	1.51
11	B2	765	U	C5'-C4'	5.34	1.59	1.51
16	BD	129	HIS	ND1-CE1	5.34	1.37	1.32
18	BF	8	TYR	C-O	-5.34	1.17	1.24
24	BL	38	ILE	N-CA	5.34	1.51	1.46
36	BX	55	LEU	CA-C	-5.34	1.46	1.52
38	A1	424	U	C5'-C4'	5.34	1.59	1.51
38	A1	1004	U	C1'-N1	5.34	1.56	1.48
38	A1	1443	G	C5'-C4'	5.34	1.59	1.51
38	A1	1956	G	O3'-P	-5.34	1.53	1.61
51	Ag	7	ALA	C-N	5.33	1.41	1.33
52	AH	49	MET	CA-C	-5.33	1.46	1.52
11	B2	982	U	O3'-P	-5.33	1.53	1.61
38	A1	512	G	O3'-P	-5.33	1.53	1.61
38	A1	1802	G	C5'-C4'	5.33	1.59	1.51
38	A1	2827	C	C1'-N1	5.33	1.56	1.48
40	A5	4	ILE	CA-CB	-5.33	1.47	1.54
49	Ae	45	ARG	CD-NE	5.33	1.53	1.46
60	AM	89	LYS	CA-CB	-5.33	1.45	1.53
62	AO	13	ARG	CZ-NH1	5.33	1.40	1.32
64	AR	59	HIS	ND1-CE1	5.33	1.37	1.32
4	AQ	129	GLY	C-N	5.33	1.41	1.33
5	AS	82	ARG	CA-CB	5.33	1.62	1.53
14	BB	128	ARG	CZ-NH2	5.33	1.40	1.33
38	A1	758	C	O3'-P	-5.33	1.53	1.61
38	A1	1140	C	C2'-C1'	-5.33	1.45	1.53
38	A1	2599	C	C5'-C4'	5.33	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	AA	32	VAL	CA-CB	-5.33	1.47	1.54
41	AA	62	ILE	C-N	5.33	1.40	1.33
40	AK	64	ARG	C-N	5.33	1.40	1.33
58	Ak	24	VAL	CA-C	-5.33	1.46	1.52
18	BF	193	THR	C-N	5.33	1.41	1.34
38	A1	1869	U	C2'-O2'	-5.33	1.34	1.42
38	A1	2651	G	C2'-C1'	-5.33	1.45	1.53
9	AX	16	LEU	CB-CG	5.33	1.64	1.53
9	AX	327	CYS	N-CA	5.33	1.52	1.46
20	BH	107	ALA	CA-C	-5.33	1.45	1.52
38	A1	1080	G	O3'-P	-5.33	1.53	1.61
38	A1	1199	U	C2'-C1'	-5.33	1.45	1.53
41	AA	58	LYS	N-CA	-5.33	1.39	1.45
59	AL	122	LEU	N-CA	-5.33	1.39	1.45
38	A1	61	G	C1'-N9	5.33	1.55	1.48
19	BG	118	GLN	C-N	5.33	1.40	1.33
38	A1	438	G	C4'-C3'	5.33	1.60	1.52
38	A1	1027	A	C4'-O4'	5.33	1.53	1.45
38	A1	1469	U	N3-C4	5.33	1.49	1.38
38	A1	2304	C	C4'-C3'	5.33	1.60	1.52
42	Aa	30	ARG	CA-CB	5.33	1.61	1.53
48	AE	154	LYS	C-N	5.33	1.41	1.33
51	Ag	37	LYS	CA-CB	5.33	1.60	1.53
10	B1	28	C	O4'-C1'	5.32	1.49	1.41
11	B2	255	G	C4'-C3'	5.32	1.60	1.52
16	BD	92	VAL	CA-C	5.32	1.59	1.52
21	BI	9	ASN	C-N	5.32	1.41	1.33
38	A1	497	G	C5'-C4'	5.32	1.59	1.51
38	A1	1140	C	C3'-O3'	5.32	1.50	1.42
38	A1	2718	G	C2'-C1'	-5.32	1.45	1.53
38	A1	3015	A	C6-N6	5.32	1.44	1.33
40	A5	63	PRO	N-CA	-5.32	1.40	1.47
63	AP	76	LYS	N-CA	-5.32	1.39	1.46
11	B2	461	A	O3'-P	-5.32	1.53	1.61
38	A1	510	A	C4'-C3'	5.32	1.60	1.52
38	A1	2368	G	C4'-C3'	5.32	1.60	1.52
11	B2	1245	C	C4'-C3'	5.32	1.61	1.53
13	BA	177	ILE	N-CA	5.32	1.52	1.46
17	BE	140	LEU	C-N	5.32	1.40	1.33
38	A1	429	U	C1'-N1	5.32	1.55	1.47
38	A1	1351	G	C2'-C1'	-5.32	1.45	1.53
62	AO	63	HIS	CG-ND1	5.32	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	BD	64	LYS	CA-C	5.32	1.60	1.52
38	A1	1861	G	P-O5'	-5.32	1.51	1.59
38	A1	2164	G	N7-C5	-5.32	1.28	1.39
38	A1	2280	G	C5'-C4'	5.32	1.59	1.51
60	AM	160	ARG	NE-CZ	5.32	1.39	1.33
38	A1	801	A	C5'-C4'	5.32	1.59	1.51
57	Aj	47	TYR	CZ-OH	5.32	1.49	1.38
59	AL	114	GLY	CA-C	-5.32	1.44	1.51
11	B2	6	G	C2'-C1'	-5.32	1.45	1.53
11	B2	1099	A	O4'-C1'	5.32	1.49	1.41
17	BE	215	ILE	C-N	5.32	1.40	1.33
38	A1	2055	U	P-O5'	-5.32	1.51	1.59
61	AN	79	ARG	CD-NE	5.32	1.53	1.46
65	AV	53	THR	CA-C	-5.32	1.46	1.52
9	AX	304	TYR	CA-CB	5.31	1.62	1.53
11	B2	1443	G	C2'-C1'	-5.31	1.45	1.53
21	BI	119	LYS	N-CA	-5.31	1.40	1.46
2	A8	22	THR	CB-OG1	-5.31	1.35	1.43
29	BQ	12	SER	C-N	5.31	1.41	1.33
38	A1	218	A	C4'-O4'	5.31	1.53	1.45
38	A1	558	C	C2'-C1'	-5.31	1.45	1.53
38	A1	2063	U	C2'-C1'	5.31	1.61	1.53
66	AY	12	ARG	CZ-NH2	5.31	1.40	1.33
38	A1	1668	G	C4'-O4'	-5.31	1.37	1.45
11	B2	186	U	O4'-C1'	-5.31	1.33	1.41
11	B2	1103	G	C4'-O4'	5.31	1.53	1.45
15	BC	82	VAL	CA-C	5.31	1.59	1.52
19	BG	108	ARG	CD-NE	5.31	1.53	1.46
29	BQ	44	GLY	C-N	5.31	1.40	1.33
31	BS	44	LYS	N-CA	-5.31	1.39	1.46
38	A1	2806	A	C2'-C1'	-5.31	1.45	1.53
39	A3	89	G	C1'-N9	5.31	1.55	1.48
41	AA	56	ARG	NE-CZ	5.31	1.38	1.33
8	AW	65	ARG	CD-NE	5.31	1.53	1.46
11	B2	781	U	C1'-N1	5.31	1.56	1.48
38	A1	2067	U	O4'-C1'	5.31	1.50	1.42
38	A1	2342	C	C4'-C3'	5.31	1.60	1.52
38	A1	3032	C	C5'-C4'	5.31	1.59	1.51
47	Ad	75	CYS	C-O	-5.31	1.17	1.24
67	AZ	42	PRO	C-N	5.31	1.40	1.33
11	B2	1275	U	C3'-C2'	-5.31	1.44	1.52
38	A1	279	G	C6-N1	5.31	1.50	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	AD	244	VAL	CA-C	-5.31	1.46	1.52
8	AW	19	ARG	NE-CZ	5.30	1.38	1.33
10	B1	32	A	C4'-O4'	5.30	1.53	1.45
19	BG	8	ILE	CA-CB	-5.30	1.48	1.54
20	BH	53	LYS	N-CA	-5.30	1.40	1.46
38	A1	169	G	C5'-C4'	5.30	1.59	1.51
38	A1	407	A	O5'-C5'	5.30	1.50	1.42
38	A1	661	G	C3'-C2'	5.30	1.60	1.52
38	A1	740	C	C3'-C2'	-5.30	1.44	1.52
38	A1	2791	C	O4'-C1'	5.30	1.49	1.41
66	AY	127	ARG	NE-CZ	5.30	1.38	1.33
38	A1	533	G	C5'-C4'	5.30	1.59	1.51
38	A1	1764	G	O5'-C5'	5.30	1.50	1.42
11	B2	795	G	O3'-P	-5.30	1.53	1.61
26	BN	147	ARG	CZ-NH2	5.30	1.40	1.33
32	BT	31	ARG	CD-NE	5.30	1.53	1.46
59	AL	65	ARG	CZ-NH2	5.30	1.40	1.33
5	AS	52	ASP	CA-C	-5.30	1.46	1.52
11	B2	651	U	O5'-C5'	5.30	1.50	1.42
38	A1	923	A	C5'-C4'	5.30	1.59	1.51
38	A1	1553	G	O3'-P	-5.30	1.53	1.61
46	AD	32	ARG	C-N	5.30	1.41	1.33
66	AY	13	VAL	CA-C	-5.30	1.46	1.52
11	B2	384	G	C2'-C1'	-5.30	1.45	1.53
11	B2	1331	G	C4'-O4'	-5.30	1.37	1.45
22	BJ	26	ARG	CZ-NH1	5.30	1.40	1.32
11	B2	1006	C	C4'-O4'	5.30	1.53	1.45
16	BD	27	ARG	CD-NE	5.30	1.53	1.46
29	BQ	108	HIS	ND1-CE1	5.30	1.37	1.32
38	A1	2078	A	C2'-C1'	-5.30	1.45	1.53
48	AE	59	ARG	C-N	5.30	1.40	1.33
49	Ae	45	ARG	CZ-NH1	5.30	1.40	1.32
54	AI	42	ARG	NE-CZ	5.30	1.38	1.33
60	AM	106	ARG	NE-CZ	5.30	1.38	1.33
4	AQ	78	PRO	CA-C	-5.29	1.46	1.52
46	AD	235	HIS	CA-CB	5.29	1.61	1.53
49	Ae	43	SER	CA-C	-5.29	1.46	1.52
67	AZ	60	VAL	CA-CB	5.29	1.60	1.54
17	BE	46	LEU	CA-C	-5.29	1.45	1.52
18	BF	178	ALA	CA-C	-5.29	1.47	1.52
20	BH	157	ARG	CA-C	-5.29	1.45	1.52
38	A1	1233	U	C2'-O2'	-5.29	1.34	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	AB	93	VAL	C-N	5.29	1.41	1.33
58	Ak	177	LEU	CA-CB	5.29	1.61	1.53
63	AP	40	PRO	C-N	5.29	1.41	1.34
67	AZ	55	LEU	CA-C	-5.29	1.46	1.52
11	B2	101	G	C3'-O3'	5.29	1.50	1.42
11	B2	942	A	C3'-O3'	5.29	1.50	1.42
11	B2	1017	U	C2'-O2'	-5.29	1.33	1.41
27	BO	120	HIS	C-N	5.29	1.40	1.33
27	BO	131	THR	CA-C	-5.29	1.46	1.52
36	BX	71	ARG	NE-CZ	5.29	1.38	1.33
38	A1	1701	C	C5'-C4'	5.29	1.59	1.51
38	A1	1858	G	C4'-C3'	5.29	1.61	1.53
62	AO	188	VAL	CA-CB	5.29	1.61	1.54
13	BA	34	LEU	CA-C	-5.29	1.46	1.52
17	BE	164	VAL	C-N	5.29	1.40	1.33
38	A1	1410	A	O3'-P	-5.29	1.53	1.61
18	BF	172	LYS	N-CA	-5.29	1.40	1.46
20	BH	20	ARG	CA-C	-5.29	1.47	1.52
29	BQ	83	GLU	C-O	-5.29	1.18	1.24
38	A1	127	C	O4'-C1'	-5.29	1.33	1.41
38	A1	834	G	C2'-C1'	-5.29	1.45	1.53
38	A1	1608	G	C4'-C3'	-5.29	1.44	1.52
38	A1	2269	C	C4'-C3'	5.29	1.60	1.52
41	AA	16	LYS	CA-C	-5.29	1.46	1.52
45	AC	236	ARG	C-N	5.29	1.40	1.33
58	Ak	29	ASP	CA-C	-5.29	1.46	1.52
62	AO	58	THR	N-CA	-5.29	1.39	1.46
66	AY	8	ARG	CA-CB	5.29	1.59	1.53
28	BP	2	ALA	C-N	5.29	1.40	1.33
62	AO	97	ALA	CA-C	-5.29	1.46	1.52
11	B2	178	C	O5'-C5'	5.29	1.50	1.42
11	B2	275	A	O3'-P	-5.29	1.53	1.61
11	B2	977	G	C2'-O2'	-5.29	1.34	1.42
18	BF	134	ARG	CZ-NH2	5.29	1.40	1.33
29	BQ	102	ALA	C-N	5.29	1.40	1.33
32	BT	98	MET	C-N	5.29	1.40	1.33
38	A1	148	C	C1'-N1	5.29	1.56	1.48
38	A1	1086	U	C3'-C2'	-5.29	1.44	1.52
38	A1	2750	C	P-O5'	-5.29	1.51	1.59
49	Ae	17	HIS	C-N	5.29	1.40	1.33
9	AX	190	GLU	C-N	5.28	1.41	1.33
15	BC	69	LEU	CA-C	-5.28	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2101	A	C4'-C3'	5.28	1.60	1.52
39	A3	69	C	C2'-C1'	-5.28	1.45	1.53
48	AE	169	GLU	CA-CB	-5.28	1.45	1.53
66	AY	75	ILE	CA-C	-5.28	1.46	1.52
23	BK	115	GLU	N-CA	-5.28	1.37	1.45
33	BU	70	ILE	CA-C	-5.28	1.47	1.53
43	AB	9	ARG	NE-CZ	5.28	1.38	1.33
52	AH	50	GLN	C-N	5.28	1.37	1.33
64	AR	42	HIS	ND1-CE1	5.28	1.37	1.32
6	AT	75	SER	C-N	5.28	1.40	1.33
11	B2	756	A	C2'-C1'	-5.28	1.45	1.53
20	BH	81	VAL	C-N	5.28	1.40	1.33
38	A1	132	G	C2'-C1'	-5.28	1.45	1.53
38	A1	2565	A	C2'-C1'	-5.28	1.45	1.53
11	B2	840	C	C2'-C1'	-5.28	1.45	1.53
40	A5	33	VAL	CA-C	-5.28	1.46	1.52
56	AJ	45	GLU	C-N	5.28	1.40	1.33
11	B2	459	G	N1-C2	5.28	1.48	1.37
11	B2	927	A	C5'-C4'	5.28	1.59	1.51
14	BB	90	ARG	NE-CZ	5.28	1.38	1.33
38	A1	303	A	C4'-C3'	5.28	1.60	1.52
38	A1	2176	G	C5'-C4'	5.28	1.59	1.51
38	A1	2265	C	C1'-N1	5.28	1.56	1.48
38	A1	2773	A	O4'-C1'	-5.28	1.33	1.41
38	A1	3007	A	O4'-C1'	5.28	1.49	1.41
48	AE	157	ARG	NE-CZ	5.28	1.38	1.33
50	AF	78	MET	CA-CB	5.28	1.61	1.53
54	AI	79	ILE	C-N	5.28	1.40	1.33
4	AQ	66	ARG	NE-CZ	5.28	1.38	1.33
11	B2	1495	U	C3'-O3'	5.28	1.50	1.42
32	BT	82	TYR	C-N	5.28	1.40	1.33
38	A1	1685	C	O5'-C5'	5.28	1.50	1.42
39	A3	87	G	O4'-C1'	5.28	1.49	1.41
11	B2	740	G	C3'-O3'	5.27	1.50	1.42
38	A1	213	G	O3'-P	-5.27	1.53	1.61
38	A1	1505	G	C2'-C1'	-5.27	1.45	1.53
38	A1	1181	C	C4-N4	5.27	1.44	1.33
38	A1	1331	U	C3'-O3'	5.27	1.50	1.42
38	A1	2483	U	C4'-C3'	5.27	1.60	1.52
45	AC	99	VAL	CA-C	-5.27	1.46	1.52
52	AH	59	PRO	CA-C	5.27	1.61	1.52
66	AY	17	ARG	CZ-NH1	5.27	1.40	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	103	A	C2'-C1'	-5.27	1.45	1.53
38	A1	82	C	C5'-C4'	5.27	1.59	1.51
38	A1	777	A	C5'-C4'	5.27	1.59	1.51
38	A1	2787	G	C2-N3	5.27	1.43	1.32
39	A3	15	G	C2'-C1'	-5.27	1.45	1.53
46	AD	29	ASP	CA-C	-5.27	1.46	1.52
58	Ak	180	LEU	CA-C	5.27	1.59	1.52
9	AX	310	ILE	CA-C	-5.27	1.45	1.52
17	BE	83	PHE	CA-CB	5.27	1.61	1.53
21	BI	68	ARG	CD-NE	5.27	1.53	1.46
23	BK	2	ARG	N-CA	-5.27	1.39	1.45
38	A1	1276	G	C4'-C3'	5.27	1.60	1.52
38	A1	1357	G	C5'-C4'	5.27	1.59	1.51
38	A1	2281	A	P-O5'	-5.27	1.51	1.59
43	AB	54	ARG	C-N	5.27	1.40	1.33
45	AC	31	PRO	C-N	5.27	1.40	1.33
57	Aj	66	ASP	C-O	-5.27	1.18	1.23
60	AM	120	GLY	CA-C	-5.27	1.46	1.52
66	AY	120	HIS	CG-ND1	-5.27	1.32	1.38
4	AQ	84	LYS	CA-C	-5.27	1.47	1.53
11	B2	1411	G	C4'-O4'	5.27	1.53	1.45
13	BA	29	GLY	C-N	5.27	1.40	1.33
38	A1	130	G	O3'-P	-5.27	1.53	1.61
12	AG	63	VAL	CA-C	-5.27	1.44	1.52
66	AY	73	ARG	CZ-NH1	5.27	1.40	1.32
9	AX	28	LYS	C-N	5.27	1.40	1.33
38	A1	1478	G	C4'-C3'	5.27	1.60	1.52
38	A1	2047	U	C3'-O3'	-5.27	1.34	1.42
17	BE	73	VAL	CA-CB	-5.26	1.47	1.54
38	A1	1406	G	C5'-C4'	5.26	1.59	1.51
39	A3	71	G	C2'-C1'	-5.26	1.45	1.53
62	AO	88	LEU	N-CA	-5.26	1.39	1.46
67	AZ	95	ALA	C-O	-5.26	1.17	1.24
11	B2	813	G	O3'-P	-5.26	1.53	1.61
18	BF	111	ARG	CA-C	-5.26	1.46	1.52
20	BH	145	ARG	C-N	5.26	1.41	1.33
23	BK	103	ASP	CA-C	-5.26	1.46	1.52
41	AA	33	ASN	C-N	5.26	1.40	1.33
52	AH	39	ILE	N-CA	-5.26	1.40	1.46
9	AX	131	ALA	CA-C	-5.26	1.46	1.52
11	B2	612	C	C1'-N1	5.26	1.56	1.48
11	B2	1340	U	C1'-N1	-5.26	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B3	91	GLY	CA-C	-5.26	1.44	1.51
18	BF	205	LEU	CA-C	5.26	1.59	1.52
19	BG	38	ILE	C-N	-5.26	1.26	1.33
30	BR	52	GLN	C-N	5.26	1.40	1.33
47	Ad	48	ARG	NE-CZ	5.26	1.38	1.33
48	AE	138	ASP	C-O	-5.26	1.18	1.23
66	AY	92	THR	N-CA	-5.26	1.39	1.46
12	B3	11	VAL	N-CA	-5.26	1.42	1.46
17	BE	73	VAL	CA-C	-5.26	1.46	1.52
38	A1	1884	C	C2'-C1'	-5.26	1.45	1.53
38	A1	2083	G	O4'-C1'	5.26	1.49	1.41
11	B2	1284	C	C5'-C4'	5.26	1.59	1.51
17	BE	240	ILE	C-O	-5.26	1.17	1.24
34	BV	45	ASP	C-N	5.26	1.40	1.33
37	BY	12	ASP	N-CA	-5.26	1.40	1.46
12	AG	39	THR	CA-C	5.26	1.59	1.52
66	AY	2	ALA	CA-C	-5.26	1.46	1.52
7	AU	112	ARG	NE-CZ	5.26	1.38	1.33
11	B2	418	G	C4'-C3'	-5.26	1.44	1.52
11	B2	1466	G	C4'-C3'	5.26	1.60	1.52
17	BE	199	ILE	CA-CB	5.26	1.60	1.54
22	BJ	42	LYS	N-CA	-5.26	1.40	1.46
25	BM	27	ILE	CA-C	-5.26	1.46	1.52
27	BO	74	ILE	CA-C	-5.26	1.47	1.52
38	A1	78	C	O4'-C1'	5.26	1.49	1.41
38	A1	2613	C	C5'-C4'	5.26	1.59	1.51
57	Aj	50	PHE	CG-CD1	5.26	1.49	1.38
29	BQ	138	ARG	NE-CZ	5.25	1.38	1.33
38	A1	1136	G	N1-C2	5.25	1.48	1.37
38	A1	1511	C	C5'-C4'	5.25	1.59	1.51
38	A1	1582	G	C3'-O3'	5.25	1.50	1.42
40	A5	22	VAL	C-N	5.25	1.41	1.33
11	B2	11	A	C2'-C1'	-5.25	1.45	1.53
29	BQ	128	LYS	CA-C	-5.25	1.46	1.52
38	A1	398	U	C5'-C4'	5.25	1.59	1.51
38	A1	2739	G	C2'-C1'	-5.25	1.45	1.53
38	A1	2846	A	C3'-C2'	-5.25	1.44	1.52
48	AE	179	PHE	C-O	-5.25	1.17	1.24
66	AY	132	ARG	NE-CZ	5.25	1.38	1.33
38	A1	2245	C	O4'-C1'	5.25	1.49	1.41
38	A1	2281	A	O3'-P	-5.25	1.53	1.61
11	B2	882	C	C3'-O3'	5.25	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
13	BA	196	VAL	CA-CB	-5.25	1.47	1.54
38	A1	448	A	C2'-O2'	5.25	1.50	1.42
38	A1	2408	G	C2-N3	5.25	1.43	1.32
39	A3	74	U	O4'-C1'	5.25	1.49	1.42
43	AB	86	GLY	CA-C	-5.25	1.44	1.51
46	AD	201	VAL	C-O	5.25	1.30	1.23
65	AV	60	ARG	N-CA	-5.25	1.40	1.46
15	BC	98	ARG	CD-NE	5.25	1.53	1.46
20	BH	48	HIS	CA-CB	5.25	1.62	1.53
25	BM	10	LYS	CA-CB	5.25	1.61	1.53
25	BM	84	ARG	CZ-NH1	5.25	1.40	1.32
38	A1	215	A	C5'-C4'	5.25	1.59	1.51
38	A1	851	G	C2'-C1'	-5.25	1.45	1.53
38	A1	1398	C	C4'-C3'	5.25	1.60	1.52
38	A1	1486	G	C5'-C4'	5.25	1.59	1.51
38	A1	1633	A	C2'-C1'	-5.25	1.45	1.53
38	A1	1916	U	P-O5'	-5.25	1.51	1.59
55	Ai	61	ALA	CA-C	-5.25	1.46	1.52
4	AQ	133	LYS	C-N	5.25	1.41	1.33
9	AX	210	ILE	N-CA	-5.25	1.39	1.46
16	BD	27	ARG	NE-CZ	5.25	1.38	1.33
22	BJ	60	ALA	CA-C	-5.25	1.46	1.52
38	A1	241	C	C2'-C1'	-5.25	1.45	1.53
38	A1	1048	C	P-O5'	5.25	1.67	1.59
38	A1	1504	C	P-O5'	-5.25	1.51	1.59
38	A1	1688	C	C3'-C2'	-5.25	1.44	1.52
38	A1	1754	A	N9-C4	5.25	1.48	1.37
32	BT	54	ALA	C-N	5.25	1.41	1.33
38	A1	2584	A	O5'-C5'	5.25	1.50	1.42
38	A1	2987	U	O4'-C1'	-5.25	1.34	1.42
9	AX	125	LEU	CB-CG	5.24	1.64	1.53
38	A1	1090	G	N7-C5	-5.24	1.28	1.39
38	A1	1292	C	C4'-O4'	5.24	1.53	1.45
38	A1	2444	G	O4'-C1'	5.24	1.49	1.41
4	AQ	121	ARG	NE-CZ	5.24	1.38	1.33
18	BF	177	LEU	N-CA	-5.24	1.39	1.46
27	BO	13	VAL	CA-C	-5.24	1.46	1.52
38	A1	1520	G	C1'-N9	5.24	1.55	1.48
11	B2	755	U	P-O5'	-5.24	1.51	1.59
12	B3	111	VAL	CA-CB	-5.24	1.48	1.54
15	BC	75	LEU	CB-CG	5.24	1.64	1.53
18	BF	134	ARG	CA-C	-5.24	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BX	70	ARG	NE-CZ	5.24	1.38	1.33
38	A1	99	U	C4'-O4'	5.24	1.53	1.45
38	A1	821	U	C1'-N1	5.24	1.56	1.48
38	A1	1006	A	C3'-O3'	5.24	1.50	1.42
38	A1	2086	C	C4'-C3'	5.24	1.60	1.52
38	A1	2267	U	O4'-C1'	5.24	1.49	1.41
63	AP	91	ARG	C-O	-5.24	1.18	1.24
22	BJ	16	ARG	CA-CB	5.24	1.61	1.53
22	BJ	75	VAL	CA-C	-5.24	1.46	1.52
26	BN	56	GLU	C-N	5.24	1.41	1.33
26	BN	132	VAL	C-N	5.24	1.40	1.33
38	A1	1968	A	O5'-C5'	5.24	1.50	1.42
38	A1	2871	A	P-O5'	-5.24	1.51	1.59
41	AA	45	ARG	CZ-NH2	5.24	1.40	1.33
45	AC	154	MET	C-N	5.24	1.40	1.33
56	AJ	19	ARG	CA-C	-5.24	1.46	1.52
24	BL	90	VAL	CA-C	5.24	1.58	1.52
36	BX	70	ARG	C-N	5.24	1.40	1.33
38	A1	546	C	O5'-C5'	5.24	1.50	1.42
38	A1	2353	C	C5'-C4'	5.24	1.59	1.51
64	AR	50	HIS	ND1-CE1	5.24	1.37	1.32
11	B2	551	U	O5'-C5'	5.24	1.50	1.42
38	A1	849	C	C4'-C3'	-5.24	1.44	1.52
38	A1	2747	C	N3-C4	5.24	1.44	1.33
39	A3	2	G	O3'-P	-5.23	1.53	1.61
5	AS	11	ASN	C-O	-5.23	1.17	1.23
18	BF	101	GLY	CA-C	-5.23	1.46	1.51
38	A1	2434	A	C6-N1	5.23	1.46	1.35
38	A1	2797	C	C5'-C4'	5.23	1.59	1.51
9	AX	256	ASN	C-N	5.23	1.39	1.33
11	B2	326	C	O3'-P	-5.23	1.53	1.61
11	B2	962	G	O3'-P	-5.23	1.53	1.61
39	A3	116	C	C3'-O3'	5.23	1.50	1.42
43	AB	142	GLN	N-CA	-5.23	1.39	1.46
5	AS	135	ARG	CZ-NH1	5.23	1.40	1.32
11	B2	58	U	O3'-P	-5.23	1.53	1.61
1	A7	31	ASP	CA-C	-5.23	1.46	1.52
9	AX	198	ASN	N-CA	5.23	1.52	1.46
9	AX	374	ILE	CA-CB	5.23	1.60	1.54
11	B2	427	G	C1'-N9	5.23	1.55	1.48
11	B2	434	A	C3'-C2'	-5.23	1.45	1.52
11	B2	1106	A	O4'-C1'	5.23	1.49	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1426	C	C2'-O2'	5.23	1.50	1.42
38	A1	672	C	C2'-C1'	-5.23	1.45	1.53
38	A1	2700	U	C3'-O3'	5.23	1.50	1.42
48	AE	84	GLY	CA-C	5.23	1.59	1.51
49	Ae	48	LYS	C-N	5.23	1.40	1.33
61	AN	108	TYR	C-N	5.23	1.40	1.33
12	B3	64	ALA	N-CA	-5.23	1.39	1.46
12	B3	65	HIS	ND1-CE1	5.23	1.37	1.32
38	A1	406	G	C5'-C4'	5.23	1.59	1.51
38	A1	1591	C	O3'-P	-5.23	1.53	1.61
56	AJ	51	ARG	CZ-NH1	5.23	1.40	1.32
59	AL	57	HIS	CE1-NE2	-5.23	1.27	1.32
32	BT	114	GLU	C-N	5.22	1.40	1.33
33	BU	63	TYR	C-N	5.22	1.41	1.34
38	A1	1240	U	C3'-O3'	5.22	1.50	1.42
39	A3	49	A	O3'-P	-5.22	1.53	1.61
54	AI	101	VAL	N-CA	-5.22	1.40	1.46
67	AZ	27	ALA	C-N	5.22	1.40	1.33
10	B1	37	A	C5'-C4'	5.22	1.59	1.51
11	B2	576	C	O5'-C5'	5.22	1.50	1.42
14	BB	18	HIS	CD2-NE2	5.22	1.43	1.37
21	BI	3	LEU	CA-CB	5.22	1.59	1.52
24	BL	29	ARG	CA-CB	5.22	1.62	1.53
24	BL	48	THR	N-CA	-5.22	1.39	1.46
38	A1	1845	C	P-O5'	-5.22	1.51	1.59
38	A1	2836	G	C5'-C4'	5.22	1.59	1.51
47	Ad	74	ARG	CD-NE	5.22	1.53	1.46
11	B2	1439	G	O4'-C1'	5.22	1.49	1.41
38	A1	63	A	C6-N6	5.22	1.44	1.33
38	A1	1891	C	C3'-O3'	5.22	1.50	1.42
12	B3	44	GLU	CA-CB	5.22	1.61	1.53
38	A1	262	C	C3'-O3'	5.22	1.50	1.42
38	A1	1076	G	O4'-C1'	5.22	1.49	1.41
38	A1	1545	C	O4'-C1'	5.22	1.49	1.41
38	A1	1834	C	C5'-C4'	5.22	1.59	1.51
60	AM	131	ILE	CA-CB	-5.22	1.48	1.54
65	AV	60	ARG	C-N	5.22	1.40	1.33
11	B2	1146	G	C2-N3	5.22	1.43	1.32
34	BV	92	LEU	CB-CG	5.22	1.63	1.53
11	B2	279	U	C2'-C1'	-5.22	1.45	1.53
14	BB	19	ILE	N-CA	-5.22	1.40	1.46
38	A1	2738	G	C1'-N9	5.22	1.55	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2743	U	C3'-C2'	-5.22	1.45	1.52
40	A5	16	ARG	CZ-NH1	5.22	1.40	1.32
53	Ah	23	LEU	CA-C	-5.22	1.47	1.53
59	AL	15	HIS	N-CA	-5.22	1.38	1.46
38	A1	866	G	C2'-C1'	-5.21	1.45	1.53
38	A1	2799	C	C3'-C2'	5.21	1.60	1.52
38	A1	2855	G	C3'-C2'	5.21	1.60	1.52
53	Ah	12	ARG	CZ-NH2	5.21	1.40	1.33
24	BL	33	ARG	CD-NE	5.21	1.53	1.46
48	AE	137	MET	CA-C	-5.21	1.46	1.52
26	BN	113	GLY	CA-C	-5.21	1.45	1.51
38	A1	667	C	O3'-P	-5.21	1.53	1.61
38	A1	845	U	C3'-O3'	5.21	1.50	1.42
38	A1	908	U	C4'-C3'	5.21	1.60	1.52
43	AB	229	HIS	ND1-CE1	5.21	1.37	1.32
62	AO	186	GLU	C-N	5.21	1.40	1.33
9	AX	108	GLN	CA-C	-5.21	1.45	1.52
11	B2	999	G	P-O5'	-5.21	1.51	1.59
38	A1	2071	C	O5'-C5'	5.21	1.50	1.42
38	A1	2347	G	O3'-P	-5.21	1.53	1.61
7	AU	111	LYS	N-CA	-5.21	1.40	1.46
10	B1	31	G	C5'-C4'	5.21	1.59	1.51
11	B2	518	U	C4'-C3'	-5.21	1.44	1.52
11	B2	1041	C	C4'-C3'	5.21	1.60	1.52
11	B2	1136	A	C2'-C1'	-5.21	1.45	1.53
11	B2	1269	G	C5'-C4'	5.21	1.59	1.51
36	BX	7	TYR	N-CA	-5.21	1.40	1.46
38	A1	377	C	C4'-O4'	5.21	1.53	1.45
38	A1	468	A	C2'-C1'	-5.21	1.45	1.53
44	Ab	38	PRO	N-CD	-5.21	1.40	1.47
4	AQ	74	ARG	NE-CZ	5.21	1.38	1.33
11	B2	122	C	C4-N4	5.21	1.44	1.33
11	B2	148	C	C5'-C4'	5.21	1.59	1.51
11	B2	1056	G	C2'-C1'	-5.21	1.45	1.53
18	BF	92	ARG	CZ-NH1	5.21	1.40	1.32
23	BK	35	ILE	CA-CB	-5.21	1.48	1.54
26	BN	129	VAL	N-CA	-5.21	1.39	1.46
38	A1	875	G	C4'-C3'	5.21	1.60	1.52
38	A1	881	G	O3'-P	-5.21	1.53	1.61
38	A1	2019	C	C2'-C1'	-5.21	1.45	1.53
38	A1	2540	A	C4'-C3'	5.21	1.60	1.52
38	A1	2615	U	C5'-C4'	5.21	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	AU	80	GLY	C-N	5.21	1.40	1.33
38	A1	621	G	O3'-P	-5.21	1.53	1.61
38	A1	1644	G	C1'-N9	5.21	1.55	1.48
1	A7	38	LYS	N-CA	5.20	1.52	1.46
11	B2	792	C	C5'-C4'	5.20	1.59	1.51
13	BA	191	LEU	N-CA	-5.20	1.40	1.46
30	BR	73	HIS	ND1-CE1	5.20	1.37	1.32
33	BU	83	ARG	C-N	5.20	1.39	1.32
38	A1	2333	G	O3'-P	-5.20	1.53	1.61
50	AF	129	THR	CA-C	-5.20	1.46	1.52
12	AG	117	LYS	C-O	-5.20	1.17	1.24
58	AK	206	LEU	CA-C	-5.20	1.45	1.52
11	B2	480	G	C3'-O3'	5.20	1.50	1.42
15	BC	153	LYS	C-N	5.20	1.41	1.33
26	BN	146	ARG	NE-CZ	5.20	1.38	1.33
38	A1	927	G	C1'-N9	5.20	1.54	1.47
38	A1	1164	C	C1'-N1	5.20	1.55	1.47
52	AH	79	LYS	CA-CB	5.20	1.61	1.53
4	AQ	54	PRO	N-CA	-5.20	1.41	1.46
9	AX	408	VAL	CA-C	-5.20	1.46	1.52
11	B2	405	G	C5'-C4'	5.20	1.59	1.51
11	B2	1306	A	P-O5'	-5.20	1.51	1.59
11	B2	1462	A	C6-N1	5.20	1.46	1.35
23	BK	46	LEU	CA-CB	5.20	1.62	1.53
27	BO	41	ARG	C-N	5.20	1.40	1.33
37	BY	19	ASN	CA-CB	5.20	1.60	1.53
38	A1	51	G	C4'-C3'	-5.20	1.45	1.53
38	A1	203	G	C6-N1	5.20	1.50	1.39
41	AA	204	VAL	C-O	-5.20	1.18	1.24
45	AC	152	GLU	C-N	5.20	1.41	1.33
47	Ad	8	ARG	CA-C	-5.20	1.45	1.52
11	B2	3	U	C2'-C1'	-5.20	1.45	1.53
11	B2	569	G	C5-C6	-5.20	1.31	1.42
15	BC	27	ARG	CD-NE	5.20	1.53	1.46
17	BE	195	ARG	C-N	5.20	1.40	1.33
21	BI	33	LEU	C-N	5.20	1.40	1.33
38	A1	658	C	C2'-C1'	-5.20	1.45	1.53
41	AA	54	HIS	ND1-CE1	5.20	1.37	1.32
12	AG	119	LYS	C-N	5.20	1.41	1.33
61	AN	95	ARG	NE-CZ	5.20	1.38	1.33
66	AY	141	GLY	C-N	5.20	1.40	1.33
12	B3	102	ILE	CA-C	-5.20	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	BB	14	ALA	C-N	5.20	1.41	1.33
14	BB	40	LEU	N-CA	-5.20	1.39	1.46
46	AD	71	GLU	CA-C	5.20	1.59	1.52
46	AD	249	ARG	NE-CZ	5.20	1.38	1.33
66	AY	20	ARG	N-CA	-5.20	1.40	1.46
9	AX	51	GLN	C-N	5.20	1.38	1.33
13	BA	49	GLU	N-CA	-5.20	1.39	1.46
38	A1	1082	A	O4'-C1'	5.20	1.49	1.42
38	A1	2016	C	C3'-O3'	5.20	1.50	1.42
46	AD	24	THR	C-O	-5.20	1.17	1.24
55	Ai	63	PHE	CA-CB	5.20	1.62	1.53
61	AN	4	ARG	CD-NE	5.20	1.53	1.46
61	AN	46	GLU	N-CA	-5.20	1.39	1.46
9	AX	262	ALA	CA-C	5.19	1.59	1.52
11	B2	1217	C	C4'-C3'	5.19	1.60	1.52
39	A3	93	G	C4'-C3'	5.19	1.60	1.52
40	A5	56	LEU	CA-CB	5.19	1.61	1.53
45	AC	143	MET	N-CA	-5.19	1.40	1.46
11	B2	647	G	O4'-C1'	-5.19	1.33	1.41
11	B2	836	G	C3'-C2'	5.19	1.60	1.52
11	B2	1111	G	C2-N3	5.19	1.43	1.32
13	BA	37	ALA	CA-C	-5.19	1.46	1.52
16	BD	41	LEU	CA-CB	5.19	1.61	1.53
38	A1	481	G	C2'-C1'	-5.19	1.45	1.53
38	A1	2802	G	C1'-N9	5.19	1.55	1.48
38	A1	2981	G	C2-N3	5.19	1.43	1.32
62	AO	13	ARG	CD-NE	5.19	1.53	1.46
11	B2	120	C	P-O5'	-5.19	1.51	1.59
11	B2	791	G	C2'-C1'	-5.19	1.45	1.53
18	BF	157	ILE	CA-C	-5.19	1.47	1.52
38	A1	745	C	O4'-C1'	-5.19	1.33	1.41
38	A1	2635	C	C4'-O4'	-5.19	1.37	1.45
45	AC	318	ARG	NE-CZ	5.19	1.38	1.33
33	BU	81	LYS	C-O	-5.19	1.17	1.23
38	A1	1842	C	C4'-O4'	-5.19	1.37	1.45
58	Ak	142	ALA	N-CA	-5.19	1.40	1.46
66	AY	134	PHE	C-O	-5.19	1.18	1.24
11	B2	1230	G	C5'-C4'	5.19	1.59	1.51
38	A1	52	A	C1'-N9	-5.19	1.40	1.48
38	A1	188	A	C4'-C3'	5.19	1.60	1.53
38	A1	413	A	C4'-O4'	-5.19	1.38	1.45
38	A1	1489	G	C3'-C2'	-5.19	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	A5	64	ARG	NE-CZ	5.19	1.38	1.33
44	Ab	62	SER	C-N	5.19	1.40	1.33
9	AX	399	GLY	C-N	5.19	1.41	1.33
43	AB	128	TYR	CA-C	5.19	1.58	1.52
4	AQ	144	GLU	CA-C	-5.18	1.46	1.52
17	BE	128	ARG	CD-NE	5.18	1.53	1.46
26	BN	91	ASP	N-CA	-5.18	1.39	1.46
33	BU	56	ALA	N-CA	-5.18	1.40	1.46
38	A1	645	U	P-O5'	-5.18	1.51	1.59
38	A1	1454	G	O5'-C5'	5.18	1.50	1.42
61	AN	124	ALA	N-CA	-5.18	1.39	1.46
5	AS	148	VAL	C-N	5.18	1.40	1.33
11	B2	583	G	C2'-C1'	-5.18	1.45	1.53
11	B2	987	G	O5'-C5'	5.18	1.50	1.42
43	AB	143	LEU	N-CA	5.18	1.52	1.46
58	Ak	42	ARG	CD-NE	5.18	1.53	1.46
4	AQ	55	ILE	C-N	5.18	1.41	1.33
27	BO	38	MET	C-O	5.18	1.30	1.24
38	A1	322	C	C2'-C1'	-5.18	1.45	1.53
38	A1	2726	G	C3'-O3'	5.18	1.50	1.42
11	B2	533	C	C4'-O4'	5.18	1.53	1.45
18	BF	39	ARG	CZ-NH2	5.18	1.40	1.33
22	BJ	56	ARG	CA-CB	5.18	1.60	1.53
25	BM	23	PHE	C-N	5.18	1.40	1.33
38	A1	281	G	O4'-C1'	5.18	1.49	1.41
38	A1	802	G	C4'-C3'	-5.18	1.45	1.53
38	A1	1415	C	O3'-P	-5.18	1.53	1.61
38	A1	1604	G	C4'-C3'	5.18	1.60	1.52
46	AD	128	ARG	CA-C	-5.18	1.45	1.52
52	AH	35	VAL	C-N	5.18	1.40	1.34
56	AJ	40	ILE	CA-C	-5.18	1.46	1.52
19	BG	95	ARG	NE-CZ	5.18	1.38	1.33
38	A1	243	G	C2-N2	5.18	1.45	1.34
38	A1	793	C	C2'-O2'	-5.18	1.34	1.42
4	AQ	102	LEU	CA-C	-5.18	1.45	1.52
11	B2	129	G	C5'-C4'	5.18	1.59	1.51
11	B2	347	G	C4'-C3'	5.18	1.60	1.53
17	BE	40	ARG	CZ-NH2	5.18	1.40	1.33
38	A1	1955	U	C3'-O3'	-5.18	1.35	1.43
45	AC	80	VAL	CA-CB	-5.18	1.47	1.53
54	AI	91	ARG	NE-CZ	5.18	1.38	1.33
58	Ak	137	VAL	N-CA	5.18	1.52	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1315	G	P-O5'	-5.17	1.51	1.59
24	BL	70	LYS	CA-C	-5.17	1.46	1.52
38	A1	2026	C	C3'-C2'	-5.17	1.45	1.52
42	Aa	74	VAL	CA-CB	-5.17	1.46	1.54
47	Ad	71	LEU	C-N	5.17	1.40	1.33
11	B2	846	G	C4'-O4'	5.17	1.53	1.45
23	BK	43	PHE	CA-CB	5.17	1.61	1.53
27	BO	145	ARG	CD-NE	5.17	1.53	1.46
39	A3	71	G	C1'-N9	5.17	1.55	1.48
11	B2	315	A	C4'-C3'	5.17	1.60	1.52
38	A1	323	U	O4'-C1'	5.17	1.49	1.41
38	A1	366	G	C2'-C1'	-5.17	1.45	1.53
38	A1	1736	G	O3'-P	-5.17	1.53	1.61
43	AB	45	VAL	N-CA	-5.17	1.41	1.46
45	AC	230	THR	C-N	5.17	1.40	1.33
49	Ae	51	TRP	C-N	5.17	1.40	1.33
9	AX	209	TYR	N-CA	5.17	1.52	1.45
13	BA	173	GLU	CA-CB	5.17	1.61	1.53
32	BT	68	ARG	CZ-NH1	5.17	1.40	1.32
38	A1	338	A	O3'-P	-5.17	1.53	1.61
38	A1	875	G	C2'-C1'	-5.17	1.45	1.53
38	A1	1435	G	C2'-C1'	-5.17	1.45	1.53
11	B2	353	G	C2'-C1'	-5.17	1.45	1.53
13	BA	72	ASP	CA-C	-5.17	1.46	1.52
18	BF	10	LYS	C-N	5.17	1.41	1.33
26	BN	62	ALA	C-N	5.17	1.40	1.33
27	BO	92	HIS	ND1-CE1	5.17	1.37	1.32
38	A1	557	G	C2'-C1'	-5.17	1.45	1.53
40	A5	14	ALA	C-N	5.17	1.41	1.33
52	AH	92	HIS	ND1-CE1	5.17	1.37	1.32
54	AI	77	ARG	NE-CZ	5.17	1.38	1.33
5	AS	126	ARG	CZ-NH1	5.17	1.40	1.32
11	B2	345	G	C4'-O4'	5.17	1.53	1.45
15	BC	60	ARG	N-CA	-5.17	1.40	1.46
26	BN	139	LYS	C-N	5.17	1.41	1.33
29	BQ	16	ARG	CZ-NH1	5.17	1.40	1.32
33	BU	127	SER	N-CA	-5.17	1.40	1.46
38	A1	114	C	P-O5'	-5.17	1.52	1.59
38	A1	563	A	N3-C4	-5.17	1.24	1.34
38	A1	1502	C	O3'-P	-5.17	1.53	1.61
38	A1	1727	G	C1'-N9	5.17	1.55	1.48
54	AI	99	VAL	C-N	5.17	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	AM	167	LYS	CA-CB	5.17	1.61	1.53
17	BE	135	GLY	CA-C	-5.17	1.44	1.51
20	BH	164	ASN	CA-C	-5.17	1.46	1.52
11	B2	96	G	C4'-O4'	5.16	1.53	1.45
11	B2	513	A	N9-C4	-5.16	1.27	1.37
11	B2	733	C	C1'-N1	5.16	1.56	1.48
11	B2	1064	C	O3'-P	-5.16	1.53	1.61
17	BE	202	ILE	C-N	5.16	1.40	1.33
19	BG	103	ARG	CZ-NH1	5.16	1.40	1.32
22	BJ	113	ARG	NE-CZ	5.16	1.38	1.33
22	BJ	120	VAL	CA-C	-5.16	1.45	1.52
34	BV	65	SER	N-CA	-5.16	1.39	1.46
38	A1	616	C	O5'-C5'	5.16	1.50	1.42
38	A1	1492	C	C2'-C1'	-5.16	1.45	1.53
38	A1	2166	C	C4'-O4'	5.16	1.53	1.45
38	A1	2425	A	C3'-O3'	5.16	1.49	1.42
43	AB	28	VAL	C-O	-5.16	1.18	1.24
64	AR	54	PRO	CA-C	5.16	1.58	1.52
66	AY	107	LEU	CA-C	-5.16	1.46	1.52
38	A1	474	G	C2'-C1'	-5.16	1.45	1.53
38	A1	2897	C	C1'-N1	5.16	1.56	1.48
45	AC	207	LEU	CA-C	-5.16	1.46	1.52
57	Aj	30	ARG	CZ-NH2	5.16	1.40	1.33
2	A8	51	ARG	CA-CB	5.16	1.61	1.53
21	BI	54	ASP	CA-C	-5.16	1.46	1.52
21	BI	71	LYS	CA-C	-5.16	1.46	1.52
34	BV	49	GLU	N-CA	-5.16	1.39	1.46
38	A1	440	A	C2-N3	5.16	1.43	1.33
38	A1	1047	A	O3'-P	-5.16	1.53	1.61
38	A1	2240	G	C2-N3	5.16	1.43	1.32
54	AI	85	TRP	N-CA	-5.16	1.39	1.46
66	AY	8	ARG	CZ-NH1	5.16	1.40	1.32
11	B2	70	C	P-O5'	5.16	1.67	1.59
11	B2	818	A	C3'-C2'	5.16	1.60	1.52
14	BB	53	LYS	C-N	5.16	1.40	1.34
25	BM	103	ARG	N-CA	5.16	1.52	1.46
29	BQ	120	ARG	CA-CB	5.16	1.61	1.53
38	A1	254	A	C4'-C3'	5.16	1.60	1.53
40	A5	37	GLY	N-CA	-5.16	1.37	1.45
44	Ab	128	PRO	CA-C	5.16	1.58	1.52
61	AN	63	GLU	C-N	5.16	1.40	1.33
11	B2	897	A	C1'-N9	5.16	1.55	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	BB	90	ARG	C-O	-5.16	1.17	1.23
50	AF	75	ILE	C-N	5.16	1.40	1.33
40	AK	27	ILE	C-N	5.16	1.40	1.33
12	B3	97	ALA	CA-C	-5.16	1.45	1.52
18	BF	82	ARG	CZ-NH2	5.16	1.40	1.33
27	BO	16	ASP	CA-C	-5.16	1.46	1.52
29	BQ	21	ALA	C-N	5.16	1.39	1.33
33	BU	31	TRP	CA-CB	5.16	1.61	1.53
38	A1	2229	G	C4'-C3'	5.16	1.60	1.52
40	A5	78	ALA	C-N	5.16	1.39	1.33
52	AH	57	VAL	CA-CB	-5.16	1.48	1.53
7	AU	28	SER	CA-CB	5.15	1.61	1.53
11	B2	102	U	O5'-C5'	-5.15	1.34	1.42
11	B2	1063	A	C5'-C4'	5.15	1.58	1.51
11	B2	1086	C	C1'-N1	5.15	1.56	1.48
38	A1	999	A	C5'-C4'	5.15	1.58	1.51
45	AC	225	THR	N-CA	5.15	1.52	1.45
9	AX	40	MET	CA-C	-5.15	1.45	1.52
38	A1	98	G	O5'-C5'	-5.15	1.34	1.42
38	A1	901	C	C1'-N1	5.15	1.56	1.48
38	A1	1341	U	C3'-O3'	5.15	1.49	1.42
38	A1	1684	C	C3'-O3'	5.15	1.49	1.42
38	A1	2441	A	C5'-C4'	5.15	1.58	1.51
38	A1	2456	C	C4'-C3'	5.15	1.60	1.52
48	AE	9	GLU	CA-C	-5.15	1.46	1.52
48	AE	13	ALA	C-N	5.15	1.40	1.33
58	AK	43	ARG	CA-CB	5.15	1.61	1.53
67	AZ	41	ALA	CA-C	5.15	1.58	1.52
11	B2	1182	G	C4'-C3'	-5.15	1.44	1.52
13	BA	46	ARG	CZ-NH1	5.15	1.40	1.32
30	BR	45	LYS	CA-CB	5.15	1.61	1.53
31	BS	29	GLU	CA-C	5.15	1.59	1.52
36	BX	44	ASN	C-O	-5.15	1.18	1.24
38	A1	988	C	C5'-C4'	5.15	1.58	1.51
38	A1	1900	U	C2'-C1'	-5.15	1.45	1.53
38	A1	2026	C	C1'-N1	5.15	1.56	1.48
38	A1	3010	C	C4'-O4'	-5.15	1.37	1.45
52	AH	76	LEU	N-CA	-5.15	1.40	1.46
11	B2	1416	C	C2'-C1'	-5.15	1.45	1.53
11	B2	1491	C	C1'-N1	5.15	1.56	1.48
13	BA	14	LYS	CA-C	-5.15	1.45	1.52
20	BH	133	ARG	C-N	5.15	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	AK	45	ARG	NE-CZ	5.15	1.38	1.33
8	AW	61	LYS	N-CA	-5.15	1.40	1.46
9	AX	139	LEU	C-N	5.15	1.40	1.33
9	AX	139	LEU	CA-CB	5.15	1.61	1.53
11	B2	415	C	P-OP1	-5.15	1.38	1.49
11	B2	944	C	C4'-C3'	5.15	1.60	1.52
11	B2	1128	U	C2'-C1'	-5.15	1.45	1.53
14	BB	80	VAL	C-N	5.15	1.40	1.33
38	A1	528	G	O5'-C5'	5.15	1.50	1.42
38	A1	2466	C	C2'-C1'	5.15	1.61	1.53
15	BC	111	ARG	CZ-NH2	5.15	1.40	1.33
25	BM	57	PRO	C-N	5.15	1.41	1.33
35	BW	24	GLU	N-CA	-5.15	1.39	1.46
50	AF	153	ASN	CG-ND2	5.15	1.44	1.33
9	AX	99	SER	C-N	5.14	1.39	1.33
11	B2	318	C	C5'-C4'	5.14	1.58	1.51
35	BW	11	SER	CA-C	-5.14	1.46	1.53
38	A1	201	C	C5'-C4'	5.14	1.58	1.51
38	A1	327	G	P-O5'	-5.14	1.52	1.59
38	A1	1093	G	C1'-N9	5.14	1.55	1.48
38	A1	1725	A	O3'-P	5.14	1.68	1.61
61	AN	128	LYS	CA-CB	5.14	1.61	1.53
2	A8	27	ARG	C-N	5.14	1.40	1.33
5	AS	76	LYS	CA-C	-5.14	1.45	1.52
7	AU	107	LEU	CA-C	-5.14	1.46	1.52
20	BH	185	ALA	C-N	-5.14	1.27	1.34
38	A1	1006	A	C3'-C2'	-5.14	1.45	1.52
38	A1	2610	C	C4-N4	5.14	1.44	1.33
43	AB	121	TYR	CA-C	-5.14	1.46	1.52
55	Ai	73	PRO	C-N	5.14	1.41	1.33
59	AL	83	GLU	C-N	5.14	1.41	1.33
11	B2	485	A	C5'-C4'	5.14	1.58	1.51
11	B2	1056	G	C4'-O4'	-5.14	1.37	1.45
18	BF	110	ILE	CA-CB	5.14	1.60	1.54
38	A1	129	C	O3'-P	-5.14	1.53	1.61
5	AS	65	ARG	CD-NE	5.14	1.53	1.46
11	B2	922	G	C1'-N9	5.14	1.55	1.48
16	BD	10	LYS	C-N	5.14	1.40	1.33
26	BN	3	GLY	N-CA	5.14	1.53	1.45
26	BN	132	VAL	CA-CB	-5.14	1.48	1.54
38	A1	453	U	C4'-O4'	-5.14	1.37	1.45
38	A1	2594	U	C1'-N1	5.14	1.56	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	A5	17	ARG	CZ-NH2	5.14	1.40	1.33
12	B3	6	TYR	CA-C	-5.14	1.46	1.52
26	BN	128	LYS	C-N	5.14	1.40	1.33
8	AW	11	ILE	CA-CB	-5.14	1.48	1.54
9	AX	324	ILE	C-O	-5.14	1.18	1.24
11	B2	406	U	O4'-C1'	5.14	1.49	1.41
38	A1	1066	C	O3'-P	-5.14	1.53	1.61
38	A1	2873	G	C2'-C1'	-5.14	1.45	1.53
48	AE	185	GLU	C-N	5.14	1.40	1.33
62	AO	8	ARG	CD-NE	5.14	1.53	1.46
62	AO	12	ARG	NE-CZ	5.14	1.38	1.33
63	AP	64	VAL	C-O	5.14	1.29	1.23
7	AU	78	VAL	N-CA	-5.13	1.40	1.46
15	BC	164	LYS	N-CA	-5.13	1.39	1.46
18	BF	185	SER	N-CA	-5.13	1.39	1.46
20	BH	156	ARG	C-N	5.13	1.40	1.33
23	BK	34	GLU	CA-C	5.13	1.59	1.52
38	A1	820	C	C4'-O4'	-5.13	1.37	1.45
38	A1	1914	U	C1'-N1	5.13	1.56	1.48
49	Ae	25	ARG	NE-CZ	5.13	1.38	1.33
61	AN	141	HIS	CG-ND1	5.13	1.43	1.38
67	AZ	70	LEU	C-N	5.13	1.41	1.33
11	B2	839	G	C3'-C2'	5.13	1.60	1.52
11	B2	967	C	C4-N4	5.13	1.44	1.33
38	A1	2083	G	O3'-P	-5.13	1.53	1.61
7	AU	47	ARG	CZ-NH1	5.13	1.40	1.32
10	B1	69	G	C4'-C3'	5.13	1.60	1.52
11	B2	271	G	C2'-C1'	-5.13	1.45	1.53
34	BV	94	GLU	N-CA	-5.13	1.39	1.45
38	A1	517	A	P-O5'	-5.13	1.52	1.59
38	A1	2945	A	N7-C5	-5.13	1.28	1.39
26	BN	100	HIS	ND1-CE1	5.13	1.37	1.32
43	AB	146	GLY	CA-C	-5.13	1.43	1.51
52	AH	16	THR	C-N	5.13	1.39	1.33
11	B2	486	A	C1'-N9	-5.13	1.39	1.47
11	B2	556	G	O3'-P	5.13	1.68	1.61
11	B2	1423	A	C4'-C3'	5.13	1.60	1.52
38	A1	578	C	C1'-N1	5.13	1.56	1.48
38	A1	940	G	N9-C4	5.13	1.48	1.38
38	A1	944	G	C4'-C3'	5.13	1.60	1.52
38	A1	2610	C	P-O5'	5.13	1.67	1.59
45	AC	333	LYS	C-O	5.13	1.30	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	47	A	C5'-C4'	5.13	1.59	1.51
11	B2	166	A	C5'-C4'	5.13	1.58	1.51
11	B2	454	G	C3'-O3'	5.13	1.49	1.42
11	B2	709	G	C1'-N9	5.13	1.55	1.48
11	B2	1321	U	C4'-O4'	-5.13	1.37	1.45
11	B2	1425	C	P-O5'	5.13	1.67	1.59
17	BE	200	VAL	CA-CB	-5.13	1.48	1.54
31	BS	45	LYS	CA-C	5.13	1.59	1.52
34	BV	7	GLU	CA-CB	5.13	1.64	1.53
38	A1	821	U	O4'-C1'	5.13	1.49	1.41
46	AD	112	LEU	CA-CB	5.13	1.61	1.53
50	AF	128	VAL	CA-C	-5.13	1.46	1.52
60	AM	80	ARG	CA-C	-5.13	1.46	1.53
11	B2	1007	A	C1'-N9	5.12	1.55	1.48
11	B2	1292	A	C4'-O4'	-5.12	1.37	1.45
38	A1	2382	A	C1'-N9	5.12	1.55	1.48
43	AB	132	VAL	C-N	5.12	1.40	1.33
46	AD	132	HIS	CE1-NE2	-5.12	1.27	1.32
58	AK	6	GLU	C-N	5.12	1.39	1.33
12	B3	108	ARG	N-CA	5.12	1.52	1.46
15	BC	146	PHE	CA-C	-5.12	1.46	1.52
18	BF	79	ARG	NE-CZ	5.12	1.38	1.33
38	A1	1339	C	O5'-C5'	5.12	1.50	1.42
38	A1	2210	G	C4'-C3'	5.12	1.60	1.52
61	AN	113	ARG	CZ-NH2	5.12	1.40	1.33
11	B2	688	C	C5'-C4'	5.12	1.58	1.51
11	B2	1475	C	C5'-C4'	5.12	1.58	1.51
29	BQ	149	ASP	CA-CB	5.12	1.61	1.53
38	A1	107	G	C4'-C3'	5.12	1.60	1.52
38	A1	928	A	O3'-P	-5.12	1.53	1.61
38	A1	1787	U	O5'-C5'	-5.12	1.34	1.42
38	A1	1946	G	P-O5'	-5.12	1.52	1.59
38	A1	2753	G	C4'-C3'	5.12	1.60	1.53
38	A1	575	G	C3'-C2'	5.12	1.60	1.52
38	A1	2419	U	O4'-C1'	5.12	1.49	1.41
46	AD	78	ARG	NE-CZ	5.12	1.38	1.33
63	AP	42	ARG	CZ-NH1	5.12	1.40	1.32
11	B2	146	A	O4'-C1'	5.12	1.49	1.41
11	B2	479	C	C4-N4	5.12	1.44	1.33
12	B3	64	ALA	CA-C	-5.12	1.46	1.52
38	A1	1179	G	C1'-N9	5.12	1.54	1.47
38	A1	1605	A	C1'-N9	-5.12	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2746	G	C4'-O4'	5.12	1.53	1.45
11	B2	110	C	C2'-O2'	-5.12	1.34	1.42
11	B2	1260	G	C3'-O3'	5.12	1.49	1.42
22	BJ	12	PRO	CA-CB	5.12	1.61	1.54
7	AU	21	HIS	CA-CB	5.12	1.61	1.53
11	B2	343	G	C1'-N9	5.12	1.55	1.48
11	B2	732	G	C2-N3	5.12	1.43	1.32
11	B2	1022	U	O5'-C5'	5.12	1.50	1.42
38	A1	1227	A	C1'-N9	5.12	1.54	1.47
38	A1	1254	C	C2'-C1'	5.12	1.61	1.53
38	A1	2801	G	C4'-C3'	5.12	1.60	1.52
41	AA	18	ARG	CA-CB	5.12	1.60	1.53
54	AI	35	LYS	C-N	5.12	1.40	1.33
2	A8	23	PHE	CA-CB	5.11	1.60	1.53
8	AW	63	ARG	CZ-NH1	5.11	1.40	1.32
9	AX	218	ILE	CA-C	-5.11	1.46	1.52
11	B2	470	G	C4'-C3'	5.11	1.60	1.53
11	B2	979	U	C3'-C2'	-5.11	1.45	1.52
11	B2	1454	A	C1'-N9	5.11	1.55	1.48
12	B3	117	LYS	N-CA	-5.11	1.40	1.46
18	BF	161	ARG	NE-CZ	5.11	1.38	1.33
23	BK	10	ARG	CD-NE	5.11	1.53	1.46
34	BV	93	ILE	N-CA	-5.11	1.40	1.46
38	A1	1903	G	P-O5'	-5.11	1.52	1.59
38	A1	2197	U	O3'-P	-5.11	1.53	1.61
38	A1	2613	C	C2'-C1'	-5.11	1.45	1.53
53	Ah	11	ARG	CA-C	-5.11	1.46	1.52
59	AL	13	GLY	CA-C	-5.11	1.44	1.51
62	AO	8	ARG	CZ-NH1	5.11	1.40	1.32
11	B2	582	G	O3'-P	-5.11	1.53	1.61
43	AB	238	ARG	CD-NE	5.11	1.53	1.46
46	AD	100	ILE	N-CA	-5.11	1.40	1.46
12	AG	23	VAL	N-CA	-5.11	1.40	1.46
11	B2	875	G	C4'-C3'	5.11	1.60	1.52
16	BD	53	ARG	C-N	5.11	1.40	1.33
38	A1	1786	G	C4'-O4'	5.11	1.53	1.45
38	A1	1986	U	C4'-C3'	5.11	1.60	1.52
38	A1	2165	A	C2'-C1'	-5.11	1.45	1.53
66	AY	36	ILE	N-CA	-5.11	1.40	1.46
11	B2	783	G	C2'-C1'	-5.11	1.45	1.53
38	A1	2411	C	C3'-C2'	-5.11	1.45	1.52
1	A7	12	LYS	CA-C	-5.11	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	1258	C	O3'-P	-5.11	1.53	1.61
16	BD	155	ALA	C-N	5.11	1.41	1.33
17	BE	28	TRP	CD2-CE3	-5.11	1.32	1.40
22	BJ	9	LEU	C-N	5.11	1.40	1.33
38	A1	889	C	O3'-P	-5.11	1.53	1.61
38	A1	952	C	C3'-C2'	5.11	1.60	1.52
38	A1	1505	G	C4'-C3'	5.11	1.60	1.52
38	A1	1967	G	O5'-C5'	5.11	1.50	1.42
3	Af	33	ARG	C-N	5.11	1.40	1.33
9	AX	417	GLN	C-N	5.11	1.40	1.33
11	B2	161	C	P-O5'	-5.11	1.52	1.59
32	BT	18	ASN	N-CA	-5.11	1.40	1.46
38	A1	1448	G	C5'-C4'	5.11	1.58	1.51
38	A1	1826	G	C1'-N9	5.11	1.54	1.47
38	A1	2159	C	O4'-C1'	5.11	1.49	1.41
9	AX	379	VAL	C-N	5.10	1.40	1.33
16	BD	114	LEU	C-N	5.10	1.40	1.33
38	A1	2287	C	C2'-C1'	-5.10	1.45	1.53
45	AC	260	HIS	CA-C	-5.10	1.46	1.52
60	AM	139	VAL	C-N	5.10	1.40	1.33
61	AN	109	GLY	C-N	5.10	1.40	1.33
5	AS	104	GLN	C-N	5.10	1.40	1.34
11	B2	1222	C	C2'-O2'	-5.10	1.34	1.42
17	BE	111	ILE	N-CA	-5.10	1.40	1.46
38	A1	2021	G	C2'-C1'	-5.10	1.45	1.53
38	A1	2064	U	C2'-O2'	-5.10	1.33	1.41
45	AC	194	GLU	CA-C	-5.10	1.46	1.52
12	AG	52	ILE	C-N	5.10	1.40	1.33
55	Ai	38	CYS	N-CA	-5.10	1.41	1.46
61	AN	33	ILE	N-CA	5.10	1.52	1.46
38	A1	1558	U	C3'-C2'	-5.10	1.45	1.52
41	AA	133	VAL	C-N	5.10	1.40	1.33
43	AB	107	TYR	N-CA	5.10	1.52	1.46
62	AO	128	GLY	C-N	5.10	1.40	1.33
11	B2	451	A	C4'-C3'	5.10	1.60	1.53
11	B2	651	U	C1'-N1	5.10	1.56	1.48
11	B2	727	G	C4'-O4'	5.10	1.53	1.45
11	B2	1444	G	C5'-C4'	5.10	1.58	1.51
21	BI	34	ILE	CA-CB	-5.10	1.48	1.54
38	A1	235	G	C4'-C3'	-5.10	1.45	1.52
38	A1	1281	A	O3'-P	-5.10	1.53	1.61
38	A1	1299	C	C4'-O4'	-5.10	1.38	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	2532	G	C1'-N9	5.10	1.55	1.48
39	A3	38	U	C4'-O4'	-5.10	1.38	1.45
12	AG	70	CYS	C-N	5.10	1.40	1.33
58	AK	70	GLU	C-N	5.10	1.40	1.33
62	AO	163	LYS	N-CA	-5.10	1.39	1.46
11	B2	170	C	C3'-O3'	5.10	1.49	1.42
11	B2	1353	C	C5'-C4'	5.10	1.58	1.51
13	BA	108	ASN	CA-C	-5.10	1.46	1.52
15	BC	61	ARG	NE-CZ	5.10	1.38	1.33
20	BH	204	LYS	N-CA	5.10	1.52	1.46
22	BJ	67	ASP	C-N	5.10	1.41	1.33
25	BM	39	ILE	CA-C	-5.10	1.46	1.52
31	BS	59	ARG	CD-NE	5.10	1.53	1.46
38	A1	36	G	C5-C6	-5.10	1.32	1.42
38	A1	466	C	C2'-C1'	-5.10	1.45	1.53
38	A1	1852	U	P-O5'	5.10	1.67	1.59
22	BJ	10	LYS	N-CA	-5.10	1.39	1.45
23	BK	130	ARG	CD-NE	5.10	1.53	1.46
30	BR	68	SER	C-O	-5.10	1.17	1.23
38	A1	1993	A	C3'-O3'	5.10	1.49	1.42
48	AE	155	ARG	CA-C	5.10	1.58	1.52
3	Af	45	ARG	NE-CZ	5.09	1.38	1.33
11	B2	1439	G	C2'-C1'	-5.09	1.45	1.53
11	B2	1463	A	C2'-C1'	-5.09	1.45	1.53
16	BD	76	ARG	CA-C	-5.09	1.46	1.52
33	BU	50	TRP	CD2-CE3	-5.09	1.32	1.40
38	A1	1377	G	C5'-C4'	5.09	1.58	1.51
38	A1	1793	G	C4'-O4'	5.09	1.53	1.45
38	A1	1968	A	P-O5'	-5.09	1.52	1.59
45	AC	82	GLY	C-N	5.09	1.40	1.33
48	AE	159	LYS	C-N	5.09	1.38	1.33
11	B2	388	G	C5'-C4'	5.09	1.58	1.51
11	B2	1011	C	C5'-C4'	5.09	1.58	1.51
43	AB	84	TYR	C-N	5.09	1.40	1.33
1	A7	30	LYS	CA-CB	5.09	1.62	1.53
11	B2	294	A	C4'-C3'	5.09	1.60	1.52
11	B2	781	U	C3'-O3'	5.09	1.49	1.42
11	B2	790	G	C4'-C3'	5.09	1.60	1.52
11	B2	1212	U	C1'-N1	5.09	1.56	1.48
11	B2	1223	C	P-O5'	-5.09	1.52	1.59
13	BA	95	LEU	C-N	5.09	1.41	1.33
17	BE	122	ILE	CA-CB	-5.09	1.48	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	BO	133	SER	C-O	-5.09	1.18	1.24
38	A1	223	U	C3'-C2'	-5.09	1.45	1.52
38	A1	942	U	C2'-C1'	-5.09	1.45	1.53
38	A1	1461	G	P-O5'	-5.09	1.52	1.59
38	A1	1462	G	O5'-C5'	-5.09	1.34	1.42
38	A1	2759	A	C6-N6	5.09	1.44	1.33
39	A3	72	G	C1'-N9	-5.09	1.40	1.48
63	AP	75	GLU	CA-C	-5.09	1.46	1.52
9	AX	380	MET	CG-SD	5.09	1.93	1.80
36	BX	50	ARG	CA-C	-5.09	1.46	1.52
38	A1	264	G	P-O5'	-5.09	1.52	1.59
38	A1	1335	C	O4'-C1'	-5.09	1.34	1.41
38	A1	2676	A	C2'-C1'	-5.09	1.45	1.53
45	AC	34	THR	N-CA	5.09	1.52	1.46
47	Ad	64	PRO	N-CA	-5.09	1.40	1.47
59	AL	58	LEU	CA-CB	5.09	1.63	1.54
11	B2	559	G	C3'-C2'	-5.09	1.45	1.52
11	B2	744	A	O3'-P	-5.09	1.53	1.61
23	BK	123	THR	N-CA	-5.09	1.39	1.46
38	A1	2560	G	O4'-C1'	-5.09	1.34	1.41
59	AL	84	HIS	CA-CB	5.09	1.62	1.53
67	AZ	87	ASP	C-N	-5.09	1.27	1.33
10	B1	2	G	C4'-O4'	5.09	1.53	1.45
11	B2	448	A	C1'-N9	5.09	1.54	1.47
11	B2	1480	G	O5'-C5'	5.09	1.50	1.42
16	BD	39	LYS	C-N	5.09	1.40	1.33
16	BD	140	PRO	C-N	5.09	1.40	1.33
20	BH	209	ARG	NE-CZ	5.09	1.38	1.33
38	A1	793	C	C2'-C1'	-5.09	1.45	1.53
38	A1	1616	A	C5'-C4'	5.09	1.58	1.51
38	A1	1814	A	O5'-C5'	5.09	1.50	1.42
38	A1	2298	C	C5'-C4'	5.09	1.58	1.51
38	A1	2879	G	C2'-C1'	-5.09	1.45	1.53
47	Ad	26	PHE	CA-CB	5.09	1.61	1.53
60	AM	44	ARG	CD-NE	5.09	1.53	1.46
11	B2	146	A	C4'-C3'	5.08	1.60	1.52
11	B2	1379	G	C2-N3	5.08	1.43	1.32
38	A1	361	G	C4'-C3'	5.08	1.60	1.53
38	A1	1969	C	C4'-O4'	5.08	1.53	1.45
38	A1	2404	G	C2'-C1'	-5.08	1.45	1.53
47	Ad	77	ARG	C-N	5.08	1.40	1.33
9	AX	291	ARG	CZ-NH1	5.08	1.39	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	5	C	C5'-C4'	5.08	1.58	1.51
11	B2	642	G	O3'-P	5.08	1.68	1.61
38	A1	353	C	C1'-N1	5.08	1.56	1.48
38	A1	1748	C	C5'-C4'	5.08	1.58	1.51
38	A1	1927	C	C1'-N1	5.08	1.56	1.48
38	A1	2077	A	C4'-O4'	5.08	1.53	1.45
38	A1	2426	U	O3'-P	-5.08	1.53	1.61
43	AB	17	PHE	N-CA	-5.08	1.40	1.46
67	AZ	33	LYS	N-CA	-5.08	1.39	1.46
9	AX	158	ASP	C-N	5.08	1.40	1.33
11	B2	522	C	O3'-P	-5.08	1.53	1.61
15	BC	166	TYR	C-O	-5.08	1.17	1.23
17	BE	64	LYS	C-N	5.08	1.40	1.33
21	BI	84	SER	CA-C	-5.08	1.45	1.52
38	A1	366	G	N1-C2	5.08	1.48	1.37
38	A1	450	G	N1-C2	5.08	1.48	1.37
46	AD	228	GLU	C-O	-5.08	1.18	1.24
59	AL	25	HIS	N-CA	-5.08	1.39	1.46
65	AV	48	ARG	CZ-NH2	5.08	1.40	1.33
38	A1	2357	U	C2-N3	5.08	1.48	1.37
38	A1	2465	A	O3'-P	-5.08	1.53	1.61
11	B2	251	G	C5'-C4'	-5.08	1.43	1.51
12	B3	106	LYS	C-N	5.08	1.40	1.33
33	BU	19	ARG	CZ-NH2	5.08	1.40	1.33
38	A1	1643	A	O5'-C5'	5.08	1.50	1.42
38	A1	2002	A	C4'-C3'	5.08	1.60	1.53
38	A1	2312	U	C3'-O3'	5.08	1.49	1.42
38	A1	3040	G	O3'-P	-5.08	1.53	1.61
11	B2	93	A	P-O5'	-5.08	1.52	1.59
11	B2	130	G	P-O5'	-5.08	1.52	1.59
40	A5	64	ARG	CZ-NH2	5.08	1.40	1.33
45	AC	55	ASP	CA-CB	5.08	1.62	1.53
48	AE	70	ILE	C-N	5.08	1.40	1.33
3	Af	48	LYS	CA-C	-5.08	1.46	1.52
10	B1	32	A	O5'-C5'	5.08	1.50	1.42
11	B2	1419	G	C1'-N9	5.08	1.55	1.48
38	A1	2648	C	C1'-N1	5.08	1.56	1.48
38	A1	3042	C	C2'-C1'	-5.08	1.45	1.53
39	A3	28	C	C5'-C4'	5.08	1.58	1.51
45	AC	214	LYS	N-CA	-5.08	1.39	1.45
47	Ad	74	ARG	CA-CB	5.08	1.61	1.53
60	AM	111	LEU	N-CA	5.08	1.52	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	AM	187	ARG	CZ-NH2	5.08	1.40	1.33
7	AU	109	ASP	N-CA	5.07	1.52	1.46
26	BN	141	ARG	CA-C	-5.07	1.46	1.52
38	A1	1091	G	C5'-C4'	5.07	1.58	1.51
38	A1	1301	G	C2'-C1'	-5.07	1.45	1.53
38	A1	1625	A	C1'-N9	5.07	1.55	1.48
38	A1	1731	U	C5'-C4'	5.07	1.58	1.51
38	A1	2150	G	C3'-C2'	5.07	1.60	1.52
38	A1	3018	C	O5'-C5'	5.07	1.50	1.42
51	Ag	36	TYR	N-CA	5.07	1.52	1.45
12	B3	67	PRO	CA-C	5.07	1.56	1.52
14	BB	127	MET	N-CA	-5.07	1.40	1.46
38	A1	448	A	C5'-C4'	5.07	1.58	1.51
38	A1	975	C	C3'-C2'	5.07	1.60	1.52
38	A1	1045	A	C5'-C4'	5.07	1.58	1.51
38	A1	2312	U	C2'-O2'	5.07	1.50	1.42
38	A1	2727	C	C3'-O3'	5.07	1.49	1.42
43	AB	202	HIS	ND1-CE1	5.07	1.37	1.32
46	AD	180	ARG	CD-NE	5.07	1.53	1.46
12	B3	17	GLU	CA-C	-5.07	1.46	1.52
17	BE	67	ASN	CA-CB	5.07	1.61	1.53
17	BE	200	VAL	N-CA	-5.07	1.40	1.46
38	A1	596	C	P-O5'	-5.07	1.52	1.59
38	A1	683	C	C2'-O2'	-5.07	1.34	1.42
38	A1	1034	G	O5'-C5'	-5.07	1.34	1.42
39	A3	99	G	C4'-C3'	-5.07	1.45	1.52
10	B1	29	C	C2'-O2'	-5.07	1.34	1.42
11	B2	279	U	C4'-C3'	5.07	1.60	1.52
11	B2	1441	G	C1'-N9	-5.07	1.40	1.48
14	BB	65	GLN	CA-CB	5.07	1.60	1.53
20	BH	102	GLU	CA-C	5.07	1.59	1.52
44	Ab	37	ASP	CA-CB	5.07	1.61	1.53
63	AP	62	ILE	CA-CB	-5.07	1.48	1.54
5	AS	62	PRO	C-N	5.07	1.40	1.33
11	B2	599	G	C3'-O3'	5.07	1.49	1.42
20	BH	85	PHE	C-N	5.07	1.40	1.33
22	BJ	92	ARG	CD-NE	5.07	1.53	1.46
38	A1	1475	G	C2'-C1'	-5.07	1.45	1.53
38	A1	1899	C	O3'-P	-5.07	1.53	1.61
38	A1	2558	U	P-O5'	5.07	1.67	1.59
64	AR	94	ARG	NE-CZ	5.07	1.38	1.33
5	AS	134	GLY	CA-C	5.07	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B3	80	VAL	CA-C	-5.07	1.49	1.52
38	A1	69	C	C1'-N1	5.07	1.56	1.48
38	A1	446	G	C2'-C1'	-5.07	1.45	1.53
38	A1	451	C	C4-N4	5.07	1.44	1.33
38	A1	1288	C	C4'-O4'	5.07	1.53	1.45
38	A1	1566	G	C2'-C1'	-5.07	1.45	1.53
40	A5	6	VAL	CA-C	-5.07	1.45	1.52
11	B2	807	C	O3'-P	-5.06	1.53	1.61
24	BL	64	TRP	N-CA	-5.06	1.40	1.45
61	AN	45	PHE	N-CA	5.06	1.52	1.45
62	AO	154	LYS	C-N	5.06	1.40	1.33
4	AQ	8	ARG	CZ-NH1	5.06	1.39	1.32
9	AX	217	ILE	C-N	5.06	1.40	1.33
11	B2	408	C	C4'-O4'	5.06	1.53	1.45
13	BA	133	GLN	CA-CB	-5.06	1.45	1.53
38	A1	740	C	C4'-C3'	5.06	1.60	1.52
38	A1	1633	A	C4'-C3'	5.06	1.60	1.52
38	A1	1885	G	C2-N3	5.06	1.42	1.32
38	A1	1984	G	C2'-C1'	-5.06	1.45	1.53
39	A3	56	C	C2'-O2'	5.06	1.50	1.42
56	AJ	16	ARG	CZ-NH2	5.06	1.40	1.33
65	AV	64	GLY	N-CA	-5.06	1.39	1.45
11	B2	395	C	C4'-C3'	5.06	1.60	1.52
11	B2	758	U	O5'-C5'	5.06	1.50	1.42
11	B2	1459	G	C5'-C4'	5.06	1.58	1.51
38	A1	467	U	C2-N3	5.06	1.47	1.37
38	A1	2709	C	C5'-C4'	5.06	1.58	1.51
46	AD	199	ILE	N-CA	-5.06	1.40	1.46
50	AF	79	ILE	CA-C	-5.06	1.46	1.52
9	AX	346	ALA	CA-C	-5.06	1.46	1.52
11	B2	991	C	C5'-C4'	5.06	1.58	1.51
11	B2	1325	C	O3'-P	-5.06	1.53	1.61
18	BF	32	THR	CA-C	-5.06	1.48	1.52
38	A1	1565	G	C4'-O4'	-5.06	1.38	1.45
45	AC	11	SER	CA-C	-5.06	1.46	1.52
45	AC	143	MET	CA-C	5.06	1.59	1.52
11	B2	1037	U	O3'-P	-5.06	1.53	1.61
27	BO	91	LEU	CA-CB	5.06	1.62	1.53
35	BW	28	PHE	N-CA	-5.06	1.39	1.45
38	A1	325	G	C2'-C1'	-5.06	1.45	1.53
38	A1	354	G	O5'-C5'	5.06	1.50	1.42
36	BX	65	ARG	C-N	5.06	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BY	14	LYS	CA-CB	5.06	1.61	1.53
38	A1	844	C	P-O5'	-5.06	1.52	1.59
38	A1	2246	G	O3'-P	-5.06	1.53	1.61
38	A1	3021	C	C5'-C4'	5.06	1.58	1.51
63	AP	55	TYR	C-N	5.06	1.40	1.33
64	AR	95	PRO	CA-CB	5.06	1.60	1.53
7	AU	4	SER	CA-C	-5.05	1.46	1.52
11	B2	1072	C	C2'-C1'	-5.05	1.45	1.53
15	BC	111	ARG	CD-NE	5.05	1.53	1.46
25	BM	53	ASP	CA-C	-5.05	1.45	1.52
38	A1	1354	G	C5'-C4'	5.05	1.58	1.51
38	A1	1534	G	P-O5'	5.05	1.67	1.59
45	AC	27	ILE	N-CA	-5.05	1.40	1.46
56	AJ	79	ARG	C-N	5.05	1.39	1.33
33	BU	108	ALA	CA-C	-5.05	1.45	1.52
38	A1	2254	U	C2-N3	5.05	1.47	1.37
38	A1	2456	C	C2'-C1'	-5.05	1.45	1.53
38	A1	2749	G	C1'-N9	5.05	1.55	1.48
44	Ab	59	ARG	CZ-NH2	5.05	1.40	1.33
52	AH	87	SER	CA-C	-5.05	1.46	1.52
11	B2	523	C	C2'-C1'	-5.05	1.45	1.53
11	B2	595	U	C5'-C4'	5.05	1.58	1.51
29	BQ	80	ARG	CZ-NH2	5.05	1.40	1.33
38	A1	872	G	C3'-C2'	5.05	1.60	1.52
38	A1	1056	C	C4'-C3'	5.05	1.60	1.52
38	A1	1699	U	P-O5'	-5.05	1.52	1.59
38	A1	1771	C	N3-C4	5.05	1.44	1.33
42	Aa	71	ARG	NE-CZ	5.05	1.38	1.33
48	AE	91	LEU	N-CA	-5.05	1.40	1.46
40	AK	37	GLY	N-CA	-5.05	1.38	1.45
5	AS	54	VAL	CA-C	5.05	1.59	1.52
9	AX	375	PRO	C-N	5.05	1.40	1.34
38	A1	841	U	C3'-O3'	5.05	1.49	1.42
38	A1	1417	U	C4-C5	5.05	1.53	1.43
38	A1	1868	C	C4'-C3'	5.05	1.60	1.52
38	A1	2185	A	N7-C5	-5.05	1.29	1.39
38	A1	2484	C	P-O5'	-5.05	1.52	1.59
52	AH	64	PHE	N-CA	-5.05	1.39	1.45
54	AI	95	LYS	C-N	5.05	1.41	1.33
56	AJ	109	PRO	N-CA	5.05	1.54	1.47
63	AP	81	ALA	CA-C	-5.05	1.46	1.52
5	AS	65	ARG	N-CA	-5.05	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	AW	2	LYS	N-CA	-5.05	1.41	1.45
11	B2	816	G	C5'-C4'	5.05	1.58	1.51
38	A1	1745	U	O3'-P	-5.05	1.53	1.61
59	AL	38	GLY	CA-C	-5.05	1.44	1.51
11	B2	120	C	C5'-C4'	5.05	1.58	1.51
11	B2	1321	U	C2'-C1'	-5.05	1.45	1.53
13	BA	10	ARG	NE-CZ	5.05	1.38	1.33
20	BH	151	ASP	C-N	5.05	1.39	1.33
38	A1	394	A	C5'-C4'	5.05	1.58	1.51
38	A1	628	A	C5'-C4'	5.05	1.58	1.51
38	A1	639	C	O3'-P	-5.05	1.53	1.61
38	A1	1631	A	C3'-C2'	-5.05	1.45	1.52
38	A1	1904	G	C1'-N9	5.05	1.55	1.48
38	A1	2688	C	O4'-C1'	5.05	1.49	1.41
38	A1	2867	U	C2'-O2'	5.05	1.50	1.42
39	A3	103	C	C1'-N1	5.05	1.56	1.48
46	AD	128	ARG	CZ-NH1	5.05	1.39	1.32
48	AE	21	ARG	C-N	5.05	1.40	1.33
52	AH	99	THR	CA-C	-5.05	1.46	1.53
56	AJ	52	ARG	CD-NE	5.05	1.53	1.46
61	AN	79	ARG	CZ-NH2	5.05	1.40	1.33
62	AO	71	PHE	C-N	5.05	1.40	1.33
63	AP	98	GLY	N-CA	-5.05	1.38	1.45
20	BH	76	GLY	C-N	5.04	1.40	1.33
38	A1	1504	C	C2'-C1'	-5.04	1.45	1.53
11	B2	902	U	C5'-C4'	5.04	1.58	1.51
15	BC	1	MET	CG-SD	5.04	1.93	1.80
33	BU	126	ARG	N-CA	-5.04	1.40	1.46
38	A1	386	A	O5'-C5'	5.04	1.50	1.42
38	A1	418	C	O3'-P	-5.04	1.53	1.61
38	A1	642	G	C3'-C2'	-5.04	1.45	1.52
48	AE	81	THR	CA-C	-5.04	1.46	1.52
54	AI	20	LYS	CA-CB	5.04	1.61	1.53
11	B2	346	C	O3'-P	-5.04	1.53	1.61
11	B2	366	C	C3'-C2'	-5.04	1.45	1.52
11	B2	615	G	O4'-C1'	-5.04	1.34	1.41
11	B2	778	G	C5'-C4'	5.04	1.58	1.51
11	B2	1411	G	C5'-C4'	5.04	1.58	1.51
11	B2	1472	G	C5'-C4'	5.04	1.58	1.51
29	BQ	30	VAL	N-CA	-5.04	1.40	1.46
38	A1	773	U	C1'-N1	5.04	1.56	1.48
44	Ab	41	ARG	CA-C	-5.04	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	AJ	68	LYS	C-N	5.04	1.40	1.32
61	AN	125	ARG	NE-CZ	5.04	1.38	1.33
11	B2	696	G	O3'-P	-5.04	1.53	1.61
38	A1	208	A	O3'-P	-5.04	1.53	1.61
38	A1	2159	C	P-O5'	-5.04	1.52	1.59
64	AR	9	ARG	NE-CZ	5.04	1.38	1.33
11	B2	507	G	N1-C2	5.04	1.47	1.37
11	B2	1281	U	C1'-N1	5.04	1.56	1.48
21	BI	43	LYS	C-O	-5.04	1.18	1.24
38	A1	761	U	C2-N3	5.04	1.47	1.37
38	A1	1749	C	C5'-C4'	5.04	1.58	1.51
38	A1	667	C	P-O5'	-5.04	1.52	1.59
38	A1	1413	A	C2'-O2'	-5.04	1.34	1.42
38	A1	1956	G	C1'-N9	5.04	1.55	1.48
44	Ab	123	ILE	N-CA	-5.04	1.39	1.46
60	AM	67	ARG	CD-NE	5.04	1.53	1.46
61	AN	71	ARG	CZ-NH1	5.04	1.39	1.32
8	AW	44	ILE	C-O	-5.04	1.18	1.24
11	B2	158	U	O3'-P	-5.04	1.53	1.61
11	B2	542	G	C3'-O3'	5.04	1.49	1.42
14	BB	28	MET	C-N	5.04	1.40	1.33
14	BB	124	HIS	CA-CB	5.04	1.61	1.53
17	BE	237	LYS	N-CA	-5.04	1.39	1.46
38	A1	446	G	C2-N3	5.04	1.42	1.32
38	A1	2263	G	C5'-C4'	5.04	1.58	1.51
38	A1	2982	G	C3'-O3'	5.04	1.49	1.42
39	A3	10	U	C2'-C1'	5.04	1.60	1.53
45	AC	33	GLU	CA-CB	5.04	1.61	1.53
7	AU	14	PHE	N-CA	-5.03	1.40	1.46
11	B2	151	G	C2-N2	5.03	1.44	1.34
11	B2	1000	G	C2'-O2'	-5.03	1.34	1.42
11	B2	1146	G	C1'-N9	-5.03	1.40	1.48
11	B2	1186	C	O3'-P	-5.03	1.53	1.61
11	B2	1297	G	C2'-C1'	-5.03	1.45	1.53
16	BD	155	ALA	CA-C	-5.03	1.46	1.52
38	A1	567	G	C2'-C1'	-5.03	1.45	1.53
38	A1	645	U	C1'-N1	5.03	1.55	1.48
38	A1	714	C	C5'-C4'	5.03	1.58	1.51
38	A1	2039	U	C1'-N1	5.03	1.56	1.48
46	AD	219	VAL	CA-CB	-5.03	1.47	1.55
50	AF	24	TYR	C-N	5.03	1.40	1.33
56	AJ	43	VAL	CA-CB	-5.03	1.48	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
64	AR	82	LYS	N-CA	5.03	1.52	1.46
67	AZ	88	PRO	N-CA	-5.03	1.41	1.47
38	A1	721	G	O4'-C1'	5.03	1.49	1.41
38	A1	1360	G	C4'-O4'	5.03	1.53	1.45
38	A1	1386	G	C4'-C3'	5.03	1.60	1.52
40	A5	36	THR	N-CA	-5.03	1.39	1.45
45	AC	182	VAL	CA-CB	-5.03	1.48	1.54
38	A1	733	A	C5'-C4'	5.03	1.58	1.51
38	A1	850	C	C5'-C4'	5.03	1.58	1.51
46	AD	191	TYR	CA-C	-5.03	1.46	1.53
48	AE	63	LYS	C-N	5.03	1.40	1.33
57	Aj	20	HIS	CE1-NE2	-5.03	1.27	1.32
60	AM	76	TRP	NE1-CE2	5.03	1.43	1.37
61	AN	142	LEU	CA-C	5.03	1.59	1.52
11	B2	194	C	C1'-N1	5.03	1.55	1.48
30	BR	66	ARG	C-N	5.03	1.40	1.33
38	A1	100	C	C4'-C3'	5.03	1.60	1.52
8	AW	45	ARG	CD-NE	5.03	1.53	1.46
9	AX	7	ILE	C-N	5.03	1.40	1.33
10	B1	50	G	C1'-N9	5.03	1.55	1.48
11	B2	623	C	C5'-C4'	5.03	1.58	1.51
11	B2	1336	U	C1'-N1	5.03	1.55	1.48
38	A1	1873	G	C2-N3	5.03	1.42	1.32
38	A1	2262	C	C4'-O4'	-5.03	1.38	1.45
65	AV	63	ARG	CZ-NH1	5.03	1.39	1.32
23	BK	28	ILE	CB-CG1	5.03	1.63	1.53
24	BL	99	GLU	C-N	5.03	1.40	1.33
32	BT	11	TYR	N-CA	-5.03	1.39	1.46
36	BX	34	GLY	C-N	5.03	1.41	1.33
38	A1	269	C	C1'-N1	5.03	1.55	1.48
38	A1	1465	A	C2'-C1'	5.03	1.60	1.53
61	AN	44	GLU	CA-CB	5.03	1.61	1.53
9	AX	6	PRO	N-CD	-5.02	1.40	1.47
11	B2	348	C	O3'-P	-5.02	1.53	1.61
38	A1	2944	G	C5'-C4'	5.02	1.58	1.51
12	AG	67	PRO	C-N	-5.02	1.27	1.34
9	AX	239	ARG	NE-CZ	5.02	1.38	1.33
11	B2	1089	C	C3'-O3'	5.02	1.49	1.42
11	B2	1430	G	C3'-C2'	-5.02	1.45	1.52
15	BC	2	ALA	CA-C	-5.02	1.46	1.52
38	A1	149	G	N1-C2	5.02	1.47	1.37
38	A1	792	A	C3'-C2'	-5.02	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A1	1945	C	C2'-C1'	-5.02	1.45	1.53
43	AB	191	THR	CA-C	-5.02	1.48	1.52
52	AH	40	ASN	C-O	-5.02	1.18	1.24
16	BD	151	THR	N-CA	-5.02	1.40	1.47
12	AG	110	LEU	N-CA	-5.02	1.40	1.46
57	Aj	85	ARG	NE-CZ	5.02	1.38	1.33
11	B2	426	C	C2'-C1'	5.02	1.60	1.53
20	BH	66	ARG	CD-NE	5.02	1.53	1.46
22	BJ	88	GLN	N-CA	-5.02	1.40	1.46
25	BM	124	ASP	CA-C	5.02	1.59	1.52
38	A1	1382	C	C1'-N1	5.02	1.55	1.48
38	A1	1638	C	O4'-C1'	5.02	1.49	1.41
38	A1	1655	G	O3'-P	-5.02	1.53	1.61
38	A1	1904	G	O3'-P	5.02	1.68	1.61
38	A1	2299	G	P-O5'	-5.02	1.52	1.59
38	A1	2463	G	O3'-P	-5.02	1.53	1.61
46	AD	161	PHE	N-CA	-5.02	1.40	1.46
38	A1	671	G	C4'-C3'	5.02	1.60	1.52
38	A1	1064	G	O5'-C5'	5.02	1.50	1.42
38	A1	2263	G	O5'-C5'	5.02	1.50	1.42
7	AU	51	LYS	N-CA	-5.02	1.40	1.45
11	B2	1153	G	P-O5'	-5.02	1.52	1.59
26	BN	34	VAL	N-CA	-5.02	1.40	1.46
26	BN	40	LYS	N-CA	-5.02	1.40	1.46
27	BO	32	GLY	CA-C	-5.02	1.45	1.52
11	B2	262	G	O3'-P	-5.01	1.53	1.61
11	B2	911	C	C4'-C3'	5.01	1.60	1.52
11	B2	986	G	C3'-O3'	5.01	1.49	1.42
11	B2	1371	C	O4'-C1'	5.01	1.49	1.41
38	A1	389	C	C5'-C4'	5.01	1.58	1.51
38	A1	1329	G	C4'-O4'	5.01	1.53	1.45
38	A1	2055	U	O4'-C1'	5.01	1.49	1.41
38	A1	2140	C	O5'-C5'	5.01	1.50	1.42
38	A1	2759	A	C2'-C1'	-5.01	1.45	1.53
54	AI	104	PRO	CA-CB	-5.01	1.46	1.53
11	B2	107	C	C5'-C4'	5.01	1.58	1.51
26	BN	129	VAL	C-N	5.01	1.41	1.33
38	A1	1985	G	C4'-O4'	5.01	1.53	1.45
38	A1	2595	C	C3'-O3'	5.01	1.49	1.42
61	AN	107	ARG	CZ-NH1	5.01	1.39	1.32
11	B2	139	C	C4'-C3'	5.01	1.60	1.52
25	BM	11	LYS	C-O	-5.01	1.15	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	BV	2	GLU	C-N	-5.01	1.27	1.33
38	A1	1527	G	C2'-C1'	-5.01	1.45	1.53
38	A1	2502	C	C4'-O4'	5.01	1.53	1.45
52	AH	127	ILE	CA-C	-5.01	1.46	1.52
58	Ak	44	LEU	C-N	5.01	1.40	1.33
10	B1	29	C	C4'-O4'	5.01	1.53	1.45
11	B2	595	U	C1'-N1	5.01	1.54	1.47
11	B2	653	C	O5'-C5'	5.01	1.50	1.42
38	A1	692	C	C4-N4	5.01	1.44	1.33
38	A1	1348	G	C5'-C4'	5.01	1.58	1.51
38	A1	1374	G	O5'-C5'	5.01	1.50	1.42
38	A1	1749	C	C2'-C1'	-5.01	1.45	1.53
38	A1	2634	U	O3'-P	-5.01	1.53	1.61
66	AY	77	ASN	C-O	-5.01	1.18	1.24
15	BC	148	GLN	CA-C	5.01	1.58	1.52
22	BJ	60	ALA	N-CA	-5.01	1.39	1.46
38	A1	428	A	C6-N1	5.01	1.45	1.35
38	A1	1005	G	O5'-C5'	5.01	1.50	1.42
54	AI	50	LYS	N-CA	5.01	1.52	1.46
56	AJ	133	ILE	CA-CB	-5.01	1.48	1.54
65	AV	61	LEU	C-N	5.01	1.40	1.33
29	BQ	118	SER	C-N	5.01	1.40	1.33
38	A1	571	G	C3'-O3'	5.01	1.49	1.42
38	A1	647	G	O4'-C1'	5.01	1.49	1.41
38	A1	842	C	C3'-C2'	-5.01	1.45	1.52
38	A1	2990	G	O3'-P	-5.01	1.53	1.61
54	AI	86	LYS	CA-C	-5.01	1.46	1.52
58	Ak	71	LEU	CA-CB	5.01	1.61	1.53
61	AN	4	ARG	CA-C	-5.01	1.46	1.52
11	B2	1438	A	C5'-C4'	5.00	1.58	1.51
21	BI	26	TYR	N-CA	-5.00	1.40	1.46
38	A1	1109	G	C3'-C2'	5.00	1.60	1.52
38	A1	2435	G	C5'-C4'	5.00	1.58	1.51
45	AC	285	ARG	NE-CZ	5.00	1.38	1.33
8	AW	63	ARG	C-N	5.00	1.40	1.33
15	BC	121	MET	C-N	5.00	1.40	1.34
38	A1	402	G	N1-C2	5.00	1.47	1.37
38	A1	1487	U	C1'-N1	5.00	1.54	1.47
38	A1	1608	G	C3'-O3'	5.00	1.49	1.42
38	A1	2079	U	C4'-C3'	5.00	1.60	1.53
40	A5	76	GLU	N-CA	5.00	1.52	1.46
50	AF	122	ALA	C-N	5.00	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	B2	363	C	C1'-N1	5.00	1.54	1.47
13	BA	130	GLN	CA-C	-5.00	1.46	1.52
14	BB	133	ILE	CA-C	-5.00	1.46	1.52
19	BG	60	LYS	C-N	5.00	1.40	1.33
38	A1	103	A	C5'-C4'	5.00	1.58	1.51
38	A1	528	G	C2'-C1'	-5.00	1.45	1.53
38	A1	794	G	C2'-O2'	-5.00	1.34	1.42
38	A1	1952	G	O4'-C1'	-5.00	1.34	1.41
56	AJ	83	ILE	CA-C	-5.00	1.45	1.52
62	AO	112	VAL	C-N	5.00	1.40	1.33

