



Full wwPDB EM Validation Report ⓘ

Mar 6, 2026 – 06:09 AM UTC

PDB ID : 4V65 / pdb_00004v65
EMDB ID : EMD-1055
Title : Structure of the E. coli ribosome in the Pre-accommodation state
Authors : Devkota, B.; Caulfield, T.R.; Tan, R.-Z.; Harvey, S.C.
Deposited on : 2008-08-03
Resolution : 9.00 Å (reported)
Based on initial models : 1EHZ, 2I2P

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

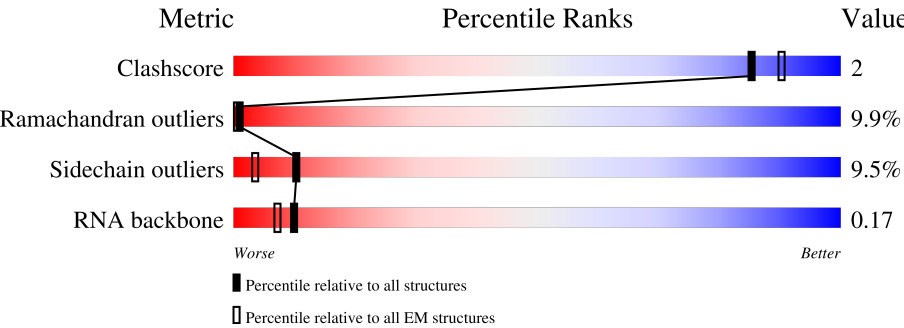
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 9.00 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)
Clashscore	229148	23984
Ramachandran outliers	224038	23583
Sidechain outliers	223484	23102
RNA backbone	8273	3508

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	AA	76	57% 14% 53% 29%
1	AE	76	58% 12% 33% 38% 17%
1	AP	76	50% 30% 42% 24%
2	AM	20	25% 30% 35% 35%
3	A1	1530	65% 6% 25% 40% 29%
4	AB	241	71% 61% 23% 6% 10%
5	AC	129	47% 64% 23% 9%

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Mol	Chain	Length	Quality of chain
6	AD	124	76% 52% 33% 12% ..
7	AF	118	55% 53% 35% 8% ..
8	AG	101	88% 61% 27% 7% 5%
9	AH	89	84% 53% 39% . . .
10	AI	82	100% 49% 39% 12%
11	AJ	84	73% 55% 35% 5% 5%
12	AK	75	29% 45% 27% . 27%
13	AL	92	82% 43% 33% 9% . 14%
14	AN	87	56% 67% 26% . . .
15	AO	233	31% 60% 24% . 12%
16	AQ	71	39% 41% 23% . . 28%
17	AR	206	62% 63% 30% 6%
18	AS	159	38% 58% 28% 6% 6%
19	AT	135	55% 46% 23% . . 26%
20	AU	179	35% 50% 28% 5% 16%
21	AV	130	48% 76% 19% . .
22	AW	130	81% 63% 31% . . .
23	AX	103	73% 46% 42% 8% 5%
24	BA	117	71% 35% 41% 20%
25	BB	2903	52% 6% 26% 41% 27%
26	BC	94	72% 64% 33% .
27	BD	123	48% 47% 40% 10% . .
28	BE	144	67% 51% 36% 10% .
29	BF	136	57% 53% 33% 12% .
30	BG	127	35% 57% 38% . .

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Mol	Chain	Length	Quality of chain
31	BH	117	
32	BI	115	
33	BJ	118	
34	BK	103	
35	BL	110	
36	BM	99	
37	BN	270	
38	BO	103	
39	BP	85	
40	BQ	63	
41	BR	59	
42	BS	70	
43	BT	57	
44	BU	54	
45	BV	46	
46	BW	64	
47	BX	38	
48	BY	209	
49	BZ	213	
50	B1	201	
51	B2	178	
52	B3	177	
53	B4	149	
54	B5	142	
55	B6	140	