All (8884) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	129	C	P-O3'-C3'	19.35	149.23	120.20
38	A1	1226	G	P-O3'-C3'	19.21	149.01	120.20
38	A1	1200	A	P-O3'-C3'	18.92	148.58	120.20
39	A3	52	U	P-O3'-C3'	18.61	148.12	120.20
39	A3	19	G	P-O3'-C3'	18.46	147.89	120.20
11	B2	56	A	P-O3'-C3'	18.44	147.86	120.20
38	A1	3035	C	P-O3'-C3'	18.09	147.34	120.20
38	A1	1096	A	P-O3'-C3'	17.78	146.87	120.20
38	A1	1037	C	P-O3'-C3'	17.44	146.35	120.20
38	A1	2543	A	P-O3'-C3'	16.59	145.08	120.20
11	B2	392	G	P-O3'-C3'	16.47	144.90	120.20
38	A1	2064	U	P-O3'-C3'	16.46	144.89	120.20
38	A1	1407	A	P-O3'-C3'	16.29	144.63	120.20
38	A1	2891	A	P-O3'-C3'	16.29	144.63	120.20
11	B2	924	U	P-O3'-C3'	16.18	144.46	120.20
11	B2	194	C	P-O3'-C3'	15.94	144.10	120.20
11	B2	806	G	P-O5'-C5'	15.75	144.52	120.90
11	B2	1261	U	P-O3'-C3'	15.52	143.49	120.20
38	A1	2244	G	P-O5'-C5'	15.40	144.00	120.90
11	B2	176	U	P-O3'-C3'	15.27	143.11	120.20
39	A3	48	A	P-O3'-C3'	15.27	143.10	120.20
38	A1	379	U	P-O3'-C3'	15.21	143.02	120.20
38	A1	1180	G	P-O3'-C3'	15.09	142.84	120.20
38	A1	1918	U	P-O3'-C3'	14.93	142.59	120.20
38	A1	12	C	P-O3'-C3'	14.77	142.35	120.20
11	B2	1453	U	P-O3'-C3'	14.77	142.35	120.20
11	B2	804	U	P-O3'-C3'	14.75	142.33	120.20
11	B2	1245	C	P-O3'-C3'	14.66	142.19	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	3004	C	P-O3'-C3'	14.63	142.14	120.20
11	B2	975	A	P-O3'-C3'	14.58	142.07	120.20
38	A1	1752	C	P-O3'-C3'	14.48	141.92	120.20
39	A3	74	U	P-O3'-C3'	14.47	141.91	120.20
39	A3	40	G	P-O3'-C3'	14.41	141.81	120.20
38	A1	2562	G	P-O3'-C3'	14.32	141.68	120.20
38	A1	2545	A	P-O3'-C3'	14.12	141.38	120.20
38	A1	579	C	P-O3'-C3'	14.01	141.21	120.20
11	B2	63	G	P-O3'-C3'	13.99	141.18	120.20
39	A3	21	C	P-O3'-C3'	13.88	141.02	120.20
52	AH	19	PRO	N-CA-C	13.83	127.58	110.70
38	A1	1643	A	P-O3'-C3'	13.78	140.87	120.20
11	B2	641	A	P-O3'-C3'	13.60	140.60	120.20
11	B2	99	C	P-O3'-C3'	13.58	140.57	120.20
38	A1	1561	G	P-O3'-C3'	13.53	140.50	120.20
38	A1	219	G	P-O5'-C5'	13.53	141.20	120.90
11	B2	262	G	P-O3'-C3'	13.41	140.31	120.20
38	A1	1084	G	P-O3'-C3'	13.40	140.30	120.20
11	B2	1483	U	P-O3'-C3'	13.38	140.26	120.20
38	A1	2883	C	P-O5'-C5'	13.20	140.70	120.90
38	A1	2301	C	P-O3'-C3'	13.19	139.99	120.20
38	A1	2987	U	P-O3'-C3'	12.93	139.60	120.20
20	BH	169	ALA	CA-C-N	12.87	137.53	120.28
20	BH	169	ALA	C-N-CA	12.87	137.53	120.28
11	B2	462	A	P-O3'-C3'	12.87	139.50	120.20
45	AC	209	VAL	CA-C-N	12.85	134.24	119.98
45	AC	209	VAL	C-N-CA	12.85	134.24	119.98
38	A1	2363	G	P-O3'-C3'	12.84	139.46	120.20
11	B2	486	A	P-O3'-C3'	12.81	139.42	120.20
38	A1	2450	A	C2'-C3'-O3'	12.81	128.71	109.50
11	B2	126	G	P-O3'-C3'	12.75	139.32	120.20
44	Ab	86	ASN	CA-CB-CG	12.70	125.30	112.60
38	A1	302	U	P-O3'-C3'	12.61	139.11	120.20
11	B2	239	A	P-O3'-C3'	12.57	139.06	120.20
11	B2	1053	A	P-O3'-C3'	12.46	138.89	120.20
52	AH	51	VAL	O-C-N	-12.43	113.54	121.37
11	B2	1436	U	P-O3'-C3'	12.41	138.82	120.20
38	A1	1704	C	P-O3'-C3'	12.36	138.73	120.20
38	A1	584	G	P-O3'-C3'	12.25	138.57	120.20
38	A1	1245	C	P-O3'-C3'	12.20	138.50	120.20
11	B2	408	C	P-O3'-C3'	12.18	138.47	120.20
38	A1	2324	C	P-O3'-C3'	12.13	138.40	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2338	A	P-O3'-C3'	12.10	138.34	120.20
23	BK	7	THR	CA-C-N	12.06	130.90	121.61
23	BK	7	THR	C-N-CA	12.06	130.90	121.61
11	B2	239	A	C2'-C3'-O3'	11.98	127.48	109.50
9	AX	254	VAL	N-CA-C	-11.95	99.21	111.88
59	AL	130	SER	CA-C-O	-11.91	109.88	120.60
67	AZ	2	ASP	CA-CB-CG	-11.88	100.72	112.60
39	A3	124	A	P-O3'-C3'	11.86	137.99	120.20
38	A1	43	G	P-O3'-C3'	11.82	137.94	120.20
38	A1	2948	A	P-O3'-C3'	11.82	137.94	120.20
38	A1	1085	G	P-O3'-C3'	11.80	137.90	120.20
17	BE	5	GLY	CA-C-N	11.78	131.92	119.90
17	BE	5	GLY	C-N-CA	11.78	131.92	119.90
38	A1	994	G	C2'-C3'-O3'	11.73	127.09	109.50
54	AI	107	PHE	CA-CB-CG	-11.73	102.07	113.80
38	A1	83	G	P-O3'-C3'	11.71	137.77	120.20
38	A1	210	A	C2'-C3'-O3'	11.70	127.04	109.50
38	A1	2063	U	C2'-C3'-O3'	11.69	131.23	113.70
62	AO	148	HIS	O-C-N	11.65	134.47	122.12
20	BH	11	ILE	O-C-N	-11.64	112.97	120.42
38	A1	639	C	P-O3'-C3'	11.58	137.57	120.20
11	B2	199	A	P-O3'-C3'	11.54	137.52	120.20
11	B2	1306	A	P-O3'-C3'	11.51	137.47	120.20
38	A1	364	A	P-O3'-C3'	11.49	137.44	120.20
11	B2	891	A	P-O3'-C3'	11.48	137.43	120.20
39	A3	74	U	C2'-C3'-O3'	11.48	126.73	109.50
9	AX	219	VAL	N-CA-CB	11.48	122.67	110.62
38	A1	83	G	O3'-P-O5'	-11.47	86.80	104.00
11	B2	1460	G	P-O3'-C3'	11.46	137.39	120.20
38	A1	2370	C	P-O3'-C3'	11.46	137.38	120.20
38	A1	1390	U	P-O3'-C3'	11.42	137.34	120.20
11	B2	370	A	P-O5'-C5'	11.38	137.97	120.90
38	A1	1443	G	P-O3'-C3'	11.34	137.22	120.20
8	AW	53	ARG	NE-CZ-NH2	11.34	129.41	119.20
11	B2	246	A	P-O3'-C3'	11.32	137.18	120.20
11	B2	1019	A	P-O3'-C3'	11.31	137.17	120.20
38	A1	734	C	P-O3'-C3'	11.26	137.09	120.20
38	A1	2945	A	P-O5'-C5'	11.24	137.76	120.90
38	A1	1602	C	P-O3'-C3'	11.24	137.06	120.20
43	AB	102	ILE	CA-C-N	11.24	131.20	119.85
43	AB	102	ILE	C-N-CA	11.24	131.20	119.85
11	B2	871	A	P-O3'-C3'	11.22	137.03	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	AB	233	ARG	N-CA-C	-11.19	99.87	114.31
51	Ag	13	LYS	N-CA-CB	11.19	126.94	110.49
11	B2	99	C	C2'-C3'-O3'	11.18	126.27	109.50
39	A3	25	A	P-O3'-C3'	11.16	136.94	120.20
38	A1	859	G	P-O3'-C3'	11.16	136.94	120.20
11	B2	201	G	P-O3'-C3'	11.15	136.93	120.20
11	B2	165	U	O3'-P-O5'	-11.11	87.34	104.00
11	B2	488	A	O4'-C1'-C2'	-11.10	94.70	105.80
38	A1	1260	C	P-O3'-C3'	11.07	136.80	120.20
11	B2	1340	U	P-O3'-C3'	11.06	136.78	120.20
46	AD	36	ILE	N-CA-CB	11.05	123.47	110.55
17	BE	192	ASN	CA-C-N	11.01	135.69	120.49
17	BE	192	ASN	C-N-CA	11.01	135.69	120.49
11	B2	26	A	P-O5'-C5'	10.91	137.26	120.90
11	B2	1161	A	P-O3'-C3'	10.90	136.55	120.20
52	AH	6	VAL	N-CA-C	-10.86	101.35	111.45
11	B2	406	U	P-O3'-C3'	10.85	136.48	120.20
1	A7	30	LYS	CA-C-N	10.84	135.18	120.54
1	A7	30	LYS	C-N-CA	10.84	135.18	120.54
11	B2	977	G	P-O3'-C3'	10.75	136.32	120.20
11	B2	196	G	P-O3'-C3'	10.72	136.28	120.20
38	A1	119	U	P-O3'-C3'	10.72	136.28	120.20
38	A1	1712	U	P-O3'-C3'	-10.70	104.15	120.20
24	BL	45	ILE	N-CA-CB	10.67	125.76	111.25
11	B2	963	A	O4'-C4'-C3'	-10.63	95.47	106.10
40	A5	14	ALA	N-CA-C	-10.60	97.37	110.61
11	B2	985	C	P-O3'-C3'	10.58	136.07	120.20
11	B2	192	G	O4'-C1'-C2'	10.56	118.16	107.60
38	A1	981	A	P-O3'-C3'	10.51	135.96	120.20
38	A1	1109	G	P-O3'-C3'	10.50	135.95	120.20
61	AN	9	ASP	CA-CB-CG	-10.46	102.14	112.60
26	BN	92	GLY	CA-C-N	10.40	134.58	120.54
26	BN	92	GLY	C-N-CA	10.40	134.58	120.54
18	BF	141	VAL	CA-C-N	10.40	130.18	118.85
18	BF	141	VAL	C-N-CA	10.40	130.18	118.85
38	A1	84	A	O3'-P-O5'	10.39	119.59	104.00
38	A1	2172	G	P-O3'-C3'	10.39	135.79	120.20
38	A1	3041	U	P-O3'-C3'	10.38	135.76	120.20
17	BE	202	ILE	N-CA-C	-10.37	102.32	112.17
38	A1	1553	G	P-O3'-C3'	10.36	135.73	120.20
38	A1	936	G	P-O3'-C3'	10.34	135.71	120.20
1	A7	23	LEU	N-CA-C	-10.33	101.44	114.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	Ak	78	LYS	N-CA-CB	10.33	122.23	110.35
31	BS	20	TYR	CA-C-N	10.33	131.10	119.32
31	BS	20	TYR	C-N-CA	10.33	131.10	119.32
38	A1	2987	U	C2'-C3'-O3'	10.32	124.98	109.50
52	AH	56	ILE	CB-CA-C	10.29	124.31	110.42
40	AK	71	VAL	CA-C-N	10.28	134.41	120.44
40	AK	71	VAL	C-N-CA	10.28	134.41	120.44
38	A1	518	A	P-O3'-C3'	10.27	135.61	120.20
50	AF	1	MET	CA-C-N	10.26	132.67	119.84
50	AF	1	MET	C-N-CA	10.26	132.67	119.84
38	A1	513	C	C2'-C3'-O3'	10.23	124.85	109.50
11	B2	516	A	O3'-P-O5'	-10.23	88.66	104.00
38	A1	1407	A	C2'-C3'-O3'	10.22	124.83	109.50
38	A1	3036	C	P-O3'-C3'	10.21	135.52	120.20
57	Aj	64	LYS	CA-C-N	10.22	135.25	120.95
57	Aj	64	LYS	C-N-CA	10.22	135.25	120.95
38	A1	1572	C	P-O5'-C5'	10.21	136.22	120.90
38	A1	293	G	P-O5'-C5'	10.21	136.21	120.90
38	A1	2063	U	C5'-C4'-C3'	10.19	131.29	116.00
22	BJ	47	ARG	N-CA-C	-10.19	91.35	108.26
38	A1	1732	C	P-O3'-C3'	10.19	135.48	120.20
25	BM	7	ASN	CA-CB-CG	10.15	122.75	112.60
38	A1	1184	U	O4'-C1'-N1	10.15	123.72	108.50
38	A1	899	A	C2'-C3'-O3'	10.15	124.72	109.50
56	AJ	112	VAL	CA-C-O	-10.14	112.60	119.19
38	A1	994	G	P-O3'-C3'	10.14	135.41	120.20
10	B1	59	A	P-O3'-C3'	10.11	135.37	120.20
38	A1	2063	U	C3'-C2'-C1'	-10.10	91.20	101.30
38	A1	2548	A	P-O3'-C3'	10.10	135.35	120.20
38	A1	1470	C	P-O3'-C3'	10.10	135.34	120.20
12	AG	11	VAL	CA-C-N	10.10	130.02	120.03
12	AG	11	VAL	C-N-CA	10.10	130.02	120.03
20	BH	9	PHE	N-CA-C	10.08	122.27	111.28
38	A1	1445	G	P-O3'-C3'	10.06	135.29	120.20
38	A1	2562	G	C2'-C3'-O3'	10.05	124.58	109.50
62	AO	64	THR	N-CA-C	-10.05	100.51	113.17
11	B2	42	G	P-O3'-C3'	10.04	135.26	120.20
11	B2	1472	G	C4'-C3'-C2'	-10.04	92.56	102.60
38	A1	1711	C	P-O5'-C5'	10.02	135.93	120.90
48	AE	179	PHE	CA-CB-CG	-10.01	103.79	113.80
11	B2	422	U	P-O3'-C3'	10.01	135.21	120.20
45	AC	159	GLU	CA-C-N	10.00	133.94	120.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	AC	159	GLU	C-N-CA	10.00	133.94	120.63
29	BQ	136	TYR	CA-C-N	10.00	133.44	120.44
29	BQ	136	TYR	C-N-CA	10.00	133.44	120.44
38	A1	2430	C	P-O5'-C5'	9.98	135.87	120.90
51	Ag	47	ARG	NE-CZ-NH2	9.98	128.18	119.20
38	A1	1080	G	P-O3'-C3'	9.97	135.16	120.20
38	A1	529	G	P-O3'-C3'	9.96	135.15	120.20
38	A1	1990	U	P-O3'-C3'	9.93	135.10	120.20
45	AC	256	ILE	N-CA-C	-9.93	103.80	113.53
62	AO	169	GLY	CA-C-N	9.92	130.43	120.31
62	AO	169	GLY	C-N-CA	9.92	130.43	120.31
37	BY	30	PHE	CA-CB-CG	-9.91	103.89	113.80
10	B1	8	U	P-O3'-C3'	9.91	135.06	120.20
38	A1	758	C	P-O3'-C3'	9.91	135.06	120.20
38	A1	1082	A	P-O3'-C3'	9.90	135.06	120.20
38	A1	1003	C	P-O3'-C3'	9.90	135.05	120.20
38	A1	1604	G	P-O5'-C5'	9.90	135.75	120.90
23	BK	108	VAL	CA-C-N	9.90	132.98	122.69
23	BK	108	VAL	C-N-CA	9.90	132.98	122.69
31	BS	55	THR	CA-C-O	9.90	130.91	120.42
38	A1	897	U	P-O3'-C3'	9.90	135.04	120.20
57	Aj	40	PHE	N-CA-CB	9.90	121.43	110.35
38	A1	1347	U	P-O3'-C3'	9.89	135.03	120.20
38	A1	2301	C	O4'-C1'-C2'	-9.88	97.72	107.60
38	A1	210	A	P-O3'-C3'	9.88	135.02	120.20
11	B2	746	A	P-O3'-C3'	9.87	135.00	120.20
60	AM	192	LYS	N-CA-C	-9.86	101.25	113.38
38	A1	1042	G	P-O3'-C3'	9.86	134.99	120.20
38	A1	2064	U	C1'-O4'-C4'	-9.86	99.84	109.70
33	BU	53	TYR	CA-C-O	-9.85	110.11	120.55
30	BR	58	ASN	CA-CB-CG	-9.85	102.75	112.60
38	A1	2064	U	C2'-C3'-O3'	9.82	124.23	109.50
61	AN	38	ASN	CA-C-N	9.82	132.11	119.84
61	AN	38	ASN	C-N-CA	9.82	132.11	119.84
11	B2	248	U	O4'-C1'-C2'	-9.82	97.78	107.60
11	B2	1307	G	P-O3'-C3'	9.81	134.92	120.20
64	AR	12	THR	CA-C-N	9.80	140.25	121.54
64	AR	12	THR	C-N-CA	9.80	140.25	121.54
11	B2	434	A	P-O3'-C3'	9.79	134.88	120.20
38	A1	301	G	P-O3'-C3'	9.79	134.88	120.20
11	B2	229	G	P-O5'-C5'	-9.78	106.23	120.90
17	BE	208	GLY	CA-C-N	9.77	132.30	120.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	BE	208	GLY	C-N-CA	9.77	132.30	120.09
38	A1	1554	G	P-O5'-C5'	9.76	135.54	120.90
28	BP	53	ARG	CA-C-N	9.76	134.14	120.29
28	BP	53	ARG	C-N-CA	9.76	134.14	120.29
38	A1	363	G	P-O5'-C5'	9.75	135.53	120.90
38	A1	2747	C	P-O3'-C3'	9.75	134.82	120.20
38	A1	1939	C	C2'-C3'-O3'	9.74	124.11	109.50
48	AE	155	ARG	N-CA-C	-9.72	93.55	109.40
38	A1	2696	G	C2'-C3'-O3'	9.71	124.07	109.50
38	A1	1936	C	P-O3'-C3'	9.70	134.75	120.20
60	AM	22	LEU	N-CA-C	-9.70	100.71	111.28
39	A3	84	U	P-O5'-C5'	9.69	135.44	120.90
56	AJ	99	PHE	CA-CB-CG	-9.69	104.11	113.80
38	A1	1879	U	P-O3'-C3'	9.65	134.68	120.20
58	AK	29	ASP	CA-CB-CG	-9.65	102.95	112.60
38	A1	1485	A	P-O3'-C3'	9.64	134.66	120.20
9	AX	112	LYS	N-CA-C	9.64	122.68	111.11
42	Aa	51	ASP	CA-C-N	9.63	129.38	119.56
42	Aa	51	ASP	C-N-CA	9.63	129.38	119.56
60	AM	18	TYR	CA-C-N	9.63	134.10	120.53
60	AM	18	TYR	C-N-CA	9.63	134.10	120.53
38	A1	1753	G	P-O3'-C3'	9.61	134.62	120.20
12	B3	3	LYS	N-CA-C	-9.61	99.52	108.07
38	A1	1764	G	P-O3'-C3'	9.61	134.61	120.20
5	AS	43	MET	N-CA-CB	9.59	125.03	110.45
4	AQ	136	HIS	CE1-NE2-CD2	-9.58	99.42	109.00
38	A1	1024	G	P-O3'-C3'	9.57	134.56	120.20
50	AF	12	GLU	CA-C-N	9.56	131.65	123.33
50	AF	12	GLU	C-N-CA	9.56	131.65	123.33
62	AO	80	THR	O-C-N	-9.55	111.74	120.71
27	BO	68	ASP	CA-C-N	9.54	129.78	119.28
27	BO	68	ASP	C-N-CA	9.54	129.78	119.28
11	B2	1423	A	P-O3'-C3'	9.54	134.51	120.20
55	Ai	40	VAL	N-CA-C	9.53	119.57	110.42
56	AJ	108	THR	CA-C-O	-9.53	110.20	120.88
38	A1	1736	G	C5'-C4'-C3'	-9.51	101.73	116.00
20	BH	51	HIS	CA-CB-CG	9.50	123.30	113.80
34	BV	25	HIS	O-C-N	-9.50	114.58	121.23
58	AK	112	ALA	CA-C-N	9.49	132.25	122.00
58	AK	112	ALA	C-N-CA	9.49	132.25	122.00
38	A1	1542	U	P-O3'-C3'	9.49	134.43	120.20
11	B2	655	A	P-O3'-C3'	9.49	134.43	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1155	A	C4'-C3'-C2'	9.49	112.09	102.60
45	AC	136	PRO	CA-C-O	-9.48	110.56	121.56
15	BC	68	ILE	N-CA-C	9.46	119.50	110.42
11	B2	325	A	P-O5'-C5'	9.43	135.05	120.90
38	A1	2701	U	C4'-C3'-C2'	-9.43	93.17	102.60
38	A1	1408	G	P-O5'-C5'	9.43	135.04	120.90
61	AN	50	HIS	CE1-NE2-CD2	-9.41	99.58	109.00
4	AQ	11	ALA	CA-C-N	9.41	132.89	120.28
4	AQ	11	ALA	C-N-CA	9.41	132.89	120.28
38	A1	3038	A	P-O3'-C3'	9.39	134.29	120.20
11	B2	1460	G	C2'-C3'-O3'	9.39	127.79	113.70
24	BL	92	GLU	CA-C-N	9.38	138.59	121.70
24	BL	92	GLU	C-N-CA	9.38	138.59	121.70
29	BQ	104	ASN	CA-C-N	9.38	132.85	120.28
29	BQ	104	ASN	C-N-CA	9.38	132.85	120.28
23	BK	98	LYS	N-CA-C	-9.38	101.15	112.59
11	B2	1105	C	P-O3'-C3'	9.37	134.26	120.20
11	B2	159	C	O3'-P-O5'	-9.37	89.94	104.00
38	A1	210	A	P-O5'-C5'	9.37	134.95	120.90
9	AX	237	HIS	CA-CB-CG	-9.35	104.45	113.80
11	B2	1437	G	P-O5'-C5'	-9.35	106.88	120.90
11	B2	1019	A	C2'-C3'-O3'	9.34	123.51	109.50
50	AF	78	MET	CA-C-N	9.34	133.25	120.46
50	AF	78	MET	C-N-CA	9.34	133.25	120.46
64	AR	55	ASP	CA-CB-CG	-9.34	103.26	112.60
20	BH	198	SER	CA-C-N	9.33	133.71	120.28
20	BH	198	SER	C-N-CA	9.33	133.71	120.28
38	A1	338	A	P-O5'-C5'	9.32	134.89	120.90
38	A1	427	G	P-O3'-C3'	9.32	134.19	120.20
11	B2	111	G	P-O3'-C3'	9.32	134.18	120.20
38	A1	1556	G	P-O5'-C5'	9.32	134.88	120.90
38	A1	588	U	P-O3'-C3'	9.32	134.17	120.20
38	A1	1746	C	C4'-C3'-C2'	-9.29	93.31	102.60
38	A1	2279	G	O4'-C1'-C2'	9.29	116.89	107.60
9	AX	375	PRO	N-CA-C	9.28	122.02	110.70
19	BG	53	LYS	CA-C-N	9.28	138.39	121.70
19	BG	53	LYS	C-N-CA	9.28	138.39	121.70
26	BN	12	ALA	CA-C-N	9.28	131.82	120.13
26	BN	12	ALA	C-N-CA	9.28	131.82	120.13
38	A1	1586	G	P-O3'-C3'	9.28	134.11	120.20
11	B2	432	G	P-O3'-C3'	9.27	134.11	120.20
11	B2	1183	C	P-O5'-C5'	9.27	134.81	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1957	U	C4'-C3'-C2'	-9.26	93.34	102.60
11	B2	1200	U	P-O3'-C3'	9.24	134.06	120.20
11	B2	959	G	P-O3'-C3'	9.23	134.04	120.20
38	A1	1117	C	P-O3'-C3'	9.23	134.04	120.20
9	AX	111	GLN	OE1-CD-NE2	9.22	131.82	122.60
38	A1	2993	G	C4'-C3'-C2'	-9.21	93.39	102.60
11	B2	176	U	P-O5'-C5'	9.21	134.71	120.90
14	BB	105	ALA	CA-C-N	9.19	132.85	120.63
14	BB	105	ALA	C-N-CA	9.19	132.85	120.63
11	B2	1096	G	P-O5'-C5'	9.18	134.67	120.90
9	AX	401	GLY	CA-C-N	9.17	132.36	120.44
9	AX	401	GLY	C-N-CA	9.17	132.36	120.44
20	BH	56	PHE	CA-CB-CG	-9.17	104.63	113.80
41	AA	41	ARG	NE-CZ-NH2	9.16	127.44	119.20
11	B2	369	A	P-O3'-C3'	9.14	133.91	120.20
24	BL	84	GLN	CA-C-O	9.14	130.24	120.55
28	BP	9	ARG	NE-CZ-NH2	-9.14	110.97	119.20
29	BQ	97	PHE	N-CA-C	9.13	121.23	111.28
62	AO	121	LEU	CA-C-N	9.13	133.43	120.28
62	AO	121	LEU	C-N-CA	9.13	133.43	120.28
46	AD	111	ARG	CA-C-N	9.13	132.51	120.28
46	AD	111	ARG	C-N-CA	9.13	132.51	120.28
26	BN	133	SER	N-CA-CB	9.12	123.45	110.04
10	B1	63	C	P-O5'-C5'	9.12	134.58	120.90
38	A1	1772	A	P-O5'-C5'	9.11	134.57	120.90
61	AN	63	GLU	CA-C-N	9.11	132.28	120.44
61	AN	63	GLU	C-N-CA	9.11	132.28	120.44
38	A1	2301	C	C4'-C3'-C2'	-9.09	93.51	102.60
39	A3	45	C	O4'-C1'-C2'	-9.09	98.51	107.60
47	Ad	80	MET	N-CA-CB	9.09	123.61	110.16
20	BH	88	ARG	N-CA-CB	9.08	125.84	110.49
47	Ad	82	GLU	N-CA-C	9.08	120.79	111.07
4	AQ	145	HIS	ND1-CE1-NE2	9.07	117.47	108.40
38	A1	471	U	P-O3'-C3'	9.07	133.81	120.20
11	B2	934	G	P-O3'-C3'	9.07	133.80	120.20
11	B2	480	G	P-O3'-C3'	-9.07	106.60	120.20
38	A1	50	C	P-O3'-C3'	9.06	133.79	120.20
38	A1	1919	A	P-O3'-C3'	-9.06	106.61	120.20
31	BS	35	VAL	CA-C-N	9.04	132.40	120.28
31	BS	35	VAL	C-N-CA	9.04	132.40	120.28
38	A1	771	G	P-O5'-C5'	9.04	134.46	120.90
20	BH	38	ASN	CA-CB-CG	-9.04	103.56	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	273	G	P-O3'-C3'	9.03	133.75	120.20
13	BA	12	LYS	N-CA-C	9.03	121.12	111.28
38	A1	1103	C	P-O5'-C5'	9.02	134.43	120.90
11	B2	1186	C	P-O3'-C3'	9.02	133.72	120.20
9	AX	219	VAL	CB-CA-C	-9.01	100.17	111.70
38	A1	3009	C	C4'-C3'-C2'	-9.01	93.59	102.60
10	B1	73	C	O4'-C1'-C2'	-9.00	98.60	107.60
9	AX	132	PHE	N-CA-C	-9.00	102.31	113.38
38	A1	2158	G	P-O3'-C3'	9.00	133.70	120.20
48	AE	111	GLY	N-CA-C	-9.00	103.22	114.92
27	BO	131	THR	N-CA-C	-8.99	98.98	113.19
35	BW	48	THR	N-CA-C	-8.99	95.29	109.50
38	A1	577	C	O4'-C1'-N1	8.99	121.99	108.50
13	BA	113	ASP	CA-CB-CG	-8.99	103.61	112.60
11	B2	1262	U	O4'-C1'-N1	8.98	121.68	108.20
23	BK	58	ASN	CA-CB-CG	-8.98	103.61	112.60
18	BF	207	ASN	OD1-CG-ND2	8.98	131.58	122.60
22	BJ	74	LYS	N-CA-C	-8.95	93.93	108.52
44	Ab	60	SER	CA-C-O	-8.95	112.67	120.19
38	A1	2215	U	P-O3'-C3'	8.95	133.62	120.20
38	A1	579	C	C2'-C3'-O3'	8.94	122.92	109.50
38	A1	1503	C	C5'-C4'-C3'	8.93	129.40	116.00
42	Aa	30	ARG	CA-C-N	8.93	132.05	120.44
42	Aa	30	ARG	C-N-CA	8.93	132.05	120.44
27	BO	56	ASP	CA-CB-CG	-8.93	103.67	112.60
17	BE	10	LEU	N-CA-C	-8.92	95.45	109.72
10	B1	55	U	P-O5'-C5'	8.91	134.27	120.90
38	A1	2286	U	C4'-C3'-O3'	-8.90	99.64	113.00
40	AK	17	ARG	N-CA-CB	8.90	125.53	110.49
61	AN	112	MET	CA-C-O	-8.89	111.93	121.36
32	BT	29	PRO	CA-C-N	8.88	132.54	120.38
32	BT	29	PRO	C-N-CA	8.88	132.54	120.38
38	A1	215	A	C2'-C3'-O3'	8.88	122.82	109.50
11	B2	1495	U	C3'-C2'-C1'	8.88	110.17	101.30
43	AB	19	SER	CA-C-N	8.88	128.64	119.76
43	AB	19	SER	C-N-CA	8.88	128.64	119.76
4	AQ	24	ILE	N-CA-CB	8.87	123.31	111.25
16	BD	146	LYS	CA-C-N	8.87	131.97	120.44
16	BD	146	LYS	C-N-CA	8.87	131.97	120.44
29	BQ	136	TYR	N-CA-C	8.86	120.94	111.28
11	B2	1459	G	C2'-C3'-O3'	8.86	122.78	109.50
51	Ag	3	ARG	CA-C-N	8.86	131.16	120.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	Ag	3	ARG	C-N-CA	8.86	131.16	120.09
54	AI	34	GLU	O-C-N	-8.86	112.71	122.10
23	BK	49	LEU	N-CA-C	-8.85	102.63	112.72
14	BB	192	VAL	O-C-N	8.85	130.45	121.87
36	BX	32	LEU	N-CA-C	-8.85	103.60	114.75
38	A1	2979	C	C4'-C3'-C2'	-8.84	93.76	102.60
42	Aa	10	ILE	N-CA-CB	8.84	121.60	110.99
11	B2	434	A	C2'-C3'-O3'	8.84	122.75	109.50
11	B2	963	A	P-O3'-C3'	8.84	133.46	120.20
38	A1	2301	C	P-O5'-C5'	8.83	134.14	120.90
54	AI	34	GLU	CA-C-O	8.82	128.61	118.55
18	BF	191	THR	N-CA-C	-8.82	100.42	114.09
38	A1	2063	U	C1'-O4'-C4'	-8.82	101.08	109.90
5	AS	43	MET	CA-C-N	8.81	132.09	120.28
5	AS	43	MET	C-N-CA	8.81	132.09	120.28
34	BV	35	ASP	N-CA-C	8.81	120.88	111.28
27	BO	116	ARG	CA-C-N	8.80	129.54	119.94
27	BO	116	ARG	C-N-CA	8.80	129.54	119.94
60	AM	153	HIS	CA-CB-CG	-8.80	105.00	113.80
58	Ak	209	ASP	CA-C-N	8.79	132.06	120.28
58	Ak	209	ASP	C-N-CA	8.79	132.06	120.28
4	AQ	135	LYS	CA-C-N	8.79	131.87	120.44
4	AQ	135	LYS	C-N-CA	8.79	131.87	120.44
57	Aj	52	ARG	O-C-N	-8.79	112.25	121.30
27	BO	137	ARG	N-CA-CB	8.78	125.33	110.49
5	AS	45	ASN	CA-CB-CG	-8.78	103.82	112.60
11	B2	351	C	P-O3'-C3'	-8.78	107.03	120.20
41	AA	164	HIS	CA-C-N	8.78	132.04	122.74
41	AA	164	HIS	C-N-CA	8.78	132.04	122.74
58	Ak	95	ASN	CA-C-O	-8.77	111.23	120.87
62	AO	65	ARG	N-CA-C	-8.77	102.72	113.50
38	A1	1395	G	O4'-C1'-C2'	-8.76	97.04	105.80
60	AM	82	PRO	CA-C-O	-8.76	112.08	121.27
11	B2	163	C	O4'-C1'-N1	8.76	121.63	108.50
6	AT	28	PHE	CA-C-N	8.75	134.10	122.90
6	AT	28	PHE	C-N-CA	8.75	134.10	122.90
17	BE	229	TYR	N-CA-C	-8.75	102.61	113.38
56	AJ	41	ILE	N-CA-C	-8.75	102.33	110.82
11	B2	247	G	C4'-C3'-O3'	8.73	122.49	109.40
18	BF	206	TYR	CA-C-O	-8.72	111.30	120.55
38	A1	408	C	P-O3'-C3'	8.72	133.28	120.20
38	A1	2396	G	P-O3'-C3'	8.72	133.28	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	324	C	O3'-P-O5'	8.72	117.08	104.00
38	A1	1592	U	P-O5'-C5'	8.72	133.97	120.90
11	B2	362	C	C2'-C3'-O3'	8.71	122.57	109.50
34	BV	34	LYS	N-CA-C	8.71	120.77	111.28
11	B2	776	C	P-O5'-C5'	8.71	133.96	120.90
39	A3	89	G	P-O3'-C3'	8.71	133.26	120.20
64	AR	49	TYR	CA-C-N	8.71	132.14	120.65
64	AR	49	TYR	C-N-CA	8.71	132.14	120.65
67	AZ	25	ARG	NE-CZ-NH2	8.70	127.03	119.20
9	AX	60	GLN	O-C-N	8.68	131.32	122.12
60	AM	156	GLY	CA-C-N	8.67	131.89	120.28
60	AM	156	GLY	C-N-CA	8.67	131.89	120.28
11	B2	988	A	P-O3'-C3'	8.66	133.20	120.20
38	A1	1819	G	C1'-O4'-C4'	-8.66	101.24	109.90
38	A1	2293	G	O4'-C1'-C2'	-8.66	97.14	105.80
24	BL	29	ARG	N-CA-C	-8.66	103.84	114.75
52	AH	40	ASN	OD1-CG-ND2	8.66	131.26	122.60
47	Ad	53	GLU	CA-C-N	8.66	134.45	120.60
47	Ad	53	GLU	C-N-CA	8.66	134.45	120.60
47	Ad	11	ARG	CA-C-O	-8.65	112.38	121.55
42	Aa	28	ALA	CA-C-N	8.65	128.27	118.85
42	Aa	28	ALA	C-N-CA	8.65	128.27	118.85
64	AR	55	ASP	N-CA-C	-8.63	98.68	109.64
60	AM	99	ILE	CA-C-N	8.63	131.84	120.28
60	AM	99	ILE	C-N-CA	8.63	131.84	120.28
11	B2	324	C	P-O3'-C3'	8.63	133.14	120.20
11	B2	1483	U	C1'-O4'-C4'	8.63	118.33	109.70
11	B2	400	G	O3'-P-O5'	8.61	116.92	104.00
40	A5	56	LEU	N-CA-C	-8.61	99.97	110.31
20	BH	14	GLU	CA-C-N	8.61	136.37	122.69
20	BH	14	GLU	C-N-CA	8.61	136.37	122.69
10	B1	26	C	P-O5'-C5'	8.60	133.81	120.90
13	BA	150	GLU	CA-C-N	8.60	132.50	120.29
13	BA	150	GLU	C-N-CA	8.60	132.50	120.29
38	A1	1572	C	P-O3'-C3'	8.60	133.10	120.20
38	A1	1896	U	P-O3'-C3'	8.60	133.09	120.20
31	BS	51	ALA	CA-C-N	8.59	129.47	119.94
31	BS	51	ALA	C-N-CA	8.59	129.47	119.94
11	B2	406	U	P-O5'-C5'	8.59	133.78	120.90
18	BF	194	THR	CA-C-N	8.58	131.37	120.56
18	BF	194	THR	C-N-CA	8.58	131.37	120.56
13	BA	56	THR	N-CA-C	-8.57	100.34	113.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BS	35	VAL	N-CA-C	8.57	120.39	110.62
48	AE	25	ILE	CA-C-N	8.57	132.10	120.44
11	B2	1432	U	P-O5'-C5'	8.57	133.75	120.90
18	BF	168	GLY	CA-C-N	8.57	131.76	120.28
18	BF	168	GLY	C-N-CA	8.57	131.76	120.28
38	A1	2300	C	C4'-C3'-C2'	-8.57	94.03	102.60
48	AE	25	ILE	C-N-CA	8.57	132.10	120.44
60	AM	12	LYS	N-CA-C	8.57	120.24	111.07
65	AV	21	MET	N-CA-C	-8.57	95.27	109.07
38	A1	1834	C	C4'-C3'-C2'	-8.56	94.03	102.60
57	Aj	41	ARG	N-CA-C	-8.55	101.50	114.16
41	AA	202	VAL	N-CA-C	-8.55	95.80	108.45
38	A1	2232	U	O4'-C1'-N1	8.55	121.32	108.50
11	B2	528	G	P-O3'-C3'	8.54	133.01	120.20
45	AC	192	VAL	CA-C-N	8.54	131.73	120.28
45	AC	192	VAL	C-N-CA	8.54	131.73	120.28
38	A1	301	G	O4'-C4'-C3'	-8.54	97.56	106.10
43	AB	5	LEU	CA-C-N	8.54	131.32	120.56
43	AB	5	LEU	C-N-CA	8.54	131.32	120.56
11	B2	155	U	P-O3'-C3'	8.53	133.00	120.20
38	A1	1906	G	O4'-C1'-N9	8.53	121.30	108.50
38	A1	217	A	C5'-C4'-C3'	8.53	127.99	115.20
38	A1	86	G	P-O5'-C5'	8.53	133.69	120.90
66	AY	118	ARG	NE-CZ-NH2	8.52	126.87	119.20
58	Ak	209	ASP	N-CA-CB	8.52	126.38	111.13
16	BD	20	LYS	N-CA-C	-8.51	101.96	111.07
38	A1	641	G	P-O3'-C3'	8.51	132.97	120.20
38	A1	2275	G	C4'-C3'-C2'	-8.51	94.09	102.60
12	AG	60	GLU	CA-C-N	8.51	131.68	120.28
12	AG	60	GLU	C-N-CA	8.51	131.68	120.28
52	AH	67	GLU	N-CA-C	-8.50	97.65	110.14
38	A1	131	C	O4'-C1'-C2'	-8.49	99.11	107.60
3	Af	30	LYS	N-CA-C	8.49	120.53	111.28
21	BI	31	SER	CA-C-N	8.48	131.65	120.28
21	BI	31	SER	C-N-CA	8.48	131.65	120.28
11	B2	1393	A	P-O5'-C5'	-8.48	108.18	120.90
16	BD	26	GLU	CA-C-N	8.48	132.33	120.29
16	BD	26	GLU	C-N-CA	8.48	132.33	120.29
38	A1	2892	A	C2'-C3'-O3'	8.47	122.21	109.50
11	B2	1439	G	O4'-C1'-N9	8.46	121.20	108.50
38	A1	899	A	P-O3'-C3'	8.46	132.89	120.20
38	A1	2155	C	C5'-C4'-C3'	-8.46	102.51	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	AB	230	ILE	CA-C-N	8.46	134.17	122.07
43	AB	230	ILE	C-N-CA	8.46	134.17	122.07
50	AF	101	VAL	N-CA-C	-8.46	95.40	107.75
9	AX	52	ILE	N-CA-CB	8.45	122.63	111.40
23	BK	31	LYS	CA-C-N	8.45	130.40	119.84
23	BK	31	LYS	C-N-CA	8.45	130.40	119.84
5	AS	45	ASN	CA-C-N	8.44	132.28	120.29
5	AS	45	ASN	C-N-CA	8.44	132.28	120.29
57	Aj	50	PHE	CA-C-O	-8.44	110.15	118.34
10	B1	7	G	P-O3'-C3'	8.44	132.86	120.20
42	Aa	31	ALA	O-C-N	-8.43	113.38	122.07
44	Ab	39	LYS	CA-C-N	8.43	134.72	121.56
44	Ab	39	LYS	C-N-CA	8.43	134.72	121.56
38	A1	98	G	P-O5'-C5'	8.43	133.54	120.90
66	AY	78	LYS	CA-C-N	8.43	128.95	119.93
66	AY	78	LYS	C-N-CA	8.43	128.95	119.93
38	A1	2536	A	C4'-C3'-C2'	-8.43	94.17	102.60
6	AT	75	SER	CB-CA-C	-8.43	97.17	110.14
38	A1	1308	G	P-O3'-C3'	8.42	132.83	120.20
12	AG	122	MET	N-CA-CB	8.42	124.72	110.49
67	AZ	41	ALA	N-CA-C	-8.42	100.57	108.07
38	A1	922	C	P-O5'-C5'	8.42	133.53	120.90
55	Ai	17	TYR	N-CA-CB	8.42	124.72	110.49
57	Aj	28	ARG	CA-C-N	8.42	130.36	119.84
57	Aj	28	ARG	C-N-CA	8.42	130.36	119.84
17	BE	179	PHE	CA-CB-CG	8.41	122.22	113.80
1	A7	14	PHE	N-CA-C	8.41	121.28	111.02
9	AX	141	PHE	CA-C-N	8.41	131.89	120.54
9	AX	141	PHE	C-N-CA	8.41	131.89	120.54
38	A1	982	G	P-O5'-C5'	8.41	133.51	120.90
38	A1	2302	C	P-O3'-C3'	-8.41	107.59	120.20
39	A3	42	A	P-O3'-C3'	8.41	132.81	120.20
38	A1	1612	G	P-O3'-C3'	8.40	132.81	120.20
38	A1	2337	G	C4'-C3'-O3'	-8.40	100.39	113.00
38	A1	1642	G	O3'-P-O5'	-8.40	91.40	104.00
4	AQ	145	HIS	CE1-NE2-CD2	-8.40	100.60	109.00
65	AV	47	PRO	CA-C-N	8.40	131.53	120.28
65	AV	47	PRO	C-N-CA	8.40	131.53	120.28
38	A1	480	A	P-O3'-C3'	8.40	132.79	120.20
14	BB	97	LEU	CA-C-N	8.39	128.15	119.76
14	BB	97	LEU	C-N-CA	8.39	128.15	119.76
30	BR	12	PRO	CA-C-N	8.39	131.86	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	BR	12	PRO	C-N-CA	8.39	131.86	120.54
38	A1	186	A	O4'-C1'-C2'	-8.39	99.21	107.60
38	A1	471	U	C2'-C3'-O3'	8.39	126.28	113.70
58	Ak	53	ARG	CA-C-N	8.38	131.50	122.11
58	Ak	53	ARG	C-N-CA	8.38	131.50	122.11
9	AX	225	TYR	CA-C-N	8.38	131.86	120.38
9	AX	225	TYR	C-N-CA	8.38	131.86	120.38
20	BH	23	THR	CA-C-N	8.38	131.51	120.28
20	BH	23	THR	C-N-CA	8.38	131.51	120.28
17	BE	73	VAL	N-CA-C	-8.38	96.42	108.48
9	AX	325	ILE	N-CA-C	8.37	119.16	110.62
38	A1	407	A	O3'-P-O5'	8.37	116.56	104.00
43	AB	38	GLU	CB-CG-CD	-8.37	98.37	112.60
51	Ag	4	PHE	O-C-N	-8.37	112.84	120.71
33	BU	55	VAL	CA-C-N	8.37	131.49	120.28
33	BU	55	VAL	C-N-CA	8.37	131.49	120.28
38	A1	1609	G	O5'-C5'-C4'	8.37	124.05	111.50
38	A1	2401	A	P-O3'-C3'	8.36	132.74	120.20
2	A8	33	VAL	CA-C-N	8.35	131.14	120.70
2	A8	33	VAL	C-N-CA	8.35	131.14	120.70
9	AX	62	ILE	CA-C-O	-8.35	111.45	120.47
32	BT	41	THR	CA-C-N	8.35	129.16	119.47
32	BT	41	THR	C-N-CA	8.35	129.16	119.47
38	A1	1408	G	O4'-C1'-C2'	-8.35	97.45	105.80
59	AL	65	ARG	CA-C-N	8.35	128.98	120.38
59	AL	65	ARG	C-N-CA	8.35	128.98	120.38
4	AQ	87	ALA	N-CA-C	-8.35	101.42	111.69
61	AN	167	LYS	CA-C-N	8.35	136.72	121.70
61	AN	167	LYS	C-N-CA	8.35	136.72	121.70
11	B2	163	C	P-O5'-C5'	8.34	133.41	120.90
38	A1	1522	A	P-O5'-C5'	-8.34	108.39	120.90
9	AX	415	TYR	N-CA-C	-8.33	101.45	111.69
38	A1	2280	G	P-O3'-C3'	8.32	132.69	120.20
20	BH	202	SER	O-C-N	8.31	130.63	122.07
12	B3	113	GLU	CB-CG-CD	-8.30	98.48	112.60
38	A1	1035	G	P-O3'-C3'	8.30	132.65	120.20
60	AM	118	TRP	CA-CB-CG	8.30	129.36	113.60
14	BB	45	VAL	CA-C-N	8.29	131.39	120.28
14	BB	45	VAL	C-N-CA	8.29	131.39	120.28
38	A1	545	G	P-O3'-C3'	8.29	132.64	120.20
16	BD	59	LEU	CA-C-O	8.29	129.47	120.10
50	AF	90	LEU	N-CA-C	-8.29	96.40	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	362	A	P-O3'-C3'	-8.28	107.78	120.20
38	A1	322	C	O4'-C1'-N1	8.28	120.92	108.50
15	BC	105	ARG	N-CA-C	8.28	121.23	111.71
32	BT	69	ASP	CA-CB-CG	-8.27	104.33	112.60
4	AQ	18	GLY	CA-C-N	8.27	131.71	120.38
4	AQ	18	GLY	C-N-CA	8.27	131.71	120.38
11	B2	1001	A	P-O3'-C3'	8.27	132.60	120.20
25	BM	31	THR	N-CA-C	-8.27	96.75	109.24
9	AX	402	THR	CA-C-N	8.27	129.33	119.99
9	AX	402	THR	C-N-CA	8.27	129.33	119.99
33	BU	110	PHE	CA-CB-CG	8.27	122.07	113.80
12	AG	6	TYR	N-CA-C	-8.27	102.22	113.30
22	BJ	103	THR	N-CA-C	-8.27	96.76	109.24
38	A1	1580	G	O4'-C1'-N9	8.27	120.90	108.50
30	BR	77	CYS	CA-C-N	8.26	131.11	122.27
30	BR	77	CYS	C-N-CA	8.26	131.11	122.27
39	A3	24	C	C5'-C4'-C3'	-8.26	103.61	116.00
35	BW	5	ILE	N-CA-CB	8.26	120.91	112.65
11	B2	1207	G	P-O3'-C3'	-8.26	107.81	120.20
38	A1	1367	A	C2'-C3'-O3'	8.25	126.08	113.70
38	A1	1707	A	C4'-C3'-C2'	-8.25	94.35	102.60
44	Ab	34	PHE	CA-CB-CG	8.24	122.04	113.80
61	AN	21	GLU	N-CA-C	-8.24	101.33	112.94
11	B2	178	C	C4'-C3'-C2'	-8.23	94.37	102.60
38	A1	2055	U	P-O5'-C5'	8.23	133.25	120.90
20	BH	40	GLU	CA-C-O	-8.23	110.36	118.34
7	AU	33	ARG	NE-CZ-NH2	8.22	126.60	119.20
47	Ad	10	TRP	CA-C-O	8.22	127.71	119.08
20	BH	52	ALA	N-CA-C	-8.21	101.71	113.21
35	BW	40	CYS	N-CA-C	-8.21	105.26	114.62
38	A1	2408	G	O4'-C1'-N9	8.21	120.82	108.50
9	AX	312	ASP	CA-C-N	8.21	130.10	119.84
9	AX	312	ASP	C-N-CA	8.21	130.10	119.84
16	BD	14	PRO	CA-C-N	8.21	128.99	119.47
16	BD	14	PRO	C-N-CA	8.21	128.99	119.47
9	AX	341	ASP	CA-C-N	8.20	127.93	119.64
9	AX	341	ASP	C-N-CA	8.20	127.93	119.64
38	A1	1132	U	P-O3'-C3'	8.20	132.50	120.20
38	A1	2363	G	O4'-C1'-N9	8.19	120.49	108.20
11	B2	1208	A	C2'-C3'-O3'	8.19	125.99	113.70
47	Ad	25	HIS	CA-CB-CG	8.19	121.99	113.80
8	AW	54	LEU	CA-C-N	8.19	131.25	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	AW	54	LEU	C-N-CA	8.19	131.25	120.28
11	B2	645	G	P-O5'-C5'	8.19	133.18	120.90
46	AD	76	PRO	O-C-N	-8.18	111.81	121.46
11	B2	248	U	O4'-C4'-C3'	-8.18	95.82	104.00
60	AM	29	LYS	N-CA-C	8.18	119.82	111.07
11	B2	1201	G	P-O5'-C5'	8.17	133.16	120.90
5	AS	116	HIS	CA-CB-CG	8.17	121.97	113.80
45	AC	146	GLN	CA-C-N	8.16	131.22	120.28
45	AC	146	GLN	C-N-CA	8.16	131.22	120.28
38	A1	1745	U	O4'-C1'-C2'	-8.16	99.44	107.60
13	BA	194	PRO	N-CA-CB	8.16	110.45	103.35
48	AE	149	ARG	NE-CZ-NH1	-8.16	113.34	121.50
38	A1	2538	G	C4'-C3'-C2'	-8.16	94.44	102.60
38	A1	1817	C	P-O5'-C5'	8.15	133.12	120.90
14	BB	180	GLY	CA-C-N	8.15	131.84	123.04
14	BB	180	GLY	C-N-CA	8.15	131.84	123.04
38	A1	2007	C	O4'-C1'-N1	8.14	120.72	108.50
38	A1	314	A	O4'-C1'-N9	8.14	120.41	108.20
60	AM	92	PRO	CA-C-O	-8.14	111.41	122.15
38	A1	394	A	P-O5'-C5'	-8.14	108.69	120.90
38	A1	759	G	C4'-C3'-C2'	-8.14	94.46	102.60
60	AM	134	ASP	CA-C-N	8.14	128.33	119.87
60	AM	134	ASP	C-N-CA	8.14	128.33	119.87
60	AM	137	HIS	CE1-NE2-CD2	-8.14	100.86	109.00
11	B2	343	G	C4'-C3'-C2'	-8.13	94.47	102.60
41	AA	168	GLY	O-C-N	-8.13	115.04	124.15
65	AV	57	GLN	O-C-N	8.13	130.54	122.09
43	AB	69	LYS	O-C-N	8.12	132.50	123.33
38	A1	2703	G	O4'-C4'-C3'	-8.12	95.89	104.00
58	AK	22	TYR	CA-CB-CG	-8.11	99.30	113.90
39	A3	36	U	P-O3'-C3'	8.11	132.37	120.20
39	A3	80	G	O4'-C4'-C3'	-8.11	95.89	104.00
25	BM	131	GLY	CA-C-N	8.11	137.03	121.54
25	BM	131	GLY	C-N-CA	8.11	137.03	121.54
38	A1	513	C	P-O3'-C3'	8.11	132.36	120.20
5	AS	72	HIS	CA-CB-CG	-8.10	105.70	113.80
38	A1	1085	G	O3'-P-O5'	-8.10	91.85	104.00
38	A1	1393	C	O4'-C1'-N1	8.10	120.35	108.20
38	A1	2045	C	O4'-C1'-N1	8.10	120.65	108.50
11	B2	1007	A	P-O5'-C5'	-8.10	108.76	120.90
16	BD	83	LEU	CA-C-O	-8.10	112.56	119.36
40	AK	56	LEU	N-CA-C	-8.10	100.60	110.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	115	A	C2'-C3'-O3'	8.09	121.64	109.50
61	AN	50	HIS	ND1-CE1-NE2	8.09	116.49	108.40
10	B1	24	A	P-O5'-C5'	8.08	133.02	120.90
40	AK	52	HIS	CE1-NE2-CD2	-8.08	100.92	109.00
25	BM	32	ASP	CA-CB-CG	-8.08	104.52	112.60
11	B2	641	A	C2'-C3'-O3'	8.07	121.61	109.50
29	BQ	142	LEU	N-CA-C	-8.07	94.69	109.06
14	BB	123	ASP	CA-CB-CG	-8.07	104.53	112.60
38	A1	1249	G	C5'-C4'-O4'	8.07	121.20	109.10
12	B3	86	LEU	N-CA-C	-8.06	103.46	113.38
17	BE	133	ILE	N-CA-C	-8.06	98.98	108.82
38	A1	1585	U	O4'-C1'-N1	8.06	120.60	108.50
34	BV	83	PRO	CA-C-N	8.06	132.15	120.38
34	BV	83	PRO	C-N-CA	8.06	132.15	120.38
61	AN	101	THR	N-CA-C	8.06	122.51	111.39
44	Ab	85	HIS	CE1-NE2-CD2	-8.06	100.94	109.00
11	B2	746	A	C2'-C3'-O3'	8.05	121.58	109.50
38	A1	2105	A	C1'-O4'-C4'	8.05	117.95	109.90
43	AB	51	ASP	CB-CA-C	-8.05	100.67	109.85
11	B2	1459	G	P-O5'-C5'	8.05	132.97	120.90
14	BB	124	HIS	CE1-NE2-CD2	-8.05	100.95	109.00
15	BC	49	ALA	N-CA-C	8.05	121.16	111.82
18	BF	175	LEU	CA-C-O	-8.05	112.02	120.55
38	A1	1357	G	O4'-C1'-C2'	-8.05	99.55	107.60
66	AY	29	HIS	CB-CG-CD2	-8.04	120.75	131.20
60	AM	110	ASN	N-CA-C	-8.04	103.42	113.55
54	AI	10	ILE	CA-C-N	8.03	131.05	120.28
54	AI	10	ILE	C-N-CA	8.03	131.05	120.28
57	Aj	37	GLN	CA-C-N	8.04	131.85	120.28
57	Aj	37	GLN	C-N-CA	8.04	131.85	120.28
63	AP	91	ARG	CA-C-N	8.04	131.85	120.28
63	AP	91	ARG	C-N-CA	8.04	131.85	120.28
19	BG	119	VAL	N-CA-C	-8.03	96.86	108.11
38	A1	298	G	C1'-O4'-C4'	8.03	117.93	109.90
50	AF	141	GLY	CA-C-N	8.03	130.68	120.56
50	AF	141	GLY	C-N-CA	8.03	130.68	120.56
16	BD	68	ILE	CA-C-N	8.03	130.88	120.44
16	BD	68	ILE	C-N-CA	8.03	130.88	120.44
22	BJ	69	SER	N-CA-C	-8.02	101.58	113.61
38	A1	2240	G	O5'-C5'-C4'	8.02	123.73	111.70
16	BD	100	ILE	N-CA-C	-8.02	105.05	112.43
46	AD	144	VAL	CA-C-N	8.02	131.49	120.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	AD	144	VAL	C-N-CA	8.02	131.49	120.35
11	B2	248	U	O3'-P-O5'	-8.01	91.98	104.00
45	AC	304	GLU	N-CA-CB	8.01	124.03	110.49
11	B2	660	C	O3'-P-O5'	-8.01	91.99	104.00
65	AV	53	THR	O-C-N	-8.01	113.32	122.93
38	A1	2643	U	O4'-C1'-N1	8.00	120.50	108.50
9	AX	174	ILE	CA-C-N	8.00	131.00	120.28
9	AX	174	ILE	C-N-CA	8.00	131.00	120.28
42	Aa	10	ILE	N-CA-C	-8.00	96.92	108.36
33	BU	84	GLY	N-CA-C	-8.00	101.61	111.45
4	AQ	139	TYR	CA-C-O	-8.00	112.42	120.82
15	BC	96	ALA	CA-C-N	8.00	131.41	120.46
15	BC	96	ALA	C-N-CA	8.00	131.41	120.46
38	A1	715	G	P-O3'-C3'	8.00	132.19	120.20
38	A1	1096	A	O4'-C1'-N9	8.00	120.49	108.50
38	A1	1339	C	O4'-C1'-C2'	8.00	115.59	107.60
13	BA	177	ILE	N-CA-CB	7.99	120.80	110.57
14	BB	14	ALA	N-CA-CB	7.99	121.60	110.01
38	A1	1037	C	C2'-C3'-O3'	7.99	121.48	109.50
38	A1	1353	A	C3'-C2'-C1'	7.99	109.48	101.50
44	Ab	85	HIS	CG-CD2-NE2	7.99	115.19	107.20
38	A1	121	G	O4'-C4'-C3'	-7.98	96.02	104.00
61	AN	105	ALA	CA-C-O	7.98	127.65	118.55
30	BR	8	ARG	CA-C-N	7.98	132.96	122.51
30	BR	8	ARG	C-N-CA	7.98	132.96	122.51
38	A1	310	C	P-O3'-C3'	7.98	132.17	120.20
46	AD	41	HIS	CE1-NE2-CD2	-7.98	101.02	109.00
9	AX	268	ASN	CB-CG-ND2	7.98	128.37	116.40
18	BF	148	LYS	CA-C-O	7.98	129.32	120.70
56	AJ	135	SER	O-C-N	7.98	132.08	122.27
27	BO	106	ILE	CA-C-N	7.97	131.61	120.29
27	BO	106	ILE	C-N-CA	7.97	131.61	120.29
10	B1	76	C	P-O3'-C3'	7.97	132.15	120.20
38	A1	2373	G	C4'-C3'-C2'	-7.97	94.63	102.60
9	AX	33	VAL	CA-C-N	7.96	132.77	120.82
9	AX	33	VAL	C-N-CA	7.96	132.77	120.82
24	BL	47	ILE	N-CA-C	-7.96	97.36	108.27
14	BB	165	ALA	N-CA-C	-7.96	103.40	113.43
23	BK	17	ALA	CA-C-O	7.96	128.96	120.36
33	BU	27	LYS	CA-C-N	7.96	128.58	120.38
33	BU	27	LYS	C-N-CA	7.96	128.58	120.38
43	AB	107	TYR	CA-C-O	-7.96	112.25	121.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	217	A	P-O5'-C5'	7.96	132.84	120.90
38	A1	735	A	O4'-C1'-N9	7.96	120.44	108.50
10	B1	47	G	O4'-C1'-N9	7.95	120.43	108.50
36	BX	49	VAL	N-CA-C	-7.95	97.88	108.06
14	BB	29	LYS	CA-C-N	7.95	130.78	120.44
14	BB	29	LYS	C-N-CA	7.95	130.78	120.44
38	A1	2257	A	O4'-C1'-N9	7.95	120.43	108.50
60	AM	19	VAL	CA-C-N	7.95	128.81	119.98
60	AM	19	VAL	C-N-CA	7.95	128.81	119.98
39	A3	45	C	C4'-C3'-C2'	-7.95	94.65	102.60
38	A1	1443	G	C2'-C3'-O3'	7.95	121.42	109.50
11	B2	141	C	O4'-C1'-N1	7.95	120.42	108.50
11	B2	1202	G	C3'-C2'-C1'	7.95	109.25	101.30
29	BQ	34	GLU	CA-C-N	7.95	130.77	120.44
29	BQ	34	GLU	C-N-CA	7.95	130.77	120.44
57	Aj	7	ILE	O-C-N	-7.95	116.06	122.97
3	Af	39	PRO	O-C-N	-7.94	117.09	122.73
10	B1	40	U	C5'-C4'-C3'	7.94	127.92	116.00
11	B2	1090	C	C4'-C3'-C2'	-7.94	94.66	102.60
39	A3	85	C	C5'-C4'-C3'	-7.94	104.09	116.00
16	BD	94	SER	N-CA-C	7.94	122.54	113.01
61	AN	83	HIS	CE1-NE2-CD2	-7.94	101.06	109.00
38	A1	2423	G	O4'-C1'-N9	7.93	120.40	108.50
50	AF	143	ASP	CA-CB-CG	7.93	120.53	112.60
51	Ag	38	ARG	CD-NE-CZ	-7.93	113.29	124.40
18	BF	44	ILE	N-CA-C	-7.93	98.61	109.55
38	A1	2072	G	C5'-C4'-C3'	7.93	127.89	116.00
9	AX	313	PRO	CA-C-N	7.92	130.82	120.60
9	AX	313	PRO	C-N-CA	7.92	130.82	120.60
32	BT	41	THR	CA-CB-OG1	7.92	121.48	109.60
44	Ab	110	LYS	CA-C-N	7.92	130.90	120.28
44	Ab	110	LYS	C-N-CA	7.92	130.90	120.28
51	Ag	5	PRO	N-CA-C	-7.92	96.15	112.47
38	A1	1666	G	P-O3'-C3'	7.92	132.08	120.20
43	AB	48	ILE	N-CA-C	-7.92	96.19	107.75
23	BK	115	GLU	CA-C-O	-7.92	112.26	119.86
20	BH	44	LEU	CB-CA-C	-7.91	99.36	109.65
54	AI	15	ALA	N-CA-C	7.91	119.90	111.28
18	BF	57	VAL	N-CA-C	-7.91	105.49	111.90
19	BG	80	GLY	CA-C-N	7.91	128.93	120.47
19	BG	80	GLY	C-N-CA	7.91	128.93	120.47
22	BJ	46	ILE	N-CA-C	-7.91	99.18	108.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2290	U	P-O5'-C5'	7.91	132.76	120.90
21	BI	53	ILE	O-C-N	7.90	131.96	122.95
27	BO	107	MET	CA-C-N	7.90	130.72	120.44
27	BO	107	MET	C-N-CA	7.90	130.72	120.44
60	AM	89	LYS	N-CA-C	-7.90	101.56	112.30
16	BD	63	GLY	N-CA-C	-7.89	105.99	114.67
38	A1	134	C	P-O3'-C3'	7.89	132.04	120.20
52	AH	121	ALA	N-CA-C	7.89	119.89	111.28
38	A1	406	G	O4'-C1'-N9	7.89	120.34	108.50
38	A1	137	A	C4'-C3'-C2'	-7.89	94.71	102.60
26	BN	78	ILE	N-CA-C	-7.89	101.41	113.16
38	A1	2677	U	O4'-C1'-N1	7.89	120.33	108.50
41	AA	20	LYS	CA-C-O	-7.89	113.44	119.59
38	A1	890	G	O4'-C1'-N9	7.89	120.33	108.50
7	AU	5	SER	N-CA-C	-7.88	95.56	108.41
38	A1	2406	C	P-O3'-C3'	-7.88	108.38	120.20
66	AY	141	GLY	CA-C-N	7.88	131.90	120.71
66	AY	141	GLY	C-N-CA	7.88	131.90	120.71
59	AL	133	ALA	CA-C-N	7.88	130.83	120.28
59	AL	133	ALA	C-N-CA	7.88	130.83	120.28
11	B2	1037	U	C4'-C3'-C2'	7.87	110.47	102.60
11	B2	1161	A	C2'-C3'-O3'	7.87	121.31	109.50
57	Aj	3	TYR	O-C-N	-7.87	116.29	121.88
38	A1	1956	G	P-O3'-C3'	7.87	132.00	120.20
47	Ad	77	ARG	N-CA-CB	7.87	121.69	110.12
18	BF	110	ILE	N-CA-CB	7.87	120.64	110.57
26	BN	126	VAL	N-CA-C	-7.86	95.73	107.37
38	A1	595	C	O4'-C1'-N1	7.86	120.29	108.50
38	A1	2883	C	O4'-C1'-N1	7.86	120.29	108.50
38	A1	2148	U	C4'-C3'-C2'	-7.86	94.74	102.60
44	Ab	32	PRO	CA-C-N	7.86	131.45	120.29
44	Ab	32	PRO	C-N-CA	7.86	131.45	120.29
5	AS	115	ILE	O-C-N	7.86	130.07	121.90
16	BD	136	ILE	CB-CA-C	-7.86	102.75	111.23
20	BH	102	GLU	N-CA-C	7.86	119.47	111.07
38	A1	637	G	P-O5'-C5'	-7.86	109.12	120.90
16	BD	156	ARG	NE-CZ-NH1	-7.85	113.65	121.50
38	A1	2606	C	P-O3'-C3'	7.85	131.97	120.20
38	A1	2696	G	C4'-C3'-C2'	7.85	110.45	102.60
43	AB	232	ALA	CA-C-O	-7.85	113.00	121.56
46	AD	85	PHE	N-CA-CB	7.85	122.99	109.10
38	A1	981	A	C2'-C3'-O3'	7.85	121.27	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	AW	15	ASP	CA-CB-CG	7.84	120.44	112.60
11	B2	1432	U	C5'-C4'-C3'	-7.84	104.23	116.00
44	Ab	41	ARG	CA-C-N	7.84	131.89	120.51
44	Ab	41	ARG	C-N-CA	7.84	131.89	120.51
9	AX	131	ALA	CA-C-O	-7.84	112.11	120.42
38	A1	2175	G	O4'-C4'-C3'	-7.84	96.16	104.00
7	AU	47	ARG	CA-C-N	7.84	131.20	120.46
7	AU	47	ARG	C-N-CA	7.84	131.20	120.46
25	BM	60	ALA	CA-C-O	-7.84	112.11	120.42
48	AE	148	PHE	CA-C-N	7.84	131.82	120.38
48	AE	148	PHE	C-N-CA	7.84	131.82	120.38
38	A1	2201	C	C5'-C4'-C3'	-7.83	104.25	116.00
18	BF	195	VAL	O-C-N	7.83	129.58	121.91
38	A1	361	G	C4'-C3'-C2'	-7.83	94.77	102.60
54	AI	141	LYS	CA-C-O	7.83	128.93	120.24
38	A1	2535	C	O4'-C4'-C3'	-7.82	96.18	104.00
33	BU	88	GLU	N-CA-C	7.82	121.27	110.24
60	AM	36	VAL	N-CA-C	-7.82	96.19	107.77
11	B2	1231	G	C4'-C3'-C2'	-7.82	94.78	102.60
50	AF	78	MET	N-CA-CB	7.81	121.72	110.16
5	AS	102	ALA	N-CA-CB	7.80	122.23	110.22
11	B2	1037	U	P-O3'-C3'	7.80	131.90	120.20
38	A1	1788	G	P-O5'-C5'	7.80	132.60	120.90
33	BU	49	ASP	N-CA-C	7.80	119.78	111.28
15	BC	184	PRO	CA-C-N	7.79	127.79	119.76
15	BC	184	PRO	C-N-CA	7.79	127.79	119.76
17	BE	234	GLY	N-CA-C	-7.79	103.69	111.56
41	AA	54	HIS	CE1-NE2-CD2	-7.79	101.21	109.00
29	BQ	84	LYS	CB-CA-C	-7.79	97.86	110.79
11	B2	471	G	O4'-C4'-C3'	-7.79	98.31	106.10
11	B2	1174	A	P-O3'-C3'	7.79	131.88	120.20
58	Ak	43	ARG	O-C-N	7.79	130.37	122.12
38	A1	1038	U	P-O5'-C5'	7.78	132.58	120.90
38	A1	2308	C	O4'-C1'-C2'	-7.78	99.82	107.60
11	B2	439	G	P-O3'-C3'	7.78	131.87	120.20
60	AM	33	GLU	CA-C-N	7.78	127.82	119.89
60	AM	33	GLU	C-N-CA	7.78	127.82	119.89
57	Aj	31	SER	N-CA-CB	7.77	123.63	110.49
4	AQ	135	LYS	CB-CA-C	-7.77	98.62	110.90
20	BH	31	PRO	CA-C-N	7.77	130.54	120.44
20	BH	31	PRO	C-N-CA	7.77	130.54	120.44
38	A1	1855	G	P-O5'-C5'	7.77	132.56	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	BN	27	ASP	CA-CB-CG	-7.77	104.83	112.60
14	BB	145	ASN	CA-CB-CG	-7.77	104.83	112.60
38	A1	1042	G	P-O5'-C5'	7.77	132.56	120.90
63	AP	34	ALA	CA-C-O	-7.77	112.19	120.42
65	AV	24	ARG	CA-C-N	7.77	133.70	120.72
65	AV	24	ARG	C-N-CA	7.77	133.70	120.72
65	AV	56	TYR	N-CA-CB	7.77	121.28	110.01
25	BM	67	ALA	CA-C-N	7.77	130.69	120.28
25	BM	67	ALA	C-N-CA	7.77	130.69	120.28
41	AA	203	TYR	CA-C-N	7.77	133.78	122.99
41	AA	203	TYR	C-N-CA	7.77	133.78	122.99
29	BQ	17	PRO	CA-C-O	-7.76	109.31	120.56
29	BQ	62	SER	N-CA-C	-7.76	97.52	109.24
8	AW	26	ALA	CA-C-N	7.76	131.31	120.29
8	AW	26	ALA	C-N-CA	7.76	131.31	120.29
18	BF	104	LYS	CA-C-O	7.76	127.27	118.97
38	A1	85	G	O5'-C5'-C4'	-7.76	99.86	111.50
11	B2	1459	G	P-O3'-C3'	7.76	131.84	120.20
38	A1	442	G	P-O3'-C3'	7.76	131.84	120.20
9	AX	74	GLY	CA-C-N	7.75	134.26	121.54
9	AX	74	GLY	C-N-CA	7.75	134.26	121.54
38	A1	2283	C	C4'-C3'-C2'	-7.75	94.85	102.60
16	BD	122	ARG	N-CA-C	-7.75	100.71	113.50
38	A1	2878	A	O4'-C1'-N9	7.75	120.12	108.50
22	BJ	18	VAL	N-CA-C	-7.74	97.27	108.11
24	BL	9	ALA	N-CA-C	-7.74	96.31	109.24
34	BV	11	ASN	CA-CB-CG	-7.74	104.86	112.60
48	AE	150	VAL	CA-C-N	7.74	130.65	120.28
48	AE	150	VAL	C-N-CA	7.74	130.65	120.28
9	AX	421	GLU	CA-C-N	7.74	131.68	120.38
9	AX	421	GLU	C-N-CA	7.74	131.68	120.38
9	AX	368	HIS	CE1-NE2-CD2	-7.74	101.27	109.00
38	A1	2033	G	O4'-C1'-C2'	-7.74	99.86	107.60
60	AM	26	ARG	CB-CA-C	-7.74	97.70	110.85
19	BG	108	ARG	O-C-N	7.73	132.14	123.01
38	A1	1068	U	P-O5'-C5'	-7.73	109.30	120.90
11	B2	1024	G	P-O3'-C3'	7.73	131.80	120.20
21	BI	50	PHE	CA-CB-CG	7.73	121.53	113.80
11	B2	437	A	P-O3'-C3'	7.73	131.79	120.20
38	A1	2211	C	O4'-C1'-N1	7.73	120.09	108.50
59	AL	12	ARG	N-CA-C	-7.72	103.44	113.17
56	AJ	13	SER	N-CA-C	-7.72	102.66	112.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B3	11	VAL	CA-C-N	7.72	127.78	119.90
12	B3	11	VAL	C-N-CA	7.72	127.78	119.90
38	A1	47	C	P-O5'-C5'	-7.72	109.32	120.90
11	B2	1129	A	C4'-C3'-C2'	-7.72	94.88	102.60
62	AO	8	ARG	N-CA-CB	7.72	123.53	110.49
33	BU	75	THR	N-CA-C	-7.72	97.34	109.07
38	A1	2760	A	C4'-C3'-O3'	7.71	120.97	109.40
51	Ag	32	ARG	N-CA-C	-7.71	105.83	114.62
49	Ae	7	THR	N-CA-C	-7.71	103.41	114.12
24	BL	21	ASN	N-CA-C	-7.71	102.93	114.64
59	AL	3	ARG	CA-C-N	7.71	131.23	120.29
59	AL	3	ARG	C-N-CA	7.71	131.23	120.29
38	A1	1485	A	C2'-C3'-O3'	7.70	121.06	109.50
38	A1	1064	G	O4'-C1'-N9	7.70	120.05	108.50
50	AF	24	TYR	CA-C-N	7.70	134.60	122.74
50	AF	24	TYR	C-N-CA	7.70	134.60	122.74
38	A1	2871	A	O4'-C1'-N9	7.70	120.05	108.50
11	B2	801	A	O3'-P-O5'	-7.70	92.46	104.00
43	AB	124	ALA	CA-C-N	7.70	128.59	120.43
43	AB	124	ALA	C-N-CA	7.70	128.59	120.43
60	AM	150	ALA	O-C-N	7.69	130.92	122.15
38	A1	2535	C	C1'-O4'-C4'	7.69	117.59	109.90
63	AP	22	SER	CA-C-N	7.69	130.90	120.44
63	AP	22	SER	C-N-CA	7.69	130.90	120.44
23	BK	79	ARG	CA-C-N	7.69	130.44	120.44
23	BK	79	ARG	C-N-CA	7.69	130.44	120.44
58	Ak	18	LEU	CA-C-N	7.69	131.00	120.46
58	Ak	18	LEU	C-N-CA	7.69	131.00	120.46
11	B2	506	G	C4'-C3'-C2'	-7.69	94.91	102.60
11	B2	972	C	P-O5'-C5'	7.69	132.43	120.90
38	A1	2063	U	O4'-C1'-N1	7.69	120.03	108.50
38	A1	1344	C	P-O3'-C3'	-7.68	108.67	120.20
40	A5	20	GLN	OE1-CD-NE2	7.68	130.28	122.60
22	BJ	17	ILE	N-CA-CB	7.68	119.75	111.00
38	A1	936	G	C2'-C3'-O3'	7.68	121.01	109.50
2	A8	29	LYS	CA-C-O	-7.67	113.37	119.66
40	A5	18	ALA	CA-C-N	7.67	135.51	121.70
40	A5	18	ALA	C-N-CA	7.67	135.51	121.70
43	AB	39	LYS	N-CA-C	-7.67	96.23	108.73
11	B2	1380	C	O4'-C1'-N1	7.67	120.00	108.50
31	BS	53	TYR	CA-C-N	7.67	130.97	120.46
31	BS	53	TYR	C-N-CA	7.67	130.97	120.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1742	C	O5'-C5'-C4'	-7.67	100.00	111.50
11	B2	93	A	O4'-C1'-N9	7.67	119.70	108.20
17	BE	58	THR	CA-C-N	7.67	132.97	120.63
17	BE	58	THR	C-N-CA	7.67	132.97	120.63
63	AP	44	ARG	N-CA-C	-7.66	97.77	109.95
48	AE	122	ASN	N-CA-C	-7.66	100.65	110.53
20	BH	107	ALA	CA-C-N	7.66	130.54	120.28
20	BH	107	ALA	C-N-CA	7.66	130.54	120.28
33	BU	83	ARG	CA-C-N	7.66	128.37	121.86
33	BU	83	ARG	C-N-CA	7.66	128.37	121.86
37	BY	38	TRP	CB-CG-CD2	-7.66	116.08	126.80
9	AX	265	LEU	N-CA-CB	7.65	121.08	109.91
38	A1	141	C	O4'-C4'-C3'	-7.65	96.35	104.00
9	AX	261	LEU	CA-C-N	7.65	130.75	120.65
9	AX	261	LEU	C-N-CA	7.65	130.75	120.65
38	A1	1096	A	C4'-C3'-C2'	-7.64	94.96	102.60
38	A1	1570	C	P-O5'-C5'	7.64	132.37	120.90
4	AQ	134	ASN	OD1-CG-ND2	7.64	130.24	122.60
52	AH	106	ILE	CA-C-N	7.64	130.52	120.28
52	AH	106	ILE	C-N-CA	7.64	130.52	120.28
11	B2	133	G	P-O3'-C3'	7.64	131.66	120.20
38	A1	1078	G	P-O3'-C3'	-7.64	108.74	120.20
35	BW	3	LYS	CA-C-O	-7.64	111.31	118.33
38	A1	2284	C	P-O3'-C3'	7.64	131.65	120.20
40	AK	72	ARG	N-CA-C	-7.63	102.89	111.14
11	B2	889	G	C4'-C3'-C2'	-7.63	94.97	102.60
38	A1	1610	C	C1'-O4'-C4'	7.63	117.53	109.90
61	AN	144	PHE	O-C-N	-7.63	113.85	122.09
11	B2	754	G	P-O5'-C5'	7.62	132.33	120.90
61	AN	74	GLN	OE1-CD-NE2	7.62	130.22	122.60
66	AY	148	ASN	O-C-N	7.61	130.01	122.09
38	A1	518	A	C2'-C3'-O3'	7.61	120.92	109.50
11	B2	1037	U	C2'-C3'-O3'	7.61	120.91	109.50
38	A1	1279	U	O4'-C1'-N1	7.61	119.61	108.20
46	AD	247	ILE	CA-C-N	7.60	130.33	120.44
46	AD	247	ILE	C-N-CA	7.60	130.33	120.44
20	BH	37	ILE	N-CA-C	-7.60	97.53	108.17
45	AC	235	LYS	CA-C-O	-7.60	112.87	120.70
49	Ae	60	ASN	CA-C-N	7.60	130.47	120.28
49	Ae	60	ASN	C-N-CA	7.60	130.47	120.28
57	Aj	79	THR	N-CA-C	-7.60	97.49	109.50
17	BE	106	ARG	CA-C-N	7.60	132.76	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	BE	106	ARG	C-N-CA	7.60	132.76	120.30
41	AA	34	LEU	CA-C-N	7.60	133.21	122.72
41	AA	34	LEU	C-N-CA	7.60	133.21	122.72
63	AP	70	GLY	CA-C-N	7.60	132.90	122.34
63	AP	70	GLY	C-N-CA	7.60	132.90	122.34
38	A1	33	U	P-O3'-C3'	-7.59	108.81	120.20
38	A1	2187	C	P-O5'-C5'	-7.59	109.51	120.90
5	AS	65	ARG	N-CA-C	-7.59	104.92	114.56
11	B2	439	G	C2'-C3'-O3'	7.59	120.89	109.50
11	B2	504	G	P-O5'-C5'	7.59	132.28	120.90
11	B2	975	A	O3'-P-O5'	7.59	115.38	104.00
24	BL	69	HIS	CA-C-O	7.59	128.56	120.36
38	A1	566	G	O4'-C1'-C2'	-7.59	98.21	105.80
45	AC	305	ILE	N-CA-CB	7.59	119.22	110.49
7	AU	21	HIS	ND1-CE1-NE2	7.59	115.99	108.40
14	BB	159	LYS	N-CA-C	-7.59	104.55	113.88
19	BG	97	LYS	CB-CA-C	-7.58	98.69	110.37
23	BK	118	LYS	CA-C-N	7.58	127.22	119.56
23	BK	118	LYS	C-N-CA	7.58	127.22	119.56
38	A1	716	U	C2'-C3'-O3'	7.58	120.88	109.50
55	Ai	41	CYS	N-CA-C	-7.58	103.09	113.18
38	A1	2252	C	O4'-C1'-N1	7.58	119.87	108.50
16	BD	89	LEU	N-CA-C	7.58	120.61	111.82
18	BF	101	GLY	CA-C-N	7.58	134.31	122.94
18	BF	101	GLY	C-N-CA	7.58	134.31	122.94
59	AL	86	ASP	CA-CB-CG	-7.58	105.02	112.60
41	AA	108	ILE	N-CA-C	-7.57	96.52	108.86
29	BQ	17	PRO	N-CA-C	7.57	119.94	110.70
38	A1	2002	A	P-O5'-C5'	7.57	132.26	120.90
60	AM	8	ARG	NE-CZ-NH2	7.57	126.01	119.20
15	BC	135	LYS	N-CA-C	-7.57	103.41	114.39
61	AN	105	ALA	N-CA-C	-7.57	104.95	114.56
7	AU	21	HIS	CE1-NE2-CD2	-7.57	101.43	109.00
38	A1	2515	U	P-O5'-C5'	7.57	132.25	120.90
45	AC	97	THR	O-C-N	-7.57	115.17	123.04
11	B2	511	C	P-O5'-C5'	-7.56	109.56	120.90
28	BP	52	PHE	N-CA-CB	7.56	121.25	109.83
38	A1	862	G	P-O3'-C3'	7.56	131.54	120.20
38	A1	2988	A	O4'-C1'-N9	7.56	119.84	108.50
45	AC	56	ASP	CA-C-N	7.56	130.90	120.39
45	AC	56	ASP	C-N-CA	7.56	130.90	120.39
46	AD	132	HIS	ND1-CE1-NE2	7.56	115.96	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AQ	75	HIS	ND1-CE1-NE2	7.56	115.96	108.40
38	A1	936	G	O4'-C1'-C2'	-7.56	98.24	105.80
67	AZ	92	LYS	CA-C-N	7.56	131.15	120.42
67	AZ	92	LYS	C-N-CA	7.56	131.15	120.42
11	B2	152	G	P-O5'-C5'	-7.55	109.57	120.90
38	A1	2300	C	O3'-P-O5'	-7.55	92.67	104.00
38	A1	2478	G	C4'-C3'-C2'	-7.55	95.05	102.60
60	AM	42	PRO	CA-C-O	-7.55	112.73	121.34
14	BB	110	PHE	CA-CB-CG	-7.55	106.25	113.80
65	AV	25	ASN	N-CA-C	-7.55	103.33	112.54
38	A1	895	C	O4'-C1'-C2'	-7.54	100.06	107.60
20	BH	1	MET	CA-C-N	7.54	130.24	120.44
20	BH	1	MET	C-N-CA	7.54	130.24	120.44
29	BQ	129	ILE	CA-C-O	-7.54	113.11	120.95
5	AS	138	PRO	N-CA-CB	7.54	110.02	103.31
11	B2	1291	G	P-O3'-C3'	7.53	131.50	120.20
16	BD	57	ARG	O-C-N	7.53	130.74	122.15
34	BV	71	ALA	N-CA-C	-7.53	96.63	108.90
36	BX	14	ILE	CA-C-N	7.53	131.51	120.74
36	BX	14	ILE	C-N-CA	7.53	131.51	120.74
34	BV	29	PRO	CA-C-N	7.53	131.59	120.83
34	BV	29	PRO	C-N-CA	7.53	131.59	120.83
11	B2	1086	C	P-O3'-C3'	-7.52	108.91	120.20
38	A1	2712	G	O3'-P-O5'	-7.52	92.72	104.00
24	BL	51	LYS	CA-C-N	7.52	130.74	120.67
24	BL	51	LYS	C-N-CA	7.52	130.74	120.67
32	BT	14	GLU	O-C-N	7.52	130.72	122.15
11	B2	1358	A	C4'-C3'-C2'	-7.51	95.09	102.60
59	AL	17	HIS	N-CA-CB	7.51	123.19	110.49
60	AM	85	MET	CA-C-N	7.51	127.97	120.31
60	AM	85	MET	C-N-CA	7.51	127.97	120.31
30	BR	85	LYS	CA-C-N	7.51	133.69	122.58
30	BR	85	LYS	C-N-CA	7.51	133.69	122.58
38	A1	349	A	C4'-C3'-C2'	7.51	110.11	102.60
61	AN	46	GLU	CA-C-N	7.51	133.42	123.06
61	AN	46	GLU	C-N-CA	7.51	133.42	123.06
38	A1	2971	U	P-O3'-C3'	7.51	131.46	120.20
62	AO	21	TYR	CB-CG-CD2	7.51	132.06	120.80
62	AO	63	HIS	ND1-CE1-NE2	7.51	115.91	108.40
50	AF	184	PHE	CA-CB-CG	7.50	121.30	113.80
54	AI	72	ASP	CA-C-N	7.50	130.34	120.28
54	AI	72	ASP	C-N-CA	7.50	130.34	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	BB	114	VAL	N-CA-C	-7.50	96.66	108.81
38	A1	1603	G	O3'-P-O5'	7.50	115.25	104.00
7	AU	47	ARG	NE-CZ-NH1	-7.50	114.00	121.50
7	AU	106	ASN	CA-CB-CG	-7.50	105.10	112.60
17	BE	81	TYR	CA-C-N	7.50	132.39	122.42
17	BE	81	TYR	C-N-CA	7.50	132.39	122.42
64	AR	43	ILE	O-C-N	-7.50	115.31	123.18
4	AQ	58	GLN	OE1-CD-NE2	7.50	130.10	122.60
11	B2	919	U	C2'-C3'-O3'	7.50	120.74	109.50
9	AX	177	GLY	CA-C-N	7.49	130.27	120.60
9	AX	177	GLY	C-N-CA	7.49	130.27	120.60
11	B2	841	C	O5'-C5'-C4'	-7.49	100.26	111.50
43	AB	151	PHE	CA-CB-CG	-7.49	106.31	113.80
38	A1	119	U	C2'-C3'-O3'	7.49	120.73	109.50
39	A3	75	G	P-O3'-C3'	7.49	131.43	120.20
4	AQ	48	GLY	CA-C-N	7.49	130.72	120.46
4	AQ	48	GLY	C-N-CA	7.49	130.72	120.46
9	AX	6	PRO	CA-C-N	7.48	130.71	120.46
9	AX	6	PRO	C-N-CA	7.48	130.71	120.46
11	B2	368	C	C2'-C3'-O3'	7.48	120.73	109.50
3	Af	18	LYS	CB-CA-C	-7.48	99.13	110.88
11	B2	17	C	C4'-C3'-C2'	-7.48	95.12	102.60
38	A1	85	G	P-O5'-C5'	7.48	132.12	120.90
38	A1	2290	U	O4'-C1'-C2'	-7.48	100.12	107.60
11	B2	417	C	C4'-C3'-C2'	-7.48	95.12	102.60
16	BD	58	LEU	CA-C-N	7.48	131.05	120.28
16	BD	58	LEU	C-N-CA	7.48	131.05	120.28
38	A1	408	C	P-O5'-C5'	7.48	132.12	120.90
20	BH	147	HIS	CG-CD2-NE2	7.48	114.68	107.20
35	BW	36	ARG	CA-C-O	7.48	129.61	121.16
60	AM	77	LYS	CA-C-N	7.48	128.59	120.44
60	AM	77	LYS	C-N-CA	7.48	128.59	120.44
67	AZ	95	ALA	CA-C-N	7.48	130.13	120.56
67	AZ	95	ALA	C-N-CA	7.48	130.13	120.56
38	A1	1654	G	P-O5'-C5'	-7.48	109.69	120.90
15	BC	50	ASN	OD1-CG-ND2	-7.47	115.13	122.60
23	BK	85	ALA	O-C-N	-7.47	114.20	122.12
26	BN	28	ILE	CA-C-N	7.46	130.28	120.28
26	BN	28	ILE	C-N-CA	7.46	130.28	120.28
38	A1	2236	C	P-O3'-C3'	-7.46	109.01	120.20
6	AT	33	ARG	N-CA-C	-7.46	96.16	108.76
11	B2	1261	U	C2'-C3'-O3'	7.46	120.69	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	1415	U	C4'-C3'-C2'	-7.46	95.14	102.60
38	A1	393	C	C5'-C4'-C3'	7.46	127.19	116.00
38	A1	709	A	O4'-C4'-C3'	-7.46	96.54	104.00
38	A1	1305	C	P-O5'-C5'	7.46	132.09	120.90
45	AC	76	PRO	CA-C-N	7.46	127.51	119.90
45	AC	76	PRO	C-N-CA	7.46	127.51	119.90
38	A1	2889	A	P-O3'-C3'	7.45	131.38	120.20
45	AC	154	MET	CA-C-N	7.45	130.22	120.60
45	AC	154	MET	C-N-CA	7.45	130.22	120.60
46	AD	223	ASP	CA-CB-CG	-7.45	105.15	112.60
58	AK	185	LEU	N-CA-CB	7.45	122.32	110.85
11	B2	806	G	C4'-C3'-C2'	-7.45	95.15	102.60
56	AJ	39	GLN	CA-C-O	-7.45	112.27	120.38
20	BH	55	HIS	CE1-NE2-CD2	-7.44	101.56	109.00
11	B2	105	C	O3'-P-O5'	7.44	115.16	104.00
20	BH	87	ARG	CA-C-N	7.44	135.75	121.54
20	BH	87	ARG	C-N-CA	7.44	135.75	121.54
38	A1	2191	U	P-O3'-C3'	7.44	131.35	120.20
11	B2	721	A	C1'-O4'-C4'	7.43	117.33	109.90
38	A1	2415	C	P-O5'-C5'	7.43	132.05	120.90
11	B2	989	C	C5'-C4'-C3'	7.43	127.14	116.00
39	A3	52	U	C2'-C3'-O3'	7.43	120.64	109.50
20	BH	84	HIS	ND1-CE1-NE2	7.43	115.83	108.40
51	Ag	8	GLU	CB-CG-CD	-7.43	99.97	112.60
11	B2	354	G	O4'-C1'-N9	7.42	119.64	108.50
32	BT	20	SER	CA-C-N	7.42	131.37	120.90
32	BT	20	SER	C-N-CA	7.42	131.37	120.90
42	Aa	17	LYS	CA-C-N	7.42	130.63	120.46
42	Aa	17	LYS	C-N-CA	7.42	130.63	120.46
45	AC	292	ASN	N-CA-CB	7.42	123.04	110.49
7	AU	92	PHE	CA-C-O	-7.42	113.26	121.87
38	A1	847	A	C4'-C3'-C2'	-7.42	95.18	102.60
55	Ai	24	ARG	CA-C-N	7.42	130.06	120.56
55	Ai	24	ARG	C-N-CA	7.42	130.06	120.56
56	AJ	89	TYR	CA-CB-CG	-7.42	100.55	113.90
9	AX	228	CYS	N-CA-C	-7.42	103.18	112.90
38	A1	13	U	C5'-C4'-C3'	7.42	127.12	116.00
33	BU	8	PRO	CA-C-N	7.41	129.63	120.22
33	BU	8	PRO	C-N-CA	7.41	129.63	120.22
38	A1	2680	A	C1'-O4'-C4'	7.41	117.31	109.90
38	A1	404	G	P-O5'-C5'	7.41	132.02	120.90
38	A1	1845	C	O4'-C1'-N1	7.41	119.62	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	Ak	196	GLU	CA-C-N	7.41	132.88	122.36
58	Ak	196	GLU	C-N-CA	7.41	132.88	122.36
18	BF	184	TRP	CG-CD2-CE3	-7.41	126.49	133.90
40	AK	32	PHE	CA-CB-CG	-7.41	106.39	113.80
38	A1	1835	A	O4'-C1'-C2'	-7.41	100.19	107.60
9	AX	148	ALA	N-CA-C	7.41	120.23	111.71
12	B3	8	LYS	N-CA-C	-7.41	105.16	114.56
38	A1	2609	G	C4'-C3'-C2'	-7.40	95.20	102.60
56	AJ	52	ARG	CB-CA-C	-7.40	101.46	110.94
44	Ab	86	ASN	OD1-CG-ND2	7.40	130.00	122.60
47	Ad	49	GLY	N-CA-C	-7.40	99.87	110.38
59	AL	102	ILE	N-CA-CB	7.40	120.78	111.46
11	B2	1067	G	C4'-C3'-O3'	-7.40	101.90	113.00
38	A1	1408	G	C4'-C3'-C2'	-7.40	95.20	102.60
38	A1	2284	C	P-O5'-C5'	7.40	132.00	120.90
67	AZ	4	ALA	N-CA-C	7.40	119.34	111.28
27	BO	58	GLN	N-CA-CB	7.40	120.99	110.12
11	B2	1194	C	O4'-C1'-N1	7.39	119.59	108.50
24	BL	23	ILE	CA-C-N	7.39	133.25	120.68
24	BL	23	ILE	C-N-CA	7.39	133.25	120.68
52	AH	101	GLU	N-CA-C	7.39	119.34	111.28
11	B2	104	A	P-O3'-C3'	7.39	131.28	120.20
52	AH	51	VAL	CA-C-N	7.39	127.37	119.76
52	AH	51	VAL	C-N-CA	7.39	127.37	119.76
11	B2	160	C	O5'-C5'-C4'	-7.39	100.42	111.50
27	BO	46	ASP	CA-C-O	-7.39	112.74	120.87
33	BU	28	PRO	CA-C-N	7.39	127.55	120.31
33	BU	28	PRO	C-N-CA	7.39	127.55	120.31
9	AX	238	GLY	CA-C-N	7.38	135.65	121.54
9	AX	238	GLY	C-N-CA	7.38	135.65	121.54
20	BH	106	GLU	CA-C-N	7.38	130.18	120.28
20	BH	106	GLU	C-N-CA	7.38	130.18	120.28
26	BN	100	HIS	CG-CD2-NE2	7.38	114.58	107.20
38	A1	2046	C	O4'-C1'-C2'	-7.38	100.22	107.60
45	AC	145	GLU	N-CA-C	7.38	119.33	111.28
46	AD	243	THR	CA-C-N	7.38	130.94	120.53
46	AD	243	THR	C-N-CA	7.38	130.94	120.53
32	BT	95	LYS	O-C-N	-7.38	115.83	121.14
38	A1	640	C	C5'-C4'-C3'	7.38	127.07	116.00
38	A1	805	C	O4'-C4'-C3'	-7.38	96.62	104.00
32	BT	50	LYS	CA-C-N	7.38	130.57	120.46
32	BT	50	LYS	C-N-CA	7.38	130.57	120.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
63	AP	5	GLY	CA-C-N	7.38	127.36	119.76
63	AP	5	GLY	C-N-CA	7.38	127.36	119.76
38	A1	980	G	P-O5'-C5'	7.38	131.96	120.90
23	BK	49	LEU	CA-C-O	-7.38	111.00	119.78
31	BS	40	ASN	CA-CB-CG	-7.38	105.22	112.60
52	AH	31	ASN	CA-CB-CG	7.38	119.97	112.60
11	B2	813	G	O4'-C1'-N9	7.37	119.56	108.50
38	A1	2138	A	C4'-C3'-C2'	-7.37	95.23	102.60
39	A3	14	G	O4'-C4'-C3'	-7.37	96.63	104.00
21	BI	29	PRO	CA-C-O	-7.37	112.68	121.67
50	AF	147	VAL	CA-C-N	7.37	128.10	120.00
50	AF	147	VAL	C-N-CA	7.37	128.10	120.00
23	BK	104	ARG	NE-CZ-NH2	7.36	125.83	119.20
38	A1	1171	G	P-O5'-C5'	7.36	131.94	120.90
14	BB	145	ASN	N-CA-C	-7.36	99.06	110.17
11	B2	71	C	P-O5'-C5'	7.36	131.94	120.90
11	B2	1244	C	O4'-C1'-N1	7.36	119.54	108.50
58	AK	106	ASN	CA-CB-CG	-7.36	105.24	112.60
17	BE	9	HIS	CE1-NE2-CD2	-7.35	101.65	109.00
38	A1	2995	A	C4'-C3'-O3'	-7.35	101.97	113.00
11	B2	204	G	C4'-C3'-O3'	-7.35	101.98	113.00
17	BE	96	THR	N-CA-C	-7.35	105.23	114.56
41	AA	120	TYR	CB-CG-CD1	-7.35	109.78	120.80
43	AB	51	ASP	CA-C-N	7.34	126.98	119.56
43	AB	51	ASP	C-N-CA	7.34	126.98	119.56
20	BH	209	ARG	N-CA-CB	7.34	120.66	110.01
55	Ai	79	ARG	CA-C-N	7.34	130.12	120.28
55	Ai	79	ARG	C-N-CA	7.34	130.12	120.28
38	A1	84	A	P-O5'-C5'	-7.34	109.89	120.90
38	A1	1829	C	O4'-C1'-C2'	-7.34	100.26	107.60
14	BB	99	GLY	CA-C-N	7.34	130.85	120.28
14	BB	99	GLY	C-N-CA	7.34	130.85	120.28
38	A1	402	G	P-O3'-C3'	-7.34	109.19	120.20
5	AS	74	PRO	CA-C-O	-7.34	113.07	121.36
14	BB	59	LEU	N-CA-C	-7.33	104.36	112.72
38	A1	746	C	O3'-P-O5'	-7.33	93.00	104.00
16	BD	83	LEU	CB-CA-C	-7.33	102.91	110.17
23	BK	117	HIS	CB-CG-CD2	-7.33	121.67	131.20
38	A1	634	G	C4'-C3'-C2'	-7.33	95.27	102.60
66	AY	29	HIS	CA-CB-CG	-7.33	106.47	113.80
45	AC	91	LEU	N-CA-C	-7.33	103.31	114.16
38	A1	595	C	C4'-C3'-O3'	-7.33	102.01	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2670	U	C4'-C3'-C2'	7.33	109.93	102.60
11	B2	1416	C	C3'-C2'-O2'	7.33	121.69	110.70
46	AD	225	LEU	N-CA-CB	7.33	121.59	110.45
58	Ak	185	LEU	N-CA-C	-7.33	98.78	110.14
3	Af	42	ARG	NE-CZ-NH2	-7.32	112.61	119.20
11	B2	663	G	O4'-C1'-N9	7.32	119.49	108.50
19	BG	30	ILE	O-C-N	-7.32	114.63	122.61
59	AL	71	ARG	NE-CZ-NH1	-7.32	114.18	121.50
18	BF	102	HIS	ND1-CE1-NE2	7.32	115.72	108.40
50	AF	47	PHE	CA-CB-CG	-7.32	106.48	113.80
65	AV	59	ALA	N-CA-C	7.32	120.19	111.33
54	AI	131	VAL	CA-C-N	7.32	128.23	120.03
54	AI	131	VAL	C-N-CA	7.32	128.23	120.03
54	AI	92	LYS	CA-C-N	7.32	130.08	120.28
54	AI	92	LYS	C-N-CA	7.32	130.08	120.28
24	BL	78	ASP	CA-CB-CG	-7.32	105.28	112.60
42	Aa	49	ILE	CB-CA-C	-7.32	100.54	110.42
9	AX	414	MET	CA-C-N	7.31	133.09	120.58
9	AX	414	MET	C-N-CA	7.31	133.09	120.58
11	B2	486	A	C2'-C3'-O3'	7.31	120.47	109.50
58	Ak	60	ILE	N-CA-C	-7.31	98.13	108.80
6	AT	77	SER	N-CA-C	7.31	118.89	111.07
16	BD	147	GLU	CA-C-N	7.31	135.65	121.18
16	BD	147	GLU	C-N-CA	7.31	135.65	121.18
5	AS	34	GLU	N-CA-CB	7.30	120.97	110.16
61	AN	58	ARG	CA-C-N	7.30	130.07	120.28
61	AN	58	ARG	C-N-CA	7.30	130.07	120.28
9	AX	210	ILE	CA-C-O	-7.30	112.25	119.92
11	B2	150	G	P-O3'-C3'	7.30	131.15	120.20
3	Af	23	VAL	CB-CA-C	-7.30	103.01	110.89
23	BK	121	ARG	CA-C-N	7.30	135.48	121.54
23	BK	121	ARG	C-N-CA	7.30	135.48	121.54
46	AD	19	PRO	CA-C-N	7.30	130.79	120.28
46	AD	19	PRO	C-N-CA	7.30	130.79	120.28
38	A1	2037	A	O5'-C5'-C4'	-7.30	100.56	111.50
38	A1	2891	A	C2'-C3'-O3'	7.30	120.44	109.50
11	B2	184	G	P-O3'-C3'	7.29	131.14	120.20
9	AX	13	GLU	CA-C-O	-7.29	112.78	121.60
60	AM	77	LYS	N-CA-C	-7.29	103.99	114.12
9	AX	14	VAL	N-CA-C	-7.29	97.96	108.53
38	A1	765	G	O4'-C1'-N9	7.29	119.44	108.50
38	A1	574	C	P-O5'-C5'	7.29	131.83	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	AM	136	HIS	ND1-CE1-NE2	7.29	115.69	108.40
38	A1	635	G	C5'-C4'-C3'	-7.29	105.07	116.00
38	A1	852	A	C4'-C3'-C2'	-7.29	95.31	102.60
38	A1	883	G	C2'-C3'-O3'	7.29	120.43	109.50
11	B2	306	C	O4'-C1'-C2'	-7.29	100.31	107.60
38	A1	360	G	P-O5'-C5'	-7.29	109.97	120.90
38	A1	609	G	P-O5'-C5'	-7.29	109.97	120.90
10	B1	64	C	O5'-C5'-C4'	-7.28	100.58	111.50
38	A1	2350	G	O3'-P-O5'	-7.28	93.07	104.00
2	A8	34	ILE	CA-C-N	7.28	128.06	119.98
2	A8	34	ILE	C-N-CA	7.28	128.06	119.98
24	BL	17	ASP	CA-CB-CG	-7.28	105.32	112.60
11	B2	115	A	P-O5'-C5'	-7.28	109.99	120.90
22	BJ	84	PRO	N-CA-CB	7.28	109.23	101.88
38	A1	118	A	P-O3'-C3'	7.28	131.11	120.20
38	A1	619	G	C4'-C3'-C2'	-7.27	95.33	102.60
38	A1	1229	U	C4'-C3'-C2'	-7.27	95.33	102.60
16	BD	162	ASN	CA-CB-CG	-7.27	105.33	112.60
22	BJ	71	LYS	CA-C-N	7.27	131.93	121.54
22	BJ	71	LYS	C-N-CA	7.27	131.93	121.54
34	BV	44	LEU	O-C-N	7.27	130.44	122.15
41	AA	136	PRO	CB-CA-C	7.27	119.79	110.92
65	AV	64	GLY	CA-C-N	7.27	129.23	120.14
65	AV	64	GLY	C-N-CA	7.27	129.23	120.14
45	AC	277	HIS	CB-CG-CD2	-7.27	121.75	131.20
64	AR	22	ARG	N-CA-C	-7.27	104.44	113.38
11	B2	1137	G	P-O5'-C5'	7.27	131.80	120.90
38	A1	374	C	C4'-C3'-C2'	-7.26	95.34	102.60
32	BT	27	LEU	O-C-N	7.26	129.82	122.12
38	A1	235	G	C4'-C3'-C2'	7.26	109.86	102.60
38	A1	2479	C	C4'-C3'-O3'	-7.26	102.11	113.00
5	AS	104	GLN	CA-C-N	7.26	130.74	120.28
5	AS	104	GLN	C-N-CA	7.26	130.74	120.28
38	A1	1335	C	P-O3'-C3'	7.26	131.09	120.20
38	A1	1743	G	O4'-C1'-N9	7.26	119.39	108.50
4	AQ	75	HIS	CE1-NE2-CD2	-7.26	101.74	109.00
12	B3	10	GLU	N-CA-C	-7.26	97.07	108.90
38	A1	331	G	P-O3'-C3'	7.26	131.08	120.20
38	A1	2953	U	O4'-C1'-N1	7.26	119.38	108.50
11	B2	1254	C	C5'-C4'-C3'	7.25	126.88	116.00
61	AN	19	ARG	N-CA-CB	7.25	122.75	110.49
11	B2	1209	C	P-O3'-C3'	7.25	131.08	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	540	A	C4'-C3'-C2'	-7.25	95.35	102.60
11	B2	409	C	P-O5'-C5'	7.25	131.77	120.90
29	BQ	126	GLU	N-CA-CB	7.25	120.77	110.12
38	A1	2670	U	P-O5'-C5'	-7.24	110.04	120.90
44	Ab	127	ASN	O-C-N	-7.24	116.36	121.65
11	B2	1461	U	C3'-C2'-C1'	7.24	108.74	101.50
60	AM	46	ASP	O-C-N	7.24	129.80	122.12
66	AY	118	ARG	NE-CZ-NH1	-7.24	114.26	121.50
15	BC	154	VAL	CA-CB-CG2	-7.24	98.09	110.40
20	BH	154	PRO	CA-C-N	7.24	129.98	120.28
20	BH	154	PRO	C-N-CA	7.24	129.98	120.28
11	B2	218	C	O4'-C1'-C2'	-7.24	100.36	107.60
38	A1	2041	U	C3'-C2'-C1'	7.24	108.54	101.30
12	B3	76	PRO	CB-CA-C	7.24	120.59	110.60
12	B3	84	LYS	N-CA-C	-7.24	103.76	112.59
21	BI	79	PHE	CA-C-N	7.24	128.89	119.84
21	BI	79	PHE	C-N-CA	7.24	128.89	119.84
1	A7	28	PRO	N-CA-CB	7.24	109.37	103.36
15	BC	137	THR	CB-CA-C	7.24	122.60	111.39
38	A1	1691	U	O4'-C1'-C2'	-7.24	100.36	107.60
38	A1	2717	A	C5'-C4'-O4'	7.24	119.95	109.10
38	A1	2957	G	P-O3'-C3'	7.24	131.05	120.20
38	A1	2796	C	C4'-C3'-C2'	-7.23	95.37	102.60
41	AA	174	ASP	CA-CB-CG	-7.23	105.37	112.60
20	BH	87	ARG	NE-CZ-NH1	-7.23	114.27	121.50
40	AK	74	ALA	CA-C-N	7.23	130.55	120.29
40	AK	74	ALA	C-N-CA	7.23	130.55	120.29
5	AS	145	HIS	ND1-CE1-NE2	7.23	115.63	108.40
19	BG	65	GLY	CA-C-O	-7.23	114.54	121.62
38	A1	2604	G	O4'-C1'-N9	7.22	119.34	108.50
59	AL	6	LYS	N-CA-CB	7.22	120.74	110.12
11	B2	147	A	P-O5'-C5'	-7.22	110.06	120.90
30	BR	24	HIS	ND1-CE1-NE2	7.22	115.62	108.40
11	B2	448	A	C4'-C3'-C2'	-7.22	95.38	102.60
18	BF	167	ILE	CA-C-N	7.22	135.56	121.41
18	BF	167	ILE	C-N-CA	7.22	135.56	121.41
7	AU	48	VAL	CB-CA-C	-7.22	102.39	112.14
19	BG	38	ILE	O-C-N	-7.22	115.04	121.61
38	A1	2272	G	O3'-P-O5'	7.22	114.83	104.00
49	Ae	26	VAL	CA-CB-CG1	7.22	122.67	110.40
11	B2	986	G	P-O5'-C5'	-7.22	110.08	120.90
41	AA	75	ARG	CA-C-N	7.22	129.95	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	AA	75	ARG	C-N-CA	7.22	129.95	120.28
15	BC	110	ARG	N-CA-CB	7.21	120.83	110.88
9	AX	121	VAL	CA-C-N	7.21	129.81	120.44
9	AX	121	VAL	C-N-CA	7.21	129.81	120.44
51	Ag	14	LYS	N-CA-C	-7.21	98.64	108.38
38	A1	407	A	O4'-C1'-C2'	-7.21	100.39	107.60
18	BF	171	GLY	CA-C-N	7.21	130.27	120.54
18	BF	171	GLY	C-N-CA	7.21	130.27	120.54
32	BT	14	GLU	CA-C-N	7.21	129.94	120.28
32	BT	14	GLU	C-N-CA	7.21	129.94	120.28
38	A1	2405	U	P-O3'-C3'	-7.21	109.39	120.20
46	AD	218	ASP	N-CA-C	-7.21	97.65	109.40
9	AX	174	ILE	N-CA-CB	7.21	118.47	110.62
11	B2	1483	U	C2'-C3'-O3'	7.21	120.31	109.50
20	BH	46	HIS	CB-CG-CD2	-7.21	121.83	131.20
38	A1	767	G	O4'-C1'-N9	7.21	119.31	108.50
16	BD	43	LYS	CA-C-N	7.21	130.52	120.29
16	BD	43	LYS	C-N-CA	7.21	130.52	120.29
4	AQ	101	ALA	N-CA-CB	7.20	120.71	110.12
38	A1	1094	U	P-O5'-C5'	-7.20	110.09	120.90
38	A1	1185	A	C4'-C3'-C2'	-7.20	95.40	102.60
11	B2	919	U	P-O3'-C3'	7.20	131.00	120.20
38	A1	2749	G	O4'-C1'-N9	7.20	119.30	108.50
11	B2	782	A	C4'-C3'-C2'	-7.20	95.40	102.60
13	BA	91	TYR	CB-CA-C	-7.20	99.58	110.88
38	A1	523	C	P-O5'-C5'	7.20	131.70	120.90
38	A1	2669	U	P-O5'-C5'	-7.20	110.10	120.90
56	AJ	75	HIS	CA-CB-CG	-7.20	106.60	113.80
61	AN	147	GLU	CA-C-N	7.20	127.97	119.98
61	AN	147	GLU	C-N-CA	7.20	127.97	119.98
46	AD	243	THR	N-CA-C	-7.20	98.13	109.50
11	B2	1414	G	C1'-O4'-C4'	7.20	117.10	109.90
13	BA	167	ALA	CA-C-N	7.20	130.51	120.29
13	BA	167	ALA	C-N-CA	7.20	130.51	120.29
38	A1	1267	A	P-O5'-C5'	-7.20	110.11	120.90
11	B2	920	U	O4'-C1'-N1	7.19	119.29	108.50
38	A1	439	G	P-O5'-C5'	7.19	131.69	120.90
61	AN	62	LEU	CA-C-O	-7.19	112.92	120.55
67	AZ	76	LYS	O-C-N	-7.19	113.05	121.32
27	BO	111	ARG	N-CA-CB	7.19	120.91	110.20
5	AS	114	ILE	N-CA-CB	7.19	119.86	111.66
15	BC	75	LEU	N-CA-CB	7.19	122.14	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	AC	162	ASP	CA-CB-CG	7.19	119.79	112.60
13	BA	59	PHE	CA-C-N	7.19	129.78	120.44
13	BA	59	PHE	C-N-CA	7.19	129.78	120.44
32	BT	66	HIS	CE1-NE2-CD2	-7.19	101.81	109.00
5	AS	95	LEU	N-CA-CB	7.19	120.68	110.12
38	A1	1218	C	P-O5'-C5'	-7.18	110.12	120.90
60	AM	152	LYS	CA-C-N	7.18	129.91	120.28
60	AM	152	LYS	C-N-CA	7.18	129.91	120.28
38	A1	1650	U	P-O5'-C5'	-7.18	110.13	120.90
55	Ai	69	LEU	N-CA-C	-7.18	99.92	108.25
11	B2	369	A	O4'-C4'-C3'	-7.18	96.82	104.00
35	BW	57	LYS	N-CA-CB	7.18	122.04	110.77
38	A1	2363	G	C2'-C3'-O3'	7.18	120.27	109.50
11	B2	620	G	P-O5'-C5'	7.18	131.66	120.90
11	B2	965	G	C4'-C3'-C2'	-7.18	95.42	102.60
38	A1	1145	G	C2'-C3'-O3'	7.18	120.27	109.50
38	A1	1516	C	O4'-C1'-C2'	-7.18	100.42	107.60
13	BA	52	LEU	N-CA-CB	7.17	122.61	110.49
30	BR	74	ASN	CA-C-N	7.17	127.77	120.38
30	BR	74	ASN	C-N-CA	7.17	127.77	120.38
31	BS	48	ASN	CA-CB-CG	-7.17	105.43	112.60
38	A1	2252	C	P-O5'-C5'	7.17	131.66	120.90
16	BD	89	LEU	CA-C-N	7.17	130.60	120.28
16	BD	89	LEU	C-N-CA	7.17	130.60	120.28
18	BF	110	ILE	CB-CA-C	-7.17	102.63	112.02
14	BB	72	VAL	N-CA-C	-7.17	106.32	113.20
42	Aa	35	VAL	N-CA-CB	7.17	120.29	110.54
21	BI	41	MET	CA-C-N	7.17	130.46	120.29
21	BI	41	MET	C-N-CA	7.17	130.46	120.29
38	A1	1343	C	O4'-C1'-N1	7.16	119.25	108.50
38	A1	2641	C	O4'-C1'-C2'	-7.16	100.44	107.60
39	A3	106	G	C4'-C3'-C2'	-7.16	95.44	102.60
9	AX	289	GLY	N-CA-C	-7.16	105.35	115.30
18	BF	51	ASP	CA-CB-CG	-7.16	105.44	112.60
38	A1	2857	C	O5'-C5'-C4'	-7.16	100.76	111.50
46	AD	158	ARG	CA-C-N	7.16	129.87	120.28
46	AD	158	ARG	C-N-CA	7.16	129.87	120.28
48	AE	18	HIS	CE1-NE2-CD2	-7.16	101.84	109.00
12	B3	97	ALA	CA-C-O	-7.15	110.67	119.18
38	A1	1393	C	P-O3'-C3'	7.15	130.93	120.20
38	A1	768	C	C5'-C4'-C3'	-7.15	105.27	116.00
43	AB	210	HIS	CE1-NE2-CD2	-7.15	101.85	109.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	AD	123	ASN	N-CA-C	-7.15	97.24	108.90
13	BA	136	ALA	CA-C-N	7.15	130.26	120.46
13	BA	136	ALA	C-N-CA	7.15	130.26	120.46
38	A1	931	C	C4'-C3'-O3'	-7.15	102.28	113.00
38	A1	2158	G	C4'-C3'-C2'	7.15	109.75	102.60
38	A1	2725	U	P-O5'-C5'	-7.15	110.17	120.90
40	AK	5	ASP	CA-C-N	7.15	131.19	120.75
40	AK	5	ASP	C-N-CA	7.15	131.19	120.75
6	AT	36	LYS	CA-C-N	7.15	130.44	120.29
6	AT	36	LYS	C-N-CA	7.15	130.44	120.29
11	B2	1290	U	C4'-C3'-C2'	-7.15	95.45	102.60
11	B2	1367	C	C4'-C3'-C2'	-7.15	95.45	102.60
38	A1	1133	U	O3'-P-O5'	7.14	114.72	104.00
38	A1	1153	U	C4'-C3'-C2'	7.14	109.74	102.60
40	A5	17	ARG	N-CA-CB	7.14	122.77	111.91
45	AC	9	ARG	NE-CZ-NH2	-7.14	112.77	119.20
38	A1	206	A	O4'-C1'-C2'	-7.14	100.46	107.60
38	A1	217	A	P-O3'-C3'	7.14	130.91	120.20
11	B2	1392	G	O3'-P-O5'	-7.14	93.30	104.00
14	BB	190	ILE	CA-C-N	7.13	127.55	119.92
14	BB	190	ILE	C-N-CA	7.13	127.55	119.92
38	A1	1708	U	C4'-C3'-C2'	-7.13	95.47	102.60
38	A1	979	G	C4'-C3'-C2'	-7.13	95.47	102.60
38	A1	2305	U	O4'-C1'-N1	7.13	119.20	108.50
63	AP	57	ASN	CA-CB-CG	7.13	119.73	112.60
11	B2	1225	C	O4'-C4'-C3'	-7.13	96.87	104.00
38	A1	2274	C	O4'-C1'-N1	7.13	119.20	108.50
5	AS	25	LEU	N-CA-CB	7.13	120.47	109.85
10	B1	27	A	P-O3'-C3'	7.13	130.89	120.20
28	BP	14	PHE	CA-CB-CG	7.13	120.93	113.80
67	AZ	71	GLY	CA-C-N	7.13	130.15	120.38
67	AZ	71	GLY	C-N-CA	7.13	130.15	120.38
11	B2	1413	G	C3'-C2'-C1'	-7.13	94.17	101.30
21	BI	56	GLY	CA-C-O	7.13	125.53	119.04
38	A1	1761	C	O4'-C1'-N1	7.13	119.19	108.50
44	Ab	60	SER	CA-C-N	7.13	127.56	119.93
44	Ab	60	SER	C-N-CA	7.13	127.56	119.93
41	AA	89	GLU	CA-C-N	7.12	129.54	120.56
41	AA	89	GLU	C-N-CA	7.12	129.54	120.56
15	BC	160	THR	N-CA-C	-7.12	102.61	112.30
16	BD	108	ILE	CB-CA-C	7.12	122.97	111.29
38	A1	1939	C	P-O3'-C3'	7.12	130.89	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AQ	136	HIS	ND1-CE1-NE2	7.12	115.52	108.40
11	B2	8	U	C5'-C4'-C3'	-7.12	104.52	115.20
38	A1	100	C	P-O3'-C3'	7.12	130.88	120.20
61	AN	50	HIS	CG-CD2-NE2	7.12	114.32	107.20
38	A1	318	G	C4'-C3'-C2'	-7.12	95.48	102.60
9	AX	57	GLU	O-C-N	7.12	129.23	122.18
20	BH	202	SER	N-CA-C	7.12	118.69	111.07
38	A1	2362	U	P-O3'-C3'	7.12	130.88	120.20
7	AU	29	ALA	CA-C-O	-7.12	112.95	120.28
9	AX	32	ILE	CA-C-N	7.12	129.59	120.70
9	AX	32	ILE	C-N-CA	7.12	129.59	120.70
38	A1	2768	C	P-O5'-C5'	7.12	131.57	120.90
9	AX	60	GLN	N-CA-C	7.11	119.03	111.28
23	BK	80	MET	O-C-N	7.11	129.40	122.07
5	AS	145	HIS	CA-CB-CG	7.11	120.91	113.80
38	A1	318	G	C5'-C4'-C3'	-7.11	105.33	116.00
41	AA	201	SER	CB-CA-C	-7.11	97.39	110.62
11	B2	1404	C	O4'-C1'-N1	7.11	119.16	108.50
38	A1	780	G	O4'-C1'-N9	7.11	119.16	108.50
38	A1	1500	C	C5'-C4'-C3'	7.11	126.66	116.00
11	B2	279	U	P-O3'-C3'	-7.11	109.54	120.20
14	BB	169	TRP	CA-C-N	7.11	130.19	120.46
14	BB	169	TRP	C-N-CA	7.11	130.19	120.46
38	A1	1029	C	O3'-P-O5'	7.11	114.66	104.00
38	A1	1069	A	P-O3'-C3'	7.10	130.85	120.20
3	Af	40	LYS	CA-C-N	7.10	132.20	122.19
3	Af	40	LYS	C-N-CA	7.10	132.20	122.19
62	AO	92	TYR	N-CA-C	-7.10	104.77	113.50
66	AY	155	LEU	N-CA-CB	7.10	122.56	110.50
11	B2	92	G	O4'-C1'-N9	7.09	119.14	108.50
11	B2	576	C	C3'-C2'-C1'	7.09	108.39	101.30
38	A1	2753	G	P-O3'-C3'	7.09	130.84	120.20
11	B2	565	C	C5'-C4'-C3'	7.09	126.64	116.00
18	BF	183	VAL	CA-CB-CG1	7.09	122.46	110.40
29	BQ	106	ARG	CA-C-N	7.09	129.78	120.28
29	BQ	106	ARG	C-N-CA	7.09	129.78	120.28
38	A1	2250	G	P-O3'-C3'	7.09	130.84	120.20
38	A1	2287	C	O4'-C1'-C2'	7.09	114.69	107.60
48	AE	170	GLU	CA-C-N	7.09	127.80	120.00
48	AE	170	GLU	C-N-CA	7.09	127.80	120.00
65	AV	39	ARG	N-CA-CB	7.09	120.66	110.16
11	B2	325	A	C1'-O4'-C4'	7.09	116.79	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	BA	172	LYS	N-CA-CB	7.09	120.29	110.01
27	BO	77	TRP	CA-C-N	7.09	133.74	122.11
27	BO	77	TRP	C-N-CA	7.09	133.74	122.11
38	A1	1034	G	O4'-C1'-N9	7.09	119.13	108.50
38	A1	2323	C	O3'-P-O5'	-7.09	93.36	104.00
45	AC	173	VAL	N-CA-C	-7.09	106.22	113.10
67	AZ	40	ASN	CA-C-N	7.08	132.33	122.06
67	AZ	40	ASN	C-N-CA	7.08	132.33	122.06
67	AZ	78	PHE	CA-CB-CG	7.08	120.89	113.80
4	AQ	28	ARG	NE-CZ-NH1	-7.08	114.42	121.50
11	B2	1049	U	C1'-O4'-C4'	7.08	116.98	109.90
38	A1	2451	G	C5'-C4'-C3'	-7.08	105.38	116.00
40	AK	52	HIS	ND1-CE1-NE2	7.08	115.48	108.40
14	BB	158	ASN	CA-CB-CG	-7.08	105.52	112.60
52	AH	2	PRO	N-CA-CB	7.08	110.68	103.25
11	B2	1391	U	C5'-C4'-C3'	7.08	126.62	116.00
38	A1	1024	G	O4'-C1'-N9	7.08	118.82	108.20
38	A1	1280	C	O4'-C1'-C2'	-7.08	100.52	107.60
49	Ae	56	LYS	N-CA-C	7.08	118.64	111.07
12	B3	43	VAL	CA-C-N	7.08	129.99	120.65
12	B3	43	VAL	C-N-CA	7.08	129.99	120.65
8	AW	64	GLU	CA-C-N	7.08	130.06	120.44
8	AW	64	GLU	C-N-CA	7.08	130.06	120.44
33	BU	49	ASP	CA-C-N	7.08	129.99	120.65
33	BU	49	ASP	C-N-CA	7.08	129.99	120.65
55	Ai	49	ILE	N-CA-CB	7.08	120.71	110.52
12	B3	106	LYS	O-C-N	-7.07	114.56	122.34
22	BJ	33	SER	O-C-N	-7.07	114.25	123.16
29	BQ	157	VAL	N-CA-C	-7.07	103.63	110.42
11	B2	732	G	C5'-C4'-C3'	7.07	126.61	116.00
15	BC	14	GLU	CA-C-N	7.07	129.76	120.28
15	BC	14	GLU	C-N-CA	7.07	129.76	120.28
9	AX	419	LEU	N-CA-C	-7.07	101.86	112.04
67	AZ	40	ASN	N-CA-C	-7.07	92.92	107.70
12	B3	94	VAL	N-CA-C	-7.07	97.31	107.77
38	A1	2016	C	C4'-C3'-C2'	-7.07	95.53	102.60
4	AQ	25	ASP	CA-C-N	7.06	126.74	119.82
4	AQ	25	ASP	C-N-CA	7.06	126.74	119.82
44	Ab	15	ARG	N-CA-C	7.06	118.98	111.28
30	BR	92	ARG	NE-CZ-NH1	-7.06	114.44	121.50
32	BT	73	LEU	N-CA-C	-7.06	97.95	109.82
38	A1	2877	A	O4'-C1'-C2'	-7.06	100.54	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	BB	176	LEU	CA-C-N	7.06	129.62	120.44
14	BB	176	LEU	C-N-CA	7.06	129.62	120.44
38	A1	485	G	P-O3'-C3'	7.06	130.79	120.20
38	A1	2351	G	C2'-C3'-O3'	7.06	120.09	109.50
11	B2	63	G	O3'-P-O5'	-7.06	93.41	104.00
11	B2	1022	U	O4'-C1'-C2'	-7.06	100.54	107.60
62	AO	97	ALA	CA-C-O	-7.06	112.94	120.42
38	A1	3000	U	O4'-C1'-N1	7.06	119.08	108.50
15	BC	47	PHE	N-CA-C	-7.05	97.74	109.24
38	A1	334	G	C4'-C3'-C2'	-7.05	95.55	102.60
38	A1	918	A	C5'-C4'-C3'	7.05	126.58	116.00
38	A1	2760	A	P-O3'-C3'	7.05	130.78	120.20
66	AY	134	PHE	CA-C-N	7.05	129.73	120.28
66	AY	134	PHE	C-N-CA	7.05	129.73	120.28
16	BD	25	ARG	O-C-N	7.05	129.33	122.07
22	BJ	76	ARG	N-CA-C	-7.05	98.74	109.95
38	A1	1415	C	O4'-C1'-N1	7.05	118.78	108.20
39	A3	24	C	C4'-C3'-C2'	-7.05	95.55	102.60
38	A1	680	U	P-O5'-C5'	7.05	131.47	120.90
38	A1	1337	G	O4'-C1'-N9	7.05	119.07	108.50
38	A1	1543	C	P-O5'-C5'	-7.05	110.33	120.90
38	A1	1578	C	O4'-C1'-C2'	-7.05	100.55	107.60
49	Ae	21	ARG	CA-C-O	7.05	126.75	118.79
62	AO	166	ARG	CA-C-N	7.05	131.39	120.75
62	AO	166	ARG	C-N-CA	7.05	131.39	120.75
13	BA	126	MET	N-CA-CB	7.04	120.85	110.35
38	A1	1226	G	O3'-P-O5'	-7.04	93.44	104.00
38	A1	1254	C	O4'-C1'-C2'	-7.04	100.56	107.60
66	AY	40	THR	N-CA-C	-7.04	96.82	108.23
38	A1	2300	C	P-O3'-C3'	7.04	130.76	120.20
11	B2	1142	G	P-O3'-C3'	7.04	130.76	120.20
22	BJ	79	ARG	NE-CZ-NH1	-7.04	114.46	121.50
11	B2	513	A	P-O3'-C3'	7.04	130.76	120.20
8	AW	29	ARG	CA-C-N	7.04	127.79	119.98
8	AW	29	ARG	C-N-CA	7.04	127.79	119.98
38	A1	994	G	C3'-C2'-C1'	7.04	108.54	101.50
9	AX	60	GLN	CA-C-O	-7.03	113.09	120.55
14	BB	37	GLN	OE1-CD-NE2	7.03	129.63	122.60
20	BH	47	THR	N-CA-C	-7.03	103.72	112.72
60	AM	66	VAL	CA-C-O	7.03	129.44	121.28
11	B2	42	G	C4'-C3'-O3'	7.03	119.95	109.40
38	A1	1542	U	C2'-C3'-O3'	7.03	120.04	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1573	A	O5'-C5'-C4'	7.03	122.24	111.70
56	AJ	86	ARG	N-CA-CB	7.03	120.56	110.16
12	B3	20	LEU	N-CA-C	-7.03	104.58	113.72
14	BB	13	LEU	CA-C-N	7.03	129.58	120.44
14	BB	13	LEU	C-N-CA	7.03	129.58	120.44
54	AI	21	MET	CB-CA-C	-7.03	99.12	110.79
60	AM	120	GLY	O-C-N	7.03	130.03	123.35
52	AH	76	LEU	O-C-N	-7.03	114.67	122.12
58	AK	11	GLU	N-CA-C	7.03	119.02	111.36
11	B2	388	G	O4'-C1'-N9	7.02	119.04	108.50
15	BC	54	VAL	N-CA-C	-7.02	105.77	113.43
22	BJ	124	LEU	N-CA-CB	7.02	120.36	110.04
31	BS	20	TYR	N-CA-CB	-7.02	101.66	110.79
33	BU	10	ASP	CA-CB-CG	-7.02	105.58	112.60
38	A1	2963	G	O4'-C1'-N9	7.02	119.03	108.50
11	B2	300	G	O4'-C4'-C3'	-7.02	96.98	104.00
38	A1	3033	G	C4'-C3'-C2'	-7.02	95.58	102.60
2	A8	29	LYS	CA-C-N	7.02	128.61	119.84
2	A8	29	LYS	C-N-CA	7.02	128.61	119.84
38	A1	1155	A	P-O5'-C5'	-7.02	110.37	120.90
57	Aj	49	GLY	CA-C-N	7.02	128.86	120.09
57	Aj	49	GLY	C-N-CA	7.02	128.86	120.09
18	BF	48	GLU	N-CA-C	7.02	119.82	111.33
38	A1	2417	G	C4'-C3'-C2'	-7.02	95.58	102.60
38	A1	2425	A	C5'-C4'-O4'	7.02	120.33	109.80
29	BQ	2	ALA	N-CA-CB	7.01	122.34	110.49
25	BM	72	LEU	CA-C-N	7.01	129.68	120.28
25	BM	72	LEU	C-N-CA	7.01	129.68	120.28
38	A1	1357	G	O4'-C1'-N9	7.01	119.02	108.50
38	A1	1601	G	P-O3'-C3'	7.01	130.71	120.20
38	A1	480	A	C4'-C3'-C2'	-7.01	95.59	102.60
66	AY	84	TYR	CA-C-N	7.01	130.06	120.46
66	AY	84	TYR	C-N-CA	7.01	130.06	120.46
11	B2	1067	G	P-O5'-C5'	-7.00	110.39	120.90
56	AJ	97	VAL	N-CA-C	-7.00	98.07	108.85
14	BB	113	ASP	CA-CB-CG	-7.00	105.60	112.60
39	A3	3	G	O4'-C4'-C3'	-7.00	97.00	104.00
43	AB	197	MET	N-CA-CB	7.00	120.93	110.29
60	AM	27	MET	O-C-N	-7.00	114.70	122.12
23	BK	44	THR	N-CA-C	7.00	118.91	111.28
5	AS	78	PHE	CA-CB-CG	-7.00	106.80	113.80
11	B2	990	G	C1'-O4'-C4'	7.00	116.90	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	AL	94	ALA	CA-C-O	-7.00	115.16	121.67
43	AB	183	LYS	N-CA-C	7.00	118.90	111.28
40	AK	4	ILE	CA-CB-CG2	6.99	122.39	110.50
38	A1	978	C	O4'-C1'-N1	6.99	118.99	108.50
38	A1	1357	G	C1'-O4'-C4'	6.99	116.89	109.90
38	A1	1504	C	O4'-C4'-C3'	-6.99	97.01	104.00
38	A1	2450	A	P-O3'-C3'	6.99	130.69	120.20
9	AX	285	GLY	N-CA-C	-6.99	100.50	110.91
38	A1	599	G	P-O3'-C3'	6.99	130.68	120.20
38	A1	2298	C	C3'-C2'-C1'	6.99	108.29	101.30
41	AA	54	HIS	CG-CD2-NE2	6.99	114.19	107.20
37	BY	12	ASP	CA-CB-CG	-6.99	105.61	112.60
40	A5	27	ILE	N-CA-C	-6.99	97.03	107.37
15	BC	163	SER	N-CA-C	-6.98	98.35	109.59
18	BF	152	VAL	N-CA-C	-6.98	98.25	108.87
11	B2	906	G	O4'-C1'-N9	6.98	118.97	108.50
38	A1	1435	G	C4'-C3'-C2'	-6.98	95.62	102.60
43	AB	117	ASP	CA-C-O	6.98	126.20	118.52
62	AO	43	HIS	CA-CB-CG	6.98	120.78	113.80
36	BX	4	ASP	CA-C-N	6.98	129.93	120.44
36	BX	4	ASP	C-N-CA	6.98	129.93	120.44
38	A1	394	A	C5'-C4'-C3'	6.98	126.47	116.00
11	B2	1412	A	O4'-C4'-C3'	-6.98	97.02	104.00
64	AR	43	ILE	CA-C-O	6.98	127.88	120.48
11	B2	671	C	P-O3'-C3'	6.97	130.66	120.20
38	A1	1684	C	C4'-C3'-C2'	-6.97	95.63	102.60
38	A1	2587	G	O4'-C4'-C3'	-6.97	97.03	104.00
38	A1	2793	C	P-O3'-C3'	6.97	130.66	120.20
52	AH	64	PHE	CA-CB-CG	6.97	120.77	113.80
62	AO	149	ILE	CA-C-N	6.97	129.62	120.28
62	AO	149	ILE	C-N-CA	6.97	129.62	120.28
11	B2	759	C	P-O5'-C5'	6.97	131.35	120.90
35	BW	38	LEU	N-CA-C	-6.97	104.52	113.16
56	AJ	80	ALA	N-CA-C	-6.97	98.43	108.60
11	B2	111	G	O3'-P-O5'	-6.97	93.55	104.00
11	B2	990	G	C4'-C3'-C2'	-6.97	95.63	102.60
38	A1	1928	A	C1'-C2'-O2'	6.97	118.85	108.40
1	A7	18	CYS	N-CA-C	-6.96	103.30	111.03
9	AX	31	GLY	CA-C-O	-6.96	113.97	120.80
19	BG	108	ARG	CA-C-O	-6.96	113.11	121.05
38	A1	1741	C	C5'-C4'-C3'	-6.96	105.56	116.00
16	BD	50	ASN	OD1-CG-ND2	6.96	129.56	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	BI	83	VAL	N-CA-C	6.96	117.72	110.62
59	AL	73	VAL	CA-C-N	6.96	132.61	123.00
59	AL	73	VAL	C-N-CA	6.96	132.61	123.00
5	AS	122	GLY	CA-C-N	6.96	127.91	120.11
5	AS	122	GLY	C-N-CA	6.96	127.91	120.11
38	A1	372	A	O4'-C1'-C2'	-6.96	98.84	105.80
11	B2	1354	A	P-O3'-C3'	-6.96	109.76	120.20
32	BT	22	GLU	CA-C-N	6.96	129.61	120.28
32	BT	22	GLU	C-N-CA	6.96	129.61	120.28
38	A1	1145	G	P-O3'-C3'	6.96	130.64	120.20
60	AM	138	PRO	CA-C-N	6.96	129.99	120.46
60	AM	138	PRO	C-N-CA	6.96	129.99	120.46
38	A1	2827	C	C5'-C4'-C3'	-6.96	105.56	116.00
63	AP	24	GLU	N-CA-C	6.96	118.94	111.36
38	A1	2117	U	C4'-C3'-O3'	-6.96	102.57	113.00
38	A1	2426	U	O4'-C1'-N1	6.96	118.93	108.50
52	AH	97	ASN	N-CA-C	-6.96	98.07	108.99
11	B2	406	U	O3'-P-O5'	-6.95	93.57	104.00
18	BF	130	SER	N-CA-C	6.95	122.11	109.32
24	BL	38	ILE	N-CA-C	-6.95	99.80	107.73
29	BQ	19	ARG	N-CA-C	-6.95	99.24	109.11
29	BQ	25	TRP	N-CA-C	-6.95	104.93	113.41
62	AO	43	HIS	CB-CG-ND1	6.95	133.13	122.70
38	A1	2378	C	C4'-C3'-C2'	-6.95	95.65	102.60
11	B2	723	G	C1'-O4'-C4'	6.95	116.85	109.90
19	BG	99	LYS	N-CA-C	6.95	120.57	110.42
38	A1	2210	G	P-O5'-C5'	6.95	131.33	120.90
42	Aa	71	ARG	NE-CZ-NH2	-6.95	112.94	119.20
11	B2	36	G	O4'-C1'-N9	6.95	118.92	108.50
46	AD	235	HIS	CA-C-N	6.95	128.23	120.66
46	AD	235	HIS	C-N-CA	6.95	128.23	120.66
39	A3	47	G	C3'-C2'-C1'	6.95	108.25	101.30
41	AA	143	THR	CB-CA-C	6.95	123.86	110.17
11	B2	652	C	O4'-C1'-N1	6.95	118.92	108.50
43	AB	135	GLU	N-CA-C	-6.95	96.98	108.23
11	B2	1268	C	O4'-C1'-C2'	-6.94	100.66	107.60
38	A1	219	G	N9-C1'-C2'	-6.94	101.59	112.00
28	BP	37	MET	N-CA-C	-6.94	103.93	112.88
38	A1	1035	G	O4'-C1'-N9	6.94	118.91	108.50
54	AI	55	LEU	O-C-N	-6.94	113.56	123.07
63	AP	75	GLU	CA-C-N	6.94	131.97	122.19
63	AP	75	GLU	C-N-CA	6.94	131.97	122.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	119	A	C4'-C3'-C2'	-6.94	95.66	102.60
27	BO	49	MET	N-CA-C	6.94	120.28	110.50
36	BX	27	VAL	N-CA-C	-6.94	99.19	108.35
38	A1	671	G	C4'-C3'-O3'	-6.94	102.59	113.00
38	A1	1186	G	P-O3'-C3'	6.94	130.60	120.20
38	A1	2285	G	P-O3'-C3'	6.94	130.61	120.20
45	AC	141	GLN	N-CA-C	6.94	118.49	111.07
57	Aj	35	ALA	CA-C-N	6.94	128.81	120.14
57	Aj	35	ALA	C-N-CA	6.94	128.81	120.14
11	B2	425	C	P-O3'-C3'	-6.93	109.80	120.20
38	A1	111	U	O4'-C1'-N1	6.93	118.90	108.50
44	Ab	85	HIS	ND1-CE1-NE2	6.93	115.33	108.40
4	AQ	126	ARG	CA-C-N	6.93	129.57	120.28
4	AQ	126	ARG	C-N-CA	6.93	129.57	120.28
10	B1	33	C	C5'-C4'-C3'	6.93	126.40	116.00
38	A1	2262	C	C5'-C4'-C3'	-6.93	105.60	116.00
46	AD	156	GLU	N-CA-CB	6.93	120.42	110.16
66	AY	74	LEU	N-CA-C	-6.93	103.96	113.18
62	AO	96	GLN	N-CA-C	-6.93	105.76	114.56
17	BE	57	LYS	CA-C-O	6.93	127.66	119.48
38	A1	703	G	P-O3'-C3'	-6.92	109.81	120.20
38	A1	2998	G	P-O3'-C3'	6.92	130.59	120.20
62	AO	116	SER	CA-C-N	6.92	131.66	120.30
62	AO	116	SER	C-N-CA	6.92	131.66	120.30
45	AC	90	TYR	CA-C-O	6.92	126.48	119.97
45	AC	246	ASP	N-CA-CB	6.92	122.05	110.77
30	BR	58	ASN	OD1-CG-ND2	6.92	129.52	122.60
31	BS	50	ILE	CA-C-N	6.92	129.55	120.28
31	BS	50	ILE	C-N-CA	6.92	129.55	120.28
57	Aj	82	ARG	NE-CZ-NH2	-6.92	112.97	119.20
11	B2	1081	C	C2'-C3'-O3'	6.92	119.88	109.50
43	AB	166	GLY	N-CA-C	-6.92	105.68	115.30
38	A1	1174	U	O4'-C1'-C2'	-6.92	100.68	107.60
38	A1	1893	C	C4'-C3'-O3'	-6.92	102.63	113.00
6	AT	32	ARG	NE-CZ-NH2	-6.91	112.98	119.20
38	A1	324	C	C4'-C3'-C2'	-6.91	95.69	102.60
38	A1	1209	A	P-O3'-C3'	6.91	130.57	120.20
38	A1	2797	C	O4'-C1'-N1	6.91	118.57	108.20
46	AD	118	ILE	CA-C-O	-6.91	113.01	120.47
58	Ak	54	VAL	CB-CA-C	-6.91	101.66	111.40
38	A1	1553	G	O3'-P-O5'	-6.91	93.64	104.00
54	AI	37	VAL	CA-CB-CG1	6.91	122.14	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	AX	100	ILE	CA-C-N	6.90	126.58	119.82
9	AX	100	ILE	C-N-CA	6.90	126.58	119.82
38	A1	914	U	O4'-C1'-N1	6.90	118.85	108.50
38	A1	1111	G	C4'-C3'-O3'	-6.90	102.65	113.00
46	AD	109	GLU	CA-C-N	6.90	129.83	120.44
46	AD	109	GLU	C-N-CA	6.90	129.83	120.44
14	BB	106	VAL	N-CA-CB	6.90	119.38	110.13
38	A1	324	C	P-O3'-C3'	6.90	130.55	120.20
38	A1	922	C	C1'-O4'-C4'	-6.90	103.00	109.90
38	A1	1552	C	O4'-C4'-C3'	-6.90	97.10	104.00
40	AK	58	GLN	O-C-N	-6.90	115.16	122.96
7	AU	8	PRO	CA-C-N	6.90	130.08	120.29
7	AU	8	PRO	C-N-CA	6.90	130.08	120.29
10	B1	60	A	O4'-C1'-N9	6.90	118.85	108.50
11	B2	177	A	O4'-C1'-C2'	-6.90	100.70	107.60
18	BF	159	GLY	CA-C-N	6.90	127.35	120.52
18	BF	159	GLY	C-N-CA	6.90	127.35	120.52
38	A1	202	A	O4'-C1'-N9	6.90	118.85	108.50
52	AH	121	ALA	CB-CA-C	-6.90	99.34	110.79
61	AN	164	ILE	N-CA-C	-6.90	97.68	108.23
17	BE	226	LEU	CA-C-N	6.90	130.21	120.28
17	BE	226	LEU	C-N-CA	6.90	130.21	120.28
5	AS	145	HIS	CE1-NE2-CD2	-6.89	102.11	109.00
11	B2	934	G	C5'-C4'-C3'	6.89	126.34	116.00
11	B2	1483	U	O4'-C4'-C3'	-6.89	99.21	106.10
41	AA	113	LEU	N-CA-CB	6.89	121.19	110.44
44	Ab	40	TRP	N-CA-CB	6.89	119.89	109.34
45	AC	12	LEU	N-CA-C	-6.89	103.27	113.61
47	Ad	60	THR	CA-CB-OG1	6.89	119.94	109.60
7	AU	23	ARG	CA-C-N	6.89	129.52	120.28
7	AU	23	ARG	C-N-CA	6.89	129.52	120.28
23	BK	35	ILE	CA-C-O	6.89	125.82	119.20
33	BU	32	ALA	N-CA-C	6.89	121.59	112.35
54	AI	87	THR	N-CA-C	-6.89	98.99	109.95
66	AY	8	ARG	CA-C-N	6.89	129.38	120.56
66	AY	8	ARG	C-N-CA	6.89	129.38	120.56
11	B2	169	C	O4'-C1'-N1	6.89	118.83	108.50
12	B3	37	ASN	CA-C-O	6.89	127.85	120.55
7	AU	73	ARG	N-CA-C	-6.88	104.91	113.38
38	A1	84	A	P-O3'-C3'	6.88	130.53	120.20
63	AP	106	LEU	CA-C-N	6.88	129.89	120.46
63	AP	106	LEU	C-N-CA	6.88	129.89	120.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	1090	C	C3'-C2'-C1'	6.88	108.18	101.30
38	A1	369	G	P-O5'-C5'	6.88	131.22	120.90
38	A1	1664	G	P-O5'-C5'	6.88	131.22	120.90
53	Ah	10	ILE	CA-C-O	-6.88	113.56	120.85
62	AO	110	PRO	N-CA-C	-6.88	102.31	110.70
66	AY	92	THR	CA-C-N	6.88	130.19	120.42
66	AY	92	THR	C-N-CA	6.88	130.19	120.42
61	AN	50	HIS	CA-C-N	6.88	132.27	122.09
61	AN	50	HIS	C-N-CA	6.88	132.27	122.09
61	AN	83	HIS	CG-CD2-NE2	6.88	114.08	107.20
64	AR	61	ARG	CA-C-O	-6.88	113.56	121.47
1	A7	52	TYR	CB-CG-CD2	-6.88	110.48	120.80
38	A1	483	C	O4'-C1'-N1	6.88	118.82	108.50
45	AC	56	ASP	N-CA-CB	6.88	122.19	110.50
38	A1	2877	A	P-O3'-C3'	6.88	130.51	120.20
10	B1	33	C	O5'-C5'-C4'	-6.87	101.19	111.50
38	A1	694	A	O4'-C1'-N9	6.87	118.51	108.20
32	BT	41	THR	O-C-N	-6.87	113.28	121.39
38	A1	1056	C	C3'-C2'-C1'	6.87	108.17	101.30
38	A1	1057	C	C3'-C2'-C1'	-6.87	94.43	101.30
3	Af	24	PRO	CA-C-N	6.87	129.87	120.46
3	Af	24	PRO	C-N-CA	6.87	129.87	120.46
11	B2	349	A	P-O5'-C5'	-6.87	110.59	120.90
14	BB	37	GLN	CA-C-N	6.87	133.14	122.49
14	BB	37	GLN	C-N-CA	6.87	133.14	122.49
38	A1	558	C	O5'-C5'-C4'	-6.87	101.20	111.50
38	A1	679	U	O4'-C1'-C2'	-6.87	100.73	107.60
38	A1	2875	C	O5'-C5'-C4'	-6.87	101.20	111.50
38	A1	568	A	P-O5'-C5'	6.87	131.20	120.90
40	A5	59	LYS	CA-C-N	6.87	132.58	123.17
40	A5	59	LYS	C-N-CA	6.87	132.58	123.17
13	BA	89	ARG	CA-C-N	6.87	129.81	120.54
13	BA	89	ARG	C-N-CA	6.87	129.81	120.54
29	BQ	71	ASN	O-C-N	-6.86	116.64	121.65
52	AH	107	ALA	CA-C-N	6.86	129.36	120.44
52	AH	107	ALA	C-N-CA	6.86	129.36	120.44
38	A1	198	C	C4'-C3'-C2'	6.86	109.46	102.60
52	AH	4	GLN	N-CA-CB	6.86	122.09	110.49
34	BV	25	HIS	CB-CG-CD2	-6.86	122.28	131.20
50	AF	176	GLU	CA-C-O	6.86	128.55	120.66
58	Ak	10	LYS	N-CA-C	-6.86	102.16	112.04
38	A1	546	C	C5'-C4'-C3'	-6.86	105.71	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A8	42	ILE	N-CA-C	6.86	117.56	110.36
11	B2	618	G	O4'-C1'-N9	6.86	118.78	108.50
38	A1	506	G	O4'-C1'-N9	6.86	118.79	108.50
11	B2	973	U	P-O3'-C3'	6.86	130.48	120.20
38	A1	1096	A	O3'-P-O5'	6.86	114.28	104.00
53	Ah	2	ARG	NH1-CZ-NH2	6.86	128.21	119.30
11	B2	171	U	C4'-C3'-O3'	-6.85	102.72	113.00
11	B2	988	A	O3'-P-O5'	6.85	114.28	104.00
46	AD	65	HIS	CE1-NE2-CD2	-6.85	102.15	109.00
56	AJ	111	GLY	CA-C-N	-6.85	116.74	123.04
56	AJ	111	GLY	C-N-CA	-6.85	116.74	123.04
45	AC	32	LYS	N-CA-C	-6.85	100.27	110.06
38	A1	132	G	O4'-C4'-C3'	-6.85	97.15	104.00
44	Ab	69	LYS	CA-C-N	6.85	129.46	120.28
44	Ab	69	LYS	C-N-CA	6.85	129.46	120.28
45	AC	232	GLY	CA-C-N	6.85	126.81	119.28
45	AC	232	GLY	C-N-CA	6.85	126.81	119.28
55	Ai	72	THR	CA-C-N	6.85	126.81	119.28
55	Ai	72	THR	C-N-CA	6.85	126.81	119.28
60	AM	97	GLN	CA-C-N	6.84	129.45	120.28
60	AM	97	GLN	C-N-CA	6.84	129.45	120.28
33	BU	40	HIS	ND1-CE1-NE2	6.84	115.24	108.40
38	A1	1455	U	P-O5'-C5'	-6.84	110.64	120.90
32	BT	94	ILE	CB-CA-C	6.84	119.39	110.91
11	B2	538	C	P-O5'-C5'	6.84	131.16	120.90
63	AP	27	VAL	CA-C-O	-6.84	114.27	121.93
38	A1	1641	G	O3'-P-O5'	-6.84	93.75	104.00
38	A1	1696	G	C4'-C3'-O3'	-6.84	102.75	113.00
43	AB	109	TYR	CA-C-O	-6.84	114.14	121.45
25	BM	115	VAL	N-CA-C	-6.83	98.19	108.17
38	A1	2401	A	C2'-C3'-O3'	6.83	119.75	109.50
19	BG	55	PHE	CA-CB-CG	-6.83	106.97	113.80
38	A1	676	G	O3'-P-O5'	-6.83	93.75	104.00
11	B2	351	C	O4'-C1'-N1	6.83	118.75	108.50
46	AD	41	HIS	ND1-CE1-NE2	6.83	115.23	108.40
59	AL	122	LEU	N-CA-C	-6.83	98.64	109.23
11	B2	1414	G	P-O5'-C5'	6.83	131.14	120.90
22	BJ	46	ILE	CB-CA-C	6.83	120.90	111.34
58	Ak	77	GLU	N-CA-C	-6.83	105.89	114.56
17	BE	8	ARG	N-CA-C	-6.83	105.10	113.50
33	BU	34	PHE	CA-C-O	-6.83	113.65	120.82
11	B2	105	C	O4'-C1'-C2'	-6.83	98.97	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	A5	63	PRO	CA-C-O	-6.83	113.25	121.03
11	B2	1437	G	C4'-C3'-C2'	-6.82	95.78	102.60
11	B2	1165	U	O4'-C1'-N1	6.82	118.73	108.50
38	A1	1764	G	C2'-C3'-O3'	6.82	119.73	109.50
9	AX	200	LEU	O-C-N	6.82	129.46	122.09
38	A1	51	G	P-O3'-C3'	6.82	130.43	120.20
12	AG	3	LYS	CA-C-O	-6.82	115.23	120.48
14	BB	201	ARG	CA-C-N	6.82	133.97	121.70
14	BB	201	ARG	C-N-CA	6.82	133.97	121.70
38	A1	2892	A	P-O3'-C3'	6.82	130.43	120.20
1	A7	5	ASN	N-CA-CB	6.82	119.89	110.01
10	B1	73	C	P-O3'-C3'	6.82	130.43	120.20
13	BA	72	ASP	CA-C-O	-6.82	113.70	121.40
38	A1	1272	A	P-O5'-C5'	-6.82	110.67	120.90
11	B2	1268	C	C3'-C2'-C1'	6.82	108.11	101.30
12	B3	48	ALA	CA-C-O	-6.81	113.63	121.47
34	BV	78	MET	CA-C-N	6.81	129.41	120.28
34	BV	78	MET	C-N-CA	6.81	129.41	120.28
37	BY	20	LYS	N-CA-C	-6.81	99.86	110.42
45	AC	156	LYS	CA-C-N	6.81	133.97	121.70
45	AC	156	LYS	C-N-CA	6.81	133.97	121.70
67	AZ	51	TYR	CA-C-O	-6.81	113.33	120.55
24	BL	32	VAL	N-CA-C	-6.81	98.68	108.42
32	BT	66	HIS	N-CA-C	-6.81	105.00	113.38
11	B2	1091	C	C4'-C3'-C2'	-6.81	95.79	102.60
38	A1	376	C	O4'-C1'-N1	6.81	118.72	108.50
9	AX	179	SER	N-CA-CB	6.81	120.08	109.94
43	AB	210	HIS	CG-CD2-NE2	6.81	114.01	107.20
44	Ab	71	VAL	N-CA-C	-6.81	104.36	111.58
38	A1	366	G	P-O3'-C3'	-6.81	109.99	120.20
38	A1	1014	U	C2'-C3'-O3'	6.81	119.71	109.50
38	A1	2159	C	P-O5'-C5'	6.80	131.11	120.90
38	A1	2273	U	P-O5'-C5'	6.80	131.11	120.90
38	A1	2269	C	P-O5'-C5'	-6.80	110.69	120.90
3	Af	27	VAL	CA-CB-CG2	-6.80	98.84	110.40
11	B2	205	C	C4'-C3'-C2'	-6.80	95.80	102.60
11	B2	866	A	O5'-C5'-C4'	-6.80	101.30	111.50
31	BS	53	TYR	O-C-N	-6.80	114.91	122.12
38	A1	2168	C	O4'-C1'-C2'	-6.80	100.80	107.60
38	A1	2730	U	C5'-C4'-C3'	-6.80	105.80	116.00
11	B2	762	G	P-O5'-C5'	-6.80	110.70	120.90
13	BA	123	ALA	N-CA-C	-6.80	97.89	109.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	382	G	C4'-C3'-C2'	-6.80	95.80	102.60
38	A1	387	A	P-O5'-C5'	6.80	131.10	120.90
38	A1	1574	A	C2'-C3'-O3'	6.80	123.90	113.70
64	AR	42	HIS	N-CA-C	-6.80	98.54	109.96
38	A1	103	A	C4'-C3'-O3'	-6.80	102.80	113.00
38	A1	444	U	P-O5'-C5'	-6.80	110.70	120.90
38	A1	2416	G	C4'-C3'-C2'	-6.80	95.80	102.60
38	A1	2960	G	O4'-C1'-C2'	-6.80	100.80	107.60
9	AX	110	CYS	CA-C-N	6.80	129.69	120.38
9	AX	110	CYS	C-N-CA	6.80	129.69	120.38
10	B1	46	U	O4'-C4'-C3'	-6.80	97.20	104.00
18	BF	71	THR	CB-CA-C	6.80	121.13	109.51
32	BT	31	ARG	CA-C-N	6.79	129.38	120.28
32	BT	31	ARG	C-N-CA	6.79	129.38	120.28
39	A3	124	A	C2'-C3'-O3'	6.79	119.69	109.50
56	AJ	69	GLY	CA-C-O	-6.79	113.07	121.02
11	B2	277	G	P-O3'-C3'	6.79	130.39	120.20
11	B2	277	G	C2'-C3'-O3'	6.79	123.89	113.70
27	BO	6	HIS	ND1-CE1-NE2	6.79	115.19	108.40
38	A1	2206	G	P-O3'-C3'	-6.79	110.01	120.20
11	B2	439	G	C3'-C2'-O2'	-6.79	104.41	114.60
23	BK	134	TYR	N-CA-CB	6.79	120.17	109.71
38	A1	2320	U	C5'-C4'-C3'	-6.79	105.01	115.20
45	AC	187	ILE	CB-CA-C	6.79	119.82	110.99
50	AF	56	TYR	N-CA-C	6.79	119.50	109.24
10	B1	59	A	C2'-C3'-O3'	6.79	123.89	113.70
5	AS	52	ASP	CA-C-N	6.79	129.93	120.29
5	AS	52	ASP	C-N-CA	6.79	129.93	120.29
27	BO	120	HIS	CA-C-N	6.79	129.27	120.44
27	BO	120	HIS	C-N-CA	6.79	129.27	120.44
54	AI	72	ASP	CA-CB-CG	-6.79	105.81	112.60
63	AP	42	ARG	NE-CZ-NH2	6.79	125.31	119.20
65	AV	42	PHE	CA-C-N	6.79	130.63	120.31
65	AV	42	PHE	C-N-CA	6.79	130.63	120.31
14	BB	58	PHE	N-CA-C	-6.79	105.56	114.31
36	BX	28	LYS	N-CA-CB	6.78	121.71	110.52
38	A1	2314	U	O4'-C1'-C2'	-6.78	100.82	107.60
38	A1	2420	C	C4'-C3'-C2'	6.78	109.38	102.60
45	AC	313	HIS	CB-CG-CD2	-6.78	122.38	131.20
38	A1	1530	A	O4'-C1'-N9	6.78	118.37	108.20
6	AT	9	ARG	CA-C-N	6.78	127.31	119.99
6	AT	9	ARG	C-N-CA	6.78	127.31	119.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	716	G	C4'-C3'-O3'	-6.78	102.83	113.00
60	AM	139	VAL	CA-C-N	6.78	130.05	120.42
60	AM	139	VAL	C-N-CA	6.78	130.05	120.42
3	Af	45	ARG	N-CA-C	-6.78	105.57	114.31
17	BE	5	GLY	O-C-N	-6.78	114.99	121.77
9	AX	415	TYR	CA-CB-CG	-6.78	101.70	113.90
38	A1	1624	U	O4'-C1'-N1	6.78	118.36	108.20
66	AY	29	HIS	CB-CG-ND1	6.78	132.86	122.70
41	AA	189	ILE	CA-C-N	6.77	127.45	120.00
41	AA	189	ILE	C-N-CA	6.77	127.45	120.00
54	AI	86	LYS	N-CA-C	-6.77	102.93	113.02
13	BA	139	LYS	N-CA-CB	6.77	120.22	110.06
24	BL	17	ASP	N-CA-C	-6.77	104.14	112.88
38	A1	85	G	C5'-C4'-O4'	-6.77	99.64	109.80
38	A1	2336	G	P-O5'-C5'	-6.77	110.74	120.90
48	AE	123	ILE	CA-C-N	6.77	126.53	119.76
48	AE	123	ILE	C-N-CA	6.77	126.53	119.76
64	AR	16	LEU	N-CA-CB	6.77	121.09	110.46
11	B2	1160	C	P-O5'-C5'	-6.77	110.74	120.90
41	AA	38	ASP	CA-CB-CG	-6.77	105.83	112.60
45	AC	341	ALA	N-CA-C	6.77	119.56	110.35
11	B2	1235	A	P-O3'-C3'	-6.77	110.05	120.20
38	A1	267	C	O4'-C1'-N1	6.77	118.65	108.50
38	A1	2771	G	O4'-C1'-N9	6.77	118.35	108.20
60	AM	137	HIS	CA-C-O	-6.77	110.89	120.16
67	AZ	94	LEU	CA-C-N	6.77	129.90	120.29
67	AZ	94	LEU	C-N-CA	6.77	129.90	120.29
34	BV	40	LEU	N-CA-C	6.77	118.66	111.28
45	AC	337	ARG	NE-CZ-NH2	6.77	125.29	119.20
59	AL	14	SER	CA-CB-OG	6.77	124.63	111.10
15	BC	77	ASN	CA-CB-CG	-6.76	105.84	112.60
26	BN	20	ARG	NE-CZ-NH2	-6.76	113.11	119.20
38	A1	592	C	O3'-P-O5'	-6.76	93.85	104.00
54	AI	42	ARG	O-C-N	6.76	129.29	122.12
64	AR	23	ARG	N-CA-CB	6.76	120.57	110.29
32	BT	43	GLU	CA-C-N	6.76	130.59	120.31
32	BT	43	GLU	C-N-CA	6.76	130.59	120.31
52	AH	60	VAL	CB-CA-C	-6.76	102.81	111.20
38	A1	1453	G	O4'-C1'-C2'	6.76	114.36	107.60
38	A1	2536	A	C5'-C4'-C3'	-6.76	105.86	116.00
45	AC	52	LEU	N-CA-C	-6.76	98.19	109.07
61	AN	106	ASP	N-CA-CB	6.76	120.27	110.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
63	AP	47	VAL	N-CA-C	-6.76	98.64	108.11
4	AQ	30	ASP	O-C-N	6.76	129.29	122.12
24	BL	5	ARG	N-CA-C	-6.76	98.19	109.07
33	BU	1	MET	CG-SD-CE	-6.76	86.03	100.90
52	AH	71	PRO	CA-C-O	-6.76	110.76	120.56
38	A1	2390	G	C4'-C3'-C2'	-6.76	95.84	102.60
11	B2	485	A	P-O3'-C3'	6.76	130.34	120.20
35	BW	4	PRO	CA-C-N	6.76	129.38	122.96
35	BW	4	PRO	C-N-CA	6.76	129.38	122.96
11	B2	195	C	O3'-P-O5'	6.75	114.13	104.00
11	B2	972	C	O4'-C1'-C2'	-6.75	100.85	107.60
46	AD	196	GLY	CA-C-N	6.75	126.69	120.21
46	AD	196	GLY	C-N-CA	6.75	126.69	120.21
67	AZ	66	THR	CA-CB-OG1	6.75	119.73	109.60
4	AQ	75	HIS	CA-CB-CG	6.75	120.55	113.80
38	A1	1437	C	P-O3'-C3'	-6.75	110.08	120.20
49	Ae	26	VAL	CA-C-O	6.75	129.22	120.78
17	BE	206	PRO	O-C-N	6.75	131.75	122.64
38	A1	1219	C	O4'-C1'-N1	6.75	118.62	108.50
38	A1	1513	G	O4'-C1'-N9	6.75	118.62	108.50
11	B2	7	G	P-O3'-C3'	6.74	130.31	120.20
15	BC	108	HIS	ND1-CE1-NE2	6.74	115.14	108.40
38	A1	1162	C	C5'-C4'-O4'	6.74	119.22	109.10
46	AD	208	VAL	N-CA-C	-6.74	98.77	108.48
50	AF	76	ARG	NE-CZ-NH2	6.74	125.27	119.20
4	AQ	66	ARG	N-CA-CB	6.74	119.84	110.07
11	B2	407	G	P-O5'-C5'	6.74	131.01	120.90
11	B2	1013	G	O4'-C1'-N9	6.74	118.61	108.50
20	BH	59	ALA	N-CA-C	-6.74	104.68	113.17
38	A1	246	A	C1'-C2'-O2'	6.74	118.51	108.40
38	A1	2165	A	P-O3'-C3'	6.74	130.31	120.20
5	AS	49	ARG	CA-C-O	6.74	127.69	120.55
9	AX	137	PRO	N-CA-C	6.74	126.35	112.47
13	BA	48	VAL	CB-CA-C	-6.74	100.66	110.63
14	BB	150	VAL	N-CA-C	-6.74	98.42	108.12
38	A1	2540	A	P-O5'-C5'	-6.74	110.79	120.90
9	AX	355	ALA	CA-C-N	6.74	131.79	123.10
9	AX	355	ALA	C-N-CA	6.74	131.79	123.10
11	B2	976	A	O4'-C1'-N9	6.74	118.60	108.50
35	BW	32	ALA	N-CA-C	-6.74	105.62	114.31
38	A1	2255	C	O3'-P-O5'	-6.74	93.90	104.00
64	AR	50	HIS	ND1-CE1-NE2	6.74	115.14	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	BT	66	HIS	CG-CD2-NE2	6.73	113.93	107.20
38	A1	1843	C	C4'-C3'-C2'	-6.73	95.87	102.60
38	A1	2229	G	P-O3'-C3'	6.73	130.30	120.20
38	A1	2561	G	O3'-P-O5'	6.73	114.09	104.00
41	AA	28	VAL	CB-CA-C	6.73	120.47	110.98
5	AS	143	THR	N-CA-CB	6.73	121.98	110.68
38	A1	2605	G	O3'-P-O5'	-6.73	93.91	104.00
38	A1	2606	C	O4'-C1'-N1	6.73	118.59	108.50
46	AD	24	THR	CA-C-N	6.73	128.25	119.84
46	AD	24	THR	C-N-CA	6.73	128.25	119.84
23	BK	34	GLU	N-CA-C	-6.72	104.20	112.88
66	AY	56	TRP	CB-CG-CD2	-6.72	117.39	126.80
60	AM	81	LYS	CA-C-O	-6.72	113.37	120.23
11	B2	375	G	C4'-C3'-C2'	-6.72	95.88	102.60
38	A1	1519	G	P-O5'-C5'	-6.72	110.82	120.90
38	A1	1641	G	P-O3'-C3'	6.72	130.28	120.20
47	Ad	47	PRO	N-CA-CB	6.72	109.20	103.35
59	AL	47	TRP	N-CA-CB	6.72	122.42	110.80
26	BN	38	LYS	CA-C-N	6.72	129.17	120.44
26	BN	38	LYS	C-N-CA	6.72	129.17	120.44
38	A1	1003	C	C3'-C2'-O2'	6.72	120.78	110.70
11	B2	694	U	O4'-C1'-N1	6.72	118.57	108.50
38	A1	2887	C	P-O5'-C5'	6.72	130.98	120.90
54	AI	23	LEU	N-CA-CB	6.72	120.69	110.28
11	B2	396	C	O4'-C1'-N1	6.71	118.57	108.50
26	BN	139	LYS	O-C-N	6.71	130.58	123.06
45	AC	46	ALA	N-CA-C	-6.71	103.21	111.40
56	AJ	109	PRO	N-CA-C	-6.71	105.47	113.86
57	Aj	13	PHE	O-C-N	6.71	128.99	122.07
11	B2	220	G	C5'-C4'-C3'	-6.71	105.93	116.00
18	BF	114	ILE	O-C-N	-6.71	115.36	121.87
30	BR	59	LYS	CA-C-O	6.71	127.45	119.60
56	AJ	120	GLY	O-C-N	-6.71	115.06	121.77
66	AY	60	ASN	OD1-CG-ND2	-6.71	115.89	122.60
12	B3	103	GLU	CB-CG-CD	-6.71	101.19	112.60
26	BN	88	CYS	N-CA-C	-6.71	98.67	109.40
38	A1	2205	A	C5'-C4'-C3'	-6.71	105.94	116.00
48	AE	50	GLN	CA-C-N	6.71	129.81	120.29
48	AE	50	GLN	C-N-CA	6.71	129.81	120.29
10	B1	6	G	C4'-C3'-C2'	-6.71	95.89	102.60
11	B2	882	C	C4'-C3'-O3'	-6.71	102.94	113.00
34	BV	54	GLN	OE1-CD-NE2	6.71	129.31	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	1045	A	O4'-C1'-N9	6.70	118.56	108.50
38	A1	604	A	O4'-C4'-C3'	-6.70	97.30	104.00
38	A1	2096	G	O4'-C1'-N9	6.70	118.56	108.50
38	A1	2426	U	P-O5'-C5'	6.70	130.96	120.90
3	Af	39	PRO	N-CA-CB	6.70	106.67	102.92
5	AS	76	LYS	CA-C-N	6.70	131.16	121.44
5	AS	76	LYS	C-N-CA	6.70	131.16	121.44
2	A8	34	ILE	CA-C-O	6.70	128.46	121.29
25	BM	127	ARG	N-CA-C	6.70	118.09	109.72
38	A1	301	G	C2'-C3'-O3'	6.70	119.55	109.50
48	AE	9	GLU	CA-C-O	-6.70	113.45	120.55
1	A7	13	GLU	N-CA-C	-6.70	103.59	111.03
9	AX	126	PHE	CA-CB-CG	6.70	120.50	113.80
11	B2	83	C	C3'-C2'-C1'	6.70	108.00	101.30
38	A1	2137	A	P-O3'-C3'	-6.70	110.15	120.20
38	A1	2415	C	C4'-C3'-C2'	-6.70	95.90	102.60
39	A3	56	C	P-O5'-C5'	6.70	130.94	120.90
26	BN	90	GLY	CA-C-N	6.70	131.54	122.84
26	BN	90	GLY	C-N-CA	6.70	131.54	122.84
38	A1	414	G	O4'-C1'-C2'	-6.70	99.11	105.80
38	A1	2413	G	O4'-C1'-C2'	-6.69	100.91	107.60
39	A3	96	C	P-O5'-C5'	6.69	130.94	120.90
9	AX	309	VAL	N-CA-C	-6.69	105.10	112.80
30	BR	92	ARG	NE-CZ-NH2	6.69	125.22	119.20
38	A1	1263	C	O4'-C1'-N1	6.69	118.54	108.50
38	A1	1967	G	P-O3'-C3'	6.69	130.24	120.20
12	AG	34	LYS	CA-C-O	-6.69	113.47	120.70
38	A1	1576	C	C4'-C3'-C2'	-6.69	95.91	102.60
38	A1	2238	G	C4'-C3'-C2'	-6.69	95.91	102.60
40	A5	62	ILE	CA-C-N	6.69	126.92	119.90
40	A5	62	ILE	C-N-CA	6.69	126.92	119.90
40	AK	54	GLU	O-C-N	-6.69	114.96	121.38
38	A1	2781	A	O4'-C1'-N9	6.69	118.53	108.50
46	AD	241	VAL	CB-CA-C	6.69	119.21	110.12
11	B2	606	U	O4'-C4'-C3'	-6.69	99.41	106.10
34	BV	33	ARG	N-CA-CB	6.69	119.95	110.12
38	A1	859	G	O4'-C1'-N9	6.69	118.53	108.50
38	A1	1344	C	C4'-C3'-O3'	-6.69	102.97	113.00
7	AU	116	ILE	N-CA-CB	6.68	118.37	110.55
9	AX	83	ILE	CA-C-N	6.68	128.98	120.56
9	AX	83	ILE	C-N-CA	6.68	128.98	120.56
59	AL	44	LYS	N-CA-CB	6.68	120.28	110.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	86	C	O4'-C1'-C2'	-6.68	100.92	107.60
11	B2	105	C	C4'-C3'-O3'	6.68	119.42	109.40
19	BG	38	ILE	CA-C-N	6.68	126.44	119.76
19	BG	38	ILE	C-N-CA	6.68	126.44	119.76
38	A1	404	G	C4'-C3'-C2'	-6.68	95.92	102.60
45	AC	311	PHE	CA-C-O	-6.68	114.58	120.19
48	AE	149	ARG	CA-C-N	6.68	128.98	120.56
48	AE	149	ARG	C-N-CA	6.68	128.98	120.56
12	AG	61	GLU	O-C-N	6.68	129.20	122.12
56	AJ	64	ALA	N-CA-C	-6.68	98.84	108.60
11	B2	918	A	O4'-C4'-C3'	6.68	110.68	104.00
34	BV	28	GLU	CA-C-O	-6.68	114.03	120.64
38	A1	202	A	P-O3'-C3'	-6.68	110.18	120.20
38	A1	543	G	C4'-C3'-C2'	-6.68	95.92	102.60
29	BQ	71	ASN	N-CA-C	-6.68	100.50	108.25
44	Ab	61	PRO	N-CA-CB	6.68	109.20	103.19
46	AD	179	VAL	O-C-N	-6.68	115.55	122.63
9	AX	275	ALA	N-CA-CB	6.68	119.97	109.82
13	BA	144	ILE	N-CA-C	6.68	117.47	110.72
38	A1	462	A	C4'-C3'-C2'	-6.68	95.92	102.60
54	AI	90	GLY	N-CA-C	6.68	120.74	112.73
64	AR	54	PRO	CA-C-N	6.68	129.67	120.39
64	AR	54	PRO	C-N-CA	6.68	129.67	120.39
17	BE	174	LEU	N-CA-C	-6.67	98.58	108.79
20	BH	8	ARG	CA-C-N	6.67	129.22	120.28
20	BH	8	ARG	C-N-CA	6.67	129.22	120.28
43	AB	97	LEU	O-C-N	-6.67	116.78	121.65
10	B1	9	A	C2'-C3'-O3'	6.67	119.51	109.50
11	B2	269	A	P-O5'-C5'	-6.67	110.89	120.90
11	B2	31	U	O4'-C4'-C3'	-6.67	97.33	104.00
45	AC	267	THR	N-CA-C	-6.67	104.76	113.17
59	AL	127	ARG	NE-CZ-NH2	-6.67	113.20	119.20
4	AQ	31	ASP	CA-CB-CG	-6.67	105.93	112.60
15	BC	13	ARG	CA-C-N	6.67	129.22	120.28
15	BC	13	ARG	C-N-CA	6.67	129.22	120.28
41	AA	189	ILE	CA-C-O	-6.67	113.43	120.57
50	AF	80	LYS	N-CA-C	-6.67	104.89	113.16
34	BV	34	LYS	CA-C-O	-6.67	113.48	120.55
38	A1	1241	C	O4'-C1'-C2'	-6.67	100.93	107.60
46	AD	44	GLN	CA-C-N	6.67	128.17	119.84
46	AD	44	GLN	C-N-CA	6.67	128.17	119.84
38	A1	2519	C	P-O5'-C5'	6.66	130.90	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	AO	12	ARG	N-CA-C	-6.66	104.10	111.36
20	BH	23	THR	N-CA-C	-6.66	105.19	113.38
58	Ak	121	ASP	CA-CB-CG	-6.66	105.94	112.60
36	BX	23	ASP	CA-CB-CG	6.66	119.26	112.60
38	A1	1860	A	C1'-C2'-O2'	6.66	118.39	108.40
38	A1	2561	G	C1'-O4'-C4'	6.66	116.56	109.90
38	A1	2501	G	P-O3'-C3'	6.66	130.19	120.20
13	BA	179	PRO	N-CA-CB	6.66	109.14	103.35
11	B2	1124	G	O5'-C5'-C4'	-6.66	101.52	111.50
25	BM	93	THR	CA-C-O	-6.66	113.44	120.23
38	A1	1074	G	P-O3'-C3'	-6.66	110.22	120.20
56	AJ	35	ALA	N-CA-C	-6.66	97.88	108.73
11	B2	1006	C	C4'-C3'-C2'	-6.65	95.95	102.60
15	BC	4	GLU	N-CA-C	-6.65	104.18	112.90
4	AQ	116	ASP	CA-C-N	6.65	130.09	120.38
4	AQ	116	ASP	C-N-CA	6.65	130.09	120.38
11	B2	883	G	C4'-C3'-C2'	-6.65	95.95	102.60
29	BQ	70	ASP	N-CA-CB	6.65	121.73	110.49
38	A1	740	C	C2'-C3'-O3'	6.65	123.68	113.70
11	B2	194	C	P-O5'-C5'	-6.65	110.93	120.90
17	BE	237	LYS	CA-C-N	6.65	126.61	120.03
17	BE	237	LYS	C-N-CA	6.65	126.61	120.03
38	A1	238	C	C5'-C4'-C3'	-6.65	105.22	115.20
38	A1	1407	A	P-O5'-C5'	6.65	130.88	120.90
62	AO	79	ASN	CA-CB-CG	6.65	119.25	112.60
67	AZ	37	VAL	N-CA-CB	-6.65	104.11	112.15
5	AS	13	ASP	O-C-N	-6.64	114.46	120.71
9	AX	296	ILE	CA-C-N	6.64	129.42	120.65
9	AX	296	ILE	C-N-CA	6.64	129.42	120.65
9	AX	365	ALA	CA-C-N	6.64	128.93	120.56
9	AX	365	ALA	C-N-CA	6.64	128.93	120.56
11	B2	1252	C	O4'-C1'-N1	6.64	118.47	108.50
38	A1	3004	C	O4'-C1'-N1	6.64	118.47	108.50
12	AG	55	GLU	O-C-N	6.64	130.16	122.25
38	A1	672	C	C4'-C3'-C2'	-6.64	95.96	102.60
38	A1	1345	G	O4'-C1'-C2'	-6.64	100.96	107.60
4	AQ	144	GLU	O-C-N	6.64	128.91	122.07
60	AM	46	ASP	CA-C-O	-6.64	113.51	120.55
38	A1	1295	G	P-O5'-C5'	-6.64	110.94	120.90
32	BT	73	LEU	CA-C-N	6.64	126.89	119.32
32	BT	73	LEU	C-N-CA	6.64	126.89	119.32
38	A1	2997	G	P-O3'-C3'	6.64	130.16	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AN	126	LEU	N-CA-C	-6.64	98.08	108.90
38	A1	830	G	C3'-C2'-O2'	6.64	120.66	110.70
38	A1	1938	G	C5'-C4'-O4'	6.64	119.06	109.10
11	B2	1429	G	C4'-C3'-C2'	-6.63	95.97	102.60
17	BE	116	SER	CA-C-N	6.63	129.83	120.28
17	BE	116	SER	C-N-CA	6.63	129.83	120.28
38	A1	111	U	P-O3'-C3'	-6.63	110.25	120.20
38	A1	1082	A	C2'-C3'-O3'	6.63	119.45	109.50
38	A1	1768	C	C1'-C2'-O2'	6.63	118.35	108.40
38	A1	1811	G	O4'-C1'-N9	6.63	118.45	108.50
38	A1	2338	A	C4'-C3'-O3'	6.63	119.35	109.40
41	AA	120	TYR	CB-CG-CD2	6.63	130.75	120.80
62	AO	171	TYR	CA-CB-CG	6.63	125.84	113.90
29	BQ	110	GLU	CA-C-N	6.63	129.71	120.29
29	BQ	110	GLU	C-N-CA	6.63	129.71	120.29
38	A1	132	G	O4'-C1'-N9	6.63	118.45	108.50
61	AN	18	THR	CA-C-N	6.63	134.21	121.54
61	AN	18	THR	C-N-CA	6.63	134.21	121.54
25	BM	33	ILE	CA-C-N	6.63	129.06	120.44
25	BM	33	ILE	C-N-CA	6.63	129.06	120.44
33	BU	47	GLN	CA-C-N	6.63	130.39	120.31
33	BU	47	GLN	C-N-CA	6.63	130.39	120.31
38	A1	2672	A	P-O5'-C5'	-6.63	110.95	120.90
43	AB	75	GLU	N-CA-CB	6.63	119.84	109.83
61	AN	59	GLN	OE1-CD-NE2	6.63	129.23	122.60
13	BA	160	GLU	CA-C-N	6.63	129.46	120.44
13	BA	160	GLU	C-N-CA	6.63	129.46	120.44
32	BT	18	ASN	CA-CB-CG	6.63	119.23	112.60
15	BC	83	GLU	O-C-N	-6.63	115.48	123.10
38	A1	1776	G	P-O5'-C5'	6.63	130.84	120.90
4	AQ	127	ALA	CA-C-N	6.63	129.82	120.28
4	AQ	127	ALA	C-N-CA	6.63	129.82	120.28
34	BV	86	ILE	N-CA-C	-6.62	104.03	110.72
38	A1	2280	G	C1'-O4'-C4'	6.62	116.53	109.90
39	A3	43	C	P-O5'-C5'	6.62	130.84	120.90
20	BH	33	LEU	CA-C-O	6.62	127.30	119.48
38	A1	2506	G	O3'-P-O5'	-6.62	94.06	104.00
46	AD	223	ASP	CA-C-O	6.62	126.43	119.14
62	AO	43	HIS	ND1-CG-CD2	-6.62	99.48	106.10
25	BM	51	ASP	N-CA-C	6.62	120.96	113.01
46	AD	125	ASP	O-C-N	6.62	129.14	122.12
52	AH	62	LYS	N-CA-CB	6.62	122.13	112.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	B1	25	G	C5'-C4'-C3'	6.62	125.93	116.00
14	BB	84	GLY	O-C-N	-6.62	115.26	122.54
41	AA	11	ALA	N-CA-CB	6.62	119.90	110.44
56	AJ	52	ARG	CA-C-O	6.62	127.72	119.98
58	AK	154	VAL	O-C-N	6.62	130.16	122.81
9	AX	291	ARG	NE-CZ-NH1	-6.62	114.88	121.50
11	B2	236	C	O4'-C1'-C2'	-6.62	100.98	107.60
45	AC	8	ARG	N-CA-CB	6.62	120.51	109.92
11	B2	1139	A	C4'-C3'-O3'	-6.61	103.08	113.00
14	BB	106	VAL	N-CA-C	-6.61	100.44	109.37
32	BT	78	GLY	N-CA-C	-6.61	106.11	115.43
38	A1	82	C	O3'-P-O5'	6.61	113.92	104.00
38	A1	784	C	O4'-C1'-N1	6.61	118.42	108.50
38	A1	2012	G	O4'-C1'-N9	6.61	118.42	108.50
39	A3	33	U	O4'-C1'-N1	6.61	118.42	108.50
11	B2	821	G	O4'-C4'-C3'	-6.61	97.39	104.00
8	AW	23	LEU	CA-C-N	6.61	129.14	120.28
8	AW	23	LEU	C-N-CA	6.61	129.14	120.28
11	B2	1017	U	P-O3'-C3'	6.61	130.12	120.20
32	BT	63	ILE	CB-CA-C	6.61	118.37	111.23
9	AX	283	ILE	N-CA-C	-6.61	107.43	113.71
18	BF	172	LYS	O-C-N	6.61	128.96	122.09
22	BJ	102	GLU	N-CA-C	-6.61	99.15	109.72
38	A1	365	G	P-O3'-C3'	-6.61	110.29	120.20
41	AA	154	ARG	NE-CZ-NH1	-6.61	114.89	121.50
58	AK	187	VAL	N-CA-CB	-6.61	101.21	110.26
38	A1	953	G	C1'-O4'-C4'	6.61	116.51	109.90
11	B2	584	C	O4'-C1'-N1	6.60	118.41	108.50
11	B2	199	A	C2'-C3'-O3'	6.60	119.40	109.50
38	A1	961	C	O3'-P-O5'	-6.60	94.10	104.00
38	A1	1166	A	O4'-C4'-C3'	-6.60	97.40	104.00
38	A1	2991	C	O4'-C1'-N1	6.60	118.40	108.50
61	AN	120	ILE	N-CA-C	-6.60	107.06	113.53
11	B2	131	G	C1'-O4'-C4'	-6.60	103.30	109.90
11	B2	399	A	P-O5'-C5'	-6.60	111.00	120.90
38	A1	1552	C	C5'-C4'-C3'	6.60	125.90	116.00
38	A1	580	G	O4'-C4'-C3'	-6.60	97.40	104.00
38	A1	886	G	C3'-C2'-C1'	-6.60	94.70	101.30
39	A3	84	U	O4'-C1'-N1	6.60	118.40	108.50
41	AA	131	MET	CA-C-N	6.60	127.11	119.99
41	AA	131	MET	C-N-CA	6.60	127.11	119.99
44	Ab	86	ASN	N-CA-CB	6.60	121.62	111.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	727	A	C3'-C2'-C1'	6.60	107.90	101.30
38	A1	1224	A	C3'-C2'-C1'	6.60	107.90	101.30
2	A8	28	VAL	O-C-N	-6.59	115.72	123.04
9	AX	217	ILE	N-CA-CB	6.59	117.81	110.62
11	B2	471	G	C2'-C3'-O3'	6.59	119.39	109.50
27	BO	21	LEU	CA-C-N	6.59	129.01	120.44
27	BO	21	LEU	C-N-CA	6.59	129.01	120.44
52	AH	121	ALA	CA-C-N	6.59	129.01	120.44
52	AH	121	ALA	C-N-CA	6.59	129.01	120.44
24	BL	6	ILE	N-CA-C	-6.59	98.24	107.80
11	B2	656	U	P-O3'-C3'	6.59	130.09	120.20
38	A1	22	C	O4'-C4'-C3'	-6.59	97.41	104.00
38	A1	1132	U	O3'-P-O5'	-6.59	94.11	104.00
38	A1	2280	G	O4'-C4'-C3'	-6.59	97.41	104.00
9	AX	89	VAL	N-CA-C	-6.59	102.85	111.09
11	B2	1158	G	O4'-C1'-N9	6.59	118.38	108.50
16	BD	116	ARG	NE-CZ-NH2	6.59	125.13	119.20
44	Ab	79	TYR	CA-CB-CG	-6.59	102.04	113.90
63	AP	57	ASN	CA-C-N	6.59	130.07	120.71
63	AP	57	ASN	C-N-CA	6.59	130.07	120.71
11	B2	1243	C	C4'-C3'-C2'	-6.59	96.01	102.60
11	B2	1340	U	C3'-C2'-O2'	6.59	120.58	110.70
16	BD	41	LEU	CA-C-N	6.59	129.77	120.28
16	BD	41	LEU	C-N-CA	6.59	129.77	120.28
12	AG	90	ALA	CA-C-N	6.59	134.50	121.06
12	AG	90	ALA	C-N-CA	6.59	134.50	121.06
38	A1	1684	C	C3'-C2'-C1'	6.59	107.89	101.30
38	A1	2287	C	C1'-O4'-C4'	-6.59	103.31	109.90
50	AF	57	LYS	N-CA-C	-6.59	99.02	109.23
60	AM	137	HIS	CG-CD2-NE2	6.59	113.79	107.20
38	A1	1326	U	C4'-C3'-C2'	6.58	109.19	102.60
24	BL	59	ALA	N-CA-CB	6.58	122.66	111.66
32	BT	67	CYS	CA-C-N	6.58	132.51	122.37
32	BT	67	CYS	C-N-CA	6.58	132.51	122.37
38	A1	188	A	O4'-C4'-C3'	-6.58	99.52	106.10
60	AM	3	MET	N-CA-C	6.58	118.54	111.36
64	AR	50	HIS	CE1-NE2-CD2	-6.58	102.42	109.00
11	B2	1303	C	O4'-C1'-N1	6.58	118.37	108.50
15	BC	45	ILE	N-CA-CB	6.58	120.19	111.90
11	B2	895	C	P-O5'-C5'	-6.58	111.03	120.90
38	A1	2803	U	O4'-C1'-N1	6.58	118.37	108.50
46	AD	69	ARG	N-CA-C	-6.58	105.22	112.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AN	162	TYR	N-CA-C	-6.58	105.82	114.31
62	AO	43	HIS	CG-CD2-NE2	6.58	113.78	107.20
9	AX	47	THR	CA-C-N	6.58	134.10	121.54
9	AX	47	THR	C-N-CA	6.58	134.10	121.54
41	AA	197	SER	CA-C-N	6.58	129.98	120.38
41	AA	197	SER	C-N-CA	6.58	129.98	120.38
38	A1	1554	G	C5'-C4'-C3'	-6.58	106.14	116.00
38	A1	2326	C	C4'-C3'-C2'	-6.58	96.02	102.60
38	A1	94	A	C4'-C3'-O3'	-6.57	103.14	113.00
64	AR	59	HIS	CG-CD2-NE2	6.57	113.77	107.20
42	Aa	67	PRO	N-CA-C	6.57	121.39	111.14
6	AT	46	ILE	N-CA-CB	6.57	118.98	110.57
63	AP	82	ALA	CA-C-N	6.57	129.74	120.28
63	AP	82	ALA	C-N-CA	6.57	129.74	120.28
20	BH	147	HIS	CE1-NE2-CD2	-6.57	102.43	109.00
27	BO	3	ASN	OD1-CG-ND2	6.57	129.17	122.60
38	A1	2402	A	C1'-O4'-C4'	6.57	116.27	109.70
59	AL	86	ASP	CA-C-N	6.57	129.74	120.28
59	AL	86	ASP	C-N-CA	6.57	129.74	120.28
11	B2	198	A	C5'-C4'-C3'	-6.57	106.15	116.00
11	B2	1091	C	P-O5'-C5'	-6.57	111.05	120.90
63	AP	90	ARG	CA-C-O	-6.57	113.59	120.55
66	AY	94	GLU	CB-CA-C	-6.57	99.89	110.79
38	A1	2196	C	C4'-C3'-C2'	-6.56	96.04	102.60
38	A1	2313	G	O4'-C1'-C2'	-6.56	101.04	107.60
25	BM	100	ALA	N-CA-C	6.56	118.51	111.36
38	A1	449	G	O4'-C4'-C3'	-6.56	97.44	104.00
40	AK	76	GLU	N-CA-CB	6.56	119.77	110.12
67	AZ	45	ILE	N-CA-C	-6.56	104.09	110.72
16	BD	20	LYS	CA-C-N	6.56	129.61	120.29
16	BD	20	LYS	C-N-CA	6.56	129.61	120.29
20	BH	16	LYS	N-CA-CB	6.56	122.62	111.66
9	AX	209	TYR	N-CA-C	-6.56	105.85	114.31
16	BD	109	VAL	N-CA-C	6.56	117.34	110.72
38	A1	307	C	P-O5'-C5'	6.56	130.74	120.90
38	A1	3005	C	C5'-C4'-C3'	-6.56	106.16	116.00
38	A1	1649	G	O4'-C1'-N9	6.56	118.33	108.50
10	B1	46	U	P-O5'-C5'	6.55	130.73	120.90
38	A1	702	G	O4'-C1'-N9	6.55	118.33	108.50
46	AD	231	ALA	O-C-N	6.55	128.85	121.32
11	B2	1002	G	O4'-C1'-N9	6.55	118.32	108.50
19	BG	70	ASP	CA-CB-CG	-6.55	106.05	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	175	G	O4'-C1'-N9	6.55	118.32	108.50
46	AD	176	LYS	N-CA-C	-6.55	98.59	109.46
58	Ak	101	LYS	CA-C-N	6.55	129.06	120.28
58	Ak	101	LYS	C-N-CA	6.55	129.06	120.28
11	B2	640	U	C2'-C3'-O3'	6.55	119.32	109.50
11	B2	377	A	O4'-C4'-C3'	-6.55	97.45	104.00
38	A1	1170	G	P-O3'-C3'	-6.55	110.38	120.20
11	B2	1258	C	O3'-P-O5'	-6.54	94.18	104.00
20	BH	194	LYS	N-CA-CB	6.54	121.55	110.49
38	A1	1069	A	O4'-C1'-C2'	6.54	112.34	105.80
63	AP	13	ARG	CA-C-N	6.54	128.95	120.44
63	AP	13	ARG	C-N-CA	6.54	128.95	120.44
22	BJ	113	ARG	N-CA-C	-6.54	101.54	109.72
38	A1	1782	C	P-O3'-C3'	6.54	130.01	120.20
39	A3	39	C	P-O5'-C5'	-6.54	111.09	120.90
4	AQ	121	ARG	CA-C-N	6.54	129.04	120.28
4	AQ	121	ARG	C-N-CA	6.54	129.04	120.28
9	AX	182	ILE	CA-C-N	6.54	129.70	120.28
9	AX	182	ILE	C-N-CA	6.54	129.70	120.28
38	A1	406	G	O3'-P-O5'	6.54	113.81	104.00
38	A1	2613	C	P-O5'-C5'	6.54	130.71	120.90
66	AY	43	TYR	N-CA-C	-6.54	104.23	111.36
43	AB	23	ARG	CA-C-O	6.54	127.30	119.59
31	BS	31	ASN	N-CA-C	-6.54	103.83	112.72
38	A1	1181	C	C4'-C3'-O3'	-6.54	103.20	113.00
38	A1	1445	G	O4'-C4'-C3'	-6.54	97.46	104.00
60	AM	98	TRP	CA-C-N	6.54	129.41	120.46
60	AM	98	TRP	C-N-CA	6.54	129.41	120.46
38	A1	1508	A	O4'-C1'-N9	6.53	118.30	108.50
62	AO	20	ASN	N-CA-C	-6.53	96.39	108.02
11	B2	1461	U	C4'-C3'-C2'	-6.53	96.07	102.60
38	A1	2408	G	N9-C1'-C2'	-6.53	102.20	112.00
38	A1	2745	G	P-O3'-C3'	-6.53	110.40	120.20
11	B2	66	G	C4'-C3'-C2'	-6.53	96.07	102.60
11	B2	1049	U	O4'-C1'-N1	6.53	118.30	108.50
16	BD	83	LEU	N-CA-C	-6.53	96.94	108.69
38	A1	524	C	C5'-C4'-C3'	6.53	125.80	116.00
38	A1	979	G	O3'-P-O5'	6.53	113.80	104.00
38	A1	2901	C	O4'-C1'-N1	6.53	118.30	108.50
6	AT	28	PHE	N-CA-CB	6.53	123.05	111.69
11	B2	1141	G	O4'-C1'-N9	6.53	118.29	108.50
9	AX	368	HIS	CG-CD2-NE2	6.53	113.73	107.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	505	U	O4'-C1'-N1	6.53	118.29	108.50
11	B2	667	G	C4'-C3'-C2'	-6.53	96.07	102.60
38	A1	406	G	C4'-C3'-C2'	-6.53	96.07	102.60
38	A1	2562	G	C4'-C3'-O3'	6.53	119.19	109.40
38	A1	2885	C	O4'-C1'-N1	6.53	118.29	108.50
41	AA	44	ASN	N-CA-C	-6.53	105.33	113.55
45	AC	198	TYR	CA-C-N	6.53	129.40	120.46
45	AC	198	TYR	C-N-CA	6.53	129.40	120.46
46	AD	214	HIS	CA-CB-CG	6.53	120.33	113.80
47	Ad	16	ARG	CA-C-O	-6.53	113.96	121.47
59	AL	125	LYS	N-CA-CB	6.53	120.82	110.57
60	AM	10	ALA	N-CA-C	6.53	118.47	111.36
5	AS	12	PHE	CA-C-N	6.53	128.25	120.09
5	AS	12	PHE	C-N-CA	6.53	128.25	120.09
5	AS	89	LYS	CA-C-N	6.53	128.92	120.44
5	AS	89	LYS	C-N-CA	6.53	128.92	120.44
38	A1	548	U	O4'-C1'-N1	6.53	118.29	108.50
50	AF	131	LYS	N-CA-C	-6.53	98.76	109.40
11	B2	248	U	P-O3'-C3'	6.52	129.99	120.20
14	BB	123	ASP	N-CA-CB	6.52	120.51	110.46
13	BA	92	ILE	N-CA-CB	6.52	118.18	110.55
38	A1	3019	C	C4'-C3'-O3'	-6.52	103.22	113.00
9	AX	15	GLU	O-C-N	6.52	130.28	122.85
13	BA	12	LYS	CA-C-O	-6.52	113.64	120.55
20	BH	95	SER	CA-C-N	6.52	133.99	121.54
20	BH	95	SER	C-N-CA	6.52	133.99	121.54
28	BP	55	TYR	CA-C-O	-6.52	114.45	121.56
40	AK	63	PRO	N-CA-CB	6.52	110.23	103.38
58	Ak	40	GLN	CA-C-N	6.52	129.55	120.29
58	Ak	40	GLN	C-N-CA	6.52	129.55	120.29
9	AX	379	VAL	CA-C-N	6.52	129.85	120.79
9	AX	379	VAL	C-N-CA	6.52	129.85	120.79
14	BB	90	ARG	N-CA-C	-6.52	99.43	109.14
58	Ak	167	GLU	CB-CG-CD	-6.52	101.52	112.60
11	B2	79	G	C4'-C3'-C2'	-6.52	96.08	102.60
38	A1	996	U	O4'-C1'-C2'	-6.52	101.08	107.60
26	BN	74	ARG	N-CA-C	-6.51	98.62	109.24
38	A1	2852	U	O4'-C1'-N1	6.51	118.27	108.50
51	Ag	45	GLU	CB-CA-C	6.51	123.00	110.17
62	AO	86	LEU	CA-C-N	6.51	128.55	120.34
62	AO	86	LEU	C-N-CA	6.51	128.55	120.34
9	AX	85	MET	CA-C-N	6.51	129.66	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	AX	85	MET	C-N-CA	6.51	129.66	120.28
38	A1	1256	G	O4'-C1'-N9	6.51	118.27	108.50
11	B2	1483	U	C4'-C3'-C2'	6.51	109.11	102.60
15	BC	62	ILE	N-CA-CB	6.51	120.35	110.58
11	B2	166	A	P-O5'-C5'	6.51	130.66	120.90
18	BF	105	GLU	CA-C-N	6.51	128.84	120.70
18	BF	105	GLU	C-N-CA	6.51	128.84	120.70
31	BS	32	LYS	CA-C-O	6.51	127.23	118.38
38	A1	1104	A	C1'-O4'-C4'	6.51	116.41	109.90
52	AH	2	PRO	CA-N-CD	-6.51	102.89	112.00
6	AT	76	ALA	N-CA-CB	6.51	119.69	110.12
18	BF	199	LYS	CA-C-N	6.51	128.90	120.44
18	BF	199	LYS	C-N-CA	6.51	128.90	120.44
23	BK	42	ARG	CA-C-N	6.51	130.20	120.31
23	BK	42	ARG	C-N-CA	6.51	130.20	120.31
32	BT	14	GLU	CA-C-O	-6.51	113.52	120.42
38	A1	639	C	C3'-C2'-C1'	6.51	107.81	101.30
11	B2	1011	C	O4'-C1'-N1	6.50	118.26	108.50
19	BG	82	ARG	NE-CZ-NH2	-6.50	113.35	119.20
31	BS	46	ILE	N-CA-CB	6.50	119.38	110.54
38	A1	255	G	C4'-C3'-C2'	-6.50	96.10	102.60
58	AK	27	LEU	O-C-N	6.50	130.62	123.27
10	B1	77	A	C4'-C3'-O3'	-6.50	103.25	113.00
11	B2	13	C	C5'-C4'-C3'	6.50	125.75	116.00
11	B2	263	C	C4'-C3'-O3'	-6.50	103.25	113.00
21	BI	17	SER	CA-C-N	6.50	128.99	120.28
21	BI	17	SER	C-N-CA	6.50	128.99	120.28
28	BP	19	ARG	O-C-N	6.50	130.26	122.85
29	BQ	156	LEU	CA-C-N	6.50	128.75	120.56
29	BQ	156	LEU	C-N-CA	6.50	128.75	120.56
38	A1	639	C	C4'-C3'-C2'	-6.50	96.10	102.60
46	AD	49	ASP	CA-C-O	-6.50	113.30	119.80
12	AG	42	ALA	N-CA-CB	6.50	119.67	110.12
11	B2	217	C	O4'-C1'-C2'	-6.50	101.10	107.60
11	B2	841	C	P-O5'-C5'	-6.50	111.15	120.90
11	B2	1404	C	O5'-C5'-C4'	-6.50	101.75	111.50
15	BC	67	ARG	CA-C-O	-6.50	113.53	120.42
17	BE	117	GLU	CA-C-N	6.50	128.89	120.44
17	BE	117	GLU	C-N-CA	6.50	128.89	120.44
25	BM	50	ALA	N-CA-C	-6.50	96.96	110.80
61	AN	148	GLY	CA-C-N	6.50	129.52	120.29
61	AN	148	GLY	C-N-CA	6.50	129.52	120.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	983	G	O4'-C4'-C3'	-6.50	97.50	104.00
14	BB	6	LEU	CA-C-N	6.50	133.40	121.70
14	BB	6	LEU	C-N-CA	6.50	133.40	121.70
38	A1	1165	C	P-O3'-C3'	6.50	129.94	120.20
44	Ab	104	HIS	CB-CG-CD2	-6.50	122.75	131.20
46	AD	119	ALA	CA-C-N	6.50	129.63	120.28
46	AD	119	ALA	C-N-CA	6.50	129.63	120.28
58	Ak	163	LEU	CA-C-N	6.50	133.91	122.67
58	Ak	163	LEU	C-N-CA	6.50	133.91	122.67
11	B2	1156	A	C2'-C3'-O3'	6.50	119.24	109.50
38	A1	123	A	P-O5'-C5'	6.50	130.64	120.90
38	A1	2562	G	O4'-C1'-C2'	-6.50	99.31	105.80
57	Aj	23	GLU	CA-C-O	-6.50	114.47	121.36
9	AX	160	ILE	N-CA-C	-6.49	104.00	110.30
10	B1	19	G	C4'-C3'-C2'	6.49	109.09	102.60
58	Ak	64	ILE	N-CA-CB	6.49	119.37	110.54
11	B2	1459	G	C4'-C3'-C2'	6.49	109.09	102.60
13	BA	156	ASP	N-CA-C	6.49	118.36	111.28
38	A1	1691	U	C3'-C2'-C1'	6.49	107.79	101.30
15	BC	14	GLU	CA-C-O	6.49	127.43	120.55
39	A3	48	A	C4'-C3'-O3'	-6.49	103.26	113.00
13	BA	31	GLU	CA-C-O	6.49	126.26	119.51
14	BB	157	ASN	CA-CB-CG	-6.49	106.11	112.60
39	A3	24	C	O3'-P-O5'	6.49	113.73	104.00
61	AN	154	MET	O-C-N	6.49	129.00	122.12
9	AX	376	PRO	N-CA-CB	6.49	110.17	103.23
26	BN	134	LEU	CA-C-N	6.49	129.62	120.28
26	BN	134	LEU	C-N-CA	6.49	129.62	120.28
41	AA	80	ASP	CA-CB-CG	6.49	119.09	112.60
44	Ab	88	LYS	N-CA-C	6.49	118.43	111.36
15	BC	20	PHE	CA-CB-CG	6.49	120.29	113.80
24	BL	33	ARG	NE-CZ-NH2	6.49	125.04	119.20
38	A1	2960	G	C3'-C2'-C1'	6.49	107.78	101.30
11	B2	384	G	C1'-C2'-O2'	-6.48	102.08	111.80
27	BO	121	GLU	CA-C-N	6.48	128.97	120.28
27	BO	121	GLU	C-N-CA	6.48	128.97	120.28
59	AL	4	ARG	N-CA-C	-6.48	104.29	111.36
11	B2	188	C	P-O5'-C5'	6.48	130.62	120.90
11	B2	571	C	P-O5'-C5'	-6.48	111.17	120.90
13	BA	137	ILE	CB-CA-C	6.48	120.89	112.14
42	Aa	31	ALA	N-CA-C	6.48	118.01	111.07
38	A1	294	U	O4'-C1'-N1	6.48	118.22	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	A3	47	G	C5'-C4'-C3'	-6.48	106.28	116.00
61	AN	151	ARG	NE-CZ-NH2	6.48	125.03	119.20
18	BF	208	THR	CA-C-N	6.48	129.49	120.29
18	BF	208	THR	C-N-CA	6.48	129.49	120.29
38	A1	1669	A	O4'-C1'-N9	6.48	118.22	108.50
38	A1	2156	A	C2'-C3'-O3'	6.48	119.22	109.50
9	AX	417	GLN	O-C-N	6.48	128.83	122.09
11	B2	1105	C	C5'-C4'-C3'	-6.48	106.28	116.00
38	A1	1404	G	P-O5'-C5'	-6.48	111.19	120.90
60	AM	122	ASP	O-C-N	-6.48	113.94	122.42
61	AN	71	ARG	CA-C-N	6.48	128.86	120.44
61	AN	71	ARG	C-N-CA	6.48	128.86	120.44
38	A1	1943	C	O4'-C1'-C2'	-6.48	101.12	107.60
43	AB	177	LYS	CA-C-N	6.48	129.49	120.29
43	AB	177	LYS	C-N-CA	6.48	129.49	120.29
61	AN	118	LYS	O-C-N	-6.48	117.32	121.85
11	B2	806	G	C3'-C2'-C1'	6.47	107.77	101.30
38	A1	40	G	O4'-C4'-C3'	-6.47	97.53	104.00
38	A1	2233	G	C2'-C3'-O3'	6.47	119.21	109.50
24	BL	62	ASP	CA-CB-CG	6.47	119.07	112.60
38	A1	1489	G	O4'-C1'-N9	6.47	118.21	108.50
38	A1	1540	A	O4'-C4'-C3'	-6.47	97.53	104.00
64	AR	30	ARG	NE-CZ-NH1	-6.47	115.03	121.50
11	B2	220	G	C4'-C3'-C2'	-6.47	96.13	102.60
24	BL	23	ILE	N-CA-C	-6.47	106.69	112.90
56	AJ	129	ARG	NE-CZ-NH1	-6.47	115.03	121.50
11	B2	811	G	C3'-C2'-O2'	6.47	120.40	110.70
32	BT	34	ARG	NE-CZ-NH2	-6.47	113.38	119.20
14	BB	118	THR	CA-C-O	6.47	127.42	119.79
57	Aj	5	LYS	CA-C-N	6.47	132.64	122.94
57	Aj	5	LYS	C-N-CA	6.47	132.64	122.94
11	B2	1394	G	O5'-C5'-C4'	-6.46	101.80	111.50
13	BA	47	VAL	CA-C-O	6.46	127.21	120.36
11	B2	126	G	O4'-C1'-N9	6.46	118.19	108.50
12	B3	32	ILE	N-CA-C	-6.46	98.82	108.12
38	A1	183	G	C4'-C3'-C2'	-6.46	96.14	102.60
38	A1	2509	A	P-O5'-C5'	-6.46	111.21	120.90
62	AO	48	ILE	CA-C-N	6.46	131.60	123.14
62	AO	48	ILE	C-N-CA	6.46	131.60	123.14
17	BE	133	ILE	N-CA-CB	6.46	119.69	112.45
15	BC	89	TYR	N-CA-C	6.46	120.42	112.54
17	BE	113	HIS	CE1-NE2-CD2	-6.46	102.54	109.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	393	C	C3'-C2'-O2'	6.46	120.39	110.70
38	A1	765	G	C1'-O4'-C4'	6.46	116.36	109.90
38	A1	2214	U	C4'-C3'-C2'	-6.46	96.14	102.60
22	BJ	1	MET	CG-SD-CE	-6.46	86.70	100.90
27	BO	8	VAL	N-CA-C	-6.46	99.19	109.20
38	A1	1027	A	C5'-C4'-O4'	-6.46	100.11	109.80
41	AA	169	THR	N-CA-C	-6.46	99.39	109.72
63	AP	11	LEU	O-C-N	6.46	128.97	122.12
38	A1	2417	G	C3'-C2'-C1'	6.46	107.75	101.30
50	AF	170	ASP	N-CA-C	-6.46	100.73	110.28
38	A1	84	A	C5'-C4'-C3'	6.45	124.88	115.20
38	A1	873	G	P-O3'-C3'	6.45	129.88	120.20
38	A1	2988	A	O5'-C5'-C4'	6.45	121.18	111.50
39	A3	118	G	O4'-C1'-N9	6.45	118.18	108.50
11	B2	314	G	O4'-C1'-N9	6.45	118.18	108.50
11	B2	1389	G	O4'-C1'-N9	6.45	118.18	108.50
14	BB	138	VAL	O-C-N	-6.45	116.20	123.10
20	BH	108	PHE	O-C-N	-6.45	115.28	122.12
58	AK	165	ALA	CB-CA-C	-6.45	99.01	109.72
66	AY	121	PRO	N-CA-C	6.45	118.57	110.70
23	BK	76	GLU	N-CA-CB	6.45	120.13	110.65
15	BC	108	HIS	CA-CB-CG	-6.45	107.35	113.80
38	A1	1624	U	O4'-C4'-C3'	-6.45	99.65	106.10
5	AS	120	HIS	CE1-NE2-CD2	-6.45	102.56	109.00
11	B2	13	C	O4'-C1'-N1	6.45	118.17	108.50
38	A1	1557	G	O3'-P-O5'	-6.45	94.33	104.00
44	Ab	90	LEU	CA-C-O	6.45	127.38	120.10
63	AP	28	LYS	CA-C-N	6.45	129.29	120.46
63	AP	28	LYS	C-N-CA	6.45	129.29	120.46
18	BF	210	ARG	CA-C-O	6.44	127.38	120.55
26	BN	98	ASP	CA-C-N	6.44	129.97	120.95
26	BN	98	ASP	C-N-CA	6.44	129.97	120.95
38	A1	2888	G	C5'-C4'-C3'	6.44	125.67	116.00
60	AM	159	PHE	CA-C-O	6.44	127.25	120.42
11	B2	362	C	P-O3'-C3'	6.44	129.86	120.20
20	BH	84	HIS	CE1-NE2-CD2	-6.44	102.56	109.00
38	A1	983	G	P-O3'-C3'	6.44	129.87	120.20
38	A1	1550	C	O4'-C1'-N1	6.44	118.17	108.50
38	A1	2970	U	C5'-C4'-C3'	6.44	124.86	115.20
41	AA	73	ALA	CA-C-N	6.44	129.44	120.29
41	AA	73	ALA	C-N-CA	6.44	129.44	120.29
22	BJ	70	GLY	CA-C-N	-6.44	114.03	123.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BJ	70	GLY	C-N-CA	-6.44	114.03	123.05
38	A1	233	A	P-O5'-C5'	-6.44	111.24	120.90
38	A1	2997	G	O4'-C1'-C2'	-6.44	101.16	107.60
48	AE	134	ILE	CA-CB-CG1	6.44	121.35	110.40
60	AM	157	ARG	N-CA-CB	6.44	119.59	110.12
29	BQ	19	ARG	NE-CZ-NH2	6.44	125.00	119.20
36	BX	45	VAL	N-CA-C	-6.44	98.33	108.95
38	A1	2171	G	C4'-C3'-C2'	-6.44	96.16	102.60
52	AH	31	ASN	CA-C-N	6.44	129.56	120.42
52	AH	31	ASN	C-N-CA	6.44	129.56	120.42
11	B2	20	G	O4'-C1'-N9	6.44	118.16	108.50
59	AL	84	HIS	CG-CD2-NE2	6.44	113.64	107.20
9	AX	80	THR	CA-C-O	-6.43	113.99	121.07
11	B2	513	A	P-O5'-C5'	6.43	130.55	120.90
11	B2	755	U	O4'-C1'-N1	6.43	118.15	108.50
33	BU	25	GLU	CB-CA-C	-6.43	99.69	110.56
38	A1	259	A	O4'-C4'-C3'	-6.43	97.57	104.00
38	A1	381	G	O4'-C1'-N9	6.43	118.15	108.50
38	A1	2348	G	C1'-O4'-C4'	6.43	116.33	109.90
45	AC	306	THR	CA-C-N	6.43	126.35	119.85
45	AC	306	THR	C-N-CA	6.43	126.35	119.85
4	AQ	118	LYS	CA-C-N	6.43	128.80	120.44
4	AQ	118	LYS	C-N-CA	6.43	128.80	120.44
11	B2	403	C	O4'-C1'-N1	6.43	118.15	108.50
11	B2	857	C	O4'-C1'-N1	6.43	118.15	108.50
14	BB	124	HIS	ND1-CE1-NE2	6.43	114.83	108.40
19	BG	42	GLU	N-CA-C	-6.43	105.36	113.72
45	AC	300	ASN	CA-CB-CG	6.43	119.03	112.60
59	AL	9	ARG	N-CA-CB	6.43	121.36	110.49
15	BC	66	THR	CA-C-N	6.43	129.42	120.29
15	BC	66	THR	C-N-CA	6.43	129.42	120.29
38	A1	884	C	P-O3'-C3'	-6.43	110.55	120.20
61	AN	144	PHE	CA-C-N	6.43	128.90	120.28
61	AN	144	PHE	C-N-CA	6.43	128.90	120.28
9	AX	201	ILE	CA-C-O	-6.43	114.36	121.17
11	B2	1396	C	O4'-C1'-N1	6.43	118.14	108.50
29	BQ	25	TRP	CA-C-O	6.43	126.67	119.41
61	AN	59	GLN	CA-C-N	6.43	129.18	120.44
61	AN	59	GLN	C-N-CA	6.43	129.18	120.44
38	A1	393	C	O4'-C4'-C3'	-6.43	97.57	104.00
38	A1	1449	C	O4'-C1'-N1	6.43	118.14	108.50
41	AA	52	LEU	N-CA-CB	6.43	119.20	110.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
66	AY	24	ALA	N-CA-C	6.43	119.10	111.71
9	AX	206	ASN	OD1-CG-ND2	-6.43	116.17	122.60
11	B2	687	G	C2'-C3'-O3'	6.43	119.14	109.50
26	BN	133	SER	CA-C-N	6.43	128.89	120.28
26	BN	133	SER	C-N-CA	6.43	128.89	120.28
38	A1	198	C	O4'-C4'-C3'	-6.43	97.57	104.00
38	A1	333	A	O4'-C1'-N9	6.43	117.84	108.20
38	A1	2872	G	O4'-C1'-N9	6.43	118.14	108.50
11	B2	1010	G	C4'-C3'-C2'	-6.42	96.17	102.60
23	BK	128	ALA	CB-CA-C	-6.42	98.48	110.56
29	BQ	9	ARG	NE-CZ-NH2	6.42	124.98	119.20
38	A1	2611	U	C4'-C3'-C2'	6.42	109.02	102.60
38	A1	2819	C	P-O3'-C3'	6.42	129.84	120.20
11	B2	478	C	P-O5'-C5'	6.42	130.53	120.90
15	BC	61	ARG	NE-CZ-NH2	-6.42	113.42	119.20
38	A1	1545	C	O4'-C1'-N1	6.42	118.14	108.50
13	BA	45	ASN	CA-C-N	6.42	130.44	120.75
13	BA	45	ASN	C-N-CA	6.42	130.44	120.75
20	BH	14	GLU	N-CA-C	6.42	118.28	111.28
44	Ab	65	TRP	N-CA-C	6.42	120.58	112.87
26	BN	12	ALA	N-CA-C	6.42	120.21	112.38
38	A1	74	A	C4'-C3'-C2'	-6.42	96.18	102.60
38	A1	2539	G	C4'-C3'-C2'	-6.42	96.18	102.60
62	AO	140	ASP	CA-C-N	6.42	128.88	120.28
62	AO	140	ASP	C-N-CA	6.42	128.88	120.28
11	B2	1067	G	P-O3'-C3'	6.42	129.83	120.20
11	B2	1338	C	C5'-C4'-C3'	6.42	125.62	116.00
27	BO	109	LEU	CA-C-N	6.42	128.88	120.28
27	BO	109	LEU	C-N-CA	6.42	128.88	120.28
38	A1	1417	U	O3'-P-O5'	-6.42	94.38	104.00
38	A1	1973	U	O4'-C1'-N1	6.42	118.12	108.50
42	Aa	20	LYS	N-CA-CB	6.42	121.33	110.49
23	BK	19	ILE	N-CA-C	-6.42	99.13	108.11
14	BB	163	ALA	CA-C-N	6.41	130.05	120.17
14	BB	163	ALA	C-N-CA	6.41	130.05	120.17
23	BK	14	ILE	O-C-N	-6.41	116.45	123.18
29	BQ	93	GLU	CA-C-N	6.41	129.20	120.54
29	BQ	93	GLU	C-N-CA	6.41	129.20	120.54
38	A1	1778	G	P-O5'-C5'	6.41	130.52	120.90
56	AJ	116	THR	N-CA-C	-6.41	104.77	112.59
11	B2	109	U	O4'-C1'-C2'	-6.41	101.19	107.60
12	B3	44	GLU	N-CA-CB	6.41	119.27	109.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	BI	51	GLU	CA-C-O	-6.41	113.78	120.70
41	AA	45	ARG	CD-NE-CZ	-6.41	115.43	124.40
41	AA	131	MET	N-CA-CB	6.41	117.78	110.03
59	AL	111	LYS	N-CA-C	-6.41	99.27	109.59
11	B2	1287	G	C4'-C3'-C2'	-6.41	96.19	102.60
34	BV	87	LEU	N-CA-C	-6.41	104.38	111.36
66	AY	117	PHE	N-CA-C	-6.41	98.08	108.52
11	B2	47	A	C3'-C2'-C1'	6.41	107.91	101.50
38	A1	883	G	C1'-O4'-C4'	-6.41	103.30	109.70
38	A1	1899	C	C5'-C4'-C3'	-6.41	106.39	116.00
39	A3	61	C	O5'-C5'-C4'	-6.41	101.89	111.50
57	Aj	32	GLU	CB-CA-C	6.41	123.17	110.42
31	BS	34	LYS	O-C-N	6.40	129.01	122.09
38	A1	679	U	O4'-C1'-N1	6.40	118.11	108.50
11	B2	1278	A	P-O3'-C3'	6.40	129.81	120.20
38	A1	1515	G	P-O5'-C5'	6.40	130.50	120.90
38	A1	2388	U	C3'-C2'-C1'	6.40	107.70	101.30
39	A3	101	A	O4'-C1'-C2'	-6.40	101.20	107.60
49	Ae	53	LYS	N-CA-CB	6.40	121.31	110.49
58	Ak	34	PRO	CA-C-O	-6.40	113.86	121.67
11	B2	1208	A	C5'-C4'-O4'	6.40	119.40	109.80
22	BJ	79	ARG	N-CA-C	6.40	119.26	110.24
38	A1	123	A	P-O3'-C3'	6.40	129.80	120.20
38	A1	306	G	P-O5'-C5'	6.40	130.50	120.90
12	AG	67	PRO	N-CA-C	6.40	118.51	110.70
52	AH	124	LYS	O-C-N	-6.40	115.33	122.12
66	AY	50	ALA	CA-C-N	6.40	129.15	120.38
66	AY	50	ALA	C-N-CA	6.40	129.15	120.38
20	BH	60	ASN	N-CA-CB	6.40	119.96	110.49
64	AR	70	GLY	CA-C-N	6.40	129.14	120.44
64	AR	70	GLY	C-N-CA	6.40	129.14	120.44
9	AX	16	LEU	CA-C-O	-6.40	113.73	120.70
11	B2	42	G	O3'-P-O5'	-6.40	94.41	104.00
30	BR	44	ARG	CA-C-N	6.40	131.21	122.19
30	BR	44	ARG	C-N-CA	6.40	131.21	122.19
38	A1	2242	A	O5'-C5'-C4'	-6.40	101.91	111.50
54	AI	17	LYS	CA-C-N	6.40	129.51	120.42
54	AI	17	LYS	C-N-CA	6.40	129.51	120.42
58	Ak	165	ALA	N-CA-CB	6.40	119.49	109.83
52	AH	25	ILE	CB-CA-C	6.40	121.78	111.29
9	AX	56	PHE	N-CA-CB	6.39	122.34	111.66
11	B2	605	C	O3'-P-O5'	-6.39	94.41	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	821	G	C1'-O4'-C4'	6.39	116.30	109.90
33	BU	37	THR	N-CA-CB	6.39	120.17	110.45
32	BT	76	MET	CA-C-N	6.39	129.13	120.63
32	BT	76	MET	C-N-CA	6.39	129.13	120.63
38	A1	995	G	C5'-C4'-C3'	-6.39	105.61	115.20
21	BI	43	LYS	CA-C-N	6.39	130.03	120.31
21	BI	43	LYS	C-N-CA	6.39	130.03	120.31
38	A1	1180	G	O3'-P-O5'	6.39	113.59	104.00
45	AC	357	THR	O-C-N	-6.39	115.19	122.09
54	AI	67	TYR	N-CA-C	-6.39	98.02	108.82
40	AK	16	ARG	N-CA-C	-6.39	99.40	109.50
46	AD	232	PRO	N-CA-CB	6.39	109.28	103.34
11	B2	1481	G	O4'-C4'-C3'	-6.39	97.61	104.00
34	BV	41	VAL	CA-C-N	6.39	129.36	120.29
34	BV	41	VAL	C-N-CA	6.39	129.36	120.29
38	A1	1731	U	O4'-C1'-N1	6.39	118.08	108.50
38	A1	2583	G	C5'-C4'-C3'	6.39	124.78	115.20
41	AA	181	ILE	CA-C-N	6.39	128.84	120.28
41	AA	181	ILE	C-N-CA	6.39	128.84	120.28
66	AY	60	ASN	CA-CB-CG	-6.39	106.21	112.60
18	BF	169	ASP	O-C-N	6.38	128.89	122.12
43	AB	148	LEU	N-CA-C	-6.38	98.81	108.96
11	B2	442	C	P-O5'-C5'	6.38	130.47	120.90
11	B2	1458	A	P-O3'-C3'	6.38	129.77	120.20
29	BQ	13	GLY	CA-C-N	6.38	130.96	120.94
29	BQ	13	GLY	C-N-CA	6.38	130.96	120.94
38	A1	414	G	C4'-C3'-C2'	-6.38	96.22	102.60
38	A1	1378	G	O4'-C4'-C3'	-6.38	99.72	106.10
39	A3	19	G	O4'-C1'-N9	6.38	118.07	108.50
13	BA	149	ALA	CA-C-N	6.38	128.83	120.28
13	BA	149	ALA	C-N-CA	6.38	128.83	120.28
11	B2	1208	A	C5'-C4'-C3'	6.38	125.57	116.00
29	BQ	47	THR	CA-CB-OG1	6.38	119.16	109.60
38	A1	1032	C	O4'-C1'-C2'	-6.38	101.22	107.60
43	AB	120	LYS	N-CA-C	-6.38	104.21	114.09
65	AV	26	ASP	N-CA-C	-6.38	105.66	113.50
11	B2	112	G	P-O3'-C3'	6.38	129.76	120.20
11	B2	774	U	O4'-C1'-C2'	-6.38	99.42	105.80
16	BD	141	SER	CA-C-N	6.37	129.76	120.71
16	BD	141	SER	C-N-CA	6.37	129.76	120.71
32	BT	66	HIS	N-CA-CB	6.37	120.03	110.53
38	A1	953	G	O4'-C1'-C2'	-6.37	101.23	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2766	C	C4'-C3'-C2'	-6.37	96.23	102.60
62	AO	6	ARG	N-CA-C	-6.37	99.87	108.86
67	AZ	63	PHE	CA-CB-CG	-6.37	107.43	113.80
39	A3	123	U	C2'-C3'-O3'	6.37	119.06	109.50
48	AE	63	LYS	N-CA-CB	6.37	121.26	110.49
58	AK	150	GLU	N-CA-C	-6.37	98.23	109.06
58	AK	183	GLN	CA-C-O	-6.37	113.54	120.17
11	B2	854	C	O4'-C4'-C3'	-6.37	97.63	104.00
11	B2	1487	U	C4'-C3'-C2'	-6.37	96.23	102.60
38	A1	2733	A	P-O3'-C3'	6.37	129.76	120.20
11	B2	25	C	O4'-C1'-N1	6.37	118.05	108.50
45	AC	57	GLU	O-C-N	-6.37	114.74	121.30
58	AK	29	ASP	CA-C-N	6.37	130.16	122.26
58	AK	29	ASP	C-N-CA	6.37	130.16	122.26
23	BK	118	LYS	CA-C-O	-6.37	114.29	120.97
31	BS	39	THR	CA-CB-OG1	6.37	119.15	109.60
38	A1	2110	C	O4'-C1'-N1	6.37	118.05	108.50
38	A1	2796	C	O3'-P-O5'	6.37	113.55	104.00
46	AD	134	ILE	N-CA-C	-6.37	99.03	108.45
38	A1	188	A	O4'-C1'-C2'	-6.36	99.44	105.80
60	AM	193	GLY	CA-C-O	-6.36	113.23	122.52
60	AM	44	ARG	CA-C-O	-6.36	113.97	120.84
11	B2	614	G	P-O5'-C5'	-6.36	111.36	120.90
30	BR	87	LEU	CA-C-O	6.36	127.23	120.36
11	B2	1099	A	P-O3'-C3'	6.36	129.74	120.20
9	AX	87	LEU	N-CA-CB	6.36	119.29	110.07
25	BM	123	HIS	N-CA-C	-6.36	102.79	111.56
28	BP	18	ALA	N-CA-C	6.36	119.19	111.82
32	BT	34	ARG	CA-C-N	6.36	128.71	120.44
32	BT	34	ARG	C-N-CA	6.36	128.71	120.44
38	A1	2290	U	C4'-C3'-O3'	-6.36	103.46	113.00
50	AF	47	PHE	N-CA-CB	6.36	122.28	111.66
5	AS	131	ARG	NE-CZ-NH2	-6.36	113.48	119.20
15	BC	26	ARG	N-CA-C	-6.36	104.08	113.61
20	BH	50	ARG	CD-NE-CZ	-6.36	115.50	124.40
38	A1	1617	G	O4'-C1'-N9	6.36	118.03	108.50
61	AN	64	ALA	N-CA-C	-6.36	104.27	111.07
67	AZ	63	PHE	N-CA-C	-6.36	99.28	109.96
11	B2	1194	C	C4'-C3'-O3'	-6.35	103.47	113.00
14	BB	127	MET	CA-C-N	6.35	128.79	120.28
14	BB	127	MET	C-N-CA	6.35	128.79	120.28
34	BV	25	HIS	CA-C-N	6.35	127.78	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BV	25	HIS	C-N-CA	6.35	127.78	119.84
38	A1	2848	C	O4'-C1'-N1	6.35	118.03	108.50
38	A1	3036	C	O5'-C5'-C4'	6.35	121.03	111.50
38	A1	3033	G	C3'-C2'-O2'	6.35	120.23	110.70
9	AX	405	LEU	CA-C-N	6.35	133.67	121.54
9	AX	405	LEU	C-N-CA	6.35	133.67	121.54
38	A1	1735	G	P-O5'-C5'	6.35	130.42	120.90
38	A1	2078	A	C3'-C2'-C1'	6.35	107.65	101.30
41	AA	5	ARG	CA-C-N	6.35	132.63	123.17
41	AA	5	ARG	C-N-CA	6.35	132.63	123.17
64	AR	72	ALA	N-CA-C	6.35	118.22	110.41
11	B2	93	A	C5'-C4'-C3'	-6.35	105.68	115.20
14	BB	101	MET	O-C-N	-6.35	113.56	122.26
38	A1	704	G	O4'-C1'-N9	6.35	118.02	108.50
60	AM	43	THR	O-C-N	6.35	129.39	122.15
38	A1	1186	G	O3'-P-O5'	-6.35	94.48	104.00
63	AP	21	LYS	CA-C-O	-6.35	113.82	120.55
11	B2	515	U	O4'-C1'-N1	6.34	117.72	108.20
11	B2	1109	C	O4'-C1'-N1	6.34	118.02	108.50
38	A1	1436	A	O4'-C1'-C2'	-6.34	101.25	107.60
38	A1	2516	G	P-O3'-C3'	-6.34	110.68	120.20
43	AB	184	ALA	N-CA-CB	6.34	120.11	110.28
60	AM	71	ARG	CA-C-N	6.34	131.95	123.00
60	AM	71	ARG	C-N-CA	6.34	131.95	123.00
66	AY	49	LYS	CA-C-N	6.34	131.31	120.72
66	AY	49	LYS	C-N-CA	6.34	131.31	120.72
46	AD	14	GLY	N-CA-C	-6.34	101.60	112.64
40	AK	5	ASP	CA-CB-CG	-6.34	106.26	112.60
11	B2	1486	A	P-O3'-C3'	6.34	129.71	120.20
20	BH	2	ALA	N-CA-C	6.34	117.86	111.07
38	A1	1909	C	O4'-C4'-C3'	-6.34	97.66	104.00
38	A1	1972	C	O4'-C1'-C2'	-6.34	101.26	107.60
45	AC	298	ASP	CA-CB-CG	-6.34	106.26	112.60
61	AN	83	HIS	ND1-CE1-NE2	6.34	114.74	108.40
11	B2	745	G	C4'-C3'-O3'	-6.34	103.49	113.00
13	BA	106	ILE	N-CA-C	-6.34	99.34	108.53
33	BU	60	ARG	N-CA-C	6.34	118.19	111.28
38	A1	1138	C	O4'-C1'-N1	6.34	118.01	108.50
39	A3	106	G	O4'-C1'-N9	6.34	118.01	108.50
44	Ab	37	ASP	O-C-N	-6.34	114.03	121.32
44	Ab	86	ASN	O-C-N	6.34	129.92	123.26
47	Ad	40	GLY	N-CA-C	-6.34	106.80	114.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	1213	G	P-O3'-C3'	6.34	129.71	120.20
12	B3	22	ALA	CB-CA-C	-6.34	100.27	110.79
14	BB	177	TYR	O-C-N	6.34	128.60	122.07
33	BU	58	ILE	CA-C-N	6.34	128.77	120.28
33	BU	58	ILE	C-N-CA	6.34	128.77	120.28
47	Ad	82	GLU	CA-C-O	-6.33	114.17	120.82
50	AF	6	TRP	CA-C-N	6.33	129.60	120.98
50	AF	6	TRP	C-N-CA	6.33	129.60	120.98
17	BE	143	HIS	ND1-CE1-NE2	6.33	114.73	108.40
38	A1	2261	C	P-O5'-C5'	-6.33	111.40	120.90
44	Ab	90	LEU	N-CA-C	6.33	119.00	111.71
19	BG	75	ARG	N-CA-C	-6.33	99.27	109.40
20	BH	87	ARG	NE-CZ-NH2	6.33	124.90	119.20
34	BV	44	LEU	CA-C-O	-6.33	113.71	120.42
38	A1	1590	C	O4'-C1'-N1	6.33	118.00	108.50
11	B2	971	G	O4'-C4'-C3'	-6.33	97.67	104.00
38	A1	140	C	C4'-C3'-C2'	-6.33	96.27	102.60
41	AA	38	ASP	N-CA-C	-6.33	100.47	108.45
46	AD	247	ILE	N-CA-C	6.33	117.08	110.62
11	B2	262	G	C2'-C3'-O3'	6.33	123.19	113.70
11	B2	1425	C	N1-C1'-C2'	-6.33	102.51	112.00
14	BB	201	ARG	NE-CZ-NH2	6.33	124.89	119.20
38	A1	381	G	O5'-C5'-C4'	-6.33	102.01	111.50
56	AJ	52	ARG	N-CA-CB	6.33	119.61	110.37
57	Aj	54	LYS	N-CA-CB	6.33	121.63	110.37
11	B2	1003	G	O4'-C1'-N9	6.33	117.99	108.50
22	BJ	8	SER	CA-C-O	6.33	125.92	119.97
45	AC	292	ASN	CA-C-N	6.33	127.13	121.82
45	AC	292	ASN	C-N-CA	6.33	127.13	121.82
60	AM	84	LYS	N-CA-CB	6.33	120.88	111.01
61	AN	88	VAL	CA-C-O	-6.33	115.77	121.97
6	AT	8	ILE	N-CA-C	-6.32	104.98	110.74
11	B2	1144	G	C5'-C4'-C3'	6.32	125.49	116.00
31	BS	4	ILE	CB-CA-C	6.32	122.03	110.71
12	AG	8	LYS	CA-C-O	6.32	126.64	119.18
11	B2	813	G	O3'-P-O5'	6.32	113.48	104.00
38	A1	2783	C	O4'-C4'-C3'	-6.32	97.68	104.00
43	AB	137	ASP	N-CA-CB	6.32	119.15	109.98
11	B2	634	C	O4'-C1'-N1	6.32	117.98	108.50
23	BK	99	PHE	CA-C-N	6.32	132.91	122.73
23	BK	99	PHE	C-N-CA	6.32	132.91	122.73
38	A1	626	C	C4'-C3'-O3'	-6.32	103.52	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	832	A	C4'-C3'-C2'	-6.32	96.28	102.60
38	A1	1005	G	P-O5'-C5'	-6.32	111.42	120.90
39	A3	28	C	O4'-C1'-N1	6.32	117.98	108.50
42	Aa	38	PHE	O-C-N	6.32	128.92	122.09
43	AB	161	VAL	O-C-N	6.32	128.57	122.69
40	AK	43	VAL	N-CA-C	-6.32	98.36	107.78
11	B2	1245	C	P-O5'-C5'	-6.32	111.42	120.90
64	AR	96	GLN	N-CA-CB	6.32	120.79	110.17
11	B2	439	G	O3'-P-O5'	6.32	113.47	104.00
11	B2	1021	C	O4'-C1'-N1	6.32	117.98	108.50
38	A1	313	U	C5'-C4'-O4'	6.32	119.28	109.80
38	A1	2840	C	C4'-C3'-C2'	6.32	108.92	102.60
59	AL	7	LYS	CA-C-O	-6.32	113.72	120.42
38	A1	102	A	C5'-C4'-C3'	6.32	125.47	116.00
38	A1	1260	C	O4'-C1'-N1	6.32	117.97	108.50
38	A1	1458	C	O4'-C1'-N1	6.32	117.97	108.50
38	A1	1682	C	O4'-C1'-C2'	-6.32	101.28	107.60
27	BO	5	ARG	NE-CZ-NH2	-6.31	113.52	119.20
59	AL	29	GLY	CA-C-N	6.31	128.74	120.28
59	AL	29	GLY	C-N-CA	6.31	128.74	120.28
9	AX	156	TYR	CB-CG-CD1	6.31	130.27	120.80
11	B2	114	A	P-O3'-C3'	6.31	129.67	120.20
15	BC	3	ILE	N-CA-C	-6.31	106.98	113.10
45	AC	348	LYS	N-CA-CB	6.31	123.45	110.70
50	AF	110	ILE	O-C-N	6.31	129.89	123.20
11	B2	231	G	O4'-C4'-C3'	-6.31	97.69	104.00
11	B2	908	G	O4'-C1'-N9	6.31	117.97	108.50
56	AJ	138	SER	CA-C-O	-6.31	113.73	120.42
14	BB	78	LYS	CA-C-O	-6.31	112.22	118.34
38	A1	513	C	C4'-C3'-C2'	6.31	108.91	102.60
38	A1	1693	G	O4'-C4'-C3'	-6.31	97.69	104.00
38	A1	3021	C	O4'-C1'-N1	6.31	117.97	108.50
38	A1	1437	C	O4'-C1'-N1	6.31	117.96	108.50
38	A1	2538	G	O4'-C1'-C2'	-6.31	101.29	107.60
38	A1	3035	C	O3'-P-O5'	6.31	113.46	104.00
41	AA	23	ASN	OD1-CG-ND2	6.31	128.91	122.60
62	AO	16	GLU	CA-C-N	6.31	132.16	120.87
62	AO	16	GLU	C-N-CA	6.31	132.16	120.87
38	A1	2609	G	O4'-C1'-N9	6.30	117.96	108.50
41	AA	61	LYS	N-CA-CB	6.30	120.14	109.87
11	B2	817	U	O4'-C1'-N1	6.30	117.95	108.50
36	BX	11	VAL	CB-CA-C	6.30	119.25	111.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	AO	76	HIS	N-CA-C	-6.30	100.37	110.14
11	B2	369	A	P-O5'-C5'	6.30	130.35	120.90
38	A1	680	U	O4'-C1'-C2'	-6.30	101.30	107.60
38	A1	1879	U	C2'-C3'-O3'	6.30	118.95	109.50
39	A3	89	G	C2'-C3'-O3'	6.30	123.15	113.70
6	AT	9	ARG	NE-CZ-NH1	-6.30	115.20	121.50
11	B2	48	G	O4'-C1'-N9	6.30	117.95	108.50
11	B2	112	G	C4'-C3'-O3'	-6.30	103.55	113.00
11	B2	267	C	P-O5'-C5'	6.30	130.35	120.90
11	B2	1392	G	O4'-C1'-N9	6.30	117.95	108.50
25	BM	25	ASN	CA-CB-CG	6.30	118.90	112.60
41	AA	106	PHE	CA-C-N	6.30	132.68	122.29
41	AA	106	PHE	C-N-CA	6.30	132.68	122.29
66	AY	80	VAL	CA-C-O	-6.30	114.49	121.23
11	B2	1364	C	C4'-C3'-C2'	-6.30	96.30	102.60
25	BM	41	ARG	O-C-N	6.30	131.55	123.24
32	BT	96	PRO	N-CA-CB	6.30	109.18	103.20
38	A1	2262	C	C4'-C3'-C2'	-6.30	96.30	102.60
11	B2	133	G	O3'-P-O5'	6.29	113.44	104.00
38	A1	2653	G	O4'-C1'-N9	6.29	117.94	108.50
38	A1	955	A	O3'-P-O5'	-6.29	94.56	104.00
38	A1	1803	U	C3'-C2'-O2'	-6.29	105.16	114.60
38	A1	2290	U	O4'-C1'-N1	6.29	117.94	108.50
11	B2	228	G	C5'-C4'-O4'	-6.29	100.36	109.80
41	AA	140	THR	CA-C-N	6.29	128.71	120.28
41	AA	140	THR	C-N-CA	6.29	128.71	120.28
5	AS	72	HIS	CE1-NE2-CD2	-6.29	102.71	109.00
41	AA	165	ALA	CA-C-N	6.29	127.70	119.84
41	AA	165	ALA	C-N-CA	6.29	127.70	119.84
11	B2	576	C	C4'-C3'-C2'	-6.29	96.31	102.60
11	B2	1128	U	P-O5'-C5'	6.29	130.33	120.90
13	BA	98	ARG	NE-CZ-NH2	6.29	124.86	119.20
33	BU	48	GLU	CA-C-N	6.29	128.71	120.28
33	BU	48	GLU	C-N-CA	6.29	128.71	120.28
38	A1	315	U	P-O5'-C5'	-6.29	111.47	120.90
38	A1	496	A	O4'-C1'-N9	6.29	117.63	108.20
38	A1	742	C	O4'-C1'-N1	6.29	117.93	108.50
38	A1	1940	U	P-O5'-C5'	-6.29	111.47	120.90
35	BW	42	ALA	N-CA-CB	6.29	120.37	110.56
38	A1	2090	A	C3'-C2'-C1'	6.29	107.79	101.50
5	AS	10	GLN	N-CA-CB	6.29	119.28	110.04
11	B2	971	G	O3'-P-O5'	-6.29	94.57	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	BD	165	HIS	CA-C-O	-6.29	113.51	119.80
38	A1	2059	G	O4'-C1'-N9	6.29	117.93	108.50
12	AG	34	LYS	O-C-N	6.29	131.40	123.23
11	B2	88	G	O4'-C1'-C2'	-6.28	101.32	107.60
11	B2	1242	C	P-O5'-C5'	6.28	130.33	120.90
20	BH	52	ALA	CA-C-N	6.28	128.99	120.44
20	BH	52	ALA	C-N-CA	6.28	128.99	120.44
38	A1	507	G	C4'-C3'-C2'	-6.28	96.32	102.60
38	A1	2691	G	O4'-C1'-C2'	6.28	113.88	107.60
42	Aa	88	ARG	N-CA-C	-6.28	98.28	108.52
9	AX	68	GLY	CA-C-O	6.28	126.11	119.07
20	BH	62	HIS	CE1-NE2-CD2	-6.28	102.72	109.00
38	A1	3035	C	C4'-C3'-O3'	-6.28	103.58	113.00
15	BC	14	GLU	O-C-N	-6.28	115.46	122.12
38	A1	245	A	O4'-C1'-N9	6.28	117.92	108.50
54	AI	3	ILE	N-CA-C	-6.28	98.58	107.75
11	B2	1330	G	O4'-C1'-C2'	-6.28	101.32	107.60
33	BU	141	GLU	N-CA-C	-6.28	102.76	110.61
9	AX	261	LEU	CB-CA-C	-6.28	99.22	110.70
11	B2	393	A	C5'-C4'-C3'	-6.28	106.59	116.00
11	B2	729	G	C4'-C3'-C2'	-6.28	96.32	102.60
11	B2	919	U	P-O5'-C5'	6.28	130.31	120.90
38	A1	2226	G	O4'-C4'-C3'	-6.28	97.72	104.00
38	A1	602	G	O4'-C1'-N9	6.27	117.91	108.50
38	A1	919	G	C4'-C3'-O3'	6.27	122.41	113.00
38	A1	2070	U	O4'-C1'-C2'	6.27	113.87	107.60
38	A1	2875	C	O4'-C1'-C2'	6.27	113.87	107.60
53	Ah	1	MET	CA-C-N	6.27	128.68	120.28
53	Ah	1	MET	C-N-CA	6.27	128.68	120.28
9	AX	210	ILE	O-C-N	6.27	131.45	122.04
38	A1	1400	U	O4'-C1'-N1	6.27	117.90	108.50
15	BC	102	ALA	N-CA-C	6.27	118.11	111.28
38	A1	285	C	C4'-C3'-C2'	-6.27	96.33	102.60
38	A1	2883	C	O4'-C1'-C2'	-6.27	101.33	107.60
39	A3	9	A	C4'-C3'-C2'	-6.27	96.33	102.60
57	Aj	40	PHE	CA-CB-CG	-6.27	107.53	113.80
11	B2	1049	U	O4'-C1'-C2'	-6.27	101.33	107.60
25	BM	56	SER	N-CA-CB	6.27	119.49	110.03
38	A1	962	C	C3'-C2'-C1'	6.27	107.57	101.30
45	AC	245	LYS	N-CA-C	-6.27	99.15	108.99
46	AD	135	ASP	N-CA-C	-6.27	103.98	111.69
62	AO	34	ARG	CD-NE-CZ	-6.27	115.63	124.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	AX	57	GLU	CA-C-O	-6.26	115.38	121.02
9	AX	348	ARG	NE-CZ-NH1	6.26	127.77	121.50
57	Aj	32	GLU	CA-C-N	6.26	132.98	121.70
57	Aj	32	GLU	C-N-CA	6.26	132.98	121.70
58	Ak	97	PHE	CA-CB-CG	-6.26	107.54	113.80
11	B2	1369	C	O4'-C1'-N1	6.26	117.89	108.50
20	BH	80	LYS	CA-C-N	6.26	129.12	122.11
20	BH	80	LYS	C-N-CA	6.26	129.12	122.11
38	A1	355	G	C4'-C3'-C2'	-6.26	96.34	102.60
39	A3	62	A	C3'-C2'-O2'	6.26	120.09	110.70
43	AB	187	LYS	N-CA-C	-6.26	99.16	108.99
5	AS	59	ARG	NE-CZ-NH2	-6.26	113.57	119.20
5	AS	155	ARG	NE-CZ-NH1	-6.26	115.24	121.50
11	B2	288	G	O4'-C1'-N9	6.26	117.89	108.50
27	BO	36	ALA	N-CA-C	-6.26	104.37	111.07
45	AC	250	ARG	NE-CZ-NH2	6.26	124.83	119.20
54	AI	86	LYS	N-CA-CB	6.26	121.66	111.27
64	AR	46	GLU	CA-C-N	6.26	128.46	120.89
64	AR	46	GLU	C-N-CA	6.26	128.46	120.89
38	A1	1352	U	P-O5'-C5'	-6.26	111.51	120.90
55	Ai	57	GLN	CA-C-N	6.26	128.66	120.28
55	Ai	57	GLN	C-N-CA	6.26	128.66	120.28
10	B1	64	C	O4'-C1'-N1	6.26	117.88	108.50
11	B2	1423	A	C5'-C4'-C3'	6.26	125.39	116.00
17	BE	19	TRP	CA-C-O	6.26	126.77	119.32
38	A1	769	G	C5'-C4'-C3'	-6.26	106.61	116.00
38	A1	892	U	O4'-C1'-N1	6.26	117.89	108.50
38	A1	1183	U	P-O3'-C3'	6.26	129.58	120.20
38	A1	2551	G	O4'-C1'-N9	6.26	117.89	108.50
43	AB	174	LYS	CA-C-N	6.26	128.66	120.28
43	AB	174	LYS	C-N-CA	6.26	128.66	120.28
27	BO	92	HIS	CA-CB-CG	-6.25	107.55	113.80
38	A1	732	G	C4'-C3'-O3'	-6.25	103.62	113.00
11	B2	1087	C	C4'-C3'-C2'	-6.25	96.35	102.60
11	B2	1255	C	C4'-C3'-C2'	-6.25	96.35	102.60
32	BT	28	PHE	CA-CB-CG	-6.25	107.55	113.80
38	A1	130	G	P-O3'-C3'	6.25	129.58	120.20
38	A1	1734	G	P-O3'-C3'	6.25	129.58	120.20
9	AX	101	PRO	N-CA-CB	6.25	109.46	103.52
11	B2	85	A	C4'-C3'-O3'	-6.25	103.62	113.00
11	B2	855	C	O5'-C5'-C4'	-6.25	102.12	111.50
11	B2	1444	G	O4'-C1'-N9	6.25	117.88	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	BB	175	ILE	O-C-N	6.25	127.93	121.87
38	A1	2186	C	O4'-C1'-N1	6.25	117.88	108.50
38	A1	2702	A	O4'-C1'-C2'	-6.25	101.35	107.60
39	A3	12	G	O4'-C1'-N9	6.25	117.88	108.50
43	AB	36	THR	CA-CB-OG1	6.25	118.98	109.60
4	AQ	95	TRP	N-CA-CB	6.25	119.41	110.16
11	B2	715	C	P-O5'-C5'	6.25	130.28	120.90
11	B2	1077	U	O5'-C5'-C4'	6.25	120.88	111.50
38	A1	274	C	C4'-C3'-C2'	-6.25	96.35	102.60
38	A1	849	C	P-O5'-C5'	-6.25	111.53	120.90
38	A1	931	C	P-O5'-C5'	6.25	130.27	120.90
38	A1	1583	G	P-O3'-C3'	-6.25	110.83	120.20
38	A1	2454	G	C5'-C4'-C3'	-6.25	106.63	116.00
52	AH	91	LYS	CA-C-N	6.25	129.79	120.17
52	AH	91	LYS	C-N-CA	6.25	129.79	120.17
66	AY	144	GLY	O-C-N	6.25	129.67	122.61
8	AW	42	MET	CB-CA-C	-6.25	101.07	110.88
9	AX	108	GLN	OE1-CD-NE2	6.25	128.85	122.60
38	A1	70	G	C5'-C4'-C3'	6.25	124.57	115.20
54	AI	38	ILE	CA-C-O	6.25	126.98	120.36
38	A1	2447	A	C2'-C3'-O3'	6.25	118.87	109.50
58	Ak	170	THR	N-CA-CB	6.25	116.55	109.49
11	B2	1002	G	C4'-C3'-C2'	-6.24	96.36	102.60
37	BY	32	ALA	N-CA-CB	6.24	119.63	109.95
37	BY	48	TRP	N-CA-C	-6.24	99.63	109.50
52	AH	32	VAL	CA-C-N	6.24	132.78	122.73
52	AH	32	VAL	C-N-CA	6.24	132.78	122.73
50	AF	57	LYS	CA-C-N	6.24	129.15	120.29
50	AF	57	LYS	C-N-CA	6.24	129.15	120.29
61	AN	36	MET	CG-SD-CE	6.24	114.63	100.90
11	B2	1217	C	P-O3'-C3'	6.24	129.56	120.20
38	A1	33	U	P-O5'-C5'	-6.24	111.54	120.90
38	A1	1071	A	O3'-P-O5'	6.24	113.36	104.00
40	AK	76	GLU	CA-C-O	-6.24	113.94	120.55
9	AX	156	TYR	CB-CG-CD2	-6.24	111.45	120.80
23	BK	34	GLU	CB-CA-C	-6.24	100.18	110.72
39	A3	113	C	O4'-C1'-N1	6.24	117.85	108.50
5	AS	65	ARG	N-CA-CB	6.23	119.29	111.00
11	B2	963	A	P-O5'-C5'	6.23	130.25	120.90
42	Aa	15	ILE	CA-C-N	6.23	131.62	122.08
42	Aa	15	ILE	C-N-CA	6.23	131.62	122.08
46	AD	177	SER	CA-C-O	6.23	125.38	118.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	243	G	C4'-C3'-C2'	-6.23	96.37	102.60
35	BW	5	ILE	O-C-N	6.23	128.53	122.30
38	A1	191	U	O4'-C1'-N1	6.23	117.85	108.50
38	A1	551	A	O4'-C1'-N9	6.23	117.85	108.50
38	A1	1722	G	P-O5'-C5'	6.23	130.25	120.90
38	A1	3034	C	O4'-C1'-N1	6.23	117.85	108.50
45	AC	129	GLU	CA-C-O	-6.23	113.81	120.42
11	B2	427	G	C4'-C3'-C2'	-6.23	96.37	102.60
19	BG	118	GLN	OE1-CD-NE2	6.23	128.83	122.60
20	BH	179	SER	CA-C-N	6.23	133.44	121.54
20	BH	179	SER	C-N-CA	6.23	133.44	121.54
38	A1	408	C	O4'-C4'-C3'	-6.23	99.87	106.10
38	A1	701	G	C5'-C4'-C3'	6.23	125.35	116.00
38	A1	2063	U	P-O3'-C3'	-6.23	110.85	120.20
38	A1	2112	C	O4'-C1'-N1	6.23	117.84	108.50
56	AJ	16	ARG	N-CA-C	-6.23	101.93	109.72
38	A1	411	U	O4'-C4'-C3'	-6.23	97.77	104.00
11	B2	243	G	O4'-C1'-C2'	-6.23	101.37	107.60
38	A1	1345	G	C4'-C3'-C2'	-6.23	96.37	102.60
43	AB	89	ALA	CA-C-N	6.23	126.19	119.78
43	AB	89	ALA	C-N-CA	6.23	126.19	119.78
46	AD	241	VAL	O-C-N	-6.23	116.62	123.03
56	AJ	74	ARG	CA-C-N	6.23	133.43	121.54
56	AJ	74	ARG	C-N-CA	6.23	133.43	121.54
60	AM	136	HIS	CE1-NE2-CD2	-6.23	102.77	109.00
6	AT	12	VAL	CA-C-O	6.23	126.86	120.39
38	A1	1299	C	P-O3'-C3'	-6.23	110.86	120.20
38	A1	2039	U	C4'-C3'-C2'	-6.23	96.37	102.60
46	AD	18	LEU	N-CA-C	-6.23	100.59	109.62
25	BM	124	ASP	N-CA-C	-6.22	105.18	114.64
38	A1	722	C	C4'-C3'-C2'	-6.22	96.38	102.60
38	A1	1304	G	O4'-C1'-C2'	-6.22	101.38	107.60
43	AB	121	TYR	CB-CA-C	-6.22	97.36	109.68
48	AE	142	THR	CA-C-N	6.22	131.96	122.93
48	AE	142	THR	C-N-CA	6.22	131.96	122.93
7	AU	84	ARG	O-C-N	-6.22	116.24	123.27
11	B2	765	U	C3'-C2'-C1'	6.22	107.52	101.30
17	BE	35	GLY	CA-C-O	-6.22	112.62	121.52
38	A1	1725	A	O4'-C4'-C3'	-6.22	97.78	104.00
38	A1	1125	A	P-O3'-C3'	6.22	129.53	120.20
43	AB	220	ARG	N-CA-C	-6.22	104.96	113.30
11	B2	128	A	P-O3'-C3'	-6.22	110.87	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	133	G	P-O5'-C5'	6.22	130.23	120.90
38	A1	177	G	C4'-C3'-C2'	-6.22	96.38	102.60
40	A5	17	ARG	O-C-N	-6.22	115.12	122.58
56	AJ	104	ALA	N-CA-C	-6.22	99.62	109.07
66	AY	127	ARG	NE-CZ-NH1	-6.22	115.28	121.50
5	AS	10	GLN	CA-C-O	-6.22	114.96	121.55
11	B2	1091	C	C5'-C4'-C3'	6.22	125.33	116.00
16	BD	85	GLU	CB-CA-C	-6.22	98.05	110.42
28	BP	45	GLU	CA-C-N	6.22	131.41	121.34
28	BP	45	GLU	C-N-CA	6.22	131.41	121.34
24	BL	69	HIS	O-C-N	-6.21	115.90	123.30
46	AD	197	PRO	CA-C-N	6.21	131.30	122.72
46	AD	197	PRO	C-N-CA	6.21	131.30	122.72
11	B2	436	A	P-O3'-C3'	6.21	129.52	120.20
32	BT	38	ARG	NE-CZ-NH1	-6.21	115.29	121.50
59	AL	133	ALA	N-CA-C	6.21	118.05	111.28
64	AR	25	LEU	CB-CA-C	6.21	119.75	109.56
11	B2	55	G	O4'-C1'-N9	6.21	117.82	108.50
11	B2	109	U	C3'-C2'-C1'	6.21	107.51	101.30
11	B2	966	G	C4'-C3'-O3'	-6.21	103.68	113.00
17	BE	196	LYS	O-C-N	-6.21	115.78	123.36
22	BJ	3	ILE	O-C-N	6.21	129.31	122.66
31	BS	4	ILE	N-CA-C	-6.21	98.75	108.81
36	BX	68	LYS	O-C-N	-6.21	115.81	123.33
41	AA	175	GLU	CA-C-N	6.21	128.60	120.28
41	AA	175	GLU	C-N-CA	6.21	128.60	120.28
11	B2	934	G	P-O5'-C5'	-6.21	111.59	120.90
21	BI	92	ARG	O-C-N	6.21	128.49	122.03
66	AY	118	ARG	CD-NE-CZ	-6.21	115.71	124.40
11	B2	264	C	P-O5'-C5'	6.21	130.21	120.90
38	A1	974	U	C3'-C2'-C1'	6.21	107.51	101.30
38	A1	1618	G	O4'-C1'-N9	6.21	117.81	108.50
45	AC	283	ASN	N-CA-C	6.21	118.17	110.91
49	Ae	10	LYS	CA-C-N	6.21	129.64	120.95
49	Ae	10	LYS	C-N-CA	6.21	129.64	120.95
38	A1	1539	U	P-O5'-C5'	6.21	130.21	120.90
38	A1	2814	U	C1'-O4'-C4'	-6.21	103.69	109.90
46	AD	221	VAL	CA-C-O	-6.21	114.43	121.75
11	B2	607	U	O4'-C1'-N1	6.20	117.50	108.20
11	B2	892	C	C2'-C3'-O3'	6.20	118.81	109.50
17	BE	113	HIS	ND1-CE1-NE2	6.20	114.60	108.40
20	BH	63	ILE	CA-C-N	6.20	129.23	120.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	BH	63	ILE	C-N-CA	6.20	129.23	120.42
31	BS	10	LYS	CA-C-O	-6.20	113.84	120.42
37	BY	29	VAL	N-CA-CB	6.20	119.69	111.25
38	A1	1769	G	O4'-C1'-N9	6.20	117.81	108.50
55	Ai	12	ARG	CA-C-N	6.20	129.21	120.28
55	Ai	12	ARG	C-N-CA	6.20	129.21	120.28
9	AX	214	ILE	N-CA-C	-6.20	104.70	110.53
17	BE	33	ARG	N-CA-C	-6.20	102.24	109.93
26	BN	8	ASN	CA-CB-CG	-6.20	106.40	112.60
38	A1	902	C	C4'-C3'-O3'	-6.20	103.70	113.00
11	B2	1221	A	P-O3'-C3'	6.20	129.50	120.20
38	A1	1136	G	O4'-C1'-N9	6.20	117.80	108.50
54	AI	65	PRO	CA-C-O	-6.20	114.76	121.27
9	AX	188	GLY	CA-C-N	6.20	125.93	119.05
9	AX	188	GLY	C-N-CA	6.20	125.93	119.05
22	BJ	93	ASN	CA-CB-CG	-6.20	106.40	112.60
26	BN	84	VAL	CA-C-O	-6.20	114.09	121.28
11	B2	248	U	O4'-C1'-N1	6.20	117.80	108.50
18	BF	73	ARG	N-CA-C	-6.20	99.30	109.40
66	AY	94	GLU	CA-C-O	-6.20	113.98	120.55
11	B2	1088	U	P-O3'-C3'	-6.20	110.91	120.20
18	BF	2	SER	N-CA-CB	6.20	120.96	110.49
18	BF	89	VAL	N-CA-C	-6.20	99.55	108.53
38	A1	298	G	O4'-C1'-C2'	-6.20	101.41	107.60
38	A1	816	C	P-O5'-C5'	-6.20	111.61	120.90
38	A1	1785	G	C1'-O4'-C4'	-6.20	103.70	109.90
38	A1	1962	G	P-O5'-C5'	6.20	130.19	120.90
39	A3	27	C	O4'-C4'-C3'	-6.20	97.81	104.00
40	A5	30	LYS	N-CA-C	-6.20	105.72	113.28
12	AG	73	LYS	CA-C-N	6.20	130.95	122.34
12	AG	73	LYS	C-N-CA	6.20	130.95	122.34
40	AK	30	LYS	N-CA-C	-6.20	104.98	112.54
40	AK	38	ALA	CA-C-N	6.20	135.72	121.34
40	AK	38	ALA	C-N-CA	6.20	135.72	121.34
38	A1	2865	C	C4'-C3'-O3'	-6.19	103.71	113.00
8	AW	36	THR	CA-C-O	6.19	128.99	121.68
38	A1	87	C	C4'-C3'-C2'	6.19	108.79	102.60
38	A1	1289	C	O4'-C1'-N1	6.19	117.79	108.50
38	A1	1722	G	O5'-C5'-C4'	6.19	120.79	111.50
42	Aa	66	PRO	CA-C-N	6.19	126.14	119.76
42	Aa	66	PRO	C-N-CA	6.19	126.14	119.76
45	AC	352	GLN	N-CA-CB	6.19	119.75	109.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	AX	323	MET	CA-C-O	-6.19	114.50	121.00
38	A1	878	G	O4'-C1'-N9	6.19	117.79	108.50
38	A1	1079	A	P-O5'-C5'	6.19	130.19	120.90
38	A1	2859	U	C5'-C4'-C3'	6.19	125.28	116.00
54	AI	55	LEU	CA-C-N	6.19	132.84	121.70
54	AI	55	LEU	C-N-CA	6.19	132.84	121.70
60	AM	9	GLU	O-C-N	-6.19	115.56	122.12
65	AV	40	TYR	O-C-N	-6.19	115.56	122.12
16	BD	100	ILE	N-CA-CB	-6.19	104.11	112.16
21	BI	11	LEU	CA-C-N	6.19	128.57	120.28
21	BI	11	LEU	C-N-CA	6.19	128.57	120.28
11	B2	1002	G	P-O5'-C5'	-6.19	111.62	120.90
13	BA	127	ARG	CA-C-N	6.19	133.36	121.54
13	BA	127	ARG	C-N-CA	6.19	133.36	121.54
22	BJ	25	LYS	CA-C-N	6.19	128.49	120.44
22	BJ	25	LYS	C-N-CA	6.19	128.49	120.44
11	B2	375	G	O4'-C1'-N9	6.19	117.78	108.50
26	BN	29	ARG	N-CA-CB	6.19	119.21	110.12
31	BS	55	THR	CA-C-N	6.19	129.07	120.29
31	BS	55	THR	C-N-CA	6.19	129.07	120.29
38	A1	98	G	C4'-C3'-C2'	-6.19	96.41	102.60
38	A1	866	G	O4'-C1'-C2'	6.19	113.79	107.60
38	A1	1543	C	C3'-C2'-C1'	6.19	107.49	101.30
11	B2	609	G	P-O5'-C5'	-6.18	111.62	120.90
38	A1	1109	G	C4'-C3'-C2'	-6.18	96.42	102.60
38	A1	2970	U	O4'-C1'-N1	6.18	117.48	108.20
54	AI	43	ASP	CA-CB-CG	-6.18	106.42	112.60
11	B2	460	C	O5'-C5'-C4'	6.18	120.77	111.50
14	BB	186	GLU	CA-C-N	6.18	129.91	120.82
14	BB	186	GLU	C-N-CA	6.18	129.91	120.82
60	AM	32	ARG	N-CA-CB	6.18	119.21	110.12
17	BE	85	VAL	N-CA-CB	6.18	117.91	110.31
22	BJ	121	ASN	CA-CB-CG	-6.18	106.42	112.60
38	A1	1771	C	C4'-C3'-C2'	6.18	108.78	102.60
60	AM	64	VAL	N-CA-C	-6.18	99.58	108.48
63	AP	57	ASN	N-CA-C	-6.18	99.17	109.24
25	BM	60	ALA	O-C-N	6.18	129.19	122.15
38	A1	810	A	O5'-C5'-C4'	-6.18	102.24	111.50
38	A1	1038	U	C5'-C4'-O4'	-6.18	100.53	109.80
39	A3	23	A	O4'-C1'-C2'	-6.18	101.42	107.60
11	B2	192	G	C1'-O4'-C4'	-6.17	103.72	109.90
17	BE	12	ARG	NE-CZ-NH1	-6.17	115.33	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BJ	84	PRO	CB-CA-C	-6.17	102.30	109.89
24	BL	82	MET	CA-C-O	6.17	127.09	120.55
20	BH	45	PRO	CB-CA-C	-6.17	101.38	111.56
20	BH	62	HIS	N-CA-CB	6.17	119.05	109.48
38	A1	1973	U	C4'-C3'-O3'	-6.17	103.74	113.00
38	A1	785	C	O4'-C1'-N1	6.17	117.76	108.50
38	A1	1811	G	O3'-P-O5'	-6.17	94.74	104.00
39	A3	12	G	C4'-C3'-C2'	-6.17	96.43	102.60
59	AL	84	HIS	CA-C-N	6.17	128.87	120.54
59	AL	84	HIS	C-N-CA	6.17	128.87	120.54
4	AQ	46	LYS	O-C-N	-6.17	115.00	122.22
6	AT	10	PRO	CA-C-N	6.17	130.18	121.66
6	AT	10	PRO	C-N-CA	6.17	130.18	121.66
46	AD	132	HIS	CE1-NE2-CD2	-6.17	102.83	109.00
9	AX	80	THR	O-C-N	6.17	128.68	122.08
9	AX	371	LYS	CA-C-N	6.17	129.02	120.63
9	AX	371	LYS	C-N-CA	6.17	129.02	120.63
32	BT	13	LEU	CA-C-O	-6.17	114.01	120.55
41	AA	84	SER	CA-C-N	6.17	128.54	120.28
41	AA	84	SER	C-N-CA	6.17	128.54	120.28
42	Aa	32	VAL	CA-CB-CG1	6.17	120.89	110.40
54	AI	37	VAL	CA-CB-CG2	-6.17	99.91	110.40
60	AM	26	ARG	NE-CZ-NH2	-6.17	113.65	119.20
66	AY	11	GLY	O-C-N	6.17	130.72	122.70
66	AY	40	THR	CA-C-N	6.17	126.06	119.28
66	AY	40	THR	C-N-CA	6.17	126.06	119.28
6	AT	81	ALA	CA-C-N	6.17	128.54	120.28
6	AT	81	ALA	C-N-CA	6.17	128.54	120.28
11	B2	1279	A	P-O3'-C3'	6.17	129.45	120.20
20	BH	55	HIS	ND1-CE1-NE2	6.17	114.57	108.40
38	A1	146	U	P-O5'-C5'	-6.17	111.65	120.90
38	A1	2113	G	P-O5'-C5'	-6.17	111.65	120.90
38	A1	2126	G	C4'-C3'-C2'	-6.17	96.43	102.60
40	A5	17	ARG	CA-C-N	6.17	132.80	121.70
40	A5	17	ARG	C-N-CA	6.17	132.80	121.70
65	AV	43	MET	CA-C-O	6.17	127.06	119.97
38	A1	2224	G	O4'-C4'-C3'	-6.17	97.83	104.00
38	A1	2526	G	C5'-C4'-C3'	6.17	125.25	116.00
39	A3	62	A	P-O3'-C3'	6.17	129.45	120.20
10	B1	65	C	O4'-C1'-N1	6.16	117.75	108.50
11	B2	1250	C	C4'-C3'-C2'	-6.16	96.44	102.60
11	B2	1307	G	O5'-C5'-C4'	-6.16	102.25	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	1435	G	O4'-C1'-C2'	-6.16	101.44	107.60
24	BL	36	GLY	CA-C-N	6.16	126.49	119.83
24	BL	36	GLY	C-N-CA	6.16	126.49	119.83
38	A1	1301	G	O4'-C1'-N9	6.16	117.74	108.50
67	AZ	24	ILE	N-CA-CB	6.16	121.19	110.65
11	B2	783	G	P-O3'-C3'	-6.16	110.96	120.20
11	B2	963	A	C1'-C2'-O2'	-6.16	102.56	111.80
31	BS	26	THR	N-CA-C	-6.16	105.41	113.17
38	A1	73	A	C4'-C3'-O3'	-6.16	103.76	113.00
38	A1	176	G	P-O5'-C5'	-6.16	111.66	120.90
48	AE	18	HIS	ND1-CE1-NE2	6.16	114.56	108.40
60	AM	73	ARG	CA-C-N	6.16	126.17	119.89
60	AM	73	ARG	C-N-CA	6.16	126.17	119.89
62	AO	82	SER	N-CA-CB	6.16	119.83	110.28
63	AP	12	ARG	CA-C-O	-6.16	112.89	119.97
11	B2	159	C	C3'-C2'-C1'	6.16	107.46	101.30
11	B2	787	U	C5'-C4'-C3'	-6.16	106.76	116.00
11	B2	883	G	C1'-C2'-O2'	6.16	117.64	108.40
29	BQ	78	ILE	N-CA-C	6.16	122.15	109.34
38	A1	1936	C	C2'-C3'-O3'	6.16	122.94	113.70
9	AX	150	GLY	O-C-N	6.16	128.10	122.19
11	B2	1169	C	O4'-C1'-N1	6.16	117.74	108.50
50	AF	53	VAL	N-CA-C	-6.16	99.56	108.36
9	AX	194	TRP	N-CA-C	-6.16	104.20	111.03
17	BE	173	ILE	O-C-N	6.16	129.49	123.03
38	A1	624	U	C3'-C2'-C1'	6.16	107.46	101.30
38	A1	1540	A	O4'-C1'-C2'	-6.16	101.44	107.60
38	A1	2543	A	O4'-C1'-N9	6.16	117.43	108.20
50	AF	115	GLY	CA-C-N	6.16	130.48	121.31
50	AF	115	GLY	C-N-CA	6.16	130.48	121.31
58	AK	92	THR	CA-CB-OG1	6.16	118.83	109.60
15	BC	183	MET	CB-CA-C	6.15	117.00	110.17
33	BU	120	VAL	CA-C-N	6.15	129.73	120.75
33	BU	120	VAL	C-N-CA	6.15	129.73	120.75
38	A1	981	A	N9-C1'-C2'	-6.15	104.77	114.00
43	AB	105	GLY	O-C-N	-6.15	114.58	122.39
54	AI	41	ASN	CA-C-N	6.15	128.52	120.28
54	AI	41	ASN	C-N-CA	6.15	128.52	120.28
58	AK	81	ASN	N-CA-C	-6.15	98.50	108.41
11	B2	604	C	C4'-C3'-O3'	-6.15	103.78	113.00
11	B2	990	G	O4'-C4'-C3'	-6.15	97.85	104.00
18	BF	58	ASN	CA-C-O	6.15	125.55	118.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BO	72	HIS	N-CA-C	6.15	120.04	112.54
38	A1	1409	U	O4'-C1'-N1	6.15	117.73	108.50
38	A1	2277	G	C5'-C4'-C3'	6.15	125.23	116.00
38	A1	2706	C	C1'-C2'-O2'	6.15	117.63	108.40
39	A3	46	G	O4'-C1'-N9	6.15	117.73	108.50
41	AA	39	LEU	CA-C-N	6.15	132.69	122.54
41	AA	39	LEU	C-N-CA	6.15	132.69	122.54
11	B2	308	G	C3'-C2'-C1'	6.15	107.45	101.30
11	B2	1144	G	C1'-C2'-O2'	6.15	117.62	108.40
36	BX	32	LEU	CB-CA-C	-6.15	101.23	109.16
38	A1	2063	U	O4'-C1'-C2'	6.15	113.75	107.60
11	B2	263	C	P-O5'-C5'	-6.15	111.68	120.90
20	BH	103	VAL	N-CA-C	6.15	116.32	110.42
33	BU	59	LEU	CA-C-N	6.15	128.52	120.28
33	BU	59	LEU	C-N-CA	6.15	128.52	120.28
38	A1	1308	G	P-O5'-C5'	6.15	130.12	120.90
38	A1	1452	G	O4'-C1'-N9	6.15	117.72	108.50
49	Ae	55	TRP	CB-CG-CD2	-6.15	118.19	126.80
21	BI	70	ASN	N-CA-C	-6.15	102.16	111.56
42	Aa	45	ALA	CA-C-O	-6.15	113.68	120.69
11	B2	1265	G	O5'-C5'-C4'	6.14	120.72	111.50
14	BB	55	ALA	N-CA-C	-6.14	105.78	113.28
38	A1	1565	G	C4'-C3'-C2'	-6.14	96.46	102.60
47	Ad	71	LEU	N-CA-C	-6.14	98.38	108.76
51	Ag	36	TYR	O-C-N	6.14	130.80	123.24
12	B3	15	LEU	CA-C-N	6.14	129.01	120.29
12	B3	15	LEU	C-N-CA	6.14	129.01	120.29
29	BQ	9	ARG	NE-CZ-NH1	-6.14	115.36	121.50
38	A1	2783	C	C1'-O4'-C4'	6.14	116.04	109.90
46	AD	113	ALA	CB-CA-C	-6.14	100.60	110.79
54	AI	80	ARG	CA-C-O	-6.14	114.04	120.55
9	AX	5	ILE	CA-C-N	6.14	127.52	119.84
9	AX	5	ILE	C-N-CA	6.14	127.52	119.84
38	A1	51	G	C3'-C2'-O2'	-6.14	105.39	114.60
15	BC	125	ALA	N-CA-CB	6.14	120.86	110.49
17	BE	149	ILE	CB-CA-C	6.14	119.88	110.55
20	BH	51	HIS	CG-CD2-NE2	6.14	113.34	107.20
4	AQ	136	HIS	O-C-N	6.14	128.39	122.07
11	B2	27	C	O4'-C1'-N1	6.14	117.70	108.50
20	BH	21	TRP	O-C-N	6.14	129.96	122.84
27	BO	6	HIS	CE1-NE2-CD2	-6.14	102.86	109.00
30	BR	8	ARG	N-CA-C	6.14	120.09	112.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1771	C	O4'-C4'-C3'	-6.14	99.96	106.10
41	AA	150	LYS	CA-C-O	6.14	127.16	119.12
40	AK	40	LEU	CA-C-N	6.14	129.64	120.31
40	AK	40	LEU	C-N-CA	6.14	129.64	120.31
59	AL	51	ILE	CA-C-N	6.14	128.50	120.28
59	AL	51	ILE	C-N-CA	6.14	128.50	120.28
9	AX	122	GLU	CA-C-N	6.13	129.32	120.79
9	AX	122	GLU	C-N-CA	6.13	129.32	120.79
11	B2	302	A	P-O3'-C3'	-6.13	111.00	120.20
18	BF	14	ASP	CA-CB-CG	-6.13	106.47	112.60
38	A1	519	A	C3'-C2'-O2'	6.13	119.90	110.70
38	A1	3004	C	N1-C1'-C2'	6.13	121.20	112.00
52	AH	56	ILE	N-CA-C	-6.13	98.69	107.77
46	AD	18	LEU	CA-C-O	-6.13	112.74	119.61
46	AD	27	ARG	CA-C-O	-6.13	113.35	120.34
9	AX	430	ILE	CA-C-O	6.13	127.64	120.71
11	B2	368	C	O4'-C4'-C3'	-6.13	99.97	106.10
11	B2	435	A	P-O5'-C5'	-6.13	111.70	120.90
32	BT	47	LEU	CA-C-N	6.13	129.00	120.29
32	BT	47	LEU	C-N-CA	6.13	129.00	120.29
10	B1	59	A	O4'-C1'-N9	6.13	117.69	108.50
17	BE	148	HIS	N-CA-C	-6.13	99.75	109.07
38	A1	951	C	O4'-C4'-C3'	-6.13	97.87	104.00
49	Ae	16	THR	CA-CB-OG1	6.13	118.80	109.60
11	B2	336	C	C3'-C2'-C1'	6.13	107.43	101.30
38	A1	139	G	P-O5'-C5'	-6.13	111.71	120.90
45	AC	5	HIS	CE1-NE2-CD2	-6.13	102.87	109.00
45	AC	52	LEU	N-CA-CB	6.13	120.19	110.57
49	Ae	17	HIS	CE1-NE2-CD2	-6.13	102.87	109.00
5	AS	135	ARG	NE-CZ-NH2	6.13	124.71	119.20
38	A1	1169	G	C5'-C4'-C3'	6.13	125.19	116.00
39	A3	107	G	O4'-C1'-N9	6.13	117.69	108.50
46	AD	228	GLU	CA-C-O	6.13	127.25	120.82
54	AI	43	ASP	N-CA-CB	6.13	118.89	110.01
18	BF	144	ALA	N-CA-CB	6.12	118.97	109.48
21	BI	13	HIS	CA-CB-CG	6.12	119.92	113.80
23	BK	83	ALA	N-CA-CB	6.12	118.95	110.07
41	AA	72	GLU	CA-C-N	6.12	128.49	120.28
41	AA	72	GLU	C-N-CA	6.12	128.49	120.28
9	AX	269	ILE	N-CA-C	-6.12	105.76	111.45
11	B2	963	A	C2'-C3'-O3'	6.12	118.68	109.50
22	BJ	4	TRP	CA-C-O	-6.12	114.48	121.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	851	G	P-O5'-C5'	6.12	130.08	120.90
46	AD	27	ARG	CA-C-N	6.12	126.01	119.28
46	AD	27	ARG	C-N-CA	6.12	126.01	119.28
48	AE	172	MET	CA-C-O	-6.12	114.39	120.82
26	BN	112	LYS	N-CA-C	-6.12	104.72	111.82
24	BL	26	ILE	CA-C-N	6.12	128.48	120.28
24	BL	26	ILE	C-N-CA	6.12	128.48	120.28
38	A1	1284	C	P-O5'-C5'	-6.12	111.72	120.90
63	AP	90	ARG	CA-C-N	6.12	128.76	120.44
63	AP	90	ARG	C-N-CA	6.12	128.76	120.44
14	BB	154	ILE	CA-C-N	6.12	127.08	119.98
14	BB	154	ILE	C-N-CA	6.12	127.08	119.98
38	A1	2368	G	P-O5'-C5'	-6.12	111.72	120.90
9	AX	416	GLU	O-C-N	6.12	128.37	122.07
11	B2	211	G	O3'-P-O5'	-6.12	94.83	104.00
30	BR	69	LYS	CA-C-O	-6.12	114.01	120.80
52	AH	76	LEU	N-CA-C	6.12	117.95	111.28
4	AQ	49	VAL	CA-CB-CG2	-6.11	100.01	110.40
11	B2	185	G	C4'-C3'-C2'	-6.11	96.49	102.60
11	B2	217	C	C4'-C3'-C2'	-6.11	96.49	102.60
11	B2	1035	C	C4'-C3'-O3'	-6.11	103.83	113.00
17	BE	44	PRO	CA-C-N	6.11	129.08	120.28
17	BE	44	PRO	C-N-CA	6.11	129.08	120.28
38	A1	978	C	O4'-C4'-C3'	-6.11	97.89	104.00
38	A1	1215	C	O4'-C1'-N1	6.11	117.67	108.50
38	A1	2962	A	O4'-C1'-N9	6.11	117.67	108.50
4	AQ	95	TRP	O-C-N	-6.11	115.18	122.15
18	BF	22	LEU	CA-C-N	6.11	127.78	120.14
18	BF	22	LEU	C-N-CA	6.11	127.78	120.14
38	A1	548	U	P-O3'-C3'	6.11	129.37	120.20
38	A1	1099	C	O4'-C1'-C2'	-6.11	101.49	107.60
38	A1	3023	G	C3'-C2'-C1'	6.11	107.41	101.30
45	AC	23	ILE	O-C-N	-6.11	114.65	122.17
11	B2	123	U	P-O5'-C5'	-6.11	111.73	120.90
11	B2	207	G	O4'-C4'-C3'	-6.11	97.89	104.00
11	B2	949	G	O4'-C1'-N9	6.11	117.67	108.50
11	B2	1205	G	O4'-C1'-N9	6.11	117.67	108.50
19	BG	53	LYS	O-C-N	-6.11	113.22	123.00
20	BH	121	GLN	CA-C-N	6.11	129.48	120.74
20	BH	121	GLN	C-N-CA	6.11	129.48	120.74
38	A1	792	A	C5'-C4'-O4'	6.11	118.97	109.80
38	A1	1166	A	C1'-O4'-C4'	6.11	116.01	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1770	A	P-O3'-C3'	6.11	129.37	120.20
17	BE	9	HIS	ND1-CE1-NE2	6.11	114.51	108.40
38	A1	2416	G	O4'-C1'-N9	6.11	117.66	108.50
38	A1	2717	A	O4'-C4'-C3'	-6.11	99.99	106.10
10	B1	29	C	P-O5'-C5'	6.11	130.06	120.90
13	BA	103	ILE	N-CA-C	-6.11	99.36	108.46
21	BI	43	LYS	N-CA-C	6.11	117.94	111.28
38	A1	514	U	O4'-C1'-N1	6.11	117.66	108.50
38	A1	1535	U	C4'-C3'-C2'	-6.11	96.49	102.60
43	AB	50	HIS	N-CA-C	-6.11	99.74	109.76
13	BA	76	GLN	CB-CG-CD	-6.11	102.22	112.60
38	A1	712	C	O3'-P-O5'	-6.11	94.84	104.00
38	A1	1902	G	C5'-C4'-C3'	6.11	125.16	116.00
38	A1	2218	C	P-O3'-C3'	6.11	129.36	120.20
43	AB	25	ARG	N-CA-CB	6.11	121.09	110.65
11	B2	1183	C	C3'-C2'-C1'	6.10	107.40	101.30
13	BA	63	HIS	CE1-NE2-CD2	-6.10	102.90	109.00
36	BX	50	ARG	N-CA-C	-6.10	99.79	109.07
38	A1	1199	U	C2'-C3'-O3'	6.10	118.66	109.50
42	Aa	28	ALA	N-CA-C	6.10	121.83	113.16
48	AE	18	HIS	CG-CD2-NE2	6.10	113.30	107.20
48	AE	121	ILE	N-CA-C	-6.10	99.69	108.48
53	Ah	11	ARG	N-CA-CB	6.10	119.19	110.16
57	Aj	31	SER	CA-C-O	-6.10	111.78	120.51
7	AU	111	LYS	CA-C-N	6.10	128.46	120.28
7	AU	111	LYS	C-N-CA	6.10	128.46	120.28
11	B2	103	A	C2'-C3'-O3'	6.10	118.65	109.50
38	A1	983	G	P-O5'-C5'	6.10	130.05	120.90
18	BF	14	ASP	N-CA-C	-6.10	107.67	114.62
61	AN	103	ARG	CA-C-O	-6.10	114.89	121.36
11	B2	79	G	O4'-C1'-N9	6.10	117.65	108.50
11	B2	256	G	O4'-C4'-C3'	-6.10	97.90	104.00
11	B2	287	G	C3'-C2'-C1'	-6.10	95.20	101.30
16	BD	31	ASP	N-CA-C	-6.10	104.04	112.03
17	BE	212	VAL	CA-CB-CG2	6.10	120.77	110.40
39	A3	21	C	O5'-C5'-C4'	6.10	120.85	111.70
46	AD	238	ARG	CA-C-N	6.10	129.79	120.82
46	AD	238	ARG	C-N-CA	6.10	129.79	120.82
38	A1	285	C	P-O3'-C3'	6.10	129.35	120.20
38	A1	400	U	P-O5'-C5'	-6.10	111.75	120.90
38	A1	402	G	O3'-P-O5'	-6.10	94.85	104.00
46	AD	38	SER	CA-C-N	6.10	128.95	120.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	AD	38	SER	C-N-CA	6.10	128.95	120.29
44	Ab	84	VAL	N-CA-C	-6.10	98.75	107.77
60	AM	137	HIS	ND1-CE1-NE2	6.10	114.50	108.40
26	BN	18	LEU	CA-C-N	6.09	128.36	120.44
26	BN	18	LEU	C-N-CA	6.09	128.36	120.44
27	BO	51	ALA	N-CA-C	-6.09	100.63	110.32
38	A1	901	C	P-O5'-C5'	6.09	130.04	120.90
38	A1	2416	G	C3'-C2'-O2'	6.09	119.84	110.70
46	AD	140	LEU	N-CA-CB	6.09	119.24	110.77
50	AF	45	GLN	N-CA-C	-6.09	99.26	109.07
63	AP	36	ARG	CA-C-O	6.09	127.01	120.55
17	BE	200	VAL	CB-CA-C	-6.09	104.04	112.02
38	A1	1628	C	O4'-C1'-N1	6.09	117.64	108.50
38	A1	2720	U	O4'-C4'-C3'	-6.09	97.91	104.00
46	AD	200	VAL	CB-CA-C	-6.09	101.75	110.83
11	B2	47	A	C2'-C3'-O3'	6.09	118.64	109.50
11	B2	253	G	C4'-C3'-C2'	-6.09	96.51	102.60
25	BM	123	HIS	CA-CB-CG	6.09	119.89	113.80
30	BR	67	ARG	CA-C-N	6.09	131.10	122.09
30	BR	67	ARG	C-N-CA	6.09	131.10	122.09
38	A1	761	U	O5'-C5'-C4'	-6.09	102.36	111.50
46	AD	24	THR	CA-C-O	-6.09	113.71	119.80
5	AS	97	ASN	OD1-CG-ND2	6.09	128.69	122.60
11	B2	80	A	P-O5'-C5'	6.09	130.04	120.90
20	BH	57	GLY	N-CA-C	-6.09	107.11	114.66
22	BJ	5	GLN	CA-C-N	6.09	132.66	121.70
22	BJ	5	GLN	C-N-CA	6.09	132.66	121.70
38	A1	921	C	P-O3'-C3'	-6.09	111.07	120.20
38	A1	2231	G	O4'-C1'-C2'	-6.09	101.51	107.60
38	A1	2900	C	O4'-C4'-C3'	-6.09	97.91	104.00
56	AJ	40	ILE	CA-C-N	6.09	129.45	120.74
56	AJ	40	ILE	C-N-CA	6.09	129.45	120.74
38	A1	2105	A	O4'-C1'-C2'	-6.09	101.51	107.60
11	B2	1218	C	O4'-C1'-N1	6.09	117.63	108.50
38	A1	2028	G	C4'-C3'-C2'	-6.09	96.51	102.60
38	A1	2489	C	P-O5'-C5'	6.09	130.03	120.90
39	A3	98	G	O5'-C5'-C4'	-6.09	102.37	111.50
54	AI	57	THR	CA-C-O	6.09	127.06	120.55
62	AO	98	GLY	O-C-N	6.09	129.57	122.45
4	AQ	43	ARG	NE-CZ-NH2	-6.08	113.72	119.20
14	BB	60	ALA	CA-C-O	6.08	126.04	118.43
15	BC	133	SER	N-CA-C	-6.08	100.64	110.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	AJ	41	ILE	N-CA-CB	6.08	119.28	110.52
11	B2	368	C	C4'-C3'-O3'	6.08	118.53	109.40
11	B2	991	C	O4'-C1'-N1	6.08	117.62	108.50
25	BM	30	ILE	N-CA-CB	6.08	121.42	111.44
30	BR	79	ASN	N-CA-C	-6.08	99.89	108.96
48	AE	160	ILE	O-C-N	-6.08	116.28	121.57
11	B2	836	G	O4'-C4'-C3'	-6.08	97.92	104.00
11	B2	1409	G	N9-C1'-C2'	6.08	121.12	112.00
38	A1	85	G	O4'-C1'-N9	6.08	117.62	108.50
38	A1	699	A	O4'-C1'-N9	6.08	117.62	108.50
38	A1	2298	C	C4'-C3'-C2'	-6.08	96.52	102.60
11	B2	1186	C	C2'-C3'-O3'	6.08	118.62	109.50
25	BM	80	HIS	CE1-NE2-CD2	-6.08	102.92	109.00
38	A1	877	U	O4'-C1'-N1	6.08	117.62	108.50
55	Ai	24	ARG	N-CA-C	6.08	117.98	111.36
7	AU	87	ASN	O-C-N	6.08	129.48	122.25
42	Aa	46	GLN	N-CA-C	-6.08	104.74	111.36
59	AL	123	VAL	N-CA-CB	6.08	119.33	111.67
18	BF	95	TYR	CB-CG-CD2	6.08	129.91	120.80
29	BQ	97	PHE	CB-CA-C	-6.08	100.70	110.79
38	A1	2250	G	C4'-C3'-O3'	6.08	122.11	113.00
60	AM	112	GLU	CA-C-N	6.08	130.31	121.80
60	AM	112	GLU	C-N-CA	6.08	130.31	121.80
7	AU	110	GLU	CA-C-O	-6.07	112.98	119.97
38	A1	981	A	C4'-C3'-C2'	6.07	108.67	102.60
38	A1	2292	A	C5'-C4'-C3'	-6.07	106.89	116.00
47	Ad	66	ARG	NE-CZ-NH2	-6.07	113.73	119.20
54	AI	20	LYS	CA-C-N	6.07	128.42	120.28
54	AI	20	LYS	C-N-CA	6.07	128.42	120.28
1	A7	46	LEU	CA-C-N	6.07	129.93	120.82
1	A7	46	LEU	C-N-CA	6.07	129.93	120.82
38	A1	2667	U	C4'-C3'-O3'	-6.07	103.89	113.00
11	B2	760	C	O5'-C5'-C4'	-6.07	102.39	111.50
11	B2	1212	U	O4'-C1'-N1	6.07	117.61	108.50
38	A1	473	C	N1-C1'-C2'	6.07	121.11	112.00
38	A1	592	C	O4'-C1'-C2'	-6.07	101.53	107.60
38	A1	1168	A	O4'-C4'-C3'	-6.07	97.93	104.00
38	A1	2840	C	O4'-C4'-C3'	-6.07	100.03	106.10
48	AE	115	PHE	O-C-N	6.07	129.86	123.06
44	Ab	108	LYS	N-CA-C	6.07	118.69	111.71
14	BB	172	ALA	CA-C-N	6.07	128.41	120.28
14	BB	172	ALA	C-N-CA	6.07	128.41	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	BR	32	ARG	CA-C-N	6.07	132.89	121.97
30	BR	32	ARG	C-N-CA	6.07	132.89	121.97
38	A1	1547	U	P-O5'-C5'	6.07	130.00	120.90
39	A3	18	G	O3'-P-O5'	-6.07	94.90	104.00
26	BN	33	ARG	N-CA-C	6.07	117.97	111.36
62	AO	160	ASP	CA-CB-CG	-6.07	106.53	112.60
33	BU	56	ALA	O-C-N	-6.06	115.69	122.12
38	A1	2953	U	P-O5'-C5'	6.06	129.99	120.90
51	Ag	45	GLU	O-C-N	-6.06	114.35	121.32
27	BO	111	ARG	CA-C-N	6.06	128.76	120.46
27	BO	111	ARG	C-N-CA	6.06	128.76	120.46
39	A3	58	C	O5'-C5'-C4'	-6.06	102.41	111.50
3	Af	35	VAL	CA-C-O	6.06	126.69	120.39
9	AX	123	ALA	N-CA-CB	6.06	119.03	109.82
11	B2	325	A	P-O3'-C3'	6.06	129.29	120.20
21	BI	118	GLU	CA-C-N	6.06	128.68	120.44
21	BI	118	GLU	C-N-CA	6.06	128.68	120.44
34	BV	60	PHE	N-CA-CB	6.06	119.46	110.49
38	A1	378	G	C4'-C3'-C2'	-6.06	96.54	102.60
38	A1	2543	A	O4'-C1'-C2'	6.06	111.86	105.80
38	A1	2739	G	O4'-C1'-N9	6.06	117.59	108.50
38	A1	2894	A	C3'-C2'-C1'	-6.06	95.24	101.30
10	B1	23	G	P-O3'-C3'	-6.06	111.11	120.20
13	BA	91	TYR	CA-C-O	-6.06	114.46	120.82
54	AI	51	GLN	CA-C-N	6.06	128.31	120.44
54	AI	51	GLN	C-N-CA	6.06	128.31	120.44
65	AV	50	LEU	CA-C-O	-6.06	114.97	121.94
35	BW	7	PRO	CA-C-O	-6.06	114.75	121.23
38	A1	418	C	C4'-C3'-O3'	-6.06	103.92	113.00
38	A1	770	G	C4'-C3'-C2'	-6.06	96.54	102.60
38	A1	1132	U	O4'-C1'-N1	6.06	117.58	108.50
48	AE	40	ARG	NE-CZ-NH2	6.06	124.65	119.20
11	B2	1129	A	C3'-C2'-C1'	6.05	107.35	101.30
17	BE	129	ASN	N-CA-C	-6.05	100.21	108.38
38	A1	285	C	O4'-C1'-C2'	-6.05	101.55	107.60
38	A1	1247	U	P-O5'-C5'	6.05	129.98	120.90
40	A5	73	ALA	CA-C-O	-6.05	114.13	120.55
62	AO	24	ARG	CA-C-N	6.05	128.39	120.28
62	AO	24	ARG	C-N-CA	6.05	128.39	120.28
38	A1	545	G	C4'-C3'-O3'	6.05	118.48	109.40
38	A1	1001	C	C4'-C3'-O3'	6.05	118.48	109.40
38	A1	1681	G	C4'-C3'-O3'	-6.05	103.92	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	AC	23	ILE	CA-CB-CG1	6.05	120.69	110.40
45	AC	97	THR	CA-C-O	6.05	127.85	121.25
38	A1	1226	G	C5'-C4'-C3'	6.05	125.08	116.00
43	AB	237	ARG	NE-CZ-NH2	6.05	124.65	119.20
46	AD	74	LYS	CA-C-O	-6.05	113.70	120.54
55	Ai	14	GLY	CA-C-N	6.05	132.33	122.65
55	Ai	14	GLY	C-N-CA	6.05	132.33	122.65
3	Af	12	ARG	CA-C-N	6.05	128.38	120.28
3	Af	12	ARG	C-N-CA	6.05	128.38	120.28
38	A1	1218	C	O5'-C5'-C4'	-6.05	102.43	111.50
39	A3	2	G	C5'-C4'-C3'	6.05	125.08	116.00
40	AK	48	MET	N-CA-C	-6.05	100.12	109.14
38	A1	1713	G	O5'-C5'-C4'	-6.05	102.43	111.50
11	B2	474	G	C1'-C2'-O2'	6.05	117.47	108.40
17	BE	225	THR	N-CA-C	-6.05	99.88	109.07
47	Ad	12	ARG	NE-CZ-NH2	6.05	124.64	119.20
13	BA	25	ASP	CB-CA-C	6.04	119.85	111.63
14	BB	30	LYS	CA-C-N	6.04	128.99	120.28
14	BB	30	LYS	C-N-CA	6.04	128.99	120.28
38	A1	228	U	O4'-C1'-N1	6.04	117.57	108.50
38	A1	1849	A	O5'-C5'-C4'	-6.04	102.43	111.50
52	AH	99	THR	CA-C-N	6.04	128.30	120.44
52	AH	99	THR	C-N-CA	6.04	128.30	120.44
6	AT	38	ASP	CA-CB-CG	-6.04	106.56	112.60
13	BA	162	VAL	CA-C-O	-6.04	113.94	120.47
23	BK	66	VAL	O-C-N	-6.04	116.52	122.99
38	A1	475	U	P-O3'-C3'	6.04	129.27	120.20
38	A1	2046	C	C4'-C3'-C2'	-6.04	96.56	102.60
50	AF	63	LYS	CA-C-N	6.04	128.87	120.29
50	AF	63	LYS	C-N-CA	6.04	128.87	120.29
59	AL	15	HIS	CA-CB-CG	-6.04	107.76	113.80
60	AM	62	VAL	N-CA-C	-6.04	100.37	108.35
11	B2	40	C	C3'-C2'-C1'	6.04	107.34	101.30
11	B2	78	G	O4'-C1'-N9	6.04	117.56	108.50
11	B2	611	A	O4'-C1'-C2'	-6.04	101.56	107.60
11	B2	1377	G	O4'-C1'-N9	6.04	117.56	108.50
38	A1	1611	C	O4'-C1'-N1	6.04	117.56	108.50
38	A1	1810	G	O4'-C1'-N9	6.04	117.56	108.50
38	A1	2160	C	C3'-C2'-C1'	-6.04	95.26	101.30
45	AC	318	ARG	N-CA-C	-6.04	97.93	110.80
13	BA	28	GLY	O-C-N	6.04	130.33	122.42
46	AD	234	THR	N-CA-CB	6.04	120.84	111.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	210	A	P-O3'-C3'	6.04	129.26	120.20
13	BA	64	VAL	CB-CA-C	-6.04	101.39	111.29
16	BD	153	THR	N-CA-C	-6.04	99.74	108.07
64	AR	89	HIS	CA-C-N	6.04	125.72	119.56
64	AR	89	HIS	C-N-CA	6.04	125.72	119.56
66	AY	17	ARG	NE-CZ-NH2	6.04	124.63	119.20
11	B2	375	G	C1'-C2'-O2'	6.04	117.45	108.40
11	B2	1144	G	P-O3'-C3'	-6.04	111.14	120.20
38	A1	1843	C	O4'-C1'-N1	6.04	117.56	108.50
4	AQ	12	ALA	CA-C-O	-6.04	114.15	120.55
11	B2	535	U	C5'-C4'-C3'	6.04	125.05	116.00
20	BH	85	PHE	CA-CB-CG	6.04	119.84	113.80
38	A1	1232	G	P-O5'-C5'	6.04	129.95	120.90
58	Ak	43	ARG	CA-C-N	6.04	128.37	120.28
58	Ak	43	ARG	C-N-CA	6.04	128.37	120.28
60	AM	39	ILE	CA-C-O	6.04	127.73	120.67
11	B2	270	A	O4'-C1'-N9	6.03	117.25	108.20
38	A1	982	G	C4'-C3'-C2'	-6.03	96.57	102.60
38	A1	1912	A	P-O5'-C5'	6.03	129.95	120.90
58	Ak	170	THR	CA-CB-OG1	6.03	118.65	109.60
11	B2	673	C	C5'-C4'-C3'	6.03	125.05	116.00
26	BN	78	ILE	CA-C-N	6.03	128.36	120.28
26	BN	78	ILE	C-N-CA	6.03	128.36	120.28
33	BU	93	ALA	N-CA-C	6.03	118.33	110.43
38	A1	549	G	O4'-C4'-C3'	-6.03	100.07	106.10
38	A1	1621	G	C3'-C2'-O2'	6.03	119.75	110.70
39	A3	87	G	P-O3'-C3'	-6.03	111.15	120.20
11	B2	196	G	C2'-C3'-O3'	6.03	122.75	113.70
11	B2	218	C	P-O5'-C5'	6.03	129.95	120.90
11	B2	1271	G	C4'-C3'-C2'	-6.03	96.57	102.60
36	BX	15	ILE	N-CA-C	-6.03	104.97	110.82
38	A1	219	G	O4'-C4'-C3'	-6.03	97.97	104.00
38	A1	607	C	O4'-C1'-C2'	-6.03	101.57	107.60
38	A1	897	U	C4'-C3'-O3'	6.03	118.44	109.40
38	A1	2014	A	P-O5'-C5'	6.03	129.95	120.90
9	AX	30	THR	CA-C-N	6.03	126.78	120.03
9	AX	30	THR	C-N-CA	6.03	126.78	120.03
26	BN	31	LYS	CA-C-N	6.03	128.28	120.44
26	BN	31	LYS	C-N-CA	6.03	128.28	120.44
38	A1	958	A	C4'-C3'-C2'	-6.03	96.57	102.60
38	A1	1706	G	P-O3'-C3'	6.03	129.24	120.20
3	Af	49	LEU	N-CA-C	-6.03	97.96	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	593	G	C5'-C4'-C3'	6.03	125.04	116.00
27	BO	81	ARG	CA-C-O	6.03	124.29	119.59
34	BV	80	TYR	CA-C-N	6.03	128.28	120.56
34	BV	80	TYR	C-N-CA	6.03	128.28	120.56
38	A1	437	G	C4'-C3'-C2'	-6.03	96.57	102.60
38	A1	2788	U	O4'-C1'-N1	6.03	117.54	108.50
11	B2	63	G	P-O5'-C5'	-6.03	111.86	120.90
11	B2	654	U	P-O3'-C3'	6.03	129.24	120.20
11	B2	924	U	C5'-C4'-C3'	6.03	125.04	116.00
32	BT	27	LEU	CB-CA-C	-6.03	100.79	110.79
34	BV	62	SER	CA-C-N	6.03	134.37	124.31
34	BV	62	SER	C-N-CA	6.03	134.37	124.31
38	A1	360	G	O5'-C5'-C4'	-6.03	102.46	111.50
38	A1	3020	G	O4'-C1'-N9	6.03	117.24	108.20
41	AA	141	ASP	CA-CB-CG	-6.03	106.58	112.60
11	B2	496	C	O4'-C1'-N1	6.02	117.54	108.50
38	A1	623	G	O5'-C5'-C4'	-6.02	102.67	111.70
38	A1	1367	A	P-O3'-C3'	6.02	129.24	120.20
4	AQ	88	ARG	CB-CA-C	6.02	122.23	110.67
11	B2	88	G	C4'-C3'-C2'	-6.02	96.58	102.60
11	B2	381	C	O4'-C1'-N1	6.02	117.53	108.50
11	B2	1163	U	O4'-C4'-C3'	-6.02	97.98	104.00
14	BB	49	ASP	CB-CA-C	-6.02	100.79	110.79
36	BX	21	THR	CB-CA-C	6.02	121.09	110.85
56	AJ	29	VAL	N-CA-CB	-6.02	104.08	111.67
49	Ae	17	HIS	CB-CG-CD2	-6.02	123.37	131.20
11	B2	183	A	O4'-C1'-N9	6.02	117.53	108.50
11	B2	1204	C	P-O5'-C5'	6.02	129.93	120.90
14	BB	135	ILE	CA-C-O	-6.02	111.88	119.95
38	A1	100	C	O3'-P-O5'	-6.02	94.97	104.00
38	A1	196	A	O5'-C5'-C4'	-6.02	102.47	111.50
48	AE	22	ARG	CA-C-N	6.02	126.36	119.92
48	AE	22	ARG	C-N-CA	6.02	126.36	119.92
17	BE	125	LEU	CA-C-O	6.02	127.20	120.70
18	BF	141	VAL	O-C-N	-6.02	114.24	121.10
20	BH	129	ASN	CA-CB-CG	-6.02	106.58	112.60
42	Aa	19	LYS	CA-C-N	6.02	133.03	121.54
42	Aa	19	LYS	C-N-CA	6.02	133.03	121.54
53	Ah	4	LYS	CA-C-N	6.02	128.66	120.54
53	Ah	4	LYS	C-N-CA	6.02	128.66	120.54
11	B2	137	A	P-O5'-C5'	6.02	129.92	120.90
27	BO	135	PHE	CA-C-N	6.02	129.84	120.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BO	135	PHE	C-N-CA	6.02	129.84	120.75
38	A1	334	G	C3'-C2'-C1'	6.01	107.31	101.30
38	A1	1745	U	C1'-O4'-C4'	6.01	115.92	109.90
5	AS	40	ARG	CB-CA-C	6.01	119.70	109.72
11	B2	58	U	O4'-C1'-N1	6.01	117.52	108.50
11	B2	842	U	P-O5'-C5'	-6.01	111.88	120.90
16	BD	104	ARG	CA-C-O	-6.01	115.18	121.55
38	A1	634	G	C4'-C3'-O3'	-6.01	103.98	113.00
38	A1	2551	G	C5'-C4'-C3'	-6.01	106.98	116.00
59	AL	88	LEU	CA-C-N	6.01	132.66	122.26
59	AL	88	LEU	C-N-CA	6.01	132.66	122.26
3	Af	35	VAL	O-C-N	-6.01	116.83	123.20
13	BA	133	GLN	OE1-CD-NE2	6.01	128.61	122.60
27	BO	30	GLY	CA-C-O	6.01	125.97	119.06
38	A1	1819	G	C4'-C3'-C2'	-6.01	96.59	102.60
52	AH	105	LYS	N-CA-C	-6.01	104.73	111.28
55	Ai	81	ILE	N-CA-C	-6.01	101.03	109.21
58	Ak	127	GLY	CA-C-N	6.01	125.77	119.76
58	Ak	127	GLY	C-N-CA	6.01	125.77	119.76
5	AS	8	SER	CA-C-N	6.01	131.95	122.94
5	AS	8	SER	C-N-CA	6.01	131.95	122.94
10	B1	77	A	O4'-C1'-N9	6.01	117.51	108.50
11	B2	496	C	O4'-C1'-C2'	-6.01	101.59	107.60
11	B2	1394	G	O4'-C1'-N9	6.01	117.52	108.50
38	A1	1350	C	O4'-C1'-C2'	-6.01	101.59	107.60
26	BN	47	ALA	N-CA-C	-6.01	102.53	110.40
43	AB	207	LYS	N-CA-C	-6.01	106.49	113.88
65	AV	53	THR	N-CA-CB	6.01	119.76	110.21
67	AZ	2	ASP	CA-C-N	6.01	128.82	120.29
67	AZ	2	ASP	C-N-CA	6.01	128.82	120.29
6	AT	40	LYS	CA-C-N	6.00	128.82	120.29
6	AT	40	LYS	C-N-CA	6.00	128.82	120.29
20	BH	168	GLY	CA-C-N	6.00	128.25	120.44
20	BH	168	GLY	C-N-CA	6.00	128.25	120.44
34	BV	82	GLU	N-CA-CB	6.00	118.07	109.78
38	A1	544	A	C2'-C3'-O3'	6.00	118.51	109.50
11	B2	246	A	C2'-C3'-O3'	6.00	122.70	113.70
11	B2	1288	C	C5'-C4'-O4'	6.00	118.81	109.80
18	BF	200	ALA	N-CA-CB	6.00	118.72	110.01
38	A1	646	U	O4'-C1'-N1	6.00	117.50	108.50
47	Ad	63	ARG	CA-C-N	6.00	125.96	119.78
47	Ad	63	ARG	C-N-CA	6.00	125.96	119.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	Ae	21	ARG	N-CA-C	-6.00	104.79	114.09
58	Ak	191	LEU	N-CA-C	-6.00	98.94	108.73
60	AM	21	GLU	CA-C-N	6.00	128.32	120.28
60	AM	21	GLU	C-N-CA	6.00	128.32	120.28
11	B2	214	C	P-O3'-C3'	-6.00	111.20	120.20
29	BQ	63	VAL	N-CA-C	-6.00	106.65	112.29
38	A1	1109	G	C3'-C2'-C1'	6.00	107.30	101.30
42	Aa	48	VAL	N-CA-CB	6.00	120.28	111.52
11	B2	290	C	C4'-C3'-O3'	-6.00	104.00	113.00
13	BA	60	THR	CA-C-N	6.00	128.60	120.44
13	BA	60	THR	C-N-CA	6.00	128.60	120.44
41	AA	97	ALA	N-CA-CB	6.00	120.63	110.49
28	BP	18	ALA	CB-CA-C	-6.00	99.15	110.67
60	AM	34	PRO	CA-C-N	6.00	128.99	120.53
60	AM	34	PRO	C-N-CA	6.00	128.99	120.53
11	B2	739	G	O4'-C1'-C2'	-6.00	101.60	107.60
17	BE	28	TRP	CA-C-O	-6.00	113.67	120.32
21	BI	87	GLU	N-CA-C	6.00	117.82	111.28
38	A1	70	G	O3'-P-O5'	-6.00	95.00	104.00
38	A1	2037	A	O4'-C4'-C3'	-6.00	98.00	104.00
38	A1	2285	G	O4'-C1'-N9	6.00	117.19	108.20
11	B2	321	A	O4'-C1'-N9	6.00	117.49	108.50
11	B2	518	U	O4'-C4'-C3'	-6.00	98.00	104.00
26	BN	82	LYS	CA-C-N	6.00	130.10	122.37
26	BN	82	LYS	C-N-CA	6.00	130.10	122.37
41	AA	160	ASN	CA-CB-CG	6.00	118.59	112.60
9	AX	244	VAL	O-C-N	-5.99	116.58	122.93
9	AX	416	GLU	CB-CA-C	-5.99	101.47	110.88
13	BA	108	ASN	CA-C-N	5.99	133.28	122.43
13	BA	108	ASN	C-N-CA	5.99	133.28	122.43
32	BT	33	ARG	CA-C-N	5.99	128.23	120.44
32	BT	33	ARG	C-N-CA	5.99	128.23	120.44
38	A1	1648	C	O4'-C4'-C3'	-5.99	98.01	104.00
44	Ab	12	VAL	CA-C-O	-5.99	114.72	120.95
44	Ab	65	TRP	CA-C-N	5.99	129.22	120.71
44	Ab	65	TRP	C-N-CA	5.99	129.22	120.71
46	AD	71	GLU	CA-C-O	-5.99	114.45	121.16
62	AO	110	PRO	CA-C-O	-5.99	111.87	120.56
11	B2	941	C	P-O3'-C3'	5.99	129.19	120.20
13	BA	24	PRO	CA-C-O	-5.99	114.82	121.23
52	AH	73	THR	N-CA-C	-5.99	104.83	111.36
52	AH	127	ILE	N-CA-CB	5.99	118.69	110.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AN	62	LEU	O-C-N	5.99	128.47	122.12
67	AZ	37	VAL	CA-CB-CG1	5.99	120.59	110.40
11	B2	197	A	C4'-C3'-O3'	-5.99	104.01	113.00
29	BQ	149	ASP	N-CA-C	-5.99	96.57	109.81
38	A1	112	U	C5'-C4'-C3'	-5.99	107.02	116.00
38	A1	817	G	P-O5'-C5'	-5.99	111.91	120.90
12	AG	114	ILE	N-CA-C	5.99	116.73	110.62
61	AN	72	TYR	CA-C-N	5.99	128.23	120.44
61	AN	72	TYR	C-N-CA	5.99	128.23	120.44
19	BG	9	SER	N-CA-CB	5.99	120.74	110.68
30	BR	73	HIS	CB-CG-ND1	5.99	131.68	122.70
38	A1	127	C	C4'-C3'-C2'	-5.99	96.61	102.60
38	A1	1031	C	C4'-C3'-O3'	-5.99	104.02	113.00
38	A1	1621	G	O4'-C4'-C3'	-5.99	98.01	104.00
38	A1	2702	A	C4'-C3'-C2'	-5.99	96.61	102.60
38	A1	2798	U	O4'-C1'-N1	5.99	117.48	108.50
39	A3	47	G	C1'-O4'-C4'	-5.99	103.91	109.90
46	AD	67	MET	CA-C-N	5.99	132.98	121.54
46	AD	67	MET	C-N-CA	5.99	132.98	121.54
52	AH	78	LYS	CA-C-N	5.99	128.58	120.44
52	AH	78	LYS	C-N-CA	5.99	128.58	120.44
18	BF	188	PHE	N-CA-C	-5.99	98.09	108.69
12	AG	56	ASP	CA-C-N	5.99	128.52	120.50
12	AG	56	ASP	C-N-CA	5.99	128.52	120.50
40	AK	17	ARG	NE-CZ-NH1	-5.99	115.51	121.50
60	AM	159	PHE	CA-CB-CG	-5.99	107.81	113.80
11	B2	262	G	C5'-C4'-C3'	-5.98	107.03	116.00
11	B2	1177	C	O4'-C4'-C3'	-5.98	98.02	104.00
11	B2	1351	U	O4'-C1'-N1	5.98	117.47	108.50
23	BK	123	THR	N-CA-CB	5.98	120.60	110.49
30	BR	24	HIS	N-CA-C	-5.98	100.15	109.72
38	A1	2840	C	P-O3'-C3'	5.98	129.18	120.20
48	AE	102	LEU	CA-C-N	5.98	129.78	120.75
48	AE	102	LEU	C-N-CA	5.98	129.78	120.75
48	AE	105	SER	CA-C-N	5.98	132.97	121.54
48	AE	105	SER	C-N-CA	5.98	132.97	121.54
60	AM	179	ALA	CA-C-O	-5.98	114.66	121.66
10	B1	27	A	P-O5'-C5'	5.98	129.87	120.90
33	BU	55	VAL	O-C-N	5.98	127.99	121.83
43	AB	103	PRO	CB-CA-C	-5.98	103.14	110.98
58	Ak	209	ASP	N-CA-C	-5.98	98.89	109.06
10	B1	8	U	C4'-C3'-C2'	-5.98	96.62	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	722	G	O4'-C1'-N9	5.98	117.47	108.50
11	B2	1143	G	O3'-P-O5'	-5.98	95.03	104.00
22	BJ	10	LYS	N-CA-C	-5.98	99.97	109.23
23	BK	16	ARG	NE-CZ-NH1	-5.98	115.52	121.50
37	BY	29	VAL	N-CA-C	-5.98	99.80	108.17
38	A1	897	U	C5'-C4'-C3'	-5.98	106.24	115.20
38	A1	3035	C	P-O5'-C5'	-5.98	111.94	120.90
11	B2	1099	A	O3'-P-O5'	5.97	112.96	104.00
11	B2	1404	C	P-O3'-C3'	5.97	129.16	120.20
21	BI	90	GLU	O-C-N	-5.97	115.92	122.07
38	A1	611	G	P-O5'-C5'	-5.97	111.94	120.90
38	A1	2074	U	P-O5'-C5'	-5.97	111.94	120.90
54	AI	38	ILE	O-C-N	-5.97	116.75	123.20
66	AY	45	GLY	CA-C-O	5.97	126.90	120.75
11	B2	347	G	O4'-C1'-C2'	5.97	111.77	105.80
11	B2	379	A	O4'-C1'-N9	5.97	117.46	108.50
11	B2	1365	G	O4'-C1'-N9	5.97	117.46	108.50
38	A1	2156	A	C4'-C3'-O3'	5.97	118.36	109.40
38	A1	2474	A	O3'-P-O5'	-5.97	95.04	104.00
38	A1	2947	G	O4'-C1'-C2'	-5.97	99.83	105.80
11	B2	828	U	C2'-C3'-O3'	5.97	118.46	109.50
11	B2	1374	C	C4'-C3'-C2'	-5.97	96.63	102.60
9	AX	369	ARG	NE-CZ-NH2	-5.97	113.83	119.20
9	AX	427	HIS	ND1-CE1-NE2	5.97	114.37	108.40
13	BA	163	ASN	CB-CG-ND2	5.97	125.35	116.40
38	A1	2628	U	O4'-C1'-N1	5.97	117.45	108.50
39	A3	51	U	P-O5'-C5'	5.97	129.85	120.90
58	Ak	195	TYR	O-C-N	-5.97	115.63	123.21
11	B2	592	G	O4'-C1'-C2'	-5.97	101.63	107.60
44	Ab	105	THR	N-CA-C	5.97	117.78	111.28
11	B2	885	G	P-O5'-C5'	5.97	129.85	120.90
38	A1	101	G	C1'-O4'-C4'	-5.97	103.73	109.70
38	A1	452	A	C5'-C4'-C3'	-5.97	107.05	116.00
41	AA	81	VAL	CA-C-N	5.97	129.46	120.75
41	AA	81	VAL	C-N-CA	5.97	129.46	120.75
53	Ah	10	ILE	CA-C-N	5.97	128.76	120.29
53	Ah	10	ILE	C-N-CA	5.97	128.76	120.29
66	AY	56	TRP	CB-CG-CD1	5.97	135.85	126.90
4	AQ	145	HIS	CG-CD2-NE2	5.96	113.16	107.20
6	AT	47	PHE	CA-CB-CG	-5.96	107.84	113.80
15	BC	21	LEU	N-CA-C	5.96	117.58	111.14
38	A1	770	G	O4'-C1'-N9	5.96	117.45	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1114	G	C5'-C4'-O4'	5.96	118.75	109.80
38	A1	1691	U	C4'-C3'-C2'	-5.96	96.64	102.60
38	A1	2072	G	O4'-C4'-C3'	-5.96	98.04	104.00
31	BS	23	GLU	CA-C-N	5.96	131.87	122.21
31	BS	23	GLU	C-N-CA	5.96	131.87	122.21
38	A1	2117	U	O4'-C1'-N1	5.96	117.44	108.50
14	BB	183	GLN	CB-CG-CD	-5.96	102.47	112.60
17	BE	66	LEU	CA-C-O	-5.96	114.10	120.42
17	BE	91	VAL	N-CA-C	-5.96	99.89	108.48
18	BF	7	GLU	CA-C-O	-5.96	114.72	120.92
54	AI	98	LYS	N-CA-C	-5.96	99.99	109.23
11	B2	160	C	C4'-C3'-C2'	-5.96	96.64	102.60
11	B2	951	G	P-O3'-C3'	5.96	129.14	120.20
14	BB	54	VAL	N-CA-C	-5.96	105.89	113.22
15	BC	7	PHE	CA-CB-CG	-5.96	107.84	113.80
29	BQ	47	THR	CA-C-N	5.96	128.19	120.44
29	BQ	47	THR	C-N-CA	5.96	128.19	120.44
38	A1	1097	G	O5'-C5'-C4'	5.96	120.44	111.50
38	A1	1382	C	O4'-C1'-C2'	-5.96	101.64	107.60
38	A1	1711	C	O4'-C1'-N1	5.96	117.14	108.20
38	A1	1765	A	P-O3'-C3'	5.96	129.14	120.20
40	AK	61	ASP	CA-C-N	5.96	133.15	122.13
40	AK	61	ASP	C-N-CA	5.96	133.15	122.13
4	AQ	67	HIS	CB-CG-CD2	-5.96	123.46	131.20
11	B2	1134	G	P-O5'-C5'	-5.96	111.97	120.90
11	B2	1440	G	O4'-C4'-C3'	-5.96	98.04	104.00
38	A1	1381	C	O4'-C1'-N1	5.96	117.44	108.50
58	AK	100	TYR	CA-C-N	5.96	128.75	120.29
58	AK	100	TYR	C-N-CA	5.96	128.75	120.29
11	B2	833	C	P-O3'-C3'	-5.96	111.27	120.20
50	AF	153	ASN	CA-C-N	5.96	128.06	120.56
50	AF	153	ASN	C-N-CA	5.96	128.06	120.56
59	AL	34	ARG	N-CA-C	-5.96	101.71	110.52
38	A1	278	C	O4'-C1'-N1	5.95	117.43	108.50
38	A1	1134	A	O3'-P-O5'	-5.95	95.07	104.00
38	A1	2428	C	C4'-C3'-C2'	-5.95	96.65	102.60
39	A3	37	U	O4'-C1'-N1	5.95	117.43	108.50
52	AH	53	VAL	N-CA-CB	5.95	121.05	111.23
5	AS	120	HIS	ND1-CE1-NE2	5.95	114.35	108.40
20	BH	81	VAL	CA-CB-CG2	5.95	120.52	110.40
34	BV	50	THR	CA-CB-CG2	5.95	120.62	110.50
38	A1	2298	C	P-O5'-C5'	5.95	129.83	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	AG	83	LYS	CB-CA-C	-5.95	100.73	110.85
3	Af	46	ARG	CA-C-N	5.95	131.95	123.14
3	Af	46	ARG	C-N-CA	5.95	131.95	123.14
11	B2	567	A	O4'-C1'-C2'	-5.95	101.65	107.60
11	B2	985	C	C4'-C3'-C2'	5.95	108.55	102.60
38	A1	1487	U	P-O3'-C3'	5.95	129.12	120.20
12	AG	32	ILE	CA-CB-CG1	5.95	120.51	110.40
9	AX	91	SER	N-CA-C	-5.95	106.06	113.38
11	B2	344	G	O4'-C1'-C2'	-5.95	101.65	107.60
11	B2	355	C	C4'-C3'-C2'	-5.95	96.65	102.60
18	BF	121	ILE	CA-C-O	-5.95	115.63	121.58
38	A1	916	A	P-O5'-C5'	-5.95	111.98	120.90
38	A1	2173	U	C3'-C2'-O2'	5.95	119.62	110.70
38	A1	3036	C	O4'-C4'-C3'	-5.95	98.05	104.00
40	A5	39	GLY	CA-C-N	5.95	128.53	120.38
40	A5	39	GLY	C-N-CA	5.95	128.53	120.38
38	A1	1806	C	O5'-C5'-C4'	-5.95	102.58	111.50
43	AB	163	ALA	N-CA-C	5.95	118.22	110.43
55	Ai	79	ARG	NE-CZ-NH2	5.95	124.55	119.20
9	AX	197	LEU	N-CA-C	5.95	117.43	111.07
11	B2	1068	C	O4'-C1'-N1	5.95	117.42	108.50
11	B2	1396	C	P-O5'-C5'	5.95	129.82	120.90
24	BL	23	ILE	CA-C-O	5.95	125.59	119.35
38	A1	223	U	O4'-C4'-C3'	-5.95	98.06	104.00
38	A1	245	A	C4'-C3'-O3'	-5.95	104.08	113.00
16	BD	165	HIS	CE1-NE2-CD2	-5.94	103.06	109.00
38	A1	512	G	P-O5'-C5'	-5.94	111.98	120.90
38	A1	1113	G	P-O3'-C3'	-5.94	111.28	120.20
34	BV	78	MET	O-C-N	-5.94	115.82	122.12
38	A1	2557	C	C3'-C2'-O2'	-5.94	101.79	110.70
46	AD	145	VAL	CB-CA-C	5.94	119.81	111.08
12	AG	108	ARG	CA-C-N	5.94	128.73	120.29
12	AG	108	ARG	C-N-CA	5.94	128.73	120.29
9	AX	198	ASN	CA-CB-CG	-5.94	106.66	112.60
11	B2	942	A	P-O3'-C3'	-5.94	111.29	120.20
11	B2	1399	G	O4'-C1'-C2'	-5.94	101.66	107.60
17	BE	179	PHE	N-CA-CB	5.94	120.31	110.63
26	BN	5	LYS	N-CA-CB	5.94	120.53	110.49
38	A1	270	C	O4'-C4'-C3'	-5.94	98.06	104.00
38	A1	405	G	O4'-C4'-C3'	5.94	109.94	104.00
38	A1	1698	G	P-O3'-C3'	-5.94	111.29	120.20
4	AQ	108	LYS	CA-C-N	5.94	129.34	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AQ	108	LYS	C-N-CA	5.94	129.34	120.31
11	B2	641	A	C5'-C4'-C3'	5.94	124.11	115.20
38	A1	2384	G	C3'-C2'-C1'	-5.94	95.36	101.30
5	AS	60	PRO	N-CA-C	-5.94	101.76	111.68
11	B2	1167	C	C4'-C3'-C2'	-5.94	96.66	102.60
17	BE	157	ASN	N-CA-C	5.94	117.75	111.28
23	BK	39	GLU	CA-C-O	5.94	126.82	120.70
38	A1	1346	G	O4'-C1'-N9	5.94	117.41	108.50
38	A1	1375	G	P-O5'-C5'	-5.94	112.00	120.90
38	A1	2769	U	C4'-C3'-O3'	-5.94	104.09	113.00
51	Ag	4	PHE	N-CA-CB	5.94	119.63	110.43
41	AA	135	VAL	CA-C-N	5.94	126.49	120.38
41	AA	135	VAL	C-N-CA	5.94	126.49	120.38
62	AO	159	GLN	N-CA-C	-5.94	104.67	113.40
11	B2	1349	C	O4'-C1'-C2'	-5.93	101.67	107.60
17	BE	133	ILE	CA-CB-CG1	5.93	120.49	110.40
19	BG	23	GLY	O-C-N	5.93	129.27	122.33
38	A1	1699	U	O4'-C4'-C3'	-5.93	98.07	104.00
38	A1	1945	C	C4'-C3'-O3'	-5.93	104.10	113.00
5	AS	130	PRO	N-CA-CB	5.93	108.85	103.33
9	AX	318	VAL	CB-CA-C	-5.93	104.11	111.70
11	B2	1216	A	C3'-C2'-O2'	-5.93	105.70	114.60
38	A1	117	A	O4'-C4'-C3'	-5.93	98.07	104.00
11	B2	961	U	O4'-C1'-N1	5.93	117.10	108.20
60	AM	30	TRP	CA-C-O	-5.93	114.26	120.55
29	BQ	132	LEU	CA-C-N	5.93	128.58	120.46
29	BQ	132	LEU	C-N-CA	5.93	128.58	120.46
38	A1	1557	G	C4'-C3'-C2'	-5.93	96.67	102.60
38	A1	2227	G	P-O5'-C5'	5.93	129.79	120.90
41	AA	78	GLY	N-CA-C	-5.93	99.13	113.18
50	AF	161	THR	CA-CB-OG1	5.93	118.50	109.60
11	B2	632	C	C4'-C3'-O3'	-5.93	104.11	113.00
11	B2	1314	C	O4'-C1'-N1	5.93	117.39	108.50
27	BO	23	TRP	CA-C-O	5.93	126.70	120.42
38	A1	1451	A	C3'-C2'-C1'	5.93	107.23	101.30
39	A3	74	U	P-O5'-C5'	5.93	129.79	120.90
45	AC	55	ASP	CA-C-N	5.93	132.37	121.70
45	AC	55	ASP	C-N-CA	5.93	132.37	121.70
11	B2	455	C	P-O3'-C3'	-5.93	111.31	120.20
11	B2	560	A	C4'-C3'-C2'	-5.93	96.67	102.60
15	BC	121	MET	N-CA-C	5.93	118.53	111.71
25	BM	133	ARG	CA-C-O	5.93	125.04	118.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	632	G	O4'-C1'-N9	5.93	117.39	108.50
38	A1	1067	G	P-O5'-C5'	-5.93	112.01	120.90
38	A1	2338	A	O4'-C1'-C2'	-5.93	99.87	105.80
48	AE	132	ILE	CB-CA-C	-5.93	103.56	110.91
10	B1	16	C	P-O3'-C3'	5.92	129.09	120.20
11	B2	304	C	O4'-C4'-C3'	-5.92	98.08	104.00
11	B2	1305	U	O4'-C4'-C3'	-5.92	100.17	106.10
17	BE	61	GLU	N-CA-CB	5.92	118.60	110.01
20	BH	89	GLU	CA-C-N	5.92	132.86	121.54
20	BH	89	GLU	C-N-CA	5.92	132.86	121.54
28	BP	55	TYR	O-C-N	5.92	129.85	122.86
29	BQ	137	LYS	CA-C-N	5.92	128.22	120.28
29	BQ	137	LYS	C-N-CA	5.92	128.22	120.28
38	A1	710	G	O4'-C4'-C3'	-5.92	98.08	104.00
38	A1	892	U	C4'-C3'-O3'	-5.92	104.11	113.00
38	A1	1380	G	O4'-C4'-C3'	-5.92	98.08	104.00
39	A3	51	U	C4'-C3'-C2'	-5.92	96.68	102.60
12	AG	85	GLU	CA-C-N	5.92	128.70	120.29
12	AG	85	GLU	C-N-CA	5.92	128.70	120.29
53	Ah	11	ARG	CA-C-N	5.92	128.14	120.44
53	Ah	11	ARG	C-N-CA	5.92	128.14	120.44
40	AK	39	GLY	N-CA-C	-5.92	107.56	115.32
60	AM	149	ILE	CA-CB-CG1	5.92	120.47	110.40
38	A1	2158	G	C2'-C3'-O3'	5.92	118.38	109.50
38	A1	2994	G	C3'-C2'-O2'	5.92	119.58	110.70
11	B2	892	C	C4'-C3'-C2'	5.92	108.52	102.60
20	BH	76	GLY	CA-C-O	-5.92	115.70	121.92
38	A1	407	A	P-O3'-C3'	5.92	129.08	120.20
38	A1	2291	G	C3'-C2'-O2'	5.92	119.58	110.70
38	A1	2791	C	P-O5'-C5'	5.92	129.78	120.90
54	AI	116	ILE	CA-C-N	5.92	132.85	121.54
54	AI	116	ILE	C-N-CA	5.92	132.85	121.54
11	B2	240	U	C5'-C4'-C3'	-5.92	106.32	115.20
20	BH	67	LEU	CA-C-N	5.92	128.57	120.46
20	BH	67	LEU	C-N-CA	5.92	128.57	120.46
21	BI	92	ARG	CB-CA-C	-5.92	101.84	110.96
43	AB	54	ARG	CA-C-N	5.92	131.23	122.82
43	AB	54	ARG	C-N-CA	5.92	131.23	122.82
4	AQ	143	GLU	O-C-N	5.92	128.39	122.12
20	BH	18	MET	N-CA-CB	5.92	120.49	110.49
23	BK	103	ASP	N-CA-C	5.92	118.94	110.24
38	A1	591	G	P-O3'-C3'	5.92	129.08	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2696	G	O4'-C4'-C3'	-5.92	100.18	106.10
38	A1	2959	A	C4'-C3'-C2'	-5.92	96.68	102.60
38	A1	2989	A	C3'-C2'-O2'	5.92	119.58	110.70
11	B2	418	G	C3'-C2'-O2'	5.92	119.58	110.70
38	A1	1515	G	P-O3'-C3'	-5.92	111.32	120.20
38	A1	1927	C	C1'-C2'-O2'	5.92	117.28	108.40
11	B2	184	G	O3'-P-O5'	-5.92	95.13	104.00
11	B2	282	G	P-O5'-C5'	5.92	129.77	120.90
38	A1	389	C	C4'-C3'-C2'	-5.92	96.69	102.60
38	A1	607	C	O3'-P-O5'	-5.92	95.13	104.00
38	A1	2395	C	C4'-C3'-O3'	-5.92	104.13	113.00
11	B2	881	G	C5'-C4'-C3'	5.91	124.87	116.00
11	B2	949	G	P-O5'-C5'	5.91	129.77	120.90
15	BC	96	ALA	N-CA-C	-5.91	104.19	111.40
18	BF	54	LEU	CB-CA-C	-5.91	103.30	110.81
38	A1	361	G	O4'-C1'-N9	5.91	117.07	108.20
38	A1	1450	C	C5'-C4'-O4'	5.91	118.67	109.80
38	A1	2217	C	C4'-C3'-C2'	5.91	108.51	102.60
38	A1	2809	G	P-O5'-C5'	5.91	129.77	120.90
11	B2	816	G	C5'-C4'-C3'	-5.91	107.13	116.00
36	BX	25	THR	N-CA-C	-5.91	100.26	109.72
38	A1	696	G	C4'-C3'-C2'	-5.91	96.69	102.60
38	A1	1037	C	O4'-C4'-C3'	-5.91	100.19	106.10
38	A1	2222	C	O4'-C1'-N1	5.91	117.36	108.50
43	AB	7	GLN	OE1-CD-NE2	5.91	128.51	122.60
1	A7	33	TYR	CA-C-N	5.91	128.47	120.38
1	A7	33	TYR	C-N-CA	5.91	128.47	120.38
11	B2	358	G	C1'-O4'-C4'	-5.91	103.99	109.90
11	B2	558	C	P-O5'-C5'	5.91	129.76	120.90
11	B2	1068	C	C4'-C3'-C2'	-5.91	96.69	102.60
18	BF	167	ILE	N-CA-CB	5.91	120.98	111.23
41	AA	153	VAL	N-CA-C	-5.91	99.75	108.85
61	AN	21	GLU	N-CA-CB	5.91	120.73	110.98
11	B2	90	C	O3'-P-O5'	5.91	112.86	104.00
11	B2	952	A	O3'-P-O5'	5.91	112.86	104.00
11	B2	1057	A	C4'-C3'-C2'	-5.91	96.69	102.60
54	AI	69	LYS	CA-C-O	5.91	125.29	118.97
59	AL	15	HIS	CE1-NE2-CD2	-5.91	103.09	109.00
18	BF	172	LYS	CA-C-O	-5.90	114.58	120.90
9	AX	117	ILE	N-CA-CB	5.90	117.32	110.65
18	BF	193	THR	CA-C-N	5.90	129.28	120.31
18	BF	193	THR	C-N-CA	5.90	129.28	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	362	A	O3'-P-O5'	5.90	112.85	104.00
38	A1	405	G	C1'-O4'-C4'	-5.90	104.00	109.90
38	A1	2378	C	P-O5'-C5'	5.90	129.75	120.90
45	AC	295	LEU	N-CA-C	-5.90	103.86	113.19
60	AM	7	ILE	CA-C-N	5.90	128.11	120.44
60	AM	7	ILE	C-N-CA	5.90	128.11	120.44
67	AZ	91	SER	O-C-N	-5.90	116.32	123.29
11	B2	1257	U	O3'-P-O5'	-5.90	95.15	104.00
13	BA	24	PRO	CA-C-N	5.90	130.96	122.35
13	BA	24	PRO	C-N-CA	5.90	130.96	122.35
38	A1	1199	U	P-O5'-C5'	-5.90	112.05	120.90
38	A1	2136	G	C5'-C4'-O4'	5.90	118.65	109.80
14	BB	98	PRO	CB-CA-C	5.90	119.06	111.21
11	B2	404	C	O4'-C1'-N1	5.90	117.35	108.50
11	B2	885	G	O5'-C5'-C4'	-5.90	102.66	111.50
11	B2	1143	G	C5'-C4'-C3'	5.90	124.84	116.00
11	B2	1435	G	O4'-C1'-N9	5.90	117.35	108.50
15	BC	108	HIS	CE1-NE2-CD2	-5.90	103.10	109.00
25	BM	115	VAL	N-CA-CB	5.90	121.13	111.58
27	BO	30	GLY	N-CA-C	-5.90	107.11	115.43
38	A1	1283	G	O4'-C1'-N9	5.90	117.35	108.50
38	A1	1890	U	C4'-C3'-O3'	-5.90	104.15	113.00
52	AH	92	HIS	CA-CB-CG	-5.90	107.90	113.80
11	B2	47	A	C4'-C3'-O3'	5.90	118.25	109.40
58	AK	147	ALA	CA-C-N	5.90	131.54	121.87
58	AK	147	ALA	C-N-CA	5.90	131.54	121.87
9	AX	169	GLY	CA-C-N	5.89	132.58	121.97
9	AX	169	GLY	C-N-CA	5.89	132.58	121.97
11	B2	280	C	O4'-C1'-N1	5.89	117.34	108.50
11	B2	1208	A	O5'-C5'-C4'	-5.89	102.66	111.50
37	BY	3	GLN	CA-C-N	5.89	132.31	121.70
37	BY	3	GLN	C-N-CA	5.89	132.31	121.70
38	A1	1593	C	O3'-P-O5'	-5.89	95.16	104.00
38	A1	1633	A	C4'-C3'-C2'	-5.89	96.71	102.60
38	A1	1675	C	C3'-C2'-O2'	5.89	119.54	110.70
44	Ab	87	VAL	N-CA-CB	-5.89	101.74	110.58
13	BA	163	ASN	CA-C-O	-5.89	114.86	121.81
18	BF	43	GLN	N-CA-C	-5.89	100.36	109.14
26	BN	98	ASP	CB-CA-C	-5.89	98.01	109.68
38	A1	216	A	P-O3'-C3'	5.89	129.04	120.20
38	A1	1023	C	O4'-C1'-N1	5.89	117.34	108.50
39	A3	93	G	P-O5'-C5'	5.89	129.74	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	AS	54	VAL	CB-CA-C	-5.89	104.19	112.14
38	A1	1080	G	P-O5'-C5'	-5.89	112.06	120.90
44	Ab	37	ASP	CA-CB-CG	-5.89	106.71	112.60
50	AF	88	TYR	N-CA-C	-5.89	99.80	109.40
38	A1	1404	G	C1'-O4'-C4'	-5.89	104.01	109.90
38	A1	3032	C	C4'-C3'-C2'	-5.89	96.71	102.60
50	AF	141	GLY	N-CA-C	-5.89	102.09	110.63
13	BA	130	GLN	N-CA-C	-5.89	99.64	109.24
62	AO	118	PHE	CA-CB-CG	-5.89	107.91	113.80
10	B1	29	C	O4'-C4'-C3'	-5.89	98.11	104.00
38	A1	987	G	C4'-C3'-C2'	-5.89	96.71	102.60
38	A1	1660	A	P-O5'-C5'	-5.89	112.07	120.90
38	A1	2050	U	O3'-P-O5'	-5.89	95.17	104.00
67	AZ	6	GLU	CB-CA-C	-5.89	100.84	110.85
4	AQ	93	GLU	CA-C-O	5.88	126.79	120.55
15	BC	23	LYS	N-CA-C	5.88	117.77	111.36
18	BF	179	GLY	CA-C-O	-5.88	112.29	119.06
25	BM	6	VAL	N-CA-C	-5.88	99.32	108.44
38	A1	2563	A	O4'-C4'-C3'	-5.88	100.22	106.10
43	AB	147	GLU	N-CA-C	-5.88	100.12	109.59
54	AI	50	LYS	CA-C-N	5.88	128.16	120.28
54	AI	50	LYS	C-N-CA	5.88	128.16	120.28
57	Aj	85	ARG	N-CA-CB	5.88	119.07	109.95
38	A1	1223	A	C5'-C4'-C3'	-5.88	107.17	116.00
48	AE	147	GLY	CA-C-N	5.88	128.75	120.28
48	AE	147	GLY	C-N-CA	5.88	128.75	120.28
62	AO	152	TYR	CA-C-O	-5.88	114.31	120.55
3	Af	43	TYR	O-C-N	-5.88	116.84	123.13
6	AT	59	THR	CA-CB-OG1	5.88	118.42	109.60
11	B2	1449	G	O4'-C4'-C3'	-5.88	98.12	104.00
19	BG	83	ARG	N-CA-C	-5.88	100.08	109.96
38	A1	1861	G	O4'-C1'-N9	5.88	117.32	108.50
38	A1	2946	C	P-O5'-C5'	5.88	129.72	120.90
38	A1	1043	U	P-O5'-C5'	-5.88	112.08	120.90
38	A1	1162	C	O4'-C4'-C3'	-5.88	100.22	106.10
38	A1	2810	G	O4'-C1'-N9	5.88	117.32	108.50
14	BB	120	PRO	CB-CA-C	-5.88	103.04	111.62
21	BI	13	HIS	ND1-CE1-NE2	5.88	114.28	108.40
29	BQ	16	ARG	NH1-CZ-NH2	5.88	126.94	119.30
38	A1	2062	A	C2'-C3'-O3'	5.88	118.32	109.50
38	A1	2402	A	O4'-C1'-C2'	-5.88	99.92	105.80
11	B2	91	G	O4'-C1'-N9	5.88	117.32	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	197	A	P-O5'-C5'	5.88	129.71	120.90
11	B2	1436	U	O4'-C1'-N1	5.88	117.31	108.50
23	BK	10	ARG	CA-C-O	-5.88	113.80	120.32
38	A1	486	A	C1'-C2'-O2'	-5.88	102.98	111.80
38	A1	2722	G	C1'-C2'-O2'	5.88	117.21	108.40
52	AH	103	VAL	CA-C-N	5.88	128.76	120.42
52	AH	103	VAL	C-N-CA	5.88	128.76	120.42
43	AB	78	LEU	N-CA-C	-5.88	99.03	108.55
6	AT	13	THR	O-C-N	-5.87	117.14	123.42
11	B2	216	G	C5'-C4'-C3'	5.87	124.81	116.00
11	B2	344	G	C4'-C3'-C2'	-5.87	96.73	102.60
11	B2	1417	A	P-O5'-C5'	5.87	129.71	120.90
38	A1	429	U	C2'-C3'-O3'	5.87	118.31	109.50
38	A1	809	A	C4'-C3'-O3'	-5.87	104.19	113.00
9	AX	23	PHE	CA-C-N	5.87	128.43	120.38
9	AX	23	PHE	C-N-CA	5.87	128.43	120.38
13	BA	55	VAL	N-CA-C	-5.87	99.34	108.44
38	A1	988	C	C5'-C4'-O4'	-5.87	100.99	109.80
38	A1	1706	G	O4'-C1'-N9	5.87	117.31	108.50
60	AM	28	ILE	O-C-N	-5.87	116.17	121.87
46	AD	180	ARG	NE-CZ-NH2	-5.87	113.92	119.20
60	AM	98	TRP	CB-CG-CD2	-5.87	118.58	126.80
9	AX	57	GLU	N-CA-C	-5.87	103.48	110.41
11	B2	911	C	O4'-C1'-N1	5.87	117.30	108.50
22	BJ	119	VAL	CA-C-O	5.87	127.50	121.28
38	A1	2890	A	O4'-C1'-C2'	-5.87	99.93	105.80
39	A3	31	U	O4'-C1'-C2'	-5.87	101.73	107.60
62	AO	63	HIS	CE1-NE2-CD2	-5.87	103.13	109.00
6	AT	24	ASN	OD1-CG-ND2	-5.87	116.73	122.60
11	B2	887	G	O4'-C4'-C3'	-5.87	98.13	104.00
50	AF	35	LEU	N-CA-C	-5.87	98.72	108.75
38	A1	324	C	C3'-C2'-C1'	5.87	107.17	101.30
38	A1	659	U	O4'-C1'-N1	5.87	117.30	108.50
50	AF	152	ALA	CA-C-N	5.87	128.14	120.28
50	AF	152	ALA	C-N-CA	5.87	128.14	120.28
7	AU	33	ARG	NH1-CZ-NH2	-5.86	111.68	119.30
11	B2	1128	U	O4'-C1'-C2'	5.86	111.66	105.80
34	BV	35	ASP	CB-CA-C	-5.86	101.06	110.79
38	A1	436	C	P-O3'-C3'	-5.86	111.41	120.20
38	A1	475	U	C1'-O4'-C4'	5.86	115.76	109.90
38	A1	821	U	O4'-C4'-C3'	-5.86	98.14	104.00
43	AB	170	LYS	CA-C-N	5.86	127.17	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	AB	170	LYS	C-N-CA	5.86	127.17	119.84
47	Ad	4	MET	N-CA-C	-5.86	105.00	114.09
50	AF	137	ILE	N-CA-C	-5.86	99.77	108.45
11	B2	122	C	P-O5'-C5'	5.86	129.69	120.90
11	B2	1004	U	P-O5'-C5'	5.86	129.69	120.90
34	BV	79	LEU	CA-C-O	5.86	126.76	120.55
38	A1	641	G	O4'-C4'-C3'	5.86	109.86	104.00
38	A1	2255	C	O4'-C4'-C3'	-5.86	98.14	104.00
56	AJ	70	ARG	CA-C-O	-5.86	114.31	120.88
4	AQ	91	LYS	N-CA-C	5.86	118.45	111.71
11	B2	149	U	O4'-C1'-N1	5.86	117.29	108.50
18	BF	211	VAL	CA-C-O	-5.86	113.36	121.51
28	BP	29	PRO	N-CA-CB	5.86	109.40	103.25
38	A1	1287	G	P-O5'-C5'	-5.86	112.11	120.90
38	A1	1517	G	O4'-C1'-N9	5.86	117.29	108.50
44	Ab	54	LEU	N-CA-CB	5.86	118.64	110.26
26	BN	76	GLN	OE1-CD-NE2	5.86	128.46	122.60
14	BB	99	GLY	N-CA-C	-5.86	106.88	115.72
15	BC	20	PHE	N-CA-C	5.86	117.75	111.36
21	BI	96	ALA	CA-C-O	-5.86	115.07	121.87
27	BO	10	VAL	N-CA-C	-5.86	100.16	108.65
38	A1	2393	G	C4'-C3'-C2'	-5.86	96.74	102.60
5	AS	72	HIS	ND1-CE1-NE2	5.86	114.26	108.40
11	B2	937	A	C3'-C2'-C1'	5.86	107.16	101.30
11	B2	1238	G	O3'-P-O5'	-5.86	95.22	104.00
26	BN	112	LYS	CA-C-N	5.86	131.41	122.86
26	BN	112	LYS	C-N-CA	5.86	131.41	122.86
11	B2	516	A	C4'-C3'-O3'	-5.85	104.22	113.00
16	BD	95	LEU	N-CA-C	5.85	118.49	110.24
17	BE	19	TRP	N-CA-C	-5.85	105.45	113.30
38	A1	946	U	P-O3'-C3'	5.85	128.98	120.20
41	AA	169	THR	CA-CB-CG2	5.85	120.45	110.50
43	AB	134	ARG	CG-CD-NE	-5.85	99.12	112.00
47	Ad	85	ARG	N-CA-CB	5.85	118.73	110.12
64	AR	57	ARG	CA-C-N	5.85	130.50	120.72
64	AR	57	ARG	C-N-CA	5.85	130.50	120.72
3	Af	48	LYS	N-CA-C	-5.85	100.25	109.50
11	B2	1156	A	P-O3'-C3'	5.85	128.98	120.20
38	A1	2396	G	C4'-C3'-O3'	-5.85	104.22	113.00
38	A1	2807	C	C3'-C2'-O2'	5.85	119.48	110.70
52	AH	42	ALA	CA-C-O	-5.85	114.67	120.70
58	Ak	213	TYR	CB-CA-C	-5.85	100.90	110.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AN	112	MET	CA-C-N	5.85	132.72	121.54
61	AN	112	MET	C-N-CA	5.85	132.72	121.54
15	BC	12	VAL	N-CA-C	5.85	116.59	110.62
15	BC	64	GLU	CA-C-N	5.85	129.20	120.31
15	BC	64	GLU	C-N-CA	5.85	129.20	120.31
59	AL	40	GLY	CA-C-N	5.85	129.15	120.90
59	AL	40	GLY	C-N-CA	5.85	129.15	120.90
7	AU	24	GLN	CA-C-N	5.85	128.70	120.28
7	AU	24	GLN	C-N-CA	5.85	128.70	120.28
9	AX	380	MET	CA-C-N	5.85	132.71	121.54
9	AX	380	MET	C-N-CA	5.85	132.71	121.54
18	BF	104	LYS	N-CA-C	-5.85	106.48	113.97
29	BQ	100	ARG	CA-C-N	5.85	128.60	120.29
29	BQ	100	ARG	C-N-CA	5.85	128.60	120.29
33	BU	14	GLU	CA-C-N	5.85	128.40	120.44
33	BU	14	GLU	C-N-CA	5.85	128.40	120.44
38	A1	1606	C	C4'-C3'-O3'	-5.85	104.23	113.00
43	AB	102	ILE	O-C-N	-5.85	114.43	121.10
46	AD	30	LEU	O-C-N	-5.85	115.48	122.15
46	AD	248	GLU	CA-C-N	5.85	129.20	120.31
46	AD	248	GLU	C-N-CA	5.85	129.20	120.31
60	AM	141	LYS	CA-C-N	5.85	128.60	120.29
60	AM	141	LYS	C-N-CA	5.85	128.60	120.29
11	B2	132	G	O5'-C5'-C4'	-5.85	102.73	111.50
11	B2	700	G	O4'-C4'-C3'	-5.85	98.15	104.00
38	A1	1997	C	O4'-C1'-N1	5.85	117.27	108.50
40	A5	12	VAL	O-C-N	-5.85	116.46	122.95
52	AH	61	THR	CA-C-N	5.85	130.44	122.19
52	AH	61	THR	C-N-CA	5.85	130.44	122.19
9	AX	249	ILE	CA-C-N	5.85	132.71	121.54
9	AX	249	ILE	C-N-CA	5.85	132.71	121.54
11	B2	28	U	P-O3'-C3'	-5.85	111.43	120.20
13	BA	72	ASP	CA-CB-CG	5.85	118.45	112.60
39	A3	34	C	C4'-C3'-C2'	-5.85	96.75	102.60
48	AE	176	MET	CA-C-N	5.85	128.70	120.28
48	AE	176	MET	C-N-CA	5.85	128.70	120.28
9	AX	106	LEU	CA-C-N	5.84	128.43	120.54
9	AX	106	LEU	C-N-CA	5.84	128.43	120.54
10	B1	57	C	C4'-C3'-C2'	-5.84	96.75	102.60
11	B2	193	G	C4'-C3'-C2'	-5.84	96.76	102.60
11	B2	373	C	P-O5'-C5'	5.84	129.67	120.90
11	B2	496	C	C1'-O4'-C4'	5.84	115.74	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	1037	U	C1'-O4'-C4'	5.84	115.55	109.70
11	B2	1405	C	P-O3'-C3'	-5.84	111.43	120.20
25	BM	30	ILE	CA-C-O	5.84	127.22	120.67
38	A1	2040	A	O4'-C1'-N9	5.84	117.27	108.50
48	AE	145	ARG	N-CA-C	-5.84	103.41	110.13
63	AP	61	MET	CA-C-N	5.84	129.91	122.37
63	AP	61	MET	C-N-CA	5.84	129.91	122.37
38	A1	443	C	C4'-C3'-C2'	-5.84	96.76	102.60
38	A1	2008	G	O4'-C1'-N9	5.84	117.26	108.50
54	AI	73	GLU	CA-C-N	5.84	128.47	120.46
54	AI	73	GLU	C-N-CA	5.84	128.47	120.46
66	AY	8	ARG	NE-CZ-NH1	-5.84	115.66	121.50
66	AY	16	LYS	CB-CG-CD	5.84	124.74	111.30
6	AT	9	ARG	NE-CZ-NH2	5.84	124.46	119.20
7	AU	81	ALA	N-CA-CB	5.84	119.05	110.35
8	AW	34	MET	CA-C-O	5.84	126.70	120.10
9	AX	275	ALA	CA-C-O	-5.84	114.64	121.07
11	B2	368	C	C4'-C3'-C2'	5.84	108.44	102.60
48	AE	28	VAL	N-CA-CB	5.84	119.76	111.82
59	AL	30	SER	CA-C-N	5.84	130.48	120.72
59	AL	30	SER	C-N-CA	5.84	130.48	120.72
11	B2	149	U	P-O5'-C5'	-5.84	112.14	120.90
41	AA	139	LEU	N-CA-C	-5.84	100.27	109.50
46	AD	156	GLU	O-C-N	-5.84	115.49	122.15
52	AH	95	VAL	N-CA-C	-5.84	107.05	112.83
11	B2	1452	G	C3'-C2'-C1'	5.84	107.14	101.30
38	A1	46	C	C3'-C2'-C1'	5.84	107.14	101.30
38	A1	2514	C	C5'-C4'-C3'	5.84	124.76	116.00
48	AE	179	PHE	N-CA-C	-5.84	98.36	110.80
67	AZ	47	ASP	CA-C-N	5.84	128.03	120.44
67	AZ	47	ASP	C-N-CA	5.84	128.03	120.44
11	B2	668	G	O4'-C1'-N9	5.84	117.26	108.50
11	B2	1260	G	O4'-C1'-N9	5.84	117.26	108.50
17	BE	64	LYS	O-C-N	5.84	128.81	122.15
28	BP	51	GLY	CA-C-O	-5.84	112.35	119.06
30	BR	6	GLY	O-C-N	5.84	127.72	122.88
38	A1	147	C	O4'-C4'-C3'	-5.84	98.16	104.00
38	A1	1611	C	P-O5'-C5'	5.84	129.65	120.90
44	Ab	15	ARG	CB-CA-C	-5.84	101.10	110.79
54	AI	98	LYS	CG-CD-CE	5.84	124.72	111.30
59	AL	18	GLY	O-C-N	-5.84	115.61	122.38
65	AV	48	ARG	CA-C-N	5.84	128.10	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
65	AV	48	ARG	C-N-CA	5.84	128.10	120.28
11	B2	1063	A	C4'-C3'-C2'	-5.83	96.77	102.60
11	B2	1095	C	O4'-C4'-C3'	5.83	109.83	104.00
11	B2	1131	G	C4'-C3'-O3'	-5.83	104.25	113.00
21	BI	46	TYR	N-CA-C	-5.83	105.26	112.90
38	A1	777	A	C1'-O4'-C4'	5.83	115.73	109.90
4	AQ	28	ARG	NE-CZ-NH2	5.83	124.45	119.20
9	AX	91	SER	CA-C-O	5.83	125.80	119.15
11	B2	114	A	C4'-C3'-O3'	5.83	118.15	109.40
11	B2	166	A	O5'-C5'-C4'	-5.83	102.75	111.50
13	BA	110	THR	N-CA-C	-5.83	99.39	108.90
23	BK	37	GLU	CA-C-N	5.83	126.13	119.83
23	BK	37	GLU	C-N-CA	5.83	126.13	119.83
26	BN	131	ARG	N-CA-C	5.83	119.47	111.54
38	A1	277	A	C4'-C3'-O3'	-5.83	104.25	113.00
38	A1	837	G	C2'-C3'-O3'	5.83	122.45	113.70
38	A1	1281	A	P-O3'-C3'	5.83	128.95	120.20
38	A1	2793	C	C5'-C4'-O4'	5.83	118.55	109.80
60	AM	48	ALA	N-CA-CB	5.83	118.79	110.16
63	AP	56	ALA	N-CA-CB	5.83	120.35	110.49
11	B2	160	C	O4'-C1'-N1	5.83	117.25	108.50
11	B2	846	G	C4'-C3'-C2'	5.83	108.43	102.60
38	A1	1842	C	O4'-C1'-N1	5.83	117.25	108.50
63	AP	19	ARG	O-C-N	-5.83	115.50	122.15
9	AX	81	ALA	CA-C-N	5.83	127.48	120.13
9	AX	81	ALA	C-N-CA	5.83	127.48	120.13
11	B2	147	A	C4'-C3'-O3'	-5.83	104.26	113.00
58	Ak	12	VAL	O-C-N	5.83	127.53	121.87
11	B2	49	C	C5'-C4'-C3'	5.83	124.74	116.00
32	BT	29	PRO	N-CA-C	5.83	124.48	112.47
38	A1	186	A	P-O5'-C5'	-5.83	112.16	120.90
42	Aa	9	VAL	N-CA-C	-5.83	99.88	108.85
44	Ab	5	GLU	CB-CG-CD	-5.83	102.69	112.60
38	A1	2059	G	C4'-C3'-C2'	-5.83	96.77	102.60
38	A1	2869	U	O4'-C1'-C2'	-5.83	99.97	105.80
38	A1	2888	G	C1'-O4'-C4'	5.83	115.73	109.90
63	AP	51	LYS	N-CA-C	-5.83	105.27	112.90
15	BC	106	GLY	CA-C-O	5.83	125.44	118.97
38	A1	1331	U	O4'-C1'-N1	5.83	117.24	108.50
44	Ab	116	LYS	CA-C-O	5.83	126.60	120.42
11	B2	899	G	C3'-C2'-O2'	5.82	119.44	110.70
11	B2	1268	C	O4'-C1'-N1	5.82	117.24	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	BA	166	ILE	CA-C-N	5.82	128.08	120.28
13	BA	166	ILE	C-N-CA	5.82	128.08	120.28
21	BI	124	ARG	N-CA-C	-5.82	100.21	109.76
38	A1	1172	U	C1'-O4'-C4'	-5.82	103.88	109.70
38	A1	2311	C	C3'-C2'-O2'	5.82	119.43	110.70
46	AD	239	LEU	N-CA-CB	5.82	119.24	109.92
7	AU	31	LEU	N-CA-CB	5.82	118.53	109.97
38	A1	981	A	O4'-C1'-N9	5.82	116.93	108.20
11	B2	192	G	O4'-C1'-N9	5.82	117.23	108.50
11	B2	369	A	O4'-C1'-N9	5.82	117.23	108.50
19	BG	84	VAL	CA-C-O	-5.82	114.53	121.28
38	A1	844	C	O4'-C1'-C2'	-5.82	101.78	107.60
38	A1	1127	C	C3'-C2'-C1'	-5.82	95.48	101.30
38	A1	2388	U	C4'-C3'-C2'	-5.82	96.78	102.60
45	AC	275	GLY	O-C-N	5.82	129.84	122.68
58	AK	133	PRO	N-CA-CB	5.82	109.36	103.25
38	A1	631	G	O4'-C1'-N9	5.82	117.23	108.50
59	AL	79	LYS	N-CA-C	5.82	117.62	111.28
9	AX	345	MET	CA-C-N	5.82	132.65	121.54
9	AX	345	MET	C-N-CA	5.82	132.65	121.54
11	B2	1281	U	O4'-C1'-N1	5.82	117.23	108.50
38	A1	55	G	O4'-C1'-N9	5.82	117.23	108.50
43	AB	152	ASN	CA-CB-CG	5.82	118.42	112.60
9	AX	315	HIS	CE1-NE2-CD2	-5.82	103.19	109.00
11	B2	584	C	P-O3'-C3'	5.82	128.92	120.20
30	BR	63	TYR	CA-C-N	5.82	131.72	122.59
30	BR	63	TYR	C-N-CA	5.82	131.72	122.59
58	AK	27	LEU	CA-C-O	-5.82	114.09	120.43
11	B2	476	C	P-O5'-C5'	-5.81	112.18	120.90
38	A1	2042	A	O3'-P-O5'	-5.81	95.28	104.00
41	AA	162	VAL	CA-CB-CG2	5.81	120.28	110.40
11	B2	114	A	C2'-C3'-O3'	5.81	118.22	109.50
11	B2	684	G	O4'-C1'-N9	5.81	117.22	108.50
11	B2	884	G	C4'-C3'-C2'	-5.81	96.79	102.60
13	BA	19	TYR	N-CA-C	-5.81	100.48	109.14
38	A1	141	C	C5'-C4'-C3'	5.81	124.72	116.00
38	A1	643	G	O4'-C4'-C3'	-5.81	98.19	104.00
38	A1	1921	U	C3'-C2'-O2'	5.81	119.42	110.70
59	AL	103	VAL	N-CA-C	-5.81	99.17	107.77
63	AP	105	GLU	CA-C-O	5.81	126.15	119.35
29	BQ	52	THR	CA-C-N	5.81	128.42	120.46
29	BQ	52	THR	C-N-CA	5.81	128.42	120.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	BQ	66	PHE	N-CA-C	-5.81	105.81	114.64
62	AO	95	LYS	N-CA-C	-5.81	106.09	112.72
3	Af	47	THR	N-CA-CB	5.81	120.28	110.46
14	BB	141	VAL	N-CA-C	5.81	116.85	108.48
19	BG	11	PRO	CA-C-N	5.81	131.31	121.14
19	BG	11	PRO	C-N-CA	5.81	131.31	121.14
24	BL	12	ASN	CA-C-N	5.81	128.42	120.46
24	BL	12	ASN	C-N-CA	5.81	128.42	120.46
37	BY	3	GLN	OE1-CD-NE2	5.81	128.41	122.60
38	A1	562	G	P-O3'-C3'	-5.81	111.48	120.20
45	AC	163	VAL	N-CA-C	-5.81	99.85	108.45
54	AI	62	ARG	NE-CZ-NH1	-5.81	115.69	121.50
55	Ai	10	ALA	CA-C-N	5.81	130.73	120.74
55	Ai	10	ALA	C-N-CA	5.81	130.73	120.74
58	Ak	162	VAL	CA-C-O	-5.81	114.49	120.71
17	BE	223	PHE	O-C-N	5.81	130.70	123.15
18	BF	161	ARG	NE-CZ-NH2	-5.81	113.97	119.20
23	BK	26	VAL	N-CA-CB	5.81	119.22	111.90
32	BT	59	TYR	CB-CG-CD1	-5.81	112.09	120.80
43	AB	137	ASP	N-CA-C	-5.81	104.58	111.03
44	Ab	29	TRP	N-CA-C	-5.81	105.03	111.36
38	A1	1409	U	P-O3'-C3'	-5.81	111.49	120.20
41	AA	161	PRO	N-CA-CB	-5.81	96.21	102.60
11	B2	826	C	P-O5'-C5'	5.80	129.60	120.90
11	B2	1493	C	P-O3'-C3'	-5.80	111.49	120.20
35	BW	15	ARG	CB-CG-CD	5.80	124.65	111.30
38	A1	1657	G	O4'-C1'-C2'	5.80	111.60	105.80
38	A1	2163	G	C5'-C4'-C3'	-5.80	107.29	116.00
38	A1	2521	U	O5'-C5'-C4'	-5.80	102.79	111.50
45	AC	141	GLN	O-C-N	5.80	128.05	122.07
49	Ae	17	HIS	CB-CG-ND1	5.80	131.41	122.70
50	AF	142	ILE	CB-CA-C	5.80	119.40	111.97
18	BF	52	VAL	CA-C-N	5.80	129.13	120.31
18	BF	52	VAL	C-N-CA	5.80	129.13	120.31
25	BM	61	MET	N-CA-CB	5.80	118.42	110.01
29	BQ	5	HIS	CB-CG-ND1	5.80	131.40	122.70
38	A1	236	G	C3'-C2'-O2'	5.80	119.40	110.70
38	A1	1059	C	O5'-C5'-C4'	-5.80	102.80	111.50
38	A1	2980	G	O4'-C1'-N9	5.80	117.20	108.50
45	AC	226	LYS	CA-C-N	5.80	127.59	120.92
45	AC	226	LYS	C-N-CA	5.80	127.59	120.92
60	AM	26	ARG	CA-C-O	-5.80	114.27	120.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	AM	114	LEU	N-CA-CB	-5.80	101.56	110.20
11	B2	851	C	O4'-C1'-N1	5.80	117.20	108.50
24	BL	13	VAL	CA-CB-CG2	-5.80	100.54	110.40
52	AH	112	ASP	CA-CB-CG	-5.80	106.80	112.60
63	AP	109	ARG	N-CA-CB	5.80	118.39	109.98
22	BJ	11	LYS	N-CA-CB	5.80	117.78	109.78
38	A1	808	A	C3'-C2'-C1'	-5.80	95.70	101.50
38	A1	2239	C	C5'-C4'-C3'	-5.80	107.30	116.00
56	AJ	125	GLU	CA-C-N	5.80	128.52	120.29
56	AJ	125	GLU	C-N-CA	5.80	128.52	120.29
6	AT	15	LYS	O-C-N	5.80	128.26	122.12
11	B2	1276	G	C4'-C3'-O3'	-5.80	104.31	113.00
11	B2	1315	G	O5'-C5'-C4'	-5.80	102.80	111.50
14	BB	106	VAL	CA-C-N	5.80	128.05	120.28
14	BB	106	VAL	C-N-CA	5.80	128.05	120.28
14	BB	190	ILE	CA-C-O	-5.80	112.18	119.95
38	A1	70	G	C3'-C2'-C1'	-5.80	95.70	101.50
38	A1	384	G	O5'-C5'-C4'	-5.80	102.80	111.50
38	A1	2697	G	O4'-C1'-N9	5.80	117.19	108.50
55	Ai	54	TRP	CD2-CE2-CZ2	-5.80	116.60	122.40
9	AX	327	CYS	CA-C-O	-5.79	114.73	120.70
1	A7	57	PRO	O-C-N	5.79	128.72	122.17
11	B2	520	G	C4'-C3'-O3'	-5.79	104.31	113.00
38	A1	589	G	O4'-C1'-C2'	-5.79	100.01	105.80
38	A1	917	A	C5'-C4'-O4'	5.79	117.79	109.10
7	AU	56	ARG	NE-CZ-NH2	-5.79	113.99	119.20
11	B2	1004	U	O4'-C1'-C2'	-5.79	101.81	107.60
11	B2	1481	G	C1'-O4'-C4'	5.79	115.69	109.90
27	BO	6	HIS	CB-CA-C	-5.79	99.65	109.38
30	BR	68	SER	N-CA-C	-5.79	100.23	109.96
31	BS	18	ASN	CA-C-O	-5.79	113.81	120.24
38	A1	849	C	C4'-C3'-O3'	-5.79	104.31	113.00
44	Ab	114	ILE	N-CA-C	5.79	115.98	110.42
60	AM	191	GLY	CA-C-O	5.79	126.81	119.80
11	B2	1093	C	P-O3'-C3'	5.79	128.88	120.20
18	BF	76	ASP	N-CA-C	-5.79	100.81	109.15
34	BV	38	GLY	N-CA-C	-5.79	105.36	112.77
38	A1	1091	G	O4'-C1'-C2'	-5.79	101.81	107.60
38	A1	1813	A	C4'-C3'-C2'	-5.79	96.81	102.60
45	AC	200	LYS	CA-C-N	5.79	128.04	120.28
45	AC	200	LYS	C-N-CA	5.79	128.04	120.28
40	AK	12	VAL	N-CA-C	-5.79	99.95	108.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	AM	74	PRO	CA-C-O	-5.79	114.94	121.43
11	B2	1128	U	C1'-O4'-C4'	-5.79	103.91	109.70
11	B2	1260	G	C5'-C4'-C3'	-5.79	107.32	116.00
38	A1	477	C	O4'-C1'-N1	5.79	117.18	108.50
38	A1	1547	U	C1'-O4'-C4'	5.79	115.69	109.90
38	A1	1619	C	P-O5'-C5'	-5.79	112.22	120.90
48	AE	184	VAL	CA-CB-CG1	-5.79	100.56	110.40
60	AM	92	PRO	N-CA-CB	5.79	110.62	103.15
17	BE	181	LYS	CA-C-N	5.79	132.75	121.41
17	BE	181	LYS	C-N-CA	5.79	132.75	121.41
31	BS	30	HIS	N-CA-C	-5.79	106.38	113.50
58	AK	213	TYR	N-CA-CB	5.79	118.72	110.16
62	AO	137	ILE	CA-CB-CG1	5.79	120.24	110.40
11	B2	985	C	C2'-C3'-O3'	5.79	122.38	113.70
23	BK	47	GLU	CA-C-O	-5.79	113.06	118.73
38	A1	268	C	O4'-C4'-C3'	-5.79	98.21	104.00
38	A1	719	C	C5'-C4'-C3'	5.79	124.68	116.00
38	A1	1559	A	P-O3'-C3'	-5.79	111.52	120.20
39	A3	46	G	C4'-C3'-C2'	-5.79	96.81	102.60
44	Ab	75	HIS	CA-C-N	5.79	126.29	120.04
44	Ab	75	HIS	C-N-CA	5.79	126.29	120.04
12	AG	109	ASP	CA-CB-CG	-5.79	106.81	112.60
11	B2	1188	C	C5'-C4'-C3'	-5.78	107.32	116.00
13	BA	53	LYS	N-CA-C	-5.78	104.89	112.41
17	BE	229	TYR	O-C-N	-5.78	114.84	122.42
38	A1	2063	U	C4'-C3'-O3'	5.78	121.67	113.00
38	A1	2860	G	O5'-C5'-C4'	-5.78	102.82	111.50
62	AO	121	LEU	O-C-N	5.78	128.03	122.07
16	BD	165	HIS	CG-CD2-NE2	5.78	112.98	107.20
32	BT	28	PHE	CA-C-N	5.78	127.07	119.84
32	BT	28	PHE	C-N-CA	5.78	127.07	119.84
38	A1	731	C	C4'-C3'-C2'	-5.78	96.82	102.60
38	A1	1809	G	C4'-C3'-O3'	-5.78	104.33	113.00
59	AL	140	ALA	CA-C-N	5.78	130.95	122.10
59	AL	140	ALA	C-N-CA	5.78	130.95	122.10
9	AX	321	ILE	CA-C-O	-5.78	114.94	120.95
18	BF	199	LYS	O-C-N	-5.78	115.46	122.22
19	BG	115	GLU	CA-C-N	5.78	129.85	121.18
19	BG	115	GLU	C-N-CA	5.78	129.85	121.18
24	BL	4	ALA	N-CA-CB	5.78	120.89	110.83
38	A1	82	C	O5'-C5'-C4'	-5.78	102.83	111.50
38	A1	956	U	O4'-C1'-C2'	-5.78	101.82	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1739	U	C4'-C3'-O3'	5.78	118.07	109.40
38	A1	2365	G	P-O5'-C5'	5.78	129.57	120.90
38	A1	2392	A	C4'-C3'-O3'	-5.78	104.33	113.00
13	BA	51	THR	N-CA-C	-5.78	105.33	112.90
14	BB	124	HIS	O-C-N	-5.78	115.61	122.20
22	BJ	90	ALA	CA-C-O	5.78	126.55	120.42
38	A1	1590	C	P-O3'-C3'	5.78	128.87	120.20
62	AO	6	ARG	CA-C-N	5.78	128.92	120.71
62	AO	6	ARG	C-N-CA	5.78	128.92	120.71
11	B2	130	G	C3'-C2'-O2'	5.78	119.37	110.70
11	B2	789	G	O4'-C1'-N9	5.78	117.17	108.50
12	B3	104	PRO	CB-CA-C	5.78	121.09	111.56
16	BD	39	LYS	CA-C-O	5.78	126.67	120.55
38	A1	373	G	O5'-C5'-C4'	5.78	120.17	111.50
38	A1	2354	A	O4'-C1'-N9	5.78	117.17	108.50
43	AB	86	GLY	CA-C-N	5.78	126.28	120.04
43	AB	86	GLY	C-N-CA	5.78	126.28	120.04
11	B2	439	G	C4'-C3'-O3'	5.78	118.06	109.40
11	B2	764	C	O4'-C1'-N1	5.78	117.16	108.50
11	B2	1238	G	C5'-C4'-O4'	5.78	117.76	109.10
11	B2	1325	C	O5'-C5'-C4'	-5.78	102.84	111.50
19	BG	105	LYS	N-CA-CB	5.78	119.74	110.85
59	AL	66	PRO	CA-C-N	5.78	125.63	119.28
59	AL	66	PRO	C-N-CA	5.78	125.63	119.28
38	A1	641	G	P-O5'-C5'	5.77	129.56	120.90
38	A1	2109	C	O4'-C1'-N1	5.77	117.16	108.50
9	AX	377	LEU	CA-C-N	5.77	129.48	120.82
9	AX	377	LEU	C-N-CA	5.77	129.48	120.82
21	BI	17	SER	N-CA-CB	5.77	118.44	110.07
23	BK	66	VAL	CA-C-O	5.77	126.83	120.48
27	BO	129	GLN	OE1-CD-NE2	-5.77	116.83	122.60
38	A1	129	C	O4'-C1'-N1	5.77	117.16	108.50
38	A1	694	A	C5'-C4'-C3'	-5.77	106.54	115.20
41	AA	26	GLN	CA-C-O	5.77	126.31	120.88
67	AZ	97	ALA	CA-C-N	5.77	128.33	120.54
67	AZ	97	ALA	C-N-CA	5.77	128.33	120.54
38	A1	175	G	O3'-P-O5'	-5.77	95.34	104.00
43	AB	149	LYS	CA-C-N	5.77	130.33	122.19
43	AB	149	LYS	C-N-CA	5.77	130.33	122.19
10	B1	49	C	O4'-C4'-C3'	-5.77	98.23	104.00
11	B2	1226	G	C4'-C3'-O3'	-5.77	104.34	113.00
18	BF	111	ARG	CD-NE-CZ	-5.77	116.32	124.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1760	C	C4'-C3'-C2'	-5.77	96.83	102.60
6	AT	14	GLU	CA-C-N	5.77	128.01	120.28
6	AT	14	GLU	C-N-CA	5.77	128.01	120.28
11	B2	939	C	O4'-C1'-N1	5.77	117.15	108.50
11	B2	1106	A	O4'-C4'-C3'	-5.77	98.23	104.00
11	B2	1425	C	O4'-C1'-N1	5.77	117.15	108.50
16	BD	102	GLU	N-CA-C	-5.77	106.22	113.72
17	BE	85	VAL	CA-C-O	-5.77	114.47	121.04
21	BI	10	ALA	O-C-N	-5.77	116.01	122.12
38	A1	1893	C	O4'-C1'-N1	5.77	117.15	108.50
38	A1	2484	C	C5'-C4'-C3'	-5.77	107.35	116.00
38	A1	2784	A	C4'-C3'-C2'	-5.77	96.83	102.60
46	AD	137	VAL	CA-CB-CG2	-5.77	100.59	110.40
5	AS	44	LEU	CA-C-N	5.77	127.94	120.44
5	AS	44	LEU	C-N-CA	5.77	127.94	120.44
11	B2	70	C	O4'-C4'-C3'	-5.77	98.23	104.00
11	B2	355	C	O4'-C1'-N1	5.77	117.15	108.50
45	AC	339	ARG	CA-C-O	-5.77	113.80	120.03
63	AP	23	ASN	N-CA-C	-5.77	104.91	111.14
4	AQ	101	ALA	N-CA-C	5.76	117.56	111.28
11	B2	545	C	O4'-C1'-N1	5.76	117.15	108.50
22	BJ	73	ARG	CA-C-O	-5.76	115.28	121.45
32	BT	32	GLN	OE1-CD-NE2	5.76	128.37	122.60
33	BU	53	TYR	O-C-N	5.76	128.23	122.12
38	A1	166	G	O4'-C1'-N9	5.76	116.85	108.20
38	A1	810	A	O4'-C1'-N9	5.76	117.14	108.50
38	A1	2761	G	C1'-C2'-O2'	5.76	117.05	108.40
49	Ae	45	ARG	N-CA-C	-5.76	101.21	110.14
11	B2	796	C	C4'-C3'-C2'	-5.76	96.84	102.60
11	B2	1305	U	O3'-P-O5'	-5.76	95.36	104.00
20	BH	177	LYS	N-CA-C	-5.76	105.56	112.59
26	BN	40	LYS	CA-C-N	5.76	128.28	120.44
26	BN	40	LYS	C-N-CA	5.76	128.28	120.44
28	BP	12	ARG	CD-NE-CZ	-5.76	116.33	124.40
38	A1	500	C	O4'-C1'-N1	5.76	117.14	108.50
62	AO	36	VAL	N-CA-CB	5.76	118.23	111.66
64	AR	55	ASP	CA-C-N	5.76	125.44	119.56
64	AR	55	ASP	C-N-CA	5.76	125.44	119.56
10	B1	36	A	C4'-C3'-C2'	-5.76	96.84	102.60
11	B2	240	U	O4'-C4'-C3'	-5.76	100.34	106.10
30	BR	73	HIS	CG-CD2-NE2	5.76	112.96	107.20
38	A1	2781	A	O4'-C1'-C2'	-5.76	101.84	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	AE	32	ILE	CA-C-O	5.76	126.82	120.48
58	Ak	174	ALA	CA-C-N	5.76	128.47	120.29
58	Ak	174	ALA	C-N-CA	5.76	128.47	120.29
64	AR	47	PRO	N-CA-CB	5.76	109.13	102.33
7	AU	14	PHE	CA-C-N	5.76	127.93	120.44
7	AU	14	PHE	C-N-CA	5.76	127.93	120.44
11	B2	1484	C	P-O5'-C5'	-5.76	112.26	120.90
14	BB	168	TYR	CA-CB-CG	-5.76	103.53	113.90
27	BO	113	ARG	N-CA-CB	5.76	120.22	110.49
38	A1	873	G	C2'-C3'-O3'	5.76	118.14	109.50
38	A1	1547	U	O4'-C1'-C2'	-5.76	101.84	107.60
38	A1	1005	G	P-O3'-C3'	5.76	128.84	120.20
38	A1	1685	C	C5'-C4'-O4'	-5.76	101.16	109.80
47	Ad	18	PRO	N-CA-CB	5.76	109.82	103.26
62	AO	9	VAL	N-CA-CB	5.76	119.27	111.21
67	AZ	25	ARG	NE-CZ-NH1	-5.76	115.74	121.50
11	B2	111	G	C5'-C4'-C3'	-5.76	107.36	116.00
31	BS	31	ASN	CB-CG-ND2	-5.76	107.77	116.40
38	A1	2125	C	P-O5'-C5'	5.76	129.53	120.90
41	AA	168	GLY	CA-C-O	5.76	126.23	121.05
46	AD	94	PRO	CA-C-N	5.76	125.52	119.76
46	AD	94	PRO	C-N-CA	5.76	125.52	119.76
49	Ae	28	TYR	N-CA-C	-5.76	99.14	108.41
56	AJ	46	TYR	N-CA-C	-5.76	99.95	108.99
11	B2	1239	A	P-O5'-C5'	-5.75	112.27	120.90
12	B3	99	VAL	N-CA-C	-5.75	99.35	108.90
14	BB	72	VAL	CB-CA-C	-5.75	105.00	110.70
11	B2	528	G	C2'-C3'-O3'	5.75	118.13	109.50
13	BA	54	ASP	N-CA-C	-5.75	106.30	113.38
16	BD	171	ILE	CA-C-O	-5.75	114.75	120.85
22	BJ	27	GLU	CA-C-N	5.75	128.88	120.71
22	BJ	27	GLU	C-N-CA	5.75	128.88	120.71
38	A1	823	G	O4'-C1'-N9	5.75	117.13	108.50
38	A1	2688	C	C5'-C4'-C3'	-5.75	107.37	116.00
39	A3	104	C	O4'-C1'-N1	5.75	117.13	108.50
45	AC	342	ILE	CA-C-O	5.75	126.44	119.54
56	AJ	130	TRP	CB-CA-C	-5.75	101.28	110.14
3	Af	1	MET	CA-C-N	5.75	132.53	121.54
3	Af	1	MET	C-N-CA	5.75	132.53	121.54
9	AX	366	ILE	N-CA-CB	5.75	117.28	110.55
11	B2	775	G	C4'-C3'-C2'	-5.75	96.85	102.60
11	B2	842	U	C3'-C2'-C1'	5.75	107.25	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	BE	49	VAL	CA-C-N	5.75	128.45	120.63
17	BE	49	VAL	C-N-CA	5.75	128.45	120.63
2	A8	32	HIS	CB-CA-C	-5.75	102.04	110.95
11	B2	443	C	C4'-C3'-C2'	-5.75	96.85	102.60
38	A1	2658	G	C1'-O4'-C4'	5.75	115.65	109.90
42	Aa	45	ALA	CA-C-N	5.75	128.46	120.29
42	Aa	45	ALA	C-N-CA	5.75	128.46	120.29
3	Af	41	ARG	N-CA-CB	5.75	119.65	110.16
28	BP	9	ARG	NE-CZ-NH1	5.75	127.25	121.50
38	A1	1692	A	P-O3'-C3'	5.75	128.82	120.20
38	A1	2299	G	O4'-C1'-C2'	5.75	113.35	107.60
60	AM	59	TYR	CB-CG-CD1	-5.75	112.18	120.80
17	BE	85	VAL	CB-CA-C	-5.75	102.77	111.33
19	BG	56	PRO	N-CA-CB	5.75	108.92	102.60
28	BP	7	ASN	CA-CB-CG	5.75	118.35	112.60
58	Ak	69	GLN	CB-CG-CD	-5.75	102.83	112.60
20	BH	46	HIS	CB-CG-ND1	5.75	131.32	122.70
38	A1	1981	G	P-O5'-C5'	-5.75	112.28	120.90
43	AB	95	ASN	CA-C-O	-5.75	114.94	121.72
9	AX	178	VAL	CA-C-N	5.74	128.29	120.54
9	AX	178	VAL	C-N-CA	5.74	128.29	120.54
20	BH	196	PRO	CA-C-N	5.74	127.98	120.28
20	BH	196	PRO	C-N-CA	5.74	127.98	120.28
27	BO	128	GLY	N-CA-C	-5.74	106.10	115.46
38	A1	982	G	O4'-C1'-C2'	-5.74	101.86	107.60
38	A1	2199	U	O4'-C4'-C3'	-5.74	98.26	104.00
62	AO	13	ARG	NE-CZ-NH2	5.74	124.37	119.20
3	Af	30	LYS	O-C-N	5.74	128.21	122.12
11	B2	529	C	C5'-C4'-C3'	5.74	123.81	115.20
38	A1	657	U	O4'-C1'-N1	5.74	117.11	108.50
38	A1	977	C	O4'-C1'-N1	5.74	117.11	108.50
2	A8	25	LYS	N-CA-C	-5.74	106.32	113.38
4	AQ	94	LEU	CA-C-N	5.74	128.44	120.29
4	AQ	94	LEU	C-N-CA	5.74	128.44	120.29
9	AX	7	ILE	CA-C-O	5.74	126.92	120.95
11	B2	415	C	P-O3'-C3'	-5.74	111.59	120.20
11	B2	472	C	C4'-C3'-O3'	-5.74	104.39	113.00
30	BR	56	TYR	CA-C-N	5.74	131.26	123.11
30	BR	56	TYR	C-N-CA	5.74	131.26	123.11
52	AH	123	ALA	CA-C-N	5.74	127.97	120.28
52	AH	123	ALA	C-N-CA	5.74	127.97	120.28
9	AX	71	ILE	CA-C-O	5.74	127.95	120.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	1306	A	O5'-C5'-C4'	5.74	120.11	111.50
13	BA	89	ARG	NE-CZ-NH2	5.74	124.36	119.20
38	A1	668	G	O5'-C5'-C4'	-5.74	102.89	111.50
38	A1	1165	C	C4'-C3'-C2'	-5.74	96.86	102.60
9	AX	249	ILE	O-C-N	5.74	129.40	123.20
9	AX	308	SER	CA-C-N	5.74	129.78	121.52
9	AX	308	SER	C-N-CA	5.74	129.78	121.52
11	B2	127	G	C4'-C3'-C2'	-5.74	96.86	102.60
5	AS	38	GLU	CA-C-O	-5.74	114.34	120.42
7	AU	95	ILE	CA-C-N	5.74	128.36	120.39
7	AU	95	ILE	C-N-CA	5.74	128.36	120.39
11	B2	576	C	O4'-C1'-N1	5.74	117.10	108.50
11	B2	644	G	C4'-C3'-O3'	-5.74	104.40	113.00
38	A1	1399	C	C4'-C3'-C2'	-5.74	96.86	102.60
38	A1	1442	G	C5'-C4'-C3'	-5.74	106.60	115.20
38	A1	1638	C	P-O3'-C3'	5.74	128.80	120.20
11	B2	1056	G	O4'-C1'-N9	5.73	117.10	108.50
38	A1	321	C	O4'-C1'-N1	5.73	117.10	108.50
38	A1	1568	A	C4'-C3'-O3'	-5.73	104.40	113.00
11	B2	711	U	C3'-C2'-C1'	5.73	107.03	101.30
11	B2	909	U	O4'-C1'-N1	5.73	117.10	108.50
11	B2	1300	A	C4'-C3'-C2'	-5.73	96.87	102.60
13	BA	47	VAL	N-CA-C	-5.73	99.86	108.12
21	BI	41	MET	O-C-N	5.73	128.20	122.12
38	A1	1274	G	O4'-C1'-N9	5.73	117.10	108.50
39	A3	54	A	O5'-C5'-C4'	-5.73	102.90	111.50
45	AC	50	HIS	CA-CB-CG	5.73	119.53	113.80
11	B2	1198	A	C4'-C3'-C2'	-5.73	96.87	102.60
17	BE	220	GLY	O-C-N	-5.73	115.25	122.70
38	A1	1942	G	C3'-C2'-C1'	-5.73	95.57	101.30
38	A1	2299	G	C3'-C2'-C1'	-5.73	95.57	101.30
38	A1	2568	A	P-O5'-C5'	-5.73	112.31	120.90
46	AD	208	VAL	CA-C-O	5.73	127.38	120.67
61	AN	15	PRO	N-CA-CB	5.73	109.40	103.38
7	AU	20	LEU	N-CA-CB	5.73	118.54	110.12
38	A1	123	A	O4'-C1'-C2'	-5.73	101.87	107.60
40	AK	13	ILE	CA-C-O	5.73	123.94	118.90
9	AX	368	HIS	ND1-CE1-NE2	5.73	114.13	108.40
11	B2	387	G	P-O5'-C5'	-5.73	112.31	120.90
24	BL	40	LEU	CA-C-N	5.73	125.68	119.78
24	BL	40	LEU	C-N-CA	5.73	125.68	119.78
38	A1	84	A	O4'-C4'-C3'	-5.73	100.37	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	460	C	C5'-C4'-C3'	-5.73	107.41	116.00
38	A1	1124	G	C5'-C4'-C3'	5.73	123.79	115.20
38	A1	1273	C	O4'-C1'-C2'	-5.73	101.87	107.60
51	Ag	39	LEU	N-CA-C	-5.73	100.80	109.85
60	AM	181	LYS	CA-C-N	5.73	129.00	122.36
60	AM	181	LYS	C-N-CA	5.73	129.00	122.36
65	AV	12	LYS	CA-C-N	5.73	125.74	119.90
65	AV	12	LYS	C-N-CA	5.73	125.74	119.90
1	A7	29	THR	CA-C-N	5.73	132.48	121.54
1	A7	29	THR	C-N-CA	5.73	132.48	121.54
6	AT	37	GLN	CA-C-N	5.73	128.42	120.29
6	AT	37	GLN	C-N-CA	5.73	128.42	120.29
11	B2	985	C	O4'-C1'-N1	5.73	117.09	108.50
61	AN	69	VAL	CA-C-N	5.73	128.53	120.28
61	AN	69	VAL	C-N-CA	5.73	128.53	120.28
5	AS	132	ALA	CA-C-N	5.72	132.75	123.93
5	AS	132	ALA	C-N-CA	5.72	132.75	123.93
11	B2	1084	U	O4'-C1'-N1	5.72	117.09	108.50
20	BH	22	SER	N-CA-C	-5.72	100.56	109.72
66	AY	12	ARG	CG-CD-NE	-5.72	99.41	112.00
3	Af	15	LYS	CA-C-O	5.72	126.83	120.82
9	AX	24	LYS	CA-C-O	-5.72	114.45	120.63
11	B2	730	G	O3'-P-O5'	-5.72	95.42	104.00
11	B2	1067	G	C5'-C4'-C3'	5.72	124.58	116.00
11	B2	1260	G	O3'-P-O5'	-5.72	95.42	104.00
17	BE	112	LEU	N-CA-C	-5.72	99.91	109.24
38	A1	1185	A	P-O3'-C3'	-5.72	111.62	120.20
38	A1	2478	G	P-O3'-C3'	5.72	128.78	120.20
38	A1	2796	C	O5'-C5'-C4'	-5.72	102.92	111.50
46	AD	194	ALA	CA-C-O	-5.72	114.49	121.36
49	Ae	57	LYS	CA-C-N	5.72	128.26	120.54
49	Ae	57	LYS	C-N-CA	5.72	128.26	120.54
57	Aj	40	PHE	CB-CA-C	-5.72	103.60	112.07
9	AX	61	THR	CA-C-N	5.72	129.68	120.30
9	AX	61	THR	C-N-CA	5.72	129.68	120.30
17	BE	14	ALA	CA-C-O	5.72	126.35	119.43
33	BU	127	SER	N-CA-C	-5.72	103.66	111.56
19	BG	96	PRO	CA-C-N	5.72	130.02	120.70
19	BG	96	PRO	C-N-CA	5.72	130.02	120.70
38	A1	1333	G	C4'-C3'-C2'	-5.72	96.88	102.60
38	A1	1571	G	O3'-P-O5'	-5.72	95.42	104.00
38	A1	2041	U	C4'-C3'-C2'	-5.72	96.88	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	AA	136	PRO	CA-C-O	-5.72	112.27	120.56
54	AI	130	THR	CA-C-N	5.72	128.54	120.42
54	AI	130	THR	C-N-CA	5.72	128.54	120.42
66	AY	96	PHE	CA-C-N	5.72	127.94	120.28
66	AY	96	PHE	C-N-CA	5.72	127.94	120.28
8	AW	61	LYS	CA-C-N	5.72	127.94	120.28
8	AW	61	LYS	C-N-CA	5.72	127.94	120.28
11	B2	253	G	C3'-C2'-C1'	5.72	107.02	101.30
5	AS	70	GLN	CA-CB-CG	5.72	125.53	114.10
11	B2	339	U	C4'-C3'-O3'	-5.72	104.43	113.00
29	BQ	149	ASP	CA-C-O	-5.72	112.33	120.16
35	BW	8	MET	CA-C-N	5.72	126.98	119.84
35	BW	8	MET	C-N-CA	5.72	126.98	119.84
38	A1	1572	C	O4'-C1'-C2'	-5.72	100.08	105.80
45	AC	19	ARG	N-CA-C	-5.72	100.38	109.76
46	AD	100	ILE	CB-CA-C	5.72	120.66	111.29
52	AH	116	ALA	N-CA-C	-5.72	100.66	108.38
63	AP	33	VAL	N-CA-C	5.72	116.45	110.62
11	B2	671	C	O3'-P-O5'	-5.71	95.43	104.00
18	BF	64	GLU	N-CA-C	-5.71	100.62	109.14
20	BH	21	TRP	CA-C-O	-5.71	114.63	121.89
38	A1	464	C	O4'-C1'-N1	5.71	117.07	108.50
38	A1	2281	A	P-O3'-C3'	5.71	128.77	120.20
38	A1	2803	U	C1'-O4'-C4'	5.71	115.61	109.90
43	AB	88	ASP	CA-CB-CG	-5.71	106.89	112.60
50	AF	177	LYS	N-CA-C	-5.71	106.23	113.43
58	Ak	161	VAL	O-C-N	-5.71	115.97	122.94
7	AU	115	ILE	CA-C-O	-5.71	114.71	121.05
9	AX	152	ILE	CA-C-N	5.71	127.97	120.60
9	AX	152	ILE	C-N-CA	5.71	127.97	120.60
10	B1	6	G	P-O3'-C3'	5.71	128.77	120.20
11	B2	1174	A	O3'-P-O5'	-5.71	95.43	104.00
38	A1	320	C	P-O5'-C5'	5.71	129.47	120.90
42	Aa	42	HIS	CE1-NE2-CD2	-5.71	103.29	109.00
47	Ad	63	ARG	NE-CZ-NH2	-5.71	114.06	119.20
57	Aj	56	GLU	CA-C-N	5.71	132.60	121.41
57	Aj	56	GLU	C-N-CA	5.71	132.60	121.41
58	Ak	216	MET	N-CA-C	5.71	117.58	111.36
11	B2	961	U	C5'-C4'-C3'	-5.71	106.64	115.20
11	B2	1424	G	C5'-C4'-C3'	-5.71	107.44	116.00
17	BE	111	ILE	N-CA-C	-5.71	99.56	108.86
38	A1	302	U	C3'-C2'-C1'	5.71	107.21	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1001	C	P-O3'-C3'	5.71	128.76	120.20
38	A1	1864	G	C3'-C2'-O2'	5.71	119.26	110.70
38	A1	2579	G	O4'-C1'-C2'	-5.71	101.89	107.60
42	Aa	74	VAL	CA-C-O	-5.71	115.67	121.67
62	AO	184	HIS	CB-CG-CD2	-5.71	123.78	131.20
8	AW	10	SER	N-CA-C	-5.71	102.85	110.55
11	B2	150	G	O4'-C1'-N9	5.71	117.06	108.50
11	B2	801	A	C2'-C3'-O3'	5.71	118.06	109.50
11	B2	1463	A	O4'-C4'-C3'	-5.71	98.29	104.00
13	BA	92	ILE	CA-CB-CG1	5.71	120.10	110.40
38	A1	714	C	P-O3'-C3'	5.71	128.76	120.20
38	A1	2027	G	C5'-C4'-C3'	-5.71	107.44	116.00
38	A1	2273	U	C3'-C2'-C1'	5.71	107.01	101.30
38	A1	2692	A	O4'-C1'-N9	5.71	117.06	108.50
38	A1	2744	U	C4'-C3'-O3'	-5.71	104.44	113.00
54	AI	114	THR	N-CA-CB	5.71	118.43	110.04
59	AL	57	HIS	CA-CB-CG	-5.71	108.09	113.80
11	B2	454	G	C1'-C2'-O2'	5.71	116.96	108.40
22	BJ	34	ASN	CA-C-N	5.71	130.00	122.30
22	BJ	34	ASN	C-N-CA	5.71	130.00	122.30
38	A1	590	A	C4'-C3'-O3'	-5.71	104.44	113.00
45	AC	62	ASN	CA-CB-CG	-5.71	106.89	112.60
46	AD	30	LEU	CB-CA-C	-5.71	101.15	110.85
54	AI	118	ALA	CA-C-O	5.71	126.38	119.31
11	B2	1090	C	O4'-C1'-C2'	-5.70	101.90	107.60
17	BE	115	ILE	CA-C-N	5.70	130.51	120.87
17	BE	115	ILE	C-N-CA	5.70	130.51	120.87
23	BK	33	VAL	N-CA-C	-5.70	107.18	112.83
25	BM	17	ALA	N-CA-C	-5.70	99.43	108.73
27	BO	134	ASN	CA-CB-CG	5.70	118.30	112.60
31	BS	55	THR	O-C-N	-5.70	115.65	122.15
36	BX	48	PRO	N-CA-C	5.70	119.81	111.03
38	A1	344	G	O4'-C1'-N9	5.70	117.06	108.50
38	A1	1957	U	O4'-C1'-C2'	-5.70	100.10	105.80
38	A1	2497	G	P-O5'-C5'	-5.70	112.34	120.90
48	AE	117	ILE	CB-CA-C	5.70	119.50	111.63
11	B2	281	G	C5'-C4'-C3'	5.70	124.55	116.00
11	B2	1030	U	C4'-C3'-O3'	-5.70	104.45	113.00
19	BG	52	GLY	CA-C-N	5.70	131.96	121.70
19	BG	52	GLY	C-N-CA	5.70	131.96	121.70
11	B2	1242	C	O4'-C4'-C3'	-5.70	98.30	104.00
38	A1	255	G	O5'-C5'-C4'	5.70	120.05	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1080	G	C5'-C4'-C3'	5.70	124.55	116.00
6	AT	35	THR	CA-C-N	5.70	128.38	120.29
6	AT	35	THR	C-N-CA	5.70	128.38	120.29
15	BC	53	TYR	N-CA-C	-5.70	106.20	114.12
17	BE	205	PHE	CA-C-O	-5.70	115.07	119.46
38	A1	218	A	P-O5'-C5'	5.70	129.45	120.90
38	A1	404	G	P-O3'-C3'	5.70	128.75	120.20
38	A1	1739	U	C2'-C3'-O3'	5.70	118.05	109.50
38	A1	1999	G	P-O3'-C3'	5.70	128.75	120.20
38	A1	2826	U	P-O3'-C3'	5.70	128.75	120.20
9	AX	52	ILE	CB-CA-C	-5.70	104.63	111.18
11	B2	1357	C	O4'-C1'-N1	5.70	117.05	108.50
38	A1	681	C	C3'-C2'-C1'	-5.70	95.60	101.30
43	AB	33	LEU	CA-C-O	5.70	126.40	119.11
56	AJ	24	GLY	O-C-N	5.70	129.22	122.50
4	AQ	10	ILE	N-CA-C	5.70	115.88	110.53
36	BX	23	ASP	N-CA-C	-5.70	103.84	112.04
38	A1	2394	G	P-O5'-C5'	5.70	129.44	120.90
38	A1	2448	A	P-O3'-C3'	5.70	128.74	120.20
11	B2	282	G	C3'-C2'-C1'	-5.69	95.61	101.30
11	B2	345	G	O5'-C5'-C4'	-5.69	102.96	111.50
11	B2	423	U	O4'-C4'-C3'	-5.69	98.31	104.00
11	B2	885	G	C4'-C3'-C2'	-5.69	96.91	102.60
11	B2	1036	G	O3'-P-O5'	-5.69	95.46	104.00
11	B2	1060	G	O4'-C1'-N9	5.69	117.04	108.50
38	A1	1021	G	C5'-C4'-C3'	-5.69	107.46	116.00
11	B2	315	A	C4'-C3'-C2'	-5.69	96.91	102.60
11	B2	962	G	O3'-P-O5'	-5.69	95.46	104.00
11	B2	1033	G	C4'-C3'-O3'	-5.69	104.46	113.00
29	BQ	17	PRO	CB-CA-C	-5.69	103.97	110.92
38	A1	103	A	O5'-C5'-C4'	-5.69	102.96	111.50
38	A1	530	A	O4'-C4'-C3'	-5.69	98.31	104.00
38	A1	1779	C	O4'-C1'-C2'	-5.69	101.91	107.60
38	A1	1989	G	C4'-C3'-O3'	-5.69	104.46	113.00
46	AD	128	ARG	CA-C-N	5.69	127.91	120.28
46	AD	128	ARG	C-N-CA	5.69	127.91	120.28
11	B2	278	A	C1'-O4'-C4'	5.69	115.59	109.90
11	B2	798	U	N1-C1'-C2'	-5.69	105.47	114.00
11	B2	1077	U	C4'-C3'-C2'	-5.69	96.91	102.60
11	B2	1094	U	C4'-C3'-C2'	-5.69	96.91	102.60
11	B2	1448	A	O4'-C1'-N9	5.69	117.04	108.50
24	BL	80	ARG	N-CA-C	-5.69	105.16	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1243	C	P-O3'-C3'	-5.69	111.67	120.20
41	AA	115	PRO	N-CA-CB	5.69	109.59	103.33
46	AD	99	LYS	CA-C-N	5.69	132.21	121.97
46	AD	99	LYS	C-N-CA	5.69	132.21	121.97
14	BB	62	PHE	CA-CB-CG	-5.69	108.11	113.80
45	AC	233	PRO	CA-C-O	-5.69	110.90	119.55
51	Ag	37	LYS	O-C-N	5.69	127.36	121.79
62	AO	38	ARG	N-CA-C	-5.69	100.70	109.52
20	BH	55	HIS	CG-CD2-NE2	5.69	112.89	107.20
38	A1	746	C	C1'-C2'-O2'	5.69	116.93	108.40
38	A1	1224	A	C5'-C4'-C3'	-5.69	107.47	116.00
26	BN	130	ASN	CA-C-N	5.69	130.20	122.07
26	BN	130	ASN	C-N-CA	5.69	130.20	122.07
27	BO	120	HIS	N-CA-CB	5.69	118.48	110.12
38	A1	686	C	C5'-C4'-C3'	-5.69	107.47	116.00
52	AH	130	ALA	N-CA-C	5.69	117.48	111.28
2	A8	49	TYR	CA-C-O	5.68	127.12	120.98
11	B2	661	C	C5'-C4'-C3'	5.68	124.53	116.00
11	B2	1251	C	O5'-C5'-C4'	-5.68	102.97	111.50
38	A1	529	G	O3'-P-O5'	-5.68	95.47	104.00
38	A1	1916	U	C1'-O4'-C4'	5.68	115.58	109.90
38	A1	2321	A	O3'-P-O5'	-5.68	95.47	104.00
38	A1	2518	G	P-O5'-C5'	-5.68	112.37	120.90
40	AK	27	ILE	CA-C-O	-5.68	114.23	120.48
10	B1	19	G	O4'-C1'-N9	5.68	117.02	108.50
10	B1	60	A	P-O5'-C5'	5.68	129.42	120.90
11	B2	1241	U	P-O3'-C3'	5.68	128.72	120.20
13	BA	40	PRO	CA-C-N	5.68	131.03	122.68
13	BA	40	PRO	C-N-CA	5.68	131.03	122.68
17	BE	179	PHE	CB-CA-C	5.68	119.10	109.50
23	BK	93	MET	N-CA-C	-5.68	105.02	112.41
38	A1	1816	C	O4'-C1'-N1	5.68	117.03	108.50
38	A1	2267	U	P-O5'-C5'	-5.68	112.38	120.90
57	Aj	67	LEU	CB-CA-C	-5.68	102.89	110.79
13	BA	164	GLY	N-CA-C	5.68	120.71	114.40
48	AE	142	THR	CB-CA-C	5.68	119.39	110.19
66	AY	56	TRP	N-CA-C	-5.68	100.66	109.24
11	B2	41	C	O4'-C1'-N1	5.68	117.02	108.50
11	B2	456	U	P-O5'-C5'	5.68	129.42	120.90
11	B2	867	A	O4'-C1'-N9	5.68	117.02	108.50
37	BY	41	GLY	CA-C-N	5.68	128.16	120.44
37	BY	41	GLY	C-N-CA	5.68	128.16	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2061	A	C2'-C3'-O3'	5.68	118.02	109.50
38	A1	2844	G	P-O3'-C3'	-5.68	111.68	120.20
11	B2	1206	G	O4'-C1'-N9	5.68	117.02	108.50
38	A1	1791	A	C2'-C3'-O3'	5.68	118.02	109.50
45	AC	351	VAL	CA-C-O	-5.68	114.45	120.53
48	AE	74	GLU	CA-C-N	5.68	125.69	119.90
48	AE	74	GLU	C-N-CA	5.68	125.69	119.90
54	AI	56	ARG	N-CA-CB	5.68	120.15	110.50
11	B2	450	A	C3'-C2'-O2'	5.68	119.22	110.70
34	BV	33	ARG	NE-CZ-NH1	-5.68	115.82	121.50
38	A1	1079	A	O4'-C1'-N9	5.68	117.02	108.50
38	A1	1102	C	O3'-P-O5'	5.68	112.51	104.00
44	Ab	67	SER	CA-C-N	5.68	125.63	119.78
44	Ab	67	SER	C-N-CA	5.68	125.63	119.78
11	B2	238	G	C4'-C3'-C2'	-5.67	96.92	102.60
11	B2	514	U	O4'-C1'-N1	5.67	117.01	108.50
11	B2	1296	U	C3'-C2'-C1'	-5.67	95.83	101.50
22	BJ	31	GLU	O-C-N	-5.67	113.92	121.64
38	A1	2821	G	O4'-C1'-N9	5.67	117.01	108.50
62	AO	134	SER	CA-C-N	5.67	126.12	119.99
62	AO	134	SER	C-N-CA	5.67	126.12	119.99
52	AH	23	PRO	CA-C-N	5.67	127.88	120.28
52	AH	23	PRO	C-N-CA	5.67	127.88	120.28
61	AN	139	ARG	NE-CZ-NH2	5.67	124.31	119.20
63	AP	59	GLY	O-C-N	5.67	129.63	122.43
3	Af	39	PRO	CB-CA-C	-5.67	107.11	111.87
11	B2	1	A	P-O3'-C3'	5.67	128.71	120.20
11	B2	10	G	P-O5'-C5'	-5.67	112.39	120.90
25	BM	28	ILE	N-CA-CB	5.67	119.53	111.82
38	A1	480	A	O3'-P-O5'	5.67	112.51	104.00
38	A1	1222	U	N1-C1'-C2'	5.67	120.51	112.00
38	A1	2307	C	P-O3'-C3'	5.67	128.71	120.20
44	Ab	28	TRP	CA-C-N	5.67	128.34	120.29
44	Ab	28	TRP	C-N-CA	5.67	128.34	120.29
55	Ai	35	LYS	CA-C-O	-5.67	115.38	121.56
11	B2	951	G	O4'-C1'-N9	5.67	117.00	108.50
38	A1	935	A	P-O3'-C3'	5.67	128.70	120.20
49	Ae	40	PHE	N-CA-C	-5.67	99.90	108.52
4	AQ	95	TRP	CD2-CE2-CZ2	-5.67	116.73	122.40
9	AX	118	MET	CA-C-O	-5.67	112.63	119.49
11	B2	683	A	C4'-C3'-C2'	-5.67	96.93	102.60
11	B2	970	G	C4'-C3'-C2'	-5.67	96.93	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	BF	46	GLU	CA-C-N	5.67	125.20	119.19
18	BF	46	GLU	C-N-CA	5.67	125.20	119.19
38	A1	407	A	O4'-C1'-N9	5.67	117.00	108.50
38	A1	1336	G	P-O5'-C5'	-5.67	112.40	120.90
41	AA	58	LYS	CA-C-O	5.67	127.64	121.06
46	AD	203	LYS	CA-C-N	5.67	130.79	122.63
46	AD	203	LYS	C-N-CA	5.67	130.79	122.63
52	AH	2	PRO	N-CD-CG	5.67	111.70	103.20
6	AT	9	ARG	O-C-N	-5.67	116.22	122.17
11	B2	753	G	C5'-C4'-C3'	-5.67	107.50	116.00
17	BE	134	LYS	CB-CA-C	-5.67	99.48	109.62
27	BO	144	SER	CA-C-N	5.67	131.90	121.70
27	BO	144	SER	C-N-CA	5.67	131.90	121.70
38	A1	616	C	O4'-C1'-N1	5.67	117.00	108.50
38	A1	686	C	O4'-C1'-C2'	-5.67	101.93	107.60
38	A1	1642	G	P-O3'-C3'	5.67	128.70	120.20
38	A1	2241	U	P-O5'-C5'	5.67	129.40	120.90
38	A1	2732	U	O3'-P-O5'	5.67	112.50	104.00
47	Ad	35	HIS	CE1-NE2-CD2	-5.67	103.33	109.00
38	A1	1706	G	P-O5'-C5'	-5.67	112.40	120.90
38	A1	1986	U	C4'-C3'-O3'	-5.67	104.50	113.00
39	A3	86	C	N1-C1'-C2'	-5.67	103.50	112.00
45	AC	87	ARG	N-CA-C	-5.67	99.78	109.24
1	A7	12	LYS	N-CA-C	5.66	117.45	111.28
13	BA	97	ARG	O-C-N	-5.66	117.31	123.26
34	BV	57	ARG	N-CA-C	-5.66	100.90	109.85
38	A1	308	C	C5'-C4'-C3'	5.66	124.50	116.00
38	A1	715	G	P-O5'-C5'	-5.66	112.41	120.90
38	A1	2081	C	P-O5'-C5'	5.66	129.40	120.90
38	A1	2319	C	C3'-C2'-C1'	5.66	106.96	101.30
38	A1	2610	C	C5'-C4'-O4'	-5.66	101.31	109.80
38	A1	2879	G	C5'-C4'-C3'	-5.66	107.51	116.00
64	AR	54	PRO	N-CA-C	5.66	120.11	111.11
20	BH	192	ALA	CA-C-O	-5.66	114.42	120.42
38	A1	1466	U	C4'-C3'-O3'	-5.66	104.51	113.00
43	AB	46	GLU	CA-C-O	5.66	126.52	120.24
14	BB	201	ARG	NE-CZ-NH1	-5.66	115.84	121.50
17	BE	218	GLU	N-CA-C	5.66	117.53	111.36
20	BH	159	ASP	N-CA-C	5.66	117.13	111.07
29	BQ	58	TYR	N-CA-C	-5.66	106.37	113.28
38	A1	912	G	C5'-C4'-C3'	-5.66	107.51	116.00
38	A1	1146	U	P-O5'-C5'	-5.66	112.41	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	AD	69	ARG	CA-C-N	5.66	129.67	122.37
46	AD	69	ARG	C-N-CA	5.66	129.67	122.37
11	B2	1150	G	P-O3'-C3'	5.66	128.69	120.20
25	BM	11	LYS	CA-CB-CG	5.66	125.42	114.10
38	A1	66	C	O4'-C4'-C3'	-5.66	98.34	104.00
39	A3	45	C	O4'-C1'-N1	5.66	116.99	108.50
41	AA	173	SER	CA-C-N	5.66	127.86	120.28
41	AA	173	SER	C-N-CA	5.66	127.86	120.28
6	AT	16	ALA	CA-C-O	-5.66	113.47	119.97
11	B2	1208	A	P-O3'-C3'	5.66	128.69	120.20
20	BH	84	HIS	CA-CB-CG	5.66	119.46	113.80
27	BO	20	GLN	CA-C-N	5.66	127.86	120.28
27	BO	20	GLN	C-N-CA	5.66	127.86	120.28
38	A1	1527	G	O3'-P-O5'	-5.66	95.52	104.00
38	A1	1613	A	O4'-C1'-N9	5.66	116.99	108.50
38	A1	2872	G	N9-C1'-C2'	-5.66	103.51	112.00
52	AH	131	LEU	O-C-N	-5.66	116.12	122.12
7	AU	56	ARG	N-CA-C	-5.66	101.16	109.81
9	AX	269	ILE	CB-CA-C	-5.66	104.51	111.92
11	B2	285	C	O4'-C1'-N1	5.66	116.98	108.50
11	B2	1146	G	O4'-C1'-C2'	-5.66	101.94	107.60
38	A1	38	U	O3'-P-O5'	5.66	112.48	104.00
38	A1	497	G	C4'-C3'-C2'	-5.66	96.94	102.60
38	A1	1165	C	O3'-P-O5'	-5.66	95.52	104.00
38	A1	2983	G	O4'-C1'-N9	5.66	116.98	108.50
52	AH	34	GLN	OE1-CD-NE2	5.66	128.26	122.60
58	Ak	129	THR	CA-C-N	5.66	132.64	123.93
58	Ak	129	THR	C-N-CA	5.66	132.64	123.93
4	AQ	81	ARG	NE-CZ-NH2	5.65	124.29	119.20
38	A1	897	U	C2'-C3'-O3'	5.65	117.98	109.50
38	A1	1824	G	C4'-C3'-C2'	-5.65	96.95	102.60
3	Af	21	ARG	CA-C-N	5.65	129.13	120.82
3	Af	21	ARG	C-N-CA	5.65	129.13	120.82
6	AT	32	ARG	CA-C-N	5.65	131.44	122.74
6	AT	32	ARG	C-N-CA	5.65	131.44	122.74
9	AX	120	PHE	N-CA-C	5.65	117.24	111.14
14	BB	48	THR	N-CA-CB	5.65	118.16	109.91
28	BP	41	HIS	CE1-NE2-CD2	-5.65	103.35	109.00
38	A1	119	U	C3'-C2'-O2'	-5.65	106.12	114.60
38	A1	180	A	C4'-C3'-C2'	-5.65	96.95	102.60
38	A1	600	A	P-O3'-C3'	5.65	128.68	120.20
38	A1	1219	C	C4'-C3'-O3'	-5.65	104.52	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1239	C	C4'-C3'-O3'	-5.65	104.52	113.00
5	AS	49	ARG	CA-C-N	5.65	127.78	120.44
5	AS	49	ARG	C-N-CA	5.65	127.78	120.44
12	B3	21	GLN	CA-C-O	5.65	125.36	119.14
34	BV	18	GLU	N-CA-C	-5.65	99.97	109.07
38	A1	80	G	O4'-C4'-C3'	-5.65	98.35	104.00
38	A1	2716	C	P-O3'-C3'	-5.65	111.72	120.20
59	AL	114	GLY	CA-C-N	5.65	128.79	120.82
59	AL	114	GLY	C-N-CA	5.65	128.79	120.82
66	AY	117	PHE	CA-CB-CG	-5.65	108.15	113.80
17	BE	54	GLY	N-CA-C	-5.65	107.47	115.43
20	BH	97	LYS	N-CA-CB	5.65	118.92	110.22
38	A1	2246	G	C4'-C3'-O3'	-5.65	104.53	113.00
4	AQ	97	LYS	CA-C-N	5.65	127.78	120.44
4	AQ	97	LYS	C-N-CA	5.65	127.78	120.44
11	B2	1239	A	C2'-C3'-O3'	5.65	117.97	109.50
26	BN	105	ILE	N-CA-C	-5.65	100.35	108.48
36	BX	50	ARG	CA-C-N	5.65	128.28	120.49
36	BX	50	ARG	C-N-CA	5.65	128.28	120.49
38	A1	883	G	O4'-C4'-C3'	-5.65	100.45	106.10
38	A1	1454	G	N9-C1'-C2'	-5.65	105.53	114.00
11	B2	1022	U	O4'-C1'-N1	5.65	116.97	108.50
12	B3	107	ALA	CA-C-N	5.65	128.12	120.38
12	B3	107	ALA	C-N-CA	5.65	128.12	120.38
38	A1	2603	A	C4'-C3'-O3'	-5.65	104.53	113.00
7	AU	36	ARG	CA-C-N	5.64	128.31	120.29
7	AU	36	ARG	C-N-CA	5.64	128.31	120.29
38	A1	2292	A	C4'-C3'-C2'	5.64	108.24	102.60
11	B2	175	G	O4'-C1'-N9	5.64	116.97	108.50
11	B2	177	A	O4'-C1'-N9	5.64	116.97	108.50
11	B2	585	U	P-O3'-C3'	5.64	128.66	120.20
11	B2	1138	G	C4'-C3'-O3'	-5.64	104.53	113.00
22	BJ	81	ILE	CA-CB-CG2	5.64	120.09	110.50
26	BN	146	ARG	NE-CZ-NH2	-5.64	114.12	119.20
27	BO	94	ILE	CB-CA-C	5.64	120.54	111.29
37	BY	19	ASN	CA-CB-CG	5.64	118.24	112.60
38	A1	629	G	O5'-C5'-C4'	-5.64	103.04	111.50
38	A1	1609	G	O4'-C1'-N9	5.64	116.96	108.50
38	A1	2672	A	C3'-C2'-C1'	5.64	106.94	101.30
38	A1	3007	A	C5'-C4'-C3'	5.64	124.46	116.00
48	AE	5	ILE	CA-C-N	5.64	125.31	119.05
48	AE	5	ILE	C-N-CA	5.64	125.31	119.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
66	AY	93	ILE	N-CA-C	-5.64	105.02	110.72
10	B1	66	C	O4'-C1'-N1	5.64	116.96	108.50
38	A1	1088	G	O4'-C1'-N9	5.64	116.96	108.50
38	A1	1675	C	O4'-C1'-N1	5.64	116.96	108.50
11	B2	31	U	P-O5'-C5'	5.64	129.36	120.90
22	BJ	56	ARG	CB-CG-CD	5.64	124.27	111.30
30	BR	59	LYS	N-CA-C	-5.64	105.51	112.90
42	Aa	18	ILE	N-CA-C	5.64	116.37	110.62
11	B2	442	C	O4'-C4'-C3'	-5.64	98.36	104.00
13	BA	175	LYS	N-CA-CB	5.64	118.90	110.22
38	A1	496	A	P-O3'-C3'	5.64	128.66	120.20
38	A1	2219	A	O3'-P-O5'	-5.64	95.55	104.00
41	AA	35	LYS	O-C-N	-5.64	116.90	123.27
48	AE	62	LYS	N-CA-C	-5.64	100.50	109.07
61	AN	57	ILE	CB-CA-C	5.64	119.19	110.96
3	Af	7	LEU	CA-C-N	5.63	128.29	120.29
3	Af	7	LEU	C-N-CA	5.63	128.29	120.29
4	AQ	115	ILE	N-CA-C	-5.63	99.94	108.17
9	AX	374	ILE	N-CA-CB	5.63	119.10	111.21
10	B1	47	G	C4'-C3'-C2'	-5.63	96.97	102.60
11	B2	1095	C	C1'-O4'-C4'	-5.63	104.27	109.90
38	A1	683	C	O4'-C1'-N1	5.63	116.95	108.50
38	A1	1497	C	O4'-C1'-C2'	-5.63	101.97	107.60
38	A1	1565	G	O4'-C1'-C2'	-5.63	101.97	107.60
38	A1	2307	C	O3'-P-O5'	-5.63	95.55	104.00
38	A1	2682	G	C5'-C4'-C3'	-5.63	107.55	116.00
11	B2	702	G	P-O3'-C3'	5.63	128.65	120.20
11	B2	1285	C	O5'-C5'-C4'	-5.63	103.05	111.50
38	A1	377	C	C4'-C3'-C2'	5.63	108.23	102.60
38	A1	2774	C	O4'-C1'-N1	5.63	116.95	108.50
48	AE	56	PRO	CB-CA-C	-5.63	101.98	110.20
60	AM	139	VAL	CB-CA-C	-5.63	104.54	112.14
5	AS	19	ARG	CA-C-N	5.63	133.34	121.91
5	AS	19	ARG	C-N-CA	5.63	133.34	121.91
11	B2	167	G	O3'-P-O5'	5.63	112.45	104.00
11	B2	721	A	C4'-C3'-O3'	-5.63	104.55	113.00
11	B2	1455	A	O4'-C4'-C3'	-5.63	98.37	104.00
29	BQ	116	LEU	CA-C-N	5.63	127.76	120.44
29	BQ	116	LEU	C-N-CA	5.63	127.76	120.44
38	A1	136	U	O4'-C1'-N1	5.63	116.95	108.50
11	B2	228	G	P-O5'-C5'	-5.63	112.45	120.90
11	B2	1225	C	C4'-C3'-C2'	5.63	108.23	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	BD	176	GLN	CA-C-O	-5.63	115.06	120.92
38	A1	1152	C	O4'-C1'-N1	5.63	116.94	108.50
38	A1	1548	A	C4'-C3'-O3'	-5.63	104.55	113.00
39	A3	116	C	O4'-C1'-N1	5.63	116.94	108.50
29	BQ	127	SER	CA-C-N	5.63	127.82	120.28
29	BQ	127	SER	C-N-CA	5.63	127.82	120.28
38	A1	134	C	O4'-C1'-N1	5.63	116.94	108.50
38	A1	2892	A	C4'-C3'-C2'	5.63	108.23	102.60
7	AU	43	ASN	CA-C-O	-5.63	115.43	121.45
20	BH	68	ILE	CA-C-N	5.63	127.75	120.44
20	BH	68	ILE	C-N-CA	5.63	127.75	120.44
25	BM	121	ILE	N-CA-C	-5.63	96.72	108.88
38	A1	307	C	C4'-C3'-C2'	-5.63	96.97	102.60
38	A1	1428	G	C4'-C3'-C2'	5.63	108.23	102.60
38	A1	1450	C	O3'-P-O5'	-5.63	95.56	104.00
40	A5	56	LEU	CA-C-N	5.63	125.30	119.56
40	A5	56	LEU	C-N-CA	5.63	125.30	119.56
43	AB	63	PHE	CA-CB-CG	-5.63	108.17	113.80
49	Ae	3	SER	CA-C-O	-5.63	115.58	121.55
60	AM	11	TRP	CA-C-N	5.63	127.75	120.44
60	AM	11	TRP	C-N-CA	5.63	127.75	120.44
64	AR	6	HIS	N-CA-CB	5.63	122.00	111.53
64	AR	6	HIS	ND1-CE1-NE2	5.63	114.03	108.40
5	AS	68	ASP	CA-C-N	5.62	130.63	122.36
5	AS	68	ASP	C-N-CA	5.62	130.63	122.36
15	BC	131	ARG	NE-CZ-NH1	-5.62	115.88	121.50
16	BD	77	LEU	CA-C-O	-5.62	113.50	119.97
38	A1	1886	C	C4'-C3'-O3'	-5.62	104.56	113.00
31	BS	40	ASN	OD1-CG-ND2	5.62	128.22	122.60
38	A1	974	U	O4'-C4'-C3'	5.62	109.62	104.00
43	AB	201	ASN	O-C-N	5.62	128.16	122.09
48	AE	106	SER	CA-C-N	5.62	133.11	123.05
48	AE	106	SER	C-N-CA	5.62	133.11	123.05
54	AI	88	ASP	N-CA-C	5.62	117.09	111.07
40	A5	47	ARG	NE-CZ-NH1	-5.62	115.88	121.50
47	Ad	16	ARG	N-CA-CB	5.62	118.83	110.29
61	AN	47	VAL	N-CA-C	-5.62	100.39	108.48
11	B2	20	G	O5'-C5'-C4'	-5.62	103.07	111.50
25	BM	23	PHE	N-CA-C	-5.62	106.19	113.16
38	A1	2589	C	O4'-C1'-N1	5.62	116.93	108.50
48	AE	121	ILE	CA-C-N	5.62	133.48	121.45
48	AE	121	ILE	C-N-CA	5.62	133.48	121.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	AU	77	TYR	CB-CG-CD1	5.62	129.23	120.80
24	BL	25	GLN	CB-CG-CD	-5.62	103.05	112.60
32	BT	43	GLU	N-CA-CB	5.62	118.87	110.22
52	AH	61	THR	N-CA-C	-5.62	103.94	112.99
34	BV	96	LYS	N-CA-CB	5.62	119.64	110.37
60	AM	11	TRP	CB-CG-CD2	-5.62	118.94	126.80
61	AN	36	MET	CB-CA-C	-5.62	100.17	110.62
5	AS	101	ASN	O-C-N	5.62	128.07	122.12
11	B2	1241	U	P-O5'-C5'	5.62	129.32	120.90
28	BP	55	TYR	N-CA-CB	5.62	118.26	110.17
32	BT	66	HIS	CB-CA-C	-5.62	99.88	109.65
38	A1	1503	C	C4'-C3'-C2'	-5.62	96.98	102.60
38	A1	2037	A	C3'-C2'-C1'	-5.62	95.68	101.30
41	AA	93	SER	CA-C-O	-5.62	114.50	120.28
43	AB	18	LYS	CA-C-N	5.62	129.22	120.68
43	AB	18	LYS	C-N-CA	5.62	129.22	120.68
50	AF	10	GLU	CA-C-N	5.62	130.42	123.12
50	AF	10	GLU	C-N-CA	5.62	130.42	123.12
55	Ai	21	ILE	CA-C-O	-5.62	114.82	121.05
9	AX	416	GLU	N-CA-CB	5.61	118.15	110.01
11	B2	719	G	O3'-P-O5'	-5.61	95.58	104.00
11	B2	1272	G	P-O3'-C3'	-5.61	111.78	120.20
11	B2	1397	C	O4'-C1'-C2'	-5.61	101.99	107.60
16	BD	166	PRO	N-CA-CB	5.61	108.85	103.52
17	BE	64	LYS	CA-C-O	-5.61	114.47	120.42
21	BI	76	LYS	CA-C-O	-5.61	113.40	118.79
30	BR	54	TYR	N-CA-CB	-5.61	101.87	110.85
38	A1	443	C	C3'-C2'-O2'	-5.61	106.18	114.60
38	A1	1580	G	C1'-O4'-C4'	5.61	115.51	109.90
38	A1	1606	C	O5'-C5'-C4'	-5.61	103.08	111.50
58	Ak	54	VAL	N-CA-C	-5.61	99.78	107.75
61	AN	149	ALA	N-CA-C	5.61	117.48	111.36
11	B2	1195	U	O4'-C1'-N1	5.61	116.92	108.50
15	BC	183	MET	N-CA-C	-5.61	98.38	109.10
20	BH	124	VAL	CA-C-N	5.61	127.80	120.28
20	BH	124	VAL	C-N-CA	5.61	127.80	120.28
38	A1	2079	U	P-O3'-C3'	-5.61	111.78	120.20
46	AD	11	GLN	O-C-N	-5.61	116.39	121.66
62	AO	163	LYS	CB-CA-C	-5.61	100.82	109.29
3	Af	43	TYR	N-CA-C	-5.61	101.38	109.29
11	B2	1469	G	O4'-C1'-N9	5.61	116.92	108.50
14	BB	123	ASP	CA-C-N	5.61	128.57	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	BB	123	ASP	C-N-CA	5.61	128.57	120.38
18	BF	92	ARG	N-CA-C	-5.61	106.32	112.72
22	BJ	108	ALA	N-CA-CB	5.61	120.58	111.21
25	BM	86	PRO	CA-C-O	-5.61	114.83	121.67
26	BN	22	LYS	CB-CA-C	-5.61	102.04	110.90
38	A1	48	G	C2'-C3'-O3'	-5.61	105.28	113.70
38	A1	1816	C	C5'-C4'-C3'	5.61	124.42	116.00
38	A1	1938	G	O4'-C4'-C3'	-5.61	100.49	106.10
46	AD	161	PHE	CB-CA-C	-5.61	101.31	110.85
65	AV	12	LYS	CA-C-O	-5.61	114.19	120.25
11	B2	456	U	O4'-C1'-N1	5.61	116.91	108.50
11	B2	1263	C	C4'-C3'-O3'	-5.61	104.59	113.00
17	BE	19	TRP	CA-C-N	5.61	132.25	121.54
17	BE	19	TRP	C-N-CA	5.61	132.25	121.54
2	A8	37	THR	CB-CA-C	-5.61	100.44	110.70
9	AX	94	ILE	N-CA-C	-5.61	99.70	108.95
9	AX	158	ASP	CA-CB-CG	5.61	118.21	112.60
11	B2	408	C	O4'-C1'-N1	5.61	116.91	108.50
11	B2	940	U	C1'-O4'-C4'	5.61	115.51	109.90
11	B2	1035	C	O4'-C1'-N1	5.61	116.91	108.50
11	B2	1124	G	O4'-C1'-N9	5.61	116.91	108.50
20	BH	91	ARG	CB-CA-C	-5.61	102.10	111.13
38	A1	329	G	O4'-C4'-C3'	-5.61	98.39	104.00
38	A1	473	C	C3'-C2'-C1'	5.61	106.91	101.30
38	A1	1273	C	C3'-C2'-C1'	5.61	106.91	101.30
38	A1	2557	C	P-O3'-C3'	-5.61	111.79	120.20
38	A1	2665	G	C5'-C4'-C3'	-5.61	107.59	116.00
41	AA	75	ARG	NE-CZ-NH1	5.61	127.11	121.50
43	AB	179	TYR	N-CA-C	5.61	117.39	111.28
11	B2	305	C	O4'-C1'-N1	5.61	116.91	108.50
11	B2	1015	C	O4'-C1'-N1	5.61	116.91	108.50
26	BN	21	LYS	CG-CD-CE	5.61	124.19	111.30
38	A1	825	C	C4'-C3'-C2'	-5.61	96.99	102.60
38	A1	865	C	C4'-C3'-O3'	-5.61	104.59	113.00
38	A1	2824	C	C4'-C3'-C2'	-5.61	96.99	102.60
18	BF	40	ARG	N-CA-C	-5.60	106.28	113.23
60	AM	48	ALA	CB-CA-C	-5.60	101.32	110.85
9	AX	423	VAL	CB-CA-C	-5.60	104.58	111.92
10	B1	21	G	C4'-C3'-C2'	-5.60	97.00	102.60
11	B2	583	G	O4'-C1'-N9	5.60	116.90	108.50
13	BA	130	GLN	OE1-CD-NE2	5.60	128.20	122.60
38	A1	2061	A	C5'-C4'-O4'	5.60	117.50	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	A5	39	GLY	N-CA-C	-5.60	107.98	115.32
59	AL	61	ARG	CA-C-N	5.60	132.39	121.41
59	AL	61	ARG	C-N-CA	5.60	132.39	121.41
59	AL	77	ASN	O-C-N	-5.60	116.66	122.94
60	AM	42	PRO	O-C-N	5.60	129.81	123.03
11	B2	201	G	P-O5'-C5'	-5.60	112.50	120.90
11	B2	656	U	O4'-C4'-C3'	-5.60	100.50	106.10
11	B2	881	G	O4'-C4'-C3'	-5.60	98.40	104.00
18	BF	133	CYS	CA-C-N	5.60	129.06	121.05
18	BF	133	CYS	C-N-CA	5.60	129.06	121.05
21	BI	2	THR	CA-C-N	5.60	131.59	122.07
21	BI	2	THR	C-N-CA	5.60	131.59	122.07
31	BS	56	LYS	CA-C-N	5.60	127.78	120.28
31	BS	56	LYS	C-N-CA	5.60	127.78	120.28
38	A1	2246	G	P-O5'-C5'	5.60	129.30	120.90
61	AN	166	ASP	CA-C-N	5.60	128.24	120.29
61	AN	166	ASP	C-N-CA	5.60	128.24	120.29
64	AR	74	ILE	CB-CA-C	5.60	119.14	110.96
4	AQ	95	TRP	CE2-CD2-CE3	5.60	124.40	118.80
11	B2	394	C	C5'-C4'-C3'	5.60	124.40	116.00
56	AJ	105	VAL	CA-CB-CG1	5.60	119.92	110.40
2	A8	23	PHE	N-CA-C	-5.60	105.76	112.59
38	A1	44	C	P-O3'-C3'	5.60	128.59	120.20
38	A1	1138	C	C1'-O4'-C4'	-5.60	104.30	109.90
38	A1	2096	G	C4'-C3'-C2'	-5.60	97.00	102.60
57	Aj	35	ALA	N-CA-C	-5.60	105.57	112.90
9	AX	417	GLN	CA-C-N	5.59	129.55	120.60
9	AX	417	GLN	C-N-CA	5.59	129.55	120.60
11	B2	1433	C	C4'-C3'-C2'	-5.59	97.00	102.60
38	A1	2217	C	O4'-C1'-N1	5.59	116.89	108.50
38	A1	2294	A	O4'-C1'-C2'	-5.59	100.20	105.80
9	AX	136	THR	CA-C-N	5.59	126.83	119.84
9	AX	136	THR	C-N-CA	5.59	126.83	119.84
11	B2	747	U	C2'-C3'-O3'	5.59	122.09	113.70
12	B3	90	ALA	CA-C-O	5.59	125.20	119.05
17	BE	73	VAL	CA-C-N	5.59	130.30	122.08
17	BE	73	VAL	C-N-CA	5.59	130.30	122.08
45	AC	194	GLU	CA-C-O	-5.59	114.49	120.42
18	BF	205	LEU	O-C-N	-5.59	115.68	122.22
38	A1	1006	A	O5'-C5'-C4'	5.59	119.89	111.50
38	A1	1498	C	O4'-C1'-N1	5.59	116.89	108.50
4	AQ	75	HIS	CG-CD2-NE2	5.59	112.79	107.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	441	U	C4'-C3'-C2'	-5.59	97.01	102.60
11	B2	1380	C	P-O5'-C5'	-5.59	112.52	120.90
22	BJ	123	ILE	CA-C-O	5.59	126.28	120.36
33	BU	57	SER	CA-C-N	5.59	128.36	120.42
33	BU	57	SER	C-N-CA	5.59	128.36	120.42
38	A1	240	A	C5'-C4'-C3'	5.59	124.38	116.00
10	B1	6	G	C5'-C4'-C3'	5.59	124.38	116.00
10	B1	57	C	P-O5'-C5'	5.59	129.28	120.90
11	B2	56	A	C5'-C4'-C3'	-5.59	106.82	115.20
15	BC	37	LYS	N-CA-CB	5.59	119.34	110.57
38	A1	434	G	O4'-C1'-N9	5.59	116.88	108.50
38	A1	1591	C	C1'-C2'-O2'	5.59	120.18	111.80
38	A1	2207	C	O4'-C1'-N1	5.59	116.88	108.50
45	AC	19	ARG	CA-C-N	5.59	128.80	120.87
45	AC	19	ARG	C-N-CA	5.59	128.80	120.87
48	AE	15	TRP	CE2-CD2-CE3	5.59	124.39	118.80
20	BH	66	ARG	CA-C-N	5.58	127.70	120.44
20	BH	66	ARG	C-N-CA	5.58	127.70	120.44
31	BS	17	VAL	N-CA-C	-5.58	106.38	112.80
38	A1	2392	A	O4'-C1'-N9	5.58	116.88	108.50
61	AN	72	TYR	CA-C-O	5.58	126.68	120.82
11	B2	876	A	O5'-C5'-C4'	-5.58	103.12	111.50
11	B2	890	C	O4'-C1'-N1	5.58	116.88	108.50
11	B2	1270	C	C4'-C3'-C2'	-5.58	97.02	102.60
12	B3	58	ASP	O-C-N	-5.58	117.47	121.83
17	BE	164	VAL	N-CA-C	-5.58	100.25	108.85
22	BJ	20	ALA	N-CA-C	-5.58	100.19	109.46
38	A1	1126	C	C5'-C4'-C3'	-5.58	107.63	116.00
38	A1	1170	G	C4'-C3'-C2'	-5.58	97.02	102.60
38	A1	1659	G	C5'-C4'-C3'	-5.58	106.83	115.20
38	A1	2336	G	O4'-C1'-N9	5.58	116.88	108.50
59	AL	66	PRO	O-C-N	-5.58	114.87	121.46
60	AM	153	HIS	CG-CD2-NE2	5.58	112.78	107.20
66	AY	64	LEU	O-C-N	-5.58	116.20	122.12
1	A7	66	LYS	N-CA-CB	5.58	119.99	110.50
11	B2	140	C	O4'-C1'-N1	5.58	116.87	108.50
11	B2	1163	U	C1'-C2'-O2'	5.58	116.77	108.40
20	BH	103	VAL	CA-C-N	5.58	127.59	120.56
20	BH	103	VAL	C-N-CA	5.58	127.59	120.56
23	BK	83	ALA	CA-C-N	5.58	127.76	120.28
23	BK	83	ALA	C-N-CA	5.58	127.76	120.28
26	BN	20	ARG	O-C-N	-5.58	116.20	122.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	BR	84	ASP	CA-CB-CG	5.58	118.18	112.60
34	BV	30	THR	CA-C-N	5.58	125.58	119.89
34	BV	30	THR	C-N-CA	5.58	125.58	119.89
38	A1	2794	G	O4'-C1'-N9	5.58	116.87	108.50
66	AY	60	ASN	CA-C-N	5.58	127.76	120.28
66	AY	60	ASN	C-N-CA	5.58	127.76	120.28
20	BH	40	GLU	CA-C-N	5.58	125.34	119.76
20	BH	40	GLU	C-N-CA	5.58	125.34	119.76
38	A1	1723	A	C4'-C3'-C2'	-5.58	97.02	102.60
41	AA	135	VAL	CA-C-O	-5.58	114.47	118.71
38	A1	488	A	P-O3'-C3'	5.58	128.57	120.20
38	A1	2087	U	P-O5'-C5'	5.58	129.27	120.90
38	A1	3024	C	C4'-C3'-O3'	-5.58	104.63	113.00
39	A3	12	G	P-O5'-C5'	-5.58	112.53	120.90
55	Ai	28	VAL	N-CA-CB	5.58	117.08	110.55
59	AL	46	LYS	N-CA-C	-5.58	98.26	108.02
65	AV	52	TRP	CZ3-CH2-CZ2	-5.58	114.25	121.50
31	BS	24	PHE	CA-CB-CG	-5.58	108.22	113.80
9	AX	176	ALA	CA-C-O	5.58	126.85	121.00
11	B2	178	C	P-O5'-C5'	-5.58	112.54	120.90
18	BF	143	PHE	CA-C-N	5.58	129.02	121.05
18	BF	143	PHE	C-N-CA	5.58	129.02	121.05
33	BU	41	LYS	N-CA-C	-5.58	100.94	109.41
38	A1	904	G	C5'-C4'-C3'	-5.58	107.64	116.00
38	A1	2096	G	P-O3'-C3'	-5.58	111.84	120.20
41	AA	120	TYR	N-CA-C	5.58	117.16	111.14
46	AD	53	GLY	CA-C-N	5.58	132.19	121.54
46	AD	53	GLY	C-N-CA	5.58	132.19	121.54
11	B2	394	C	P-O5'-C5'	5.57	129.26	120.90
38	A1	2823	G	P-O3'-C3'	5.57	128.56	120.20
39	A3	83	C	C4'-C3'-O3'	-5.57	104.64	113.00
47	Ad	27	GLU	N-CA-C	-5.57	100.88	109.52
60	AM	153	HIS	CE1-NE2-CD2	-5.57	103.43	109.00
64	AR	57	ARG	CB-CA-C	-5.57	99.97	110.67
11	B2	653	C	O4'-C1'-N1	5.57	116.86	108.50
33	BU	97	ILE	CB-CA-C	-5.57	102.15	111.29
7	AU	37	GLU	CB-CG-CD	-5.57	103.13	112.60
11	B2	488	A	C1'-O4'-C4'	5.57	115.27	109.70
23	BK	71	PHE	CA-CB-CG	-5.57	108.23	113.80
38	A1	912	G	C4'-C3'-C2'	-5.57	97.03	102.60
38	A1	2036	A	C4'-C3'-O3'	-5.57	104.64	113.00
38	A1	2650	G	C5'-C4'-C3'	-5.57	107.64	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2976	G	O4'-C1'-N9	5.57	116.86	108.50
39	A3	17	G	P-O5'-C5'	-5.57	112.54	120.90
11	B2	84	C	O4'-C1'-N1	5.57	116.85	108.50
38	A1	2512	C	P-O5'-C5'	-5.57	112.55	120.90
11	B2	1462	A	C5'-C4'-C3'	-5.57	107.65	116.00
21	BI	53	ILE	N-CA-C	-5.57	100.56	108.58
38	A1	328	G	C5'-C4'-C3'	-5.57	107.65	116.00
38	A1	330	U	P-O5'-C5'	5.57	129.25	120.90
38	A1	1957	U	O4'-C1'-N1	5.57	116.55	108.20
46	AD	28	PRO	N-CA-CB	5.57	109.40	103.39
53	Ah	2	ARG	NE-CZ-NH2	-5.57	114.19	119.20
58	Ak	68	ALA	CA-C-O	-5.57	113.81	120.10
66	AY	18	PRO	CB-CA-C	-5.57	103.43	112.62
23	BK	129	LYS	O-C-N	-5.57	117.46	123.42
25	BM	8	ILE	N-CA-C	-5.57	100.38	108.17
32	BT	97	GLU	N-CA-C	-5.57	106.49	113.28
34	BV	65	SER	CA-C-N	5.57	131.83	122.87
34	BV	65	SER	C-N-CA	5.57	131.83	122.87
38	A1	1848	A	P-O5'-C5'	-5.57	112.55	120.90
38	A1	1895	G	C1'-C2'-O2'	5.57	116.75	108.40
38	A1	2471	A	O5'-C5'-C4'	-5.57	103.35	111.70
38	A1	2805	U	C3'-C2'-C1'	5.57	106.87	101.30
42	Aa	74	VAL	O-C-N	5.57	129.22	123.04
12	AG	85	GLU	N-CA-C	-5.57	105.21	111.28
60	AM	114	LEU	CA-C-O	-5.57	114.06	120.24
3	Af	22	ARG	CD-NE-CZ	-5.56	116.61	124.40
5	AS	49	ARG	N-CA-C	5.56	117.34	111.28
11	B2	210	A	C2'-C3'-O3'	-5.56	105.35	113.70
11	B2	1033	G	P-O3'-C3'	-5.56	111.86	120.20
18	BF	111	ARG	CA-CB-CG	-5.56	102.97	114.10
20	BH	7	GLU	CA-C-N	5.56	128.29	120.28
20	BH	7	GLU	C-N-CA	5.56	128.29	120.28
20	BH	50	ARG	NE-CZ-NH1	-5.56	115.94	121.50
38	A1	3017	U	O4'-C1'-N1	5.56	116.85	108.50
45	AC	252	LYS	CA-C-N	5.56	129.76	120.64
45	AC	252	LYS	C-N-CA	5.56	129.76	120.64
46	AD	156	GLU	CA-C-O	5.56	126.32	120.42
58	Ak	114	PRO	CA-C-O	-5.56	114.88	121.67
58	Ak	178	ASN	CA-CB-CG	-5.56	107.04	112.60
59	AL	50	THR	N-CA-C	-5.56	106.62	113.41
11	B2	1096	G	C4'-C3'-C2'	-5.56	97.04	102.60
13	BA	39	ASP	CA-C-N	5.56	125.51	119.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	BA	39	ASP	C-N-CA	5.56	125.51	119.78
17	BE	177	LEU	CA-C-O	-5.56	112.54	120.16
18	BF	37	ILE	CA-C-N	5.56	128.19	120.29
18	BF	37	ILE	C-N-CA	5.56	128.19	120.29
20	BH	88	ARG	CB-CG-CD	5.56	124.09	111.30
25	BM	119	THR	N-CA-C	5.56	116.00	109.60
38	A1	1641	G	C4'-C3'-O3'	-5.56	104.66	113.00
38	A1	2056	A	O4'-C1'-N9	5.56	116.84	108.50
44	Ab	44	LYS	CA-C-N	5.56	129.49	121.54
44	Ab	44	LYS	C-N-CA	5.56	129.49	121.54
48	AE	121	ILE	CB-CA-C	5.56	118.91	110.62
52	AH	10	VAL	CA-C-N	5.56	129.67	120.94
52	AH	10	VAL	C-N-CA	5.56	129.67	120.94
56	AJ	139	ILE	N-CA-C	-5.56	100.47	108.42
59	AL	83	GLU	CB-CA-C	-5.56	101.39	110.85
65	AV	31	PHE	CB-CA-C	-5.56	101.18	110.19
38	A1	218	A	C4'-C3'-C2'	-5.56	97.04	102.60
38	A1	350	A	O4'-C4'-C3'	-5.56	100.54	106.10
38	A1	590	A	C5'-C4'-C3'	-5.56	107.66	116.00
38	A1	979	G	O4'-C1'-N9	5.56	116.84	108.50
38	A1	1036	C	C4'-C3'-C2'	-5.56	97.04	102.60
38	A1	1395	G	O5'-C5'-C4'	-5.56	103.36	111.70
38	A1	1722	G	P-O3'-C3'	5.56	128.54	120.20
38	A1	1824	G	O5'-C5'-C4'	-5.56	103.16	111.50
59	AL	18	GLY	CA-C-O	5.56	124.51	118.95
11	B2	331	C	C5'-C4'-C3'	5.56	124.34	116.00
11	B2	357	C	C4'-C3'-O3'	-5.56	104.66	113.00
11	B2	896	A	P-O3'-C3'	5.56	128.54	120.20
20	BH	78	HIS	CG-CD2-NE2	5.56	112.76	107.20
25	BM	101	ALA	N-CA-CB	5.56	118.39	110.16
37	BY	17	ARG	NE-CZ-NH2	-5.56	114.20	119.20
38	A1	85	G	C5'-C4'-C3'	5.56	124.34	116.00
38	A1	99	U	O3'-P-O5'	-5.56	95.66	104.00
47	Ad	76	MET	CA-C-N	5.56	127.73	120.28
47	Ad	76	MET	C-N-CA	5.56	127.73	120.28
40	AK	59	LYS	N-CA-C	-5.56	100.61	109.23
5	AS	129	TYR	CA-C-N	5.56	125.46	119.85
5	AS	129	TYR	C-N-CA	5.56	125.46	119.85
10	B1	2	G	O4'-C4'-C3'	-5.56	98.44	104.00
11	B2	16	G	C3'-C2'-O2'	5.56	119.04	110.70
11	B2	156	A	P-O5'-C5'	-5.56	112.56	120.90
11	B2	280	C	O4'-C1'-C2'	-5.56	102.04	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	331	C	O4'-C1'-N1	5.56	116.84	108.50
29	BQ	31	GLU	N-CA-C	5.56	117.42	111.36
38	A1	622	A	C2'-C3'-O3'	5.56	117.84	109.50
38	A1	1036	C	C4'-C3'-O3'	-5.56	104.66	113.00
52	AH	87	SER	N-CA-C	-5.56	100.27	108.99
55	Ai	22	ARG	CA-C-N	5.56	127.73	120.28
55	Ai	22	ARG	C-N-CA	5.56	127.73	120.28
9	AX	205	PRO	CA-C-N	5.56	130.75	122.86
9	AX	205	PRO	C-N-CA	5.56	130.75	122.86
43	AB	54	ARG	NE-CZ-NH1	-5.56	115.94	121.50
9	AX	121	VAL	N-CA-C	5.55	116.01	110.23
11	B2	62	G	C4'-C3'-O3'	-5.55	104.67	113.00
11	B2	177	A	C1'-O4'-C4'	5.55	115.45	109.90
11	B2	375	G	P-O5'-C5'	-5.55	112.57	120.90
11	B2	1416	C	O4'-C1'-N1	5.55	116.83	108.50
30	BR	24	HIS	CE1-NE2-CD2	-5.55	103.45	109.00
38	A1	1244	C	C1'-O4'-C4'	5.55	115.45	109.90
38	A1	1610	C	O4'-C4'-C3'	-5.55	98.45	104.00
38	A1	2253	G	C5'-C4'-C3'	5.55	124.33	116.00
38	A1	2372	C	O4'-C1'-C2'	-5.55	100.25	105.80
38	A1	2826	U	O4'-C4'-C3'	-5.55	100.55	106.10
43	AB	65	ASN	N-CA-C	-5.55	106.46	113.18
47	Ad	3	PRO	CA-C-N	5.55	130.27	121.44
47	Ad	3	PRO	C-N-CA	5.55	130.27	121.44
66	AY	31	VAL	CA-C-N	5.55	132.15	121.54
66	AY	31	VAL	C-N-CA	5.55	132.15	121.54
11	B2	1358	A	C3'-C2'-O2'	5.55	119.03	110.70
38	A1	2760	A	C4'-C3'-C2'	-5.55	97.05	102.60
38	A1	3000	U	C3'-C2'-O2'	5.55	119.03	110.70
7	AU	3	ILE	N-CA-CB	5.55	119.46	110.13
15	BC	39	PRO	CA-C-N	5.55	128.17	120.29
15	BC	39	PRO	C-N-CA	5.55	128.17	120.29
20	BH	51	HIS	CE1-NE2-CD2	-5.55	103.45	109.00
38	A1	562	G	O4'-C1'-N9	5.55	116.83	108.50
38	A1	1397	U	O4'-C1'-N1	5.55	116.83	108.50
38	A1	1620	C	C4'-C3'-C2'	-5.55	97.05	102.60
40	A5	21	LYS	N-CA-CB	5.55	118.13	109.97
40	A5	57	PRO	N-CA-CB	5.55	109.03	103.48
44	Ab	30	ARG	CA-C-O	5.55	125.76	119.27
60	AM	65	ARG	NE-CZ-NH1	5.55	127.05	121.50
64	AR	11	LYS	N-CA-CB	5.55	119.87	110.49
66	AY	4	LEU	O-C-N	-5.55	115.97	123.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	50	C	P-O5'-C5'	5.55	129.22	120.90
11	B2	141	C	C3'-C2'-C1'	5.55	106.85	101.30
11	B2	369	A	O3'-P-O5'	-5.55	95.68	104.00
11	B2	982	U	O4'-C1'-N1	5.55	116.82	108.50
12	B3	116	MET	N-CA-C	-5.55	105.44	113.21
13	BA	89	ARG	CG-CD-NE	-5.55	99.79	112.00
24	BL	52	SER	CA-CB-OG	5.55	122.20	111.10
33	BU	70	ILE	CA-C-O	5.55	126.36	120.26
38	A1	2278	U	P-O5'-C5'	5.55	129.22	120.90
63	AP	91	ARG	NE-CZ-NH1	5.55	127.05	121.50
11	B2	168	G	O4'-C1'-N9	5.55	116.82	108.50
11	B2	254	G	O4'-C1'-N9	5.55	116.82	108.50
38	A1	621	G	P-O5'-C5'	5.55	129.22	120.90
38	A1	1723	A	P-O3'-C3'	5.55	128.52	120.20
41	AA	162	VAL	CA-CB-CG1	-5.55	100.97	110.40
62	AO	159	GLN	OE1-CD-NE2	5.55	128.15	122.60
8	AW	38	LEU	CB-CA-C	5.55	122.27	110.07
11	B2	821	G	O4'-C1'-C2'	-5.55	102.05	107.60
20	BH	55	HIS	CA-CB-CG	5.55	119.35	113.80
30	BR	77	CYS	N-CA-C	5.55	117.33	111.28
38	A1	398	U	P-O3'-C3'	5.55	128.52	120.20
38	A1	1331	U	O4'-C4'-C3'	-5.55	98.45	104.00
38	A1	1407	A	O4'-C4'-C3'	-5.55	100.55	106.10
38	A1	2844	G	C4'-C3'-O3'	-5.55	104.68	113.00
38	A1	2946	C	P-O3'-C3'	5.55	128.52	120.20
66	AY	91	MET	N-CA-C	-5.55	106.21	114.64
16	BD	116	ARG	CB-CA-C	-5.54	102.17	110.88
26	BN	40	LYS	O-C-N	-5.54	115.83	122.15
31	BS	16	LEU	O-C-N	-5.54	115.45	122.27
38	A1	766	G	P-O5'-C5'	-5.54	112.58	120.90
38	A1	2660	G	O4'-C1'-N9	5.54	116.82	108.50
38	A1	3001	C	C5'-C4'-O4'	-5.54	101.48	109.80
39	A3	31	U	C3'-C2'-C1'	5.54	106.84	101.30
46	AD	152	GLN	OE1-CD-NE2	5.54	128.15	122.60
47	Ad	66	ARG	CA-C-N	5.54	124.89	118.85
47	Ad	66	ARG	C-N-CA	5.54	124.89	118.85
4	AQ	139	TYR	O-C-N	5.54	127.78	122.07
5	AS	58	LYS	CB-CA-C	-5.54	100.48	110.35
11	B2	626	G	P-O5'-C5'	-5.54	112.58	120.90
11	B2	1008	U	O4'-C1'-N1	5.54	116.81	108.50
13	BA	84	GLY	CA-C-N	5.54	131.27	122.62
13	BA	84	GLY	C-N-CA	5.54	131.27	122.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	BE	60	ARG	CB-CA-C	-5.54	100.55	110.70
38	A1	1747	C	C4'-C3'-O3'	-5.54	104.68	113.00
38	A1	2411	C	O4'-C1'-N1	5.54	116.82	108.50
45	AC	30	TRP	CA-C-O	-5.54	115.27	119.59
11	B2	1105	C	C2'-C3'-O3'	5.54	122.01	113.70
21	BI	66	LEU	N-CA-C	5.54	118.25	111.82
26	BN	43	PRO	N-CD-CG	5.54	111.51	103.20
38	A1	214	C	O4'-C1'-N1	5.54	116.81	108.50
38	A1	723	A	P-O3'-C3'	5.54	128.51	120.20
38	A1	2953	U	C3'-C2'-C1'	5.54	106.84	101.30
59	AL	84	HIS	CB-CG-ND1	5.54	131.01	122.70
65	AV	22	TYR	N-CA-C	-5.54	99.49	108.52
11	B2	529	C	O4'-C1'-C2'	-5.54	100.26	105.80
20	BH	4	PRO	CA-C-N	5.54	127.70	120.28
20	BH	4	PRO	C-N-CA	5.54	127.70	120.28
30	BR	106	LEU	N-CA-C	-5.54	100.75	109.50
31	BS	18	ASN	CA-C-N	5.54	127.64	120.44
31	BS	18	ASN	C-N-CA	5.54	127.64	120.44
33	BU	91	TYR	N-CA-C	-5.54	100.65	109.07
38	A1	169	G	O4'-C1'-N9	5.54	116.81	108.50
38	A1	536	G	O4'-C1'-N9	5.54	116.81	108.50
38	A1	841	U	O4'-C1'-N1	5.54	116.81	108.50
41	AA	21	PRO	N-CA-C	-5.54	105.34	114.75
45	AC	353	ARG	CA-C-O	-5.54	112.57	120.16
14	BB	30	LYS	CA-C-O	5.54	126.63	120.82
9	AX	103	ASN	O-C-N	5.54	129.95	122.59
11	B2	35	G	P-O3'-C3'	-5.54	111.90	120.20
38	A1	1183	U	C1'-O4'-C4'	5.54	115.44	109.90
38	A1	1705	C	O4'-C1'-N1	5.54	116.80	108.50
38	A1	2130	C	O4'-C1'-N1	5.54	116.80	108.50
46	AD	21	VAL	CA-C-N	5.54	128.72	120.31
46	AD	21	VAL	C-N-CA	5.54	128.72	120.31
57	Aj	2	LYS	CG-CD-CE	5.54	124.03	111.30
11	B2	25	C	C4'-C3'-O3'	-5.53	104.70	113.00
16	BD	32	LYS	N-CA-C	-5.53	107.17	114.31
17	BE	20	TYR	N-CA-CB	5.53	119.84	110.49
22	BJ	35	THR	CA-CB-OG1	-5.53	101.30	109.60
26	BN	36	ARG	N-CA-CB	5.53	119.84	110.49
38	A1	241	C	C5'-C4'-C3'	-5.53	107.70	116.00
38	A1	610	C	P-O3'-C3'	-5.53	111.90	120.20
38	A1	2592	U	O4'-C1'-N1	5.53	116.80	108.50
38	A1	2612	A	O4'-C1'-C2'	5.53	111.33	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	AB	181	LYS	O-C-N	-5.53	115.84	122.15
58	Ak	15	LEU	CA-C-N	5.53	127.63	120.44
58	Ak	15	LEU	C-N-CA	5.53	127.63	120.44
66	AY	117	PHE	CA-C-N	5.53	130.55	122.41
66	AY	117	PHE	C-N-CA	5.53	130.55	122.41
9	AX	79	VAL	CA-C-N	5.53	128.48	120.79
9	AX	79	VAL	C-N-CA	5.53	128.48	120.79
9	AX	366	ILE	CA-C-N	5.53	129.99	121.19
9	AX	366	ILE	C-N-CA	5.53	129.99	121.19
18	BF	96	VAL	CA-C-O	-5.53	114.67	120.76
32	BT	56	LYS	CA-C-N	5.53	129.25	120.07
32	BT	56	LYS	C-N-CA	5.53	129.25	120.07
38	A1	371	U	C3'-C2'-C1'	5.53	107.03	101.50
38	A1	2388	U	O4'-C1'-N1	5.53	116.80	108.50
39	A3	64	C	C4'-C3'-O3'	-5.53	104.70	113.00
11	B2	203	A	C5'-C4'-O4'	5.53	117.40	109.10
24	BL	78	ASP	CA-C-N	5.53	128.72	120.31
24	BL	78	ASP	C-N-CA	5.53	128.72	120.31
26	BN	144	LYS	CA-C-O	-5.53	115.62	120.60
38	A1	2992	G	C4'-C3'-C2'	-5.53	97.07	102.60
66	AY	136	GLU	CA-C-O	5.53	126.18	119.38
13	BA	89	ARG	N-CA-C	5.53	118.23	111.82
16	BD	18	TRP	CZ3-CH2-CZ2	-5.53	114.31	121.50
21	BI	117	ILE	CA-C-N	5.53	128.14	120.29
21	BI	117	ILE	C-N-CA	5.53	128.14	120.29
38	A1	220	C	C4'-C3'-O3'	-5.53	104.71	113.00
38	A1	1529	A	O4'-C1'-N9	5.53	116.79	108.50
4	AQ	15	LEU	CA-C-N	5.53	131.18	122.78
4	AQ	15	LEU	C-N-CA	5.53	131.18	122.78
9	AX	129	ALA	CA-C-N	5.53	132.34	121.06
9	AX	129	ALA	C-N-CA	5.53	132.34	121.06
11	B2	1006	C	C1'-O4'-C4'	-5.53	104.37	109.90
12	B3	65	HIS	CE1-NE2-CD2	-5.53	103.47	109.00
20	BH	90	HIS	CG-CD2-NE2	5.53	112.73	107.20
25	BM	78	GLY	CA-C-O	-5.53	115.22	120.64
38	A1	583	A	P-O3'-C3'	5.53	128.49	120.20
45	AC	29	SER	CA-C-N	-5.53	115.15	122.56
45	AC	29	SER	C-N-CA	-5.53	115.15	122.56
9	AX	256	ASN	CA-CB-CG	5.53	118.13	112.60
11	B2	964	A	C2'-C3'-O3'	5.53	117.79	109.50
11	B2	1178	C	P-O5'-C5'	-5.53	112.61	120.90
27	BO	136	ARG	N-CA-CB	5.53	118.16	110.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	BU	70	ILE	O-C-N	-5.53	114.93	122.11
35	BW	43	THR	O-C-N	5.53	129.52	123.22
47	Ad	84	ILE	CA-C-O	-5.53	115.20	120.95
52	AH	111	LYS	O-C-N	5.53	127.76	122.07
11	B2	661	C	P-O3'-C3'	5.52	128.49	120.20
33	BU	3	THR	N-CA-CB	5.52	118.82	110.42
38	A1	234	G	P-O3'-C3'	-5.52	111.91	120.20
45	AC	276	PHE	CB-CA-C	5.52	119.57	111.73
64	AR	53	MET	O-C-N	-5.52	116.47	121.39
8	AW	36	THR	N-CA-C	-5.52	101.36	109.81
12	B3	39	THR	N-CA-C	-5.52	105.27	112.23
38	A1	317	A	O5'-C5'-C4'	-5.52	103.22	111.50
38	A1	1390	U	O5'-C5'-C4'	-5.52	103.42	111.70
38	A1	2044	C	O4'-C1'-C2'	-5.52	102.08	107.60
39	A3	105	G	O4'-C4'-C3'	-5.52	98.48	104.00
46	AD	213	ASN	N-CA-C	-5.52	105.34	111.36
62	AO	183	GLU	CB-CA-C	-5.52	101.46	110.85
11	B2	483	G	O4'-C1'-N9	5.52	116.78	108.50
11	B2	1250	C	C4'-C3'-O3'	-5.52	104.72	113.00
19	BG	106	THR	N-CA-C	-5.52	100.71	109.76
38	A1	1665	G	O4'-C1'-C2'	-5.52	102.08	107.60
38	A1	1811	G	C5'-C4'-C3'	5.52	124.28	116.00
41	AA	117	ILE	CB-CA-C	-5.52	104.81	112.04
50	AF	158	THR	N-CA-CB	5.52	118.89	110.44
54	AI	28	VAL	CA-CB-CG1	5.52	119.79	110.40
11	B2	1384	G	O4'-C1'-N9	5.52	116.78	108.50
14	BB	83	PHE	N-CA-C	-5.52	105.34	111.36
16	BD	45	GLU	N-CA-CB	5.52	118.23	110.12
18	BF	83	PHE	CA-CB-CG	-5.52	108.28	113.80
38	A1	1291	C	O4'-C1'-N1	5.52	116.78	108.50
38	A1	1469	U	P-O5'-C5'	5.52	129.18	120.90
38	A1	2843	C	O4'-C1'-N1	5.52	116.78	108.50
9	AX	417	GLN	CA-C-O	-5.52	115.00	120.90
11	B2	693	C	C5'-C4'-O4'	5.52	118.08	109.80
11	B2	1157	G	P-O5'-C5'	5.52	129.18	120.90
11	B2	1366	U	C4'-C3'-O3'	-5.52	104.72	113.00
11	B2	1428	G	O4'-C1'-N9	5.52	116.78	108.50
38	A1	556	G	O4'-C1'-N9	5.52	116.78	108.50
38	A1	1069	A	O4'-C4'-C3'	-5.52	100.58	106.10
38	A1	1247	U	C1'-O4'-C4'	-5.52	104.38	109.90
38	A1	1425	U	P-O5'-C5'	-5.52	112.62	120.90
38	A1	1969	C	C4'-C3'-O3'	-5.52	104.72	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	Ag	33	LYS	N-CA-CB	5.52	119.87	110.71
58	Ak	16	ALA	CA-C-N	5.52	127.67	120.28
58	Ak	16	ALA	C-N-CA	5.52	127.67	120.28
58	Ak	117	LYS	CB-CG-CD	5.52	123.99	111.30
61	AN	98	PRO	N-CA-CB	5.52	108.69	102.67
66	AY	63	THR	N-CA-CB	5.52	118.33	110.16
10	B1	23	G	C4'-C3'-O3'	-5.52	104.72	113.00
11	B2	995	G	O4'-C1'-N9	5.52	116.78	108.50
11	B2	1443	G	C3'-C2'-O2'	5.52	118.97	110.70
11	B2	1445	A	N1-C6-N6	5.52	135.15	118.60
23	BK	8	GLY	CA-C-N	-5.52	114.23	122.39
23	BK	8	GLY	C-N-CA	-5.52	114.23	122.39
30	BR	71	HIS	CB-CG-CD2	-5.52	124.03	131.20
4	AQ	84	LYS	CA-C-N	5.51	127.94	120.38
4	AQ	84	LYS	C-N-CA	5.51	127.94	120.38
5	AS	12	PHE	CA-CB-CG	-5.51	108.29	113.80
9	AX	268	ASN	CB-CG-OD1	-5.51	109.77	120.80
11	B2	336	C	O4'-C1'-C2'	-5.51	102.09	107.60
11	B2	425	C	C4'-C3'-C2'	-5.51	97.09	102.60
24	BL	1	MET	CA-C-N	5.51	131.23	122.74
24	BL	1	MET	C-N-CA	5.51	131.23	122.74
27	BO	132	ARG	CA-C-N	5.51	128.66	120.17
27	BO	132	ARG	C-N-CA	5.51	128.66	120.17
30	BR	103	VAL	CA-C-O	5.51	127.56	120.83
38	A1	1076	G	C5'-C4'-C3'	-5.51	107.73	116.00
38	A1	1916	U	C4'-C3'-O3'	-5.51	104.73	113.00
38	A1	2741	U	O5'-C5'-C4'	-5.51	103.23	111.50
41	AA	100	LEU	N-CA-C	-5.51	105.91	113.30
18	BF	62	ASN	CA-CB-CG	5.51	118.11	112.60
38	A1	604	A	C3'-C2'-C1'	-5.51	95.79	101.30
38	A1	2963	G	C4'-C3'-C2'	-5.51	97.09	102.60
46	AD	254	TYR	N-CA-C	-5.51	106.68	113.41
12	AG	13	LYS	N-CA-CB	5.51	118.32	110.16
11	B2	455	C	O4'-C1'-N1	5.51	116.77	108.50
17	BE	157	ASN	N-CA-CB	-5.51	102.02	110.12
29	BQ	77	THR	CA-CB-OG1	5.51	117.87	109.60
34	BV	81	ILE	N-CA-C	-5.51	105.35	110.53
38	A1	1037	C	N1-C1'-C2'	-5.51	105.73	114.00
38	A1	1916	U	O4'-C1'-N1	5.51	116.77	108.50
38	A1	2298	C	O4'-C1'-C2'	-5.51	102.09	107.60
38	A1	2540	A	P-O3'-C3'	5.51	128.47	120.20
38	A1	3001	C	C5'-C4'-C3'	-5.51	107.73	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	1080	C	N1-C1'-C2'	5.51	120.26	112.00
13	BA	63	HIS	CA-C-N	5.51	131.89	121.97
13	BA	63	HIS	C-N-CA	5.51	131.89	121.97
38	A1	2235	G	C5'-C4'-C3'	-5.51	107.73	116.00
40	A5	73	ALA	CA-C-N	5.51	128.11	120.29
40	A5	73	ALA	C-N-CA	5.51	128.11	120.29
41	AA	203	TYR	O-C-N	-5.51	116.88	123.27
21	BI	9	ASN	N-CA-C	5.51	117.28	111.28
39	A3	123	U	P-O3'-C3'	5.51	128.46	120.20
12	AG	117	LYS	N-CA-C	5.51	118.21	111.82
11	B2	725	C	C4'-C3'-C2'	-5.51	97.09	102.60
15	BC	98	ARG	CB-CA-C	-5.51	101.65	110.79
16	BD	124	LEU	CA-C-N	5.51	129.33	120.30
16	BD	124	LEU	C-N-CA	5.51	129.33	120.30
38	A1	301	G	O5'-C5'-C4'	5.51	119.96	111.70
38	A1	350	A	O5'-C5'-C4'	-5.51	103.44	111.70
38	A1	1731	U	C1'-O4'-C4'	5.51	115.41	109.90
38	A1	2552	C	P-O5'-C5'	5.51	129.16	120.90
50	AF	61	ARG	N-CA-CB	5.51	120.26	111.56
63	AP	13	ARG	NE-CZ-NH2	5.51	124.16	119.20
66	AY	8	ARG	NE-CZ-NH2	5.51	124.16	119.20
25	BM	133	ARG	N-CA-C	-5.50	106.01	114.16
63	AP	39	ARG	CA-C-O	-5.50	114.47	120.69
64	AR	63	GLY	O-C-N	5.50	129.86	122.70
18	BF	139	HIS	CE1-NE2-CD2	-5.50	103.50	109.00
38	A1	572	U	O4'-C1'-N1	5.50	116.76	108.50
38	A1	730	C	O4'-C1'-N1	5.50	116.75	108.50
38	A1	1247	U	O4'-C1'-N1	5.50	116.75	108.50
41	AA	163	VAL	N-CA-C	-5.50	100.30	108.45
42	Aa	87	VAL	CA-C-O	-5.50	115.34	121.23
46	AD	65	HIS	ND1-CE1-NE2	5.50	113.90	108.40
53	Ah	12	ARG	CA-C-N	5.50	127.66	120.28
53	Ah	12	ARG	C-N-CA	5.50	127.66	120.28
60	AM	143	ASP	CA-CB-CG	-5.50	107.10	112.60
11	B2	934	G	C2'-C3'-O3'	5.50	121.95	113.70
11	B2	1098	G	O4'-C1'-N9	5.50	116.75	108.50
15	BC	95	GLN	O-C-N	-5.50	115.58	122.35
27	BO	18	ASN	N-CA-C	-5.50	105.36	113.61
33	BU	12	LEU	CA-C-O	-5.50	114.72	120.55
34	BV	25	HIS	CA-C-O	-5.50	115.72	121.06
38	A1	2044	C	P-O5'-C5'	5.50	129.15	120.90
38	A1	2702	A	P-O5'-C5'	-5.50	112.65	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2902	G	O4'-C1'-N9	5.50	116.75	108.50
41	AA	60	VAL	N-CA-C	-5.50	100.51	108.71
47	Ad	61	LYS	N-CA-C	-5.50	106.07	112.89
54	AI	132	GLY	CA-C-O	-5.50	115.41	120.80
11	B2	33	U	O4'-C1'-C2'	5.50	113.10	107.60
11	B2	1375	C	O4'-C1'-N1	5.50	116.75	108.50
38	A1	2078	A	P-O5'-C5'	-5.50	112.65	120.90
45	AC	287	ILE	N-CA-C	5.50	116.16	110.82
58	AK	40	GLN	O-C-N	-5.50	116.29	122.12
11	B2	353	G	P-O5'-C5'	5.50	129.15	120.90
40	AK	51	LYS	N-CA-C	5.50	116.96	110.97
7	AU	118	ARG	CA-C-N	5.50	127.96	120.54
7	AU	118	ARG	C-N-CA	5.50	127.96	120.54
11	B2	324	C	O3'-P-O5'	5.50	112.24	104.00
11	B2	367	G	O4'-C1'-C2'	-5.50	102.10	107.60
11	B2	441	U	O4'-C1'-N1	5.50	116.75	108.50
11	B2	863	U	O4'-C1'-N1	5.50	116.75	108.50
20	BH	111	ILE	CA-C-O	-5.50	115.02	120.85
38	A1	401	C	C5'-C4'-O4'	5.50	118.04	109.80
38	A1	604	A	C3'-C2'-O2'	5.50	118.94	110.70
38	A1	612	G	P-O3'-C3'	-5.50	111.95	120.20
38	A1	2701	U	P-O5'-C5'	-5.50	112.66	120.90
38	A1	3039	G	C3'-C2'-C1'	5.50	106.80	101.30
44	Ab	116	LYS	O-C-N	-5.50	115.88	122.15
38	A1	509	A	O4'-C4'-C3'	-5.50	98.50	104.00
12	AG	45	ARG	N-CA-C	5.50	118.19	111.82
11	B2	20	G	P-O3'-C3'	-5.49	111.96	120.20
13	BA	138	ARG	NE-CZ-NH2	5.49	124.14	119.20
18	BF	59	ALA	N-CA-C	-5.49	106.94	113.97
19	BG	64	ARG	CB-CA-C	-5.49	102.22	110.90
38	A1	146	U	O4'-C1'-N1	5.49	116.74	108.50
38	A1	2688	C	C5'-C4'-O4'	5.49	118.04	109.80
39	A3	46	G	C3'-C2'-O2'	5.49	118.94	110.70
42	Aa	61	ARG	N-CA-C	-5.49	100.75	109.76
58	AK	206	LEU	CA-C-N	5.49	127.91	120.44
58	AK	206	LEU	C-N-CA	5.49	127.91	120.44
60	AM	145	LYS	CA-C-O	5.49	126.29	119.97
9	AX	198	ASN	CB-CA-C	-5.49	102.22	110.90
11	B2	880	G	C3'-C2'-O2'	5.49	118.94	110.70
18	BF	81	VAL	CA-C-N	5.49	131.15	122.36
18	BF	81	VAL	C-N-CA	5.49	131.15	122.36
30	BR	17	ASP	O-C-N	-5.49	115.01	122.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1518	G	O5'-C5'-C4'	5.49	119.74	111.50
48	AE	149	ARG	NE-CZ-NH2	5.49	124.14	119.20
11	B2	934	G	O4'-C4'-C3'	-5.49	98.51	104.00
15	BC	106	GLY	N-CA-C	-5.49	107.09	115.00
38	A1	10	C	O4'-C1'-C2'	-5.49	102.11	107.60
38	A1	206	A	O4'-C4'-C3'	-5.49	98.51	104.00
52	AH	18	GLY	O-C-N	-5.49	116.28	121.77
4	AQ	67	HIS	CE1-NE2-CD2	-5.49	103.51	109.00
20	BH	10	PHE	N-CA-C	5.49	116.94	111.07
38	A1	632	G	O4'-C1'-C2'	-5.49	102.11	107.60
38	A1	1210	G	C4'-C3'-C2'	-5.49	97.11	102.60
38	A1	2050	U	P-O5'-C5'	-5.49	112.67	120.90
38	A1	2367	C	C4'-C3'-C2'	-5.49	97.11	102.60
38	A1	2631	C	O4'-C1'-N1	5.49	116.73	108.50
46	AD	204	ASN	N-CA-C	-5.49	103.87	111.28
66	AY	74	LEU	CA-C-O	5.49	126.83	119.47
11	B2	832	G	C5'-C4'-C3'	-5.49	107.77	116.00
11	B2	1027	C	C4'-C3'-C2'	-5.49	97.11	102.60
27	BO	125	PRO	N-CA-CB	5.49	109.01	103.25
38	A1	1746	C	C5'-C4'-C3'	-5.49	107.77	116.00
11	B2	407	G	O4'-C4'-C3'	-5.49	98.51	104.00
11	B2	1484	C	O4'-C1'-N1	5.49	116.43	108.20
22	BJ	55	VAL	N-CA-C	-5.49	100.68	108.58
7	AU	108	GLU	N-CA-C	-5.48	104.45	113.50
11	B2	673	C	O4'-C1'-N1	5.48	116.72	108.50
13	BA	170	ILE	O-C-N	5.48	127.28	121.91
17	BE	177	LEU	CA-C-N	5.48	125.95	120.52
17	BE	177	LEU	C-N-CA	5.48	125.95	120.52
20	BH	120	ILE	CA-C-N	5.48	128.64	120.31
20	BH	120	ILE	C-N-CA	5.48	128.64	120.31
21	BI	40	VAL	CB-CA-C	-5.48	104.65	112.22
38	A1	593	C	O5'-C5'-C4'	-5.48	103.28	111.50
38	A1	1289	C	C3'-C2'-C1'	-5.48	95.82	101.30
38	A1	1752	C	P-O5'-C5'	-5.48	112.67	120.90
43	AB	10	ARG	CA-C-N	5.48	126.99	120.14
43	AB	10	ARG	C-N-CA	5.48	126.99	120.14
45	AC	27	ILE	N-CA-C	-5.48	100.76	108.27
11	B2	616	G	O4'-C1'-N9	5.48	116.72	108.50
11	B2	861	G	O5'-C5'-C4'	-5.48	103.28	111.50
11	B2	989	C	C3'-C2'-C1'	5.48	106.78	101.30
38	A1	624	U	P-O5'-C5'	5.48	129.12	120.90
38	A1	1392	G	O4'-C4'-C3'	-5.48	100.62	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1854	G	C3'-C2'-C1'	5.48	106.78	101.30
41	AA	45	ARG	N-CA-CB	5.48	118.02	109.85
50	AF	8	ARG	NE-CZ-NH2	5.48	124.13	119.20
54	AI	134	VAL	CB-CA-C	-5.48	104.66	112.22
38	A1	60	G	C1'-O4'-C4'	5.48	115.18	109.70
38	A1	1148	C	P-O5'-C5'	-5.48	112.68	120.90
38	A1	3004	C	C3'-C2'-O2'	5.48	118.92	110.70
11	B2	1422	G	C4'-C3'-C2'	-5.48	97.12	102.60
11	B2	1432	U	O4'-C4'-C3'	-5.48	98.52	104.00
13	BA	157	PHE	CA-C-O	-5.48	115.06	120.70
38	A1	406	G	C5'-C4'-C3'	-5.48	107.78	116.00
38	A1	1188	C	O4'-C1'-N1	5.48	116.72	108.50
38	A1	2708	U	P-O5'-C5'	5.48	129.12	120.90
46	AD	198	LEU	CA-C-O	-5.48	114.46	120.43
52	AH	92	HIS	CB-CG-CD2	-5.48	124.08	131.20
11	B2	943	C	O4'-C1'-N1	5.47	116.71	108.50
11	B2	1153	G	O4'-C1'-N9	5.47	116.71	108.50
13	BA	92	ILE	O-C-N	5.47	127.27	121.91
15	BC	75	LEU	O-C-N	-5.47	116.98	123.22
21	BI	44	TYR	N-CA-C	-5.47	105.47	111.82
38	A1	258	C	O4'-C1'-N1	5.47	116.71	108.50
38	A1	594	U	O5'-C5'-C4'	-5.47	103.29	111.50
38	A1	1974	G	N9-C1'-C2'	5.47	120.21	112.00
12	AG	80	VAL	O-C-N	-5.47	115.58	121.11
59	AL	42	ARG	CB-CA-C	-5.47	101.70	110.79
11	B2	990	G	O4'-C1'-C2'	-5.47	102.13	107.60
17	BE	217	ASP	CA-C-N	5.47	128.06	120.29
17	BE	217	ASP	C-N-CA	5.47	128.06	120.29
38	A1	71	A	P-O3'-C3'	5.47	128.41	120.20
39	A3	77	A	C4'-C3'-C2'	-5.47	97.13	102.60
49	Ae	32	LYS	N-CA-CB	5.47	119.74	110.49
30	BR	99	HIS	CB-CG-CD2	-5.47	124.09	131.20
55	Ai	22	ARG	N-CA-C	5.47	118.17	111.82
11	B2	1185	A	C2'-C3'-O3'	5.47	117.70	109.50
38	A1	352	G	O4'-C1'-N9	5.47	116.70	108.50
38	A1	2275	G	O4'-C1'-C2'	-5.47	102.13	107.60
39	A3	112	C	C4'-C3'-O3'	-5.47	104.80	113.00
45	AC	141	GLN	CA-C-N	5.47	127.61	120.28
45	AC	141	GLN	C-N-CA	5.47	127.61	120.28
12	AG	38	GLU	CB-CA-C	-5.47	101.71	110.79
57	Aj	31	SER	O-C-N	5.47	129.86	122.59
63	AP	7	THR	CA-CB-OG1	5.47	117.80	109.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	BC	96	ALA	O-C-N	5.47	128.79	122.17
38	A1	1431	U	C4'-C3'-C2'	-5.47	97.13	102.60
38	A1	2881	G	C5'-C4'-C3'	5.47	124.20	116.00
20	BH	197	LYS	CA-C-O	5.47	126.34	120.55
20	BH	202	SER	CA-C-N	5.47	128.05	120.29
20	BH	202	SER	C-N-CA	5.47	128.05	120.29
29	BQ	94	ASP	O-C-N	5.47	127.78	122.09
38	A1	626	C	P-O5'-C5'	5.47	129.10	120.90
38	A1	888	U	C4'-C3'-O3'	-5.47	104.80	113.00
38	A1	1420	U	O4'-C1'-N1	5.47	116.70	108.50
38	A1	1450	C	P-O5'-C5'	5.47	129.10	120.90
41	AA	124	TYR	N-CA-CB	5.47	118.22	110.13
45	AC	30	TRP	O-C-N	5.47	127.41	121.23
50	AF	69	ARG	CA-C-N	5.47	127.60	120.28
50	AF	69	ARG	C-N-CA	5.47	127.60	120.28
50	AF	180	LYS	O-C-N	-5.47	116.90	121.44
11	B2	378	A	C4'-C3'-C2'	5.46	108.06	102.60
11	B2	586	C	O3'-P-O5'	-5.46	95.80	104.00
11	B2	1333	G	C4'-C3'-O3'	-5.46	104.80	113.00
13	BA	83	LYS	N-CA-C	-5.46	105.41	112.68
22	BJ	65	VAL	CA-C-O	5.46	126.55	120.59
23	BK	54	GLU	CA-C-N	5.46	130.82	122.24
23	BK	54	GLU	C-N-CA	5.46	130.82	122.24
38	A1	1822	G	O3'-P-O5'	-5.46	95.80	104.00
38	A1	1913	C	C4'-C3'-O3'	-5.46	104.80	113.00
45	AC	352	GLN	OE1-CD-NE2	5.46	128.06	122.60
58	Ak	92	THR	N-CA-C	5.46	117.15	108.79
65	AV	12	LYS	O-C-N	5.46	127.55	121.43
16	BD	39	LYS	O-C-N	-5.46	116.33	122.12
18	BF	27	LYS	CA-C-N	5.46	129.84	120.72
18	BF	27	LYS	C-N-CA	5.46	129.84	120.72
52	AH	34	GLN	CA-C-N	5.46	127.94	120.46
52	AH	34	GLN	C-N-CA	5.46	127.94	120.46
11	B2	1023	C	O4'-C1'-N1	5.46	116.69	108.50
12	B3	101	ILE	CA-CB-CG1	5.46	119.69	110.40
38	A1	324	C	O4'-C1'-C2'	-5.46	102.14	107.60
38	A1	1244	C	O4'-C1'-C2'	-5.46	102.14	107.60
38	A1	1720	G	P-O3'-C3'	5.46	128.39	120.20
38	A1	2424	A	C1'-O4'-C4'	-5.46	104.44	109.90
38	A1	2495	A	C4'-C3'-C2'	-5.46	97.14	102.60
49	Ae	21	ARG	NE-CZ-NH2	-5.46	114.28	119.20
50	AF	177	LYS	O-C-N	5.46	129.42	122.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	AG	69	LEU	CA-C-O	-5.46	114.63	120.42
55	Ai	61	ALA	CB-CA-C	-5.46	100.94	109.84
66	AY	147	ILE	CA-C-N	5.46	127.91	120.54
66	AY	147	ILE	C-N-CA	5.46	127.91	120.54
15	BC	117	LEU	O-C-N	-5.46	115.33	122.59
38	A1	895	C	C4'-C3'-C2'	-5.46	97.14	102.60
38	A1	1898	A	C4'-C3'-C2'	5.46	108.06	102.60
1	A7	36	VAL	CA-C-N	5.46	129.01	120.82
1	A7	36	VAL	C-N-CA	5.46	129.01	120.82
9	AX	60	GLN	CB-CA-C	-5.46	101.73	110.79
24	BL	82	MET	CA-C-N	5.46	127.60	120.28
24	BL	82	MET	C-N-CA	5.46	127.60	120.28
27	BO	49	MET	CA-C-N	5.46	128.46	120.71
27	BO	49	MET	C-N-CA	5.46	128.46	120.71
38	A1	1976	C	O4'-C1'-N1	5.46	116.69	108.50
42	Aa	16	LYS	N-CA-C	-5.46	107.63	114.56
54	AI	105	LYS	CA-C-N	5.46	131.06	122.49
54	AI	105	LYS	C-N-CA	5.46	131.06	122.49
64	AR	60	GLY	CA-C-O	-5.46	112.47	119.13
4	AQ	45	ILE	CA-C-N	5.46	128.14	120.28
4	AQ	45	ILE	C-N-CA	5.46	128.14	120.28
11	B2	233	C	C4'-C3'-C2'	-5.46	97.14	102.60
11	B2	466	C	C4'-C3'-C2'	-5.46	97.14	102.60
18	BF	102	HIS	CE1-NE2-CD2	-5.46	103.54	109.00
38	A1	842	C	C5'-C4'-C3'	5.46	124.19	116.00
38	A1	2106	G	C4'-C3'-C2'	-5.46	97.14	102.60
41	AA	145	ILE	CB-CA-C	5.46	118.95	111.97
41	AA	156	GLN	CB-CG-CD	-5.46	103.32	112.60
44	Ab	99	ALA	CB-CA-C	5.46	120.78	109.38
46	AD	149	GLN	N-CA-CB	5.46	118.23	110.16
8	AW	61	LYS	CA-C-O	5.46	126.55	120.82
9	AX	273	GLY	CA-C-N	5.46	127.53	120.44
9	AX	273	GLY	C-N-CA	5.46	127.53	120.44
11	B2	626	G	C1'-O4'-C4'	5.46	115.36	109.90
11	B2	1162	G	O4'-C1'-N9	5.46	116.68	108.50
27	BO	139	GLN	OE1-CD-NE2	-5.46	117.14	122.60
32	BT	31	ARG	CA-C-O	-5.46	115.27	121.00
45	AC	328	VAL	CA-C-N	5.46	125.22	119.76
45	AC	328	VAL	C-N-CA	5.46	125.22	119.76
14	BB	11	GLN	CA-C-N	5.45	128.03	120.29
14	BB	11	GLN	C-N-CA	5.45	128.03	120.29
62	AO	174	LYS	CA-C-O	-5.45	115.44	121.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	BB	104	PRO	CB-CA-C	-5.45	102.81	111.04
38	A1	1737	A	O4'-C4'-C3'	-5.45	98.55	104.00
43	AB	120	LYS	N-CA-CB	5.45	119.52	111.01
45	AC	152	GLU	CA-C-N	5.45	128.03	120.29
45	AC	152	GLU	C-N-CA	5.45	128.03	120.29
12	AG	77	TYR	CA-C-N	-5.45	114.51	122.58
12	AG	77	TYR	C-N-CA	-5.45	114.51	122.58
65	AV	39	ARG	CB-CA-C	-5.45	101.58	110.85
66	AY	95	GLU	CB-CA-C	-5.45	101.58	110.85
11	B2	742	U	P-O5'-C5'	5.45	129.08	120.90
14	BB	99	GLY	CA-C-O	5.45	125.07	118.86
14	BB	119	ASP	CB-CA-C	-5.45	101.55	109.45
14	BB	128	ARG	CG-CD-NE	-5.45	100.01	112.00
34	BV	32	SER	N-CA-C	-5.45	99.64	108.52
38	A1	173	G	P-O3'-C3'	5.45	128.38	120.20
52	AH	38	LYS	CA-C-N	5.45	127.54	120.56
52	AH	38	LYS	C-N-CA	5.45	127.54	120.56
66	AY	44	LEU	CA-C-N	5.45	126.03	119.98
66	AY	44	LEU	C-N-CA	5.45	126.03	119.98
38	A1	171	A	P-O5'-C5'	-5.45	112.73	120.90
38	A1	1129	G	C4'-C3'-C2'	-5.45	97.15	102.60
42	Aa	91	TYR	N-CA-C	-5.45	100.45	108.79
44	Ab	47	ASP	CA-C-N	5.45	131.00	122.17
44	Ab	47	ASP	C-N-CA	5.45	131.00	122.17
38	A1	142	G	P-O3'-C3'	5.45	128.37	120.20
38	A1	2101	A	C4'-C3'-C2'	-5.45	97.15	102.60
38	A1	2218	C	O4'-C1'-N1	5.45	116.67	108.50
45	AC	311	PHE	CB-CA-C	-5.45	101.19	108.87
63	AP	52	ILE	N-CA-CB	5.45	116.92	110.55
17	BE	115	ILE	N-CA-C	-5.45	99.86	108.90
23	BK	10	ARG	O-C-N	5.45	129.68	123.31
38	A1	50	C	C1'-C2'-O2'	5.45	116.57	108.40
38	A1	1744	A	O3'-P-O5'	-5.45	95.83	104.00
38	A1	2089	C	C3'-C2'-C1'	5.45	106.75	101.30
38	A1	2488	C	C4'-C3'-C2'	5.45	108.05	102.60
38	A1	2657	A	C2'-C3'-O3'	5.45	117.67	109.50
38	A1	2713	A	C4'-C3'-C2'	-5.45	97.16	102.60
9	AX	160	ILE	O-C-N	-5.44	116.33	121.94
11	B2	134	A	C4'-C3'-O3'	-5.44	104.83	113.00
11	B2	677	U	O4'-C1'-N1	5.44	116.67	108.50
14	BB	102	THR	N-CA-CB	5.44	119.69	110.49
38	A1	379	U	O4'-C1'-N1	5.44	116.67	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	833	G	P-O3'-C3'	-5.44	112.03	120.20
38	A1	1609	G	N9-C1'-C2'	-5.44	103.83	112.00
11	B2	503	G	O4'-C1'-N9	5.44	116.66	108.50
20	BH	60	ASN	CA-CB-CG	5.44	118.04	112.60
30	BR	17	ASP	CA-C-N	5.44	135.08	121.80
30	BR	17	ASP	C-N-CA	5.44	135.08	121.80
38	A1	880	U	O4'-C1'-N1	5.44	116.66	108.50
39	A3	51	U	O5'-C5'-C4'	-5.44	103.34	111.50
47	Ad	85	ARG	CA-C-N	5.44	127.57	120.28
47	Ad	85	ARG	C-N-CA	5.44	127.57	120.28
50	AF	144	LYS	CA-C-N	5.44	127.84	120.44
50	AF	144	LYS	C-N-CA	5.44	127.84	120.44
57	Aj	85	ARG	CA-C-O	5.44	126.89	120.69
62	AO	33	PRO	O-C-N	5.44	129.75	123.06
62	AO	166	ARG	N-CA-C	-5.44	104.23	112.99
5	AS	116	HIS	ND1-CE1-NE2	5.44	113.84	108.40
8	AW	33	THR	CA-C-N	5.44	128.12	120.28
8	AW	33	THR	C-N-CA	5.44	128.12	120.28
11	B2	617	A	O4'-C4'-C3'	-5.44	98.56	104.00
11	B2	706	G	O3'-P-O5'	-5.44	95.84	104.00
15	BC	27	ARG	N-CA-C	-5.44	105.00	111.69
38	A1	237	G	P-O3'-C3'	5.44	128.36	120.20
38	A1	871	G	C4'-C3'-C2'	-5.44	97.16	102.60
38	A1	1596	G	P-O3'-C3'	-5.44	112.04	120.20
44	Ab	79	TYR	CB-CA-C	-5.44	99.41	109.37
12	AG	87	GLY	CA-C-N	5.44	127.57	120.28
12	AG	87	GLY	C-N-CA	5.44	127.57	120.28
67	AZ	48	ASP	N-CA-CB	5.44	117.90	110.01
20	BH	127	ILE	N-CA-CB	5.44	118.74	110.58
38	A1	283	U	P-O3'-C3'	-5.44	112.04	120.20
38	A1	1339	C	C1'-O4'-C4'	-5.44	104.46	109.90
38	A1	1349	G	C4'-C3'-C2'	-5.44	97.16	102.60
38	A1	1523	A	C5'-C4'-C3'	5.44	123.36	115.20
11	B2	845	G	O4'-C1'-N9	5.44	116.66	108.50
14	BB	51	ARG	N-CA-C	5.44	117.29	111.36
23	BK	43	PHE	CA-C-N	5.44	127.57	120.28
23	BK	43	PHE	C-N-CA	5.44	127.57	120.28
38	A1	1015	G	O3'-P-O5'	-5.44	95.84	104.00
38	A1	1310	A	O4'-C1'-N9	5.44	116.66	108.50
38	A1	1354	G	P-O3'-C3'	-5.44	112.04	120.20
38	A1	2490	C	C4'-C3'-O3'	-5.44	104.84	113.00
38	A1	2525	C	O4'-C1'-N1	5.44	116.66	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2833	G	C4'-C3'-O3'	-5.44	104.84	113.00
41	AA	114	MET	O-C-N	-5.44	115.60	120.71
61	AN	32	THR	CA-CB-OG1	5.44	117.76	109.60
17	BE	193	VAL	CA-C-N	5.44	131.92	121.54
17	BE	193	VAL	C-N-CA	5.44	131.92	121.54
23	BK	99	PHE	CB-CA-C	-5.44	101.29	110.64
48	AE	15	TRP	CA-C-O	-5.44	115.11	120.82
59	AL	85	LEU	CA-C-N	5.44	128.01	120.29
59	AL	85	LEU	C-N-CA	5.44	128.01	120.29
9	AX	254	VAL	CG1-CB-CG2	5.43	122.76	110.80
11	B2	1263	C	C5'-C4'-O4'	5.43	117.95	109.80
19	BG	98	GLU	CA-C-N	5.43	130.04	121.56
19	BG	98	GLU	C-N-CA	5.43	130.04	121.56
38	A1	1085	G	C1'-C2'-O2'	5.43	116.55	108.40
38	A1	1700	U	O4'-C1'-N1	5.43	116.65	108.50
38	A1	2399	C	O3'-P-O5'	-5.43	95.85	104.00
38	A1	738	C	O4'-C1'-N1	5.43	116.65	108.50
38	A1	2833	G	C4'-C3'-C2'	-5.43	97.17	102.60
12	AG	10	GLU	CA-C-N	5.43	128.67	123.02
12	AG	10	GLU	C-N-CA	5.43	128.67	123.02
11	B2	1381	G	P-O3'-C3'	5.43	128.35	120.20
20	BH	66	ARG	N-CA-CB	5.43	117.89	110.01
38	A1	793	C	P-O3'-C3'	-5.43	112.05	120.20
38	A1	1251	G	C5'-C4'-C3'	5.43	124.15	116.00
11	B2	284	A	C4'-C3'-O3'	-5.43	104.86	113.00
11	B2	308	G	O4'-C1'-C2'	-5.43	102.17	107.60
11	B2	659	U	O4'-C4'-C3'	-5.43	98.57	104.00
14	BB	30	LYS	O-C-N	-5.43	116.48	122.07
16	BD	98	GLU	CA-C-N	5.43	132.80	121.94
16	BD	98	GLU	C-N-CA	5.43	132.80	121.94
38	A1	836	U	C4'-C3'-C2'	-5.43	97.17	102.60
38	A1	1331	U	P-O3'-C3'	-5.43	112.06	120.20
38	A1	1427	A	O4'-C1'-N9	5.43	116.64	108.50
38	A1	1601	G	O3'-P-O5'	-5.43	95.86	104.00
38	A1	1780	C	P-O3'-C3'	5.43	128.35	120.20
47	Ad	74	ARG	CA-C-N	5.43	128.00	120.29
47	Ad	74	ARG	C-N-CA	5.43	128.00	120.29
49	Ae	51	TRP	CA-C-N	5.43	128.42	120.71
49	Ae	51	TRP	C-N-CA	5.43	128.42	120.71
52	AH	81	LEU	N-CA-C	5.43	117.28	111.36
40	AK	81	SER	N-CA-CB	5.43	118.91	110.44
58	AK	158	LYS	CA-C-N	5.43	130.85	120.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	Ak	158	LYS	C-N-CA	5.43	130.85	120.97
65	AV	4	TRP	N-CA-C	-5.43	101.04	109.24
33	BU	86	ALA	CA-C-O	5.43	126.62	120.70
38	A1	225	C	O4'-C1'-N1	5.43	116.64	108.50
38	A1	457	C	O4'-C1'-N1	5.43	116.64	108.50
38	A1	1678	A	C1'-O4'-C4'	-5.43	104.47	109.90
38	A1	1983	C	C4'-C3'-C2'	-5.43	97.17	102.60
62	AO	73	TRP	N-CA-C	-5.43	100.85	109.59
11	B2	1330	G	C4'-C3'-C2'	-5.43	97.17	102.60
27	BO	111	ARG	NE-CZ-NH2	-5.43	114.32	119.20
39	A3	10	U	P-O5'-C5'	-5.43	112.76	120.90
45	AC	87	ARG	CG-CD-NE	-5.43	100.06	112.00
10	B1	40	U	C5'-C4'-O4'	-5.42	101.66	109.80
11	B2	1427	C	C4'-C3'-C2'	-5.42	97.18	102.60
15	BC	97	VAL	CA-C-O	-5.42	115.31	120.95
37	BY	47	GLU	CA-C-N	5.42	131.08	122.62
37	BY	47	GLU	C-N-CA	5.42	131.08	122.62
38	A1	1556	G	C4'-C3'-C2'	-5.42	97.18	102.60
38	A1	2332	G	C4'-C3'-C2'	-5.42	97.18	102.60
38	A1	2697	G	O4'-C1'-C2'	-5.42	102.18	107.60
61	AN	79	ARG	CA-CB-CG	-5.42	103.25	114.10
62	AO	110	PRO	N-CA-CB	5.42	108.34	103.08
63	AP	89	ALA	CA-C-N	5.42	127.55	120.28
63	AP	89	ALA	C-N-CA	5.42	127.55	120.28
10	B1	20	G	P-O5'-C5'	-5.42	112.77	120.90
28	BP	16	LYS	CA-C-O	5.42	126.21	119.97
38	A1	448	A	C4'-C3'-O3'	-5.42	104.86	113.00
38	A1	1151	G	O3'-P-O5'	5.42	112.14	104.00
38	A1	1894	A	P-O3'-C3'	5.42	128.34	120.20
41	AA	60	VAL	CA-C-O	-5.42	114.55	120.84
5	AS	27	ILE	CA-C-N	5.42	127.92	120.39
5	AS	27	ILE	C-N-CA	5.42	127.92	120.39
20	BH	124	VAL	O-C-N	-5.42	116.60	121.91
29	BQ	16	ARG	CA-C-N	5.42	125.96	120.38
29	BQ	16	ARG	C-N-CA	5.42	125.96	120.38
38	A1	1669	A	O4'-C1'-C2'	-5.42	102.18	107.60
38	A1	1855	G	O4'-C1'-N9	5.42	116.63	108.50
38	A1	1943	C	C1'-O4'-C4'	5.42	115.32	109.90
38	A1	1975	C	O4'-C1'-N1	5.42	116.63	108.50
3	Af	4	ASN	N-CA-C	-5.42	95.82	111.00
10	B1	20	G	C5'-C4'-C3'	-5.42	107.87	116.00
25	BM	80	HIS	N-CA-C	-5.42	101.70	110.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1733	C	O4'-C1'-N1	5.42	116.63	108.50
38	A1	2181	G	O4'-C1'-N9	5.42	116.63	108.50
38	A1	2698	G	O4'-C1'-N9	5.42	116.63	108.50
61	AN	71	ARG	N-CA-C	5.42	116.87	111.07
9	AX	141	PHE	N-CA-CB	5.42	118.06	109.82
11	B2	249	U	O4'-C1'-N1	5.42	116.63	108.50
11	B2	411	C	C1'-O4'-C4'	5.42	115.12	109.70
21	BI	4	LEU	CA-C-O	-5.42	115.28	121.40
22	BJ	116	GLN	OE1-CD-NE2	5.42	128.02	122.60
33	BU	122	THR	CA-C-O	-5.42	115.08	120.66
38	A1	43	G	O4'-C1'-N9	5.42	116.63	108.50
38	A1	1734	G	C5'-C4'-C3'	-5.42	107.87	116.00
62	AO	151	GLU	CA-C-O	-5.42	115.12	120.70
38	A1	2954	C	P-O5'-C5'	-5.42	112.78	120.90
40	AK	50	ILE	CA-C-N	5.42	127.80	120.65
40	AK	50	ILE	C-N-CA	5.42	127.80	120.65
11	B2	351	C	C4'-C3'-C2'	-5.42	97.19	102.60
11	B2	651	U	O5'-C5'-C4'	-5.42	103.38	111.50
11	B2	1322	C	C1'-O4'-C4'	-5.42	104.48	109.90
20	BH	17	VAL	CA-CB-CG2	5.42	119.61	110.40
38	A1	1685	C	O4'-C4'-C3'	-5.42	98.58	104.00
38	A1	2297	C	P-O5'-C5'	5.42	129.02	120.90
46	AD	251	ARG	NE-CZ-NH1	5.42	126.92	121.50
48	AE	128	TYR	CB-CG-CD1	-5.42	112.68	120.80
55	Ai	6	LYS	CA-C-N	5.42	131.36	122.64
55	Ai	6	LYS	C-N-CA	5.42	131.36	122.64
2	A8	32	HIS	CE1-NE2-CD2	-5.41	103.59	109.00
9	AX	50	ALA	CA-C-N	5.41	129.87	122.34
9	AX	50	ALA	C-N-CA	5.41	129.87	122.34
11	B2	445	G	P-O5'-C5'	-5.41	112.78	120.90
11	B2	801	A	O5'-C5'-C4'	-5.41	103.58	111.70
16	BD	156	ARG	NE-CZ-NH2	5.41	124.07	119.20
22	BJ	64	ASN	O-C-N	-5.41	115.84	122.55
37	BY	46	THR	N-CA-C	-5.41	99.70	108.52
38	A1	2092	G	C4'-C3'-C2'	-5.41	97.19	102.60
9	AX	7	ILE	CA-C-N	5.41	127.53	120.28
9	AX	7	ILE	C-N-CA	5.41	127.53	120.28
9	AX	423	VAL	N-CA-C	5.41	116.48	111.45
38	A1	122	G	C1'-O4'-C4'	5.41	115.31	109.90
39	A3	58	C	C4'-C3'-O3'	-5.41	104.88	113.00
67	AZ	19	GLY	CA-C-N	5.41	127.85	120.54
67	AZ	19	GLY	C-N-CA	5.41	127.85	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	BP	2	ALA	CA-C-N	5.41	129.43	120.94
28	BP	2	ALA	C-N-CA	5.41	129.43	120.94
38	A1	691	G	C4'-C3'-O3'	-5.41	104.88	113.00
38	A1	937	A	O4'-C1'-N9	5.41	116.62	108.50
38	A1	1053	A	C1'-O4'-C4'	5.41	115.31	109.90
38	A1	1419	G	C4'-C3'-O3'	-5.41	104.89	113.00
38	A1	2793	C	O4'-C1'-N1	5.41	116.61	108.50
12	AG	16	ALA	CA-C-O	-5.41	114.81	120.55
52	AH	9	LEU	N-CA-CB	5.41	120.25	110.83
58	Ak	124	ILE	N-CA-C	-5.41	97.19	108.88
1	A7	62	LYS	N-CA-CB	5.41	119.63	110.49
11	B2	392	G	O4'-C1'-N9	5.41	116.61	108.50
11	B2	626	G	O4'-C1'-C2'	-5.41	102.19	107.60
11	B2	1295	C	C4'-C3'-C2'	-5.41	97.19	102.60
38	A1	1601	G	C5'-C4'-C3'	5.41	124.11	116.00
38	A1	2812	U	O4'-C4'-C3'	-5.41	98.59	104.00
43	AB	222	PRO	CA-C-N	5.41	125.41	119.89
43	AB	222	PRO	C-N-CA	5.41	125.41	119.89
56	AJ	16	ARG	CA-C-N	5.41	126.24	120.13
56	AJ	16	ARG	C-N-CA	5.41	126.24	120.13
63	AP	42	ARG	N-CA-C	-5.41	106.36	113.17
11	B2	388	G	C4'-C3'-C2'	-5.41	97.19	102.60
11	B2	1049	U	P-O3'-C3'	5.41	128.31	120.20
38	A1	277	A	N1-C6-N6	5.41	134.82	118.60
38	A1	2944	G	C4'-C3'-C2'	-5.41	97.19	102.60
41	AA	75	ARG	NE-CZ-NH2	-5.41	114.33	119.20
58	Ak	20	LYS	N-CA-CB	5.41	118.55	110.22
4	AQ	58	GLN	CA-C-N	5.41	128.54	120.87
4	AQ	58	GLN	C-N-CA	5.41	128.54	120.87
11	B2	410	U	O4'-C1'-N1	5.41	116.61	108.50
17	BE	74	ASP	CA-C-O	-5.41	114.32	121.08
38	A1	308	C	C1'-O4'-C4'	5.41	115.31	109.90
38	A1	480	A	O4'-C1'-N9	5.41	116.61	108.50
38	A1	527	G	P-O5'-C5'	5.41	129.01	120.90
38	A1	1098	C	P-O5'-C5'	5.41	129.01	120.90
38	A1	1270	G	C3'-C2'-C1'	5.41	106.71	101.30
38	A1	2041	U	O4'-C1'-C2'	-5.41	102.19	107.60
42	Aa	13	VAL	N-CA-C	-5.41	101.67	108.05
7	AU	87	ASN	CA-C-O	-5.40	113.21	119.59
50	AF	142	ILE	N-CA-C	5.40	115.61	110.42
9	AX	237	HIS	CA-C-O	-5.40	115.11	121.16
11	B2	844	G	N9-C1'-C2'	-5.40	103.90	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	889	G	C1'-O4'-C4'	-5.40	104.50	109.90
20	BH	87	ARG	O-C-N	-5.40	115.41	122.59
25	BM	114	ARG	NE-CZ-NH1	-5.40	116.10	121.50
38	A1	41	G	C4'-C3'-O3'	-5.40	104.90	113.00
38	A1	1157	U	O4'-C1'-N1	5.40	116.60	108.50
38	A1	1753	G	C1'-O4'-C4'	5.40	115.10	109.70
43	AB	106	THR	N-CA-CB	5.40	119.39	110.69
45	AC	234	VAL	N-CA-CB	5.40	116.87	110.55
48	AE	167	THR	CA-C-N	5.40	127.52	120.28
48	AE	167	THR	C-N-CA	5.40	127.52	120.28
51	Ag	3	ARG	NE-CZ-NH1	-5.40	116.10	121.50
64	AR	10	ARG	CA-C-N	5.40	131.86	121.54
64	AR	10	ARG	C-N-CA	5.40	131.86	121.54
11	B2	703	U	P-O5'-C5'	5.40	129.00	120.90
13	BA	20	ILE	CA-C-O	5.40	126.32	120.43
15	BC	135	LYS	CA-C-N	5.40	130.23	122.35
15	BC	135	LYS	C-N-CA	5.40	130.23	122.35
38	A1	649	A	C4'-C3'-C2'	-5.40	97.20	102.60
38	A1	1788	G	N9-C1'-C2'	-5.40	103.90	112.00
38	A1	1906	G	C1'-O4'-C4'	-5.40	104.50	109.90
38	A1	2573	C	O4'-C4'-C3'	-5.40	100.70	106.10
66	AY	37	VAL	CB-CA-C	5.40	118.22	110.33
4	AQ	38	ARG	NE-CZ-NH1	-5.40	116.10	121.50
29	BQ	76	LEU	N-CA-CB	5.40	118.45	109.60
41	AA	25	THR	CA-C-N	5.40	131.31	121.97
41	AA	25	THR	C-N-CA	5.40	131.31	121.97
51	Ag	20	CYS	CA-C-N	5.40	131.99	121.41
51	Ag	20	CYS	C-N-CA	5.40	131.99	121.41
61	AN	113	ARG	N-CA-C	-5.40	99.30	110.80
6	AT	31	ASP	N-CA-C	5.40	117.26	110.24
9	AX	166	ILE	O-C-N	5.40	129.02	123.03
11	B2	130	G	C4'-C3'-O3'	-5.40	104.90	113.00
13	BA	155	LYS	CA-C-O	5.40	126.14	120.42
13	BA	175	LYS	CA-C-O	5.40	126.20	120.10
38	A1	1561	G	O4'-C1'-N9	5.40	116.60	108.50
38	A1	1954	U	C1'-O4'-C4'	5.40	115.10	109.70
11	B2	90	C	C2'-C3'-O3'	5.40	121.79	113.70
11	B2	391	G	O4'-C1'-N9	5.40	116.59	108.50
12	B3	82	SER	CA-C-O	-5.40	115.50	121.33
38	A1	220	C	O4'-C1'-C2'	-5.40	102.20	107.60
38	A1	1245	C	P-O5'-C5'	5.40	128.99	120.90
5	AS	149	VAL	CB-CA-C	5.39	117.70	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	BR	84	ASP	CA-C-N	5.39	129.41	120.94
30	BR	84	ASP	C-N-CA	5.39	129.41	120.94
38	A1	394	A	C5'-C4'-O4'	-5.39	101.71	109.80
38	A1	1591	C	O3'-P-O5'	5.39	112.09	104.00
38	A1	1776	G	C4'-C3'-O3'	-5.39	104.91	113.00
38	A1	2240	G	O4'-C1'-N9	5.39	116.29	108.20
39	A3	93	G	C5'-C4'-C3'	5.39	124.09	116.00
56	AJ	127	ALA	CA-C-N	5.39	127.78	120.44
56	AJ	127	ALA	C-N-CA	5.39	127.78	120.44
11	B2	64	G	P-O5'-C5'	5.39	128.99	120.90
11	B2	804	U	C2'-C3'-O3'	5.39	121.79	113.70
11	B2	1233	G	O4'-C1'-N9	5.39	116.59	108.50
16	BD	111	LYS	CB-CA-C	-5.39	101.68	110.85
17	BE	213	VAL	N-CA-C	-5.39	100.08	108.81
23	BK	115	GLU	CA-C-N	5.39	125.30	119.85
23	BK	115	GLU	C-N-CA	5.39	125.30	119.85
38	A1	115	C	O4'-C1'-N1	5.39	116.59	108.50
38	A1	2694	C	C4'-C3'-C2'	-5.39	97.21	102.60
40	A5	55	PRO	CB-CA-C	5.39	118.01	110.95
42	Aa	92	VAL	N-CA-C	-5.39	100.12	107.99
43	AB	209	HIS	ND1-CE1-NE2	5.39	113.79	108.40
45	AC	154	MET	CA-C-O	-5.39	115.16	120.82
48	AE	128	TYR	O-C-N	-5.39	115.64	122.17
52	AH	132	SER	CA-C-O	5.39	127.74	121.11
61	AN	130	GLN	CA-C-N	5.39	129.85	122.84
61	AN	130	GLN	C-N-CA	5.39	129.85	122.84
11	B2	1348	C	C4'-C3'-O3'	-5.39	104.91	113.00
38	A1	1267	A	O4'-C1'-N9	5.39	116.29	108.20
40	A5	40	LEU	N-CA-CB	5.39	118.15	110.06
58	Ak	172	GLU	CB-CA-C	-5.39	101.69	110.85
62	AO	25	LEU	CA-C-N	5.39	127.45	120.44
62	AO	25	LEU	C-N-CA	5.39	127.45	120.44
11	B2	54	C	P-O3'-C3'	5.39	128.28	120.20
11	B2	1495	U	O4'-C1'-N1	5.39	116.58	108.50
23	BK	19	ILE	CB-CA-C	5.39	118.61	110.63
26	BN	83	VAL	N-CA-CB	5.39	116.59	110.72
38	A1	847	A	O4'-C1'-N9	5.39	116.58	108.50
38	A1	857	U	O4'-C1'-N1	5.39	116.58	108.50
48	AE	92	LYS	CB-CA-C	-5.39	101.84	110.79
58	Ak	126	ALA	N-CA-C	-5.39	100.61	109.40
18	BF	66	LEU	N-CA-C	-5.39	104.29	111.24
30	BR	30	HIS	ND1-CE1-NE2	5.39	113.79	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2347	G	N1-C6-O6	5.39	136.06	119.90
38	A1	2591	A	C5'-C4'-C3'	-5.39	107.92	116.00
46	AD	235	HIS	CB-CG-CD2	-5.39	124.20	131.20
58	Ak	14	GLU	CA-C-N	5.39	128.50	120.31
58	Ak	14	GLU	C-N-CA	5.39	128.50	120.31
3	Af	26	TRP	N-CA-CB	5.39	118.63	110.28
5	AS	137	THR	CA-C-N	5.39	125.31	119.76
5	AS	137	THR	C-N-CA	5.39	125.31	119.76
7	AU	117	GLU	CB-CA-C	-5.39	101.69	110.85
38	A1	2484	C	O5'-C5'-C4'	-5.39	103.42	111.50
11	B2	196	G	P-O5'-C5'	5.38	128.98	120.90
17	BE	30	VAL	N-CA-CB	5.38	116.68	110.49
18	BF	144	ALA	O-C-N	5.38	129.52	123.06
32	BT	16	LEU	N-CA-C	5.38	117.90	111.71
32	BT	33	ARG	NE-CZ-NH1	5.38	126.89	121.50
38	A1	1597	G	C1'-O4'-C4'	5.38	115.28	109.90
41	AA	30	VAL	CA-C-O	-5.38	114.74	120.39
45	AC	203	LEU	CB-CA-C	-5.38	101.53	110.68
47	Ad	83	GLN	OE1-CD-NE2	5.38	127.98	122.60
6	AT	49	VAL	N-CA-C	-5.38	101.32	108.96
11	B2	405	G	O4'-C1'-N9	5.38	116.58	108.50
13	BA	85	MET	CG-SD-CE	-5.38	89.06	100.90
38	A1	2528	U	C4'-C3'-O3'	-5.38	104.93	113.00
60	AM	159	PHE	CB-CA-C	-5.38	101.70	110.85
10	B1	19	G	O4'-C1'-C2'	5.38	112.98	107.60
11	B2	1090	C	O4'-C1'-N1	5.38	116.57	108.50
27	BO	41	ARG	NE-CZ-NH2	-5.38	114.36	119.20
38	A1	206	A	C1'-O4'-C4'	5.38	115.28	109.90
42	Aa	75	LYS	N-CA-C	-5.38	101.11	109.72
44	Ab	10	LEU	CA-C-N	5.38	127.93	120.29
44	Ab	10	LEU	C-N-CA	5.38	127.93	120.29
9	AX	223	VAL	CA-C-N	5.38	127.45	120.56
9	AX	223	VAL	C-N-CA	5.38	127.45	120.56
11	B2	801	A	P-O3'-C3'	5.38	128.27	120.20
27	BO	134	ASN	OD1-CG-ND2	5.38	127.98	122.60
38	A1	2405	U	C4'-C3'-C2'	-5.38	97.22	102.60
9	AX	175	ALA	CA-C-N	5.38	127.75	120.65
9	AX	175	ALA	C-N-CA	5.38	127.75	120.65
11	B2	347	G	C4'-C3'-O3'	5.38	117.47	109.40
11	B2	1329	C	O4'-C1'-N1	5.38	116.57	108.50
15	BC	80	ILE	CA-C-N	5.38	131.01	122.62
15	BC	80	ILE	C-N-CA	5.38	131.01	122.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	BD	12	GLU	N-CA-C	-5.38	100.13	108.90
20	BH	73	ARG	O-C-N	-5.38	116.50	122.09
25	BM	9	LYS	N-CA-C	-5.38	104.63	113.50
32	BT	15	GLN	OE1-CD-NE2	5.38	127.98	122.60
38	A1	149	G	C2'-C3'-O3'	5.38	121.77	113.70
38	A1	407	A	C4'-C3'-C2'	-5.38	97.22	102.60
38	A1	990	G	O4'-C1'-N9	5.38	116.57	108.50
38	A1	2946	C	O4'-C1'-N1	5.38	116.57	108.50
48	AE	104	ALA	CA-C-N	5.38	129.21	120.23
48	AE	104	ALA	C-N-CA	5.38	129.21	120.23
9	AX	260	ILE	O-C-N	5.38	127.30	121.87
11	B2	822	A	C5'-C4'-C3'	-5.38	107.94	116.00
16	BD	40	GLU	CA-C-N	5.38	127.92	120.29
16	BD	40	GLU	C-N-CA	5.38	127.92	120.29
38	A1	312	G	P-O5'-C5'	-5.38	112.84	120.90
38	A1	480	A	C5'-C4'-C3'	5.38	124.06	116.00
38	A1	1002	A	C5'-C4'-C3'	-5.38	107.94	116.00
38	A1	1012	G	C1'-C2'-O2'	5.38	116.47	108.40
38	A1	1766	A	P-O5'-C5'	-5.38	112.83	120.90
38	A1	1903	G	P-O5'-C5'	5.38	128.97	120.90
38	A1	2814	U	P-O5'-C5'	5.38	128.97	120.90
44	Ab	28	TRP	N-CA-CB	5.38	119.58	110.49
45	AC	339	ARG	CA-C-N	5.38	125.37	119.89
45	AC	339	ARG	C-N-CA	5.38	125.37	119.89
46	AD	73	LEU	CB-CA-C	-5.38	100.13	110.24
52	AH	25	ILE	CA-C-N	5.38	130.31	121.87
52	AH	25	ILE	C-N-CA	5.38	130.31	121.87
60	AM	187	ARG	N-CA-C	-5.38	106.49	112.57
12	B3	11	VAL	CA-C-O	-5.38	115.17	119.25
38	A1	875	G	C4'-C3'-C2'	-5.38	97.22	102.60
59	AL	107	GLN	CB-CG-CD	-5.38	103.46	112.60
11	B2	1092	G	C5'-C4'-C3'	5.37	124.06	116.00
20	BH	42	ARG	N-CA-CB	5.37	121.53	111.43
38	A1	1249	G	C2'-C3'-O3'	5.37	117.56	109.50
38	A1	1801	C	C4'-C3'-O3'	-5.37	104.94	113.00
38	A1	2135	C	P-O3'-C3'	5.37	128.26	120.20
38	A1	2756	G	P-O5'-C5'	-5.37	112.84	120.90
50	AF	76	ARG	N-CA-C	5.37	117.14	111.28
5	AS	35	VAL	O-C-N	-5.37	116.31	121.90
11	B2	855	C	P-O5'-C5'	-5.37	112.84	120.90
11	B2	1235	A	O5'-C5'-C4'	-5.37	103.44	111.50
38	A1	593	C	O4'-C1'-N1	5.37	116.56	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2234	C	O4'-C4'-C3'	-5.37	98.63	104.00
38	A1	2261	C	P-O3'-C3'	-5.37	112.14	120.20
6	AT	47	PHE	CA-C-N	5.37	131.80	121.54
6	AT	47	PHE	C-N-CA	5.37	131.80	121.54
36	BX	33	GLU	N-CA-CB	5.37	118.72	110.61
38	A1	2678	U	P-O5'-C5'	-5.37	112.84	120.90
56	AJ	112	VAL	O-C-N	5.37	126.50	121.61
5	AS	81	GLY	O-C-N	-5.37	118.45	123.87
11	B2	540	G	P-O5'-C5'	-5.37	112.85	120.90
11	B2	781	U	O4'-C1'-N1	5.37	116.55	108.50
20	BH	47	THR	CA-C-O	5.37	126.09	119.81
25	BM	24	ASN	CA-CB-CG	-5.37	107.23	112.60
38	A1	962	C	O4'-C1'-N1	5.37	116.55	108.50
38	A1	1159	U	O5'-C5'-C4'	-5.37	103.45	111.50
41	AA	121	LEU	CA-C-O	-5.37	113.46	119.79
43	AB	229	HIS	CA-C-N	5.37	129.08	122.37
43	AB	229	HIS	C-N-CA	5.37	129.08	122.37
20	BH	163	ARG	CD-NE-CZ	-5.37	116.89	124.40
26	BN	144	LYS	CA-C-N	5.37	126.55	119.84
26	BN	144	LYS	C-N-CA	5.37	126.55	119.84
38	A1	686	C	C4'-C3'-O3'	-5.37	104.95	113.00
38	A1	865	C	C3'-C2'-C1'	5.37	106.67	101.30
38	A1	1358	C	P-O5'-C5'	5.37	128.95	120.90
63	AP	112	THR	O-C-N	-5.37	115.45	122.59
11	B2	1084	U	C5'-C4'-O4'	5.37	117.85	109.80
19	BG	51	PHE	CA-CB-CG	-5.37	108.44	113.80
38	A1	1359	C	O4'-C1'-N1	5.37	116.55	108.50
38	A1	1757	G	O4'-C1'-N9	5.37	116.55	108.50
45	AC	196	PHE	N-CA-CB	5.37	117.85	110.07
52	AH	23	PRO	N-CA-CB	5.37	108.89	103.25
54	AI	49	TYR	N-CA-CB	5.37	118.10	110.16
11	B2	502	U	C1'-O4'-C4'	5.36	115.26	109.90
11	B2	837	C	P-O5'-C5'	-5.36	112.86	120.90
21	BI	119	LYS	CA-C-N	5.36	129.24	122.00
21	BI	119	LYS	C-N-CA	5.36	129.24	122.00
23	BK	121	ARG	N-CA-CB	5.36	118.65	110.44
30	BR	94	LEU	N-CA-C	-5.36	105.55	112.68
32	BT	70	MET	CA-C-O	-5.36	115.86	121.55
32	BT	108	PRO	CA-C-O	-5.36	115.13	121.67
38	A1	1226	G	O4'-C1'-N9	5.36	116.55	108.50
38	A1	2172	G	O4'-C4'-C3'	-5.36	98.64	104.00
38	A1	2971	U	O4'-C1'-N1	5.36	116.55	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	A3	25	A	C5'-C4'-C3'	5.36	124.04	116.00
61	AN	122	LEU	N-CA-C	-5.36	101.21	109.52
62	AO	110	PRO	O-C-N	5.36	127.79	121.46
15	BC	20	PHE	CB-CA-C	-5.36	101.73	110.85
16	BD	165	HIS	O-C-N	5.36	126.64	121.28
38	A1	1746	C	O4'-C4'-C3'	5.36	109.36	104.00
38	A1	2682	G	C3'-C2'-C1'	-5.36	95.94	101.30
9	AX	70	LEU	N-CA-C	-5.36	106.12	113.30
11	B2	17	C	N1-C1'-C2'	5.36	120.04	112.00
11	B2	1041	C	O5'-C5'-C4'	-5.36	103.46	111.50
38	A1	282	G	P-O5'-C5'	-5.36	112.86	120.90
38	A1	2532	G	P-O5'-C5'	-5.36	112.86	120.90
39	A3	59	C	C5'-C4'-O4'	-5.36	101.76	109.80
52	AH	49	MET	CA-C-N	5.36	130.02	121.66
52	AH	49	MET	C-N-CA	5.36	130.02	121.66
11	B2	721	A	O4'-C4'-C3'	-5.36	98.64	104.00
25	BM	64	ALA	CA-C-N	5.36	127.46	120.28
25	BM	64	ALA	C-N-CA	5.36	127.46	120.28
38	A1	1006	A	P-O3'-C3'	5.36	128.24	120.20
38	A1	2984	A	C4'-C3'-O3'	-5.36	104.96	113.00
66	AY	86	LYS	CA-C-N	5.36	127.90	120.29
66	AY	86	LYS	C-N-CA	5.36	127.90	120.29
5	AS	116	HIS	CE1-NE2-CD2	-5.36	103.64	109.00
11	B2	33	U	P-O3'-C3'	5.36	128.24	120.20
15	BC	84	GLU	CA-C-N	5.36	129.30	121.80
15	BC	84	GLU	C-N-CA	5.36	129.30	121.80
16	BD	137	ILE	CA-C-O	-5.36	114.73	121.11
22	BJ	123	ILE	O-C-N	-5.36	117.41	123.20
26	BN	131	ARG	CA-C-O	5.36	127.75	121.54
38	A1	2224	G	C3'-C2'-C1'	-5.36	95.94	101.30
38	A1	2669	U	O4'-C1'-N1	5.36	116.54	108.50
38	A1	2780	G	C5'-C4'-C3'	5.36	124.04	116.00
43	AB	28	VAL	N-CA-C	-5.36	100.35	108.17
12	AG	106	LYS	N-CA-CB	5.36	119.55	110.49
64	AR	59	HIS	CE1-NE2-CD2	-5.36	103.64	109.00
4	AQ	114	LYS	N-CA-C	-5.36	106.12	113.30
20	BH	72	MET	CA-CB-CG	5.36	124.81	114.10
27	BO	107	MET	N-CA-CB	5.36	118.08	110.16
38	A1	2291	G	C3'-C2'-C1'	-5.36	95.94	101.30
38	A1	2966	C	O4'-C1'-N1	5.36	116.53	108.50
45	AC	228	LYS	N-CA-CB	5.36	118.36	110.33
38	A1	593	C	C3'-C2'-C1'	5.35	106.65	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2300	C	O4'-C1'-N1	5.35	116.53	108.50
38	A1	2949	G	O3'-P-O5'	-5.35	95.97	104.00
63	AP	10	ASN	O-C-N	5.35	128.25	122.15
7	AU	96	HIS	CA-C-N	5.35	125.02	119.56
7	AU	96	HIS	C-N-CA	5.35	125.02	119.56
11	B2	1048	G	C4'-C3'-C2'	-5.35	97.25	102.60
17	BE	33	ARG	N-CA-CB	5.35	117.69	110.14
24	BL	44	ARG	N-CA-C	-5.35	100.17	108.90
33	BU	15	ARG	NE-CZ-NH2	-5.35	114.38	119.20
38	A1	1200	A	C3'-C2'-C1'	5.35	106.65	101.30
38	A1	1960	U	N1-C1'-C2'	5.35	120.03	112.00
40	A5	50	ILE	CA-C-O	5.35	127.47	120.78
46	AD	150	LYS	CA-C-N	5.35	127.75	120.63
46	AD	150	LYS	C-N-CA	5.35	127.75	120.63
62	AO	112	VAL	CA-C-O	-5.35	115.61	121.28
11	B2	1423	A	C5'-C4'-O4'	-5.35	101.77	109.80
20	BH	147	HIS	ND1-CE1-NE2	5.35	113.75	108.40
28	BP	22	ILE	N-CA-C	-5.35	105.19	113.16
34	BV	23	ILE	N-CA-C	-5.35	100.77	108.48
38	A1	219	G	O4'-C1'-N9	5.35	116.53	108.50
38	A1	2153	C	P-O5'-C5'	-5.35	112.87	120.90
41	AA	25	THR	N-CA-C	-5.35	100.01	108.73
45	AC	33	GLU	N-CA-CB	5.35	118.17	110.20
54	AI	100	TYR	N-CA-C	-5.35	100.68	109.40
66	AY	64	LEU	N-CA-C	5.35	117.11	111.28
20	BH	4	PRO	O-C-N	5.35	128.65	122.23
20	BH	69	ASN	OD1-CG-ND2	5.35	127.95	122.60
38	A1	1128	G	P-O5'-C5'	-5.35	112.88	120.90
38	A1	2984	A	O4'-C1'-C2'	-5.35	102.25	107.60
45	AC	130	ARG	NE-CZ-NH1	-5.35	116.15	121.50
46	AD	188	GLY	CA-C-N	5.35	129.96	122.36
46	AD	188	GLY	C-N-CA	5.35	129.96	122.36
50	AF	15	GLU	N-CA-C	-5.35	106.71	113.18
58	AK	22	TYR	N-CA-C	-5.35	102.75	110.40
11	B2	141	C	O4'-C1'-C2'	-5.35	102.25	107.60
18	BF	110	ILE	CA-CB-CG1	-5.35	101.31	110.40
29	BQ	75	ASN	OD1-CG-ND2	-5.35	117.25	122.60
38	A1	1771	C	C1'-O4'-C4'	5.35	115.05	109.70
38	A1	2083	G	O4'-C1'-N9	5.35	116.52	108.50
45	AC	198	TYR	CB-CG-CD1	-5.35	112.78	120.80
45	AC	342	ILE	N-CA-CB	-5.35	103.10	112.08
54	AI	51	GLN	CA-CB-CG	5.35	124.80	114.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AN	127	LYS	N-CA-C	-5.35	101.51	109.96
18	BF	201	VAL	O-C-N	-5.35	116.67	121.91
20	BH	40	GLU	CB-CG-CD	-5.35	103.51	112.60
20	BH	176	ASN	OD1-CG-ND2	5.35	127.95	122.60
28	BP	7	ASN	CA-C-N	5.35	129.73	122.19
28	BP	7	ASN	C-N-CA	5.35	129.73	122.19
38	A1	1443	G	O4'-C4'-C3'	-5.35	100.75	106.10
38	A1	1628	C	P-O3'-C3'	5.35	128.22	120.20
38	A1	2518	G	C4'-C3'-C2'	-5.35	97.25	102.60
15	BC	149	GLY	O-C-N	-5.34	116.81	122.95
17	BE	242	LEU	O-C-N	-5.34	116.39	121.57
22	BJ	75	VAL	O-C-N	-5.34	117.00	122.82
34	BV	2	GLU	O-C-N	5.34	129.88	123.36
48	AE	134	ILE	CA-CB-CG2	-5.34	101.41	110.50
12	AG	69	LEU	CA-C-N	5.34	127.88	120.29
12	AG	69	LEU	C-N-CA	5.34	127.88	120.29
55	Ai	32	MET	O-C-N	-5.34	116.45	122.12
4	AQ	52	LYS	O-C-N	5.34	129.66	123.30
11	B2	130	G	O4'-C1'-N9	5.34	116.52	108.50
11	B2	1210	A	C5'-C4'-C3'	-5.34	107.98	116.00
14	BB	74	LEU	N-CA-C	-5.34	106.14	113.30
38	A1	119	U	C4'-C3'-C2'	5.34	107.94	102.60
38	A1	141	C	O4'-C1'-C2'	-5.34	102.26	107.60
43	AB	108	VAL	CA-C-O	-5.34	115.69	121.19
11	B2	1081	C	C1'-O4'-C4'	-5.34	104.36	109.70
27	BO	84	ASP	CA-C-N	5.34	131.44	123.05
27	BO	84	ASP	C-N-CA	5.34	131.44	123.05
37	BY	17	ARG	NE-CZ-NH1	5.34	126.84	121.50
38	A1	1153	U	C2'-C3'-O3'	5.34	121.71	113.70
38	A1	1516	C	O4'-C1'-N1	5.34	116.51	108.50
39	A3	16	G	O4'-C1'-N9	5.34	116.51	108.50
41	AA	165	ALA	O-C-N	-5.34	116.63	121.17
47	Ad	85	ARG	NE-CZ-NH2	-5.34	114.39	119.20
48	AE	144	GLU	CB-CG-CD	-5.34	103.52	112.60
63	AP	16	ARG	CA-C-N	5.34	127.88	120.29
63	AP	16	ARG	C-N-CA	5.34	127.88	120.29
11	B2	922	G	C4'-C3'-O3'	-5.34	104.99	113.00
38	A1	413	A	C4'-C3'-C2'	-5.34	97.26	102.60
38	A1	725	G	C3'-C2'-C1'	-5.34	95.96	101.30
38	A1	1411	G	C4'-C3'-O3'	-5.34	104.99	113.00
38	A1	1966	C	O4'-C1'-N1	5.34	116.51	108.50
44	Ab	116	LYS	CA-C-N	5.34	128.43	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	Ab	116	LYS	C-N-CA	5.34	128.43	120.31
54	AI	119	HIS	CA-CB-CG	-5.34	108.46	113.80
59	AL	14	SER	O-C-N	5.34	127.78	122.12
61	AN	139	ARG	N-CA-CB	5.34	118.56	110.28
62	AO	109	HIS	CA-C-O	-5.34	115.43	120.34
11	B2	556	G	P-O5'-C5'	-5.34	112.89	120.90
38	A1	2107	G	O5'-C5'-C4'	-5.34	103.49	111.50
38	A1	2573	C	O3'-P-O5'	-5.34	95.99	104.00
7	AU	37	GLU	N-CA-CB	5.34	118.06	110.16
11	B2	29	G	P-O5'-C5'	-5.34	112.89	120.90
11	B2	217	C	C1'-O4'-C4'	5.34	115.24	109.90
11	B2	1355	C	O5'-C5'-C4'	-5.34	103.50	111.50
38	A1	306	G	C2'-C3'-O3'	5.34	121.70	113.70
38	A1	310	C	C4'-C3'-C2'	-5.34	97.26	102.60
38	A1	640	C	O5'-C5'-C4'	5.34	119.50	111.50
38	A1	1101	U	O4'-C4'-C3'	-5.34	98.66	104.00
38	A1	1476	C	P-O5'-C5'	-5.34	112.90	120.90
38	A1	2050	U	O4'-C1'-N1	5.34	116.20	108.20
45	AC	32	LYS	N-CA-CB	5.34	121.83	111.53
45	AC	243	ALA	CA-C-N	5.34	127.43	120.28
45	AC	243	ALA	C-N-CA	5.34	127.43	120.28
54	AI	62	ARG	NE-CZ-NH2	5.34	124.00	119.20
63	AP	88	THR	CA-C-N	5.34	127.38	120.44
63	AP	88	THR	C-N-CA	5.34	127.38	120.44
7	AU	110	GLU	N-CA-C	5.33	118.01	111.82
11	B2	112	G	O4'-C1'-C2'	-5.33	102.27	107.60
38	A1	1004	U	O4'-C1'-N1	5.33	116.50	108.50
47	Ad	21	ARG	CA-C-N	5.33	131.57	121.97
47	Ad	21	ARG	C-N-CA	5.33	131.57	121.97
1	A7	51	GLY	N-CA-C	5.33	120.23	113.24
38	A1	1035	G	C4'-C3'-O3'	5.33	121.00	113.00
38	A1	1261	C	C3'-C2'-C1'	5.33	106.63	101.30
38	A1	1442	G	P-O5'-C5'	5.33	128.90	120.90
38	A1	2759	A	C5'-C4'-C3'	-5.33	107.20	115.20
44	Ab	115	ILE	CB-CA-C	-5.33	104.86	112.22
61	AN	144	PHE	CA-CB-CG	-5.33	108.47	113.80
8	AW	6	ILE	O-C-N	5.33	127.32	121.83
11	B2	1056	G	C5'-C4'-C3'	-5.33	108.00	116.00
20	BH	99	LYS	CA-C-N	5.33	127.42	120.28
20	BH	99	LYS	C-N-CA	5.33	127.42	120.28
38	A1	880	U	C1'-C2'-O2'	5.33	116.40	108.40
38	A1	1168	A	C1'-O4'-C4'	5.33	115.23	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1180	G	C4'-C3'-C2'	-5.33	97.27	102.60
38	A1	1497	C	C3'-C2'-C1'	5.33	106.63	101.30
38	A1	2636	C	O4'-C1'-C2'	-5.33	102.27	107.60
38	A1	2966	C	C4'-C3'-C2'	-5.33	97.27	102.60
54	AI	34	GLU	N-CA-C	-5.33	107.79	114.56
9	AX	10	LYS	N-CA-C	-5.33	106.28	112.89
11	B2	81	C	C5'-C4'-O4'	-5.33	101.81	109.80
11	B2	1202	G	C4'-C3'-C2'	-5.33	97.27	102.60
15	BC	96	ALA	CA-C-O	-5.33	114.85	120.55
16	BD	97	ILE	CA-C-N	5.33	130.60	122.23
16	BD	97	ILE	C-N-CA	5.33	130.60	122.23
16	BD	175	LYS	N-CA-CB	5.33	119.50	110.49
25	BM	41	ARG	NE-CZ-NH2	-5.33	114.40	119.20
27	BO	72	HIS	CG-CD2-NE2	5.33	112.53	107.20
38	A1	1253	U	O4'-C1'-C2'	-5.33	102.27	107.60
38	A1	2943	G	O4'-C4'-C3'	-5.33	98.67	104.00
52	AH	70	VAL	CA-C-N	5.33	125.87	120.38
52	AH	70	VAL	C-N-CA	5.33	125.87	120.38
56	AJ	108	THR	N-CA-CB	5.33	117.14	109.78
5	AS	151	GLU	CA-C-N	5.33	128.80	120.75
5	AS	151	GLU	C-N-CA	5.33	128.80	120.75
11	B2	646	U	C2'-C3'-O3'	5.33	121.69	113.70
15	BC	34	ASP	CA-CB-CG	-5.33	107.27	112.60
25	BM	43	SER	CA-C-N	5.33	126.80	120.14
25	BM	43	SER	C-N-CA	5.33	126.80	120.14
38	A1	949	C	O4'-C1'-N1	5.33	116.49	108.50
48	AE	58	ARG	NE-CZ-NH1	5.33	126.83	121.50
57	Aj	18	THR	CA-C-O	5.33	127.03	121.38
11	B2	393	A	P-O5'-C5'	-5.33	112.91	120.90
38	A1	397	G	C5'-C4'-C3'	5.33	123.99	116.00
44	Ab	117	ARG	CA-C-N	5.33	127.85	120.29
44	Ab	117	ARG	C-N-CA	5.33	127.85	120.29
11	B2	603	G	O4'-C1'-N9	5.33	116.49	108.50
11	B2	1156	A	O4'-C1'-N9	5.33	116.19	108.20
11	B2	1465	C	O3'-P-O5'	-5.33	96.01	104.00
38	A1	688	G	N9-C1'-C2'	-5.33	104.01	112.00
38	A1	2620	G	P-O5'-C5'	-5.33	112.91	120.90
41	AA	96	GLN	N-CA-C	-5.33	100.97	109.07
49	Ae	5	THR	CA-CB-CG2	5.33	119.56	110.50
3	Af	27	VAL	N-CA-C	5.32	116.05	110.62
7	AU	43	ASN	CA-CB-CG	5.32	117.92	112.60
9	AX	348	ARG	NH1-CZ-NH2	-5.32	112.38	119.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	695	G	O4'-C1'-N9	5.32	116.48	108.50
15	BC	95	GLN	N-CA-C	-5.32	106.80	113.72
38	A1	1152	C	P-O5'-C5'	5.32	128.88	120.90
38	A1	1281	A	N1-C6-N6	5.32	134.57	118.60
38	A1	1733	C	C4'-C3'-O3'	-5.32	105.02	113.00
38	A1	1858	G	P-O5'-C5'	5.32	128.88	120.90
39	A3	53	A	O3'-P-O5'	-5.32	96.01	104.00
52	AH	3	LYS	N-CA-CB	5.32	119.48	110.49
59	AL	72	GLU	CA-C-O	5.32	126.17	120.32
8	AW	53	ARG	CG-CD-NE	-5.32	100.29	112.00
11	B2	239	A	O3'-P-O5'	5.32	111.98	104.00
11	B2	849	U	P-O3'-C3'	5.32	128.18	120.20
38	A1	1027	A	C1'-O4'-C4'	-5.32	104.58	109.90
38	A1	1550	C	O3'-P-O5'	-5.32	96.02	104.00
39	A3	39	C	O4'-C1'-N1	5.32	116.48	108.50
49	Ae	25	ARG	CA-C-O	5.32	128.09	121.81
67	AZ	98	LYS	CA-C-N	5.32	131.28	121.70
67	AZ	98	LYS	C-N-CA	5.32	131.28	121.70
4	AQ	14	ILE	O-C-N	-5.32	116.35	121.83
11	B2	767	U	O4'-C1'-N1	5.32	116.48	108.50
11	B2	1487	U	P-O3'-C3'	-5.32	112.22	120.20
16	BD	56	ARG	CA-C-N	5.32	127.85	120.29
16	BD	56	ARG	C-N-CA	5.32	127.85	120.29
26	BN	14	ARG	O-C-N	-5.32	116.48	122.12
38	A1	1072	U	O4'-C1'-C2'	-5.32	102.28	107.60
38	A1	1242	A	P-O3'-C3'	5.32	128.18	120.20
38	A1	1955	U	P-O3'-C3'	5.32	128.18	120.20
38	A1	2724	A	C2'-C3'-O3'	5.32	117.48	109.50
45	AC	319	SER	N-CA-CB	5.32	119.48	110.49
46	AD	41	HIS	CG-CD2-NE2	5.32	112.52	107.20
55	Ai	55	GLN	N-CA-CB	5.32	120.76	111.13
62	AO	150	ALA	CA-C-N	5.32	127.68	120.44
62	AO	150	ALA	C-N-CA	5.32	127.68	120.44
66	AY	76	GLY	O-C-N	-5.32	117.21	123.17
11	B2	493	C	P-O3'-C3'	5.32	128.18	120.20
11	B2	502	U	O4'-C4'-C3'	-5.32	98.68	104.00
16	BD	83	LEU	N-CA-CB	5.32	117.89	110.07
9	AX	29	TRP	CG-CD2-CE3	-5.32	128.58	133.90
19	BG	91	GLY	CA-C-O	-5.32	113.92	121.52
38	A1	688	G	C4'-C3'-C2'	-5.32	97.28	102.60
38	A1	1489	G	O4'-C4'-C3'	-5.32	98.68	104.00
38	A1	1918	U	C4'-C3'-C2'	-5.32	97.28	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2262	C	C5'-C4'-O4'	5.32	117.78	109.80
38	A1	2839	A	C3'-C2'-O2'	-5.32	106.62	114.60
45	AC	268	VAL	CA-C-N	5.32	125.48	119.90
45	AC	268	VAL	C-N-CA	5.32	125.48	119.90
49	Ae	55	TRP	CB-CG-CD1	5.32	134.88	126.90
11	B2	324	C	C1'-O4'-C4'	-5.32	104.39	109.70
38	A1	406	G	C3'-C2'-C1'	5.32	106.62	101.30
38	A1	1931	G	C4'-C3'-C2'	-5.32	97.28	102.60
58	Ak	145	ILE	CA-C-O	-5.32	114.09	119.89
58	Ak	186	GLU	N-CA-C	-5.32	105.07	112.30
65	AV	56	TYR	CB-CA-C	5.32	119.22	110.88
66	AY	103	GLY	O-C-N	5.32	128.67	122.45
14	BB	196	GLU	N-CA-CB	5.31	117.85	109.83
18	BF	95	TYR	CB-CG-CD1	-5.31	112.83	120.80
18	BF	125	LYS	N-CA-CB	5.31	119.25	110.69
38	A1	847	A	P-O3'-C3'	-5.31	112.23	120.20
38	A1	1308	G	O4'-C4'-C3'	-5.31	98.69	104.00
5	AS	135	ARG	N-CA-C	-5.31	101.22	109.72
11	B2	931	C	C4'-C3'-C2'	-5.31	97.29	102.60
13	BA	63	HIS	CG-CD2-NE2	5.31	112.51	107.20
15	BC	106	GLY	O-C-N	-5.31	116.11	122.33
19	BG	10	ASP	CB-CA-C	-5.31	104.27	110.17
22	BJ	105	ILE	N-CA-CB	5.31	119.99	111.23
27	BO	124	LEU	CA-C-N	5.31	126.48	119.84
27	BO	124	LEU	C-N-CA	5.31	126.48	119.84
38	A1	252	A	C3'-C2'-O2'	5.31	118.67	110.70
38	A1	1764	G	C4'-C3'-C2'	5.31	107.91	102.60
38	A1	1873	G	O4'-C1'-C2'	5.31	112.91	107.60
38	A1	2024	A	P-O5'-C5'	5.31	128.87	120.90
38	A1	2258	A	P-O5'-C5'	5.31	128.87	120.90
45	AC	155	ILE	N-CA-CB	5.31	116.41	110.51
60	AM	19	VAL	O-C-N	5.31	127.10	121.89
63	AP	21	LYS	CA-C-N	5.31	127.40	120.28
63	AP	21	LYS	C-N-CA	5.31	127.40	120.28
11	B2	1406	U	O4'-C1'-N1	5.31	116.47	108.50
18	BF	46	GLU	N-CA-C	-5.31	102.30	110.32
38	A1	197	C	O4'-C1'-N1	5.31	116.47	108.50
38	A1	1831	C	P-O3'-C3'	-5.31	112.23	120.20
38	A1	2042	A	O4'-C1'-C2'	5.31	111.11	105.80
53	Ah	9	ARG	CA-C-N	5.31	127.96	120.42
53	Ah	9	ARG	C-N-CA	5.31	127.96	120.42
11	B2	37	G	O5'-C5'-C4'	-5.31	103.54	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	427	G	C1'-C2'-O2'	5.31	116.36	108.40
11	B2	1492	U	O3'-P-O5'	5.31	111.97	104.00
15	BC	118	ARG	N-CA-C	-5.31	105.45	112.94
30	BR	15	LYS	O-C-N	-5.31	117.06	123.27
38	A1	445	G	O4'-C1'-N9	5.31	116.46	108.50
38	A1	634	G	N9-C1'-C2'	-5.31	104.04	112.00
38	A1	2363	G	C1'-O4'-C4'	-5.31	104.39	109.70
57	Aj	80	ARG	CA-C-O	-5.31	115.77	121.45
58	Ak	20	LYS	CA-C-O	-5.31	114.10	120.10
9	AX	164	TYR	N-CA-C	5.31	117.88	111.40
9	AX	263	ALA	N-CA-CB	5.31	117.92	110.12
11	B2	1197	C	P-O3'-C3'	5.31	128.16	120.20
16	BD	71	GLU	N-CA-CB	5.31	117.70	110.01
20	BH	77	SER	N-CA-CB	5.31	118.65	110.21
38	A1	1488	C	P-O3'-C3'	5.31	128.16	120.20
38	A1	2391	G	P-O5'-C5'	5.31	128.86	120.90
42	Aa	13	VAL	CA-C-O	-5.31	115.74	119.19
55	Ai	30	ALA	N-CA-C	-5.31	105.39	111.07
61	AN	8	ILE	N-CA-C	-5.31	98.30	109.34
11	B2	342	G	O4'-C1'-N9	5.31	116.46	108.50
11	B2	1341	C	O4'-C1'-N1	5.31	116.46	108.50
11	B2	1363	C	C4'-C3'-O3'	-5.31	105.04	113.00
38	A1	219	G	C5'-C4'-O4'	-5.31	101.84	109.80
38	A1	1022	G	O4'-C1'-N9	5.31	116.46	108.50
38	A1	1825	G	C4'-C3'-C2'	-5.31	97.29	102.60
7	AU	21	HIS	CG-CD2-NE2	5.30	112.50	107.20
11	B2	1047	U	O4'-C1'-N1	5.30	116.46	108.50
11	B2	1464	C	O4'-C1'-C2'	-5.30	102.30	107.60
17	BE	125	LEU	N-CA-C	-5.30	100.75	109.40
38	A1	747	G	O4'-C1'-N9	5.30	116.45	108.50
38	A1	2102	A	C1'-C2'-O2'	5.30	116.36	108.40
38	A1	2243	G	O3'-P-O5'	5.30	111.96	104.00
38	A1	2671	C	C3'-C2'-C1'	5.30	106.60	101.30
45	AC	62	ASN	O-C-N	-5.30	116.60	122.86
46	AD	38	SER	N-CA-C	5.30	117.14	111.36
59	AL	25	HIS	CG-CD2-NE2	5.30	112.50	107.20
11	B2	171	U	C5'-C4'-O4'	-5.30	101.85	109.80
11	B2	417	C	O4'-C1'-N1	5.30	116.45	108.50
38	A1	1210	G	O4'-C4'-C3'	5.30	109.30	104.00
38	A1	1329	G	C5'-C4'-C3'	5.30	123.95	116.00
38	A1	1880	A	C3'-C2'-C1'	-5.30	96.00	101.30
11	B2	782	A	O4'-C1'-C2'	-5.30	102.30	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	1318	U	C3'-C2'-C1'	5.30	106.60	101.30
38	A1	2047	U	O4'-C1'-C2'	-5.30	102.30	107.60
42	Aa	27	ARG	N-CA-CB	5.30	117.98	110.13
46	AD	143	ILE	CA-CB-CG1	5.30	119.41	110.40
62	AO	133	HIS	CA-CB-CG	5.30	119.10	113.80
5	AS	142	GLN	CA-C-O	-5.30	115.01	121.05
8	AW	33	THR	CA-C-O	-5.30	114.93	120.55
12	B3	44	GLU	N-CA-C	-5.30	105.19	110.97
18	BF	35	HIS	CB-CG-CD2	-5.30	124.31	131.20
29	BQ	81	ILE	N-CA-CB	5.30	116.75	110.55
38	A1	365	G	O3'-P-O5'	5.30	111.95	104.00
38	A1	1092	U	C4'-C3'-C2'	-5.30	97.30	102.60
38	A1	1634	A	C2'-C3'-O3'	5.30	117.45	109.50
40	AK	20	GLN	CG-CD-NE2	-5.30	108.45	116.40
62	AO	51	TYR	CB-CG-CD2	-5.30	112.85	120.80
66	AY	64	LEU	CA-C-N	5.30	127.82	120.29
66	AY	64	LEU	C-N-CA	5.30	127.82	120.29
11	B2	74	U	C4'-C3'-O3'	5.30	117.35	109.40
38	A1	1561	G	N9-C1'-C2'	-5.30	104.05	112.00
5	AS	42	MET	N-CA-CB	5.30	118.47	110.42
9	AX	387	PHE	O-C-N	5.30	129.63	122.59
11	B2	953	C	O3'-P-O5'	5.30	111.94	104.00
11	B2	1004	U	C1'-O4'-C4'	5.30	115.20	109.90
23	BK	54	GLU	CA-C-O	-5.30	114.88	120.55
25	BM	102	ILE	CA-C-N	5.30	127.38	120.28
25	BM	102	ILE	C-N-CA	5.30	127.38	120.28
26	BN	90	GLY	N-CA-C	-5.30	100.63	113.18
38	A1	1247	U	C5'-C4'-C3'	-5.30	108.05	116.00
38	A1	1483	U	C3'-C2'-C1'	5.30	106.80	101.50
38	A1	2495	A	O4'-C1'-N9	5.30	116.45	108.50
38	A1	2539	G	C4'-C3'-O3'	-5.30	105.06	113.00
38	A1	2636	C	C1'-O4'-C4'	5.30	115.20	109.90
39	A3	69	C	O4'-C1'-N1	5.30	116.45	108.50
44	Ab	89	GLU	CB-CG-CD	-5.30	103.60	112.60
61	AN	85	LYS	CA-CB-CG	5.30	124.69	114.10
11	B2	343	G	O4'-C1'-N9	5.29	116.44	108.50
11	B2	1452	G	C5'-C4'-O4'	5.29	117.74	109.80
14	BB	142	ASP	CA-CB-CG	5.29	117.89	112.60
11	B2	623	C	P-O5'-C5'	-5.29	112.96	120.90
34	BV	59	TYR	N-CA-C	5.29	117.55	110.35
38	A1	1092	U	O4'-C1'-C2'	-5.29	102.31	107.60
38	A1	1711	C	P-O3'-C3'	5.29	128.14	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AN	4	ARG	CA-C-N	5.29	126.04	120.11
61	AN	4	ARG	C-N-CA	5.29	126.04	120.11
62	AO	161	GLU	O-C-N	-5.29	117.55	123.48
9	AX	344	SER	CA-C-N	5.29	131.65	121.54
9	AX	344	SER	C-N-CA	5.29	131.65	121.54
11	B2	69	U	C4'-C3'-C2'	-5.29	97.31	102.60
11	B2	123	U	P-O3'-C3'	-5.29	112.26	120.20
11	B2	260	C	O5'-C5'-C4'	-5.29	103.56	111.50
11	B2	322	G	P-O5'-C5'	-5.29	112.96	120.90
25	BM	118	VAL	N-CA-C	-5.29	107.56	112.43
29	BQ	75	ASN	CA-C-O	-5.29	115.46	121.65
38	A1	332	A	C1'-O4'-C4'	-5.29	104.41	109.70
38	A1	1748	C	O4'-C1'-N1	5.29	116.44	108.50
38	A1	1807	G	O4'-C1'-C2'	-5.29	102.31	107.60
38	A1	1874	G	C4'-C3'-C2'	-5.29	97.31	102.60
38	A1	2520	C	P-O5'-C5'	5.29	128.84	120.90
38	A1	2754	A	C4'-C3'-O3'	-5.29	105.06	113.00
45	AC	362	GLU	N-CA-C	5.29	117.36	110.43
60	AM	27	MET	N-CA-C	5.29	117.05	111.28
38	A1	1604	G	C1'-O4'-C4'	-5.29	104.61	109.90
38	A1	2086	C	C1'-O4'-C4'	5.29	115.19	109.90
38	A1	2100	U	O3'-P-O5'	-5.29	96.07	104.00
41	AA	62	ILE	CB-CA-C	5.29	118.71	110.83
66	AY	71	ARG	N-CA-CB	5.29	118.45	110.30
11	B2	537	G	C1'-O4'-C4'	5.29	115.19	109.90
11	B2	766	G	C2'-C3'-O3'	5.29	121.63	113.70
11	B2	1396	C	C5'-C4'-O4'	-5.29	101.87	109.80
11	B2	1403	U	O4'-C1'-N1	5.29	116.43	108.50
38	A1	519	A	O4'-C1'-C2'	-5.29	102.31	107.60
38	A1	881	G	C3'-C2'-C1'	5.29	106.59	101.30
38	A1	928	A	C2'-C3'-O3'	5.29	121.63	113.70
38	A1	1303	C	P-O3'-C3'	-5.29	112.27	120.20
38	A1	1476	C	C5'-C4'-C3'	-5.29	108.07	116.00
38	A1	1634	A	C4'-C3'-C2'	-5.29	97.31	102.60
38	A1	2695	U	C1'-O4'-C4'	5.29	115.19	109.90
11	B2	1104	G	C1'-C2'-O2'	5.29	116.33	108.40
21	BI	70	ASN	CA-CB-CG	-5.29	107.31	112.60
29	BQ	20	THR	N-CA-C	-5.29	106.51	113.17
38	A1	799	C	P-O5'-C5'	5.29	128.83	120.90
58	AK	83	ILE	CA-CB-CG2	5.29	119.49	110.50
66	AY	127	ARG	CA-C-O	5.29	125.83	119.59
4	AQ	120	TYR	CB-CG-CD2	-5.29	112.87	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	AS	129	TYR	CA-C-O	-5.29	114.49	120.46
10	B1	64	C	P-O5'-C5'	5.29	128.83	120.90
11	B2	1053	A	C2'-C3'-O3'	5.29	117.43	109.50
11	B2	1451	C	O4'-C1'-C2'	-5.29	102.31	107.60
25	BM	115	VAL	CA-CB-CG1	5.29	119.39	110.40
38	A1	1820	C	C3'-C2'-O2'	5.29	118.63	110.70
40	A5	16	ARG	CA-C-O	-5.29	114.51	120.43
58	Ak	135	PRO	CA-C-N	5.29	127.70	120.46
58	Ak	135	PRO	C-N-CA	5.29	127.70	120.46
59	AL	136	LYS	N-CA-C	-5.29	105.60	111.36
7	AU	99	ASN	CA-CB-CG	-5.28	107.32	112.60
10	B1	35	G	O4'-C1'-C2'	5.28	112.88	107.60
26	BN	100	HIS	CE1-NE2-CD2	-5.28	103.72	109.00
38	A1	1003	C	P-O5'-C5'	5.28	128.83	120.90
38	A1	1018	G	P-O3'-C3'	5.28	128.12	120.20
38	A1	1057	C	O4'-C4'-C3'	-5.28	98.72	104.00
38	A1	1305	C	P-O3'-C3'	-5.28	112.28	120.20
38	A1	2512	C	C4'-C3'-C2'	-5.28	97.32	102.60
41	AA	206	THR	CA-C-N	5.28	129.62	120.58
41	AA	206	THR	C-N-CA	5.28	129.62	120.58
44	Ab	104	HIS	CE1-NE2-CD2	-5.28	103.72	109.00
50	AF	71	PHE	CB-CG-CD1	5.28	129.68	120.70
59	AL	8	VAL	CA-CB-CG2	-5.28	101.42	110.40
11	B2	106	A	O4'-C1'-N9	5.28	116.42	108.50
38	A1	1482	G	O4'-C1'-N9	5.28	116.42	108.50
39	A3	34	C	C4'-C3'-O3'	-5.28	105.08	113.00
40	AK	77	LYS	N-CA-C	-5.28	105.58	112.23
1	A7	41	ALA	CA-C-N	5.28	127.61	120.38
1	A7	41	ALA	C-N-CA	5.28	127.61	120.38
6	AT	82	ARG	N-CA-C	-5.28	105.53	111.28
38	A1	951	C	O4'-C1'-C2'	-5.28	102.32	107.60
38	A1	1718	C	C4'-C3'-C2'	5.28	107.88	102.60
38	A1	2034	G	C4'-C3'-C2'	-5.28	97.32	102.60
43	AB	7	GLN	CG-CD-NE2	-5.28	108.48	116.40
46	AD	19	PRO	N-CD-CG	5.28	111.12	103.20
58	Ak	94	MET	O-C-N	-5.28	116.38	122.87
29	BQ	129	ILE	N-CA-CB	5.28	117.72	110.54
38	A1	613	C	O4'-C1'-N1	5.28	116.42	108.50
38	A1	2356	U	O4'-C1'-N1	5.28	116.42	108.50
38	A1	2565	A	C4'-C3'-C2'	-5.28	97.32	102.60
40	AK	73	ALA	O-C-N	5.28	127.72	122.12
59	AL	106	THR	CA-C-O	5.28	125.17	119.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	486	A	C3'-C2'-C1'	5.28	106.78	101.50
19	BG	90	LYS	CA-C-N	-5.28	113.58	121.87
19	BG	90	LYS	C-N-CA	-5.28	113.58	121.87
38	A1	623	G	C3'-C2'-C1'	-5.28	96.22	101.50
38	A1	711	C	C4'-C3'-C2'	-5.28	97.32	102.60
38	A1	1012	G	C1'-O4'-C4'	5.28	115.18	109.90
38	A1	1801	C	P-O3'-C3'	-5.28	112.28	120.20
38	A1	1830	U	C3'-C2'-C1'	-5.28	96.02	101.30
48	AE	180	GLY	N-CA-C	-5.28	104.56	111.37
67	AZ	44	GLU	CA-C-N	5.28	127.92	120.42
67	AZ	44	GLU	C-N-CA	5.28	127.92	120.42
11	B2	593	G	O4'-C4'-C3'	-5.28	98.72	104.00
20	BH	12	PRO	CA-C-N	5.28	127.61	120.38
20	BH	12	PRO	C-N-CA	5.28	127.61	120.38
25	BM	16	ILE	CB-CA-C	5.28	118.70	111.31
38	A1	718	G	C5'-C4'-C3'	-5.28	108.09	116.00
38	A1	962	C	C5'-C4'-C3'	-5.28	108.08	116.00
38	A1	1819	G	C5'-C4'-C3'	-5.28	108.09	116.00
55	Ai	32	MET	CA-C-N	5.28	128.33	120.31
55	Ai	32	MET	C-N-CA	5.28	128.33	120.31
15	BC	157	PRO	CA-C-N	5.27	131.61	121.54
15	BC	157	PRO	C-N-CA	5.27	131.61	121.54
21	BI	49	GLU	O-C-N	-5.27	116.32	122.81
38	A1	1024	G	O5'-C5'-C4'	-5.27	103.79	111.70
67	AZ	45	ILE	N-CA-CB	5.27	118.49	110.58
5	AS	132	ALA	N-CA-C	5.27	117.34	110.43
10	B1	56	U	O5'-C5'-C4'	-5.27	103.59	111.50
11	B2	654	U	C5'-C4'-C3'	5.27	123.91	116.00
11	B2	1001	A	C2'-C3'-O3'	5.27	117.41	109.50
13	BA	23	ALA	N-CA-CB	5.27	117.64	110.79
16	BD	104	ARG	CA-C-N	5.27	127.60	120.38
16	BD	104	ARG	C-N-CA	5.27	127.60	120.38
38	A1	1829	C	O5'-C5'-C4'	-5.27	103.59	111.50
38	A1	2296	A	C4'-C3'-C2'	5.27	107.87	102.60
38	A1	2583	G	O4'-C1'-C2'	5.27	111.07	105.80
46	AD	145	VAL	CA-C-N	5.27	129.03	120.60
46	AD	145	VAL	C-N-CA	5.27	129.03	120.60
47	Ad	84	ILE	N-CA-CB	5.27	117.71	110.54
60	AM	67	ARG	CB-CG-CD	5.27	123.43	111.30
65	AV	62	GLN	N-CA-C	5.27	116.71	111.07
66	AY	29	HIS	CE1-NE2-CD2	-5.27	103.73	109.00
5	AS	30	LYS	CA-C-N	5.27	128.32	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	AS	30	LYS	C-N-CA	5.27	128.32	120.31
22	BJ	118	GLY	CA-C-O	-5.27	113.17	119.02
38	A1	1876	G	P-O3'-C3'	5.27	128.11	120.20
38	A1	1943	C	O4'-C1'-N1	5.27	116.41	108.50
42	Aa	28	ALA	CA-C-O	-5.27	113.23	118.34
45	AC	153	ASP	N-CA-C	-5.27	105.61	111.36
46	AD	140	LEU	CB-CA-C	-5.27	102.75	109.92
57	Aj	24	ARG	CA-CB-CG	5.27	124.64	114.10
62	AO	46	ALA	O-C-N	-5.27	116.84	123.27
11	B2	77	G	C5'-C4'-C3'	5.27	123.91	116.00
11	B2	266	A	C1'-O4'-C4'	-5.27	104.63	109.90
11	B2	657	A	P-O5'-C5'	-5.27	113.00	120.90
11	B2	785	U	P-O5'-C5'	-5.27	113.00	120.90
11	B2	977	G	O4'-C1'-N9	5.27	116.40	108.50
11	B2	1143	G	P-O3'-C3'	-5.27	112.30	120.20
11	B2	1409	G	O4'-C1'-N9	5.27	116.41	108.50
17	BE	123	LYS	CA-C-N	5.27	125.68	119.99
17	BE	123	LYS	C-N-CA	5.27	125.68	119.99
34	BV	10	GLU	CA-C-O	-5.27	114.87	120.40
38	A1	311	C	C4'-C3'-O3'	-5.27	105.09	113.00
38	A1	1604	G	O4'-C1'-C2'	5.27	112.87	107.60
43	AB	71	ILE	N-CA-C	-5.27	100.61	108.46
45	AC	15	SER	O-C-N	-5.27	114.47	121.64
45	AC	282	LEU	O-C-N	5.27	128.98	123.03
46	AD	235	HIS	CB-CA-C	-5.27	102.35	110.62
47	Ad	2	LYS	CG-CD-CE	5.27	123.42	111.30
47	Ad	48	ARG	O-C-N	-5.27	117.08	123.03
48	AE	126	VAL	CA-C-N	5.27	131.60	121.54
48	AE	126	VAL	C-N-CA	5.27	131.60	121.54
12	B3	46	GLY	O-C-N	-5.27	116.72	122.41
13	BA	168	ALA	CA-C-N	5.27	127.77	120.29
13	BA	168	ALA	C-N-CA	5.27	127.77	120.29
23	BK	39	GLU	O-C-N	-5.27	116.40	122.09
27	BO	35	PHE	CA-C-N	5.27	127.29	120.44
27	BO	35	PHE	C-N-CA	5.27	127.29	120.44
27	BO	116	ARG	O-C-N	5.27	127.70	122.12
38	A1	758	C	C4'-C3'-C2'	-5.27	97.33	102.60
38	A1	1488	C	P-O5'-C5'	5.27	128.80	120.90
38	A1	1874	G	O4'-C1'-N9	5.27	116.40	108.50
66	AY	69	ARG	N-CA-C	5.27	116.83	111.14
11	B2	247	G	O4'-C4'-C3'	-5.27	100.83	106.10
13	BA	142	GLN	O-C-N	5.27	127.49	122.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	BC	18	ASP	CA-C-N	5.27	127.60	120.44
15	BC	18	ASP	C-N-CA	5.27	127.60	120.44
33	BU	70	ILE	N-CA-C	-5.27	106.29	111.77
38	A1	841	U	C4'-C3'-C2'	-5.27	97.33	102.60
38	A1	1244	C	C3'-C2'-C1'	5.27	106.57	101.30
38	A1	1976	C	O5'-C5'-C4'	-5.27	103.60	111.50
38	A1	2071	C	C4'-C3'-C2'	-5.27	97.33	102.60
42	Aa	15	ILE	CA-CB-CG1	5.27	119.35	110.40
6	AT	73	GLU	CB-CG-CD	-5.26	103.65	112.60
11	B2	1146	G	C1'-O4'-C4'	5.26	115.16	109.90
11	B2	1322	C	C2'-C3'-O3'	5.26	121.60	113.70
14	BB	191	PRO	CA-C-N	5.26	127.67	120.46
14	BB	191	PRO	C-N-CA	5.26	127.67	120.46
35	BW	6	ILE	CA-C-N	5.26	125.52	119.83
35	BW	6	ILE	C-N-CA	5.26	125.52	119.83
38	A1	2086	C	O4'-C1'-C2'	-5.26	102.34	107.60
38	A1	2435	G	O4'-C1'-N9	5.26	116.40	108.50
23	BK	21	GLU	N-CA-CB	5.26	117.78	109.83
38	A1	1692	A	C2'-C3'-O3'	5.26	121.59	113.70
4	AQ	25	ASP	N-CA-CB	5.26	120.34	109.45
11	B2	769	A	O4'-C1'-C2'	-5.26	100.54	105.80
15	BC	101	GLN	O-C-N	-5.26	116.65	122.07
33	BU	103	GLN	CA-CB-CG	-5.26	103.58	114.10
38	A1	273	G	C4'-C3'-C2'	-5.26	97.34	102.60
38	A1	629	G	C2'-C3'-O3'	5.26	121.59	113.70
38	A1	1084	G	C1'-C2'-O2'	5.26	116.29	108.40
39	A3	33	U	O4'-C4'-C3'	-5.26	98.74	104.00
39	A3	61	C	P-O5'-C5'	5.26	128.79	120.90
45	AC	209	VAL	N-CA-CB	5.26	118.47	110.58
48	AE	92	LYS	N-CA-C	5.26	117.02	111.28
40	AK	55	PRO	CA-C-O	-5.26	115.25	121.67
4	AQ	82	LYS	N-CA-C	-5.26	105.72	113.61
6	AT	75	SER	CA-C-N	5.26	127.33	120.28
6	AT	75	SER	C-N-CA	5.26	127.33	120.28
38	A1	765	G	C4'-C3'-O3'	-5.26	105.11	113.00
38	A1	844	C	O4'-C1'-N1	5.26	116.39	108.50
38	A1	1918	U	C3'-C2'-C1'	5.26	106.56	101.30
41	AA	42	PRO	CA-C-N	5.26	131.06	122.65
41	AA	42	PRO	C-N-CA	5.26	131.06	122.65
47	Ad	5	TYR	N-CA-C	-5.26	103.08	110.50
60	AM	48	ALA	CA-C-N	5.26	127.33	120.28
60	AM	48	ALA	C-N-CA	5.26	127.33	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AN	81	ASN	CA-C-N	5.26	131.59	121.54
61	AN	81	ASN	C-N-CA	5.26	131.59	121.54
62	AO	26	LYS	CA-C-N	5.26	127.28	120.44
62	AO	26	LYS	C-N-CA	5.26	127.28	120.44
11	B2	124	C	C4'-C3'-C2'	-5.26	97.34	102.60
12	B3	51	VAL	O-C-N	-5.26	117.78	123.14
21	BI	41	MET	N-CA-CB	5.26	117.85	110.12
31	BS	6	GLN	N-CA-CB	5.26	117.74	110.17
32	BT	9	ARG	O-C-N	-5.26	117.23	123.22
38	A1	445	G	C1'-C2'-O2'	5.26	116.29	108.40
38	A1	1605	A	P-O3'-C3'	-5.26	112.31	120.20
38	A1	2276	G	P-O5'-C5'	5.26	128.79	120.90
12	AG	120	GLU	CA-C-N	5.26	127.75	120.29
12	AG	120	GLU	C-N-CA	5.26	127.75	120.29
58	AK	40	GLN	CA-C-O	5.26	126.12	120.55
8	AW	38	LEU	CA-C-O	-5.25	115.46	121.40
11	B2	111	G	C3'-C2'-O2'	5.25	118.58	110.70
38	A1	1136	G	C1'-O4'-C4'	-5.25	104.64	109.90
38	A1	2313	G	C5'-C4'-C3'	5.25	123.88	116.00
40	AK	62	ILE	CA-C-N	5.25	125.23	120.03
40	AK	62	ILE	C-N-CA	5.25	125.23	120.03
10	B1	42	C	O4'-C1'-N1	5.25	116.38	108.50
11	B2	388	G	P-O5'-C5'	-5.25	113.02	120.90
11	B2	391	G	P-O3'-C3'	-5.25	112.32	120.20
11	B2	571	C	O4'-C1'-C2'	-5.25	102.35	107.60
12	B3	119	LYS	N-CA-CB	5.25	119.37	110.49
29	BQ	36	LEU	CA-C-N	5.25	127.66	120.46
29	BQ	36	LEU	C-N-CA	5.25	127.66	120.46
31	BS	47	ARG	NE-CZ-NH1	-5.25	116.25	121.50
38	A1	2097	G	C4'-C3'-O3'	-5.25	105.12	113.00
38	A1	2594	U	O4'-C1'-N1	5.25	116.38	108.50
60	AM	76	TRP	CG-CD2-CE3	-5.25	128.65	133.90
60	AM	108	PHE	CA-CB-CG	-5.25	108.55	113.80
11	B2	704	C	P-O5'-C5'	5.25	128.78	120.90
11	B2	1468	A	C4'-C3'-O3'	-5.25	105.12	113.00
17	BE	154	GLU	CA-C-N	5.25	127.75	120.29
17	BE	154	GLU	C-N-CA	5.25	127.75	120.29
26	BN	5	LYS	CA-C-N	5.25	134.61	121.80
26	BN	5	LYS	C-N-CA	5.25	134.61	121.80
30	BR	15	LYS	CA-C-N	5.25	131.40	122.37
30	BR	15	LYS	C-N-CA	5.25	131.40	122.37
38	A1	371	U	O4'-C1'-C2'	-5.25	100.55	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	866	G	C4'-C3'-O3'	-5.25	105.12	113.00
38	A1	2869	U	P-O3'-C3'	5.25	128.08	120.20
45	AC	262	ALA	N-CA-C	-5.25	106.55	113.17
4	AQ	142	LEU	CA-C-N	5.25	127.31	120.28
4	AQ	142	LEU	C-N-CA	5.25	127.31	120.28
11	B2	1007	A	C4'-C3'-C2'	-5.25	97.35	102.60
25	BM	50	ALA	N-CA-CB	5.25	119.36	110.49
38	A1	1975	C	O3'-P-O5'	5.25	111.88	104.00
38	A1	2117	U	C1'-C2'-O2'	-5.25	100.52	108.40
38	A1	3031	U	P-O3'-C3'	-5.25	112.33	120.20
4	AQ	51	LYS	CB-CA-C	-5.25	99.05	111.65
17	BE	235	THR	N-CA-C	-5.25	105.11	112.25
19	BG	79	HIS	CB-CG-CD2	-5.25	124.38	131.20
24	BL	30	THR	CA-CB-OG1	5.25	117.47	109.60
24	BL	47	ILE	N-CA-CB	5.25	120.87	111.63
38	A1	1076	G	C4'-C3'-C2'	-5.25	97.35	102.60
38	A1	1161	A	C4'-C3'-C2'	-5.25	97.35	102.60
53	Ah	8	LYS	N-CA-C	-5.25	105.64	111.36
57	Aj	18	THR	O-C-N	-5.25	117.75	123.26
57	Aj	80	ARG	NH1-CZ-NH2	-5.25	112.48	119.30
59	AL	102	ILE	N-CA-C	-5.25	100.19	107.80
5	AS	12	PHE	CB-CA-C	-5.25	103.69	111.72
9	AX	174	ILE	CB-CA-C	-5.25	105.25	111.81
11	B2	884	G	C5'-C4'-C3'	-5.25	108.13	116.00
14	BB	167	ILE	N-CA-C	-5.25	105.68	113.39
16	BD	140	PRO	N-CA-C	-5.25	107.19	114.27
38	A1	290	G	O4'-C1'-C2'	-5.25	102.35	107.60
38	A1	2234	C	O5'-C5'-C4'	-5.25	103.63	111.50
38	A1	2640	C	O4'-C1'-N1	5.25	116.37	108.50
50	AF	143	ASP	CA-C-N	5.25	127.31	120.28
50	AF	143	ASP	C-N-CA	5.25	127.31	120.28
61	AN	61	ALA	N-CA-C	5.25	117.91	111.82
11	B2	1002	G	C5'-C4'-C3'	5.25	123.87	116.00
38	A1	1632	U	O5'-C5'-C4'	-5.25	103.63	111.50
61	AN	112	MET	O-C-N	5.25	129.06	122.92
9	AX	368	HIS	CA-C-O	-5.24	113.01	120.51
11	B2	282	G	C4'-C3'-O3'	-5.24	105.14	113.00
11	B2	702	G	C5'-C4'-C3'	5.24	123.87	116.00
11	B2	834	C	O4'-C1'-N1	5.24	116.36	108.50
38	A1	302	U	C2'-C3'-O3'	5.24	117.36	109.50
45	AC	184	GLU	CB-CG-CD	-5.24	103.69	112.60
45	AC	203	LEU	N-CA-C	5.24	117.67	111.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	AL	68	GLU	O-C-N	-5.24	116.17	122.15
11	B2	1444	G	P-O3'-C3'	5.24	128.06	120.20
20	BH	114	ARG	CG-CD-NE	-5.24	100.47	112.00
32	BT	25	ALA	O-C-N	5.24	127.68	122.12
32	BT	34	ARG	N-CA-CB	5.24	117.61	110.01
38	A1	2890	A	C5'-C4'-C3'	5.24	123.06	115.20
38	A1	3026	C	O4'-C1'-N1	5.24	116.06	108.20
4	AQ	126	ARG	CA-C-O	-5.24	115.00	120.55
11	B2	11	A	O4'-C1'-C2'	-5.24	102.36	107.60
38	A1	904	G	C4'-C3'-C2'	-5.24	97.36	102.60
38	A1	939	A	C4'-C3'-O3'	-5.24	105.14	113.00
38	A1	1138	C	C4'-C3'-C2'	-5.24	97.36	102.60
38	A1	2504	U	O4'-C1'-N1	5.24	116.36	108.50
38	A1	2875	C	C1'-O4'-C4'	-5.24	104.66	109.90
41	AA	54	HIS	ND1-CE1-NE2	5.24	113.64	108.40
12	AG	41	LYS	N-CA-C	-5.24	105.57	111.28
61	AN	151	ARG	NH1-CZ-NH2	-5.24	112.49	119.30
5	AS	137	THR	N-CA-C	-5.24	101.04	109.58
11	B2	315	A	O4'-C1'-C2'	-5.24	102.36	107.60
11	B2	852	G	O4'-C4'-C3'	-5.24	98.76	104.00
11	B2	1419	G	P-O3'-C3'	-5.24	112.34	120.20
29	BQ	31	GLU	CA-C-N	5.24	127.73	120.29
29	BQ	31	GLU	C-N-CA	5.24	127.73	120.29
38	A1	1014	U	O4'-C1'-N1	5.24	116.06	108.20
38	A1	1406	G	C5'-C4'-C3'	-5.24	108.14	116.00
38	A1	2039	U	C4'-C3'-O3'	-5.24	105.14	113.00
38	A1	2242	A	C5'-C4'-C3'	5.24	123.86	116.00
38	A1	2540	A	N1-C6-N6	5.24	134.31	118.60
50	AF	103	VAL	N-CA-C	-5.24	100.34	107.99
53	Ah	20	GLU	N-CA-CB	5.24	118.01	110.20
40	AK	52	HIS	CG-CD2-NE2	5.24	112.44	107.20
4	AQ	137	GLN	CA-C-N	5.24	127.30	120.28
4	AQ	137	GLN	C-N-CA	5.24	127.30	120.28
11	B2	1344	U	O4'-C1'-N1	5.24	116.36	108.50
16	BD	56	ARG	CA-C-O	5.24	126.10	120.55
16	BD	161	ALA	N-CA-CB	5.24	118.24	110.49
16	BD	168	ARG	NE-CZ-NH2	-5.24	114.49	119.20
38	A1	2701	U	O4'-C1'-N1	5.24	116.36	108.50
58	Ak	177	LEU	CA-C-N	5.24	127.30	120.28
58	Ak	177	LEU	C-N-CA	5.24	127.30	120.28
59	AL	65	ARG	CA-C-O	-5.24	114.99	120.70
10	B1	18	U	C4'-C3'-C2'	5.24	107.83	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	756	A	C5'-C4'-O4'	-5.24	101.95	109.80
11	B2	1412	A	C5'-C4'-C3'	5.24	123.85	116.00
13	BA	125	ALA	N-CA-CB	5.24	118.25	110.29
18	BF	152	VAL	CA-CB-CG2	-5.24	101.50	110.40
32	BT	26	ARG	N-CA-C	5.24	116.99	111.28
38	A1	9	A	C3'-C2'-C1'	-5.24	96.06	101.30
38	A1	920	G	O3'-P-O5'	-5.24	96.15	104.00
38	A1	1431	U	O4'-C4'-C3'	5.24	109.24	104.00
38	A1	2277	G	P-O5'-C5'	5.24	128.75	120.90
38	A1	2809	G	C4'-C3'-C2'	-5.24	97.36	102.60
38	A1	2985	U	O4'-C1'-N1	5.24	116.35	108.50
41	AA	95	ARG	CA-C-O	5.24	128.02	121.89
46	AD	43	ILE	N-CA-C	-5.24	100.02	107.77
64	AR	43	ILE	N-CA-CB	5.24	118.37	111.25
66	AY	48	GLN	CA-C-O	-5.24	115.00	120.55
11	B2	1351	U	O4'-C1'-C2'	-5.23	102.37	107.60
38	A1	1631	A	C4'-C3'-O3'	-5.23	105.15	113.00
38	A1	1895	G	O3'-P-O5'	-5.23	96.15	104.00
11	B2	871	A	C2'-C3'-O3'	5.23	117.35	109.50
11	B2	1010	G	P-O5'-C5'	5.23	128.75	120.90
27	BO	113	ARG	N-CA-C	-5.23	99.65	110.80
27	BO	129	GLN	CB-CA-C	5.23	120.83	110.42
29	BQ	8	LYS	N-CA-C	-5.23	106.21	112.59
38	A1	1258	G	O4'-C1'-N9	5.23	116.35	108.50
39	A3	59	C	O4'-C1'-N1	5.23	116.35	108.50
48	AE	124	PRO	N-CD-CG	5.23	111.05	103.20
59	AL	78	LEU	N-CA-C	-5.23	105.75	111.82
61	AN	74	GLN	N-CA-C	5.23	116.67	111.07
11	B2	1229	A	P-O5'-C5'	-5.23	113.06	120.90
25	BM	127	ARG	CB-CG-CD	5.23	123.33	111.30
36	BX	4	ASP	N-CA-CB	5.23	119.33	110.49
38	A1	1416	G	O3'-P-O5'	-5.23	96.15	104.00
38	A1	1753	G	P-O5'-C5'	-5.23	113.05	120.90
46	AD	182	GLY	CA-C-O	-5.23	115.95	122.59
46	AD	230	LEU	N-CA-C	5.23	117.89	111.82
47	Ad	56	LYS	CA-C-O	5.23	126.28	119.95
48	AE	147	GLY	N-CA-C	-5.23	108.17	114.66
56	AJ	60	ASP	N-CA-CB	5.23	118.94	110.41
60	AM	36	VAL	CA-C-O	-5.23	114.99	120.27
65	AV	3	ARG	N-CA-C	5.23	117.46	110.35
27	BO	118	ILE	CA-C-O	-5.23	115.31	120.85
29	BQ	97	PHE	CA-C-N	5.23	127.24	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	BQ	97	PHE	C-N-CA	5.23	127.24	120.44
38	A1	1066	C	O4'-C1'-N1	5.23	116.34	108.50
38	A1	2365	G	C3'-C2'-O2'	5.23	118.54	110.70
38	A1	2693	G	C4'-C3'-C2'	-5.23	97.37	102.60
42	Aa	72	VAL	N-CA-C	-5.23	100.71	108.45
45	AC	274	MET	N-CA-C	-5.23	100.51	109.24
61	AN	18	THR	CB-CA-C	5.23	118.12	109.70
18	BF	105	GLU	N-CA-C	-5.23	102.45	110.14
38	A1	551	A	C4'-C3'-C2'	-5.23	97.37	102.60
38	A1	1341	U	P-O5'-C5'	5.23	128.74	120.90
41	AA	214	ILE	CA-C-N	5.23	128.50	120.82
41	AA	214	ILE	C-N-CA	5.23	128.50	120.82
50	AF	183	THR	CA-CB-OG1	5.23	117.44	109.60
56	AJ	28	THR	N-CA-CB	5.23	118.24	110.29
4	AQ	92	LYS	O-C-N	5.23	127.73	122.09
6	AT	45	GLU	CA-C-O	-5.23	115.32	120.70
11	B2	1003	G	C4'-C3'-O3'	-5.23	105.16	113.00
11	B2	1023	C	O4'-C1'-C2'	-5.23	102.37	107.60
11	B2	1099	A	C4'-C3'-C2'	-5.23	97.37	102.60
38	A1	1200	A	O4'-C1'-N9	5.23	116.34	108.50
38	A1	1897	G	O4'-C1'-N9	5.23	116.04	108.20
38	A1	2571	G	C4'-C3'-C2'	-5.23	97.37	102.60
11	B2	60	A	O4'-C1'-N9	5.22	116.04	108.20
11	B2	683	A	P-O3'-C3'	-5.22	112.36	120.20
18	BF	95	TYR	N-CA-CB	5.22	120.59	111.13
38	A1	53	A	P-O5'-C5'	-5.22	113.06	120.90
38	A1	1692	A	O5'-C5'-C4'	5.22	119.34	111.50
38	A1	1995	C	P-O5'-C5'	5.22	128.74	120.90
38	A1	2276	G	C5'-C4'-C3'	5.22	123.84	116.00
38	A1	2954	C	C4'-C3'-O3'	-5.22	105.16	113.00
47	Ad	35	HIS	ND1-CE1-NE2	5.22	113.62	108.40
54	AI	67	TYR	O-C-N	-5.22	118.17	121.88
62	AO	125	VAL	CA-C-O	5.22	126.38	120.95
11	B2	201	G	C1'-O4'-C4'	5.22	115.12	109.90
17	BE	202	ILE	N-CA-CB	5.22	119.23	112.28
25	BM	117	ASP	CA-CB-CG	-5.22	107.38	112.60
38	A1	710	G	O4'-C1'-C2'	-5.22	102.38	107.60
38	A1	895	C	O4'-C1'-N1	5.22	116.33	108.50
38	A1	1670	A	O4'-C1'-N9	5.22	116.33	108.50
38	A1	1902	G	O4'-C1'-N9	5.22	116.33	108.50
38	A1	2201	C	O4'-C1'-N1	5.22	116.33	108.50
38	A1	2550	A	O5'-C5'-C4'	-5.22	103.67	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2609	G	O4'-C1'-C2'	-5.22	102.38	107.60
38	A1	2664	G	C3'-C2'-O2'	5.22	118.53	110.70
45	AC	142	GLU	CA-C-N	5.22	127.23	120.44
45	AC	142	GLU	C-N-CA	5.22	127.23	120.44
17	BE	72	LEU	N-CA-C	-5.22	100.52	109.24
38	A1	316	G	C3'-C2'-C1'	5.22	106.52	101.30
64	AR	42	HIS	CG-CD2-NE2	5.22	112.42	107.20
7	AU	115	ILE	O-C-N	5.22	127.33	121.90
11	B2	281	G	P-O3'-C3'	-5.22	112.37	120.20
38	A1	356	C	C4'-C3'-C2'	-5.22	97.38	102.60
38	A1	634	G	P-O3'-C3'	5.22	128.03	120.20
38	A1	668	G	O4'-C4'-C3'	-5.22	98.78	104.00
38	A1	1658	A	C4'-C3'-O3'	-5.22	105.17	113.00
38	A1	2481	G	C5'-C4'-C3'	5.22	123.83	116.00
40	A5	6	VAL	N-CA-C	5.22	117.15	109.63
46	AD	156	GLU	CB-CA-C	-5.22	101.98	110.85
60	AM	53	TYR	O-C-N	-5.22	117.30	123.41
61	AN	64	ALA	N-CA-CB	5.22	117.58	110.01
11	B2	128	A	O3'-P-O5'	-5.22	96.17	104.00
11	B2	356	G	P-O3'-C3'	5.22	128.03	120.20
11	B2	1278	A	C4'-C3'-O3'	-5.22	105.17	113.00
17	BE	240	ILE	N-CA-C	5.22	117.92	110.09
20	BH	104	VAL	CA-C-N	5.22	127.22	120.44
20	BH	104	VAL	C-N-CA	5.22	127.22	120.44
38	A1	233	A	C4'-C3'-C2'	-5.22	97.38	102.60
38	A1	731	C	C4'-C3'-O3'	-5.22	105.17	113.00
38	A1	1076	G	P-O3'-C3'	-5.22	112.37	120.20
38	A1	1574	A	P-O3'-C3'	5.22	128.03	120.20
38	A1	2678	U	C3'-C2'-C1'	5.22	106.52	101.30
50	AF	8	ARG	CD-NE-CZ	5.22	131.71	124.40
1	A7	11	LEU	CA-C-N	5.22	127.27	120.28
1	A7	11	LEU	C-N-CA	5.22	127.27	120.28
4	AQ	23	TRP	CE2-CD2-CE3	5.22	124.02	118.80
11	B2	1127	A	C4'-C3'-C2'	5.22	107.82	102.60
11	B2	1143	G	O4'-C1'-N9	5.22	116.32	108.50
14	BB	189	LYS	CA-C-N	5.22	131.78	122.13
14	BB	189	LYS	C-N-CA	5.22	131.78	122.13
25	BM	44	GLY	CA-C-N	5.22	125.74	120.00
25	BM	44	GLY	C-N-CA	5.22	125.74	120.00
33	BU	113	LYS	N-CA-C	-5.22	100.74	109.24
38	A1	926	C	C5'-C4'-C3'	5.22	123.03	115.20
38	A1	935	A	C1'-O4'-C4'	5.22	114.92	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1164	C	O5'-C5'-C4'	5.22	119.53	111.70
38	A1	2273	U	O5'-C5'-C4'	-5.22	103.68	111.50
39	A3	88	A	P-O3'-C3'	5.22	128.03	120.20
45	AC	128	LEU	O-C-N	5.22	128.10	122.15
60	AM	108	PHE	N-CA-C	-5.22	101.05	109.40
11	B2	252	U	P-O3'-C3'	-5.21	112.38	120.20
11	B2	602	G	O4'-C4'-C3'	-5.21	98.79	104.00
11	B2	1037	U	O4'-C4'-C3'	-5.21	100.89	106.10
29	BQ	89	PRO	O-C-N	5.21	129.22	122.91
32	BT	98	MET	N-CA-C	-5.21	106.60	113.17
38	A1	217	A	O4'-C4'-C3'	-5.21	100.89	106.10
38	A1	1493	C	C1'-O4'-C4'	-5.21	104.69	109.90
38	A1	1519	G	O4'-C1'-N9	5.21	116.32	108.50
45	AC	291	GLU	CA-C-N	5.21	131.50	121.54
45	AC	291	GLU	C-N-CA	5.21	131.50	121.54
9	AX	117	ILE	CB-CA-C	-5.21	105.14	111.87
38	A1	1153	U	C4'-C3'-O3'	-5.21	105.18	113.00
44	Ab	80	GLU	CA-C-N	5.21	128.87	121.42
44	Ab	80	GLU	C-N-CA	5.21	128.87	121.42
40	AK	78	ALA	O-C-N	5.21	127.65	122.12
60	AM	83	SER	N-CA-CB	5.21	119.30	110.49
7	AU	11	GLN	CA-C-N	5.21	127.52	120.38
7	AU	11	GLN	C-N-CA	5.21	127.52	120.38
11	B2	177	A	P-O5'-C5'	-5.21	113.08	120.90
11	B2	972	C	C1'-O4'-C4'	5.21	115.11	109.90
14	BB	196	GLU	CB-CG-CD	-5.21	103.74	112.60
22	BJ	42	LYS	N-CA-C	-5.21	99.92	108.41
29	BQ	11	LYS	O-C-N	5.21	128.78	122.68
31	BS	30	HIS	N-CA-CB	5.21	118.19	110.53
34	BV	59	TYR	CB-CG-CD1	5.21	128.62	120.80
38	A1	109	G	C4'-C3'-C2'	-5.21	97.39	102.60
38	A1	256	G	C4'-C3'-C2'	-5.21	97.39	102.60
38	A1	554	C	C4'-C3'-C2'	-5.21	97.39	102.60
39	A3	34	C	O4'-C1'-N1	5.21	116.32	108.50
42	Aa	75	LYS	CA-C-N	-5.21	116.15	123.13
42	Aa	75	LYS	C-N-CA	-5.21	116.15	123.13
58	Ak	167	GLU	N-CA-C	-5.21	101.67	109.95
5	AS	116	HIS	N-CA-CB	5.21	119.56	110.81
11	B2	940	U	O4'-C1'-C2'	-5.21	102.39	107.60
11	B2	1069	G	O4'-C1'-C2'	-5.21	102.39	107.60
17	BE	145	GLY	CA-C-N	-5.21	115.27	122.30
17	BE	145	GLY	C-N-CA	-5.21	115.27	122.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	BQ	144	LYS	CA-C-N	5.21	130.26	121.14
29	BQ	144	LYS	C-N-CA	5.21	130.26	121.14
32	BT	115	HIS	CE1-NE2-CD2	-5.21	103.79	109.00
38	A1	730	C	C4'-C3'-C2'	-5.21	97.39	102.60
38	A1	2131	C	P-O3'-C3'	-5.21	112.39	120.20
38	A1	2673	C	O4'-C4'-C3'	-5.21	98.79	104.00
46	AD	94	PRO	CA-C-O	-5.21	113.01	120.56
50	AF	86	PHE	N-CA-C	-5.21	100.91	109.40
40	AK	58	GLN	CG-CD-NE2	-5.21	108.58	116.40
11	B2	1119	U	C2'-C3'-O3'	5.21	117.31	109.50
38	A1	13	U	P-O3'-C3'	5.21	128.01	120.20
38	A1	621	G	P-O3'-C3'	5.21	128.01	120.20
38	A1	801	A	C1'-C2'-O2'	5.21	116.21	108.40
38	A1	883	G	O5'-C5'-C4'	5.21	119.51	111.70
38	A1	928	A	C3'-C2'-C1'	5.21	106.51	101.30
38	A1	2116	G	O4'-C1'-C2'	5.21	111.01	105.80
38	A1	2328	G	O4'-C1'-N9	5.21	116.31	108.50
45	AC	329	PRO	N-CA-C	-5.21	103.01	111.19
11	B2	74	U	O5'-C5'-C4'	5.21	119.51	111.70
11	B2	251	G	P-O3'-C3'	-5.21	112.39	120.20
11	B2	716	G	P-O3'-C3'	-5.21	112.39	120.20
16	BD	154	TYR	CB-CG-CD1	-5.21	112.99	120.80
22	BJ	120	VAL	N-CA-C	-5.21	100.15	107.75
26	BN	118	ASP	CA-CB-CG	-5.21	107.39	112.60
28	BP	41	HIS	ND1-CE1-NE2	5.21	113.61	108.40
58	AK	19	ILE	N-CA-C	5.21	115.93	110.62
61	AN	28	GLY	CA-C-O	-5.21	116.15	121.62
62	AO	101	GLU	N-CA-CB	5.21	118.75	110.16
11	B2	153	G	P-O5'-C5'	-5.21	113.09	120.90
11	B2	669	A	C3'-C2'-C1'	5.21	106.50	101.30
11	B2	875	G	O4'-C4'-C3'	-5.21	98.80	104.00
27	BO	55	THR	N-CA-CB	5.21	117.80	110.36
36	BX	18	THR	CA-CB-OG1	5.21	117.41	109.60
38	A1	931	C	P-O3'-C3'	5.21	128.01	120.20
38	A1	1606	C	O4'-C1'-N1	5.21	116.31	108.50
5	AS	102	ALA	CA-C-N	5.20	127.81	120.42
5	AS	102	ALA	C-N-CA	5.20	127.81	120.42
13	BA	153	ASN	OD1-CG-ND2	-5.20	117.40	122.60
14	BB	18	HIS	CE1-NE2-CD2	-5.20	103.80	109.00
36	BX	64	ALA	O-C-N	5.20	129.15	123.22
38	A1	105	C	O4'-C1'-N1	5.20	116.31	108.50
38	A1	2032	G	O4'-C1'-N9	5.20	116.31	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	AH	131	LEU	CA-C-N	5.20	131.40	123.23
52	AH	131	LEU	C-N-CA	5.20	131.40	123.23
11	B2	1066	C	P-O3'-C3'	-5.20	112.40	120.20
11	B2	1086	C	P-O5'-C5'	5.20	128.70	120.90
38	A1	747	G	P-O5'-C5'	5.20	128.70	120.90
38	A1	1827	A	P-O3'-C3'	-5.20	112.40	120.20
38	A1	2360	G	O4'-C1'-N9	5.20	116.30	108.50
41	AA	6	GLN	OE1-CD-NE2	-5.20	117.40	122.60
9	AX	38	PHE	CA-C-N	5.20	127.11	120.56
9	AX	38	PHE	C-N-CA	5.20	127.11	120.56
11	B2	31	U	C5'-C4'-C3'	5.20	123.80	116.00
20	BH	13	HIS	CE1-NE2-CD2	-5.20	103.80	109.00
21	BI	6	PRO	CA-C-N	5.20	127.67	120.29
21	BI	6	PRO	C-N-CA	5.20	127.67	120.29
38	A1	2966	C	C3'-C2'-C1'	5.20	106.50	101.30
45	AC	359	VAL	CA-CB-CG1	-5.20	101.56	110.40
58	Ak	167	GLU	CA-C-N	5.20	129.10	120.94
58	Ak	167	GLU	C-N-CA	5.20	129.10	120.94
61	AN	116	PHE	CA-C-N	5.20	131.60	121.41
61	AN	116	PHE	C-N-CA	5.20	131.60	121.41
11	B2	175	G	O5'-C5'-C4'	-5.20	103.70	111.50
38	A1	954	A	O4'-C1'-C2'	-5.20	102.40	107.60
38	A1	2823	G	C1'-C2'-O2'	5.20	116.20	108.40
45	AC	179	LYS	CA-C-N	5.20	126.34	119.84
45	AC	179	LYS	C-N-CA	5.20	126.34	119.84
45	AC	204	GLY	CA-C-N	5.20	130.75	122.59
45	AC	204	GLY	C-N-CA	5.20	130.75	122.59
48	AE	178	GLU	N-CA-C	-5.20	105.06	111.40
11	B2	51	A	O4'-C1'-N9	5.20	116.30	108.50
11	B2	339	U	O3'-P-O5'	-5.20	96.20	104.00
11	B2	693	C	O4'-C4'-C3'	-5.20	98.80	104.00
22	BJ	41	ASP	N-CA-C	-5.20	100.93	109.40
38	A1	592	C	O4'-C1'-N1	5.20	116.30	108.50
38	A1	1172	U	C2'-C3'-O3'	5.20	117.30	109.50
38	A1	1972	C	C4'-C3'-C2'	-5.20	97.40	102.60
38	A1	2163	G	O4'-C1'-N9	5.20	116.30	108.50
38	A1	2263	G	C3'-C2'-O2'	5.20	118.50	110.70
67	AZ	63	PHE	CB-CA-C	5.20	118.11	109.53
67	AZ	86	VAL	CB-CA-C	5.20	119.81	111.29
7	AU	55	MET	N-CA-C	-5.20	107.61	114.31
7	AU	70	ASP	CB-CA-C	-5.20	100.20	109.71
17	BE	168	VAL	CA-C-O	-5.20	112.99	119.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	852	A	C5'-C4'-C3'	-5.20	108.21	116.00
38	A1	2883	C	C1'-O4'-C4'	5.20	115.10	109.90
43	AB	214	PRO	CA-C-N	5.20	127.19	120.44
43	AB	214	PRO	C-N-CA	5.20	127.19	120.44
57	Aj	23	GLU	CA-CB-CG	5.20	124.49	114.10
64	AR	57	ARG	O-C-N	5.20	128.66	122.27
7	AU	66	VAL	O-C-N	-5.19	116.82	122.64
11	B2	1318	U	C4'-C3'-C2'	-5.19	97.41	102.60
16	BD	142	TYR	CB-CA-C	5.19	118.34	109.72
38	A1	846	C	O4'-C1'-N1	5.19	116.29	108.50
38	A1	1714	G	P-O5'-C5'	-5.19	113.11	120.90
38	A1	1779	C	O4'-C1'-N1	5.19	116.29	108.50
38	A1	2396	G	P-O5'-C5'	5.19	128.69	120.90
52	AH	67	GLU	N-CA-CB	5.19	118.44	110.70
55	Ai	20	LYS	N-CA-C	5.19	116.94	111.28
57	Aj	25	VAL	CB-CA-C	-5.19	103.59	111.33
11	B2	804	U	O3'-P-O5'	5.19	111.79	104.00
11	B2	1260	G	C3'-C2'-C1'	5.19	106.49	101.30
11	B2	1271	G	C1'-C2'-O2'	5.19	116.19	108.40
38	A1	494	C	O3'-P-O5'	-5.19	96.21	104.00
38	A1	1726	A	N1-C6-N6	5.19	134.18	118.60
38	A1	3027	C	O4'-C1'-N1	5.19	116.29	108.50
45	AC	244	HIS	ND1-CE1-NE2	5.19	113.59	108.40
47	Ad	49	GLY	O-C-N	-5.19	116.50	123.67
55	Ai	32	MET	N-CA-C	5.19	116.94	111.28
62	AO	191	ARG	CA-C-N	5.19	131.32	121.97
62	AO	191	ARG	C-N-CA	5.19	131.32	121.97
66	AY	65	ALA	CA-C-N	5.19	127.19	120.44
66	AY	65	ALA	C-N-CA	5.19	127.19	120.44
4	AQ	28	ARG	CA-C-N	5.19	127.57	120.46
4	AQ	28	ARG	C-N-CA	5.19	127.57	120.46
4	AQ	141	PHE	CA-CB-CG	-5.19	108.61	113.80
11	B2	489	C	C4'-C3'-C2'	5.19	107.79	102.60
11	B2	884	G	O3'-P-O5'	-5.19	96.21	104.00
13	BA	161	SER	CA-C-O	-5.19	115.35	120.70
24	BL	99	GLU	N-CA-C	-5.19	100.94	109.40
38	A1	1033	C	C5'-C4'-C3'	-5.19	108.22	116.00
38	A1	2315	G	C3'-C2'-O2'	5.19	118.48	110.70
43	AB	37	GLN	N-CA-C	-5.19	103.54	110.55
59	AL	97	GLU	N-CA-CB	5.19	117.67	109.83
62	AO	120	VAL	CA-C-N	5.19	127.19	120.44
62	AO	120	VAL	C-N-CA	5.19	127.19	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
64	AR	59	HIS	CA-CB-CG	5.19	118.99	113.80
66	AY	129	SER	CB-CA-C	-5.19	109.04	115.89
10	B1	27	A	C5'-C4'-C3'	-5.19	108.22	116.00
11	B2	1463	A	C5'-C4'-C3'	5.19	123.78	116.00
16	BD	174	ALA	O-C-N	5.19	127.96	121.84
18	BF	97	GLY	N-CA-C	-5.19	101.80	111.14
27	BO	111	ARG	CA-CB-CG	-5.19	103.72	114.10
46	AD	96	LYS	CA-C-N	5.19	129.55	121.35
46	AD	96	LYS	C-N-CA	5.19	129.55	121.35
55	Ai	40	VAL	N-CA-CB	5.19	116.62	110.55
5	AS	35	VAL	N-CA-CB	5.19	117.21	110.57
11	B2	584	C	O4'-C4'-C3'	-5.19	98.81	104.00
11	B2	999	G	O4'-C1'-C2'	-5.19	102.41	107.60
11	B2	1083	G	O4'-C4'-C3'	-5.19	98.81	104.00
15	BC	45	ILE	N-CA-C	-5.19	99.03	107.28
18	BF	6	LYS	CA-CB-CG	5.19	124.47	114.10
27	BO	25	LEU	N-CA-C	5.19	117.84	111.82
38	A1	1132	U	O4'-C1'-C2'	-5.19	102.41	107.60
38	A1	1698	G	C4'-C3'-O3'	-5.19	105.22	113.00
38	A1	2230	G	O3'-P-O5'	-5.19	96.22	104.00
44	Ab	89	GLU	CA-C-N	5.19	127.75	120.28
44	Ab	89	GLU	C-N-CA	5.19	127.75	120.28
59	AL	21	CYS	CA-C-O	5.19	127.21	121.56
9	AX	356	ILE	N-CA-C	-5.19	101.01	108.53
11	B2	363	C	C1'-C2'-O2'	5.19	119.58	111.80
11	B2	616	G	O4'-C1'-C2'	5.19	112.79	107.60
11	B2	797	U	O3'-P-O5'	-5.19	96.22	104.00
11	B2	797	U	P-O5'-C5'	-5.19	113.12	120.90
18	BF	106	VAL	CA-C-O	5.19	126.84	121.29
38	A1	2265	C	C5'-C4'-C3'	-5.19	108.22	116.00
38	A1	2571	G	O4'-C4'-C3'	-5.19	98.81	104.00
45	AC	191	SER	CA-C-N	5.19	127.78	120.42
45	AC	191	SER	C-N-CA	5.19	127.78	120.42
45	AC	305	ILE	CB-CA-C	-5.19	103.60	111.69
55	Ai	27	ALA	O-C-N	-5.19	116.43	122.03
7	AU	98	SER	N-CA-C	5.18	117.67	111.71
11	B2	206	C	O4'-C1'-C2'	-5.18	102.42	107.60
11	B2	694	U	C4'-C3'-O3'	-5.18	105.22	113.00
11	B2	1458	A	C4'-C3'-O3'	5.18	117.18	109.40
32	BT	96	PRO	N-CA-C	-5.18	107.27	114.27
38	A1	1657	G	P-O5'-C5'	-5.18	113.12	120.90
38	A1	2376	U	O4'-C1'-C2'	-5.18	102.42	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	AB	200	VAL	N-CA-C	5.18	115.96	110.72
58	AK	137	VAL	CB-CA-C	-5.18	105.14	112.14
66	AY	12	ARG	N-CA-CB	5.18	117.99	110.47
4	AQ	61	TYR	CA-C-O	5.18	126.26	120.82
11	B2	223	G	C5'-C4'-C3'	-5.18	108.23	116.00
11	B2	663	G	P-O3'-C3'	-5.18	112.43	120.20
11	B2	734	G	O4'-C1'-N9	5.18	116.27	108.50
11	B2	1071	C	C5'-C4'-C3'	5.18	123.77	116.00
11	B2	1171	G	C3'-C2'-C1'	5.18	106.48	101.30
38	A1	816	C	O4'-C1'-N1	5.18	116.27	108.50
38	A1	1241	C	C1'-O4'-C4'	5.18	115.08	109.90
38	A1	1774	A	C3'-C2'-O2'	-5.18	106.83	114.60
38	A1	2318	G	C5'-C4'-C3'	5.18	123.77	116.00
39	A3	120	C	C4'-C3'-C2'	-5.18	97.42	102.60
51	Ag	27	GLY	CA-C-N	5.18	129.99	121.39
51	Ag	27	GLY	C-N-CA	5.18	129.99	121.39
58	AK	205	VAL	O-C-N	5.18	127.29	121.90
11	B2	1418	G	O5'-C5'-C4'	-5.18	103.73	111.50
37	BY	34	HIS	N-CA-C	-5.18	106.64	113.12
38	A1	736	U	O4'-C1'-C2'	-5.18	100.62	105.80
38	A1	784	C	O5'-C5'-C4'	-5.18	103.73	111.50
38	A1	1727	G	C4'-C3'-C2'	-5.18	97.42	102.60
3	Af	28	ILE	O-C-N	-5.18	116.50	121.83
10	B1	48	U	C2'-C3'-O3'	5.18	121.47	113.70
11	B2	277	G	C1'-C2'-O2'	-5.18	100.63	108.40
11	B2	1154	G	O4'-C1'-N9	5.18	116.27	108.50
17	BE	6	PRO	O-C-N	-5.18	116.31	122.89
22	BJ	70	GLY	CA-C-O	-5.18	111.56	120.57
28	BP	30	ILE	CA-C-N	5.18	128.31	120.75
28	BP	30	ILE	C-N-CA	5.18	128.31	120.75
31	BS	44	LYS	CA-C-O	5.18	126.32	120.00
38	A1	1499	C	O4'-C1'-N1	5.18	116.27	108.50
38	A1	2248	G	C4'-C3'-O3'	-5.18	105.23	113.00
50	AF	65	VAL	CA-C-N	5.18	127.17	120.44
50	AF	65	VAL	C-N-CA	5.18	127.17	120.44
14	BB	116	ILE	N-CA-C	-5.18	100.86	108.11
38	A1	278	C	P-O5'-C5'	5.18	128.67	120.90
38	A1	687	C	O4'-C1'-N1	5.18	116.27	108.50
38	A1	729	A	C5'-C4'-C3'	-5.18	108.23	116.00
38	A1	1388	U	P-O5'-C5'	5.18	128.67	120.90
66	AY	42	SER	CB-CA-C	-5.18	102.72	110.90
9	AX	150	GLY	CA-C-O	-5.18	115.10	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	193	G	O4'-C1'-N9	5.18	116.27	108.50
11	B2	415	C	C5'-C4'-C3'	5.18	123.76	116.00
17	BE	13	LEU	CA-C-N	5.18	131.46	122.56
17	BE	13	LEU	C-N-CA	5.18	131.46	122.56
23	BK	13	ALA	CB-CA-C	5.18	118.28	109.84
33	BU	65	ASP	CA-C-N	5.18	130.00	121.87
33	BU	65	ASP	C-N-CA	5.18	130.00	121.87
36	BX	54	ILE	N-CA-CB	5.18	118.55	111.41
38	A1	389	C	O4'-C1'-C2'	-5.18	102.42	107.60
38	A1	484	C	C4'-C3'-C2'	-5.18	97.42	102.60
38	A1	773	U	O4'-C4'-C3'	-5.18	98.82	104.00
38	A1	1196	A	O3'-P-O5'	-5.18	96.23	104.00
38	A1	1529	A	P-O5'-C5'	-5.18	113.14	120.90
50	AF	86	PHE	CA-C-N	5.18	130.07	122.77
50	AF	86	PHE	C-N-CA	5.18	130.07	122.77
40	AK	11	VAL	CA-CB-CG2	5.18	119.20	110.40
2	A8	32	HIS	CA-CB-CG	-5.17	108.63	113.80
3	Af	12	ARG	CB-CG-CD	5.17	123.20	111.30
7	AU	19	PRO	N-CA-C	5.17	119.34	111.11
29	BQ	113	PRO	CA-C-N	5.17	131.42	121.54
29	BQ	113	PRO	C-N-CA	5.17	131.42	121.54
38	A1	1454	G	O4'-C1'-C2'	5.17	110.97	105.80
42	Aa	44	LYS	N-CA-CB	5.17	119.23	110.49
58	Ak	84	GLU	N-CA-CB	5.17	118.82	110.85
10	B1	51	G	P-O5'-C5'	5.17	128.66	120.90
11	B2	106	A	O4'-C1'-C2'	-5.17	102.43	107.60
38	A1	1370	G	P-O3'-C3'	-5.17	112.44	120.20
38	A1	2092	G	O4'-C1'-N9	5.17	116.26	108.50
38	A1	2151	C	O4'-C1'-N1	5.17	116.26	108.50
40	AK	43	VAL	N-CA-CB	5.17	119.65	111.99
59	AL	77	ASN	N-CA-C	-5.17	102.86	110.52
9	AX	373	TYR	CB-CG-CD1	5.17	128.56	120.80
13	BA	150	GLU	O-C-N	-5.17	116.64	122.12
16	BD	59	LEU	O-C-N	-5.17	116.17	122.22
17	BE	128	ARG	CA-C-O	5.17	126.31	120.00
27	BO	115	TYR	O-C-N	5.17	127.60	122.12
38	A1	82	C	C4'-C3'-C2'	-5.17	97.43	102.60
38	A1	1535	U	O5'-C5'-C4'	-5.17	103.74	111.50
38	A1	3035	C	C5'-C4'-C3'	5.17	123.76	116.00
41	AA	116	LYS	CA-C-O	-5.17	114.94	120.42
55	Ai	36	HIS	CA-C-N	5.17	128.05	120.71
55	Ai	36	HIS	C-N-CA	5.17	128.05	120.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	AJ	130	TRP	CA-C-N	5.17	127.08	120.56
56	AJ	130	TRP	C-N-CA	5.17	127.08	120.56
11	B2	985	C	C4'-C3'-O3'	-5.17	105.25	113.00
11	B2	1131	G	O4'-C1'-N9	5.17	116.25	108.50
11	B2	1351	U	C4'-C3'-C2'	-5.17	97.43	102.60
26	BN	13	GLY	CA-C-N	5.17	127.21	120.28
26	BN	13	GLY	C-N-CA	5.17	127.21	120.28
38	A1	1677	A	C4'-C3'-O3'	5.17	117.16	109.40
9	AX	56	PHE	CB-CG-CD2	-5.17	111.91	120.70
11	B2	195	C	O4'-C1'-N1	5.17	116.25	108.50
11	B2	268	C	P-O3'-C3'	-5.17	112.45	120.20
11	B2	886	G	P-O3'-C3'	-5.17	112.45	120.20
21	BI	95	PRO	N-CA-C	-5.17	107.29	114.27
38	A1	611	G	C5'-C4'-C3'	-5.17	108.25	116.00
38	A1	1095	A	C5'-C4'-C3'	-5.17	108.25	116.00
38	A1	1454	G	O4'-C1'-N9	5.17	115.95	108.20
41	AA	114	MET	CA-C-N	5.17	124.79	119.05
41	AA	114	MET	C-N-CA	5.17	124.79	119.05
41	AA	205	LYS	O-C-N	-5.17	117.83	123.26
60	AM	84	LYS	N-CA-C	-5.17	106.08	114.09
62	AO	191	ARG	NE-CZ-NH1	-5.17	116.33	121.50
8	AW	43	VAL	CA-C-N	5.17	127.75	120.42
8	AW	43	VAL	C-N-CA	5.17	127.75	120.42
11	B2	1268	C	P-O3'-C3'	-5.17	112.45	120.20
11	B2	1433	C	O4'-C4'-C3'	-5.17	98.83	104.00
23	BK	8	GLY	O-C-N	-5.17	118.82	123.37
30	BR	99	HIS	CE1-NE2-CD2	-5.17	103.83	109.00
38	A1	1177	C	C1'-O4'-C4'	5.17	115.07	109.90
38	A1	1615	G	P-O3'-C3'	5.17	127.95	120.20
45	AC	44	TYR	CA-C-N	5.17	128.68	121.24
45	AC	44	TYR	C-N-CA	5.17	128.68	121.24
52	AH	126	VAL	CB-CA-C	-5.17	105.09	112.22
10	B1	7	G	O3'-P-O5'	-5.17	96.25	104.00
11	B2	518	U	O4'-C1'-C2'	-5.17	102.44	107.60
20	BH	166	ALA	O-C-N	5.17	127.39	122.07
27	BO	58	GLN	CA-C-N	5.17	127.54	120.46
27	BO	58	GLN	C-N-CA	5.17	127.54	120.46
38	A1	476	C	O4'-C1'-N1	5.17	116.25	108.50
45	AC	30	TRP	CB-CG-CD2	5.17	134.03	126.80
45	AC	315	GLY	CA-C-N	5.17	127.42	120.50
45	AC	315	GLY	C-N-CA	5.17	127.42	120.50
50	AF	145	GLU	CA-C-N	5.17	127.15	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	AF	145	GLU	C-N-CA	5.17	127.15	120.44
12	AG	62	ILE	CA-C-O	5.17	126.32	120.95
4	AQ	23	TRP	CG-CD2-CE3	-5.16	128.74	133.90
9	AX	274	LEU	CA-C-N	5.16	127.97	120.79
9	AX	274	LEU	C-N-CA	5.16	127.97	120.79
11	B2	1332	C	O4'-C1'-C2'	-5.16	102.44	107.60
22	BJ	87	ARG	CA-C-N	5.16	127.20	120.28
22	BJ	87	ARG	C-N-CA	5.16	127.20	120.28
38	A1	638	A	C5'-C4'-O4'	5.16	116.84	109.10
38	A1	1488	C	O4'-C1'-N1	5.16	116.25	108.50
38	A1	2641	C	O4'-C4'-C3'	-5.16	98.84	104.00
38	A1	2871	A	C3'-C2'-C1'	5.16	106.46	101.30
38	A1	3005	C	O4'-C1'-N1	5.16	116.25	108.50
41	AA	194	ARG	CA-C-N	5.16	132.92	120.99
41	AA	194	ARG	C-N-CA	5.16	132.92	120.99
58	AK	157	GLN	N-CA-C	-5.16	106.98	113.28
15	BC	26	ARG	CA-C-O	5.16	125.27	119.18
15	BC	69	LEU	CA-C-N	5.16	127.71	120.28
15	BC	69	LEU	C-N-CA	5.16	127.71	120.28
20	BH	53	LYS	N-CA-C	5.16	116.72	111.14
38	A1	336	C	O4'-C1'-N1	5.16	116.24	108.50
46	AD	7	ASP	N-CA-CB	5.16	117.45	110.38
11	B2	711	U	O4'-C1'-C2'	-5.16	102.44	107.60
11	B2	1223	C	C4'-C3'-C2'	-5.16	97.44	102.60
20	BH	195	ASP	CA-C-N	5.16	125.24	119.87
20	BH	195	ASP	C-N-CA	5.16	125.24	119.87
21	BI	16	ASN	CA-CB-CG	-5.16	107.44	112.60
26	BN	41	SER	N-CA-C	-5.16	105.57	111.14
38	A1	1178	G	O4'-C1'-C2'	5.16	112.76	107.60
39	A3	113	C	P-O5'-C5'	5.16	128.64	120.90
45	AC	203	LEU	O-C-N	5.16	127.59	122.12
47	Ad	25	HIS	CE1-NE2-CD2	-5.16	103.84	109.00
62	AO	12	ARG	CA-C-N	5.16	129.34	120.72
62	AO	12	ARG	C-N-CA	5.16	129.34	120.72
1	A7	26	LYS	CA-C-N	5.16	127.67	120.65
1	A7	26	LYS	C-N-CA	5.16	127.67	120.65
2	A8	25	LYS	CA-C-N	5.16	129.50	122.90
2	A8	25	LYS	C-N-CA	5.16	129.50	122.90
5	AS	16	ARG	NE-CZ-NH1	-5.16	116.34	121.50
11	B2	1442	G	O4'-C1'-N9	5.16	116.24	108.50
16	BD	169	MET	CA-C-O	-5.16	114.95	120.42
18	BF	145	VAL	O-C-N	-5.16	117.33	123.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BK	79	ARG	NE-CZ-NH2	5.16	123.84	119.20
28	BP	46	VAL	CA-C-N	5.16	127.39	120.58
28	BP	46	VAL	C-N-CA	5.16	127.39	120.58
38	A1	1694	G	O4'-C1'-N9	5.16	116.24	108.50
38	A1	2157	U	C5'-C4'-C3'	5.16	123.74	116.00
38	A1	2690	U	C4'-C3'-O3'	-5.16	105.26	113.00
41	AA	204	VAL	N-CA-C	-5.16	100.69	108.12
42	Aa	32	VAL	CA-C-N	5.16	127.61	120.29
42	Aa	32	VAL	C-N-CA	5.16	127.61	120.29
45	AC	349	PRO	CA-C-N	5.16	125.06	119.85
45	AC	349	PRO	C-N-CA	5.16	125.06	119.85
55	Ai	43	ARG	N-CA-C	-5.16	101.47	109.72
59	AL	122	LEU	CA-C-N	-5.16	116.10	123.11
59	AL	122	LEU	C-N-CA	-5.16	116.10	123.11
9	AX	325	ILE	CA-C-N	5.16	127.71	120.28
9	AX	325	ILE	C-N-CA	5.16	127.71	120.28
13	BA	51	THR	O-C-N	5.16	129.68	122.36
26	BN	144	LYS	N-CA-CB	5.16	116.27	110.03
6	AT	39	ILE	CA-C-N	5.16	127.14	120.44
6	AT	39	ILE	C-N-CA	5.16	127.14	120.44
11	B2	348	C	P-O5'-C5'	5.16	128.63	120.90
14	BB	79	PRO	CA-C-N	5.16	127.52	120.46
14	BB	79	PRO	C-N-CA	5.16	127.52	120.46
15	BC	80	ILE	CB-CA-C	-5.16	102.97	110.81
16	BD	156	ARG	N-CA-CB	5.16	119.92	112.13
20	BH	62	HIS	CA-CB-CG	-5.16	108.64	113.80
30	BR	5	ILE	N-CA-C	-5.16	108.10	113.10
30	BR	67	ARG	O-C-N	-5.16	116.54	123.14
33	BU	108	ALA	N-CA-C	-5.16	107.66	114.31
38	A1	949	C	C1'-C2'-O2'	5.16	116.13	108.40
38	A1	1249	G	O3'-P-O5'	-5.16	96.27	104.00
38	A1	2251	G	C4'-C3'-O3'	-5.16	105.27	113.00
38	A1	2683	G	C5'-C4'-C3'	5.16	123.73	116.00
58	Ak	154	VAL	CB-CA-C	-5.16	104.45	111.15
11	B2	241	U	O4'-C1'-N1	5.15	116.23	108.50
17	BE	29	ALA	CA-C-N	5.15	128.29	120.77
17	BE	29	ALA	C-N-CA	5.15	128.29	120.77
38	A1	2424	A	C2'-C3'-O3'	-5.15	105.97	113.70
65	AV	2	ALA	CA-C-N	5.15	128.53	120.75
65	AV	2	ALA	C-N-CA	5.15	128.53	120.75
8	AW	56	THR	O-C-N	-5.15	116.76	122.07
11	B2	222	G	C1'-O4'-C4'	5.15	115.05	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	257	U	C5'-C4'-C3'	5.15	123.73	116.00
11	B2	678	G	C1'-O4'-C4'	-5.15	104.75	109.90
11	B2	811	G	C4'-C3'-C2'	-5.15	97.45	102.60
29	BQ	134	LYS	N-CA-C	-5.15	105.56	111.07
38	A1	934	G	O4'-C1'-N9	5.15	116.23	108.50
38	A1	1295	G	C4'-C3'-O3'	5.15	117.13	109.40
54	AI	10	ILE	O-C-N	5.15	128.59	122.66
56	AJ	43	VAL	N-CA-C	-5.15	100.89	108.11
58	Ak	113	LYS	O-C-N	-5.15	117.62	121.23
11	B2	914	U	O4'-C1'-N1	5.15	116.23	108.50
28	BP	21	CYS	CA-C-N	5.15	128.80	121.02
28	BP	21	CYS	C-N-CA	5.15	128.80	121.02
38	A1	2223	G	P-O5'-C5'	5.15	128.63	120.90
38	A1	2615	U	O4'-C1'-C2'	5.15	112.75	107.60
41	AA	183	ALA	CA-C-N	5.15	127.52	120.46
41	AA	183	ALA	C-N-CA	5.15	127.52	120.46
54	AI	33	ALA	N-CA-C	-5.15	107.16	112.93
54	AI	127	LYS	N-CA-CB	5.15	119.19	110.49
11	B2	589	U	O4'-C1'-N1	5.15	116.22	108.50
24	BL	97	GLU	N-CA-C	-5.15	101.48	109.72
38	A1	540	A	C3'-C2'-O2'	-5.15	106.88	114.60
38	A1	921	C	O4'-C1'-N1	5.15	116.22	108.50
38	A1	1708	U	P-O5'-C5'	-5.15	113.18	120.90
38	A1	2967	C	C5'-C4'-C3'	5.15	123.72	116.00
54	AI	69	LYS	N-CA-C	-5.15	107.38	113.97
55	Ai	38	CYS	N-CA-C	-5.15	97.61	108.73
60	AM	103	LYS	CA-C-N	5.15	127.44	120.44
60	AM	103	LYS	C-N-CA	5.15	127.44	120.44
11	B2	795	G	C1'-O4'-C4'	-5.15	104.75	109.90
11	B2	823	A	C4'-C3'-O3'	-5.15	105.28	113.00
13	BA	28	GLY	N-CA-C	-5.15	108.52	115.21
15	BC	38	THR	N-CA-C	-5.15	100.12	108.82
38	A1	1433	C	C3'-C2'-O2'	5.15	118.42	110.70
38	A1	1615	G	O4'-C1'-N9	5.15	115.92	108.20
38	A1	2231	G	C3'-C2'-C1'	5.15	106.45	101.30
38	A1	2719	G	P-O5'-C5'	-5.15	113.18	120.90
63	AP	60	GLU	N-CA-CB	5.15	118.42	110.60
11	B2	804	U	O4'-C1'-C2'	-5.15	102.45	107.60
11	B2	901	G	O4'-C1'-N9	5.15	116.22	108.50
38	A1	177	G	O4'-C1'-N9	5.15	116.22	108.50
38	A1	806	C	C5'-C4'-C3'	5.15	123.72	116.00
38	A1	1352	U	O4'-C1'-N1	5.15	115.92	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	AX	279	MET	CG-SD-CE	-5.14	89.58	100.90
23	BK	129	LYS	N-CA-C	-5.14	100.92	108.79
27	BO	120	HIS	CA-C-O	5.14	126.00	120.55
34	BV	25	HIS	CB-CG-ND1	5.14	130.42	122.70
38	A1	2131	C	P-O5'-C5'	5.14	128.62	120.90
38	A1	2999	G	P-O3'-C3'	5.14	127.92	120.20
39	A3	28	C	C4'-C3'-O3'	-5.14	105.28	113.00
54	AI	2	ARG	N-CA-C	-5.14	100.07	108.76
11	B2	503	G	C3'-C2'-C1'	-5.14	96.16	101.30
11	B2	931	C	C5'-C4'-C3'	-5.14	108.29	116.00
19	BG	18	GLN	CA-C-O	5.14	126.25	120.70
26	BN	17	LYS	N-CA-C	-5.14	105.75	111.36
27	BO	116	ARG	CA-CB-CG	5.14	124.38	114.10
34	BV	24	TYR	CA-CB-CG	-5.14	104.64	113.90
38	A1	1363	C	O4'-C1'-C2'	-5.14	102.46	107.60
38	A1	2252	C	C4'-C3'-C2'	-5.14	97.46	102.60
38	A1	2979	C	P-O5'-C5'	5.14	128.62	120.90
67	AZ	64	GLU	CA-C-O	-5.14	113.66	119.78
26	BN	70	ARG	CA-C-N	5.14	129.70	122.09
26	BN	70	ARG	C-N-CA	5.14	129.70	122.09
32	BT	32	GLN	CA-C-N	5.14	127.12	120.44
32	BT	32	GLN	C-N-CA	5.14	127.12	120.44
33	BU	8	PRO	O-C-N	5.14	129.12	122.85
11	B2	1112	G	P-O3'-C3'	-5.14	112.49	120.20
11	B2	1115	G	O4'-C1'-N9	5.14	116.21	108.50
11	B2	1310	C	C1'-C2'-O2'	5.14	116.11	108.40
18	BF	17	GLU	CA-C-N	5.14	125.14	119.90
18	BF	17	GLU	C-N-CA	5.14	125.14	119.90
38	A1	944	G	O5'-C5'-C4'	-5.14	103.79	111.50
38	A1	1074	G	C4'-C3'-C2'	-5.14	97.46	102.60
38	A1	1459	A	C4'-C3'-O3'	-5.14	105.29	113.00
46	AD	147	ASP	CA-C-N	5.14	127.68	120.28
46	AD	147	ASP	C-N-CA	5.14	127.68	120.28
58	Ak	8	LYS	N-CA-CB	5.14	117.57	110.17
16	BD	27	ARG	CD-NE-CZ	-5.14	117.21	124.40
18	BF	95	TYR	N-CA-C	-5.14	99.97	108.75
38	A1	2369	G	C4'-C3'-O3'	-5.14	105.29	113.00
13	BA	190	VAL	O-C-N	5.14	127.95	122.45
14	BB	17	VAL	CA-C-O	-5.14	114.70	120.25
26	BN	129	VAL	N-CA-CB	5.14	118.81	111.82
30	BR	63	TYR	CB-CG-CD2	-5.14	113.09	120.80
38	A1	226	C	C3'-C2'-O2'	5.14	118.41	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	343	C	C4'-C3'-C2'	-5.14	97.46	102.60
38	A1	479	G	O4'-C1'-N9	5.14	116.20	108.50
38	A1	2188	C	C5'-C4'-O4'	5.14	117.50	109.80
38	A1	2849	C	O4'-C4'-C3'	-5.14	98.86	104.00
44	Ab	20	LYS	N-CA-C	-5.14	104.14	110.31
45	AC	242	ARG	CA-C-N	5.14	131.35	121.54
45	AC	242	ARG	C-N-CA	5.14	131.35	121.54
11	B2	680	C	C1'-C2'-O2'	5.13	116.10	108.40
11	B2	918	A	P-O3'-C3'	5.13	127.90	120.20
11	B2	1064	C	P-O3'-C3'	5.13	127.90	120.20
11	B2	1191	G	O4'-C1'-N9	5.13	116.20	108.50
25	BM	41	ARG	CA-C-O	-5.13	113.11	120.15
38	A1	300	U	O5'-C5'-C4'	5.13	119.40	111.70
38	A1	965	A	P-O3'-C3'	5.13	127.90	120.20
38	A1	1174	U	C4'-C3'-O3'	-5.13	105.30	113.00
38	A1	1642	G	C5'-C4'-C3'	5.13	122.90	115.20
38	A1	1678	A	C4'-C3'-O3'	-5.13	105.30	113.00
38	A1	2184	G	O4'-C1'-C2'	-5.13	100.67	105.80
38	A1	2662	G	O4'-C1'-N9	5.13	116.20	108.50
39	A3	25	A	O4'-C1'-N9	5.13	116.20	108.50
41	AA	200	LYS	N-CA-CB	5.13	117.67	110.12
59	AL	43	ASN	CA-CB-CG	-5.13	107.47	112.60
60	AM	165	ALA	CA-C-N	5.13	125.65	120.00
60	AM	165	ALA	C-N-CA	5.13	125.65	120.00
63	AP	84	LYS	CA-C-N	5.13	130.63	122.62
63	AP	84	LYS	C-N-CA	5.13	130.63	122.62
63	AP	108	GLU	CA-C-O	5.13	125.86	120.42
11	B2	258	A	C5'-C4'-C3'	-5.13	108.30	116.00
21	BI	113	HIS	CE1-NE2-CD2	-5.13	103.87	109.00
60	AM	131	ILE	CA-C-O	-5.13	115.00	120.59
3	Af	26	TRP	CB-CG-CD1	5.13	134.60	126.90
8	AW	36	THR	CB-CA-C	5.13	119.89	110.24
9	AX	33	VAL	N-CA-CB	5.13	116.21	110.62
11	B2	528	G	C4'-C3'-O3'	5.13	117.10	109.40
16	BD	25	ARG	CA-C-N	5.13	127.11	120.44
16	BD	25	ARG	C-N-CA	5.13	127.11	120.44
31	BS	8	PHE	CA-CB-CG	5.13	118.93	113.80
38	A1	73	A	C5'-C4'-C3'	5.13	123.70	116.00
38	A1	1593	C	O4'-C1'-N1	5.13	116.20	108.50
38	A1	2108	U	O4'-C1'-N1	5.13	116.20	108.50
38	A1	2610	C	O4'-C1'-C2'	-5.13	102.47	107.60
38	A1	2753	G	C4'-C3'-C2'	-5.13	97.47	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	AM	72	LYS	N-CA-C	-5.13	100.04	108.41
9	AX	342	PRO	N-CD-CG	5.13	110.89	103.20
26	BN	49	GLN	OE1-CD-NE2	5.13	127.73	122.60
38	A1	52	A	C4'-C3'-O3'	-5.13	105.31	113.00
38	A1	1682	C	C4'-C3'-O3'	-5.13	105.31	113.00
38	A1	2746	G	P-O5'-C5'	5.13	128.59	120.90
12	AG	91	GLY	O-C-N	-5.13	117.31	122.54
58	AK	202	THR	CA-C-O	-5.13	115.76	120.94
60	AM	154	HIS	ND1-CE1-NE2	5.13	113.53	108.40
11	B2	55	G	C5'-C4'-O4'	5.13	117.49	109.80
11	B2	1012	C	O4'-C1'-N1	5.13	116.19	108.50
38	A1	1907	G	P-O5'-C5'	5.13	128.59	120.90
38	A1	2641	C	C1'-O4'-C4'	5.13	115.03	109.90
43	AB	143	LEU	N-CA-C	-5.13	104.23	110.13
5	AS	85	VAL	N-CA-C	5.13	115.85	110.62
7	AU	97	PRO	CB-CA-C	-5.13	104.57	111.85
9	AX	375	PRO	CA-C-N	5.13	124.30	118.97
9	AX	375	PRO	C-N-CA	5.13	124.30	118.97
11	B2	187	C	P-O5'-C5'	-5.13	113.21	120.90
11	B2	687	G	O3'-P-O5'	-5.13	96.31	104.00
11	B2	1141	G	P-O5'-C5'	-5.13	113.21	120.90
11	B2	1469	G	P-O5'-C5'	-5.13	113.21	120.90
38	A1	1644	G	P-O5'-C5'	5.13	128.59	120.90
41	AA	20	LYS	CA-C-N	5.13	125.95	120.47
41	AA	20	LYS	C-N-CA	5.13	125.95	120.47
54	AI	141	LYS	N-CA-CB	5.13	117.84	110.20
61	AN	122	LEU	N-CA-CB	5.13	120.47	111.55
4	AQ	67	HIS	ND1-CE1-NE2	5.12	113.53	108.40
38	A1	1484	U	O5'-C5'-C4'	-5.12	104.01	111.70
10	B1	53	G	C4'-C3'-O3'	-5.12	105.31	113.00
11	B2	651	U	C3'-C2'-C1'	-5.12	96.18	101.30
11	B2	1112	G	C4'-C3'-C2'	-5.12	97.48	102.60
20	BH	78	HIS	CB-CG-ND1	5.12	130.39	122.70
20	BH	137	THR	N-CA-CB	5.12	118.59	110.55
33	BU	131	LYS	CA-C-O	5.12	125.53	119.48
37	BY	17	ARG	N-CA-C	-5.12	100.06	108.41
38	A1	304	G	O3'-P-O5'	-5.12	96.31	104.00
38	A1	1414	G	C5'-C4'-C3'	5.12	122.89	115.20
38	A1	1620	C	C5'-C4'-C3'	-5.12	108.32	116.00
38	A1	2476	A	C5'-C4'-C3'	-5.12	108.32	116.00
41	AA	30	VAL	N-CA-CB	5.12	118.48	111.41
44	Ab	127	ASN	CA-C-N	5.12	125.57	120.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	Ab	127	ASN	C-N-CA	5.12	125.57	120.14
50	AF	58	ASP	CA-C-N	5.12	130.67	121.76
50	AF	58	ASP	C-N-CA	5.12	130.67	121.76
9	AX	60	GLN	OE1-CD-NE2	-5.12	117.48	122.60
10	B1	65	C	C4'-C3'-C2'	-5.12	97.48	102.60
11	B2	543	C	C4'-C3'-C2'	-5.12	97.48	102.60
14	BB	49	ASP	CA-C-N	5.12	127.10	120.44
14	BB	49	ASP	C-N-CA	5.12	127.10	120.44
38	A1	1004	U	C3'-C2'-C1'	-5.12	96.18	101.30
38	A1	2289	A	O4'-C4'-C3'	5.12	109.12	104.00
45	AC	342	ILE	O-C-N	-5.12	117.17	122.14
46	AD	136	ASN	CA-CB-CG	-5.12	107.48	112.60
61	AN	124	ALA	N-CA-C	-5.12	101.34	109.59
63	AP	99	GLU	CA-C-N	5.12	129.41	122.19
63	AP	99	GLU	C-N-CA	5.12	129.41	122.19
11	B2	861	G	C1'-C2'-O2'	5.12	116.08	108.40
11	B2	1370	U	O4'-C4'-C3'	-5.12	98.88	104.00
22	BJ	85	ALA	N-CA-C	-5.12	104.67	112.04
38	A1	35	G	O4'-C1'-N9	5.12	116.18	108.50
38	A1	1511	C	C5'-C4'-C3'	-5.12	108.32	116.00
41	AA	82	ILE	O-C-N	-5.12	117.09	122.57
46	AD	65	HIS	CG-CD2-NE2	5.12	112.32	107.20
50	AF	97	PHE	CA-CB-CG	-5.12	108.68	113.80
63	AP	43	GLN	CA-C-N	5.12	131.11	122.87
63	AP	43	GLN	C-N-CA	5.12	131.11	122.87
3	Af	42	ARG	NH1-CZ-NH2	5.12	125.95	119.30
9	AX	178	VAL	N-CA-CB	5.12	116.19	110.51
11	B2	164	A	C1'-O4'-C4'	5.12	115.02	109.90
16	BD	57	ARG	NE-CZ-NH2	-5.12	114.59	119.20
20	BH	133	ARG	CA-C-O	5.12	124.53	118.90
27	BO	4	PHE	CA-CB-CG	5.12	118.92	113.80
38	A1	652	G	C4'-C3'-C2'	-5.12	97.48	102.60
63	AP	90	ARG	CD-NE-CZ	-5.12	117.23	124.40
7	AU	31	LEU	N-CA-C	-5.12	102.71	110.28
13	BA	79	TYR	N-CA-C	-5.12	100.83	109.07
18	BF	170	VAL	CA-C-N	5.12	125.63	120.00
18	BF	170	VAL	C-N-CA	5.12	125.63	120.00
11	B2	126	G	C4'-C3'-C2'	-5.12	97.48	102.60
13	BA	88	ALA	N-CA-CB	5.12	119.64	111.56
25	BM	36	ALA	O-C-N	5.12	129.12	122.42
38	A1	369	G	O4'-C1'-C2'	-5.12	100.69	105.80
38	A1	516	A	P-O5'-C5'	-5.12	113.23	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1581	A	O4'-C1'-C2'	-5.12	102.48	107.60
38	A1	2532	G	O5'-C5'-C4'	-5.12	103.83	111.50
38	A1	2700	U	O4'-C4'-C3'	-5.12	98.88	104.00
58	Ak	175	ASN	CA-C-N	5.12	127.47	120.46
58	Ak	175	ASN	C-N-CA	5.12	127.47	120.46
62	AO	43	HIS	O-C-N	-5.12	117.55	123.33
11	B2	116	C	C5'-C4'-C3'	5.11	123.67	116.00
11	B2	1084	U	C4'-C3'-O3'	-5.11	105.33	113.00
19	BG	19	VAL	CA-C-N	5.11	129.78	122.72
19	BG	19	VAL	C-N-CA	5.11	129.78	122.72
38	A1	2309	C	C4'-C3'-O3'	-5.11	105.33	113.00
46	AD	147	ASP	CA-CB-CG	-5.11	107.49	112.60
47	Ad	41	ARG	NE-CZ-NH2	5.11	123.80	119.20
48	AE	102	LEU	CA-C-O	5.11	126.54	120.66
11	B2	1114	G	O4'-C4'-C3'	-5.11	98.89	104.00
11	B2	1217	C	C3'-C2'-O2'	5.11	118.37	110.70
38	A1	653	U	P-O3'-C3'	5.11	127.87	120.20
38	A1	2088	G	P-O5'-C5'	5.11	128.57	120.90
41	AA	105	ASP	N-CA-C	-5.11	106.99	113.43
4	AQ	19	GLU	O-C-N	5.11	127.54	122.12
11	B2	937	A	C4'-C3'-C2'	-5.11	97.49	102.60
11	B2	1172	A	C5'-C4'-O4'	5.11	117.47	109.80
11	B2	1234	A	O4'-C1'-N9	5.11	116.17	108.50
13	BA	93	ARG	NE-CZ-NH1	-5.11	116.39	121.50
33	BU	57	SER	O-C-N	-5.11	115.59	122.23
38	A1	671	G	O4'-C1'-N9	5.11	116.17	108.50
38	A1	1668	G	O5'-C5'-C4'	5.11	119.37	111.70
38	A1	1711	C	N1-C1'-C2'	-5.11	106.34	114.00
38	A1	2008	G	P-O5'-C5'	-5.11	113.23	120.90
38	A1	2970	U	C4'-C3'-C2'	-5.11	97.49	102.60
43	AB	204	PHE	N-CA-CB	5.11	118.19	110.42
46	AD	20	LYS	CG-CD-CE	5.11	123.06	111.30
47	Ad	67	PRO	CB-CA-C	-5.11	104.88	112.55
63	AP	1	MET	CA-C-N	5.11	131.30	121.54
63	AP	1	MET	C-N-CA	5.11	131.30	121.54
11	B2	79	G	P-O3'-C3'	-5.11	112.54	120.20
38	A1	774	G	O5'-C5'-C4'	-5.11	103.84	111.50
38	A1	1054	A	O4'-C4'-C3'	-5.11	98.89	104.00
41	AA	35	LYS	N-CA-CB	5.11	118.76	110.43
11	B2	329	G	P-O5'-C5'	-5.11	113.24	120.90
11	B2	331	C	N1-C1'-C2'	5.11	119.66	112.00
18	BF	56	GLU	N-CA-C	-5.11	106.90	112.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	BN	6	ALA	CA-C-N	5.11	126.22	119.84
26	BN	6	ALA	C-N-CA	5.11	126.22	119.84
38	A1	386	A	C1'-O4'-C4'	-5.11	104.79	109.90
38	A1	557	G	O4'-C1'-N9	5.11	116.16	108.50
38	A1	2324	C	C2'-C3'-O3'	5.11	121.36	113.70
47	Ad	78	LYS	N-CA-C	5.11	116.85	111.28
12	AG	84	LYS	CA-C-N	5.11	127.12	120.28
12	AG	84	LYS	C-N-CA	5.11	127.12	120.28
15	BC	120	ILE	N-CA-C	5.11	115.88	110.72
18	BF	119	LEU	N-CA-C	-5.11	106.80	112.57
21	BI	28	LYS	CA-C-O	-5.11	113.16	120.16
22	BJ	82	GLU	CB-CA-C	5.11	120.58	110.42
38	A1	171	A	C3'-C2'-C1'	5.11	106.41	101.30
38	A1	241	C	O4'-C1'-N1	5.11	116.16	108.50
66	AY	120	HIS	CE1-NE2-CD2	-5.11	103.89	109.00
38	A1	2134	G	O4'-C1'-N9	5.10	116.16	108.50
38	A1	2724	A	C5'-C4'-C3'	-5.10	107.54	115.20
41	AA	150	LYS	CB-CA-C	-5.10	100.41	110.11
11	B2	467	G	O4'-C1'-N9	5.10	116.15	108.50
32	BT	61	LYS	N-CA-C	-5.10	101.23	109.40
38	A1	297	G	C1'-O4'-C4'	5.10	115.00	109.90
38	A1	1674	G	O4'-C1'-N9	5.10	116.15	108.50
38	A1	2770	A	C5'-C4'-C3'	5.10	122.85	115.20
50	AF	62	ARG	CA-C-O	5.10	125.96	120.55
66	AY	119	LEU	N-CA-CB	5.10	118.37	110.46
7	AU	58	ASP	CB-CA-C	-5.10	102.87	110.88
16	BD	68	ILE	CA-C-O	5.10	126.36	121.05
17	BE	223	PHE	CA-C-O	-5.10	115.47	121.44
38	A1	1033	C	C4'-C3'-C2'	-5.10	97.50	102.60
58	Ak	55	SER	N-CA-C	-5.10	101.49	108.38
8	AW	40	ASN	OD1-CG-ND2	5.10	127.70	122.60
17	BE	143	HIS	CB-CG-CD2	-5.10	124.57	131.20
37	BY	24	ARG	CB-CA-C	-5.10	101.57	110.09
38	A1	796	C	O4'-C1'-N1	5.10	116.15	108.50
38	A1	2217	C	C1'-O4'-C4'	5.10	115.00	109.90
38	A1	2328	G	C5'-C4'-O4'	5.10	117.45	109.80
40	A5	37	GLY	N-CA-C	-5.10	101.09	113.18
46	AD	76	PRO	CA-C-N	5.10	126.21	119.84
46	AD	76	PRO	C-N-CA	5.10	126.21	119.84
58	Ak	126	ALA	CA-C-O	-5.10	115.19	120.70
59	AL	42	ARG	NH1-CZ-NH2	5.10	125.93	119.30
4	AQ	50	ILE	N-CA-C	-5.10	100.31	107.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	AS	23	ARG	NE-CZ-NH1	5.10	126.60	121.50
7	AU	84	ARG	NE-CZ-NH2	-5.10	114.61	119.20
9	AX	28	LYS	CA-C-O	-5.10	114.49	120.20
11	B2	442	C	O3'-P-O5'	5.10	111.64	104.00
20	BH	21	TRP	CA-CB-CG	-5.10	103.91	113.60
27	BO	56	ASP	CA-C-N	5.10	127.11	120.28
27	BO	56	ASP	C-N-CA	5.10	127.11	120.28
29	BQ	57	GLN	N-CA-C	-5.10	104.66	111.24
30	BR	36	GLY	CA-C-N	5.10	129.78	121.62
30	BR	36	GLY	C-N-CA	5.10	129.78	121.62
30	BR	60	TYR	CA-C-O	-5.10	113.46	119.48
36	BX	30	ARG	NE-CZ-NH1	-5.10	116.40	121.50
38	A1	2095	U	C5'-C4'-C3'	5.10	123.65	116.00
45	AC	266	TRP	CA-C-O	-5.10	113.47	119.48
54	AI	111	GLU	N-CA-CB	5.10	119.62	110.80
40	AK	17	ARG	NE-CZ-NH2	5.10	123.79	119.20
59	AL	64	SER	CA-C-N	5.10	128.43	120.68
59	AL	64	SER	C-N-CA	5.10	128.43	120.68
60	AM	49	ARG	CA-C-N	5.10	127.11	120.28
60	AM	49	ARG	C-N-CA	5.10	127.11	120.28
2	A8	29	LYS	CB-CG-CD	5.10	123.02	111.30
12	B3	78	ILE	N-CA-C	-5.10	100.55	108.81
14	BB	190	ILE	CA-CB-CG1	5.10	119.06	110.40
29	BQ	109	LEU	CA-C-N	5.10	127.38	120.65
29	BQ	109	LEU	C-N-CA	5.10	127.38	120.65
38	A1	1807	G	C4'-C3'-C2'	-5.10	97.50	102.60
11	B2	156	A	O4'-C4'-C3'	-5.09	98.91	104.00
11	B2	772	G	O4'-C4'-C3'	-5.09	101.00	106.10
11	B2	923	A	P-O5'-C5'	5.09	128.54	120.90
11	B2	1343	C	C4'-C3'-O3'	-5.09	105.36	113.00
13	BA	187	LYS	N-CA-CB	5.09	119.45	111.56
21	BI	24	GLU	CA-C-O	5.09	126.90	121.45
22	BJ	75	VAL	CA-C-N	5.09	131.07	122.87
22	BJ	75	VAL	C-N-CA	5.09	131.07	122.87
22	BJ	100	ILE	N-CA-C	-5.09	100.91	108.45
33	BU	67	PRO	N-CA-CB	5.09	107.84	103.31
38	A1	1983	C	O4'-C1'-N1	5.09	116.14	108.50
38	A1	2807	C	P-O5'-C5'	5.09	128.54	120.90
11	B2	1474	A	O4'-C1'-N9	5.09	116.14	108.50
31	BS	13	ALA	CA-C-N	5.09	127.11	120.28
31	BS	13	ALA	C-N-CA	5.09	127.11	120.28
33	BU	88	GLU	O-C-N	5.09	129.18	122.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	501	C	O4'-C1'-N1	5.09	116.14	108.50
38	A1	1521	G	C3'-C2'-C1'	5.09	106.39	101.30
5	AS	146	ILE	O-C-N	-5.09	117.57	123.07
11	B2	264	C	O4'-C1'-N1	5.09	116.14	108.50
26	BN	16	LEU	CA-C-N	5.09	127.52	120.29
26	BN	16	LEU	C-N-CA	5.09	127.52	120.29
32	BT	34	ARG	NE-CZ-NH1	5.09	126.59	121.50
38	A1	712	C	O4'-C1'-N1	5.09	116.14	108.50
38	A1	782	G	C4'-C3'-C2'	-5.09	97.51	102.60
38	A1	2694	C	P-O3'-C3'	-5.09	112.56	120.20
56	AJ	131	VAL	CA-C-O	-5.09	115.77	121.17
1	A7	34	LEU	N-CA-CB	5.09	117.69	110.06
9	AX	119	CYS	N-CA-CB	5.09	117.39	110.01
9	AX	363	GLU	CA-C-N	5.09	127.81	120.38
9	AX	363	GLU	C-N-CA	5.09	127.81	120.38
9	AX	394	PHE	CA-CB-CG	5.09	118.89	113.80
11	B2	335	G	O4'-C4'-C3'	-5.09	98.91	104.00
17	BE	124	PRO	N-CA-C	-5.09	102.62	111.32
38	A1	1145	G	O5'-C5'-C4'	-5.09	104.06	111.70
38	A1	2333	G	O4'-C1'-N9	5.09	116.13	108.50
39	A3	38	U	C1'-O4'-C4'	5.09	114.99	109.90
43	AB	31	ILE	CA-CB-CG1	5.09	119.05	110.40
48	AE	105	SER	N-CA-C	-5.09	104.80	112.99
50	AF	106	ASP	CB-CA-C	-5.09	101.96	110.56
59	AL	105	VAL	N-CA-C	-5.09	106.49	111.88
11	B2	691	G	P-O5'-C5'	5.09	128.53	120.90
38	A1	529	G	O4'-C1'-N9	5.09	116.13	108.50
38	A1	922	C	C3'-C2'-O2'	5.09	118.33	110.70
38	A1	2811	U	O4'-C1'-N1	5.09	116.13	108.50
48	AE	75	PRO	N-CA-C	5.09	119.19	111.15
65	AV	21	MET	CG-SD-CE	5.09	112.09	100.90
11	B2	520	G	C4'-C3'-C2'	-5.09	97.51	102.60
11	B2	965	G	C3'-C2'-O2'	5.09	118.33	110.70
13	BA	169	GLU	CA-C-O	-5.09	115.03	120.42
19	BG	3	THR	CA-C-N	-5.09	115.43	122.30
19	BG	3	THR	C-N-CA	-5.09	115.43	122.30
38	A1	815	U	P-O3'-C3'	5.09	127.83	120.20
38	A1	1019	G	C5'-C4'-C3'	-5.09	108.37	116.00
42	Aa	12	THR	N-CA-C	-5.09	100.23	108.52
58	Ak	42	ARG	CA-C-N	5.09	127.09	120.28
58	Ak	42	ARG	C-N-CA	5.09	127.09	120.28
64	AR	61	ARG	N-CA-CB	5.09	118.02	110.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AQ	88	ARG	N-CA-CB	5.08	118.16	110.28
8	AW	45	ARG	N-CA-C	5.08	116.63	111.14
11	B2	940	U	O4'-C1'-N1	5.08	116.13	108.50
23	BK	30	GLY	CA-C-O	5.08	124.71	119.27
38	A1	2853	A	O3'-P-O5'	-5.08	96.37	104.00
63	AP	120	GLU	CA-CB-CG	-5.08	103.93	114.10
5	AS	65	ARG	NE-CZ-NH2	-5.08	114.62	119.20
11	B2	398	C	C4'-C3'-O3'	-5.08	105.38	113.00
11	B2	448	A	P-O3'-C3'	5.08	127.83	120.20
11	B2	1331	G	P-O3'-C3'	-5.08	112.58	120.20
18	BF	170	VAL	CA-C-O	-5.08	115.78	121.17
20	BH	127	ILE	N-CA-C	5.08	115.86	110.72
21	BI	53	ILE	N-CA-CB	5.08	116.26	110.72
23	BK	85	ALA	CA-C-O	5.08	125.94	120.55
38	A1	118	A	P-O5'-C5'	-5.08	113.28	120.90
38	A1	128	C	O3'-P-O5'	-5.08	96.38	104.00
38	A1	742	C	O4'-C1'-C2'	-5.08	102.52	107.60
38	A1	1775	G	C4'-C3'-O3'	-5.08	105.37	113.00
38	A1	2229	G	O3'-P-O5'	-5.08	96.38	104.00
38	A1	2490	C	C5'-C4'-C3'	-5.08	108.38	116.00
39	A3	37	U	P-O5'-C5'	5.08	128.52	120.90
41	AA	117	ILE	N-CA-CB	5.08	116.83	110.47
46	AD	137	VAL	CA-C-N	5.08	124.78	119.64
46	AD	137	VAL	C-N-CA	5.08	124.78	119.64
50	AF	61	ARG	N-CA-C	-5.08	101.39	108.96
52	AH	84	GLU	N-CA-CB	5.08	117.98	110.56
8	AW	4	SER	O-C-N	5.08	127.94	122.15
11	B2	222	G	O4'-C4'-C3'	-5.08	98.92	104.00
11	B2	391	G	C4'-C3'-O3'	-5.08	105.38	113.00
11	B2	1285	C	C4'-C3'-C2'	-5.08	97.52	102.60
16	BD	56	ARG	O-C-N	-5.08	116.73	122.12
30	BR	8	ARG	CD-NE-CZ	-5.08	117.29	124.40
38	A1	323	U	C5'-C4'-O4'	-5.08	102.18	109.80
38	A1	1127	C	C4'-C3'-O3'	-5.08	105.38	113.00
38	A1	2223	G	O4'-C1'-N9	5.08	116.12	108.50
38	A1	2304	C	P-O5'-C5'	5.08	128.52	120.90
38	A1	2358	U	C5'-C4'-C3'	5.08	123.62	116.00
4	AQ	63	ALA	CA-C-N	5.08	127.34	120.38
4	AQ	63	ALA	C-N-CA	5.08	127.34	120.38
19	BG	4	PHE	CA-CB-CG	-5.08	108.72	113.80
32	BT	29	PRO	O-C-N	5.08	129.50	122.64
35	BW	33	THR	N-CA-C	-5.08	101.01	108.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BW	35	VAL	O-C-N	5.08	128.67	123.18
38	A1	617	G	O4'-C1'-N9	5.08	116.12	108.50
38	A1	1363	C	O4'-C1'-N1	5.08	116.12	108.50
38	A1	1534	G	O4'-C1'-N9	5.08	116.12	108.50
38	A1	1626	A	C1'-O4'-C4'	5.08	114.98	109.90
39	A3	63	G	C4'-C3'-O3'	-5.08	105.38	113.00
11	B2	135	U	O4'-C1'-N1	5.08	116.12	108.50
11	B2	217	C	P-O3'-C3'	-5.08	112.58	120.20
11	B2	325	A	C2'-C3'-O3'	5.08	117.12	109.50
11	B2	993	C	O4'-C1'-N1	5.08	116.12	108.50
13	BA	185	ILE	CA-C-N	5.08	127.04	120.44
13	BA	185	ILE	C-N-CA	5.08	127.04	120.44
14	BB	18	HIS	CG-CD2-NE2	5.08	112.28	107.20
33	BU	27	LYS	O-C-N	-5.08	117.09	121.71
38	A1	715	G	C4'-C3'-O3'	-5.08	105.38	113.00
38	A1	1211	C	P-O3'-C3'	-5.08	112.58	120.20
38	A1	1221	U	O4'-C1'-N1	5.08	116.12	108.50
38	A1	2142	U	C4'-C3'-O3'	-5.08	105.38	113.00
38	A1	2228	G	O4'-C1'-C2'	-5.08	102.52	107.60
38	A1	2722	G	O4'-C1'-N9	5.08	116.12	108.50
58	Ak	108	GLN	N-CA-CB	5.08	118.41	111.25
66	AY	16	LYS	CA-C-O	-5.08	115.98	121.87
17	BE	196	LYS	N-CA-C	-5.08	99.70	108.69
31	BS	9	ILE	O-C-N	5.08	126.80	121.87
38	A1	1475	G	P-O5'-C5'	-5.08	113.28	120.90
38	A1	1481	G	O4'-C1'-C2'	-5.08	102.52	107.60
38	A1	2480	G	P-O5'-C5'	-5.08	113.28	120.90
59	AL	68	GLU	N-CA-C	5.08	116.89	111.36
9	AX	272	TRP	N-CA-C	5.08	118.57	112.38
11	B2	126	G	P-O5'-C5'	-5.08	113.29	120.90
16	BD	163	PRO	N-CA-C	-5.08	106.80	113.65
25	BM	93	THR	N-CA-C	-5.08	103.64	109.93
33	BU	52	TYR	N-CA-CB	5.08	117.67	110.16
38	A1	50	C	P-O5'-C5'	-5.08	113.29	120.90
38	A1	1109	G	P-O5'-C5'	-5.08	113.29	120.90
38	A1	1602	C	O4'-C1'-N1	5.08	116.11	108.50
39	A3	121	A	C1'-C2'-O2'	5.08	116.01	108.40
41	AA	213	LYS	CA-C-O	-5.08	115.63	121.47
11	B2	932	C	O4'-C4'-C3'	-5.07	98.93	104.00
11	B2	1154	G	P-O5'-C5'	-5.07	113.29	120.90
27	BO	31	ILE	N-CA-C	-5.07	98.40	107.18
38	A1	1143	A	P-O5'-C5'	5.07	128.51	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1720	G	C4'-C3'-O3'	-5.07	105.39	113.00
41	AA	18	ARG	N-CA-C	-5.07	100.46	108.73
41	AA	137	PRO	N-CA-C	5.07	119.53	111.26
42	Aa	66	PRO	CB-CA-C	5.07	117.11	110.92
48	AE	52	THR	CA-C-N	5.07	130.15	121.07
48	AE	52	THR	C-N-CA	5.07	130.15	121.07
52	AH	33	LYS	N-CA-CB	5.07	118.26	110.70
52	AH	127	ILE	CA-C-O	-5.07	115.67	120.95
54	AI	5	ASN	N-CA-C	-5.07	99.52	108.20
4	AQ	136	HIS	CG-CD2-NE2	5.07	112.27	107.20
11	B2	385	A	C4'-C3'-C2'	-5.07	97.53	102.60
11	B2	1094	U	N1-C1'-C2'	5.07	119.61	112.00
38	A1	2259	G	P-O5'-C5'	-5.07	113.29	120.90
59	AL	7	LYS	CA-C-N	5.07	129.33	120.86
59	AL	7	LYS	C-N-CA	5.07	129.33	120.86
11	B2	1176	C	P-O5'-C5'	5.07	128.50	120.90
23	BK	76	GLU	N-CA-C	-5.07	107.13	113.72
30	BR	10	GLN	N-CA-C	-5.07	100.64	108.55
38	A1	857	U	C3'-C2'-O2'	5.07	118.31	110.70
38	A1	1864	G	P-O5'-C5'	-5.07	113.29	120.90
41	AA	72	GLU	CB-CA-C	-5.07	102.23	110.85
50	AF	179	GLY	N-CA-C	-5.07	101.16	113.18
58	Ak	62	LEU	CA-C-N	5.07	127.07	120.28
58	Ak	62	LEU	C-N-CA	5.07	127.07	120.28
64	AR	50	HIS	CG-CD2-NE2	5.07	112.27	107.20
66	AY	47	LEU	CA-C-N	5.07	127.08	120.28
66	AY	47	LEU	C-N-CA	5.07	127.08	120.28
9	AX	220	PHE	CA-CB-CG	5.07	118.87	113.80
11	B2	891	A	P-O5'-C5'	-5.07	113.30	120.90
38	A1	1286	G	O4'-C4'-C3'	-5.07	98.93	104.00
67	AZ	76	LYS	CG-CD-CE	5.07	122.96	111.30
11	B2	18	C	O4'-C1'-C2'	-5.07	102.53	107.60
16	BD	118	MET	CA-C-N	5.07	128.01	120.31
16	BD	118	MET	C-N-CA	5.07	128.01	120.31
27	BO	34	ASN	OD1-CG-ND2	5.07	127.67	122.60
27	BO	129	GLN	CG-CD-OE1	5.07	130.94	120.80
34	BV	37	LYS	CA-C-N	5.07	125.57	120.00
34	BV	37	LYS	C-N-CA	5.07	125.57	120.00
35	BW	20	ASP	N-CA-C	-5.07	107.10	113.28
38	A1	482	A	O4'-C4'-C3'	-5.07	98.93	104.00
38	A1	1981	G	O4'-C1'-N9	5.07	116.10	108.50
38	A1	2672	A	P-O3'-C3'	5.07	127.80	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2753	G	O4'-C1'-N9	5.07	115.80	108.20
38	A1	2795	G	O5'-C5'-C4'	-5.07	103.90	111.50
41	AA	185	LEU	CA-C-N	5.07	127.58	120.28
41	AA	185	LEU	C-N-CA	5.07	127.58	120.28
45	AC	209	VAL	CB-CA-C	-5.07	105.23	112.22
8	AW	43	VAL	N-CA-C	5.07	115.29	110.53
9	AX	168	SER	CA-C-N	5.07	131.34	121.41
9	AX	168	SER	C-N-CA	5.07	131.34	121.41
10	B1	37	A	O4'-C1'-C2'	-5.07	102.53	107.60
10	B1	69	G	O4'-C4'-C3'	-5.07	98.94	104.00
38	A1	91	G	O4'-C1'-N9	5.07	116.10	108.50
38	A1	670	G	O4'-C1'-C2'	-5.07	102.53	107.60
38	A1	2008	G	P-O3'-C3'	-5.07	112.60	120.20
38	A1	2783	C	O4'-C1'-C2'	-5.07	102.53	107.60
50	AF	36	GLU	CA-C-O	-5.07	115.23	120.70
12	AG	61	GLU	N-CA-C	5.07	116.80	111.28
66	AY	55	THR	N-CA-C	-5.07	100.64	108.90
14	BB	190	ILE	O-C-N	5.06	126.87	121.10
18	BF	120	ASN	CB-CA-C	-5.06	100.34	110.42
23	BK	96	LYS	N-CA-C	-5.06	107.05	113.18
58	Ak	75	GLU	O-C-N	5.06	128.28	122.25
60	AM	151	LEU	CA-C-N	5.06	127.32	120.38
60	AM	151	LEU	C-N-CA	5.06	127.32	120.38
64	AR	32	LEU	CB-CA-C	-5.06	100.95	110.67
66	AY	114	LYS	N-CA-CB	5.06	116.88	110.04
11	B2	478	C	O4'-C1'-N1	5.06	116.09	108.50
11	B2	805	C	O4'-C1'-N1	5.06	116.09	108.50
11	B2	820	G	C4'-C3'-O3'	-5.06	105.41	113.00
11	B2	1042	U	O4'-C1'-N1	5.06	116.09	108.50
17	BE	86	GLY	O-C-N	5.06	127.16	122.81
38	A1	382	G	P-O5'-C5'	-5.06	113.31	120.90
38	A1	680	U	C5'-C4'-C3'	5.06	123.59	116.00
38	A1	1547	U	O4'-C4'-C3'	-5.06	98.94	104.00
38	A1	1663	C	O4'-C1'-N1	5.06	116.09	108.50
42	Aa	15	ILE	CB-CA-C	5.06	119.59	111.29
12	AG	43	VAL	CA-C-N	5.06	127.33	120.44
12	AG	43	VAL	C-N-CA	5.06	127.33	120.44
60	AM	116	SER	CB-CA-C	-5.06	101.20	110.62
65	AV	41	TYR	CA-C-N	5.06	127.06	120.28
65	AV	41	TYR	C-N-CA	5.06	127.06	120.28
11	B2	1103	G	C5'-C4'-C3'	-5.06	108.41	116.00
60	AM	71	ARG	CD-NE-CZ	-5.06	117.31	124.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	1227	A	P-O3'-C3'	5.06	127.79	120.20
20	BH	91	ARG	NE-CZ-NH2	5.06	123.75	119.20
27	BO	111	ARG	CB-CA-C	-5.06	101.44	110.70
38	A1	590	A	P-O5'-C5'	5.06	128.49	120.90
38	A1	728	A	O5'-C5'-C4'	5.06	119.09	111.50
43	AB	6	ILE	N-CA-C	5.06	115.28	110.42
55	Ai	16	ARG	CA-C-O	-5.06	115.24	120.70
58	Ak	189	LEU	O-C-N	5.06	129.60	122.77
3	Af	38	HIS	ND1-CE1-NE2	5.06	113.46	108.40
11	B2	347	G	N9-C1'-C2'	-5.06	106.41	114.00
12	B3	85	GLU	N-CA-C	-5.06	107.78	114.31
16	BD	76	ARG	NE-CZ-NH2	-5.06	114.65	119.20
21	BI	26	TYR	CA-CB-CG	-5.06	104.80	113.90
21	BI	81	VAL	O-C-N	-5.06	117.82	123.03
38	A1	301	G	C4'-C3'-C2'	5.06	107.66	102.60
38	A1	1709	C	P-O5'-C5'	5.06	128.49	120.90
38	A1	2190	A	O4'-C1'-N9	5.06	115.79	108.20
38	A1	2838	U	C4'-C3'-C2'	5.06	107.66	102.60
41	AA	123	ARG	O-C-N	5.06	127.55	122.09
48	AE	128	TYR	CB-CG-CD2	5.06	128.39	120.80
3	Af	5	LYS	N-CA-CB	5.06	118.64	110.05
11	B2	561	A	C4'-C3'-C2'	-5.06	97.54	102.60
23	BK	83	ALA	CB-CA-C	-5.06	102.91	110.90
29	BQ	137	LYS	N-CA-C	-5.06	105.66	111.07
39	A3	83	C	O5'-C5'-C4'	5.06	119.08	111.50
39	A3	122	C	O4'-C1'-N1	5.06	115.78	108.20
62	AO	88	LEU	N-CA-CB	5.06	117.73	110.20
9	AX	368	HIS	ND1-CG-CD2	-5.05	101.05	106.10
10	B1	39	A	P-O3'-C3'	5.05	127.78	120.20
11	B2	18	C	P-O5'-C5'	-5.05	113.32	120.90
11	B2	72	C	C4'-C3'-C2'	-5.05	97.55	102.60
11	B2	278	A	O4'-C1'-C2'	-5.05	102.55	107.60
14	BB	58	PHE	CB-CA-C	5.05	117.51	109.02
27	BO	33	ILE	N-CA-CB	5.05	116.46	110.55
35	BW	54	VAL	N-CA-C	-5.05	100.50	108.23
38	A1	640	C	C4'-C3'-C2'	5.05	107.65	102.60
38	A1	1378	G	O4'-C1'-C2'	5.05	110.85	105.80
43	AB	58	VAL	O-C-N	-5.05	117.31	123.02
59	AL	48	THR	CB-CA-C	5.05	120.48	110.42
60	AM	92	PRO	CB-CA-C	-5.05	103.27	110.75
63	AP	16	ARG	CB-CA-C	-5.05	102.40	110.79
5	AS	66	TYR	CA-C-O	-5.05	115.87	121.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	736	A	O4'-C1'-N9	5.05	116.08	108.50
11	B2	1224	U	O4'-C1'-N1	5.05	116.08	108.50
38	A1	1911	G	N9-C1'-C2'	-5.05	104.42	112.00
38	A1	2441	A	O4'-C1'-N9	5.05	116.08	108.50
38	A1	2471	A	C5'-C4'-C3'	5.05	122.78	115.20
14	BB	155	PRO	N-CD-CG	5.05	110.78	103.20
38	A1	479	G	C4'-C3'-O3'	-5.05	105.42	113.00
38	A1	2256	G	O3'-P-O5'	-5.05	96.42	104.00
38	A1	3020	G	C1'-O4'-C4'	-5.05	104.65	109.70
43	AB	168	LEU	N-CA-C	-5.05	107.06	114.39
58	AK	178	ASN	N-CA-C	5.05	116.79	111.28
66	AY	54	ILE	CA-C-N	5.05	130.11	122.99
66	AY	54	ILE	C-N-CA	5.05	130.11	122.99
7	AU	30	PRO	N-CA-CB	5.05	107.80	103.31
9	AX	315	HIS	CG-CD2-NE2	5.05	112.25	107.20
11	B2	340	A	P-O3'-C3'	-5.05	112.63	120.20
11	B2	484	U	O4'-C1'-C2'	-5.05	100.75	105.80
11	B2	686	C	C4'-C3'-O3'	-5.05	105.42	113.00
19	BG	54	GLU	N-CA-CB	5.05	119.08	110.50
37	BY	30	PHE	CA-C-N	5.05	129.56	122.09
37	BY	30	PHE	C-N-CA	5.05	129.56	122.09
38	A1	108	G	O4'-C1'-C2'	-5.05	102.55	107.60
38	A1	757	C	C1'-C2'-O2'	5.05	115.97	108.40
38	A1	1580	G	O4'-C4'-C3'	-5.05	98.95	104.00
38	A1	1836	A	C5'-C4'-O4'	5.05	117.37	109.80
38	A1	2342	C	O4'-C4'-C3'	-5.05	98.95	104.00
38	A1	2519	C	O4'-C1'-N1	5.05	116.07	108.50
45	AC	317	VAL	CA-CB-CG2	-5.05	101.82	110.40
12	AG	40	THR	CA-C-N	5.05	127.05	120.28
12	AG	40	THR	C-N-CA	5.05	127.05	120.28
61	AN	70	ASN	CA-C-N	5.05	127.00	120.44
61	AN	70	ASN	C-N-CA	5.05	127.00	120.44
11	B2	99	C	C4'-C3'-C2'	5.05	107.65	102.60
11	B2	1131	G	P-O3'-C3'	5.05	127.77	120.20
23	BK	85	ALA	CA-C-N	5.05	127.05	120.28
23	BK	85	ALA	C-N-CA	5.05	127.05	120.28
38	A1	412	G	C2'-C3'-O3'	5.05	117.07	109.50
38	A1	474	G	C2'-C3'-O3'	5.05	117.07	109.50
38	A1	739	C	C4'-C3'-C2'	-5.05	97.55	102.60
38	A1	830	G	P-O5'-C5'	5.05	128.47	120.90
38	A1	866	G	P-O3'-C3'	5.05	127.77	120.20
38	A1	1271	G	O5'-C5'-C4'	5.05	119.27	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2089	C	O4'-C1'-C2'	-5.05	102.55	107.60
38	A1	2118	C	O4'-C1'-N1	5.05	116.07	108.50
38	A1	2414	G	O4'-C1'-N9	5.05	116.07	108.50
47	Ad	65	GLU	CA-C-O	-5.05	115.00	120.81
48	AE	162	THR	O-C-N	5.05	129.34	122.48
61	AN	31	ILE	CA-CB-CG1	5.05	118.98	110.40
7	AU	117	GLU	CA-C-O	-5.05	115.07	120.42
14	BB	156	THR	CA-C-N	5.05	129.56	122.09
14	BB	156	THR	C-N-CA	5.05	129.56	122.09
21	BI	19	ARG	NE-CZ-NH1	-5.05	116.45	121.50
36	BX	59	GLU	CB-CG-CD	-5.05	104.02	112.60
38	A1	1415	C	C3'-C2'-C1'	5.05	106.55	101.50
38	A1	2158	G	O4'-C4'-C3'	-5.05	101.05	106.10
45	AC	345	PRO	N-CA-CB	-5.05	98.65	103.39
62	AO	177	ASP	CA-C-O	-5.05	116.17	121.06
67	AZ	10	ALA	N-CA-C	5.05	116.78	111.28
4	AQ	65	ILE	CA-C-N	5.04	127.30	120.44
4	AQ	65	ILE	C-N-CA	5.04	127.30	120.44
7	AU	78	VAL	O-C-N	5.04	128.63	123.18
11	B2	757	G	O4'-C1'-N9	5.04	116.07	108.50
30	BR	73	HIS	CB-CG-CD2	-5.04	124.64	131.20
30	BR	110	GLU	CA-C-N	5.04	131.18	121.54
30	BR	110	GLU	C-N-CA	5.04	131.18	121.54
38	A1	1097	G	C5'-C4'-O4'	-5.04	102.23	109.80
38	A1	1299	C	C4'-C3'-O3'	-5.04	105.43	113.00
54	AI	86	LYS	CB-CA-C	-5.04	101.96	110.44
61	AN	136	ARG	N-CA-CB	5.04	119.61	110.83
11	B2	650	A	P-O3'-C3'	5.04	127.77	120.20
13	BA	64	VAL	CA-CB-CG1	5.04	118.97	110.40
18	BF	16	TRP	CE2-CD2-CE3	5.04	123.84	118.80
38	A1	1225	A	O3'-P-O5'	-5.04	96.43	104.00
38	A1	2553	U	C4'-C3'-O3'	-5.04	105.43	113.00
45	AC	185	TYR	CB-CA-C	-5.04	99.37	109.35
59	AL	60	LYS	O-C-N	5.04	128.60	122.85
11	B2	361	A	P-O5'-C5'	-5.04	113.34	120.90
11	B2	442	C	O4'-C1'-N1	5.04	116.06	108.50
11	B2	1129	A	O4'-C1'-C2'	-5.04	102.56	107.60
11	B2	1338	C	C3'-C2'-C1'	5.04	106.34	101.30
18	BF	215	PRO	O-C-N	5.04	128.53	122.23
36	BX	57	LEU	N-CA-CB	5.04	118.48	110.16
38	A1	926	C	O4'-C1'-C2'	-5.04	100.76	105.80
38	A1	1093	G	O4'-C1'-N9	5.04	116.06	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	1500	C	C5'-C4'-O4'	-5.04	102.24	109.80
38	A1	2733	A	C1'-C2'-O2'	-5.04	100.84	108.40
38	A1	3045	G	N9-C1'-C2'	-5.04	104.44	112.00
12	AG	44	GLU	O-C-N	-5.04	116.65	122.09
12	AG	110	LEU	N-CA-CB	5.04	117.38	110.07
11	B2	151	G	O4'-C1'-N9	5.04	116.06	108.50
11	B2	848	G	C2'-C3'-O3'	5.04	117.06	109.50
38	A1	939	A	O3'-P-O5'	-5.04	96.44	104.00
38	A1	986	G	C5'-C4'-C3'	-5.04	108.44	116.00
38	A1	1549	C	C4'-C3'-O3'	-5.04	105.44	113.00
38	A1	1902	G	P-O5'-C5'	-5.04	113.34	120.90
38	A1	2151	C	O5'-C5'-C4'	-5.04	103.94	111.50
59	AL	15	HIS	ND1-CE1-NE2	5.04	113.44	108.40
4	AQ	140	LEU	CA-C-O	-5.04	115.53	120.82
10	B1	13	C	C4'-C3'-O3'	-5.04	105.44	113.00
11	B2	464	G	O5'-C5'-C4'	-5.04	104.14	111.70
11	B2	960	A	O4'-C4'-C3'	-5.04	101.06	106.10
16	BD	71	GLU	CA-C-O	-5.04	115.53	120.82
22	BJ	117	ASP	CA-CB-CG	-5.04	107.56	112.60
38	A1	287	G	O4'-C1'-N9	5.04	116.06	108.50
38	A1	1892	G	C1'-O4'-C4'	-5.04	104.86	109.90
38	A1	2036	A	O4'-C1'-N9	5.04	116.06	108.50
39	A3	102	G	O4'-C1'-N9	5.04	116.06	108.50
44	Ab	13	ARG	CA-C-N	5.04	127.03	120.28
44	Ab	13	ARG	C-N-CA	5.04	127.03	120.28
58	Ak	80	ILE	N-CA-CB	5.04	117.16	110.26
60	AM	91	SER	O-C-N	-5.04	117.04	121.32
66	AY	20	ARG	CA-C-N	5.04	127.03	120.28
66	AY	20	ARG	C-N-CA	5.04	127.03	120.28
11	B2	765	U	O4'-C1'-N1	5.04	116.06	108.50
11	B2	1101	G	O4'-C1'-N9	5.04	116.06	108.50
11	B2	1151	A	P-O3'-C3'	-5.04	112.64	120.20
12	B3	115	ALA	CA-C-N	5.04	127.81	119.35
12	B3	115	ALA	C-N-CA	5.04	127.81	119.35
38	A1	736	U	C1'-O4'-C4'	-5.04	104.66	109.70
38	A1	1092	U	O4'-C1'-N1	5.04	116.06	108.50
38	A1	1364	C	P-O3'-C3'	-5.04	112.64	120.20
39	A3	52	U	O4'-C4'-C3'	-5.04	101.06	106.10
61	AN	108	TYR	N-CA-C	5.04	118.19	111.24
7	AU	96	HIS	ND1-CE1-NE2	5.04	113.44	108.40
18	BF	18	PRO	N-CA-C	5.04	119.11	111.15
38	A1	1254	C	C1'-O4'-C4'	5.04	114.94	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	2329	A	P-O3'-C3'	5.04	127.75	120.20
50	AF	62	ARG	CA-C-N	5.04	127.03	120.28
50	AF	62	ARG	C-N-CA	5.04	127.03	120.28
62	AO	84	TYR	CB-CG-CD2	-5.04	113.25	120.80
1	A7	31	ASP	CA-C-N	5.03	126.98	120.44
1	A7	31	ASP	C-N-CA	5.03	126.98	120.44
10	B1	26	C	C1'-C2'-O2'	5.03	115.95	108.40
11	B2	515	U	C5'-C4'-C3'	5.03	122.75	115.20
11	B2	853	G	C3'-C2'-C1'	-5.03	96.27	101.30
38	A1	1667	U	O4'-C1'-N1	5.03	116.05	108.50
38	A1	1832	G	O3'-P-O5'	5.03	111.55	104.00
45	AC	228	LYS	N-CA-C	-5.03	106.31	112.90
46	AD	69	ARG	NE-CZ-NH2	-5.03	114.67	119.20
58	AK	147	ALA	CB-CA-C	-5.03	101.26	110.62
62	AO	158	GLU	CA-CB-CG	-5.03	104.03	114.10
65	AV	5	ASN	CA-CB-CG	-5.03	107.57	112.60
11	B2	169	C	C4'-C3'-C2'	-5.03	97.57	102.60
11	B2	1262	U	O4'-C4'-C3'	-5.03	101.07	106.10
31	BS	16	LEU	N-CA-CB	-5.03	102.48	110.28
32	BT	67	CYS	N-CA-C	-5.03	102.25	110.20
38	A1	2665	G	O4'-C1'-N9	5.03	116.05	108.50
11	B2	79	G	P-O5'-C5'	5.03	128.45	120.90
11	B2	1282	C	C4'-C3'-C2'	-5.03	97.57	102.60
20	BH	72	MET	N-CA-C	5.03	117.50	111.71
23	BK	86	LEU	N-CA-C	5.03	116.76	111.28
25	BM	98	ALA	CB-CA-C	-5.03	103.15	110.95
38	A1	694	A	O4'-C4'-C3'	-5.03	101.07	106.10
38	A1	832	A	C1'-C2'-O2'	5.03	115.94	108.40
38	A1	1734	G	P-O5'-C5'	5.03	128.45	120.90
38	A1	2352	G	P-O5'-C5'	5.03	128.44	120.90
38	A1	2462	U	P-O3'-C3'	-5.03	112.65	120.20
46	AD	174	LYS	N-CA-C	-5.03	105.88	111.36
55	AI	46	VAL	N-CA-CB	5.03	116.01	110.53
11	B2	396	C	C4'-C3'-C2'	-5.03	97.57	102.60
17	BE	166	MET	CA-C-O	-5.03	114.93	120.36
21	BI	20	VAL	CA-C-O	5.03	126.18	120.85
36	BX	67	ILE	N-CA-C	-5.03	108.60	113.53
43	AB	209	HIS	CE1-NE2-CD2	-5.03	103.97	109.00
40	AK	50	ILE	N-CA-CB	5.03	119.53	111.23
11	B2	1265	G	C4'-C3'-C2'	-5.03	97.57	102.60
13	BA	176	LYS	CA-C-N	5.03	127.00	120.56
13	BA	176	LYS	C-N-CA	5.03	127.00	120.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	BI	113	HIS	CA-C-N	5.03	127.43	120.29
21	BI	113	HIS	C-N-CA	5.03	127.43	120.29
24	BL	27	ALA	N-CA-C	5.03	116.76	111.28
26	BN	15	LYS	CA-C-N	5.03	127.43	120.29
26	BN	15	LYS	C-N-CA	5.03	127.43	120.29
27	BO	92	HIS	CE1-NE2-CD2	-5.03	103.97	109.00
33	BU	84	GLY	CA-C-O	5.03	125.06	120.64
38	A1	19	G	O4'-C1'-N9	5.03	116.04	108.50
38	A1	346	U	C3'-C2'-C1'	5.03	106.33	101.30
38	A1	402	G	N9-C1'-C2'	-5.03	104.46	112.00
38	A1	722	C	O4'-C1'-N1	5.03	116.04	108.50
38	A1	966	G	C1'-C2'-O2'	5.03	115.94	108.40
38	A1	1038	U	O4'-C1'-N1	5.03	116.04	108.50
38	A1	1097	G	O4'-C1'-N9	5.03	116.04	108.50
38	A1	1419	G	O4'-C4'-C3'	-5.03	98.97	104.00
38	A1	2547	A	P-O3'-C3'	5.03	127.74	120.20
39	A3	85	C	C1'-C2'-O2'	5.03	115.94	108.40
45	AC	41	PHE	N-CA-C	-5.03	101.10	108.99
52	AH	76	LEU	CA-C-O	5.03	125.88	120.55
10	B1	53	G	P-O5'-C5'	5.03	128.44	120.90
11	B2	110	C	C1'-C2'-O2'	5.03	115.94	108.40
11	B2	792	C	O4'-C1'-N1	5.03	116.04	108.50
13	BA	120	MET	CB-CA-C	5.03	117.92	109.48
13	BA	178	TYR	CA-C-N	5.03	124.96	119.78
13	BA	178	TYR	C-N-CA	5.03	124.96	119.78
33	BU	134	THR	CA-C-N	5.03	127.52	120.28
33	BU	134	THR	C-N-CA	5.03	127.52	120.28
38	A1	324	C	O4'-C1'-N1	5.03	116.04	108.50
38	A1	1277	G	C1'-O4'-C4'	-5.03	104.88	109.90
58	Ak	207	ALA	N-CA-CB	5.03	117.36	110.07
7	AU	115	ILE	CA-C-N	5.02	126.89	120.56
7	AU	115	ILE	C-N-CA	5.02	126.89	120.56
17	BE	61	GLU	CA-C-N	5.02	127.01	120.28
17	BE	61	GLU	C-N-CA	5.02	127.01	120.28
38	A1	626	C	O3'-P-O5'	5.02	111.54	104.00
38	A1	637	G	O4'-C1'-N9	5.02	115.74	108.20
38	A1	1242	A	O4'-C1'-N9	5.02	116.03	108.50
38	A1	1386	G	C1'-C2'-O2'	5.02	115.94	108.40
38	A1	2405	U	C5'-C4'-C3'	-5.02	108.46	116.00
7	AU	40	LYS	CA-C-N	5.02	129.65	123.12
7	AU	40	LYS	C-N-CA	5.02	129.65	123.12
11	B2	45	U	O4'-C1'-N1	5.02	115.73	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	935	G	O3'-P-O5'	-5.02	96.47	104.00
13	BA	9	THR	CA-C-N	5.02	131.13	121.54
13	BA	9	THR	C-N-CA	5.02	131.13	121.54
17	BE	185	VAL	N-CA-C	-5.02	101.02	108.45
20	BH	30	ASP	O-C-N	-5.02	117.04	121.31
21	BI	32	LYS	CB-CG-CD	5.02	122.85	111.30
23	BK	16	ARG	NH1-CZ-NH2	5.02	125.83	119.30
24	BL	21	ASN	CA-CB-CG	-5.02	107.58	112.60
38	A1	544	A	O3'-P-O5'	-5.02	96.47	104.00
38	A1	588	U	O4'-C1'-N1	5.02	116.03	108.50
38	A1	2968	G	C3'-C2'-C1'	-5.02	96.28	101.30
54	AI	52	ARG	O-C-N	5.02	127.24	122.07
55	Ai	52	GLY	N-CA-C	-5.02	108.32	115.30
7	AU	68	GLU	CA-C-N	5.02	130.11	122.98
7	AU	68	GLU	C-N-CA	5.02	130.11	122.98
25	BM	108	ALA	CB-CA-C	-5.02	99.73	110.32
42	Aa	18	ILE	O-C-N	-5.02	117.00	121.87
46	AD	214	HIS	N-CA-C	5.02	115.37	109.60
60	AM	172	LEU	N-CA-C	-5.02	106.84	113.17
3	Af	15	LYS	CA-C-N	5.02	127.01	120.28
3	Af	15	LYS	C-N-CA	5.02	127.01	120.28
11	B2	191	A	C1'-C2'-O2'	5.02	115.93	108.40
11	B2	633	C	C4'-C3'-O3'	-5.02	105.47	113.00
11	B2	697	A	P-O5'-C5'	-5.02	113.37	120.90
11	B2	890	C	C5'-C4'-C3'	-5.02	108.47	116.00
38	A1	70	G	N9-C1'-C2'	-5.02	106.47	114.00
38	A1	210	A	C3'-C2'-O2'	-5.02	107.07	114.60
38	A1	239	G	P-O3'-C3'	-5.02	112.67	120.20
38	A1	758	C	P-O5'-C5'	-5.02	113.37	120.90
38	A1	2200	A	P-O3'-C3'	-5.02	112.67	120.20
38	A1	2466	C	C1'-O4'-C4'	5.02	114.92	109.90
38	A1	2600	C	O4'-C1'-N1	5.02	116.03	108.50
49	Ae	37	ALA	N-CA-CB	-5.02	104.22	110.90
61	AN	154	MET	N-CA-C	5.02	116.75	111.28
1	A7	48	GLY	CA-C-N	5.02	127.34	120.77
1	A7	48	GLY	C-N-CA	5.02	127.34	120.77
9	AX	274	LEU	N-CA-CB	5.02	117.29	110.01
11	B2	73	U	O4'-C1'-N1	5.02	116.03	108.50
11	B2	107	C	O3'-P-O5'	5.02	111.53	104.00
11	B2	148	C	N1-C1'-C2'	-5.02	104.47	112.00
11	B2	838	C	O4'-C1'-N1	5.02	116.03	108.50
11	B2	888	A	C4'-C3'-O3'	-5.02	105.47	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	A1	24	G	C3'-C2'-C1'	5.02	106.32	101.30
38	A1	167	G	C4'-C3'-C2'	-5.02	97.58	102.60
38	A1	1562	U	C1'-O4'-C4'	-5.02	104.88	109.90
38	A1	2016	C	O4'-C1'-N1	5.02	116.03	108.50
46	AD	128	ARG	O-C-N	-5.02	116.10	122.27
55	Ai	31	LYS	CA-C-N	5.02	127.00	120.28
55	Ai	31	LYS	C-N-CA	5.02	127.00	120.28
60	AM	33	GLU	CB-CG-CD	-5.02	104.07	112.60
4	AQ	81	ARG	CA-C-O	-5.02	115.24	121.06
11	B2	1055	C	O4'-C4'-C3'	-5.02	98.98	104.00
11	B2	1443	G	O4'-C1'-N9	5.02	116.03	108.50
15	BC	157	PRO	N-CD-CG	5.02	110.72	103.20
38	A1	51	G	C2'-C3'-O3'	5.02	117.02	109.50
38	A1	540	A	P-O5'-C5'	5.02	128.42	120.90
38	A1	628	A	O3'-P-O5'	-5.02	96.48	104.00
38	A1	1949	A	C4'-C3'-C2'	-5.02	97.58	102.60
38	A1	2100	U	O4'-C1'-N1	5.02	116.02	108.50
60	AM	89	LYS	CA-C-O	5.02	125.60	119.78
11	B2	97	C	P-O5'-C5'	5.01	128.42	120.90
11	B2	464	G	P-O5'-C5'	-5.01	113.38	120.90
11	B2	1463	A	C1'-O4'-C4'	5.01	114.92	109.90
15	BC	185	PRO	N-CA-CB	5.01	107.77	103.31
21	BI	39	ARG	CD-NE-CZ	-5.01	117.38	124.40
23	BK	130	ARG	NE-CZ-NH2	5.01	123.71	119.20
25	BM	51	ASP	CA-CB-CG	5.01	117.61	112.60
33	BU	61	ARG	N-CA-C	5.01	116.44	111.07
38	A1	427	G	O4'-C1'-N9	5.01	116.02	108.50
38	A1	547	C	C5'-C4'-C3'	-5.01	108.48	116.00
38	A1	1355	A	P-O5'-C5'	-5.01	113.38	120.90
38	A1	1942	G	O4'-C4'-C3'	-5.01	98.99	104.00
38	A1	2125	C	C1'-C2'-O2'	5.01	115.92	108.40
43	AB	32	PRO	N-CD-CG	5.01	110.72	103.20
56	AJ	47	HIS	ND1-CE1-NE2	5.01	113.42	108.40
58	Ak	52	LEU	CA-C-O	-5.01	115.39	120.71
11	B2	850	A	O5'-C5'-C4'	-5.01	103.98	111.50
11	B2	1256	C	O4'-C1'-N1	5.01	116.02	108.50
37	BY	36	ASP	O-C-N	5.01	129.26	122.59
38	A1	2538	G	O4'-C1'-N9	5.01	116.02	108.50
38	A1	2677	U	C4'-C3'-O3'	-5.01	105.48	113.00
46	AD	66	SER	N-CA-C	5.01	118.51	111.74
9	AX	179	SER	CA-C-N	5.01	127.27	120.65
9	AX	179	SER	C-N-CA	5.01	127.27	120.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	B2	348	C	O4'-C1'-N1	5.01	116.02	108.50
11	B2	933	G	O5'-C5'-C4'	5.01	119.22	111.70
27	BO	78	ALA	CA-C-O	5.01	124.33	118.97
34	BV	16	ARG	NE-CZ-NH2	-5.01	114.69	119.20
38	A1	1963	G	C4'-C3'-O3'	-5.01	105.48	113.00
43	AB	239	LYS	N-CA-CB	5.01	119.02	110.50
60	AM	41	ARG	CA-C-N	5.01	124.92	119.76
60	AM	41	ARG	C-N-CA	5.01	124.92	119.76
61	AN	101	THR	CB-CA-C	-5.01	104.77	111.89
67	AZ	42	PRO	CA-C-N	5.01	127.00	120.28
67	AZ	42	PRO	C-N-CA	5.01	127.00	120.28
11	B2	802	G	C1'-O4'-C4'	-5.01	104.89	109.90
11	B2	964	A	O3'-P-O5'	-5.01	96.48	104.00
29	BQ	93	GLU	CA-C-O	5.01	125.76	120.10
38	A1	209	G	C4'-C3'-C2'	-5.01	97.59	102.60
38	A1	2496	G	C4'-C3'-C2'	-5.01	97.59	102.60
39	A3	6	G	C1'-C2'-O2'	5.01	115.92	108.40
39	A3	43	C	N1-C1'-C2'	5.01	119.51	112.00
44	Ab	26	GLN	CA-CB-CG	-5.01	104.08	114.10
11	B2	1227	A	P-O5'-C5'	-5.01	113.39	120.90
11	B2	1336	U	C4'-C3'-C2'	-5.01	97.59	102.60
38	A1	416	A	O4'-C1'-N9	5.01	116.01	108.50
38	A1	2656	A	P-O3'-C3'	5.01	127.71	120.20
55	Ai	24	ARG	N-CA-CB	5.01	117.57	110.16
57	Aj	42	ARG	CB-CA-C	-5.01	102.68	110.94
3	Af	42	ARG	CB-CA-C	-5.01	100.37	109.38
11	B2	277	G	C3'-C2'-C1'	5.01	106.31	101.30
11	B2	1349	C	C1'-O4'-C4'	5.01	114.91	109.90
23	BK	91	GLY	O-C-N	-5.01	117.00	122.41
38	A1	389	C	C4'-C3'-O3'	-5.01	105.49	113.00
38	A1	510	A	C1'-C2'-O2'	5.01	115.91	108.40
38	A1	1340	G	O4'-C1'-N9	5.01	116.01	108.50
38	A1	2538	G	C3'-C2'-C1'	5.01	106.31	101.30
38	A1	2583	G	C3'-C2'-C1'	-5.01	96.49	101.50
38	A1	2613	C	O4'-C1'-N1	5.01	116.01	108.50
38	A1	2869	U	C3'-C2'-O2'	-5.01	107.09	114.60
57	Aj	5	LYS	CB-CA-C	-5.01	102.34	110.85
40	AK	72	ARG	CA-C-N	5.01	126.99	120.28
40	AK	72	ARG	C-N-CA	5.01	126.99	120.28
11	B2	989	C	C4'-C3'-C2'	-5.00	97.59	102.60
11	B2	1245	C	C4'-C3'-O3'	5.00	116.91	109.40
14	BB	107	LYS	CA-C-O	5.00	125.86	120.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BV	38	GLY	CA-C-N	5.00	127.92	120.31
34	BV	38	GLY	C-N-CA	5.00	127.92	120.31
38	A1	2886	C	O4'-C1'-N1	5.00	116.01	108.50
45	AC	149	GLY	N-CA-C	5.00	118.74	112.73
45	AC	208	ARG	CA-C-O	-5.00	115.58	121.44
45	AC	349	PRO	N-CA-C	-5.00	104.59	110.70
4	AQ	97	LYS	O-C-N	-5.00	116.83	122.03
5	AS	112	LEU	N-CA-C	5.00	117.56	110.10
11	B2	747	U	C4'-C3'-C2'	-5.00	97.60	102.60
11	B2	1298	G	C3'-C2'-C1'	-5.00	96.30	101.30
14	BB	137	ILE	CA-C-O	5.00	125.99	120.64
18	BF	45	LYS	CB-CA-C	-5.00	102.71	109.16
21	BI	60	VAL	N-CA-C	-5.00	101.01	108.46
35	BW	2	ALA	CA-C-N	5.00	127.19	120.58
35	BW	2	ALA	C-N-CA	5.00	127.19	120.58
38	A1	174	C	C4'-C3'-O3'	-5.00	105.49	113.00
38	A1	460	C	O4'-C1'-N1	5.00	116.00	108.50
38	A1	531	G	C4'-C3'-O3'	-5.00	105.50	113.00
38	A1	1027	A	O4'-C1'-C2'	5.00	112.60	107.60
38	A1	1307	C	P-O3'-C3'	-5.00	112.69	120.20
52	AH	84	GLU	N-CA-C	-5.00	106.77	112.92
54	AI	131	VAL	CA-CB-CG1	-5.00	101.89	110.40
54	AI	132	GLY	CA-C-N	5.00	126.95	120.44
54	AI	132	GLY	C-N-CA	5.00	126.95	120.44
61	AN	8	ILE	CA-CB-CG2	5.00	119.01	110.50
11	B2	598	U	O4'-C4'-C3'	-5.00	99.00	104.00
12	B3	69	LEU	CA-C-N	5.00	126.98	120.28
12	B3	69	LEU	C-N-CA	5.00	126.98	120.28
33	BU	18	GLN	CA-C-O	5.00	125.20	119.35
38	A1	7	G	C1'-O4'-C4'	-5.00	104.90	109.90
38	A1	2039	U	O4'-C1'-C2'	-5.00	102.60	107.60
39	A3	112	C	P-O3'-C3'	-5.00	112.70	120.20
45	AC	184	GLU	CA-C-O	-5.00	115.30	120.70
45	AC	356	ILE	CA-C-N	5.00	127.24	120.44
45	AC	356	ILE	C-N-CA	5.00	127.24	120.44
51	Ag	12	PHE	CA-CB-CG	5.00	118.80	113.80

All (12) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
19	BG	53	LYS	CA
20	BH	85	PHE	CA

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Mol	Chain	Res	Type	Atom
20	BH	86	MET	CA
20	BH	87	ARG	CA
20	BH	96	LYS	CA
38	A1	2063	U	C3',C4'
49	Ae	14	THR	CB
51	Ag	13	LYS	CA
52	AH	91	LYS	CA
59	AL	11	LEU	CA
59	AL	44	LYS	CA

All (2533) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
38	A1	100	C	Sidechain
38	A1	1000	G	Sidechain
38	A1	1002	A	Sidechain
38	A1	1011	A	Sidechain
38	A1	1012	G	Sidechain
38	A1	1014	U	Sidechain
38	A1	1015	G	Sidechain
38	A1	1017	A	Sidechain
38	A1	1019	G	Sidechain
38	A1	102	A	Sidechain
38	A1	1022	G	Sidechain
38	A1	1023	C	Sidechain
38	A1	1028	G	Sidechain
38	A1	1029	C	Sidechain
38	A1	103	A	Sidechain
38	A1	1030	C	Sidechain
38	A1	1032	C	Sidechain
38	A1	1034	G	Sidechain
38	A1	1035	G	Sidechain
38	A1	1037	C	Sidechain
38	A1	1041	U	Sidechain
38	A1	1044	C	Sidechain
38	A1	1045	A	Sidechain
38	A1	1049	U	Sidechain
38	A1	105	C	Sidechain
38	A1	1051	C	Sidechain
38	A1	1056	C	Sidechain
38	A1	1057	C	Sidechain
38	A1	1059	C	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	106	G	Sidechain
38	A1	1060	C	Sidechain
38	A1	1061	G	Sidechain
38	A1	1063	C	Sidechain
38	A1	1066	C	Sidechain
38	A1	1067	G	Sidechain
38	A1	107	G	Sidechain
38	A1	1070	G	Sidechain
38	A1	1071	A	Sidechain
38	A1	1074	G	Sidechain
38	A1	1075	G	Sidechain
38	A1	108	G	Sidechain
38	A1	1081	U	Sidechain
38	A1	1083	G	Sidechain
38	A1	1084	G	Sidechain
38	A1	1085	G	Sidechain
38	A1	1086	U	Sidechain
38	A1	1090	G	Sidechain
38	A1	1092	U	Sidechain
38	A1	1093	G	Sidechain
38	A1	1094	U	Sidechain
38	A1	1096	A	Sidechain
38	A1	1099	C	Sidechain
38	A1	110	A	Sidechain
38	A1	1100	G	Sidechain
38	A1	1101	U	Sidechain
38	A1	1102	C	Sidechain
38	A1	1107	G	Sidechain
38	A1	1110	A	Sidechain
38	A1	1111	G	Sidechain
38	A1	1113	G	Sidechain
38	A1	1115	A	Sidechain
38	A1	1116	A	Sidechain
38	A1	1117	C	Sidechain
38	A1	1118	A	Sidechain
38	A1	1121	C	Sidechain
38	A1	1123	A	Sidechain
38	A1	1125	A	Sidechain
38	A1	1128	G	Sidechain
38	A1	1130	G	Sidechain
38	A1	1132	U	Sidechain
38	A1	1135	A	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1138	C	Sidechain
38	A1	1142	A	Sidechain
38	A1	1146	U	Sidechain
38	A1	1147	G	Sidechain
38	A1	1148	C	Sidechain
38	A1	115	C	Sidechain
38	A1	1151	G	Sidechain
38	A1	1153	U	Sidechain
38	A1	1162	C	Sidechain
38	A1	1163	U	Sidechain
38	A1	1165	C	Sidechain
38	A1	1166	A	Sidechain
38	A1	1167	A	Sidechain
38	A1	117	A	Sidechain
38	A1	1170	G	Sidechain
38	A1	1171	G	Sidechain
38	A1	1179	G	Sidechain
38	A1	118	A	Sidechain
38	A1	1180	G	Sidechain
38	A1	1181	C	Sidechain
38	A1	1187	A	Sidechain
38	A1	1189	A	Sidechain
38	A1	119	U	Sidechain
38	A1	1192	G	Sidechain
38	A1	1193	G	Sidechain
38	A1	1194	G	Sidechain
38	A1	1195	G	Sidechain
38	A1	1199	U	Sidechain
38	A1	1200	A	Sidechain
38	A1	1201	G	Sidechain
38	A1	1203	C	Sidechain
38	A1	1205	U	Sidechain
38	A1	1206	A	Sidechain
38	A1	1208	A	Sidechain
38	A1	1209	A	Sidechain
38	A1	1210	G	Sidechain
38	A1	1212	A	Sidechain
38	A1	1215	C	Sidechain
38	A1	1216	A	Sidechain
38	A1	1217	U	Sidechain
38	A1	122	G	Sidechain
38	A1	1220	U	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1222	U	Sidechain
38	A1	1223	A	Sidechain
38	A1	1224	A	Sidechain
38	A1	1225	A	Sidechain
38	A1	1228	G	Sidechain
38	A1	1229	U	Sidechain
38	A1	123	A	Sidechain
38	A1	1230	G	Sidechain
38	A1	1234	A	Sidechain
38	A1	1238	G	Sidechain
38	A1	1239	C	Sidechain
38	A1	1240	U	Sidechain
38	A1	1241	C	Sidechain
38	A1	1243	C	Sidechain
38	A1	1244	C	Sidechain
38	A1	1245	C	Sidechain
38	A1	1246	G	Sidechain
38	A1	1247	U	Sidechain
38	A1	1248	C	Sidechain
38	A1	125	C	Sidechain
38	A1	1250	A	Sidechain
38	A1	1256	G	Sidechain
38	A1	1257	G	Sidechain
38	A1	1258	G	Sidechain
38	A1	1259	G	Sidechain
38	A1	1261	C	Sidechain
38	A1	1264	G	Sidechain
38	A1	1266	A	Sidechain
38	A1	1268	A	Sidechain
38	A1	1269	U	Sidechain
38	A1	1271	G	Sidechain
38	A1	1273	C	Sidechain
38	A1	1274	G	Sidechain
38	A1	1275	G	Sidechain
38	A1	1279	U	Sidechain
38	A1	1281	A	Sidechain
38	A1	1285	C	Sidechain
38	A1	1286	G	Sidechain
38	A1	1287	G	Sidechain
38	A1	1289	C	Sidechain
38	A1	1290	G	Sidechain
38	A1	1291	C	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1294	A	Sidechain
38	A1	1295	G	Sidechain
38	A1	1296	A	Sidechain
38	A1	1297	C	Sidechain
38	A1	1298	C	Sidechain
38	A1	13	U	Sidechain
38	A1	130	G	Sidechain
38	A1	1301	G	Sidechain
38	A1	1302	G	Sidechain
38	A1	1305	C	Sidechain
38	A1	1306	A	Sidechain
38	A1	1307	C	Sidechain
38	A1	1308	G	Sidechain
38	A1	1324	G	Sidechain
38	A1	1326	U	Sidechain
38	A1	133	G	Sidechain
38	A1	1331	U	Sidechain
38	A1	1333	G	Sidechain
38	A1	1336	G	Sidechain
38	A1	1339	C	Sidechain
38	A1	1340	G	Sidechain
38	A1	1345	G	Sidechain
38	A1	1347	U	Sidechain
38	A1	1348	G	Sidechain
38	A1	1349	G	Sidechain
38	A1	135	U	Sidechain
38	A1	1351	G	Sidechain
38	A1	1353	A	Sidechain
38	A1	1354	G	Sidechain
38	A1	1356	A	Sidechain
38	A1	1357	G	Sidechain
38	A1	136	U	Sidechain
38	A1	1369	G	Sidechain
38	A1	137	A	Sidechain
38	A1	1370	G	Sidechain
38	A1	1372	C	Sidechain
38	A1	1373	C	Sidechain
38	A1	1374	G	Sidechain
38	A1	1375	G	Sidechain
38	A1	1377	G	Sidechain
38	A1	138	U	Sidechain
38	A1	1380	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1381	C	Sidechain
38	A1	1385	C	Sidechain
38	A1	1386	G	Sidechain
38	A1	1387	G	Sidechain
38	A1	1388	U	Sidechain
38	A1	1390	U	Sidechain
38	A1	1392	G	Sidechain
38	A1	1393	C	Sidechain
38	A1	1394	G	Sidechain
38	A1	1395	G	Sidechain
38	A1	1399	C	Sidechain
38	A1	140	C	Sidechain
38	A1	1400	U	Sidechain
38	A1	1401	G	Sidechain
38	A1	1403	C	Sidechain
38	A1	1405	G	Sidechain
38	A1	1409	U	Sidechain
38	A1	1410	A	Sidechain
38	A1	1411	G	Sidechain
38	A1	1412	C	Sidechain
38	A1	1414	G	Sidechain
38	A1	1415	C	Sidechain
38	A1	1416	G	Sidechain
38	A1	1418	A	Sidechain
38	A1	1421	C	Sidechain
38	A1	1423	G	Sidechain
38	A1	1424	G	Sidechain
38	A1	1425	U	Sidechain
38	A1	1428	G	Sidechain
38	A1	1429	A	Sidechain
38	A1	143	C	Sidechain
38	A1	1433	C	Sidechain
38	A1	1434	C	Sidechain
38	A1	1435	G	Sidechain
38	A1	1439	G	Sidechain
38	A1	1440	C	Sidechain
38	A1	1441	C	Sidechain
38	A1	1442	G	Sidechain
38	A1	1443	G	Sidechain
38	A1	1444	A	Sidechain
38	A1	1445	G	Sidechain
38	A1	1446	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1447	G	Sidechain
38	A1	1448	G	Sidechain
38	A1	1449	C	Sidechain
38	A1	1453	G	Sidechain
38	A1	1454	G	Sidechain
38	A1	1455	U	Sidechain
38	A1	1459	A	Sidechain
38	A1	146	U	Sidechain
38	A1	1462	G	Sidechain
38	A1	1465	A	Sidechain
38	A1	1467	G	Sidechain
38	A1	1471	G	Sidechain
38	A1	1472	U	Sidechain
38	A1	1473	C	Sidechain
38	A1	1474	A	Sidechain
38	A1	1476	C	Sidechain
38	A1	1477	C	Sidechain
38	A1	1479	U	Sidechain
38	A1	148	C	Sidechain
38	A1	1481	G	Sidechain
38	A1	1486	G	Sidechain
38	A1	149	G	Sidechain
38	A1	1491	U	Sidechain
38	A1	1494	U	Sidechain
38	A1	1495	A	Sidechain
38	A1	1501	G	Sidechain
38	A1	1504	C	Sidechain
38	A1	1505	G	Sidechain
38	A1	1509	C	Sidechain
38	A1	1512	G	Sidechain
38	A1	1513	G	Sidechain
38	A1	1514	C	Sidechain
38	A1	1516	C	Sidechain
38	A1	1520	G	Sidechain
38	A1	1521	G	Sidechain
38	A1	1522	A	Sidechain
38	A1	1523	A	Sidechain
38	A1	1524	A	Sidechain
38	A1	1525	G	Sidechain
38	A1	1526	G	Sidechain
38	A1	1527	G	Sidechain
38	A1	1528	A	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1532	G	Sidechain
38	A1	1533	G	Sidechain
38	A1	1539	U	Sidechain
38	A1	1540	A	Sidechain
38	A1	1541	U	Sidechain
38	A1	1546	G	Sidechain
38	A1	1548	A	Sidechain
38	A1	1553	G	Sidechain
38	A1	1554	G	Sidechain
38	A1	1555	G	Sidechain
38	A1	1560	G	Sidechain
38	A1	1561	G	Sidechain
38	A1	1565	G	Sidechain
38	A1	1569	A	Sidechain
38	A1	1570	C	Sidechain
38	A1	1571	G	Sidechain
38	A1	1575	G	Sidechain
38	A1	1576	C	Sidechain
38	A1	1577	C	Sidechain
38	A1	1578	C	Sidechain
38	A1	1581	A	Sidechain
38	A1	1582	G	Sidechain
38	A1	1583	G	Sidechain
38	A1	1584	G	Sidechain
38	A1	1585	U	Sidechain
38	A1	1586	G	Sidechain
38	A1	1589	G	Sidechain
38	A1	1591	C	Sidechain
38	A1	1592	U	Sidechain
38	A1	1594	G	Sidechain
38	A1	1596	G	Sidechain
38	A1	16	G	Sidechain
38	A1	1600	G	Sidechain
38	A1	1601	G	Sidechain
38	A1	1602	C	Sidechain
38	A1	1603	G	Sidechain
38	A1	1604	G	Sidechain
38	A1	1608	G	Sidechain
38	A1	1609	G	Sidechain
38	A1	1610	C	Sidechain
38	A1	1612	G	Sidechain
38	A1	1613	A	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1616	A	Sidechain
38	A1	1618	G	Sidechain
38	A1	1620	C	Sidechain
38	A1	1621	G	Sidechain
38	A1	1622	G	Sidechain
38	A1	1623	C	Sidechain
38	A1	1624	U	Sidechain
38	A1	1625	A	Sidechain
38	A1	1626	A	Sidechain
38	A1	1627	G	Sidechain
38	A1	1630	U	Sidechain
38	A1	1631	A	Sidechain
38	A1	1632	U	Sidechain
38	A1	1633	A	Sidechain
38	A1	1635	G	Sidechain
38	A1	1637	C	Sidechain
38	A1	1638	C	Sidechain
38	A1	164	A	Sidechain
38	A1	1640	G	Sidechain
38	A1	1641	G	Sidechain
38	A1	1642	G	Sidechain
38	A1	1644	G	Sidechain
38	A1	1653	U	Sidechain
38	A1	1655	G	Sidechain
38	A1	1657	G	Sidechain
38	A1	1659	G	Sidechain
38	A1	166	G	Sidechain
38	A1	1660	A	Sidechain
38	A1	1661	A	Sidechain
38	A1	1663	C	Sidechain
38	A1	1665	G	Sidechain
38	A1	1666	G	Sidechain
38	A1	1668	G	Sidechain
38	A1	167	G	Sidechain
38	A1	1674	G	Sidechain
38	A1	1675	C	Sidechain
38	A1	1676	G	Sidechain
38	A1	1677	A	Sidechain
38	A1	1679	U	Sidechain
38	A1	1680	G	Sidechain
38	A1	1681	G	Sidechain
38	A1	1687	C	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1690	U	Sidechain
38	A1	1695	G	Sidechain
38	A1	1696	G	Sidechain
38	A1	1699	U	Sidechain
38	A1	17	C	Sidechain
38	A1	1707	A	Sidechain
38	A1	1708	U	Sidechain
38	A1	1709	C	Sidechain
38	A1	1713	G	Sidechain
38	A1	1714	G	Sidechain
38	A1	1717	C	Sidechain
38	A1	1718	C	Sidechain
38	A1	1719	C	Sidechain
38	A1	172	C	Sidechain
38	A1	1721	U	Sidechain
38	A1	1722	G	Sidechain
38	A1	1725	A	Sidechain
38	A1	1726	A	Sidechain
38	A1	1727	G	Sidechain
38	A1	1731	U	Sidechain
38	A1	1733	C	Sidechain
38	A1	1734	G	Sidechain
38	A1	1735	G	Sidechain
38	A1	1737	A	Sidechain
38	A1	1739	U	Sidechain
38	A1	1740	U	Sidechain
38	A1	1741	C	Sidechain
38	A1	1743	G	Sidechain
38	A1	1744	A	Sidechain
38	A1	1745	U	Sidechain
38	A1	1746	C	Sidechain
38	A1	175	G	Sidechain
38	A1	1750	C	Sidechain
38	A1	1753	G	Sidechain
38	A1	1758	U	Sidechain
38	A1	1759	A	Sidechain
38	A1	176	G	Sidechain
38	A1	1760	C	Sidechain
38	A1	1763	A	Sidechain
38	A1	1768	C	Sidechain
38	A1	1769	G	Sidechain
38	A1	177	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1773	C	Sidechain
38	A1	1774	A	Sidechain
38	A1	1775	G	Sidechain
38	A1	1776	G	Sidechain
38	A1	1777	U	Sidechain
38	A1	178	G	Sidechain
38	A1	1781	C	Sidechain
38	A1	1782	C	Sidechain
38	A1	1783	U	Sidechain
38	A1	1784	G	Sidechain
38	A1	1787	U	Sidechain
38	A1	1788	G	Sidechain
38	A1	1789	A	Sidechain
38	A1	1792	A	Sidechain
38	A1	1793	G	Sidechain
38	A1	1794	C	Sidechain
38	A1	1795	C	Sidechain
38	A1	1796	U	Sidechain
38	A1	1798	A	Sidechain
38	A1	1799	G	Sidechain
38	A1	1800	G	Sidechain
38	A1	1802	G	Sidechain
38	A1	1803	U	Sidechain
38	A1	1804	G	Sidechain
38	A1	1805	U	Sidechain
38	A1	1807	G	Sidechain
38	A1	181	U	Sidechain
38	A1	1810	G	Sidechain
38	A1	1811	G	Sidechain
38	A1	1814	A	Sidechain
38	A1	1815	C	Sidechain
38	A1	1817	C	Sidechain
38	A1	1819	G	Sidechain
38	A1	182	U	Sidechain
38	A1	1822	G	Sidechain
38	A1	1823	A	Sidechain
38	A1	1824	G	Sidechain
38	A1	1826	G	Sidechain
38	A1	183	G	Sidechain
38	A1	1833	G	Sidechain
38	A1	184	A	Sidechain
38	A1	1841	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1844	C	Sidechain
38	A1	1846	G	Sidechain
38	A1	1848	A	Sidechain
38	A1	185	A	Sidechain
38	A1	1852	U	Sidechain
38	A1	1854	G	Sidechain
38	A1	1856	G	Sidechain
38	A1	1857	A	Sidechain
38	A1	1858	G	Sidechain
38	A1	1861	G	Sidechain
38	A1	1863	G	Sidechain
38	A1	1865	U	Sidechain
38	A1	187	C	Sidechain
38	A1	1870	G	Sidechain
38	A1	1873	G	Sidechain
38	A1	1876	G	Sidechain
38	A1	1877	C	Sidechain
38	A1	1878	G	Sidechain
38	A1	1882	C	Sidechain
38	A1	1884	C	Sidechain
38	A1	1885	G	Sidechain
38	A1	1886	C	Sidechain
38	A1	1888	G	Sidechain
38	A1	189	U	Sidechain
38	A1	1890	U	Sidechain
38	A1	1891	C	Sidechain
38	A1	1896	U	Sidechain
38	A1	1897	G	Sidechain
38	A1	190	C	Sidechain
38	A1	1900	U	Sidechain
38	A1	1901	A	Sidechain
38	A1	1902	G	Sidechain
38	A1	1903	G	Sidechain
38	A1	1907	G	Sidechain
38	A1	1908	C	Sidechain
38	A1	1914	U	Sidechain
38	A1	1919	A	Sidechain
38	A1	1920	A	Sidechain
38	A1	1921	U	Sidechain
38	A1	1924	A	Sidechain
38	A1	1926	A	Sidechain
38	A1	1927	C	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1928	A	Sidechain
38	A1	1929	C	Sidechain
38	A1	1930	A	Sidechain
38	A1	1931	G	Sidechain
38	A1	1932	G	Sidechain
38	A1	1933	U	Sidechain
38	A1	1934	C	Sidechain
38	A1	1935	C	Sidechain
38	A1	1936	C	Sidechain
38	A1	1937	A	Sidechain
38	A1	1938	G	Sidechain
38	A1	1939	C	Sidechain
38	A1	194	G	Sidechain
38	A1	1941	A	Sidechain
38	A1	1942	G	Sidechain
38	A1	1946	G	Sidechain
38	A1	1947	A	Sidechain
38	A1	1949	A	Sidechain
38	A1	195	U	Sidechain
38	A1	1950	G	Sidechain
38	A1	1952	G	Sidechain
38	A1	1953	U	Sidechain
38	A1	1956	G	Sidechain
38	A1	1957	U	Sidechain
38	A1	1958	A	Sidechain
38	A1	196	A	Sidechain
38	A1	1961	G	Sidechain
38	A1	1962	G	Sidechain
38	A1	1966	C	Sidechain
38	A1	1968	A	Sidechain
38	A1	1969	C	Sidechain
38	A1	1970	G	Sidechain
38	A1	1973	U	Sidechain
38	A1	1975	C	Sidechain
38	A1	1976	C	Sidechain
38	A1	1978	A	Sidechain
38	A1	1980	U	Sidechain
38	A1	1981	G	Sidechain
38	A1	1982	C	Sidechain
38	A1	1985	G	Sidechain
38	A1	1987	A	Sidechain
38	A1	1988	U	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	1989	G	Sidechain
38	A1	1990	U	Sidechain
38	A1	1991	G	Sidechain
38	A1	1993	A	Sidechain
38	A1	1994	G	Sidechain
38	A1	1998	G	Sidechain
38	A1	2001	U	Sidechain
38	A1	2002	A	Sidechain
38	A1	2003	C	Sidechain
38	A1	2004	A	Sidechain
38	A1	2006	C	Sidechain
38	A1	2007	C	Sidechain
38	A1	2010	G	Sidechain
38	A1	2011	U	Sidechain
38	A1	2015	G	Sidechain
38	A1	2017	A	Sidechain
38	A1	2019	C	Sidechain
38	A1	2025	A	Sidechain
38	A1	2033	G	Sidechain
38	A1	2034	G	Sidechain
38	A1	2036	A	Sidechain
38	A1	2037	A	Sidechain
38	A1	2039	U	Sidechain
38	A1	2040	A	Sidechain
38	A1	2042	A	Sidechain
38	A1	2045	C	Sidechain
38	A1	2047	U	Sidechain
38	A1	2048	C	Sidechain
38	A1	2050	U	Sidechain
38	A1	2051	A	Sidechain
38	A1	2053	G	Sidechain
38	A1	2054	G	Sidechain
38	A1	2055	U	Sidechain
38	A1	2057	G	Sidechain
38	A1	206	A	Sidechain
38	A1	2061	A	Sidechain
38	A1	2063	U	Sidechain
38	A1	2064	U	Sidechain
38	A1	2067	U	Sidechain
38	A1	2068	U	Sidechain
38	A1	207	A	Sidechain
38	A1	2071	C	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2072	G	Sidechain
38	A1	2076	A	Sidechain
38	A1	2078	A	Sidechain
38	A1	2082	C	Sidechain
38	A1	2084	A	Sidechain
38	A1	2086	C	Sidechain
38	A1	2088	G	Sidechain
38	A1	2089	C	Sidechain
38	A1	2090	A	Sidechain
38	A1	2091	U	Sidechain
38	A1	2092	G	Sidechain
38	A1	2093	A	Sidechain
38	A1	2097	G	Sidechain
38	A1	2099	G	Sidechain
38	A1	210	A	Sidechain
38	A1	2101	A	Sidechain
38	A1	2106	G	Sidechain
38	A1	211	A	Sidechain
38	A1	2110	C	Sidechain
38	A1	2112	C	Sidechain
38	A1	2113	G	Sidechain
38	A1	2114	C	Sidechain
38	A1	2115	U	Sidechain
38	A1	2117	U	Sidechain
38	A1	2119	C	Sidechain
38	A1	2120	C	Sidechain
38	A1	2122	G	Sidechain
38	A1	2123	G	Sidechain
38	A1	2124	C	Sidechain
38	A1	2126	G	Sidechain
38	A1	2131	C	Sidechain
38	A1	2132	C	Sidechain
38	A1	2134	G	Sidechain
38	A1	2138	A	Sidechain
38	A1	2139	A	Sidechain
38	A1	214	C	Sidechain
38	A1	2140	C	Sidechain
38	A1	2141	C	Sidechain
38	A1	2142	U	Sidechain
38	A1	2148	U	Sidechain
38	A1	2149	G	Sidechain
38	A1	2152	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2154	G	Sidechain
38	A1	2156	A	Sidechain
38	A1	2158	G	Sidechain
38	A1	2161	A	Sidechain
38	A1	2162	G	Sidechain
38	A1	2164	G	Sidechain
38	A1	2165	A	Sidechain
38	A1	2166	C	Sidechain
38	A1	2167	C	Sidechain
38	A1	2171	G	Sidechain
38	A1	2172	G	Sidechain
38	A1	2175	G	Sidechain
38	A1	2176	G	Sidechain
38	A1	2177	A	Sidechain
38	A1	2178	A	Sidechain
38	A1	2179	G	Sidechain
38	A1	218	A	Sidechain
38	A1	2183	A	Sidechain
38	A1	2184	G	Sidechain
38	A1	2189	C	Sidechain
38	A1	2190	A	Sidechain
38	A1	2191	U	Sidechain
38	A1	2192	G	Sidechain
38	A1	2195	G	Sidechain
38	A1	220	C	Sidechain
38	A1	2201	C	Sidechain
38	A1	2202	U	Sidechain
38	A1	2203	G	Sidechain
38	A1	2204	C	Sidechain
38	A1	2205	A	Sidechain
38	A1	2208	C	Sidechain
38	A1	221	G	Sidechain
38	A1	2210	G	Sidechain
38	A1	2212	C	Sidechain
38	A1	2216	G	Sidechain
38	A1	2217	C	Sidechain
38	A1	2218	C	Sidechain
38	A1	2219	A	Sidechain
38	A1	2223	G	Sidechain
38	A1	2224	G	Sidechain
38	A1	2226	G	Sidechain
38	A1	2228	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2229	G	Sidechain
38	A1	2230	G	Sidechain
38	A1	2233	G	Sidechain
38	A1	2234	C	Sidechain
38	A1	2235	G	Sidechain
38	A1	2237	A	Sidechain
38	A1	2240	G	Sidechain
38	A1	2241	U	Sidechain
38	A1	2243	G	Sidechain
38	A1	2244	G	Sidechain
38	A1	2245	C	Sidechain
38	A1	2247	G	Sidechain
38	A1	2248	G	Sidechain
38	A1	2249	A	Sidechain
38	A1	2250	G	Sidechain
38	A1	2253	G	Sidechain
38	A1	2256	G	Sidechain
38	A1	2257	A	Sidechain
38	A1	2258	A	Sidechain
38	A1	2259	G	Sidechain
38	A1	226	C	Sidechain
38	A1	2260	C	Sidechain
38	A1	2262	C	Sidechain
38	A1	2265	C	Sidechain
38	A1	2266	C	Sidechain
38	A1	2267	U	Sidechain
38	A1	227	G	Sidechain
38	A1	2270	G	Sidechain
38	A1	2272	G	Sidechain
38	A1	2274	C	Sidechain
38	A1	2275	G	Sidechain
38	A1	2278	U	Sidechain
38	A1	2279	G	Sidechain
38	A1	2280	G	Sidechain
38	A1	2281	A	Sidechain
38	A1	2285	G	Sidechain
38	A1	2286	U	Sidechain
38	A1	2291	G	Sidechain
38	A1	2295	C	Sidechain
38	A1	2298	C	Sidechain
38	A1	23	G	Sidechain
38	A1	230	A	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2301	C	Sidechain
38	A1	2302	C	Sidechain
38	A1	2303	A	Sidechain
38	A1	2304	C	Sidechain
38	A1	2305	U	Sidechain
38	A1	2308	C	Sidechain
38	A1	2310	G	Sidechain
38	A1	2316	U	Sidechain
38	A1	2317	G	Sidechain
38	A1	2318	G	Sidechain
38	A1	2320	U	Sidechain
38	A1	2322	A	Sidechain
38	A1	2324	C	Sidechain
38	A1	2328	G	Sidechain
38	A1	2329	A	Sidechain
38	A1	2331	A	Sidechain
38	A1	2334	G	Sidechain
38	A1	2336	G	Sidechain
38	A1	2337	G	Sidechain
38	A1	2338	A	Sidechain
38	A1	234	G	Sidechain
38	A1	2340	A	Sidechain
38	A1	2341	G	Sidechain
38	A1	2342	C	Sidechain
38	A1	2343	G	Sidechain
38	A1	2345	U	Sidechain
38	A1	2346	A	Sidechain
38	A1	2348	G	Sidechain
38	A1	2349	U	Sidechain
38	A1	2351	G	Sidechain
38	A1	2354	A	Sidechain
38	A1	2356	U	Sidechain
38	A1	2358	U	Sidechain
38	A1	236	G	Sidechain
38	A1	2361	C	Sidechain
38	A1	2362	U	Sidechain
38	A1	237	G	Sidechain
38	A1	2371	A	Sidechain
38	A1	2373	G	Sidechain
38	A1	2379	G	Sidechain
38	A1	238	C	Sidechain
38	A1	2382	A	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2384	G	Sidechain
38	A1	2386	U	Sidechain
38	A1	2388	U	Sidechain
38	A1	239	G	Sidechain
38	A1	2393	G	Sidechain
38	A1	2394	G	Sidechain
38	A1	2398	C	Sidechain
38	A1	2399	C	Sidechain
38	A1	24	G	Sidechain
38	A1	2400	U	Sidechain
38	A1	2403	G	Sidechain
38	A1	2404	G	Sidechain
38	A1	2405	U	Sidechain
38	A1	2407	G	Sidechain
38	A1	2408	G	Sidechain
38	A1	241	C	Sidechain
38	A1	2410	U	Sidechain
38	A1	2414	G	Sidechain
38	A1	2418	G	Sidechain
38	A1	2419	U	Sidechain
38	A1	242	C	Sidechain
38	A1	2420	C	Sidechain
38	A1	2423	G	Sidechain
38	A1	2428	C	Sidechain
38	A1	2429	G	Sidechain
38	A1	2434	A	Sidechain
38	A1	2435	G	Sidechain
38	A1	2436	A	Sidechain
38	A1	2437	G	Sidechain
38	A1	2441	A	Sidechain
38	A1	2444	G	Sidechain
38	A1	2445	G	Sidechain
38	A1	2450	A	Sidechain
38	A1	2451	G	Sidechain
38	A1	2453	C	Sidechain
38	A1	2458	U	Sidechain
38	A1	2459	G	Sidechain
38	A1	246	A	Sidechain
38	A1	2460	A	Sidechain
38	A1	2463	G	Sidechain
38	A1	2469	G	Sidechain
38	A1	2470	U	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2472	A	Sidechain
38	A1	2473	C	Sidechain
38	A1	2474	A	Sidechain
38	A1	2475	G	Sidechain
38	A1	2477	G	Sidechain
38	A1	2479	C	Sidechain
38	A1	248	C	Sidechain
38	A1	2481	G	Sidechain
38	A1	2483	U	Sidechain
38	A1	2485	C	Sidechain
38	A1	2487	G	Sidechain
38	A1	249	G	Sidechain
38	A1	2490	C	Sidechain
38	A1	2492	G	Sidechain
38	A1	2493	A	Sidechain
38	A1	2494	A	Sidechain
38	A1	2497	G	Sidechain
38	A1	2499	U	Sidechain
38	A1	2501	G	Sidechain
38	A1	2504	U	Sidechain
38	A1	2506	G	Sidechain
38	A1	2508	G	Sidechain
38	A1	2509	A	Sidechain
38	A1	2517	U	Sidechain
38	A1	2523	C	Sidechain
38	A1	2526	G	Sidechain
38	A1	2529	G	Sidechain
38	A1	2531	G	Sidechain
38	A1	2532	G	Sidechain
38	A1	2538	G	Sidechain
38	A1	2539	G	Sidechain
38	A1	2540	A	Sidechain
38	A1	2541	U	Sidechain
38	A1	2542	G	Sidechain
38	A1	2544	C	Sidechain
38	A1	2548	A	Sidechain
38	A1	2559	G	Sidechain
38	A1	256	G	Sidechain
38	A1	2560	G	Sidechain
38	A1	2562	G	Sidechain
38	A1	2566	A	Sidechain
38	A1	2574	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2576	C	Sidechain
38	A1	2577	U	Sidechain
38	A1	258	C	Sidechain
38	A1	2580	G	Sidechain
38	A1	2581	G	Sidechain
38	A1	2583	G	Sidechain
38	A1	2584	A	Sidechain
38	A1	2585	G	Sidechain
38	A1	2587	G	Sidechain
38	A1	2588	C	Sidechain
38	A1	2590	C	Sidechain
38	A1	2592	U	Sidechain
38	A1	2593	A	Sidechain
38	A1	2594	U	Sidechain
38	A1	260	A	Sidechain
38	A1	2604	G	Sidechain
38	A1	2605	G	Sidechain
38	A1	2612	A	Sidechain
38	A1	2613	C	Sidechain
38	A1	2617	G	Sidechain
38	A1	2618	C	Sidechain
38	A1	2619	U	Sidechain
38	A1	2622	C	Sidechain
38	A1	2626	U	Sidechain
38	A1	263	U	Sidechain
38	A1	2630	C	Sidechain
38	A1	2631	C	Sidechain
38	A1	2634	U	Sidechain
38	A1	2636	C	Sidechain
38	A1	2639	G	Sidechain
38	A1	264	G	Sidechain
38	A1	2641	C	Sidechain
38	A1	2642	C	Sidechain
38	A1	2645	C	Sidechain
38	A1	2646	A	Sidechain
38	A1	2647	G	Sidechain
38	A1	2649	A	Sidechain
38	A1	2650	G	Sidechain
38	A1	2652	G	Sidechain
38	A1	2653	G	Sidechain
38	A1	2656	A	Sidechain
38	A1	2658	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2663	G	Sidechain
38	A1	2667	U	Sidechain
38	A1	2669	U	Sidechain
38	A1	2671	C	Sidechain
38	A1	2674	C	Sidechain
38	A1	2675	C	Sidechain
38	A1	2676	A	Sidechain
38	A1	2679	A	Sidechain
38	A1	2680	A	Sidechain
38	A1	2684	G	Sidechain
38	A1	2688	C	Sidechain
38	A1	269	C	Sidechain
38	A1	2693	G	Sidechain
38	A1	2694	C	Sidechain
38	A1	2697	G	Sidechain
38	A1	2700	U	Sidechain
38	A1	2703	G	Sidechain
38	A1	2707	G	Sidechain
38	A1	2708	U	Sidechain
38	A1	2710	G	Sidechain
38	A1	2712	G	Sidechain
38	A1	2713	A	Sidechain
38	A1	2714	G	Sidechain
38	A1	2717	A	Sidechain
38	A1	2719	G	Sidechain
38	A1	272	G	Sidechain
38	A1	2722	G	Sidechain
38	A1	2723	G	Sidechain
38	A1	2726	G	Sidechain
38	A1	2727	C	Sidechain
38	A1	2728	U	Sidechain
38	A1	273	G	Sidechain
38	A1	2733	A	Sidechain
38	A1	2737	G	Sidechain
38	A1	2738	G	Sidechain
38	A1	2739	G	Sidechain
38	A1	274	C	Sidechain
38	A1	2742	G	Sidechain
38	A1	2743	U	Sidechain
38	A1	2744	U	Sidechain
38	A1	2746	G	Sidechain
38	A1	275	C	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2751	C	Sidechain
38	A1	2752	U	Sidechain
38	A1	2753	G	Sidechain
38	A1	2754	A	Sidechain
38	A1	2756	G	Sidechain
38	A1	2759	A	Sidechain
38	A1	276	G	Sidechain
38	A1	2761	G	Sidechain
38	A1	2764	G	Sidechain
38	A1	2766	C	Sidechain
38	A1	2768	C	Sidechain
38	A1	2769	U	Sidechain
38	A1	277	A	Sidechain
38	A1	2773	A	Sidechain
38	A1	2774	C	Sidechain
38	A1	2775	G	Sidechain
38	A1	2777	G	Sidechain
38	A1	2779	G	Sidechain
38	A1	2783	C	Sidechain
38	A1	2785	G	Sidechain
38	A1	2787	G	Sidechain
38	A1	279	G	Sidechain
38	A1	2792	G	Sidechain
38	A1	2793	C	Sidechain
38	A1	2794	G	Sidechain
38	A1	2795	G	Sidechain
38	A1	2799	C	Sidechain
38	A1	28	A	Sidechain
38	A1	2800	U	Sidechain
38	A1	2801	G	Sidechain
38	A1	2803	U	Sidechain
38	A1	2804	C	Sidechain
38	A1	2806	A	Sidechain
38	A1	2810	G	Sidechain
38	A1	2817	U	Sidechain
38	A1	2819	C	Sidechain
38	A1	2821	G	Sidechain
38	A1	2822	G	Sidechain
38	A1	2827	C	Sidechain
38	A1	2829	C	Sidechain
38	A1	2831	G	Sidechain
38	A1	2832	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2833	G	Sidechain
38	A1	2835	A	Sidechain
38	A1	2836	G	Sidechain
38	A1	2838	U	Sidechain
38	A1	2839	A	Sidechain
38	A1	284	U	Sidechain
38	A1	2842	C	Sidechain
38	A1	2843	C	Sidechain
38	A1	2844	G	Sidechain
38	A1	2847	G	Sidechain
38	A1	2848	C	Sidechain
38	A1	2850	G	Sidechain
38	A1	2852	U	Sidechain
38	A1	2853	A	Sidechain
38	A1	2854	A	Sidechain
38	A1	2855	G	Sidechain
38	A1	2856	G	Sidechain
38	A1	286	G	Sidechain
38	A1	2860	G	Sidechain
38	A1	2862	A	Sidechain
38	A1	2863	A	Sidechain
38	A1	2864	G	Sidechain
38	A1	2869	U	Sidechain
38	A1	287	G	Sidechain
38	A1	2874	C	Sidechain
38	A1	2877	A	Sidechain
38	A1	288	G	Sidechain
38	A1	2882	G	Sidechain
38	A1	2883	C	Sidechain
38	A1	2884	C	Sidechain
38	A1	2888	G	Sidechain
38	A1	289	G	Sidechain
38	A1	2891	A	Sidechain
38	A1	2892	A	Sidechain
38	A1	2893	U	Sidechain
38	A1	2898	G	Sidechain
38	A1	2899	G	Sidechain
38	A1	2902	G	Sidechain
38	A1	292	U	Sidechain
38	A1	2943	G	Sidechain
38	A1	2944	G	Sidechain
38	A1	2947	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	2948	A	Sidechain
38	A1	2949	G	Sidechain
38	A1	2950	G	Sidechain
38	A1	2951	G	Sidechain
38	A1	2953	U	Sidechain
38	A1	2955	G	Sidechain
38	A1	2956	G	Sidechain
38	A1	2959	A	Sidechain
38	A1	296	G	Sidechain
38	A1	2961	A	Sidechain
38	A1	2962	A	Sidechain
38	A1	2963	G	Sidechain
38	A1	2964	A	Sidechain
38	A1	2965	C	Sidechain
38	A1	2967	C	Sidechain
38	A1	2969	G	Sidechain
38	A1	297	G	Sidechain
38	A1	2974	U	Sidechain
38	A1	2975	A	Sidechain
38	A1	2976	G	Sidechain
38	A1	2977	G	Sidechain
38	A1	2978	G	Sidechain
38	A1	298	G	Sidechain
38	A1	2980	G	Sidechain
38	A1	2982	G	Sidechain
38	A1	2986	G	Sidechain
38	A1	2987	U	Sidechain
38	A1	2988	A	Sidechain
38	A1	299	U	Sidechain
38	A1	2990	G	Sidechain
38	A1	2994	G	Sidechain
38	A1	2995	A	Sidechain
38	A1	2997	G	Sidechain
38	A1	2998	G	Sidechain
38	A1	2999	G	Sidechain
38	A1	30	G	Sidechain
38	A1	3000	U	Sidechain
38	A1	3004	C	Sidechain
38	A1	3005	C	Sidechain
38	A1	3007	A	Sidechain
38	A1	3009	C	Sidechain
38	A1	302	U	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	3022	C	Sidechain
38	A1	3023	G	Sidechain
38	A1	3024	C	Sidechain
38	A1	3026	C	Sidechain
38	A1	3027	C	Sidechain
38	A1	3031	U	Sidechain
38	A1	3034	C	Sidechain
38	A1	3035	C	Sidechain
38	A1	3036	C	Sidechain
38	A1	3038	A	Sidechain
38	A1	304	G	Sidechain
38	A1	3042	C	Sidechain
38	A1	3044	U	Sidechain
38	A1	3045	G	Sidechain
38	A1	305	G	Sidechain
38	A1	308	C	Sidechain
38	A1	309	C	Sidechain
38	A1	31	G	Sidechain
38	A1	310	C	Sidechain
38	A1	312	G	Sidechain
38	A1	313	U	Sidechain
38	A1	316	G	Sidechain
38	A1	317	A	Sidechain
38	A1	318	G	Sidechain
38	A1	319	A	Sidechain
38	A1	32	C	Sidechain
38	A1	322	C	Sidechain
38	A1	324	C	Sidechain
38	A1	325	G	Sidechain
38	A1	326	C	Sidechain
38	A1	328	G	Sidechain
38	A1	329	G	Sidechain
38	A1	33	U	Sidechain
38	A1	330	U	Sidechain
38	A1	332	A	Sidechain
38	A1	336	C	Sidechain
38	A1	338	A	Sidechain
38	A1	339	A	Sidechain
38	A1	34	C	Sidechain
38	A1	341	U	Sidechain
38	A1	342	C	Sidechain
38	A1	348	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	35	G	Sidechain
38	A1	351	C	Sidechain
38	A1	353	C	Sidechain
38	A1	354	G	Sidechain
38	A1	355	G	Sidechain
38	A1	358	C	Sidechain
38	A1	361	G	Sidechain
38	A1	363	G	Sidechain
38	A1	364	A	Sidechain
38	A1	365	G	Sidechain
38	A1	366	G	Sidechain
38	A1	369	G	Sidechain
38	A1	37	C	Sidechain
38	A1	373	G	Sidechain
38	A1	374	C	Sidechain
38	A1	376	C	Sidechain
38	A1	379	U	Sidechain
38	A1	380	A	Sidechain
38	A1	384	G	Sidechain
38	A1	386	A	Sidechain
38	A1	388	G	Sidechain
38	A1	390	C	Sidechain
38	A1	394	A	Sidechain
38	A1	396	G	Sidechain
38	A1	397	G	Sidechain
38	A1	398	U	Sidechain
38	A1	40	G	Sidechain
38	A1	400	U	Sidechain
38	A1	401	C	Sidechain
38	A1	402	G	Sidechain
38	A1	404	G	Sidechain
38	A1	405	G	Sidechain
38	A1	407	A	Sidechain
38	A1	409	C	Sidechain
38	A1	410	C	Sidechain
38	A1	412	G	Sidechain
38	A1	413	A	Sidechain
38	A1	416	A	Sidechain
38	A1	417	C	Sidechain
38	A1	419	G	Sidechain
38	A1	42	G	Sidechain
38	A1	420	U	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	423	G	Sidechain
38	A1	424	U	Sidechain
38	A1	428	A	Sidechain
38	A1	43	G	Sidechain
38	A1	431	U	Sidechain
38	A1	433	C	Sidechain
38	A1	434	G	Sidechain
38	A1	435	G	Sidechain
38	A1	438	G	Sidechain
38	A1	439	G	Sidechain
38	A1	44	C	Sidechain
38	A1	442	G	Sidechain
38	A1	444	U	Sidechain
38	A1	447	G	Sidechain
38	A1	448	A	Sidechain
38	A1	449	G	Sidechain
38	A1	45	G	Sidechain
38	A1	450	G	Sidechain
38	A1	452	A	Sidechain
38	A1	454	C	Sidechain
38	A1	455	G	Sidechain
38	A1	457	C	Sidechain
38	A1	461	C	Sidechain
38	A1	462	A	Sidechain
38	A1	463	A	Sidechain
38	A1	465	C	Sidechain
38	A1	468	A	Sidechain
38	A1	470	A	Sidechain
38	A1	474	G	Sidechain
38	A1	477	C	Sidechain
38	A1	478	C	Sidechain
38	A1	48	G	Sidechain
38	A1	481	G	Sidechain
38	A1	482	A	Sidechain
38	A1	488	A	Sidechain
38	A1	489	G	Sidechain
38	A1	493	A	Sidechain
38	A1	496	A	Sidechain
38	A1	497	G	Sidechain
38	A1	498	U	Sidechain
38	A1	499	A	Sidechain
38	A1	503	U	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	506	G	Sidechain
38	A1	51	G	Sidechain
38	A1	515	G	Sidechain
38	A1	516	A	Sidechain
38	A1	517	A	Sidechain
38	A1	518	A	Sidechain
38	A1	519	A	Sidechain
38	A1	52	A	Sidechain
38	A1	520	G	Sidechain
38	A1	521	C	Sidechain
38	A1	524	C	Sidechain
38	A1	525	C	Sidechain
38	A1	527	G	Sidechain
38	A1	529	G	Sidechain
38	A1	53	A	Sidechain
38	A1	532	G	Sidechain
38	A1	534	G	Sidechain
38	A1	536	G	Sidechain
38	A1	537	U	Sidechain
38	A1	54	G	Sidechain
38	A1	540	A	Sidechain
38	A1	543	G	Sidechain
38	A1	545	G	Sidechain
38	A1	548	U	Sidechain
38	A1	549	G	Sidechain
38	A1	55	G	Sidechain
38	A1	552	A	Sidechain
38	A1	553	C	Sidechain
38	A1	555	G	Sidechain
38	A1	557	G	Sidechain
38	A1	558	C	Sidechain
38	A1	559	G	Sidechain
38	A1	560	G	Sidechain
38	A1	562	G	Sidechain
38	A1	566	G	Sidechain
38	A1	567	G	Sidechain
38	A1	568	A	Sidechain
38	A1	569	G	Sidechain
38	A1	571	G	Sidechain
38	A1	577	C	Sidechain
38	A1	583	A	Sidechain
38	A1	585	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	586	A	Sidechain
38	A1	588	U	Sidechain
38	A1	589	G	Sidechain
38	A1	59	U	Sidechain
38	A1	590	A	Sidechain
38	A1	597	C	Sidechain
38	A1	603	G	Sidechain
38	A1	61	G	Sidechain
38	A1	612	G	Sidechain
38	A1	613	C	Sidechain
38	A1	621	G	Sidechain
38	A1	622	A	Sidechain
38	A1	623	G	Sidechain
38	A1	625	A	Sidechain
38	A1	627	G	Sidechain
38	A1	629	G	Sidechain
38	A1	63	A	Sidechain
38	A1	632	G	Sidechain
38	A1	635	G	Sidechain
38	A1	643	G	Sidechain
38	A1	644	G	Sidechain
38	A1	646	U	Sidechain
38	A1	647	G	Sidechain
38	A1	648	C	Sidechain
38	A1	652	G	Sidechain
38	A1	654	C	Sidechain
38	A1	655	C	Sidechain
38	A1	656	G	Sidechain
38	A1	658	C	Sidechain
38	A1	659	U	Sidechain
38	A1	660	U	Sidechain
38	A1	661	G	Sidechain
38	A1	662	A	Sidechain
38	A1	663	A	Sidechain
38	A1	664	A	Sidechain
38	A1	665	C	Sidechain
38	A1	674	G	Sidechain
38	A1	675	G	Sidechain
38	A1	676	G	Sidechain
38	A1	677	A	Sidechain
38	A1	684	G	Sidechain
38	A1	685	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	689	U	Sidechain
38	A1	690	G	Sidechain
38	A1	691	G	Sidechain
38	A1	694	A	Sidechain
38	A1	696	G	Sidechain
38	A1	697	U	Sidechain
38	A1	698	U	Sidechain
38	A1	7	G	Sidechain
38	A1	70	G	Sidechain
38	A1	700	A	Sidechain
38	A1	701	G	Sidechain
38	A1	703	G	Sidechain
38	A1	704	G	Sidechain
38	A1	705	G	Sidechain
38	A1	707	U	Sidechain
38	A1	71	A	Sidechain
38	A1	710	G	Sidechain
38	A1	712	C	Sidechain
38	A1	713	C	Sidechain
38	A1	715	G	Sidechain
38	A1	716	U	Sidechain
38	A1	72	U	Sidechain
38	A1	721	G	Sidechain
38	A1	725	G	Sidechain
38	A1	726	G	Sidechain
38	A1	727	A	Sidechain
38	A1	728	A	Sidechain
38	A1	733	A	Sidechain
38	A1	735	A	Sidechain
38	A1	738	C	Sidechain
38	A1	739	C	Sidechain
38	A1	743	A	Sidechain
38	A1	746	C	Sidechain
38	A1	747	G	Sidechain
38	A1	749	G	Sidechain
38	A1	75	G	Sidechain
38	A1	760	G	Sidechain
38	A1	761	U	Sidechain
38	A1	763	A	Sidechain
38	A1	767	G	Sidechain
38	A1	770	G	Sidechain
38	A1	771	G	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	775	C	Sidechain
38	A1	776	G	Sidechain
38	A1	777	A	Sidechain
38	A1	778	A	Sidechain
38	A1	779	A	Sidechain
38	A1	78	C	Sidechain
38	A1	780	G	Sidechain
38	A1	786	G	Sidechain
38	A1	787	G	Sidechain
38	A1	788	A	Sidechain
38	A1	789	G	Sidechain
38	A1	79	C	Sidechain
38	A1	790	U	Sidechain
38	A1	791	C	Sidechain
38	A1	798	G	Sidechain
38	A1	8	G	Sidechain
38	A1	80	G	Sidechain
38	A1	800	G	Sidechain
38	A1	802	G	Sidechain
38	A1	803	A	Sidechain
38	A1	807	G	Sidechain
38	A1	808	A	Sidechain
38	A1	809	A	Sidechain
38	A1	81	G	Sidechain
38	A1	810	A	Sidechain
38	A1	816	C	Sidechain
38	A1	817	G	Sidechain
38	A1	818	A	Sidechain
38	A1	821	U	Sidechain
38	A1	823	G	Sidechain
38	A1	824	C	Sidechain
38	A1	825	C	Sidechain
38	A1	827	G	Sidechain
38	A1	83	G	Sidechain
38	A1	832	A	Sidechain
38	A1	833	G	Sidechain
38	A1	834	G	Sidechain
38	A1	835	G	Sidechain
38	A1	836	U	Sidechain
38	A1	838	A	Sidechain
38	A1	842	C	Sidechain
38	A1	844	C	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	845	U	Sidechain
38	A1	847	A	Sidechain
38	A1	850	C	Sidechain
38	A1	852	A	Sidechain
38	A1	853	G	Sidechain
38	A1	857	U	Sidechain
38	A1	859	G	Sidechain
38	A1	86	G	Sidechain
38	A1	860	A	Sidechain
38	A1	861	G	Sidechain
38	A1	862	G	Sidechain
38	A1	865	C	Sidechain
38	A1	866	G	Sidechain
38	A1	871	G	Sidechain
38	A1	872	G	Sidechain
38	A1	873	G	Sidechain
38	A1	874	U	Sidechain
38	A1	875	G	Sidechain
38	A1	876	C	Sidechain
38	A1	877	U	Sidechain
38	A1	878	G	Sidechain
38	A1	879	A	Sidechain
38	A1	88	G	Sidechain
38	A1	880	U	Sidechain
38	A1	881	G	Sidechain
38	A1	884	C	Sidechain
38	A1	885	A	Sidechain
38	A1	887	U	Sidechain
38	A1	889	C	Sidechain
38	A1	890	G	Sidechain
38	A1	892	U	Sidechain
38	A1	897	U	Sidechain
38	A1	899	A	Sidechain
38	A1	90	A	Sidechain
38	A1	902	C	Sidechain
38	A1	903	C	Sidechain
38	A1	904	G	Sidechain
38	A1	905	G	Sidechain
38	A1	908	U	Sidechain
38	A1	911	G	Sidechain
38	A1	912	G	Sidechain
38	A1	918	A	Sidechain

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Mol	Chain	Res	Type	Group
38	A1	919	G	Sidechain
38	A1	92	G	Sidechain
38	A1	921	C	Sidechain
38	A1	934	G	Sidechain
38	A1	936	G	Sidechain
38	A1	937	A	Sidechain
38	A1	938	U	Sidechain
38	A1	941	C	Sidechain
38	A1	943	G	Sidechain
38	A1	946	U	Sidechain
38	A1	947	C	Sidechain
38	A1	948	C	Sidechain
38	A1	95	G	Sidechain
38	A1	953	G	Sidechain
38	A1	954	A	Sidechain
38	A1	956	U	Sidechain
38	A1	96	C	Sidechain
38	A1	960	C	Sidechain
38	A1	961	C	Sidechain
38	A1	963	G	Sidechain
38	A1	964	C	Sidechain
38	A1	965	A	Sidechain
38	A1	966	G	Sidechain
38	A1	969	U	Sidechain
38	A1	970	G	Sidechain
38	A1	975	C	Sidechain
38	A1	979	G	Sidechain
38	A1	98	G	Sidechain
38	A1	980	G	Sidechain
38	A1	983	G	Sidechain
38	A1	989	G	Sidechain
38	A1	990	G	Sidechain
38	A1	992	G	Sidechain
38	A1	993	G	Sidechain
38	A1	994	G	Sidechain
38	A1	995	G	Sidechain
38	A1	996	U	Sidechain
38	A1	997	A	Sidechain
38	A1	998	G	Sidechain
39	A3	1	C	Sidechain
39	A3	10	U	Sidechain
39	A3	101	A	Sidechain

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Mol	Chain	Res	Type	Group
39	A3	102	G	Sidechain
39	A3	104	C	Sidechain
39	A3	106	G	Sidechain
39	A3	11	A	Sidechain
39	A3	111	G	Sidechain
39	A3	113	C	Sidechain
39	A3	116	C	Sidechain
39	A3	121	A	Sidechain
39	A3	124	A	Sidechain
39	A3	14	G	Sidechain
39	A3	16	G	Sidechain
39	A3	17	G	Sidechain
39	A3	19	G	Sidechain
39	A3	2	G	Sidechain
39	A3	21	C	Sidechain
39	A3	25	A	Sidechain
39	A3	26	C	Sidechain
39	A3	27	C	Sidechain
39	A3	29	G	Sidechain
39	A3	3	G	Sidechain
39	A3	31	U	Sidechain
39	A3	32	C	Sidechain
39	A3	35	A	Sidechain
39	A3	38	U	Sidechain
39	A3	4	C	Sidechain
39	A3	42	A	Sidechain
39	A3	43	C	Sidechain
39	A3	46	G	Sidechain
39	A3	48	A	Sidechain
39	A3	49	A	Sidechain
39	A3	51	U	Sidechain
39	A3	53	A	Sidechain
39	A3	54	A	Sidechain
39	A3	57	C	Sidechain
39	A3	58	C	Sidechain
39	A3	60	C	Sidechain
39	A3	63	G	Sidechain
39	A3	68	C	Sidechain
39	A3	71	G	Sidechain
39	A3	72	G	Sidechain
39	A3	73	U	Sidechain
39	A3	74	U	Sidechain

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Mol	Chain	Res	Type	Group
39	A3	75	G	Sidechain
39	A3	76	U	Sidechain
39	A3	78	C	Sidechain
39	A3	79	U	Sidechain
39	A3	82	C	Sidechain
39	A3	84	U	Sidechain
39	A3	86	C	Sidechain
39	A3	89	G	Sidechain
39	A3	9	A	Sidechain
39	A3	93	G	Sidechain
40	A5	32	PHE	Sidechain
40	A5	67	SER	Mainchain
2	A8	49	TYR	Sidechain
41	AA	107	PHE	Sidechain
41	AA	120	TYR	Sidechain
41	AA	18	ARG	Sidechain
41	AA	203	TYR	Sidechain
43	AB	10	ARG	Sidechain
43	AB	107	TYR	Sidechain
43	AB	156	ARG	Sidechain
43	AB	167	ARG	Sidechain
43	AB	234	ARG	Sidechain
43	AB	238	ARG	Sidechain
43	AB	30	TYR	Sidechain
43	AB	60	ARG	Sidechain
45	AC	135	LEU	Peptide
45	AC	156	LYS	Peptide
45	AC	185	TYR	Sidechain
45	AC	26	ARG	Sidechain
45	AC	292	ASN	Peptide
45	AC	304	GLU	Peptide
45	AC	343	ARG	Sidechain
46	AD	111	ARG	Sidechain
46	AD	130	ARG	Sidechain
46	AD	140	LEU	Peptide
46	AD	187	ARG	Sidechain
46	AD	22	PHE	Sidechain
46	AD	251	ARG	Sidechain
46	AD	33	ARG	Sidechain
46	AD	82	PHE	Sidechain
46	AD	91	ARG	Sidechain
48	AE	145	ARG	Sidechain

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Mol	Chain	Res	Type	Group
48	AE	149	ARG	Sidechain
48	AE	152	ARG	Sidechain
48	AE	24	ARG	Sidechain
48	AE	58	ARG	Sidechain
48	AE	88	TYR	Sidechain
50	AF	133	ARG	Sidechain
50	AF	173	TYR	Sidechain
50	AF	6	TRP	Peptide
12	AG	33	ARG	Sidechain
12	AG	45	ARG	Sidechain
52	AH	1	MET	Peptide
52	AH	59	PRO	Peptide
54	AI	128	TYR	Sidechain
54	AI	42	ARG	Sidechain
54	AI	62	ARG	Sidechain
54	AI	67	TYR	Sidechain
54	AI	76	ARG	Sidechain
54	AI	91	ARG	Sidechain
54	AI	96	ARG	Sidechain
56	AJ	46	TYR	Sidechain
56	AJ	74	ARG	Sidechain
56	AJ	86	ARG	Sidechain
56	AJ	96	ARG	Sidechain
40	AK	16	ARG	Sidechain
40	AK	64	ARG	Sidechain
59	AL	10	LYS	Peptide
59	AL	12	ARG	Sidechain
59	AL	47	TRP	Peptide
59	AL	53	TYR	Peptide
59	AL	54	ALA	Peptide
59	AL	63	PHE	Sidechain,Peptide
59	AL	65	ARG	Sidechain
59	AL	8	VAL	Peptide
59	AL	95	TYR	Sidechain
60	AM	31	ARG	Sidechain
60	AM	59	TYR	Sidechain
60	AM	71	ARG	Sidechain
60	AM	73	ARG	Sidechain
61	AN	108	TYR	Sidechain
61	AN	163	ARG	Sidechain
61	AN	17	TYR	Sidechain
61	AN	22	TYR	Sidechain

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Mol	Chain	Res	Type	Group
61	AN	58	ARG	Sidechain
61	AN	72	TYR	Sidechain
61	AN	82	TYR	Sidechain
62	AO	14	ARG	Sidechain
62	AO	15	ARG	Sidechain
62	AO	152	TYR	Sidechain
62	AO	171	TYR	Sidechain
62	AO	184	HIS	Sidechain
62	AO	22	ARG	Sidechain
62	AO	65	ARG	Sidechain
62	AO	8	ARG	Sidechain
62	AO	84	TYR	Sidechain
62	AO	92	TYR	Sidechain
63	AP	12	ARG	Sidechain
63	AP	13	ARG	Sidechain
63	AP	41	ARG	Sidechain
63	AP	93	ILE	Mainchain
4	AQ	100	ARG	Sidechain
4	AQ	133	LYS	Peptide
4	AQ	139	TYR	Sidechain
4	AQ	3	THR	Peptide
4	AQ	66	ARG	Sidechain
64	AR	3	GLN	Peptide
5	AS	129	TYR	Sidechain
5	AS	133	PHE	Sidechain
5	AS	139	PHE	Sidechain
5	AS	40	ARG	Sidechain
5	AS	83	TYR	Sidechain
6	AT	41	ARG	Sidechain
6	AT	61	ARG	Sidechain
7	AU	119	ARG	Sidechain
7	AU	33	ARG	Sidechain
7	AU	42	ARG	Sidechain
7	AU	59	TYR	Sidechain
65	AV	39	ARG	Sidechain
65	AV	45	ARG	Sidechain
65	AV	56	TYR	Sidechain
65	AV	60	ARG	Sidechain
65	AV	9	TYR	Sidechain
9	AX	132	PHE	Sidechain
9	AX	173	PHE	Sidechain
9	AX	220	PHE	Sidechain

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Mol	Chain	Res	Type	Group
9	AX	251	PHE	Sidechain
9	AX	287	TYR	Sidechain
9	AX	373	TYR	Sidechain
9	AX	384	PHE	Sidechain
9	AX	412	TYR	Sidechain
9	AX	415	TYR	Sidechain
66	AY	10	ARG	Sidechain
66	AY	69	ARG	Sidechain
67	AZ	51	TYR	Sidechain
42	Aa	26	LYS	Peptide
42	Aa	7	GLU	Peptide
44	Ab	15	ARG	Sidechain
44	Ab	18	ARG	Sidechain
44	Ab	25	ARG	Sidechain
44	Ab	26	GLN	Peptide
44	Ab	34	PHE	Peptide
44	Ab	35	LYS	Peptide
44	Ab	38	PRO	Peptide
44	Ab	57	LYS	Peptide
44	Ab	79	TYR	Sidechain
47	Ad	41	ARG	Sidechain
49	Ae	1	MET	Peptide
49	Ae	11	ARG	Sidechain
49	Ae	22	ARG	Sidechain
49	Ae	25	ARG	Sidechain
49	Ae	45	ARG	Sidechain
49	Ae	49	TYR	Sidechain
49	Ae	50	ARG	Sidechain
49	Ae	51	TRP	Peptide
49	Ae	8	PHE	Peptide
3	Af	2	ALA	Peptide
3	Af	33	ARG	Peptide
3	Af	34	ARG	Sidechain
3	Af	37	THR	Peptide
3	Af	38	HIS	Peptide
3	Af	48	LYS	Peptide
51	Ag	33	LYS	Peptide
51	Ag	38	ARG	Sidechain
51	Ag	4	PHE	Peptide
51	Ag	40	ARG	Sidechain
51	Ag	41	PRO	Peptide
53	Ah	11	ARG	Sidechain

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Mol	Chain	Res	Type	Group
53	Ah	2	ARG	Sidechain
55	Ai	17	TYR	Sidechain
55	Ai	22	ARG	Sidechain
57	Aj	30	ARG	Peptide
57	Aj	54	LYS	Peptide
57	Aj	57	GLY	Peptide
57	Aj	58	ARG	Peptide
57	Aj	59	GLU	Peptide
57	Aj	62	VAL	Peptide
57	Aj	82	ARG	Sidechain
58	Ak	213	TYR	Sidechain
58	Ak	33	MET	Peptide
58	Ak	54	VAL	Peptide
58	Ak	82	TYR	Sidechain
10	B1	10	G	Sidechain
10	B1	13	C	Sidechain
10	B1	15	G	Sidechain
10	B1	17	C	Sidechain
10	B1	18	U	Sidechain
10	B1	19	G	Sidechain
10	B1	2	G	Sidechain
10	B1	23	G	Sidechain
10	B1	24	A	Sidechain
10	B1	30	G	Sidechain
10	B1	31	G	Sidechain
10	B1	32	A	Sidechain
10	B1	33	C	Sidechain
10	B1	35	G	Sidechain
10	B1	43	G	Sidechain
10	B1	44	G	Sidechain
10	B1	46	U	Sidechain
10	B1	48	U	Sidechain
10	B1	49	C	Sidechain
10	B1	51	G	Sidechain
10	B1	52	G	Sidechain
10	B1	53	G	Sidechain
10	B1	54	G	Sidechain
10	B1	55	U	Sidechain
10	B1	56	U	Sidechain
10	B1	59	A	Sidechain
10	B1	6	G	Sidechain
10	B1	64	C	Sidechain

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Mol	Chain	Res	Type	Group
10	B1	68	C	Sidechain
10	B1	69	G	Sidechain
10	B1	7	G	Sidechain
10	B1	71	C	Sidechain
10	B1	75	C	Sidechain
10	B1	8	U	Sidechain
10	B1	9	A	Sidechain
11	B2	10	G	Sidechain
11	B2	100	A	Sidechain
11	B2	1000	G	Sidechain
11	B2	1002	G	Sidechain
11	B2	1003	G	Sidechain
11	B2	1006	C	Sidechain
11	B2	1007	A	Sidechain
11	B2	1008	U	Sidechain
11	B2	1009	G	Sidechain
11	B2	101	G	Sidechain
11	B2	1013	G	Sidechain
11	B2	1014	C	Sidechain
11	B2	1016	G	Sidechain
11	B2	1018	C	Sidechain
11	B2	1022	U	Sidechain
11	B2	1023	C	Sidechain
11	B2	1029	G	Sidechain
11	B2	1030	U	Sidechain
11	B2	1032	A	Sidechain
11	B2	1033	G	Sidechain
11	B2	1035	C	Sidechain
11	B2	1036	G	Sidechain
11	B2	1038	C	Sidechain
11	B2	1039	C	Sidechain
11	B2	1040	A	Sidechain
11	B2	1041	C	Sidechain
11	B2	1042	U	Sidechain
11	B2	1043	U	Sidechain
11	B2	1044	A	Sidechain
11	B2	1045	A	Sidechain
11	B2	1046	G	Sidechain
11	B2	1047	U	Sidechain
11	B2	1048	G	Sidechain
11	B2	1049	U	Sidechain
11	B2	1050	G	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	1054	A	Sidechain
11	B2	1056	G	Sidechain
11	B2	1058	G	Sidechain
11	B2	1059	C	Sidechain
11	B2	106	A	Sidechain
11	B2	1060	G	Sidechain
11	B2	1063	A	Sidechain
11	B2	1065	C	Sidechain
11	B2	1066	C	Sidechain
11	B2	1067	G	Sidechain
11	B2	1069	G	Sidechain
11	B2	107	C	Sidechain
11	B2	1070	C	Sidechain
11	B2	1072	C	Sidechain
11	B2	1076	G	Sidechain
11	B2	1079	G	Sidechain
11	B2	1082	A	Sidechain
11	B2	1083	G	Sidechain
11	B2	1090	C	Sidechain
11	B2	1093	C	Sidechain
11	B2	1095	C	Sidechain
11	B2	1097	G	Sidechain
11	B2	110	C	Sidechain
11	B2	1100	G	Sidechain
11	B2	1101	G	Sidechain
11	B2	1103	G	Sidechain
11	B2	1104	G	Sidechain
11	B2	1108	U	Sidechain
11	B2	111	G	Sidechain
11	B2	1111	G	Sidechain
11	B2	1112	G	Sidechain
11	B2	1113	G	Sidechain
11	B2	1114	G	Sidechain
11	B2	1115	G	Sidechain
11	B2	1118	C	Sidechain
11	B2	1120	G	Sidechain
11	B2	1121	C	Sidechain
11	B2	1122	C	Sidechain
11	B2	1124	G	Sidechain
11	B2	1127	A	Sidechain
11	B2	1128	U	Sidechain
11	B2	1135	G	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	1136	A	Sidechain
11	B2	1137	G	Sidechain
11	B2	1138	G	Sidechain
11	B2	1139	A	Sidechain
11	B2	1141	G	Sidechain
11	B2	1142	G	Sidechain
11	B2	1143	G	Sidechain
11	B2	1144	G	Sidechain
11	B2	1146	G	Sidechain
11	B2	1148	G	Sidechain
11	B2	1150	G	Sidechain
11	B2	1151	A	Sidechain
11	B2	1153	G	Sidechain
11	B2	1155	U	Sidechain
11	B2	1157	G	Sidechain
11	B2	1158	G	Sidechain
11	B2	116	C	Sidechain
11	B2	1161	A	Sidechain
11	B2	1162	G	Sidechain
11	B2	1163	U	Sidechain
11	B2	1166	G	Sidechain
11	B2	1167	C	Sidechain
11	B2	1169	C	Sidechain
11	B2	117	C	Sidechain
11	B2	1172	A	Sidechain
11	B2	1174	A	Sidechain
11	B2	1179	C	Sidechain
11	B2	1181	G	Sidechain
11	B2	1184	U	Sidechain
11	B2	1185	A	Sidechain
11	B2	1188	C	Sidechain
11	B2	1189	G	Sidechain
11	B2	119	A	Sidechain
11	B2	1191	G	Sidechain
11	B2	1193	G	Sidechain
11	B2	1197	C	Sidechain
11	B2	1198	A	Sidechain
11	B2	1199	A	Sidechain
11	B2	12	U	Sidechain
11	B2	1202	G	Sidechain
11	B2	1203	G	Sidechain
11	B2	1204	C	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	1207	G	Sidechain
11	B2	1208	A	Sidechain
11	B2	121	C	Sidechain
11	B2	1211	A	Sidechain
11	B2	1212	U	Sidechain
11	B2	1215	G	Sidechain
11	B2	1218	C	Sidechain
11	B2	1219	C	Sidechain
11	B2	1220	G	Sidechain
11	B2	1223	C	Sidechain
11	B2	1226	G	Sidechain
11	B2	1227	A	Sidechain
11	B2	1228	A	Sidechain
11	B2	1229	A	Sidechain
11	B2	123	U	Sidechain
11	B2	1231	G	Sidechain
11	B2	1232	G	Sidechain
11	B2	1234	A	Sidechain
11	B2	1235	A	Sidechain
11	B2	1239	A	Sidechain
11	B2	124	C	Sidechain
11	B2	1240	A	Sidechain
11	B2	1241	U	Sidechain
11	B2	1245	C	Sidechain
11	B2	1247	A	Sidechain
11	B2	1250	C	Sidechain
11	B2	1251	C	Sidechain
11	B2	1256	C	Sidechain
11	B2	1259	A	Sidechain
11	B2	1260	G	Sidechain
11	B2	1261	U	Sidechain
11	B2	1264	G	Sidechain
11	B2	1265	G	Sidechain
11	B2	1267	U	Sidechain
11	B2	1271	G	Sidechain
11	B2	1273	G	Sidechain
11	B2	1276	G	Sidechain
11	B2	1280	C	Sidechain
11	B2	1282	C	Sidechain
11	B2	1284	C	Sidechain
11	B2	1285	C	Sidechain
11	B2	1287	G	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	1289	G	Sidechain
11	B2	1293	A	Sidechain
11	B2	1294	G	Sidechain
11	B2	1295	C	Sidechain
11	B2	1298	G	Sidechain
11	B2	1300	A	Sidechain
11	B2	1304	C	Sidechain
11	B2	1305	U	Sidechain
11	B2	1309	A	Sidechain
11	B2	1316	U	Sidechain
11	B2	1317	G	Sidechain
11	B2	1319	C	Sidechain
11	B2	1321	U	Sidechain
11	B2	1324	U	Sidechain
11	B2	1325	C	Sidechain
11	B2	1326	G	Sidechain
11	B2	1331	G	Sidechain
11	B2	1332	C	Sidechain
11	B2	1333	G	Sidechain
11	B2	1334	A	Sidechain
11	B2	1336	U	Sidechain
11	B2	1339	G	Sidechain
11	B2	1340	U	Sidechain
11	B2	1341	C	Sidechain
11	B2	1342	C	Sidechain
11	B2	1343	C	Sidechain
11	B2	1344	U	Sidechain
11	B2	1345	G	Sidechain
11	B2	1346	C	Sidechain
11	B2	1347	U	Sidechain
11	B2	1348	C	Sidechain
11	B2	135	U	Sidechain
11	B2	1350	U	Sidechain
11	B2	1351	U	Sidechain
11	B2	1352	G	Sidechain
11	B2	1353	C	Sidechain
11	B2	1354	A	Sidechain
11	B2	1355	C	Sidechain
11	B2	1356	A	Sidechain
11	B2	136	A	Sidechain
11	B2	1362	C	Sidechain
11	B2	1369	C	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	137	A	Sidechain
11	B2	1372	C	Sidechain
11	B2	1376	C	Sidechain
11	B2	1379	G	Sidechain
11	B2	138	C	Sidechain
11	B2	1380	C	Sidechain
11	B2	1384	G	Sidechain
11	B2	1385	U	Sidechain
11	B2	139	C	Sidechain
11	B2	1390	G	Sidechain
11	B2	1393	A	Sidechain
11	B2	1398	U	Sidechain
11	B2	1399	G	Sidechain
11	B2	140	C	Sidechain
11	B2	1402	C	Sidechain
11	B2	1403	U	Sidechain
11	B2	1404	C	Sidechain
11	B2	1405	C	Sidechain
11	B2	1406	U	Sidechain
11	B2	1409	G	Sidechain
11	B2	141	C	Sidechain
11	B2	1413	G	Sidechain
11	B2	1414	G	Sidechain
11	B2	1416	C	Sidechain
11	B2	1418	G	Sidechain
11	B2	1419	G	Sidechain
11	B2	142	G	Sidechain
11	B2	1421	C	Sidechain
11	B2	1423	A	Sidechain
11	B2	1424	G	Sidechain
11	B2	1427	C	Sidechain
11	B2	1429	G	Sidechain
11	B2	1430	G	Sidechain
11	B2	1431	C	Sidechain
11	B2	1432	U	Sidechain
11	B2	1433	C	Sidechain
11	B2	1435	G	Sidechain
11	B2	1440	G	Sidechain
11	B2	1441	G	Sidechain
11	B2	1442	G	Sidechain
11	B2	1444	G	Sidechain
11	B2	1449	G	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	1450	U	Sidechain
11	B2	1452	G	Sidechain
11	B2	1453	U	Sidechain
11	B2	1454	A	Sidechain
11	B2	1457	A	Sidechain
11	B2	1458	A	Sidechain
11	B2	1466	G	Sidechain
11	B2	1469	G	Sidechain
11	B2	1470	G	Sidechain
11	B2	1471	G	Sidechain
11	B2	1473	A	Sidechain
11	B2	1474	A	Sidechain
11	B2	1477	U	Sidechain
11	B2	1478	A	Sidechain
11	B2	1480	G	Sidechain
11	B2	1481	G	Sidechain
11	B2	1486	A	Sidechain
11	B2	1487	U	Sidechain
11	B2	1489	A	Sidechain
11	B2	1492	U	Sidechain
11	B2	1493	C	Sidechain
11	B2	150	G	Sidechain
11	B2	152	G	Sidechain
11	B2	153	G	Sidechain
11	B2	155	U	Sidechain
11	B2	156	A	Sidechain
11	B2	157	A	Sidechain
11	B2	159	C	Sidechain
11	B2	161	C	Sidechain
11	B2	162	C	Sidechain
11	B2	168	G	Sidechain
11	B2	174	G	Sidechain
11	B2	175	G	Sidechain
11	B2	178	C	Sidechain
11	B2	180	G	Sidechain
11	B2	181	G	Sidechain
11	B2	182	A	Sidechain
11	B2	184	G	Sidechain
11	B2	185	G	Sidechain
11	B2	186	U	Sidechain
11	B2	188	C	Sidechain
11	B2	190	C	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	191	A	Sidechain
11	B2	195	C	Sidechain
11	B2	196	G	Sidechain
11	B2	2	U	Sidechain
11	B2	20	G	Sidechain
11	B2	201	G	Sidechain
11	B2	203	A	Sidechain
11	B2	204	G	Sidechain
11	B2	205	C	Sidechain
11	B2	207	G	Sidechain
11	B2	210	A	Sidechain
11	B2	212	G	Sidechain
11	B2	215	C	Sidechain
11	B2	216	G	Sidechain
11	B2	217	C	Sidechain
11	B2	220	G	Sidechain
11	B2	223	G	Sidechain
11	B2	225	U	Sidechain
11	B2	226	G	Sidechain
11	B2	228	G	Sidechain
11	B2	229	G	Sidechain
11	B2	23	G	Sidechain
11	B2	231	G	Sidechain
11	B2	232	G	Sidechain
11	B2	235	G	Sidechain
11	B2	237	C	Sidechain
11	B2	238	G	Sidechain
11	B2	240	U	Sidechain
11	B2	246	A	Sidechain
11	B2	247	G	Sidechain
11	B2	249	U	Sidechain
11	B2	250	G	Sidechain
11	B2	252	U	Sidechain
11	B2	255	G	Sidechain
11	B2	256	G	Sidechain
11	B2	257	U	Sidechain
11	B2	258	A	Sidechain
11	B2	259	A	Sidechain
11	B2	261	G	Sidechain
11	B2	262	G	Sidechain
11	B2	27	C	Sidechain
11	B2	270	A	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	277	G	Sidechain
11	B2	279	U	Sidechain
11	B2	282	G	Sidechain
11	B2	283	U	Sidechain
11	B2	288	G	Sidechain
11	B2	289	C	Sidechain
11	B2	291	G	Sidechain
11	B2	292	U	Sidechain
11	B2	294	A	Sidechain
11	B2	295	G	Sidechain
11	B2	298	C	Sidechain
11	B2	299	G	Sidechain
11	B2	30	C	Sidechain
11	B2	300	G	Sidechain
11	B2	301	G	Sidechain
11	B2	302	A	Sidechain
11	B2	303	G	Sidechain
11	B2	304	C	Sidechain
11	B2	305	C	Sidechain
11	B2	307	G	Sidechain
11	B2	308	G	Sidechain
11	B2	309	A	Sidechain
11	B2	31	U	Sidechain
11	B2	319	U	Sidechain
11	B2	32	A	Sidechain
11	B2	320	G	Sidechain
11	B2	322	G	Sidechain
11	B2	323	A	Sidechain
11	B2	324	C	Sidechain
11	B2	325	A	Sidechain
11	B2	326	C	Sidechain
11	B2	33	U	Sidechain
11	B2	332	C	Sidechain
11	B2	334	G	Sidechain
11	B2	335	G	Sidechain
11	B2	34	G	Sidechain
11	B2	340	A	Sidechain
11	B2	342	G	Sidechain
11	B2	347	G	Sidechain
11	B2	348	C	Sidechain
11	B2	35	G	Sidechain
11	B2	355	C	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	356	G	Sidechain
11	B2	359	A	Sidechain
11	B2	36	G	Sidechain
11	B2	362	C	Sidechain
11	B2	363	C	Sidechain
11	B2	365	C	Sidechain
11	B2	368	C	Sidechain
11	B2	369	A	Sidechain
11	B2	37	G	Sidechain
11	B2	370	A	Sidechain
11	B2	371	U	Sidechain
11	B2	372	G	Sidechain
11	B2	375	G	Sidechain
11	B2	376	G	Sidechain
11	B2	38	G	Sidechain
11	B2	382	G	Sidechain
11	B2	385	A	Sidechain
11	B2	386	C	Sidechain
11	B2	387	G	Sidechain
11	B2	389	G	Sidechain
11	B2	39	U	Sidechain
11	B2	390	G	Sidechain
11	B2	391	G	Sidechain
11	B2	392	G	Sidechain
11	B2	394	C	Sidechain
11	B2	395	C	Sidechain
11	B2	399	A	Sidechain
11	B2	400	G	Sidechain
11	B2	401	U	Sidechain
11	B2	402	G	Sidechain
11	B2	404	C	Sidechain
11	B2	405	G	Sidechain
11	B2	406	U	Sidechain
11	B2	407	G	Sidechain
11	B2	408	C	Sidechain
11	B2	41	C	Sidechain
11	B2	410	U	Sidechain
11	B2	414	G	Sidechain
11	B2	419	G	Sidechain
11	B2	421	U	Sidechain
11	B2	422	U	Sidechain
11	B2	423	U	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	427	G	Sidechain
11	B2	430	G	Sidechain
11	B2	431	U	Sidechain
11	B2	432	G	Sidechain
11	B2	434	A	Sidechain
11	B2	436	A	Sidechain
11	B2	438	A	Sidechain
11	B2	439	G	Sidechain
11	B2	44	C	Sidechain
11	B2	440	C	Sidechain
11	B2	441	U	Sidechain
11	B2	443	C	Sidechain
11	B2	445	G	Sidechain
11	B2	446	G	Sidechain
11	B2	447	A	Sidechain
11	B2	449	U	Sidechain
11	B2	45	U	Sidechain
11	B2	451	A	Sidechain
11	B2	452	G	Sidechain
11	B2	453	G	Sidechain
11	B2	454	G	Sidechain
11	B2	455	C	Sidechain
11	B2	456	U	Sidechain
11	B2	458	G	Sidechain
11	B2	459	G	Sidechain
11	B2	46	A	Sidechain
11	B2	460	C	Sidechain
11	B2	461	A	Sidechain
11	B2	463	G	Sidechain
11	B2	464	G	Sidechain
11	B2	467	G	Sidechain
11	B2	469	U	Sidechain
11	B2	47	A	Sidechain
11	B2	470	G	Sidechain
11	B2	472	C	Sidechain
11	B2	477	G	Sidechain
11	B2	48	G	Sidechain
11	B2	480	G	Sidechain
11	B2	483	G	Sidechain
11	B2	484	U	Sidechain
11	B2	488	A	Sidechain
11	B2	490	C	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	491	G	Sidechain
11	B2	494	G	Sidechain
11	B2	495	G	Sidechain
11	B2	500	A	Sidechain
11	B2	505	U	Sidechain
11	B2	506	G	Sidechain
11	B2	510	A	Sidechain
11	B2	512	U	Sidechain
11	B2	513	A	Sidechain
11	B2	514	U	Sidechain
11	B2	516	A	Sidechain
11	B2	517	U	Sidechain
11	B2	521	G	Sidechain
11	B2	524	U	Sidechain
11	B2	528	G	Sidechain
11	B2	529	C	Sidechain
11	B2	53	G	Sidechain
11	B2	530	G	Sidechain
11	B2	533	C	Sidechain
11	B2	538	C	Sidechain
11	B2	539	C	Sidechain
11	B2	54	C	Sidechain
11	B2	541	G	Sidechain
11	B2	542	G	Sidechain
11	B2	543	C	Sidechain
11	B2	550	G	Sidechain
11	B2	551	U	Sidechain
11	B2	556	G	Sidechain
11	B2	557	G	Sidechain
11	B2	559	G	Sidechain
11	B2	56	A	Sidechain
11	B2	560	A	Sidechain
11	B2	563	U	Sidechain
11	B2	568	C	Sidechain
11	B2	57	G	Sidechain
11	B2	570	G	Sidechain
11	B2	571	C	Sidechain
11	B2	572	U	Sidechain
11	B2	575	A	Sidechain
11	B2	576	C	Sidechain
11	B2	581	G	Sidechain
11	B2	582	G	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	585	U	Sidechain
11	B2	588	C	Sidechain
11	B2	59	C	Sidechain
11	B2	595	U	Sidechain
11	B2	597	C	Sidechain
11	B2	599	G	Sidechain
11	B2	6	G	Sidechain
11	B2	60	A	Sidechain
11	B2	601	G	Sidechain
11	B2	604	C	Sidechain
11	B2	605	C	Sidechain
11	B2	607	U	Sidechain
11	B2	609	G	Sidechain
11	B2	610	G	Sidechain
11	B2	612	C	Sidechain
11	B2	616	G	Sidechain
11	B2	617	A	Sidechain
11	B2	618	G	Sidechain
11	B2	620	G	Sidechain
11	B2	621	G	Sidechain
11	B2	622	C	Sidechain
11	B2	624	G	Sidechain
11	B2	625	G	Sidechain
11	B2	626	G	Sidechain
11	B2	628	G	Sidechain
11	B2	63	G	Sidechain
11	B2	632	C	Sidechain
11	B2	634	C	Sidechain
11	B2	635	C	Sidechain
11	B2	636	G	Sidechain
11	B2	639	G	Sidechain
11	B2	64	G	Sidechain
11	B2	640	U	Sidechain
11	B2	642	G	Sidechain
11	B2	643	G	Sidechain
11	B2	644	G	Sidechain
11	B2	645	G	Sidechain
11	B2	648	A	Sidechain
11	B2	649	A	Sidechain
11	B2	651	U	Sidechain
11	B2	654	U	Sidechain
11	B2	657	A	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	66	G	Sidechain
11	B2	660	C	Sidechain
11	B2	662	C	Sidechain
11	B2	665	G	Sidechain
11	B2	667	G	Sidechain
11	B2	669	A	Sidechain
11	B2	672	G	Sidechain
11	B2	678	G	Sidechain
11	B2	68	G	Sidechain
11	B2	681	G	Sidechain
11	B2	683	A	Sidechain
11	B2	684	G	Sidechain
11	B2	685	G	Sidechain
11	B2	687	G	Sidechain
11	B2	688	C	Sidechain
11	B2	69	U	Sidechain
11	B2	690	C	Sidechain
11	B2	691	G	Sidechain
11	B2	693	C	Sidechain
11	B2	694	U	Sidechain
11	B2	695	G	Sidechain
11	B2	697	A	Sidechain
11	B2	7	G	Sidechain
11	B2	700	G	Sidechain
11	B2	701	G	Sidechain
11	B2	702	G	Sidechain
11	B2	706	G	Sidechain
11	B2	707	A	Sidechain
11	B2	708	C	Sidechain
11	B2	709	G	Sidechain
11	B2	71	C	Sidechain
11	B2	710	G	Sidechain
11	B2	711	U	Sidechain
11	B2	713	A	Sidechain
11	B2	716	G	Sidechain
11	B2	717	C	Sidechain
11	B2	718	G	Sidechain
11	B2	719	G	Sidechain
11	B2	72	C	Sidechain
11	B2	720	A	Sidechain
11	B2	721	A	Sidechain
11	B2	723	G	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	724	C	Sidechain
11	B2	725	C	Sidechain
11	B2	728	G	Sidechain
11	B2	732	G	Sidechain
11	B2	734	G	Sidechain
11	B2	739	G	Sidechain
11	B2	74	U	Sidechain
11	B2	740	G	Sidechain
11	B2	742	U	Sidechain
11	B2	743	U	Sidechain
11	B2	744	A	Sidechain
11	B2	748	A	Sidechain
11	B2	749	C	Sidechain
11	B2	752	G	Sidechain
11	B2	753	G	Sidechain
11	B2	757	G	Sidechain
11	B2	758	U	Sidechain
11	B2	76	U	Sidechain
11	B2	761	U	Sidechain
11	B2	765	U	Sidechain
11	B2	769	A	Sidechain
11	B2	77	G	Sidechain
11	B2	772	G	Sidechain
11	B2	777	G	Sidechain
11	B2	778	G	Sidechain
11	B2	78	G	Sidechain
11	B2	784	G	Sidechain
11	B2	786	G	Sidechain
11	B2	788	C	Sidechain
11	B2	79	G	Sidechain
11	B2	790	G	Sidechain
11	B2	793	G	Sidechain
11	B2	794	A	Sidechain
11	B2	795	G	Sidechain
11	B2	797	U	Sidechain
11	B2	798	U	Sidechain
11	B2	799	C	Sidechain
11	B2	8	U	Sidechain
11	B2	800	G	Sidechain
11	B2	802	G	Sidechain
11	B2	804	U	Sidechain
11	B2	806	G	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	810	G	Sidechain
11	B2	811	G	Sidechain
11	B2	813	G	Sidechain
11	B2	816	G	Sidechain
11	B2	82	G	Sidechain
11	B2	820	G	Sidechain
11	B2	821	G	Sidechain
11	B2	823	A	Sidechain
11	B2	824	G	Sidechain
11	B2	826	C	Sidechain
11	B2	827	G	Sidechain
11	B2	83	C	Sidechain
11	B2	832	G	Sidechain
11	B2	834	C	Sidechain
11	B2	839	G	Sidechain
11	B2	84	C	Sidechain
11	B2	840	C	Sidechain
11	B2	842	U	Sidechain
11	B2	844	G	Sidechain
11	B2	845	G	Sidechain
11	B2	846	G	Sidechain
11	B2	85	A	Sidechain
11	B2	850	A	Sidechain
11	B2	852	G	Sidechain
11	B2	854	C	Sidechain
11	B2	856	G	Sidechain
11	B2	858	A	Sidechain
11	B2	86	C	Sidechain
11	B2	860	G	Sidechain
11	B2	867	A	Sidechain
11	B2	87	C	Sidechain
11	B2	873	A	Sidechain
11	B2	874	G	Sidechain
11	B2	876	A	Sidechain
11	B2	879	U	Sidechain
11	B2	88	G	Sidechain
11	B2	881	G	Sidechain
11	B2	882	C	Sidechain
11	B2	884	G	Sidechain
11	B2	885	G	Sidechain
11	B2	886	G	Sidechain
11	B2	889	G	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	890	C	Sidechain
11	B2	892	C	Sidechain
11	B2	894	A	Sidechain
11	B2	896	A	Sidechain
11	B2	897	A	Sidechain
11	B2	899	G	Sidechain
11	B2	900	G	Sidechain
11	B2	903	G	Sidechain
11	B2	905	A	Sidechain
11	B2	906	G	Sidechain
11	B2	908	G	Sidechain
11	B2	91	G	Sidechain
11	B2	913	G	Sidechain
11	B2	914	U	Sidechain
11	B2	916	U	Sidechain
11	B2	917	A	Sidechain
11	B2	918	A	Sidechain
11	B2	919	U	Sidechain
11	B2	921	G	Sidechain
11	B2	922	G	Sidechain
11	B2	923	A	Sidechain
11	B2	928	A	Sidechain
11	B2	930	G	Sidechain
11	B2	932	C	Sidechain
11	B2	936	A	Sidechain
11	B2	939	C	Sidechain
11	B2	94	C	Sidechain
11	B2	940	U	Sidechain
11	B2	941	C	Sidechain
11	B2	942	A	Sidechain
11	B2	945	G	Sidechain
11	B2	948	G	Sidechain
11	B2	949	G	Sidechain
11	B2	951	G	Sidechain
11	B2	952	A	Sidechain
11	B2	954	G	Sidechain
11	B2	955	G	Sidechain
11	B2	961	U	Sidechain
11	B2	962	G	Sidechain
11	B2	963	A	Sidechain
11	B2	964	A	Sidechain
11	B2	965	G	Sidechain

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Mol	Chain	Res	Type	Group
11	B2	975	A	Sidechain
11	B2	976	A	Sidechain
11	B2	977	G	Sidechain
11	B2	978	G	Sidechain
11	B2	979	U	Sidechain
11	B2	98	U	Sidechain
11	B2	983	G	Sidechain
11	B2	984	C	Sidechain
11	B2	985	C	Sidechain
11	B2	986	G	Sidechain
11	B2	987	G	Sidechain
11	B2	988	A	Sidechain
11	B2	990	G	Sidechain
11	B2	992	G	Sidechain
11	B2	995	G	Sidechain
11	B2	996	A	Sidechain
11	B2	997	G	Sidechain
11	B2	998	A	Sidechain
13	BA	118	ARG	Sidechain
13	BA	127	ARG	Sidechain
13	BA	135	ARG	Sidechain
13	BA	178	TYR	Sidechain
13	BA	19	TYR	Sidechain
13	BA	193	GLU	Peptide
13	BA	22	TYR	Sidechain
13	BA	68	PHE	Sidechain
13	BA	71	TYR	Sidechain
13	BA	79	TYR	Sidechain
13	BA	93	ARG	Sidechain
14	BB	12	TYR	Sidechain
14	BB	5	TYR	Sidechain
15	BC	146	PHE	Sidechain
15	BC	166	TYR	Sidechain
15	BC	20	PHE	Sidechain
15	BC	26	ARG	Sidechain
15	BC	30	TYR	Sidechain
15	BC	53	TYR	Sidechain
15	BC	89	TYR	Sidechain
15	BC	98	ARG	Sidechain
16	BD	103	ARG	Sidechain
16	BD	116	ARG	Sidechain
16	BD	138	ARG	Sidechain

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Mol	Chain	Res	Type	Group
16	BD	154	TYR	Sidechain
16	BD	57	ARG	Sidechain
16	BD	76	ARG	Sidechain
16	BD	79	ARG	Sidechain
17	BE	12	ARG	Sidechain
17	BE	128	ARG	Sidechain
17	BE	162	TYR	Peptide
17	BE	20	TYR	Sidechain
17	BE	204	ARG	Sidechain
17	BE	205	PHE	Peptide
17	BE	47	TYR	Sidechain
17	BE	60	ARG	Sidechain
17	BE	81	TYR	Sidechain
18	BF	111	ARG	Sidechain
18	BF	143	PHE	Sidechain
18	BF	40	ARG	Sidechain
19	BG	17	LYS	Peptide
19	BG	43	LEU	Peptide
19	BG	77	ASP	Peptide
19	BG	97	LYS	Mainchain
20	BH	137	THR	Peptide
20	BH	14	GLU	Peptide
20	BH	145	ARG	Sidechain
20	BH	178	MET	Peptide
20	BH	49	GLY	Peptide
20	BH	50	ARG	Sidechain
20	BH	56	PHE	Sidechain
20	BH	72	MET	Peptide
20	BH	79	TYR	Sidechain
20	BH	83	GLY	Peptide
20	BH	84	HIS	Peptide
20	BH	86	MET	Peptide
20	BH	87	ARG	Peptide
21	BI	128	TYR	Sidechain
21	BI	46	TYR	Sidechain
21	BI	86	PHE	Sidechain
22	BJ	26	ARG	Sidechain
22	BJ	30	ARG	Sidechain
22	BJ	36	ARG	Sidechain
22	BJ	49	TYR	Sidechain
22	BJ	62	TYR	Sidechain
22	BJ	64	ASN	Peptide

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Mol	Chain	Res	Type	Group
23	BK	10	ARG	Sidechain
23	BK	12	THR	Peptide
23	BK	134	TYR	Sidechain
23	BK	2	ARG	Sidechain
23	BK	25	ARG	Sidechain
23	BK	71	PHE	Sidechain,Peptide
24	BL	14	ARG	Sidechain
24	BL	41	PRO	Peptide
24	BL	44	ARG	Sidechain
24	BL	46	ARG	Sidechain
24	BL	50	ARG	Sidechain
24	BL	71	ARG	Sidechain
24	BL	83	ARG	Sidechain
24	BL	90	VAL	Peptide
25	BM	127	ARG	Sidechain
25	BM	52	ARG	Sidechain
26	BN	124	TYR	Sidechain
26	BN	131	ARG	Sidechain
26	BN	5	LYS	Peptide
26	BN	65	PRO	Peptide
27	BO	124	LEU	Peptide
27	BO	41	ARG	Sidechain
27	BO	53	TYR	Sidechain
27	BO	85	TYR	Sidechain
27	BO	89	ARG	Sidechain
28	BP	6	TYR	Sidechain
29	BQ	100	ARG	Sidechain
29	BQ	135	TYR	Sidechain
29	BQ	136	TYR	Sidechain
29	BQ	148	TYR	Sidechain
29	BQ	2	ALA	Peptide
29	BQ	55	ARG	Sidechain
29	BQ	58	TYR	Sidechain
30	BR	63	TYR	Sidechain
30	BR	66	ARG	Sidechain
30	BR	92	ARG	Sidechain
31	BS	20	TYR	Sidechain
31	BS	53	TYR	Sidechain
32	BT	19	MET	Peptide
32	BT	26	ARG	Sidechain
32	BT	34	ARG	Sidechain
32	BT	52	ARG	Sidechain

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Mol	Chain	Res	Type	Group
32	BT	59	TYR	Sidechain
33	BU	60	ARG	Sidechain
33	BU	74	ARG	Sidechain
33	BU	83	ARG	Sidechain
33	BU	90	PHE	Sidechain
34	BV	20	TYR	Sidechain
34	BV	21	PHE	Sidechain
34	BV	24	TYR	Sidechain
34	BV	4	ARG	Sidechain
34	BV	55	TYR	Sidechain
34	BV	59	TYR	Sidechain
34	BV	77	ARG	Sidechain
34	BV	80	TYR	Sidechain
34	BV	81	ILE	Peptide
34	BV	85	TYR	Sidechain
34	BV	94	GLU	Peptide
34	BV	96	LYS	Peptide
35	BW	28	PHE	Sidechain
36	BX	22	GLY	Peptide
36	BX	4	ASP	Peptide
36	BX	42	ARG	Sidechain
37	BY	17	ARG	Sidechain
37	BY	37	ARG	Sidechain
37	BY	45	TYR	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A7	525	0	567	3	0
2	A8	258	0	272	0	0
3	Af	445	0	510	1	0
4	AQ	1256	0	1390	2	0
5	AS	1200	0	1255	2	0
6	AT	680	0	739	4	0
7	AU	1008	0	1077	3	0
8	AW	546	0	601	1	0
9	AX	3309	0	3523	6	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	B1	1646	0	835	75	0
11	B2	32132	0	16199	155	0
12	AG	939	0	994	3	0
12	B3	939	0	994	3	0
13	BA	1559	0	1648	4	0
14	BB	1623	0	1685	6	0
15	BC	1460	0	1549	1	0
16	BD	1434	0	1498	3	0
17	BE	1976	0	2046	5	0
18	BF	1717	0	1770	4	0
19	BG	984	0	1044	5	0
20	BH	1736	0	1787	15	0
21	BI	1028	0	1065	3	0
22	BJ	1004	0	1088	5	0
23	BK	1072	0	1128	8	0
24	BL	822	0	870	6	0
25	BM	1004	0	1041	1	0
26	BN	1141	0	1240	2	0
27	BO	1189	0	1248	6	0
28	BP	462	0	492	5	0
29	BQ	1310	0	1392	12	0
30	BR	934	0	960	2	0
31	BS	556	0	604	4	0
32	BT	924	0	986	3	0
33	BU	1176	0	1216	5	0
34	BV	823	0	847	6	0
35	BW	478	0	524	5	0
36	BX	568	0	600	0	0
37	BY	409	0	410	4	0
38	A1	63885	0	32208	260	0
39	A3	2691	0	1371	13	0
40	A5	614	0	670	5	0
40	AK	614	0	670	1	0
41	AA	1677	0	1796	13	0
42	Aa	677	0	749	5	0
43	AB	1838	0	1914	4	0
44	Ab	1075	0	1168	0	0
45	AC	2717	0	2875	9	0
46	AD	2026	0	2137	11	0
47	Ad	740	0	809	3	0
48	AE	1489	0	1550	5	0
49	Ae	506	0	529	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
50	AF	1476	0	1518	7	0
51	Ag	372	0	395	3	0
52	AH	989	0	1077	4	0
53	Ah	230	0	270	50	0
54	AI	1150	0	1240	6	0
55	Ai	590	0	631	3	0
56	AJ	1014	0	1072	5	0
57	Aj	788	0	842	5	0
58	Ak	1633	0	1726	9	0
59	AL	1154	0	1219	10	0
60	AM	1595	0	1695	1	0
61	AN	1379	0	1405	3	0
62	AO	1598	0	1639	4	0
63	AP	966	0	1019	3	0
64	AR	787	0	827	4	0
65	AV	555	0	548	1	0
66	AY	1243	0	1326	4	0
67	AZ	754	0	804	12	0
All	All	171094	0	125393	640	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 2.

All (640) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:B2:849:U:H4'	53:Ah:9:ARG:CZ	1.28	1.61
11:B2:849:U:C5'	53:Ah:9:ARG:HD2	1.39	1.51
10:B1:77:A:H5''	38:A1:2513:C:C2'	1.48	1.40
29:BQ:158:ARG:OXT	67:AZ:73:LEU:CD2	1.69	1.40
11:B2:849:U:H4'	53:Ah:9:ARG:NH1	1.38	1.35
11:B2:849:U:H5''	53:Ah:9:ARG:CD	1.56	1.32
10:B1:57:C:H5'	38:A1:2291:G:C8	1.29	1.31
10:B1:57:C:C5'	38:A1:2291:G:C8	1.99	1.29
11:B2:849:U:C4'	53:Ah:9:ARG:CZ	2.11	1.29
10:B1:77:A:N1	38:A1:2538:G:H2'	1.47	1.28
10:B1:77:A:C6	38:A1:2538:G:H2'	1.73	1.23
11:B2:1475:C:OP1	53:Ah:3:TRP:CZ2	1.93	1.21
11:B2:849:U:C5'	53:Ah:9:ARG:CD	2.12	1.20
11:B2:1475:C:P	53:Ah:3:TRP:CZ2	2.38	1.16
11:B2:850:A:OP1	53:Ah:16:GLN:NE2	1.81	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B1:63:C:O2'	41:AA:40:LYS:NZ	1.79	1.12
10:B1:75:C:N3	38:A1:2540:A:O4'	1.84	1.10
10:B1:77:A:C5'	38:A1:2513:C:C2'	2.31	1.06
29:BQ:158:ARG:HB3	67:AZ:73:LEU:HD23	1.33	1.06
29:BQ:158:ARG:C	67:AZ:73:LEU:HD22	1.81	1.06
10:B1:75:C:C2'	38:A1:2539:G:O2'	2.05	1.03
10:B1:77:A:N6	38:A1:2538:G:C8	2.29	1.01
10:B1:77:A:C6	38:A1:2538:G:C2'	2.44	1.00
10:B1:63:C:O2'	41:AA:40:LYS:CE	2.10	0.99
10:B1:77:A:C5'	38:A1:2513:C:O2'	2.12	0.98
10:B1:77:A:N1	38:A1:2538:G:C2'	2.27	0.97
10:B1:77:A:H5''	38:A1:2513:C:H2'	0.99	0.97
11:B2:1475:C:P	53:Ah:3:TRP:HZ2	1.84	0.96
11:B2:1382:G:H5'	56:AJ:70:ARG:NH2	1.81	0.95
10:B1:75:C:H2'	38:A1:2539:G:O2'	1.66	0.94
29:BQ:158:ARG:OXT	67:AZ:73:LEU:HD22	0.75	0.93
10:B1:77:A:N6	38:A1:2539:G:C8	2.37	0.93
11:B2:849:U:C5'	53:Ah:9:ARG:NE	2.33	0.92
11:B2:1465:C:OP1	53:Ah:2:ARG:CB	2.17	0.92
10:B1:76:C:H5	38:A1:2540:A:C5	1.92	0.87
10:B1:77:A:H5'	38:A1:2513:C:O2'	1.71	0.87
11:B2:847:A:H5'	53:Ah:9:ARG:NH2	1.90	0.87
11:B2:849:U:H4'	53:Ah:9:ARG:NE	1.90	0.86
11:B2:849:U:H5'	53:Ah:9:ARG:CD	2.04	0.86
10:B1:77:A:C5'	38:A1:2513:C:H2'	1.96	0.86
11:B2:1382:G:H5'	56:AJ:70:ARG:HH21	1.38	0.85
11:B2:849:U:C4'	53:Ah:9:ARG:NH1	2.31	0.84
10:B1:77:A:H5''	38:A1:2513:C:O2'	1.77	0.83
38:A1:228:U:H3	38:A1:247:A:H61	1.27	0.83
11:B2:555:U:H3	11:B2:590:G:H1	1.27	0.81
10:B1:77:A:N6	38:A1:2538:G:N9	2.12	0.81
11:B2:849:U:C4'	53:Ah:9:ARG:NE	2.44	0.81
11:B2:1382:G:C5'	56:AJ:70:ARG:NH2	2.44	0.80
38:A1:815:U:H3	38:A1:930:G:H1	1.27	0.80
11:B2:1475:C:O5'	53:Ah:3:TRP:HZ2	1.63	0.79
10:B1:75:C:C2	38:A1:2540:A:O4'	2.36	0.79
11:B2:849:U:H5'	53:Ah:9:ARG:NE	1.97	0.79
10:B1:75:C:O2	38:A1:2540:A:H5'	1.83	0.78
10:B1:77:A:C6	38:A1:2539:G:C8	2.71	0.78
10:B1:76:C:H4'	38:A1:2538:G:N2	2.00	0.77
10:B1:75:C:O2	38:A1:2540:A:C5'	2.34	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B1:76:C:C5	38:A1:2540:A:C5	2.73	0.76
10:B1:75:C:N3	38:A1:2540:A:C1'	2.49	0.75
10:B1:77:A:N1	38:A1:2539:G:O4'	2.19	0.75
18:BF:214:SER:H	18:BF:215:PRO:HD2	1.53	0.74
29:BQ:158:ARG:HB3	67:AZ:73:LEU:CD2	2.13	0.74
10:B1:27:A:H61	10:B1:45:G:H1	1.36	0.73
10:B1:76:C:C5	38:A1:2540:A:C4	2.77	0.73
11:B2:431:U:H3	11:B2:438:A:H61	1.37	0.73
11:B2:1475:C:O5'	53:Ah:3:TRP:CZ2	2.41	0.72
39:A3:52:U:H4'	39:A3:53:A:H5'	1.70	0.72
10:B1:63:C:O2'	41:AA:40:LYS:HE2	1.90	0.71
11:B2:1465:C:OP1	53:Ah:2:ARG:HG3	1.91	0.70
10:B1:77:A:C8	38:A1:2514:C:C2	2.77	0.70
11:B2:1316:U:H3	11:B2:1326:G:H1	1.36	0.70
38:A1:420:U:H3	38:A1:435:G:H1	1.36	0.70
11:B2:1475:C:OP2	53:Ah:4:LYS:CE	2.40	0.70
11:B2:1475:C:OP2	53:Ah:4:LYS:HE2	1.91	0.70
10:B1:9:A:H2'	10:B1:11:C:H41	1.57	0.69
10:B1:77:A:H8	38:A1:2514:C:N3	1.90	0.69
38:A1:2248:G:H21	38:A1:2297:C:H42	1.38	0.69
10:B1:77:A:N6	38:A1:2539:G:H8	1.88	0.69
10:B1:57:C:H5'	38:A1:2291:G:H8	0.78	0.68
20:BH:90:HIS:CD2	20:BH:91:ARG:H	2.12	0.68
11:B2:1475:C:P	53:Ah:3:TRP:CE2	2.86	0.68
11:B2:1475:C:OP1	53:Ah:3:TRP:CH2	2.46	0.67
11:B2:860:G:OP1	53:Ah:10:ILE:HD13	1.95	0.67
11:B2:1465:C:OP1	53:Ah:2:ARG:CG	2.43	0.67
11:B2:1401:U:H3	11:B2:1414:G:H1	1.44	0.66
11:B2:1475:C:OP1	53:Ah:3:TRP:HZ2	1.59	0.66
10:B1:76:C:H4'	38:A1:2538:G:C2	2.31	0.66
10:B1:75:C:C1'	38:A1:2539:G:O2'	2.44	0.66
38:A1:1568:A:N1	38:A1:1569:A:N1	2.43	0.66
29:BQ:158:ARG:CB	67:AZ:73:LEU:HD23	2.18	0.65
11:B2:1465:C:OP1	53:Ah:2:ARG:HB2	1.94	0.65
50:AF:137:ILE:HD13	50:AF:172:ILE:HD12	1.79	0.65
11:B2:1475:C:OP2	53:Ah:4:LYS:NZ	2.30	0.64
38:A1:1907:G:H1	38:A1:2108:U:H3	1.46	0.64
11:B2:847:A:H5'	53:Ah:9:ARG:HH21	1.60	0.64
10:B1:77:A:C6	38:A1:2538:G:C1'	2.61	0.64
38:A1:2450:A:C6	64:AR:50:HIS:CE1	2.86	0.64
38:A1:2450:A:C6	64:AR:50:HIS:HE1	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:Aj:20:HIS:CE1	57:Aj:78:HIS:HE1	2.15	0.64
11:B2:369:A:H61	11:B2:387:G:H1'	1.63	0.63
11:B2:973:U:H3'	11:B2:974:G:H5''	1.78	0.63
11:B2:1465:C:OP1	53:Ah:2:ARG:HB3	1.96	0.63
38:A1:1096:A:H2'	38:A1:1097:G:H5''	1.81	0.63
35:BW:13:PHE:HB3	35:BW:26:ILE:HD11	1.81	0.63
12:AG:39:THR:HG23	12:AG:100:ALA:HB2	1.80	0.62
1:A7:24:VAL:HA	6:AT:85:LEU:HD12	1.81	0.62
26:BN:75:VAL:HG23	26:BN:84:VAL:HB	1.82	0.62
37:BY:31:MET:HE2	37:BY:31:MET:HA	1.80	0.62
38:A1:965:A:N6	38:A1:2560:G:H21	1.97	0.62
11:B2:1307:G:H1	20:BH:48:HIS:CE1	2.16	0.62
11:B2:1475:C:H5	53:Ah:3:TRP:CD1	2.18	0.62
62:AO:35:LEU:HD11	62:AO:46:ALA:HB1	1.79	0.62
31:BS:5:ARG:HH21	31:BS:9:ILE:HG21	1.64	0.61
11:B2:1475:C:C5'	53:Ah:3:TRP:HZ2	2.13	0.61
10:B1:76:C:H5'	38:A1:2539:G:H1'	1.83	0.61
11:B2:1092:G:C2	11:B2:1094:U:H4'	2.35	0.61
10:B1:77:A:N6	38:A1:2538:G:H2'	2.16	0.61
24:BL:92:GLU:HA	24:BL:94:VAL:H	1.64	0.61
33:BU:121:ILE:HD13	33:BU:121:ILE:H	1.64	0.61
38:A1:1568:A:C2	38:A1:1569:A:C2	2.88	0.61
41:AA:48:LEU:HG	41:AA:49:GLU:H	1.66	0.60
11:B2:1185:A:H2'	11:B2:1185:A:N3	2.17	0.60
14:BB:67:ILE:O	14:BB:87:THR:HG21	2.02	0.60
38:A1:1096:A:H2'	38:A1:1097:G:C5'	2.31	0.60
20:BH:90:HIS:CG	20:BH:91:ARG:H	2.20	0.59
38:A1:122:G:H1	38:A1:126:U:H3	1.50	0.59
10:B1:75:C:O2	38:A1:2540:A:C4'	2.50	0.59
35:BW:48:THR:H	35:BW:52:GLY:HA2	1.67	0.59
46:AD:75:THR:HB	46:AD:76:PRO:HD3	1.85	0.59
37:BY:20:LYS:HG3	37:BY:38:TRP:HE1	1.68	0.59
38:A1:2260:C:H42	38:A1:2277:G:H1	1.51	0.59
38:A1:1626:A:H2'	38:A1:1627:G:H5'	1.85	0.58
38:A1:1109:G:H1'	38:A1:1125:A:H61	1.68	0.58
38:A1:965:A:H61	38:A1:2560:G:H21	1.51	0.58
38:A1:1177:C:H2'	38:A1:1178:G:H5''	1.85	0.58
11:B2:1370:U:H3	11:B2:1445:A:H61	1.50	0.58
39:A3:6:G:C5	39:A3:7:C:C5	2.91	0.58
8:AW:45:ARG:HE	8:AW:49:ARG:HE	1.50	0.58
11:B2:456:U:H3	11:B2:494:G:H1	1.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BB:2:ALA:H	14:BB:53:LYS:HG3	1.69	0.58
11:B2:847:A:C5'	53:Ah:9:ARG:HH21	2.16	0.58
4:AQ:77:GLY:H	4:AQ:81:ARG:HH21	1.51	0.58
11:B2:1475:C:C5	53:Ah:3:TRP:CD1	2.92	0.58
38:A1:1018:G:H21	38:A1:1034:G:H1	1.52	0.58
10:B1:77:A:H8	38:A1:2514:C:C2	2.21	0.57
11:B2:1475:C:OP2	53:Ah:3:TRP:NE1	2.37	0.57
38:A1:1009:G:H1	38:A1:1041:U:H3	1.52	0.57
38:A1:1187:A:H62	38:A1:1191:C:H42	1.52	0.57
10:B1:77:A:C8	38:A1:2537:G:N1	2.72	0.57
10:B1:76:C:H5''	38:A1:2538:G:N2	2.19	0.57
38:A1:1970:G:H21	53:Ah:21:ARG:HH22	1.52	0.57
10:B1:75:C:C2	38:A1:2540:A:C4'	2.88	0.57
16:BD:67:GLU:HG2	16:BD:70:ARG:HH11	1.70	0.57
38:A1:379:U:H2'	38:A1:380:A:C8	2.40	0.57
38:A1:117:A:C8	38:A1:118:A:C8	2.93	0.57
11:B2:1327:C:H41	23:BK:124:LYS:HE2	1.69	0.57
18:BF:214:SER:H	18:BF:215:PRO:CD	2.18	0.57
11:B2:1475:C:P	53:Ah:4:LYS:HE2	2.45	0.56
10:B1:75:C:O2'	38:A1:2539:G:O2'	2.22	0.56
11:B2:932:C:H3'	11:B2:933:G:H5''	1.87	0.56
11:B2:1178:C:H4'	28:BP:9:ARG:HE	1.70	0.56
46:AD:130:ARG:HG2	46:AD:130:ARG:HH11	1.70	0.56
11:B2:849:U:H5''	53:Ah:9:ARG:HD2	0.60	0.56
22:BJ:88:GLN:HE22	38:A1:1888:G:C5'	2.19	0.56
50:AF:61:ARG:O	50:AF:65:VAL:HG23	2.06	0.56
38:A1:480:A:H2'	38:A1:481:G:C8	2.41	0.56
10:B1:77:A:H5''	38:A1:2513:C:C1'	2.32	0.55
11:B2:239:A:H4'	11:B2:240:U:H5'	1.88	0.55
39:A3:4:C:H5''	62:AO:36:VAL:HG11	1.88	0.55
33:BU:38:GLY:HA2	33:BU:94:GLY:H	1.71	0.55
38:A1:1388:U:H3'	59:AL:3:ARG:HH21	1.70	0.55
38:A1:2341:G:H22	60:AM:124:MET:HG2	1.70	0.55
38:A1:2987:U:H3	38:A1:3014:U:H5'	1.72	0.55
11:B2:317:A:H5''	22:BJ:1:MET:HE3	1.89	0.55
10:B1:8:U:H3	10:B1:14:A:H62	1.54	0.55
38:A1:186:A:H61	38:A1:2548:A:H62	1.55	0.55
11:B2:1207:G:H21	23:BK:37:GLU:HB2	1.72	0.54
10:B1:75:C:O2	38:A1:2540:A:O4'	2.24	0.54
29:BQ:158:ARG:C	67:AZ:73:LEU:CD2	2.60	0.54
11:B2:1307:G:H22	20:BH:48:HIS:CE1	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:499:A:C2	38:A1:509:A:C4	2.96	0.54
38:A1:1174:U:H5''	50:AF:62:ARG:HH21	1.73	0.54
11:B2:1314:C:H42	11:B2:1328:G:H1	1.56	0.54
11:B2:28:U:H3	11:B2:503:G:H1	1.56	0.53
11:B2:616:G:N1	11:B2:697:A:N1	2.56	0.53
39:A3:9:A:C2	39:A3:12:G:H1'	2.44	0.53
38:A1:1253:U:H3'	38:A1:1254:C:H5''	1.89	0.53
38:A1:1762:G:H4'	38:A1:1763:A:C8	2.44	0.53
41:AA:89:GLU:HB3	41:AA:95:ARG:HH22	1.73	0.53
10:B1:75:C:N3	38:A1:2540:A:C4'	2.71	0.53
11:B2:386:C:H4'	17:BE:28:TRP:HE1	1.72	0.53
38:A1:564:U:C6	38:A1:2890:A:H2	2.26	0.53
38:A1:1833:G:H21	38:A1:1836:A:H61	1.57	0.53
38:A1:2074:U:C5	38:A1:2075:U:C5	2.97	0.53
11:B2:977:G:H21	28:BP:1:MET:CE	2.22	0.53
23:BK:40:ILE:HD12	23:BK:40:ILE:H	1.73	0.53
27:BO:116:ARG:HH22	27:BO:127:ARG:HB3	1.73	0.53
38:A1:1832:G:H2'	38:A1:1833:G:H5''	1.91	0.53
11:B2:213:C:C5	11:B2:214:C:C5	2.97	0.52
38:A1:1431:U:H3	38:A1:1469:U:H3	1.56	0.52
11:B2:847:A:H5'	53:Ah:9:ARG:HH22	1.72	0.52
29:BQ:158:ARG:CB	67:AZ:73:LEU:CD2	2.85	0.52
38:A1:272:G:H1	38:A1:284:U:H3	1.56	0.52
38:A1:2121:C:H5	45:AC:241:LEU:HD11	1.75	0.52
29:BQ:142:LEU:HD13	29:BQ:146:TRP:CD1	2.45	0.52
10:B1:64:C:H5'	41:AA:40:LYS:HZ3	1.75	0.52
22:BJ:88:GLN:HE22	38:A1:1888:G:H5''	1.74	0.52
52:AH:76:LEU:HD13	52:AH:106:ILE:HG23	1.92	0.52
10:B1:77:A:C5'	38:A1:2513:C:C1'	2.87	0.52
11:B2:849:U:H4'	53:Ah:9:ARG:CD	2.40	0.52
59:AL:106:THR:HB	59:AL:126:ALA:HA	1.92	0.52
10:B1:77:A:N6	38:A1:2538:G:C5	2.39	0.52
13:BA:97:ARG:HG2	13:BA:98:ARG:H	1.74	0.51
45:AC:263:ARG:HH22	54:AI:57:THR:HG22	1.74	0.51
11:B2:29:G:H1	11:B2:502:U:H3	1.56	0.51
28:BP:19:ARG:HH21	28:BP:33:ILE:HG21	1.73	0.51
10:B1:75:C:N3	38:A1:2540:A:H1'	2.24	0.51
10:B1:58:A:C2	38:A1:2235:G:H1'	2.46	0.51
11:B2:213:C:C6	11:B2:214:C:C5	2.99	0.51
38:A1:1234:A:H61	52:AH:4:GLN:HG3	1.75	0.51
9:AX:166:ILE:HD13	9:AX:418:LEU:HD12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:AO:118:PHE:CD1	62:AO:137:ILE:HD13	2.46	0.51
38:A1:330:U:H3	38:A1:388:G:H1	1.59	0.50
11:B2:222:G:H21	17:BE:145:GLY:HA3	1.77	0.50
11:B2:1475:C:C5	53:Ah:3:TRP:NE1	2.79	0.50
11:B2:849:U:C4'	53:Ah:9:ARG:CD	2.82	0.50
38:A1:1812:A:N6	42:Aa:22:VAL:HG13	2.27	0.50
38:A1:391:C:H2'	38:A1:392:G:C8	2.46	0.50
38:A1:1632:U:O2	38:A1:1670:A:C2	2.65	0.50
11:B2:1222:C:H4'	33:BU:118:GLY:HA2	1.93	0.50
27:BO:34:ASN:HD21	33:BU:40:HIS:CE1	2.29	0.50
38:A1:314:A:H5'	38:A1:315:U:C5	2.46	0.50
38:A1:710:G:H22	46:AD:229:HIS:CE1	2.29	0.50
38:A1:2251:G:H2'	38:A1:2252:C:C6	2.46	0.50
11:B2:745:G:H22	11:B2:1452:G:H4'	1.77	0.50
38:A1:1712:U:H2'	38:A1:1713:G:OP2	2.12	0.50
38:A1:1225:A:H4'	38:A1:1242:A:H61	1.76	0.49
38:A1:2313:G:H3'	38:A1:2314:U:H6	1.76	0.49
66:AY:8:ARG:HB2	66:AY:28:LEU:HD13	1.94	0.49
38:A1:1625:A:H2'	38:A1:1626:A:C8	2.46	0.49
38:A1:575:G:H2'	38:A1:576:G:H5''	1.94	0.49
11:B2:138:C:C5	11:B2:139:C:C5	3.01	0.49
38:A1:1407:A:C8	38:A1:1409:U:C2	3.00	0.49
11:B2:791:G:H21	35:BW:10:ARG:HH12	1.60	0.49
39:A3:67:U:H3	39:A3:108:G:H1	1.60	0.49
11:B2:1271:G:H5''	27:BO:83:LYS:HB3	1.94	0.49
38:A1:393:C:H2'	38:A1:394:A:OP1	2.13	0.49
38:A1:1834:C:C5	38:A1:1835:A:C5	3.01	0.49
10:B1:77:A:C2	38:A1:2539:G:O4'	2.65	0.49
14:BB:127:MET:O	14:BB:131:VAL:HG23	2.12	0.49
57:Aj:4:PRO:HG2	57:Aj:7:ILE:HD13	1.95	0.49
27:BO:130:ARG:HE	27:BO:132:ARG:HE	1.60	0.49
48:AE:70:ILE:HB	48:AE:71:ARG:HH21	1.78	0.49
10:B1:64:C:H5'	41:AA:40:LYS:NZ	2.27	0.49
29:BQ:26:VAL:HG12	29:BQ:28:TYR:H	1.78	0.49
38:A1:2273:U:H2'	38:A1:2274:C:C6	2.47	0.49
5:AS:53:ASP:HB3	5:AS:59:ARG:HB2	1.95	0.48
51:Ag:41:PRO:HB3	51:Ag:42:LYS:HB3	1.95	0.48
11:B2:87:C:H2'	11:B2:88:G:H5'	1.95	0.48
38:A1:2643:U:C4	38:A1:2645:C:H1'	2.48	0.48
11:B2:207:G:H22	11:B2:209:A:H3'	1.77	0.48
11:B2:429:A:H61	11:B2:440:C:H41	1.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:228:U:H3	38:A1:247:A:N6	2.04	0.48
39:A3:18:G:H2'	39:A3:19:G:C8	2.48	0.48
11:B2:1464:C:OP1	53:Ah:3:TRP:HZ3	1.96	0.48
17:BE:209:TRP:H	17:BE:209:TRP:CD1	2.30	0.48
67:AZ:71:GLY:HA2	67:AZ:74:LEU:HD11	1.94	0.48
11:B2:973:U:H3'	11:B2:974:G:C5'	2.44	0.48
12:B3:69:LEU:CD1	37:BY:13:GLY:H	2.25	0.48
38:A1:701:G:H2'	38:A1:702:G:C8	2.48	0.48
58:Ak:183:GLN:CD	58:Ak:183:GLN:H	2.21	0.48
11:B2:708:C:H1'	29:BQ:135:TYR:CD2	2.49	0.48
16:BD:158:SER:H	16:BD:159:PRO:HD2	1.78	0.48
38:A1:1422:G:H5'	42:Aa:49:ILE:HG23	1.95	0.48
58:Ak:25:VAL:HG23	58:Ak:91:VAL:HG12	1.96	0.48
38:A1:1018:G:H2'	38:A1:1019:G:C8	2.49	0.48
51:Ag:19:ARG:HH11	51:Ag:37:LYS:HB2	1.79	0.48
10:B1:76:C:C6	38:A1:2539:G:C6	3.02	0.48
11:B2:1444:G:H2'	11:B2:1445:A:H5''	1.96	0.48
27:BO:85:TYR:HB2	32:BT:9:ARG:HH21	1.77	0.48
38:A1:1347:U:H3	38:A1:1383:G:H1	1.62	0.48
38:A1:1601:G:H1	38:A1:1706:G:H2'	1.78	0.48
38:A1:2307:C:H2'	38:A1:2308:C:C6	2.49	0.48
10:B1:75:C:C1'	38:A1:2539:G:HO2'	2.26	0.48
20:BH:11:ILE:HB	20:BH:12:PRO:HD3	1.96	0.48
38:A1:314:A:C5'	38:A1:315:U:C5	2.97	0.48
39:A3:60:C:H2'	39:A3:61:C:C6	2.48	0.48
38:A1:2055:U:H2'	38:A1:2056:A:H5'	1.95	0.48
38:A1:2741:U:H3	38:A1:2890:A:H62	1.61	0.48
38:A1:2622:C:H5''	38:A1:2688:C:C5	2.49	0.47
59:AL:126:ALA:HB3	59:AL:129:PHE:CZ	2.49	0.47
38:A1:1195:G:H1'	38:A1:1241:C:H41	1.78	0.47
38:A1:2846:A:H2'	38:A1:2847:G:O4'	2.13	0.47
64:AR:89:HIS:H	64:AR:89:HIS:CD2	2.33	0.47
10:B1:77:A:N6	38:A1:2538:G:C2'	2.76	0.47
11:B2:147:A:C5	11:B2:148:C:H1'	2.49	0.47
57:Aj:65:LEU:HB2	57:Aj:84:PHE:O	2.13	0.47
19:BG:53:LYS:H	19:BG:54:GLU:HB2	1.80	0.47
38:A1:710:G:C5	38:A1:711:C:C5	3.03	0.47
5:AS:39:LEU:HA	5:AS:42:MET:HE2	1.95	0.47
10:B1:63:C:HO2'	41:AA:40:LYS:CE	2.23	0.47
11:B2:786:G:H1	11:B2:812:U:H3	1.63	0.47
11:B2:849:U:C4'	53:Ah:9:ARG:NH2	2.72	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BL:67:ARG:HB3	24:BL:69:HIS:CE1	2.50	0.47
38:A1:289:G:C5	38:A1:290:G:C5	3.03	0.47
38:A1:859:G:H4'	38:A1:860:A:OP1	2.15	0.47
38:A1:979:G:H1	38:A1:1072:U:H3	1.62	0.47
38:A1:1160:U:C4	38:A1:1273:C:H4'	2.50	0.47
38:A1:1244:C:H2'	38:A1:1245:C:C2	2.49	0.47
38:A1:1572:C:C5	47:Ad:60:THR:HB	2.48	0.47
54:AI:93:ALA:HA	54:AI:96:ARG:HE	1.79	0.47
7:AU:67:VAL:HG11	7:AU:92:PHE:CZ	2.50	0.47
9:AX:168:SER:H	9:AX:414:MET:HE2	1.80	0.47
11:B2:138:C:C5	11:B2:139:C:C4	3.03	0.47
11:B2:138:C:C4	11:B2:139:C:C4	3.03	0.47
38:A1:583:A:H3'	38:A1:584:G:C5'	2.45	0.47
19:BG:33:ARG:HH21	19:BG:77:ASP:HA	1.80	0.47
38:A1:1611:C:C5	38:A1:1612:G:C5	3.03	0.47
38:A1:2445:G:N2	38:A1:2450:A:C8	2.83	0.47
39:A3:18:G:H21	39:A3:20:G:H22	1.63	0.47
11:B2:975:A:H2'	11:B2:976:A:H5''	1.96	0.47
11:B2:1326:G:H2'	11:B2:1327:C:C6	2.50	0.47
63:AP:29:ILE:O	63:AP:33:VAL:HG23	2.15	0.47
10:B1:76:C:C5'	38:A1:2539:G:H1'	2.45	0.46
38:A1:2229:G:H2'	38:A1:2229:G:N3	2.30	0.46
59:AL:49:TRP:CG	59:AL:50:THR:H	2.33	0.46
6:AT:11:VAL:CG2	6:AT:29:ILE:HG12	2.45	0.46
21:BI:57:ARG:HH21	35:BW:7:PRO:HB2	1.80	0.46
38:A1:1510:U:H3	49:Ae:47:ARG:HA	1.80	0.46
38:A1:1192:G:H22	38:A1:1246:G:H1'	1.80	0.46
38:A1:1512:G:H2'	38:A1:1513:G:C8	2.51	0.46
38:A1:1604:G:C6	38:A1:1703:G:C6	3.03	0.46
38:A1:1718:C:H2'	55:Ai:48:ARG:HH22	1.80	0.46
38:A1:2465:A:H61	38:A1:2483:U:H3	1.63	0.46
45:AC:216:GLY:HA3	45:AC:353:ARG:H	1.80	0.46
11:B2:120:C:H2'	11:B2:121:C:H5'	1.97	0.46
11:B2:322:G:H21	17:BE:5:GLY:HA3	1.80	0.46
11:B2:702:G:H22	11:B2:706:G:H1	1.62	0.46
11:B2:1080:C:H5''	23:BK:16:ARG:HH22	1.80	0.46
21:BI:86:PHE:HB3	21:BI:113:HIS:CE1	2.51	0.46
38:A1:763:A:H2'	38:A1:764:G:H5'	1.98	0.46
38:A1:1565:G:C6	38:A1:1571:G:C6	3.04	0.46
38:A1:1123:A:C8	66:AY:13:VAL:HG21	2.50	0.46
10:B1:75:C:O2	38:A1:2539:G:O2'	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1359:C:H2'	38:A1:1360:G:C8	2.51	0.46
38:A1:1775:G:H3'	38:A1:1776:G:C8	2.51	0.46
7:AU:105:LEU:HD13	7:AU:105:LEU:HA	1.85	0.46
11:B2:334:G:H1	11:B2:347:G:H1	1.63	0.46
38:A1:1103:C:H2'	38:A1:1104:A:C8	2.51	0.46
38:A1:1224:A:H61	58:Ak:39:SER:HB2	1.81	0.46
39:A3:111:G:C6	39:A3:112:C:C4	3.04	0.46
12:AG:87:GLY:HA3	12:AG:95:ALA:HA	1.98	0.46
10:B1:76:C:O2'	38:A1:2538:G:C6	2.69	0.45
38:A1:230:A:H61	38:A1:244:A:H5''	1.81	0.45
40:A5:22:VAL:CG1	40:A5:43:VAL:HG11	2.46	0.45
46:AD:26:PHE:CD1	46:AD:120:ALA:HB2	2.51	0.45
10:B1:77:A:H1'	57:Aj:27:LYS:HE3	1.97	0.45
11:B2:920:U:H6	11:B2:920:U:O5'	1.99	0.45
38:A1:265:A:C2	38:A1:294:U:C2	3.05	0.45
38:A1:813:G:C6	38:A1:814:G:C6	3.04	0.45
38:A1:2758:G:H4'	45:AC:12:LEU:HB2	1.98	0.45
46:AD:198:LEU:HD23	46:AD:240:THR:HG22	1.99	0.45
48:AE:168:LYS:NZ	48:AE:172:MET:HE1	2.31	0.45
58:Ak:36:TYR:HB3	58:Ak:37:PRO:HD3	1.97	0.45
4:AQ:83:GLY:HA2	38:A1:1789:A:C8	2.51	0.45
38:A1:1280:C:H3'	38:A1:1281:A:C5'	2.46	0.45
38:A1:1854:G:N7	55:Ai:15:ALA:HB2	2.31	0.45
41:AA:53:PRO:HD2	41:AA:180:ASN:HA	1.99	0.45
65:AV:4:TRP:CH2	65:AV:6:VAL:HG22	2.52	0.45
11:B2:618:G:H22	11:B2:695:G:H1	1.65	0.45
30:BR:17:ASP:HB2	30:BR:24:HIS:CE1	2.51	0.45
31:BS:13:ALA:CB	31:BS:53:TYR:HB3	2.46	0.45
38:A1:314:A:H5''	38:A1:315:U:C6	2.51	0.45
41:AA:46:PHE:CE2	41:AA:188:ILE:HG12	2.51	0.45
45:AC:50:HIS:CD2	45:AC:67:PHE:CE2	3.05	0.45
11:B2:150:G:H2'	11:B2:151:G:C8	2.51	0.45
11:B2:671:C:N4	11:B2:688:C:C5	2.85	0.45
1:A7:39:VAL:CG1	9:AX:415:TYR:CD2	2.99	0.45
11:B2:367:G:H21	11:B2:369:A:H62	1.64	0.45
16:BD:108:ILE:HG21	16:BD:144:VAL:HG21	1.98	0.45
24:BL:7:LYS:HZ3	24:BL:72:LEU:HD13	1.82	0.45
11:B2:1382:G:C5'	56:AJ:70:ARG:CZ	2.95	0.45
24:BL:5:ARG:HE	24:BL:72:LEU:HD11	1.81	0.45
38:A1:347:G:H21	38:A1:370:A:H62	1.65	0.45
38:A1:1043:U:C5	38:A1:1044:C:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:AN:11:TYR:HA	61:AN:55:VAL:HA	1.99	0.45
38:A1:86:G:C6	38:A1:87:C:C4	3.05	0.45
38:A1:1033:C:H2'	38:A1:1033:C:O2	2.17	0.45
38:A1:2257:A:C5	38:A1:2281:A:C8	3.05	0.45
33:BU:23:ILE:HG23	33:BU:25:GLU:H	1.82	0.45
11:B2:186:U:H2'	11:B2:187:C:H5'	1.99	0.45
11:B2:1475:C:OP2	53:Ah:3:TRP:CE2	2.70	0.45
32:BT:11:TYR:H	32:BT:16:LEU:HD11	1.82	0.45
38:A1:2537:G:C6	38:A1:2538:G:C5	3.05	0.45
58:Ak:136:ILE:HG12	58:Ak:140:MET:HE3	1.99	0.45
9:AX:168:SER:H	9:AX:414:MET:CE	2.30	0.44
18:BF:157:ILE:O	18:BF:183:VAL:HG22	2.17	0.44
27:BO:94:ILE:H	27:BO:97:LYS:HB2	1.82	0.44
38:A1:2521:U:H4'	59:AL:65:ARG:HD2	1.99	0.44
38:A1:2988:A:C2	38:A1:3016:G:H4'	2.52	0.44
50:AF:89:LYS:H	50:AF:176:GLU:HB3	1.82	0.44
10:B1:77:A:H8	38:A1:2537:G:H1	1.66	0.44
11:B2:1474:A:H4'	53:Ah:4:LYS:HE3	1.65	0.44
12:B3:118:VAL:HG12	12:B3:118:VAL:O	2.16	0.44
38:A1:419:G:C5	38:A1:420:U:C5	3.05	0.44
38:A1:430:A:H2'	38:A1:450:G:H21	1.83	0.44
38:A1:2445:G:H1'	64:AR:50:HIS:NE2	2.32	0.44
19:BG:87:LEU:HD23	19:BG:104:LYS:HG3	1.98	0.44
24:BL:92:GLU:HA	24:BL:94:VAL:N	2.32	0.44
38:A1:376:C:H2'	38:A1:377:C:C6	2.52	0.44
39:A3:76:U:O2	39:A3:76:U:H2'	2.17	0.44
66:AY:6:VAL:HG12	66:AY:28:LEU:HD11	2.00	0.44
11:B2:1345:G:C6	11:B2:1346:C:C4	3.05	0.44
41:AA:56:ARG:H	41:AA:151:LYS:HB3	1.81	0.44
11:B2:842:U:H4'	11:B2:843:G:H5''	1.98	0.44
38:A1:2453:C:H2'	38:A1:2454:G:C8	2.52	0.44
1:A7:39:VAL:HG13	9:AX:415:TYR:CD2	2.53	0.44
38:A1:2178:A:H2'	38:A1:2619:U:H4'	1.99	0.44
40:A5:18:ALA:H	40:A5:19:GLY:CA	2.31	0.44
9:AX:34:LEU:HD11	9:AX:38:PHE:CZ	2.53	0.44
11:B2:347:G:H4'	11:B2:348:C:OP1	2.17	0.44
11:B2:916:U:H3	11:B2:919:U:H5''	1.83	0.44
13:BA:193:GLU:HB2	13:BA:194:PRO:HD3	1.99	0.44
34:BV:84:GLU:CD	34:BV:84:GLU:H	2.25	0.44
54:AI:18:VAL:HG11	54:AI:79:ILE:HD13	1.99	0.44
11:B2:387:G:C6	11:B2:388:G:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:735:A:C2	59:AL:79:LYS:HG3	2.53	0.44
38:A1:1992:A:C5	38:A1:2013:A:C6	3.06	0.44
14:BB:31:PHE:HA	14:BB:47:LYS:HD2	2.00	0.44
38:A1:1693:G:C2	38:A1:1694:G:H1'	2.53	0.44
41:AA:48:LEU:HG	41:AA:49:GLU:N	2.32	0.44
11:B2:176:U:H2'	11:B2:177:A:C8	2.53	0.43
11:B2:1078:U:C6	11:B2:1079:G:C8	3.06	0.43
11:B2:1307:G:H22	20:BH:48:HIS:HE1	1.65	0.43
38:A1:1161:A:H3'	38:A1:1162:C:C5'	2.47	0.43
54:AI:106:GLU:HG2	54:AI:107:PHE:CZ	2.53	0.43
11:B2:128:A:H2	11:B2:216:G:H22	1.66	0.43
11:B2:780:C:H4'	21:BI:13:HIS:CG	2.53	0.43
20:BH:89:GLU:H	20:BH:94:ASN:HB3	1.83	0.43
38:A1:82:C:C5	38:A1:83:G:C8	3.06	0.43
38:A1:186:A:H61	38:A1:2548:A:N6	2.16	0.43
38:A1:1096:A:H2'	38:A1:1097:G:H5'	2.00	0.43
38:A1:3020:G:N3	38:A1:3020:G:H2'	2.33	0.43
10:B1:76:C:C5'	38:A1:2538:G:N2	2.81	0.43
11:B2:1465:C:H2'	11:B2:1466:G:C8	2.52	0.43
15:BC:94:VAL:HG12	15:BC:94:VAL:O	2.17	0.43
11:B2:1467:U:H3	11:B2:1478:A:H61	1.65	0.43
38:A1:584:G:H2'	38:A1:585:G:C8	2.54	0.43
38:A1:1296:A:H3'	38:A1:1297:C:C6	2.53	0.43
34:BV:9:LYS:HB2	34:BV:18:GLU:HB2	2.00	0.43
38:A1:1854:G:C8	55:AI:15:ALA:HB2	2.54	0.43
23:BK:3:ILE:HG23	23:BK:3:ILE:O	2.18	0.43
38:A1:215:A:H4'	38:A1:216:A:C2	2.54	0.43
38:A1:338:A:C8	38:A1:362:A:C2	3.06	0.43
38:A1:569:G:H5'	38:A1:652:G:H22	1.83	0.43
38:A1:1145:G:C6	38:A1:1147:G:C5	3.07	0.43
40:AK:9:ILE:HG21	40:AK:80:ILE:HG21	2.01	0.43
10:B1:77:A:N3	57:Aj:27:LYS:HE2	2.34	0.43
13:BA:103:ILE:HB	13:BA:123:ALA:HB3	2.01	0.43
23:BK:26:VAL:HG21	23:BK:57:TRP:HE1	1.83	0.43
23:BK:87:VAL:HG22	23:BK:95:LEU:CB	2.49	0.43
47:Ad:65:GLU:O	47:Ad:66:ARG:HB3	2.19	0.43
52:AH:55:ILE:HA	52:AH:66:ILE:HG22	2.01	0.43
52:AH:81:LEU:HD22	52:AH:96:GLY:HA3	2.00	0.43
58:Ak:36:TYR:H	58:Ak:37:PRO:HD2	1.83	0.43
6:AT:6:VAL:H	6:AT:7:ILE:HD12	1.82	0.43
38:A1:1533:G:C6	38:A1:1534:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1760:C:O2	38:A1:1766:A:C2	2.71	0.43
38:A1:1953:U:C5	38:A1:1954:U:C2	3.07	0.43
40:A5:60:ILE:HD12	40:A5:74:ALA:HB3	2.01	0.43
45:AC:260:HIS:HA	45:AC:261:PRO:C	2.43	0.43
63:AP:11:LEU:HD13	63:AP:83:TRP:CE2	2.54	0.43
11:B2:852:G:C6	11:B2:853:G:C6	3.07	0.43
11:B2:1082:A:H2'	11:B2:1082:A:N3	2.33	0.43
38:A1:1035:G:H2'	38:A1:1036:C:C6	2.54	0.43
42:Aa:54:VAL:HG12	42:Aa:92:VAL:HG23	2.01	0.43
45:AC:136:PRO:HA	45:AC:137:LYS:HB2	2.00	0.43
46:AD:94:PRO:HB3	46:AD:95:PRO:HD2	2.01	0.43
11:B2:435:A:H5''	34:BV:88:ILE:CD1	2.49	0.42
11:B2:1387:C:H2'	11:B2:1388:G:C8	2.54	0.42
38:A1:1363:C:H2'	38:A1:1364:C:H6	1.84	0.42
38:A1:2817:U:C5	38:A1:2818:C:C5	3.07	0.42
10:B1:57:C:H4'	38:A1:2291:G:N9	2.27	0.42
11:B2:700:G:C6	11:B2:701:G:C5	3.07	0.42
31:BS:4:ILE:HD12	31:BS:4:ILE:HA	1.95	0.42
31:BS:5:ARG:HH21	31:BS:9:ILE:CG2	2.31	0.42
38:A1:99:U:H4'	38:A1:100:C:OP2	2.19	0.42
38:A1:2902:G:H1	38:A1:3041:U:H3	1.66	0.42
7:AU:2:LYS:HD2	38:A1:364:A:C8	2.54	0.42
34:BV:84:GLU:HG2	34:BV:96:LYS:H	1.84	0.42
38:A1:273:G:H1	38:A1:283:U:H3	1.67	0.42
11:B2:72:C:C5	11:B2:73:U:C4	3.08	0.42
29:BQ:60:ILE:HD11	29:BQ:63:VAL:HG22	2.02	0.42
38:A1:49:A:C2	38:A1:119:U:N3	2.87	0.42
38:A1:510:A:H4'	46:AD:78:ARG:HH12	1.85	0.42
38:A1:888:U:H2'	38:A1:889:C:H6	1.83	0.42
38:A1:2313:G:H3'	38:A1:2314:U:C6	2.54	0.42
43:AB:202:HIS:CD2	43:AB:204:PHE:H	2.37	0.42
46:AD:21:VAL:HG12	46:AD:115:MET:HG2	2.00	0.42
59:AL:36:MET:O	59:AL:37:ALA:HB3	2.20	0.42
11:B2:73:U:H2'	11:B2:74:U:H5'	2.02	0.42
11:B2:181:G:H1	30:BR:31:GLY:H	1.66	0.42
11:B2:391:G:C6	11:B2:392:G:C5	3.07	0.42
23:BK:87:VAL:HG22	23:BK:95:LEU:HB3	2.00	0.42
50:AF:182:ILE:HG12	51:Ag:26:TRP:HE1	1.83	0.42
54:AI:8:GLY:HA3	54:AI:119:HIS:CE1	2.54	0.42
59:AL:49:TRP:CD1	59:AL:50:THR:H	2.35	0.42
11:B2:255:G:C6	11:B2:256:G:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:29:PRO:HB3	28:BP:40:ARG:HE	1.85	0.42
38:A1:1198:G:H2'	38:A1:1199:U:C6	2.54	0.42
38:A1:1208:A:C2	38:A1:1235:A:H4'	2.54	0.42
38:A1:1565:G:H8	40:A5:17:ARG:HH21	1.63	0.42
43:AB:111:ILE:HG23	43:AB:121:TYR:HB2	2.02	0.42
61:AN:51:THR:HG23	61:AN:156:PHE:CZ	2.55	0.42
11:B2:1385:U:H2'	11:B2:1386:C:C6	2.55	0.42
11:B2:1478:A:C2	11:B2:1479:C:C2	3.08	0.42
38:A1:331:G:H5''	38:A1:333:A:H61	1.85	0.42
38:A1:2518:G:H2'	38:A1:2519:C:C6	2.55	0.42
11:B2:588:C:O2	11:B2:588:C:H2'	2.19	0.42
11:B2:257:U:H5'	22:BJ:30:ARG:HG2	2.01	0.42
20:BH:209:ARG:NE	20:BH:209:ARG:HA	2.34	0.42
34:BV:14:ILE:HD12	34:BV:77:ARG:HH21	1.84	0.42
38:A1:407:A:H3'	38:A1:408:C:C5'	2.50	0.42
38:A1:1787:U:C4	38:A1:1788:G:C6	3.07	0.42
38:A1:2599:C:H5''	61:AN:60:ASN:HB3	2.02	0.42
39:A3:25:A:H2'	39:A3:26:C:C6	2.55	0.42
58:Ak:163:LEU:HD11	58:Ak:173:LEU:HD13	2.01	0.42
11:B2:1292:A:C6	11:B2:1293:A:C5	3.08	0.41
20:BH:118:ASN:O	20:BH:122:VAL:HG23	2.20	0.41
34:BV:12:LYS:H	34:BV:12:LYS:HD2	1.84	0.41
38:A1:28:A:H1'	38:A1:550:A:C5	2.55	0.41
38:A1:516:A:C6	38:A1:517:A:C6	3.08	0.41
38:A1:1713:G:C3'	38:A1:1714:G:H5''	2.49	0.41
38:A1:1804:G:H4'	38:A1:1805:U:OP2	2.20	0.41
48:AE:48:LEU:HD21	48:AE:80:VAL:HG23	2.02	0.41
58:Ak:63:ALA:O	58:Ak:67:VAL:HG23	2.20	0.41
11:B2:132:G:H21	11:B2:1407:U:H1'	1.86	0.41
11:B2:487:U:H3'	11:B2:487:U:H6	1.85	0.41
11:B2:900:G:OP1	20:BH:74:SER:HA	2.20	0.41
35:BW:1:MET:HB3	35:BW:2:ALA:H	1.71	0.41
38:A1:338:A:C6	38:A1:339:A:C6	3.08	0.41
39:A3:26:C:H1'	39:A3:53:A:H61	1.85	0.41
39:A3:73:U:H3'	39:A3:74:U:H5''	2.01	0.41
43:AB:101:LYS:HA	43:AB:101:LYS:HD2	1.95	0.41
58:Ak:72:GLY:O	58:Ak:195:TYR:CD2	2.73	0.41
63:AP:42:ARG:H	63:AP:42:ARG:HD2	1.85	0.41
10:B1:76:C:C4'	38:A1:2538:G:N2	2.79	0.41
11:B2:179:U:H3	11:B2:184:G:N2	2.18	0.41
11:B2:973:U:C3'	11:B2:974:G:H5''	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:B2:975:A:H2'	11:B2:976:A:C5'	2.50	0.41
38:A1:1558:U:O2	38:A1:1573:A:C2	2.73	0.41
38:A1:2182:A:H2'	38:A1:2183:A:H4'	2.02	0.41
38:A1:2628:U:H5	45:AC:6:ARG:HH22	1.67	0.41
38:A1:2873:G:H21	50:AF:149:GLN:HE22	1.68	0.41
11:B2:32:A:C2	11:B2:33:U:C2	3.08	0.41
38:A1:569:G:C6	38:A1:2143:C:H1'	2.55	0.41
38:A1:704:G:H22	38:A1:711:C:N4	2.17	0.41
38:A1:1568:A:C2	38:A1:1569:A:N1	2.89	0.41
38:A1:2326:C:C2	38:A1:2334:G:C2	3.08	0.41
54:AI:39:THR:HG23	54:AI:127:LYS:O	2.20	0.41
11:B2:105:C:H4'	11:B2:106:A:OP1	2.19	0.41
11:B2:164:A:H2'	11:B2:165:U:C6	2.56	0.41
11:B2:850:A:OP1	53:Ah:13:LEU:HD23	2.20	0.41
12:B3:69:LEU:HD12	37:BY:13:GLY:H	1.86	0.41
20:BH:80:LYS:HA	20:BH:88:ARG:HG2	2.02	0.41
32:BT:83:VAL:HG21	32:BT:103:LEU:HD11	2.03	0.41
38:A1:575:G:C2'	38:A1:576:G:H5''	2.51	0.41
38:A1:1183:U:C2	38:A1:1251:G:C2	3.08	0.41
38:A1:1194:G:H22	38:A1:1242:A:H62	1.69	0.41
38:A1:1558:U:O4	38:A1:1744:A:C6	2.74	0.41
38:A1:2239:C:H5''	38:A1:2240:G:OP2	2.20	0.41
11:B2:1345:G:C5	11:B2:1346:C:C5	3.09	0.41
24:BL:14:ARG:HH22	24:BL:17:ASP:HB2	1.86	0.41
40:A5:18:ALA:H	40:A5:19:GLY:HA3	1.86	0.41
42:Aa:66:PRO:HA	42:Aa:67:PRO:HD3	1.92	0.41
50:AF:130:VAL:HG22	50:AF:139:VAL:HG22	2.03	0.41
11:B2:147:A:H61	19:BG:70:ASP:HB3	1.86	0.41
17:BE:152:ILE:HD12	17:BE:152:ILE:HA	1.76	0.41
19:BG:88:LEU:HD11	19:BG:105:LYS:HB3	2.02	0.41
20:BH:125:TRP:HA	20:BH:125:TRP:CE3	2.56	0.41
38:A1:1028:G:H2'	38:A1:1029:C:C5	2.55	0.41
38:A1:1887:A:H2'	38:A1:1888:G:C8	2.56	0.41
38:A1:2574:G:C6	38:A1:2609:G:C2	3.08	0.41
47:Ad:25:HIS:CD2	47:Ad:26:PHE:O	2.74	0.41
11:B2:73:U:H2'	11:B2:74:U:C5'	2.51	0.41
20:BH:111:ILE:CG2	20:BH:119:PRO:HB3	2.51	0.41
25:BM:26:THR:HG21	25:BM:97:GLY:HA3	2.01	0.41
26:BN:29:ARG:H	26:BN:29:ARG:HD2	1.86	0.41
38:A1:442:G:H1	38:A1:463:A:H61	1.68	0.41
38:A1:1568:A:C6	38:A1:1569:A:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A1:1720:G:H3'	38:A1:1721:U:H5'	2.03	0.41
38:A1:1752:C:H2'	38:A1:1753:G:C8	2.55	0.41
38:A1:2292:A:H5'	41:AA:126:GLY:HA3	2.02	0.41
45:AC:301:THR:HA	45:AC:356:ILE:HD13	2.02	0.41
59:AL:9:ARG:HB2	59:AL:11:LEU:HD13	2.02	0.41
11:B2:843:G:H1	11:B2:870:U:H3	1.67	0.41
14:BB:74:LEU:HD23	14:BB:77:GLN:NE2	2.36	0.41
18:BF:11:ARG:HH21	18:BF:48:GLU:HG2	1.86	0.41
38:A1:33:U:OP2	46:AD:186:MET:HG2	2.21	0.41
38:A1:267:C:H1'	38:A1:294:U:O2	2.21	0.41
38:A1:959:U:H1'	38:A1:2475:G:H1	1.85	0.41
38:A1:1530:A:C2	38:A1:1531:C:C2	3.08	0.41
38:A1:1611:C:H2'	38:A1:1612:G:O4'	2.20	0.41
66:AY:120:HIS:CG	66:AY:121:PRO:HD2	2.55	0.41
6:AT:49:VAL:HA	6:AT:74:TYR:CE2	2.55	0.41
10:B1:76:C:H5''	38:A1:2538:G:H22	1.82	0.41
10:B1:76:C:C4'	38:A1:2539:G:H1'	2.43	0.41
11:B2:242:A:C6	11:B2:275:A:C4	3.09	0.41
11:B2:849:U:O4'	53:Ah:9:ARG:NH2	2.54	0.41
11:B2:1036:G:OP1	11:B2:1038:C:C2	2.74	0.41
20:BH:3:LYS:HB2	20:BH:4:PRO:HD3	2.03	0.41
22:BJ:101:ILE:HG12	22:BJ:102:GLU:H	1.86	0.41
38:A1:106:G:C6	38:A1:107:G:C5	3.09	0.41
38:A1:2495:A:C2	62:AO:26:LYS:HB2	2.56	0.41
48:AE:155:ARG:HA	48:AE:155:ARG:HE	1.86	0.41
67:AZ:34:LEU:HD11	67:AZ:36:ILE:HD11	2.03	0.41
3:Af:5:LYS:HD2	3:Af:10:LYS:HE3	2.02	0.40
11:B2:385:A:H2'	11:B2:386:C:H5'	2.03	0.40
20:BH:149:ALA:HB2	20:BH:215:ARG:HD2	2.04	0.40
56:AJ:92:LEU:HD23	56:AJ:92:LEU:H	1.86	0.40
11:B2:1264:G:H1	11:B2:1291:G:H2'	1.86	0.40
11:B2:1326:G:H2'	11:B2:1327:C:H6	1.85	0.40
38:A1:1699:U:C5	38:A1:1700:U:C5	3.10	0.40
38:A1:2712:G:H5''	43:AB:212:GLY:HA2	2.03	0.40
42:Aa:38:PHE:CE2	42:Aa:42:HIS:CE1	3.09	0.40
48:AE:59:ARG:O	48:AE:75:PRO:HA	2.22	0.40
12:AG:33:ARG:HB3	12:AG:38:GLU:HB3	2.03	0.40
67:AZ:76:LYS:HA	67:AZ:76:LYS:HD3	1.94	0.40
38:A1:843:C:H2'	38:A1:844:C:C6	2.56	0.40
59:AL:102:ILE:HG23	59:AL:102:ILE:O	2.22	0.40
11:B2:1463:A:H61	11:B2:1482:C:H42	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BA:43:VAL:O	13:BA:43:VAL:HG13	2.21	0.40
38:A1:426:G:H2'	38:A1:427:G:C8	2.57	0.40
38:A1:2772:U:C5	38:A1:2780:G:C2	3.09	0.40
38:A1:2985:U:H3'	38:A1:2986:G:C8	2.56	0.40
46:AD:221:VAL:CG2	46:AD:224:ASN:HD22	2.35	0.40
67:AZ:51:TYR:CE2	67:AZ:52:TYR:CE1	3.10	0.40
11:B2:988:A:C2'	11:B2:989:C:H5'	2.52	0.40
14:BB:162:LYS:NZ	14:BB:192:VAL:HG11	2.37	0.40
28:BP:36:LEU:HD13	28:BP:36:LEU:H	1.85	0.40
38:A1:806:C:OP1	46:AD:82:PHE:CE2	2.75	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A7	63/67 (94%)	43 (68%)	16 (25%)	4 (6%)	1	13
2	A8	30/52 (58%)	22 (73%)	7 (23%)	1 (3%)	3	21
3	Af	49/51 (96%)	40 (82%)	6 (12%)	3 (6%)	1	13
4	AQ	148/150 (99%)	139 (94%)	5 (3%)	4 (3%)	4	25
5	AS	148/150 (99%)	135 (91%)	10 (7%)	3 (2%)	6	31
6	AT	82/84 (98%)	75 (92%)	4 (5%)	3 (4%)	2	20
7	AU	119/121 (98%)	113 (95%)	5 (4%)	1 (1%)	16	54
8	AW	64/72 (89%)	64 (100%)	0	0	100	100
9	AX	430/436 (99%)	322 (75%)	77 (18%)	31 (7%)	1	11
12	AG	121/123 (98%)	114 (94%)	4 (3%)	3 (2%)	4	26
12	B3	121/123 (98%)	100 (83%)	14 (12%)	7 (6%)	1	14
13	BA	188/190 (99%)	164 (87%)	12 (6%)	12 (6%)	1	12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	BB	200/202 (99%)	182 (91%)	12 (6%)	6 (3%)	3	23
15	BC	184/186 (99%)	171 (93%)	9 (5%)	4 (2%)	5	29
16	BD	170/172 (99%)	148 (87%)	20 (12%)	2 (1%)	10	44
17	BE	239/241 (99%)	207 (87%)	20 (8%)	12 (5%)	1	16
18	BF	215/217 (99%)	188 (87%)	16 (7%)	11 (5%)	1	15
19	BG	123/125 (98%)	103 (84%)	13 (11%)	7 (6%)	1	14
20	BH	213/215 (99%)	186 (87%)	14 (7%)	13 (6%)	1	13
21	BI	127/129 (98%)	118 (93%)	8 (6%)	1 (1%)	16	54
22	BJ	125/127 (98%)	107 (86%)	15 (12%)	3 (2%)	4	27
23	BK	133/135 (98%)	116 (87%)	10 (8%)	7 (5%)	1	15
24	BL	100/102 (98%)	90 (90%)	7 (7%)	3 (3%)	3	23
25	BM	131/133 (98%)	112 (86%)	9 (7%)	10 (8%)	1	10
26	BN	143/145 (99%)	128 (90%)	7 (5%)	8 (6%)	1	14
27	BO	146/148 (99%)	122 (84%)	16 (11%)	8 (6%)	1	15
28	BP	54/56 (96%)	44 (82%)	8 (15%)	2 (4%)	2	20
29	BQ	156/158 (99%)	137 (88%)	9 (6%)	10 (6%)	1	12
30	BR	111/113 (98%)	105 (95%)	5 (4%)	1 (1%)	14	51
31	BS	65/67 (97%)	60 (92%)	5 (8%)	0	100	100
32	BT	109/111 (98%)	102 (94%)	5 (5%)	2 (2%)	6	34
33	BU	142/144 (99%)	123 (87%)	11 (8%)	8 (6%)	1	14
34	BV	97/99 (98%)	88 (91%)	5 (5%)	4 (4%)	2	18
35	BW	61/63 (97%)	52 (85%)	6 (10%)	3 (5%)	1	16
36	BX	69/71 (97%)	62 (90%)	6 (9%)	1 (1%)	9	40
37	BY	48/50 (96%)	41 (85%)	5 (10%)	2 (4%)	2	17
40	A5	79/81 (98%)	67 (85%)	9 (11%)	3 (4%)	2	19
40	AK	79/81 (98%)	70 (89%)	4 (5%)	5 (6%)	1	13
41	AA	214/216 (99%)	186 (87%)	19 (9%)	9 (4%)	2	17
42	Aa	78/92 (85%)	69 (88%)	9 (12%)	0	100	100
43	AB	237/239 (99%)	209 (88%)	23 (10%)	5 (2%)	5	30
44	Ab	125/127 (98%)	108 (86%)	11 (9%)	6 (5%)	2	16
45	AC	338/365 (93%)	303 (90%)	21 (6%)	14 (4%)	2	18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
46	AD	253/255 (99%)	220 (87%)	23 (9%)	10 (4%)	2	18
47	Ad	87/89 (98%)	78 (90%)	6 (7%)	3 (3%)	3	21
48	AE	184/186 (99%)	161 (88%)	15 (8%)	8 (4%)	2	17
49	Ae	60/62 (97%)	43 (72%)	13 (22%)	4 (7%)	1	12
50	AF	182/184 (99%)	165 (91%)	14 (8%)	3 (2%)	7	38
51	Ag	43/45 (96%)	30 (70%)	8 (19%)	5 (12%)	0	5
52	AH	132/134 (98%)	114 (86%)	11 (8%)	7 (5%)	1	15
53	Ah	22/24 (92%)	21 (96%)	1 (4%)	0	100	100
54	AI	140/142 (99%)	121 (86%)	13 (9%)	6 (4%)	2	17
55	Ai	76/78 (97%)	69 (91%)	4 (5%)	3 (4%)	2	19
56	AJ	130/132 (98%)	121 (93%)	6 (5%)	3 (2%)	5	28
57	Aj	92/94 (98%)	69 (75%)	18 (20%)	5 (5%)	1	15
58	Ak	210/212 (99%)	192 (91%)	11 (5%)	7 (3%)	3	21
59	AL	145/147 (99%)	129 (89%)	11 (8%)	5 (3%)	3	21
60	AM	192/194 (99%)	175 (91%)	11 (6%)	6 (3%)	3	22
61	AN	166/168 (99%)	141 (85%)	19 (11%)	6 (4%)	2	20
62	AO	195/197 (99%)	166 (85%)	20 (10%)	9 (5%)	2	17
63	AP	118/120 (98%)	107 (91%)	5 (4%)	6 (5%)	1	15
64	AR	93/95 (98%)	85 (91%)	3 (3%)	5 (5%)	1	15
65	AV	64/66 (97%)	61 (95%)	3 (5%)	0	100	100
66	AY	153/155 (99%)	137 (90%)	12 (8%)	4 (3%)	4	25
67	AZ	97/99 (98%)	84 (87%)	9 (9%)	4 (4%)	2	18
All	All	8708/8907 (98%)	7624 (88%)	733 (8%)	351 (4%)	4	18

All (351) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A7	30	LYS
4	AQ	134	ASN
9	AX	239	ARG
9	AX	277	TYR
9	AX	346	ALA
12	B3	56	ASP
13	BA	128	ARG

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Mol	Chain	Res	Type
14	BB	4	GLU
14	BB	109	PHE
17	BE	237	LYS
18	BF	214	SER
20	BH	85	PHE
20	BH	87	ARG
20	BH	88	ARG
20	BH	90	HIS
20	BH	96	LYS
20	BH	194	LYS
21	BI	58	ALA
22	BJ	23	LYS
23	BK	105	THR
23	BK	122	SER
25	BM	89	SER
26	BN	6	ALA
26	BN	36	ARG
26	BN	116	MET
27	BO	113	ARG
27	BO	143	VAL
28	BP	43	PHE
29	BQ	2	ALA
29	BQ	6	ALA
29	BQ	78	ILE
29	BQ	114	LYS
33	BU	35	VAL
33	BU	77	TYR
33	BU	143	ILE
34	BV	55	TYR
43	AB	210	HIS
44	Ab	36	ASN
45	AC	292	ASN
45	AC	304	GLU
46	AD	75	THR
46	AD	76	PRO
48	AE	127	GLU
49	Ae	6	ALA
50	AF	178	ALA
12	AG	122	MET
51	Ag	38	ARG
51	Ag	45	GLU
52	AH	2	PRO

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Mol	Chain	Res	Type
54	AI	60	ASN
55	Ai	45	ALA
56	AJ	20	ALA
57	Aj	31	SER
57	Aj	60	LYS
40	AK	17	ARG
40	AK	69	GLU
59	AL	17	HIS
60	AM	83	SER
60	AM	88	VAL
61	AN	19	ARG
61	AN	113	ARG
62	AO	136	GLU
63	AP	2	LYS
64	AR	10	ARG
64	AR	13	ARG
1	A7	38	LYS
1	A7	55	HIS
6	AT	72	PRO
9	AX	48	ALA
9	AX	108	GLN
9	AX	147	ILE
9	AX	172	LEU
9	AX	207	ILE
9	AX	303	PRO
9	AX	329	MET
9	AX	374	ILE
9	AX	385	VAL
9	AX	405	LEU
9	AX	432	LYS
12	B3	122	MET
13	BA	52	LEU
13	BA	57	GLY
13	BA	64	VAL
14	BB	93	PRO
16	BD	175	LYS
17	BE	27	LYS
17	BE	150	VAL
17	BE	160	THR
18	BF	2	SER
18	BF	9	ALA
18	BF	136	ARG

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Mol	Chain	Res	Type
18	BF	167	ILE
19	BG	53	LYS
19	BG	54	GLU
20	BH	48	HIS
20	BH	92	SER
22	BJ	21	ARG
23	BK	50	ILE
25	BM	12	GLU
25	BM	132	ARG
29	BQ	24	ILE
29	BQ	70	ASP
34	BV	95	LYS
40	A5	50	ILE
41	AA	94	PRO
41	AA	97	ALA
41	AA	128	ARG
43	AB	38	GLU
43	AB	186	ASN
44	Ab	39	LYS
44	Ab	53	LYS
45	AC	60	LEU
45	AC	138	ASN
45	AC	243	ALA
46	AD	101	ILE
48	AE	120	HIS
48	AE	163	ARG
50	AF	5	ALA
12	AG	5	SER
51	Ag	9	ALA
52	AH	4	GLN
52	AH	25	ILE
54	AI	62	ARG
54	AI	117	GLU
55	Ai	17	TYR
56	AJ	75	HIS
57	Aj	53	PRO
40	AK	52	HIS
58	Ak	35	ALA
58	Ak	61	GLU
59	AL	9	ARG
59	AL	37	ALA
62	AO	54	LYS

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Mol	Chain	Res	Type
62	AO	179	GLU
63	AP	40	PRO
63	AP	56	ALA
63	AP	75	GLU
66	AY	89	LEU
67	AZ	57	ASP
3	Af	44	TRP
4	AQ	89	MET
5	AS	57	LEU
6	AT	48	ASN
9	AX	58	PHE
9	AX	96	MET
9	AX	308	SER
9	AX	345	MET
9	AX	369	ARG
12	B3	64	ALA
12	B3	95	ALA
12	B3	120	GLU
13	BA	65	LYS
14	BB	136	PRO
15	BC	58	GLY
17	BE	88	MET
19	BG	41	LYS
20	BH	19	GLY
20	BH	45	PRO
20	BH	138	SER
23	BK	107	LEU
24	BL	15	SER
24	BL	90	VAL
25	BM	7	ASN
25	BM	50	ALA
25	BM	88	GLY
25	BM	131	GLY
26	BN	121	GLY
27	BO	83	LYS
32	BT	20	SER
33	BU	2	ALA
33	BU	76	TYR
34	BV	26	PRO
36	BX	38	GLY
40	A5	18	ALA
41	AA	2	PRO

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Mol	Chain	Res	Type
44	Ab	21	PRO
45	AC	2	GLY
45	AC	25	PRO
45	AC	318	ARG
45	AC	319	SER
45	AC	347	LYS
46	AD	91	ARG
46	AD	205	GLU
46	AD	211	ALA
48	AE	66	ARG
48	AE	101	ARG
49	Ae	33	GLY
50	AF	2	PRO
12	AG	47	GLN
52	AH	3	LYS
52	AH	13	GLY
58	Ak	107	ARG
59	AL	49	TRP
61	AN	10	ARG
61	AN	82	TYR
61	AN	163	ARG
62	AO	111	PRO
62	AO	172	LEU
62	AO	192	ILE
62	AO	193	ILE
63	AP	96	ALA
3	Af	40	LYS
4	AQ	4	LEU
4	AQ	113	LYS
5	AS	16	ARG
5	AS	111	LYS
6	AT	5	LYS
12	B3	119	LYS
13	BA	10	ARG
13	BA	27	PHE
13	BA	44	LEU
13	BA	76	GLN
13	BA	129	ILE
15	BC	31	GLY
15	BC	151	LEU
16	BD	158	SER
17	BE	20	TYR

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Mol	Chain	Res	Type
18	BF	139	HIS
19	BG	50	LEU
19	BG	56	PRO
20	BH	93	LEU
26	BN	81	GLY
27	BO	74	ILE
32	BT	29	PRO
33	BU	79	GLY
33	BU	128	PHE
35	BW	9	PRO
35	BW	21	CYS
37	BY	3	GLN
40	A5	70	GLU
41	AA	160	ASN
43	AB	40	THR
44	Ab	26	GLN
45	AC	172	TRP
45	AC	325	ALA
46	AD	141	PRO
47	Ad	58	PRO
48	AE	164	HIS
48	AE	179	PHE
49	Ae	38	CYS
51	Ag	34	CYS
52	AH	117	LEU
54	AI	104	PRO
55	Ai	9	SER
56	AJ	33	SER
57	Aj	56	GLU
57	Aj	74	CYS
40	AK	42	LYS
58	Ak	58	THR
58	Ak	69	GLN
60	AM	137	HIS
60	AM	149	ILE
64	AR	7	SER
64	AR	8	PHE
1	A7	56	VAL
3	Af	32	ASN
9	AX	102	GLU
9	AX	250	LYS
9	AX	293	VAL

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Mol	Chain	Res	Type
13	BA	45	ASN
14	BB	91	ALA
15	BC	117	LEU
17	BE	175	GLU
17	BE	194	ALA
17	BE	236	ASP
18	BF	5	TRP
18	BF	6	LYS
20	BH	43	LEU
22	BJ	105	ILE
23	BK	23	LYS
23	BK	52	ALA
25	BM	25	ASN
25	BM	32	ASP
26	BN	5	LYS
27	BO	87	THR
27	BO	137	ARG
28	BP	29	PRO
29	BQ	5	HIS
29	BQ	112	HIS
29	BQ	150	PRO
30	BR	12	PRO
33	BU	39	ARG
34	BV	97	GLU
35	BW	6	ILE
41	AA	19	ALA
41	AA	103	LYS
46	AD	68	ALA
47	Ad	22	VAL
51	Ag	5	PRO
54	AI	59	THR
58	Ak	36	TYR
58	Ak	74	PRO
59	AL	48	THR
60	AM	181	LYS
62	AO	8	ARG
62	AO	162	GLU
66	AY	139	ALA
67	AZ	79	VAL
7	AU	18	ALA
9	AX	324	ILE
9	AX	338	THR

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Mol	Chain	Res	Type
12	B3	103	GLU
17	BE	70	LYS
17	BE	153	ALA
18	BF	16	TRP
18	BF	183	VAL
19	BG	55	PHE
27	BO	125	PRO
29	BQ	18	PRO
41	AA	98	ARG
44	Ab	59	ARG
45	AC	353	ARG
54	AI	84	PRO
60	AM	14	PRO
64	AR	11	LYS
66	AY	32	ASN
9	AX	145	ILE
19	BG	100	GLY
26	BN	111	PRO
41	AA	81	VAL
43	AB	31	ILE
49	Ae	15	PRO
61	AN	8	ILE
9	AX	170	ILE
24	BL	53	PRO
25	BM	120	PRO
67	AZ	42	PRO
67	AZ	86	VAL
9	AX	77	PRO
26	BN	89	PRO
27	BO	82	PRO
46	AD	25	PRO
47	Ad	66	ARG
52	AH	90	PRO
63	AP	65	PRO
2	A8	43	ILE
9	AX	6	PRO
9	AX	109	GLY
9	AX	313	PRO
17	BE	83	PHE
18	BF	129	GLY
23	BK	53	GLY
37	BY	35	GLY

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Mol	Chain	Res	Type
45	AC	31	PRO
46	AD	45	PRO
48	AE	3	VAL
9	AX	144	ILE
13	BA	39	ASP
14	BB	76	GLY
40	AK	50	ILE
66	AY	122	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A7	57/59 (97%)	55 (96%)	2 (4%)	32	53
2	A8	28/44 (64%)	27 (96%)	1 (4%)	31	52
3	Af	47/47 (100%)	47 (100%)	0	100	100
4	AQ	130/130 (100%)	124 (95%)	6 (5%)	24	45
5	AS	126/126 (100%)	120 (95%)	6 (5%)	23	44
6	AT	75/75 (100%)	72 (96%)	3 (4%)	28	49
7	AU	110/110 (100%)	105 (96%)	5 (4%)	24	46
8	AW	61/66 (92%)	61 (100%)	0	100	100
9	AX	351/355 (99%)	343 (98%)	8 (2%)	44	64
12	AG	99/99 (100%)	94 (95%)	5 (5%)	21	42
12	B3	99/99 (100%)	96 (97%)	3 (3%)	36	57
13	BA	166/166 (100%)	154 (93%)	12 (7%)	13	35
14	BB	173/173 (100%)	166 (96%)	7 (4%)	28	49
15	BC	145/145 (100%)	140 (97%)	5 (3%)	32	54
16	BD	153/153 (100%)	150 (98%)	3 (2%)	48	66
17	BE	212/212 (100%)	200 (94%)	12 (6%)	18	40
18	BF	181/181 (100%)	173 (96%)	8 (4%)	25	47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	BG	108/108 (100%)	106 (98%)	2 (2%)	50	67
20	BH	184/184 (100%)	168 (91%)	16 (9%)	9	29
21	BI	107/107 (100%)	106 (99%)	1 (1%)	70	79
22	BJ	103/103 (100%)	95 (92%)	8 (8%)	11	32
23	BK	111/111 (100%)	107 (96%)	4 (4%)	31	52
24	BL	91/91 (100%)	85 (93%)	6 (7%)	15	37
25	BM	100/100 (100%)	96 (96%)	4 (4%)	28	49
26	BN	119/119 (100%)	112 (94%)	7 (6%)	18	39
27	BO	122/122 (100%)	119 (98%)	3 (2%)	42	63
28	BP	46/46 (100%)	44 (96%)	2 (4%)	26	47
29	BQ	143/143 (100%)	134 (94%)	9 (6%)	16	37
30	BR	102/102 (100%)	96 (94%)	6 (6%)	18	39
31	BS	61/61 (100%)	59 (97%)	2 (3%)	33	55
32	BT	99/99 (100%)	95 (96%)	4 (4%)	28	49
33	BU	121/121 (100%)	118 (98%)	3 (2%)	42	63
34	BV	89/89 (100%)	86 (97%)	3 (3%)	32	54
35	BW	54/54 (100%)	48 (89%)	6 (11%)	6	20
36	BX	60/60 (100%)	56 (93%)	4 (7%)	15	36
37	BY	41/41 (100%)	41 (100%)	0	100	100
40	A5	64/64 (100%)	63 (98%)	1 (2%)	55	70
40	AK	64/64 (100%)	58 (91%)	6 (9%)	8	26
41	AA	182/182 (100%)	173 (95%)	9 (5%)	22	43
42	Aa	73/81 (90%)	70 (96%)	3 (4%)	27	49
43	AB	189/189 (100%)	183 (97%)	6 (3%)	34	56
44	Ab	114/114 (100%)	106 (93%)	8 (7%)	14	35
45	AC	291/312 (93%)	279 (96%)	12 (4%)	27	49
46	AD	213/213 (100%)	205 (96%)	8 (4%)	29	50
47	Ad	81/81 (100%)	80 (99%)	1 (1%)	63	75
48	AE	158/158 (100%)	152 (96%)	6 (4%)	29	50
49	Ae	51/51 (100%)	49 (96%)	2 (4%)	28	49
50	AF	156/156 (100%)	150 (96%)	6 (4%)	29	50

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
51	Ag	37/37 (100%)	36 (97%)	1 (3%)	39	61
52	AH	110/110 (100%)	108 (98%)	2 (2%)	51	68
53	Ah	23/23 (100%)	23 (100%)	0	100	100
54	AI	122/122 (100%)	117 (96%)	5 (4%)	27	49
55	Ai	57/57 (100%)	55 (96%)	2 (4%)	32	53
56	AJ	104/104 (100%)	101 (97%)	3 (3%)	37	58
57	Aj	83/83 (100%)	81 (98%)	2 (2%)	43	64
58	Ak	179/179 (100%)	170 (95%)	9 (5%)	22	43
59	AL	117/117 (100%)	114 (97%)	3 (3%)	40	62
60	AM	162/162 (100%)	155 (96%)	7 (4%)	26	47
61	AN	140/140 (100%)	136 (97%)	4 (3%)	37	58
62	AO	166/166 (100%)	157 (95%)	9 (5%)	20	41
63	AP	101/101 (100%)	96 (95%)	5 (5%)	22	43
64	AR	85/85 (100%)	80 (94%)	5 (6%)	18	39
65	AV	56/56 (100%)	56 (100%)	0	100	100
66	AY	133/133 (100%)	130 (98%)	3 (2%)	44	64
67	AZ	80/80 (100%)	73 (91%)	7 (9%)	9	28
All	All	7465/7521 (99%)	7154 (96%)	311 (4%)	28	48

All (311) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A7	38	LYS
1	A7	64	ILE
2	A8	29	LYS
4	AQ	58	GLN
4	AQ	115	ILE
4	AQ	119	THR
4	AQ	125	ILE
4	AQ	133	LYS
4	AQ	149	LYS
5	AS	27	ILE
5	AS	50	TYR
5	AS	74	PRO
5	AS	85	VAL
5	AS	129	TYR

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Mol	Chain	Res	Type
5	AS	154	ARG
6	AT	3	PRO
6	AT	13	THR
6	AT	56	THR
7	AU	33	ARG
7	AU	43	ASN
7	AU	52	VAL
7	AU	89	THR
7	AU	103	ILE
9	AX	52	ILE
9	AX	61	THR
9	AX	66	ARG
9	AX	71	ILE
9	AX	77	PRO
9	AX	258	PRO
9	AX	283	ILE
9	AX	294	ASP
12	B3	34	LYS
12	B3	66	LEU
12	B3	77	TYR
13	BA	20	ILE
13	BA	30	VAL
13	BA	50	VAL
13	BA	51	THR
13	BA	55	VAL
13	BA	70	VAL
13	BA	101	THR
13	BA	106	ILE
13	BA	137	ILE
13	BA	147	LYS
13	BA	191	LEU
13	BA	195	GLN
14	BB	8	PRO
14	BB	13	LEU
14	BB	80	VAL
14	BB	102	THR
14	BB	107	LYS
14	BB	142	ASP
14	BB	169	TRP
15	BC	35	ILE
15	BC	37	LYS
15	BC	153	LYS

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Mol	Chain	Res	Type
15	BC	157	PRO
15	BC	175	VAL
16	BD	54	ARG
16	BD	123	GLN
16	BD	147	GLU
17	BE	36	PRO
17	BE	38	ASN
17	BE	44	PRO
17	BE	64	LYS
17	BE	67	ASN
17	BE	116	SER
17	BE	179	PHE
17	BE	185	VAL
17	BE	202	ILE
17	BE	203	LYS
17	BE	209	TRP
17	BE	233	VAL
18	BF	34	ILE
18	BF	70	LEU
18	BF	75	THR
18	BF	92	ARG
18	BF	125	LYS
18	BF	126	ARG
18	BF	183	VAL
18	BF	188	PHE
19	BG	15	ILE
19	BG	50	LEU
20	BH	4	PRO
20	BH	10	PHE
20	BH	26	VAL
20	BH	28	VAL
20	BH	42	ARG
20	BH	43	LEU
20	BH	63	ILE
20	BH	69	ASN
20	BH	81	VAL
20	BH	85	PHE
20	BH	86	MET
20	BH	87	ARG
20	BH	122	VAL
20	BH	148	VAL
20	BH	175	ARG

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Mol	Chain	Res	Type
20	BH	209	ARG
21	BI	4	LEU
22	BJ	19	LEU
22	BJ	23	LYS
22	BJ	28	LEU
22	BJ	40	GLN
22	BJ	75	VAL
22	BJ	77	ILE
22	BJ	120	VAL
22	BJ	127	GLU
23	BK	40	ILE
23	BK	60	VAL
23	BK	104	ARG
23	BK	114	THR
24	BL	33	ARG
24	BL	34	MET
24	BL	66	LEU
24	BL	94	VAL
24	BL	96	ILE
24	BL	100	LEU
25	BM	28	ILE
25	BM	49	LYS
25	BM	105	LEU
25	BM	115	VAL
26	BN	29	ARG
26	BN	69	MET
26	BN	75	VAL
26	BN	84	VAL
26	BN	103	VAL
26	BN	119	ILE
26	BN	145	PRO
27	BO	39	VAL
27	BO	103	ARG
27	BO	143	VAL
28	BP	14	PHE
28	BP	36	LEU
29	BQ	8	LYS
29	BQ	15	LYS
29	BQ	18	PRO
29	BQ	36	LEU
29	BQ	39	LYS
29	BQ	58	TYR

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Mol	Chain	Res	Type
29	BQ	76	LEU
29	BQ	141	LYS
29	BQ	152	THR
30	BR	12	PRO
30	BR	39	VAL
30	BR	41	ASP
30	BR	44	ARG
30	BR	93	PRO
30	BR	103	VAL
31	BS	16	LEU
31	BS	66	ILE
32	BT	9	ARG
32	BT	34	ARG
32	BT	64	ARG
32	BT	110	ARG
33	BU	27	LYS
33	BU	97	ILE
33	BU	121	ILE
34	BV	12	LYS
34	BV	13	LEU
34	BV	46	LEU
35	BW	14	LEU
35	BW	26	ILE
35	BW	27	VAL
35	BW	53	ILE
35	BW	54	VAL
35	BW	60	GLU
36	BX	18	THR
36	BX	29	VAL
36	BX	60	THR
36	BX	65	ARG
40	A5	49	ASN
41	AA	20	LYS
41	AA	79	LEU
41	AA	107	PHE
41	AA	133	VAL
41	AA	134	VAL
41	AA	155	ILE
41	AA	161	PRO
41	AA	194	ARG
41	AA	206	THR
42	Aa	20	LYS

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Mol	Chain	Res	Type
42	Aa	23	PRO
42	Aa	48	VAL
43	AB	83	ILE
43	AB	101	LYS
43	AB	128	TYR
43	AB	136	PRO
43	AB	138	LYS
43	AB	222	PRO
44	Ab	7	LYS
44	Ab	24	LEU
44	Ab	38	PRO
44	Ab	54	LEU
44	Ab	81	GLU
44	Ab	86	ASN
44	Ab	106	VAL
44	Ab	125	VAL
45	AC	18	LYS
45	AC	70	VAL
45	AC	139	TYR
45	AC	176	LEU
45	AC	183	MET
45	AC	212	VAL
45	AC	221	VAL
45	AC	235	LYS
45	AC	240	LYS
45	AC	286	LEU
45	AC	335	ILE
45	AC	361	VAL
46	AD	169	ASP
46	AD	190	ARG
46	AD	219	VAL
46	AD	221	VAL
46	AD	234	THR
46	AD	247	ILE
46	AD	250	LEU
46	AD	252	GLU
47	Ad	58	PRO
48	AE	32	ILE
48	AE	39	GLU
48	AE	41	LEU
48	AE	75	PRO
48	AE	123	ILE

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Mol	Chain	Res	Type
48	AE	150	VAL
49	Ae	10	LYS
49	Ae	46	LEU
50	AF	2	PRO
50	AF	7	ILE
50	AF	14	PRO
50	AF	99	ILE
50	AF	102	LYS
50	AF	108	VAL
12	AG	23	VAL
12	AG	63	VAL
12	AG	77	TYR
12	AG	93	GLU
12	AG	94	VAL
51	Ag	40	ARG
52	AH	9	LEU
52	AH	50	GLN
54	AI	13	ARG
54	AI	34	GLU
54	AI	98	LYS
54	AI	106	GLU
54	AI	129	VAL
55	Ai	21	ILE
55	Ai	71	VAL
56	AJ	32	ASN
56	AJ	102	ASN
56	AJ	138	SER
57	Aj	2	LYS
57	Aj	23	GLU
40	AK	12	VAL
40	AK	22	VAL
40	AK	24	VAL
40	AK	25	VAL
40	AK	51	LYS
40	AK	52	HIS
58	Ak	28	VAL
58	Ak	31	SER
58	Ak	46	ARG
58	Ak	51	LEU
58	Ak	56	ARG
58	Ak	90	LEU
58	Ak	183	GLN

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Mol	Chain	Res	Type
58	Ak	191	LEU
58	Ak	204	ASP
59	AL	17	HIS
59	AL	36	MET
59	AL	123	VAL
60	AM	37	VAL
60	AM	66	VAL
60	AM	95	SER
60	AM	117	TYR
60	AM	137	HIS
60	AM	139	VAL
60	AM	146	ILE
61	AN	11	TYR
61	AN	31	ILE
61	AN	50	HIS
61	AN	137	VAL
62	AO	9	VAL
62	AO	37	VAL
62	AO	60	VAL
62	AO	73	TRP
62	AO	74	LYS
62	AO	131	VAL
62	AO	137	ILE
62	AO	140	ASP
62	AO	142	TYR
63	AP	4	THR
63	AP	29	ILE
63	AP	42	ARG
63	AP	78	VAL
63	AP	93	ILE
64	AR	11	LYS
64	AR	31	PHE
64	AR	61	ARG
64	AR	66	VAL
64	AR	85	THR
66	AY	3	LYS
66	AY	37	VAL
66	AY	43	TYR
67	AZ	17	VAL
67	AZ	37	VAL
67	AZ	48	ASP
67	AZ	51	TYR

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Mol	Chain	Res	Type
67	AZ	73	LEU
67	AZ	76	LYS
67	AZ	79	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (143) such sidechains are listed below:

Mol	Chain	Res	Type
1	A7	5	ASN
5	AS	70	GLN
7	AU	17	ASN
7	AU	43	ASN
7	AU	106	ASN
9	AX	51	GLN
9	AX	86	GLN
9	AX	108	GLN
9	AX	180	GLN
9	AX	268	ASN
9	AX	315	HIS
9	AX	368	HIS
12	B3	47	GLN
13	BA	133	GLN
13	BA	195	GLN
14	BB	37	GLN
14	BB	124	HIS
14	BB	158	ASN
15	BC	95	GLN
16	BD	106	GLN
16	BD	123	GLN
16	BD	129	HIS
17	BE	67	ASN
17	BE	141	ASN
17	BE	147	ASN
17	BE	157	ASN
18	BF	3	GLN
18	BF	30	GLN
18	BF	62	ASN
18	BF	203	ASN
19	BG	48	ASN
19	BG	118	GLN
19	BG	120	ASN
20	BH	13	HIS
20	BH	38	ASN

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Mol	Chain	Res	Type
20	BH	48	HIS
20	BH	51	HIS
20	BH	90	HIS
20	BH	113	GLN
20	BH	118	ASN
21	BI	9	ASN
21	BI	70	ASN
21	BI	113	HIS
22	BJ	52	ASN
22	BJ	88	GLN
22	BJ	116	GLN
23	BK	29	ASN
24	BL	21	ASN
24	BL	69	HIS
24	BL	84	GLN
25	BM	29	HIS
25	BM	99	GLN
26	BN	66	ASN
26	BN	100	HIS
27	BO	20	GLN
27	BO	58	GLN
27	BO	72	HIS
27	BO	92	HIS
29	BQ	108	HIS
30	BR	24	HIS
30	BR	52	GLN
30	BR	99	HIS
31	BS	18	ASN
32	BT	66	HIS
32	BT	84	HIS
33	BU	40	HIS
33	BU	103	GLN
33	BU	104	GLN
34	BV	25	HIS
35	BW	25	GLN
35	BW	30	HIS
37	BY	3	GLN
37	BY	34	HIS
41	AA	23	ASN
42	Aa	42	HIS
42	Aa	55	ASN
43	AB	8	GLN

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Mol	Chain	Res	Type
43	AB	22	HIS
43	AB	50	HIS
44	Ab	85	HIS
44	Ab	98	GLN
45	AC	50	HIS
45	AC	62	ASN
45	AC	283	ASN
45	AC	292	ASN
45	AC	313	HIS
45	AC	365	GLN
46	AD	44	GLN
46	AD	65	HIS
46	AD	93	HIS
46	AD	204	ASN
46	AD	224	ASN
46	AD	229	HIS
46	AD	235	HIS
47	Ad	25	HIS
47	Ad	70	HIS
48	AE	100	ASN
48	AE	110	HIS
48	AE	112	ASN
49	Ae	29	ASN
50	AF	45	GLN
50	AF	104	GLN
50	AF	149	GLN
52	AH	93	ASN
52	AH	97	ASN
54	AI	5	ASN
54	AI	108	GLN
56	AJ	32	ASN
56	AJ	75	HIS
56	AJ	102	ASN
57	Aj	17	HIS
57	Aj	20	HIS
57	Aj	37	GLN
57	Aj	78	HIS
40	AK	31	ASN
58	Ak	17	ASN
58	Ak	81	ASN
58	Ak	104	GLN
58	Ak	105	GLN

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Mol	Chain	Res	Type
59	AL	77	ASN
59	AL	84	HIS
59	AL	90	GLN
60	AM	137	HIS
60	AM	174	ASN
61	AN	97	ASN
62	AO	42	ASN
62	AO	43	HIS
62	AO	47	GLN
62	AO	76	HIS
62	AO	148	HIS
63	AP	23	ASN
64	AR	3	GLN
64	AR	6	HIS
64	AR	42	HIS
64	AR	50	HIS
64	AR	59	HIS
64	AR	89	HIS
65	AV	5	ASN
65	AV	57	GLN
66	AY	14	ASN
66	AY	77	ASN
66	AY	98	GLN
66	AY	120	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
10	B1	76/77 (98%)	20 (26%)	4 (5%)
11	B2	1494/1495 (99%)	267 (17%)	103 (6%)
38	A1	2964/3049 (97%)	615 (20%)	158 (5%)
39	A3	125/126 (99%)	36 (28%)	11 (8%)
All	All	4659/4747 (98%)	938 (20%)	276 (5%)

All (938) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
10	B1	8	U
10	B1	9	A
10	B1	10	G
10	B1	18	U

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Mol	Chain	Res	Type
10	B1	19	G
10	B1	21	G
10	B1	22	A
10	B1	23	G
10	B1	35	G
10	B1	36	A
10	B1	43	G
10	B1	47	G
10	B1	48	U
10	B1	50	G
10	B1	59	A
10	B1	60	A
10	B1	62	C
10	B1	74	A
10	B1	75	C
10	B1	77	A
11	B2	3	U
11	B2	4	C
11	B2	42	G
11	B2	43	A
11	B2	47	A
11	B2	48	G
11	B2	57	G
11	B2	63	G
11	B2	64	G
11	B2	71	C
11	B2	72	C
11	B2	73	U
11	B2	74	U
11	B2	75	C
11	B2	91	G
11	B2	100	A
11	B2	104	A
11	B2	105	C
11	B2	106	A
11	B2	112	G
11	B2	114	A
11	B2	115	A
11	B2	116	C
11	B2	117	C
11	B2	127	G
11	B2	151	G

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Mol	Chain	Res	Type
11	B2	166	A
11	B2	177	A
11	B2	184	G
11	B2	195	C
11	B2	196	G
11	B2	197	A
11	B2	199	A
11	B2	200	G
11	B2	202	G
11	B2	203	A
11	B2	204	G
11	B2	209	A
11	B2	211	G
11	B2	240	U
11	B2	243	G
11	B2	247	G
11	B2	248	U
11	B2	249	U
11	B2	262	G
11	B2	263	C
11	B2	276	A
11	B2	277	G
11	B2	278	A
11	B2	285	C
11	B2	317	A
11	B2	324	C
11	B2	325	A
11	B2	326	C
11	B2	328	G
11	B2	340	A
11	B2	341	C
11	B2	348	C
11	B2	349	A
11	B2	350	G
11	B2	362	C
11	B2	363	C
11	B2	369	A
11	B2	393	A
11	B2	394	C
11	B2	402	G
11	B2	407	G
11	B2	409	C

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Mol	Chain	Res	Type
11	B2	411	C
11	B2	412	U
11	B2	413	G
11	B2	423	U
11	B2	425	C
11	B2	431	U
11	B2	432	G
11	B2	434	A
11	B2	435	A
11	B2	436	A
11	B2	438	A
11	B2	439	G
11	B2	440	C
11	B2	449	U
11	B2	450	A
11	B2	459	G
11	B2	460	C
11	B2	461	A
11	B2	462	A
11	B2	463	G
11	B2	464	G
11	B2	471	G
11	B2	472	C
11	B2	480	G
11	B2	485	A
11	B2	486	A
11	B2	487	U
11	B2	500	A
11	B2	512	U
11	B2	514	U
11	B2	515	U
11	B2	525	A
11	B2	526	A
11	B2	528	G
11	B2	529	C
11	B2	530	G
11	B2	541	G
11	B2	585	U
11	B2	586	C
11	B2	607	U
11	B2	619	A
11	B2	640	U

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Mol	Chain	Res	Type
11	B2	642	G
11	B2	648	A
11	B2	655	A
11	B2	656	U
11	B2	657	A
11	B2	672	G
11	B2	677	U
11	B2	678	G
11	B2	685	G
11	B2	702	G
11	B2	703	U
11	B2	709	G
11	B2	722	G
11	B2	731	A
11	B2	735	A
11	B2	736	A
11	B2	747	U
11	B2	748	A
11	B2	766	G
11	B2	769	A
11	B2	771	G
11	B2	782	A
11	B2	801	A
11	B2	805	C
11	B2	806	G
11	B2	816	G
11	B2	843	G
11	B2	860	G
11	B2	872	A
11	B2	884	G
11	B2	885	G
11	B2	892	C
11	B2	904	G
11	B2	919	U
11	B2	920	U
11	B2	925	U
11	B2	928	A
11	B2	933	G
11	B2	934	G
11	B2	935	G
11	B2	936	A
11	B2	937	A

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Mol	Chain	Res	Type
11	B2	950	C
11	B2	951	G
11	B2	952	A
11	B2	953	C
11	B2	960	A
11	B2	962	G
11	B2	963	A
11	B2	964	A
11	B2	965	G
11	B2	970	G
11	B2	972	C
11	B2	973	U
11	B2	974	G
11	B2	975	A
11	B2	976	A
11	B2	977	G
11	B2	978	G
11	B2	986	G
11	B2	988	A
11	B2	989	C
11	B2	993	C
11	B2	1002	G
11	B2	1005	G
11	B2	1017	U
11	B2	1018	C
11	B2	1020	G
11	B2	1037	U
11	B2	1038	C
11	B2	1046	G
11	B2	1047	U
11	B2	1053	A
11	B2	1054	A
11	B2	1064	C
11	B2	1068	C
11	B2	1076	G
11	B2	1077	U
11	B2	1078	U
11	B2	1080	C
11	B2	1081	C
11	B2	1082	A
11	B2	1083	G
11	B2	1094	U

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Mol	Chain	Res	Type
11	B2	1095	C
11	B2	1105	C
11	B2	1106	A
11	B2	1112	G
11	B2	1117	A
11	B2	1119	U
11	B2	1128	U
11	B2	1143	G
11	B2	1144	G
11	B2	1151	A
11	B2	1156	A
11	B2	1157	G
11	B2	1161	A
11	B2	1162	G
11	B2	1171	G
11	B2	1172	A
11	B2	1175	C
11	B2	1184	U
11	B2	1185	A
11	B2	1186	C
11	B2	1187	A
11	B2	1198	A
11	B2	1208	A
11	B2	1209	C
11	B2	1210	A
11	B2	1216	A
11	B2	1218	C
11	B2	1238	G
11	B2	1239	A
11	B2	1240	A
11	B2	1242	C
11	B2	1246	U
11	B2	1247	A
11	B2	1260	G
11	B2	1261	U
11	B2	1262	U
11	B2	1263	C
11	B2	1265	G
11	B2	1280	C
11	B2	1292	A
11	B2	1298	G
11	B2	1306	A

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Mol	Chain	Res	Type
11	B2	1307	G
11	B2	1308	U
11	B2	1322	C
11	B2	1323	A
11	B2	1324	U
11	B2	1325	C
11	B2	1341	C
11	B2	1354	A
11	B2	1358	A
11	B2	1379	G
11	B2	1409	G
11	B2	1410	G
11	B2	1424	G
11	B2	1437	G
11	B2	1445	A
11	B2	1454	A
11	B2	1457	A
11	B2	1458	A
11	B2	1459	G
11	B2	1460	G
11	B2	1461	U
11	B2	1462	A
11	B2	1472	G
11	B2	1475	C
11	B2	1484	C
11	B2	1485	G
11	B2	1486	A
11	B2	1487	U
11	B2	1489	A
11	B2	1494	C
11	B2	1495	U
38	A1	9	A
38	A1	11	G
38	A1	12	C
38	A1	13	U
38	A1	14	A
38	A1	44	C
38	A1	45	G
38	A1	46	C
38	A1	50	C
38	A1	51	G
38	A1	64	A

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Mol	Chain	Res	Type
38	A1	73	A
38	A1	74	A
38	A1	75	G
38	A1	84	A
38	A1	85	G
38	A1	92	G
38	A1	100	C
38	A1	101	G
38	A1	118	A
38	A1	119	U
38	A1	120	G
38	A1	124	C
38	A1	130	G
38	A1	136	U
38	A1	137	A
38	A1	139	G
38	A1	144	A
38	A1	145	C
38	A1	146	U
38	A1	170	A
38	A1	185	A
38	A1	188	A
38	A1	205	A
38	A1	211	A
38	A1	215	A
38	A1	216	A
38	A1	217	A
38	A1	219	G
38	A1	221	G
38	A1	222	A
38	A1	237	G
38	A1	238	C
38	A1	254	A
38	A1	255	G
38	A1	279	G
38	A1	286	G
38	A1	291	A
38	A1	292	U
38	A1	293	G
38	A1	300	U
38	A1	301	G
38	A1	302	U

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Mol	Chain	Res	Type
38	A1	303	A
38	A1	304	G
38	A1	305	G
38	A1	306	G
38	A1	309	C
38	A1	310	C
38	A1	313	U
38	A1	316	G
38	A1	318	G
38	A1	319	A
38	A1	332	A
38	A1	333	A
38	A1	341	U
38	A1	342	C
38	A1	351	C
38	A1	361	G
38	A1	363	G
38	A1	365	G
38	A1	370	A
38	A1	371	U
38	A1	372	A
38	A1	378	G
38	A1	379	U
38	A1	380	A
38	A1	385	U
38	A1	394	A
38	A1	399	C
38	A1	401	C
38	A1	403	G
38	A1	404	G
38	A1	405	G
38	A1	406	G
38	A1	407	A
38	A1	408	C
38	A1	409	C
38	A1	411	U
38	A1	414	G
38	A1	426	G
38	A1	428	A
38	A1	430	A
38	A1	440	A
38	A1	443	C

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Mol	Chain	Res	Type
38	A1	444	U
38	A1	445	G
38	A1	450	G
38	A1	472	A
38	A1	480	A
38	A1	481	G
38	A1	486	A
38	A1	489	G
38	A1	490	C
38	A1	493	A
38	A1	494	C
38	A1	495	U
38	A1	496	A
38	A1	514	U
38	A1	518	A
38	A1	519	A
38	A1	520	G
38	A1	530	A
38	A1	531	G
38	A1	537	U
38	A1	538	G
38	A1	540	A
38	A1	541	A
38	A1	542	A
38	A1	543	G
38	A1	546	C
38	A1	569	G
38	A1	570	G
38	A1	576	G
38	A1	579	C
38	A1	580	G
38	A1	581	A
38	A1	584	G
38	A1	585	G
38	A1	587	A
38	A1	588	U
38	A1	589	G
38	A1	599	G
38	A1	623	G
38	A1	640	C
38	A1	642	G
38	A1	654	C

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Mol	Chain	Res	Type
38	A1	666	A
38	A1	678	G
38	A1	694	A
38	A1	716	U
38	A1	717	A
38	A1	733	A
38	A1	734	C
38	A1	735	A
38	A1	736	U
38	A1	737	G
38	A1	759	G
38	A1	788	A
38	A1	801	A
38	A1	819	U
38	A1	851	G
38	A1	859	G
38	A1	860	A
38	A1	863	C
38	A1	877	U
38	A1	882	U
38	A1	898	G
38	A1	899	A
38	A1	900	C
38	A1	910	G
38	A1	911	G
38	A1	917	A
38	A1	919	G
38	A1	920	G
38	A1	923	A
38	A1	925	U
38	A1	927	G
38	A1	928	A
38	A1	936	G
38	A1	937	A
38	A1	940	G
38	A1	946	U
38	A1	947	C
38	A1	962	C
38	A1	963	G
38	A1	982	G
38	A1	995	G
38	A1	1002	A

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Mol	Chain	Res	Type
38	A1	1004	U
38	A1	1006	A
38	A1	1007	U
38	A1	1010	G
38	A1	1011	A
38	A1	1013	G
38	A1	1014	U
38	A1	1015	G
38	A1	1016	C
38	A1	1018	G
38	A1	1019	G
38	A1	1024	G
38	A1	1026	A
38	A1	1027	A
38	A1	1028	G
38	A1	1030	C
38	A1	1033	C
38	A1	1036	C
38	A1	1037	C
38	A1	1038	U
38	A1	1039	C
38	A1	1041	U
38	A1	1042	G
38	A1	1043	U
38	A1	1046	A
38	A1	1047	A
38	A1	1048	C
38	A1	1069	A
38	A1	1070	G
38	A1	1072	U
38	A1	1081	U
38	A1	1082	A
38	A1	1083	G
38	A1	1085	G
38	A1	1086	U
38	A1	1097	G
38	A1	1109	G
38	A1	1110	A
38	A1	1118	A
38	A1	1126	C
38	A1	1143	A
38	A1	1145	G

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Mol	Chain	Res	Type
38	A1	1146	U
38	A1	1147	G
38	A1	1156	G
38	A1	1161	A
38	A1	1162	C
38	A1	1166	A
38	A1	1172	U
38	A1	1178	G
38	A1	1180	G
38	A1	1181	C
38	A1	1185	A
38	A1	1186	G
38	A1	1188	C
38	A1	1194	G
38	A1	1195	G
38	A1	1199	U
38	A1	1201	G
38	A1	1206	A
38	A1	1217	U
38	A1	1223	A
38	A1	1226	G
38	A1	1227	A
38	A1	1241	C
38	A1	1242	A
38	A1	1246	G
38	A1	1250	A
38	A1	1251	G
38	A1	1253	U
38	A1	1254	C
38	A1	1261	C
38	A1	1267	A
38	A1	1268	A
38	A1	1269	U
38	A1	1273	C
38	A1	1274	G
38	A1	1279	U
38	A1	1280	C
38	A1	1282	A
38	A1	1327	C
38	A1	1348	G
38	A1	1354	G
38	A1	1367	A

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Mol	Chain	Res	Type
38	A1	1368	A
38	A1	1369	G
38	A1	1379	A
38	A1	1380	G
38	A1	1391	C
38	A1	1393	C
38	A1	1398	C
38	A1	1407	A
38	A1	1408	G
38	A1	1415	C
38	A1	1416	G
38	A1	1417	U
38	A1	1443	G
38	A1	1444	A
38	A1	1446	G
38	A1	1450	C
38	A1	1471	G
38	A1	1475	G
38	A1	1485	A
38	A1	1486	G
38	A1	1488	C
38	A1	1511	C
38	A1	1522	A
38	A1	1525	G
38	A1	1541	U
38	A1	1542	U
38	A1	1543	C
38	A1	1554	G
38	A1	1556	G
38	A1	1561	G
38	A1	1562	U
38	A1	1563	G
38	A1	1564	C
38	A1	1573	A
38	A1	1575	G
38	A1	1576	C
38	A1	1577	C
38	A1	1583	G
38	A1	1584	G
38	A1	1585	U
38	A1	1586	G
38	A1	1587	A

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Mol	Chain	Res	Type
38	A1	1588	C
38	A1	1592	U
38	A1	1598	U
38	A1	1609	G
38	A1	1612	G
38	A1	1613	A
38	A1	1614	U
38	A1	1615	G
38	A1	1616	A
38	A1	1621	G
38	A1	1623	C
38	A1	1627	G
38	A1	1628	C
38	A1	1632	U
38	A1	1633	A
38	A1	1634	A
38	A1	1635	G
38	A1	1637	C
38	A1	1639	G
38	A1	1642	G
38	A1	1643	A
38	A1	1644	G
38	A1	1645	U
38	A1	1646	G
38	A1	1654	G
38	A1	1655	G
38	A1	1656	C
38	A1	1657	G
38	A1	1659	G
38	A1	1663	C
38	A1	1664	G
38	A1	1665	G
38	A1	1668	G
38	A1	1669	A
38	A1	1671	A
38	A1	1672	G
38	A1	1678	A
38	A1	1679	U
38	A1	1684	C
38	A1	1688	C
38	A1	1691	U
38	A1	1694	G

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Mol	Chain	Res	Type
38	A1	1697	G
38	A1	1701	C
38	A1	1702	C
38	A1	1703	G
38	A1	1706	G
38	A1	1707	A
38	A1	1708	U
38	A1	1709	C
38	A1	1712	U
38	A1	1713	G
38	A1	1714	G
38	A1	1718	C
38	A1	1719	C
38	A1	1721	U
38	A1	1722	G
38	A1	1723	A
38	A1	1728	C
38	A1	1729	C
38	A1	1732	C
38	A1	1733	C
38	A1	1734	G
38	A1	1736	G
38	A1	1738	A
38	A1	1740	U
38	A1	1741	C
38	A1	1744	A
38	A1	1746	C
38	A1	1753	G
38	A1	1754	A
38	A1	1763	A
38	A1	1764	G
38	A1	1765	A
38	A1	1772	A
38	A1	1774	A
38	A1	1777	U
38	A1	1780	C
38	A1	1781	C
38	A1	1782	C
38	A1	1783	U
38	A1	1791	A
38	A1	1803	U
38	A1	1804	G

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Mol	Chain	Res	Type
38	A1	1805	U
38	A1	1806	C
38	A1	1811	G
38	A1	1812	A
38	A1	1833	G
38	A1	1853	C
38	A1	1855	G
38	A1	1859	A
38	A1	1876	G
38	A1	1878	G
38	A1	1880	A
38	A1	1882	C
38	A1	1897	G
38	A1	1903	G
38	A1	1912	A
38	A1	1918	U
38	A1	1919	A
38	A1	1920	A
38	A1	1921	U
38	A1	1937	A
38	A1	1940	U
38	A1	1957	U
38	A1	1962	G
38	A1	1976	C
38	A1	1991	G
38	A1	2002	A
38	A1	2003	C
38	A1	2013	A
38	A1	2025	A
38	A1	2032	G
38	A1	2033	G
38	A1	2038	C
38	A1	2040	A
38	A1	2044	C
38	A1	2054	G
38	A1	2056	A
38	A1	2060	A
38	A1	2061	A
38	A1	2062	A
38	A1	2063	U
38	A1	2064	U
38	A1	2065	C

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Mol	Chain	Res	Type
38	A1	2068	U
38	A1	2069	G
38	A1	2079	U
38	A1	2087	U
38	A1	2088	G
38	A1	2091	U
38	A1	2094	A
38	A1	2095	U
38	A1	2096	G
38	A1	2116	G
38	A1	2117	U
38	A1	2144	U
38	A1	2146	C
38	A1	2154	G
38	A1	2155	C
38	A1	2156	A
38	A1	2157	U
38	A1	2159	C
38	A1	2166	C
38	A1	2173	U
38	A1	2178	A
38	A1	2183	A
38	A1	2184	G
38	A1	2192	G
38	A1	2216	G
38	A1	2219	A
38	A1	2220	C
38	A1	2224	G
38	A1	2225	C
38	A1	2227	G
38	A1	2230	G
38	A1	2231	G
38	A1	2232	U
38	A1	2233	G
38	A1	2234	C
38	A1	2235	G
38	A1	2236	C
38	A1	2237	A
38	A1	2238	G
38	A1	2239	C
38	A1	2240	G
38	A1	2241	U

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Mol	Chain	Res	Type
38	A1	2243	G
38	A1	2245	C
38	A1	2246	G
38	A1	2249	A
38	A1	2251	G
38	A1	2252	C
38	A1	2254	U
38	A1	2255	C
38	A1	2256	G
38	A1	2258	A
38	A1	2259	G
38	A1	2268	C
38	A1	2270	G
38	A1	2275	G
38	A1	2276	G
38	A1	2278	U
38	A1	2280	G
38	A1	2281	A
38	A1	2284	C
38	A1	2285	G
38	A1	2286	U
38	A1	2287	C
38	A1	2288	C
38	A1	2289	A
38	A1	2290	U
38	A1	2292	A
38	A1	2293	G
38	A1	2294	A
38	A1	2295	C
38	A1	2296	A
38	A1	2301	C
38	A1	2302	C
38	A1	2303	A
38	A1	2304	C
38	A1	2306	C
38	A1	2308	C
38	A1	2310	G
38	A1	2321	A
38	A1	2325	C
38	A1	2332	G
38	A1	2338	A
38	A1	2339	C

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Mol	Chain	Res	Type
38	A1	2351	G
38	A1	2352	G
38	A1	2363	G
38	A1	2364	G
38	A1	2371	A
38	A1	2396	G
38	A1	2397	C
38	A1	2400	U
38	A1	2401	A
38	A1	2402	A
38	A1	2422	G
38	A1	2434	A
38	A1	2441	A
38	A1	2448	A
38	A1	2449	A
38	A1	2450	A
38	A1	2451	G
38	A1	2459	G
38	A1	2476	A
38	A1	2502	C
38	A1	2507	C
38	A1	2508	G
38	A1	2511	C
38	A1	2515	U
38	A1	2542	G
38	A1	2543	A
38	A1	2544	C
38	A1	2545	A
38	A1	2546	G
38	A1	2547	A
38	A1	2548	A
38	A1	2549	A
38	A1	2554	A
38	A1	2555	C
38	A1	2556	C
38	A1	2562	G
38	A1	2563	A
38	A1	2587	G
38	A1	2590	C
38	A1	2591	A
38	A1	2593	A
38	A1	2606	C

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Mol	Chain	Res	Type
38	A1	2607	U
38	A1	2613	C
38	A1	2617	G
38	A1	2618	C
38	A1	2619	U
38	A1	2620	G
38	A1	2621	U
38	A1	2633	A
38	A1	2644	G
38	A1	2669	U
38	A1	2681	A
38	A1	2682	G
38	A1	2693	G
38	A1	2697	G
38	A1	2718	G
38	A1	2724	A
38	A1	2725	U
38	A1	2729	A
38	A1	2745	G
38	A1	2748	C
38	A1	2760	A
38	A1	2761	G
38	A1	2794	G
38	A1	2826	U
38	A1	2827	C
38	A1	2840	C
38	A1	2846	A
38	A1	2861	A
38	A1	2864	G
38	A1	2871	A
38	A1	2878	A
38	A1	2889	A
38	A1	2891	A
38	A1	2892	A
38	A1	2893	U
38	A1	2894	A
38	A1	2944	G
38	A1	2945	A
38	A1	2947	G
38	A1	2948	A
38	A1	2949	G
38	A1	2958	U

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Mol	Chain	Res	Type
38	A1	2988	A
38	A1	2997	G
38	A1	2998	G
38	A1	3000	U
38	A1	3001	C
38	A1	3002	A
38	A1	3004	C
38	A1	3005	C
38	A1	3027	C
38	A1	3036	C
38	A1	3037	G
38	A1	3038	A
38	A1	3039	G
38	A1	3040	G
38	A1	3042	C
38	A1	3046	C
39	A3	2	G
39	A3	4	C
39	A3	11	A
39	A3	12	G
39	A3	20	G
39	A3	21	C
39	A3	22	C
39	A3	23	A
39	A3	25	A
39	A3	26	C
39	A3	29	G
39	A3	31	U
39	A3	33	U
39	A3	35	A
39	A3	41	A
39	A3	42	A
39	A3	44	C
39	A3	49	A
39	A3	53	A
39	A3	54	A
39	A3	55	G
39	A3	63	G
39	A3	70	C
39	A3	74	U
39	A3	75	G
39	A3	76	U

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Mol	Chain	Res	Type
39	A3	83	C
39	A3	85	C
39	A3	89	G
39	A3	90	A
39	A3	100	A
39	A3	106	G
39	A3	111	G
39	A3	123	U
39	A3	124	A
39	A3	125	U

All (276) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
10	B1	8	U
10	B1	9	A
10	B1	18	U
10	B1	59	A
11	B2	3	U
11	B2	42	G
11	B2	47	A
11	B2	55	G
11	B2	56	A
11	B2	74	U
11	B2	90	C
11	B2	99	C
11	B2	103	A
11	B2	105	C
11	B2	111	G
11	B2	114	A
11	B2	116	C
11	B2	126	G
11	B2	158	U
11	B2	176	U
11	B2	196	G
11	B2	199	A
11	B2	203	A
11	B2	239	A
11	B2	246	A
11	B2	247	G
11	B2	262	G
11	B2	275	A

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Mol	Chain	Res	Type
11	B2	276	A
11	B2	277	G
11	B2	324	C
11	B2	325	A
11	B2	347	G
11	B2	362	C
11	B2	368	C
11	B2	408	C
11	B2	422	U
11	B2	434	A
11	B2	439	G
11	B2	448	A
11	B2	462	A
11	B2	471	G
11	B2	486	A
11	B2	513	A
11	B2	528	G
11	B2	584	C
11	B2	641	A
11	B2	655	A
11	B2	677	U
11	B2	687	G
11	B2	702	G
11	B2	746	A
11	B2	747	U
11	B2	804	U
11	B2	871	A
11	B2	891	A
11	B2	892	C
11	B2	919	U
11	B2	924	U
11	B2	934	G
11	B2	935	G
11	B2	949	G
11	B2	951	G
11	B2	959	G
11	B2	963	A
11	B2	964	A
11	B2	975	A
11	B2	977	G
11	B2	985	C
11	B2	1001	A

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Mol	Chain	Res	Type
11	B2	1017	U
11	B2	1019	A
11	B2	1037	U
11	B2	1053	A
11	B2	1081	C
11	B2	1105	C
11	B2	1142	G
11	B2	1150	G
11	B2	1156	A
11	B2	1161	A
11	B2	1174	A
11	B2	1184	U
11	B2	1185	A
11	B2	1186	C
11	B2	1208	A
11	B2	1217	C
11	B2	1238	G
11	B2	1241	U
11	B2	1245	C
11	B2	1260	G
11	B2	1261	U
11	B2	1291	G
11	B2	1306	A
11	B2	1307	G
11	B2	1322	C
11	B2	1324	U
11	B2	1340	U
11	B2	1399	G
11	B2	1423	A
11	B2	1436	U
11	B2	1453	U
11	B2	1457	A
11	B2	1458	A
11	B2	1459	G
11	B2	1460	G
11	B2	1461	U
11	B2	1483	U
38	A1	11	G
38	A1	12	C
38	A1	84	A
38	A1	91	G
38	A1	99	U

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Mol	Chain	Res	Type
38	A1	119	U
38	A1	129	C
38	A1	210	A
38	A1	215	A
38	A1	237	G
38	A1	285	C
38	A1	299	U
38	A1	300	U
38	A1	301	G
38	A1	302	U
38	A1	332	A
38	A1	364	A
38	A1	371	U
38	A1	379	U
38	A1	393	C
38	A1	408	C
38	A1	427	G
38	A1	444	U
38	A1	471	U
38	A1	480	A
38	A1	485	G
38	A1	493	A
38	A1	513	C
38	A1	518	A
38	A1	529	G
38	A1	545	G
38	A1	579	C
38	A1	584	G
38	A1	588	U
38	A1	598	C
38	A1	716	U
38	A1	734	C
38	A1	736	U
38	A1	859	G
38	A1	883	G
38	A1	897	U
38	A1	899	A
38	A1	919	G
38	A1	936	G
38	A1	940	G
38	A1	946	U
38	A1	981	A

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Mol	Chain	Res	Type
38	A1	994	G
38	A1	1003	C
38	A1	1013	G
38	A1	1014	U
38	A1	1027	A
38	A1	1035	G
38	A1	1037	C
38	A1	1038	U
38	A1	1082	A
38	A1	1109	G
38	A1	1117	C
38	A1	1125	A
38	A1	1143	A
38	A1	1145	G
38	A1	1162	C
38	A1	1172	U
38	A1	1180	G
38	A1	1200	A
38	A1	1209	A
38	A1	1245	C
38	A1	1249	G
38	A1	1260	C
38	A1	1267	A
38	A1	1279	U
38	A1	1281	A
38	A1	1367	A
38	A1	1390	U
38	A1	1407	A
38	A1	1443	G
38	A1	1445	G
38	A1	1450	C
38	A1	1485	A
38	A1	1487	U
38	A1	1510	U
38	A1	1541	U
38	A1	1553	G
38	A1	1561	G
38	A1	1572	C
38	A1	1574	A
38	A1	1585	U
38	A1	1614	U
38	A1	1643	A

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Mol	Chain	Res	Type
38	A1	1670	A
38	A1	1677	A
38	A1	1718	C
38	A1	1719	C
38	A1	1722	G
38	A1	1739	U
38	A1	1752	C
38	A1	1753	G
38	A1	1764	G
38	A1	1782	C
38	A1	1803	U
38	A1	1804	G
38	A1	1879	U
38	A1	1918	U
38	A1	1920	A
38	A1	1936	C
38	A1	1939	C
38	A1	2002	A
38	A1	2043	A
38	A1	2060	A
38	A1	2062	A
38	A1	2063	U
38	A1	2064	U
38	A1	2068	U
38	A1	2094	A
38	A1	2156	A
38	A1	2158	G
38	A1	2165	A
38	A1	2172	G
38	A1	2215	U
38	A1	2250	G
38	A1	2253	G
38	A1	2280	G
38	A1	2301	C
38	A1	2321	A
38	A1	2324	C
38	A1	2338	A
38	A1	2362	U
38	A1	2363	G
38	A1	2370	C
38	A1	2396	G
38	A1	2400	U

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Mol	Chain	Res	Type
38	A1	2401	A
38	A1	2450	A
38	A1	2501	G
38	A1	2543	A
38	A1	2545	A
38	A1	2546	G
38	A1	2548	A
38	A1	2554	A
38	A1	2562	G
38	A1	2606	C
38	A1	2619	U
38	A1	2696	G
38	A1	2702	A
38	A1	2747	C
38	A1	2826	U
38	A1	2840	C
38	A1	2890	A
38	A1	2891	A
38	A1	2892	A
38	A1	2946	C
38	A1	2947	G
38	A1	2948	A
38	A1	2957	G
38	A1	2987	U
38	A1	3004	C
38	A1	3035	C
38	A1	3041	U
39	A3	19	G
39	A3	21	C
39	A3	25	A
39	A3	40	G
39	A3	48	A
39	A3	52	U
39	A3	62	A
39	A3	74	U
39	A3	75	G
39	A3	89	G
39	A3	123	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

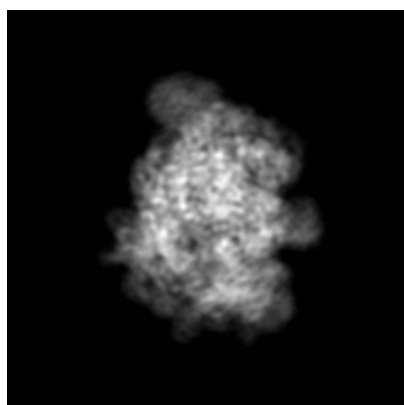
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5691. These allow visual inspection of the internal detail of the map and identification of artifacts.

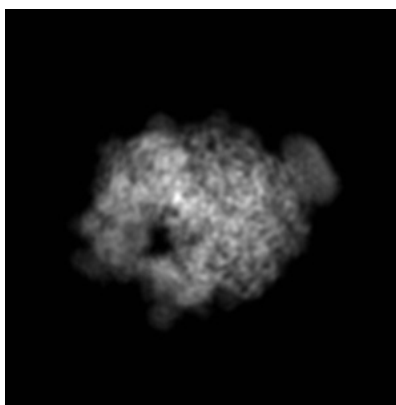
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

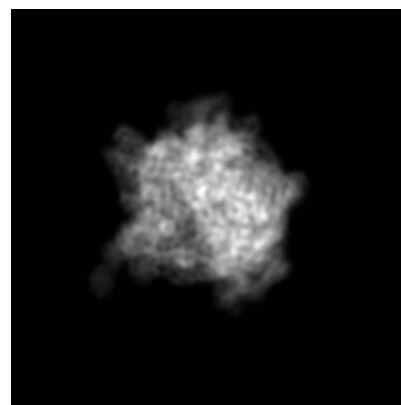
6.1.1 Primary map



X



Y

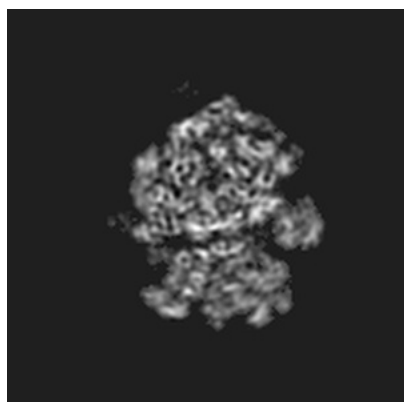


Z

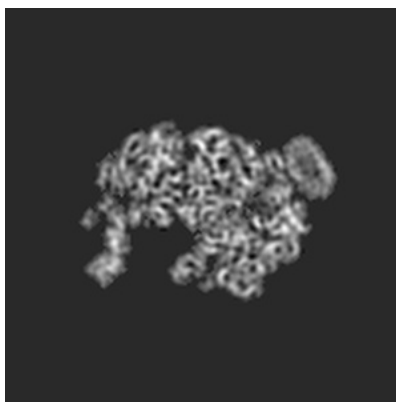
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

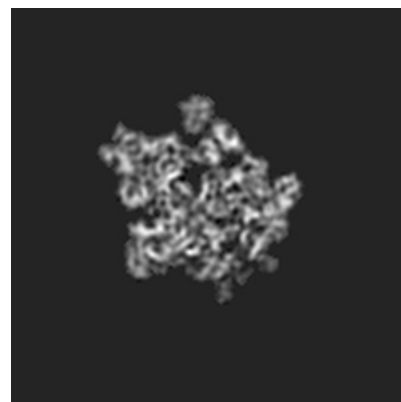
6.2.1 Primary map



X Index: 81



Y Index: 81

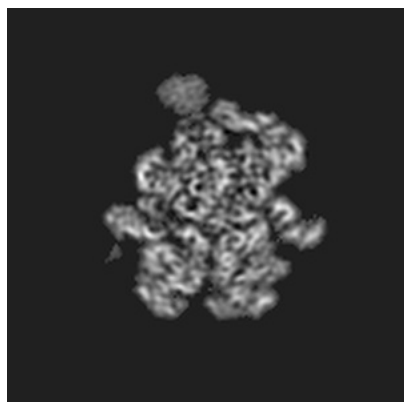


Z Index: 81

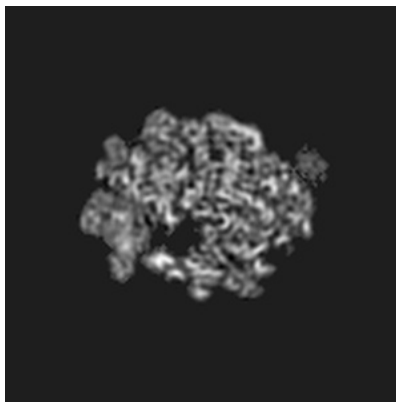
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

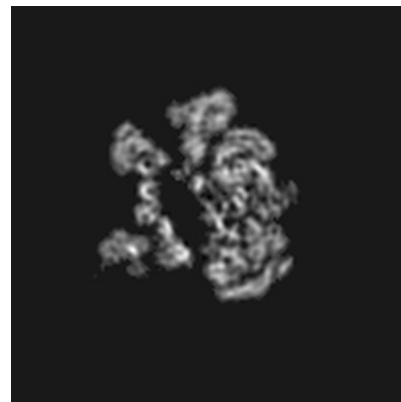
6.3.1 Primary map



X Index: 85



Y Index: 87

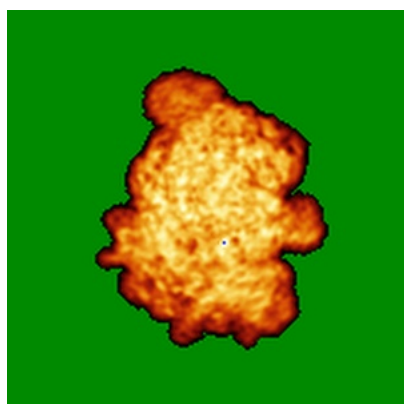


Z Index: 70

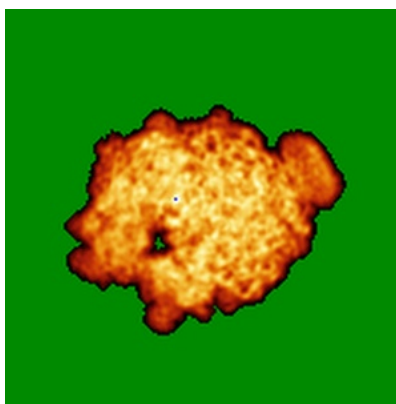
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

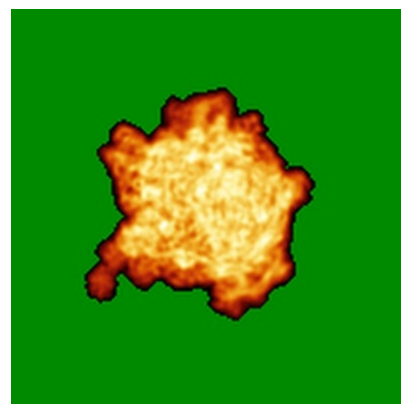
6.4.1 Primary map



X



Y



Z

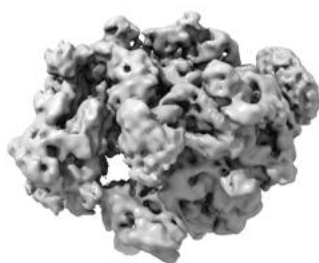
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

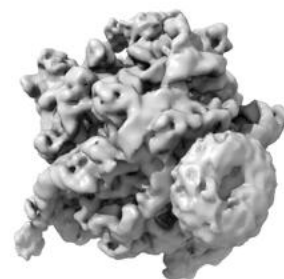
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.93. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

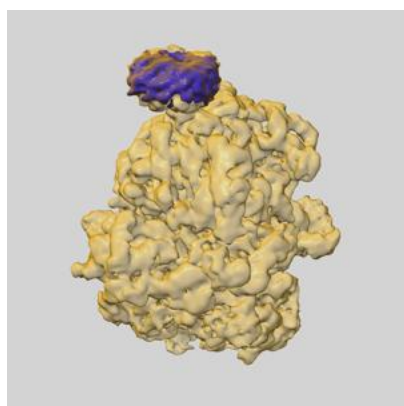
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

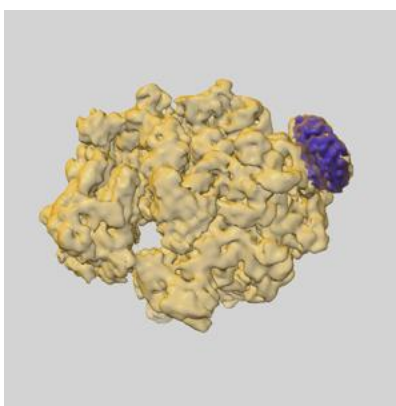
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

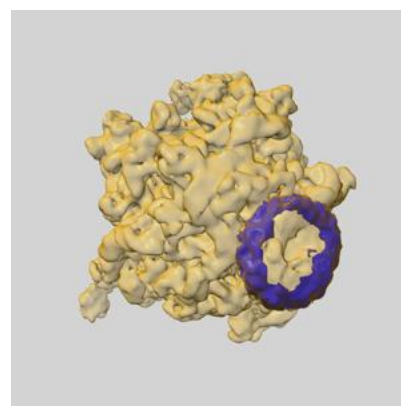
6.6.1 emd_5691_msk_4.map [i](#)



X

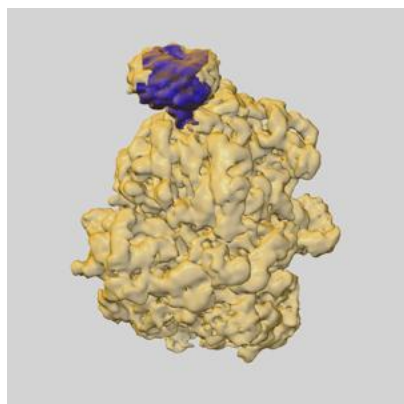


Y

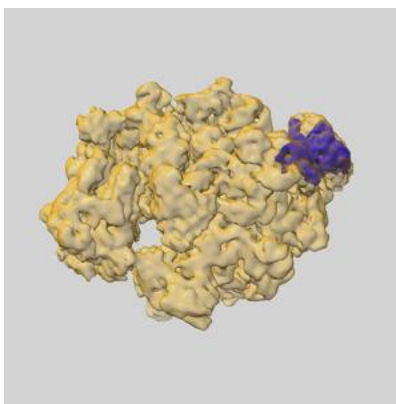


Z

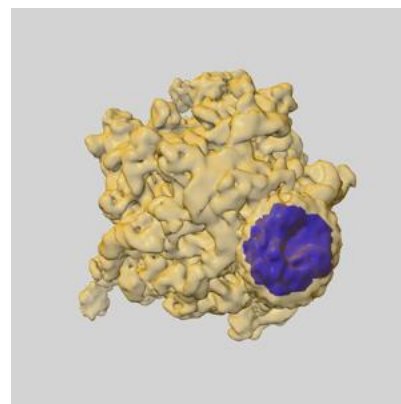
6.6.2 emd_5691_msk_3.map [i](#)



X

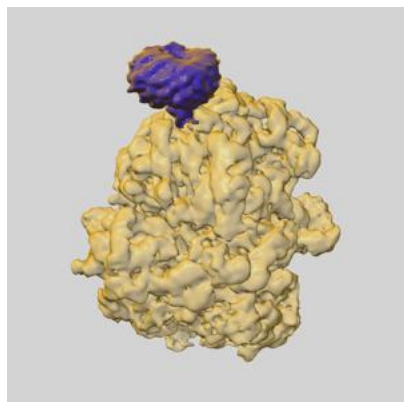


Y

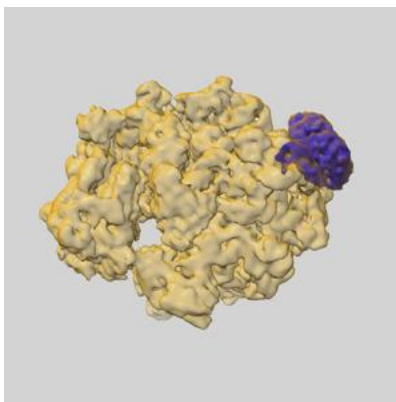


Z

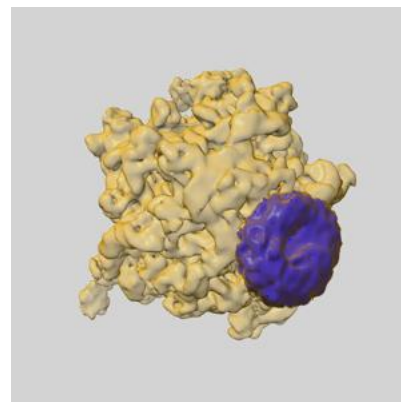
6.6.3 emd_5691_msk_2.map [i](#)



X

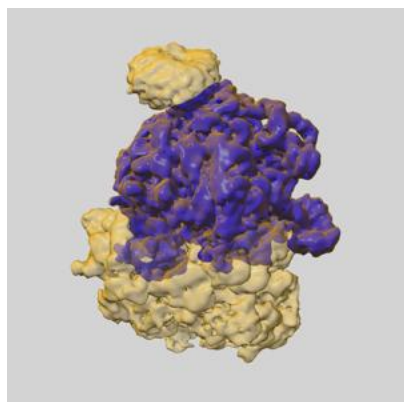


Y

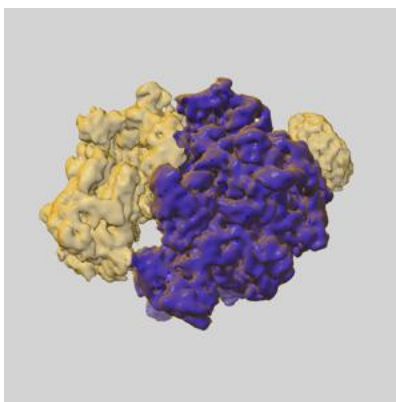


Z

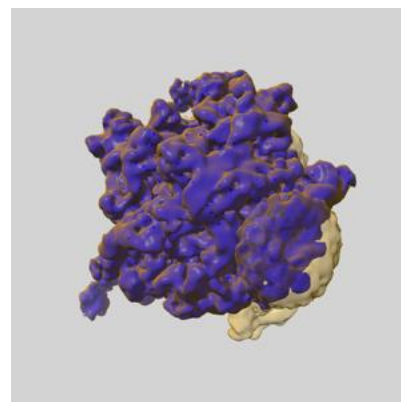
6.6.4 emd_5691_msk_1.map [i](#)



X

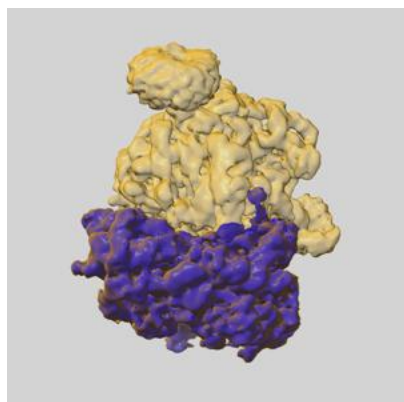


Y

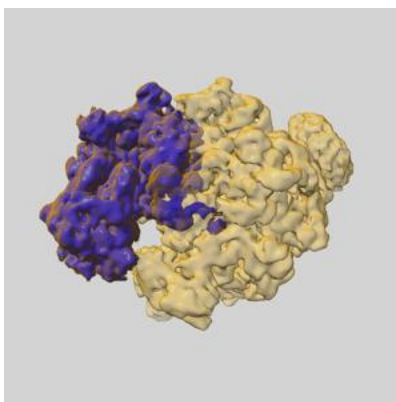


Z

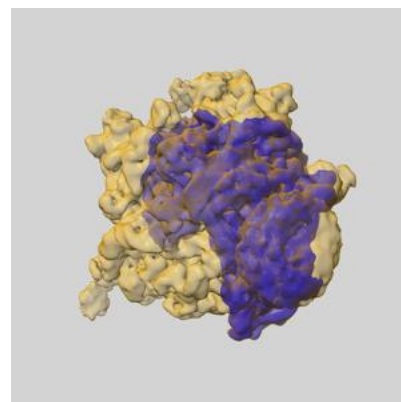
6.6.5 emd_5691_msk_5.map [i](#)



X



Y

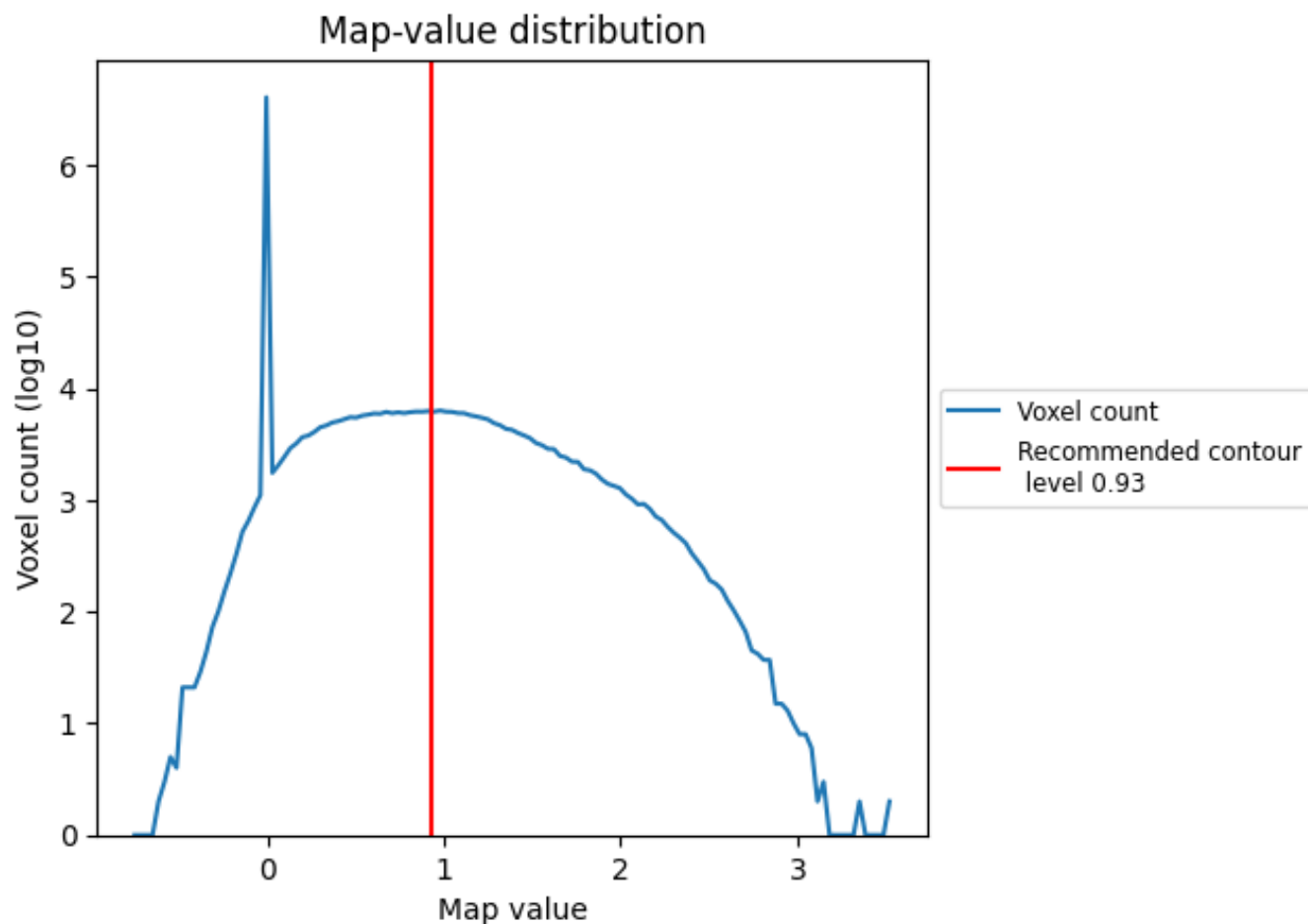


Z

7 Map analysis [i](#)

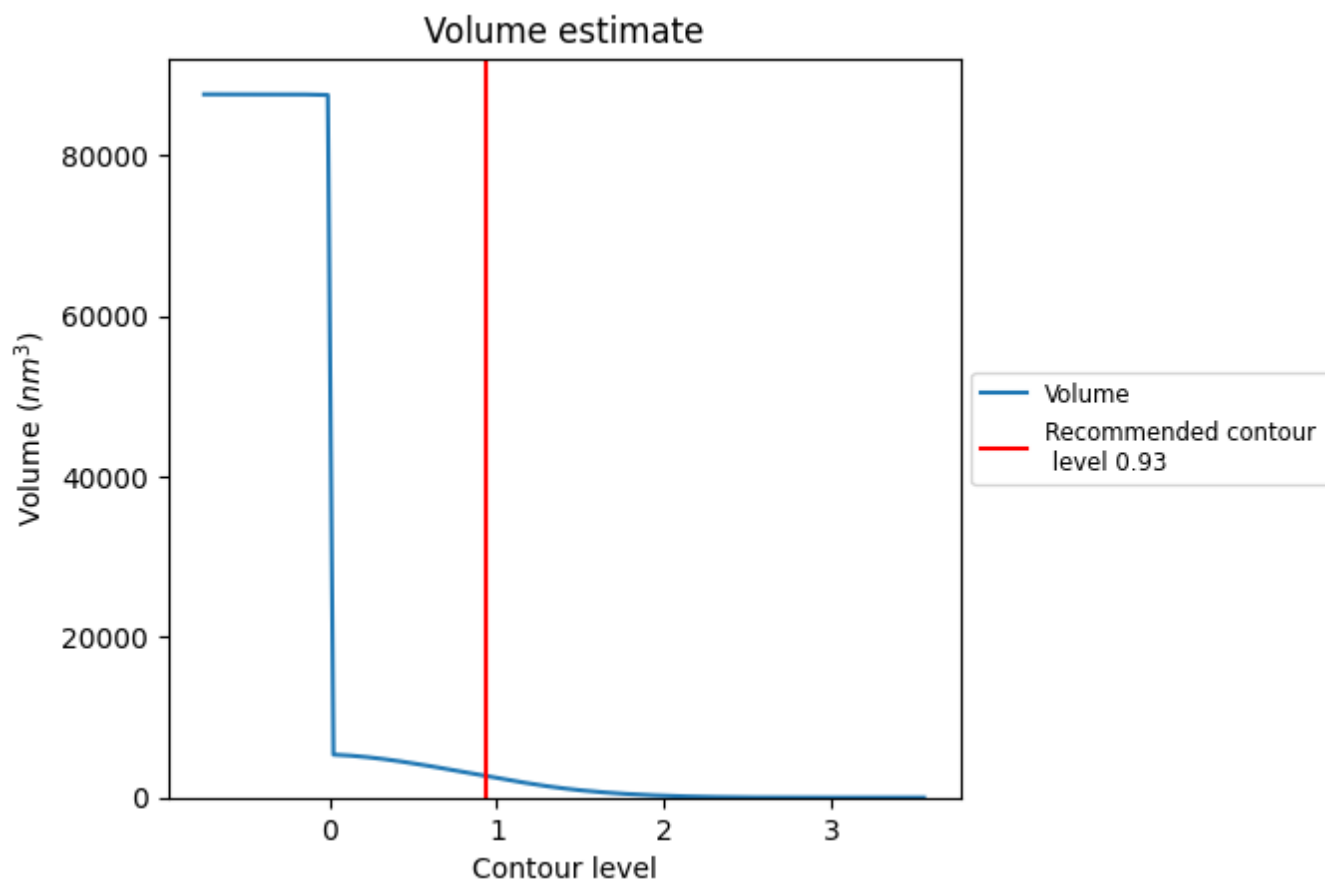
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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 [i](#)



The volume at the recommended contour level is 2715 nm³; this corresponds to an approximate mass of 2453 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](#)

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

8 Fourier-Shell correlation

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

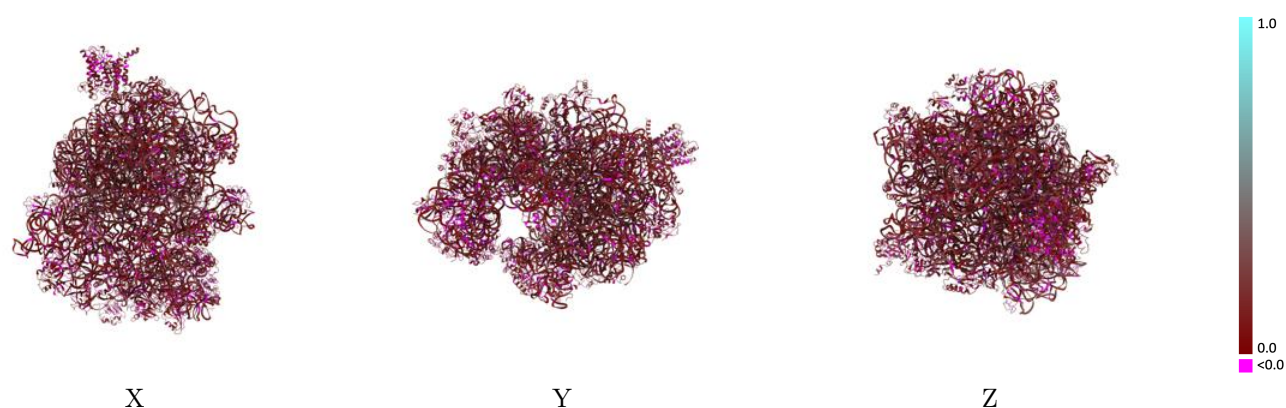
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-5691 and PDB model 4V4N. Per-residue inclusion information can be found in section 3 on page 16.

9.1 Map-model overlay [i](#)

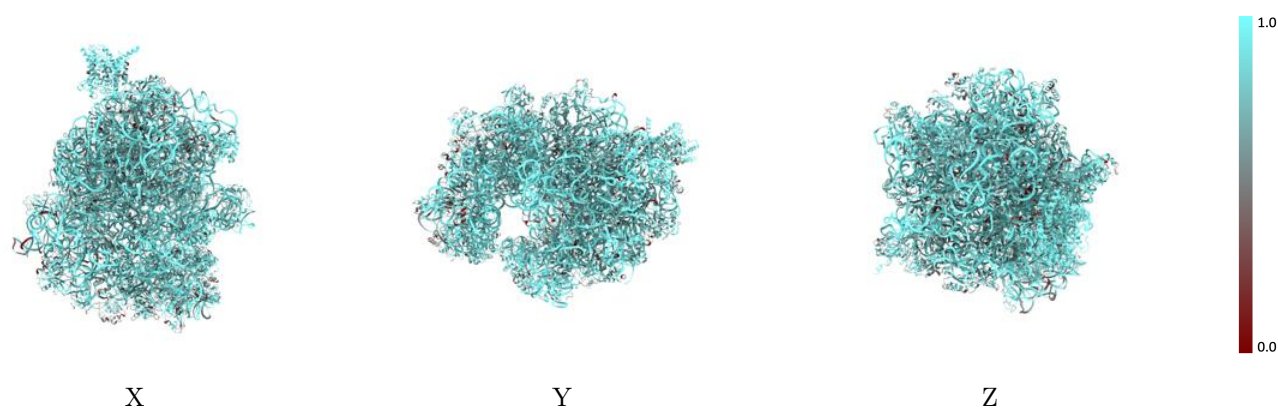
This section was not generated.

9.2 Q-score mapped to coordinate model [i](#)



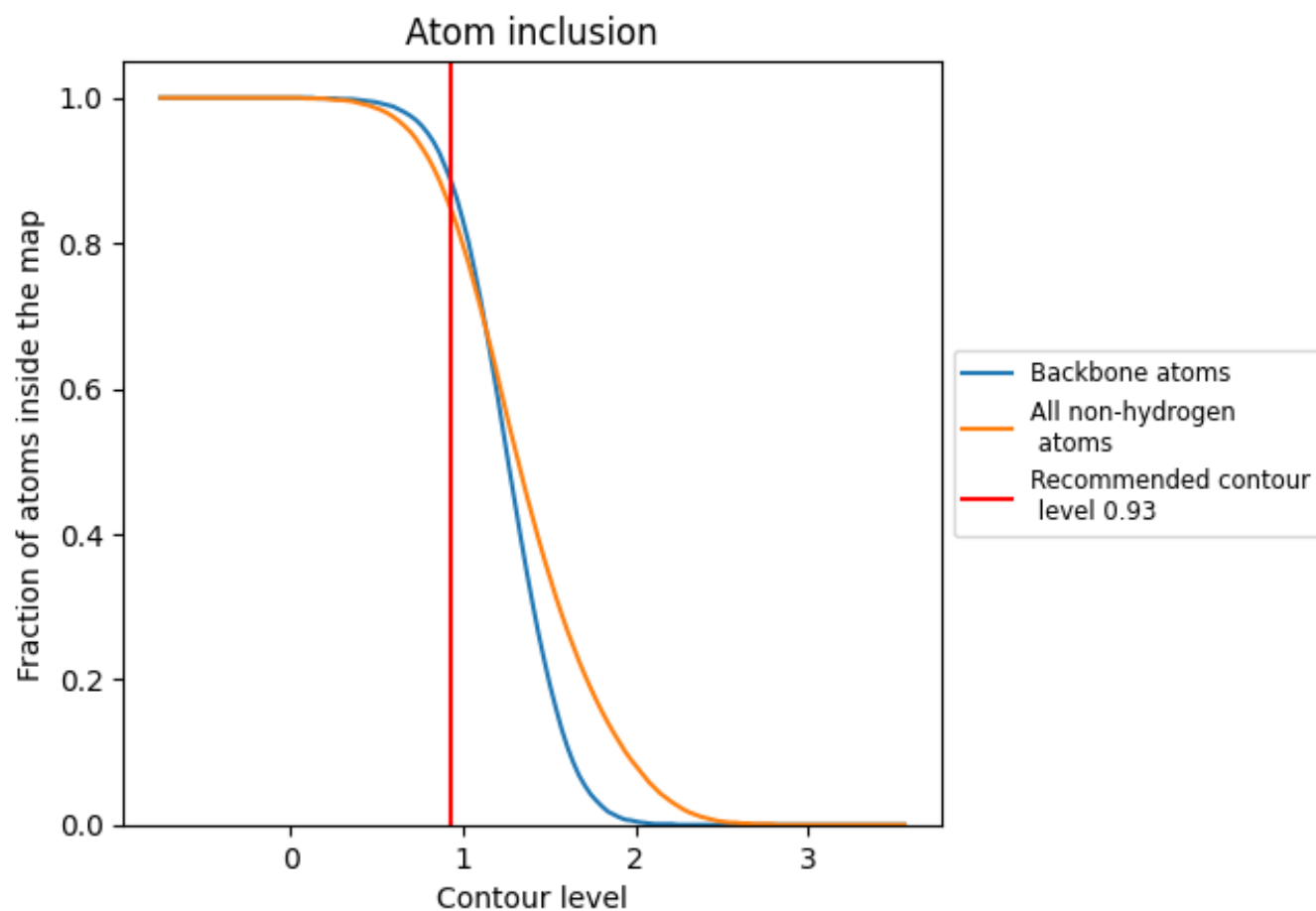
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



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 (0.93).

9.4 Atom inclusion [i](#)



At the recommended contour level, 88% of all backbone atoms, 85% 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 (0.93) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8470	 0.1240
A1	 0.9300	 0.1530
A3	 0.8970	 0.1350
A5	 0.7410	 0.1180
A7	 0.8860	 0.1390
A8	 0.9090	 0.0680
AA	 0.7120	 0.0850
AB	 0.6590	 0.0870
AC	 0.6820	 0.0840
AD	 0.6510	 0.0890
AE	 0.8360	 0.1010
AF	 0.7700	 0.1100
AG	 0.8010	 0.1310
AH	 0.8720	 0.0650
AI	 0.6350	 0.1030
AJ	 0.6970	 0.0860
AK	 0.6620	 0.1130
AL	 0.6150	 0.0750
AM	 0.6090	 0.0770
AN	 0.6760	 0.0960
AO	 0.7420	 0.1000
AP	 0.7630	 0.1130
AQ	 0.6740	 0.0980
AR	 0.6640	 0.0850
AS	 0.7080	 0.0980
AT	 0.6840	 0.1060
AU	 0.7180	 0.1020
AV	 0.7430	 0.0970
AW	 0.7590	 0.1270
AX	 0.8680	 0.1020
AY	 0.6910	 0.1130
AZ	 0.8210	 0.1280
Aa	 0.6630	 0.0790
Ab	 0.6230	 0.0900
Ad	 0.6940	 0.0790



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Chain	Atom inclusion	Q-score
Ae	 0.6110	 0.0430
Af	 0.2890	 0.0250
Ag	 0.4060	 0.0270
Ah	 0.5420	 0.0520
Ai	 0.6860	 0.1150
Aj	 0.7910	 0.0890
Ak	 0.7710	 0.1020
B1	 0.8520	 0.1170
B2	 0.9350	 0.1380
B3	 0.5800	 0.0800
BA	 0.8750	 0.1130
BB	 0.7500	 0.1120
BC	 0.7360	 0.1080
BD	 0.7170	 0.0920
BE	 0.6980	 0.0590
BF	 0.7390	 0.1020
BG	 0.8000	 0.0880
BH	 0.7540	 0.0780
BI	 0.7270	 0.0990
BJ	 0.7290	 0.0740
BK	 0.6320	 0.0360
BL	 0.7110	 0.0710
BM	 0.7710	 0.0910
BN	 0.6860	 0.0930
BO	 0.8360	 0.0850
BP	 0.7530	 0.0550
BQ	 0.7480	 0.0960
BR	 0.7180	 0.0820
BS	 0.5900	 0.0680
BT	 0.8170	 0.0770
BU	 0.7540	 0.0640
BV	 0.7530	 0.0900
BW	 0.7170	 0.0850
BX	 0.8830	 0.0910
BY	 0.7990	 0.0630