2 Entry composition [i](#)

There are 55 unique types of molecules in this entry. The entry contains 149248 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called A/T, P and E-site tRNAs.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	AA	75	Total	C	N	O	P	0	0
			1600	715	288	523	74		
1	AP	75	Total	C	N	O	P	0	0
			1600	715	288	523	74		
1	AE	76	Total	C	N	O	P	0	0
			1622	725	293	529	75		

- Molecule 2 is a RNA chain called mRNA model.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	AM	20	Total	C	N	O	P	0	0
			397	180	40	158	19		

- Molecule 3 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A1	1530	Total	C	N	O	P	0	0
			32828	14642	6024	10633	1529		

- Molecule 4 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AB	218	Total	C	N	O	S	0	0
			1704	1081	305	311	7		

- Molecule 5 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	AC	117	Total	C	N	O	S	0	0
			876	540	174	159	3		

- Molecule 6 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	AD	123	Total	C	N	O	S	0	0
			954	590	196	164	4		

- Molecule 7 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AF	114	Total	C	N	O	S	0	0
			883	546	178	156	3		

- Molecule 8 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AG	96	Total	C	N	O	S	0	0
			773	483	160	127	3		

- Molecule 9 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AH	88	Total	C	N	O	S	0	0
			715	440	146	128	1		

- Molecule 10 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AI	82	Total	C	N	O	S	0	0
			648	406	128	113	1		

- Molecule 11 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AJ	80	Total	C	N	O	S	0	0
			648	411	121	113	3		

- Molecule 12 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
12	AK	55	Total	C	N	O	0	0
			455	288	86	81		

- Molecule 13 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AL	79	Total	C	N	O	S	0	0
			637	408	120	107	2		

- Molecule 14 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AN	85	Total	C	N	O	S	0	0
			664	411	137	113	3		

- Molecule 15 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AO	206	Total	C	N	O	S	0	0
			1624	1028	305	288	3		

- Molecule 16 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AQ	51	Total	C	N	O	S	0	0
			425	265	86	73	1		

- Molecule 17 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AR	205	Total	C	N	O	S	0	0
			1642	1026	315	297	4		

- Molecule 18 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AS	150	Total	C	N	O	S	0	0
			1105	687	211	201	6		

- Molecule 19 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AT	100	Total	C	N	O	S	0	0
			817	515	148	148	6		

- Molecule 20 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AU	150	Total	C	N	O	S	0	0
			1174	730	226	214	4		

- Molecule 21 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AV	129	Total	C	N	O	S	0	0
			978	616	173	183	6		

- Molecule 22 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	AW	127	Total	C	N	O	S	0	0
			1021	634	206	178	3		

- Molecule 23 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AX	98	Total	C	N	O	S	0	0
			786	493	150	142	1		

- Molecule 24 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	BA	117	Total	C	N	O	P	0	0
			2504	1116	459	813	116		

- Molecule 25 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	BB	2903	Total	C	N	O	P	0	0
			62317	27801	11467	20147	2902		

- Molecule 26 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	BC	94	Total	C	N	O	S	0	0
			752	479	137	133	3		

- Molecule 27 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	BD	121	Total	C	N	O	S	0	0
			930	582	179	164	5		

- Molecule 28 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	BE	144	Total	C	N	O	S	0	0
			1052	654	207	189	2		

- Molecule 29 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	BF	136	Total	C	N	O	S	0	0
			1073	686	205	176	6		

- Molecule 30 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	BG	127	Total	C	N	O	S	0	0
			1007	621	204	177	5		

- Molecule 31 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	BH	117	Total	C	N	O	S	0	0
			899	557	179	162	1		

- Molecule 32 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	BI	114	Total	C	N	O	S	0	0
			916	574	179	162	1		

- Molecule 33 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
33	BJ	117	Total	C	N	O	0	0
			946	604	192	150		

- Molecule 34 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	BK	103	Total	C	N	O	S	0	0
			815	516	153	144	2		

- Molecule 35 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	BL	110	Total	C	N	O	S	0	0
			856	532	166	155	3		

- Molecule 36 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	BM	99	Total	C	N	O	S	0	0
			777	491	145	139	2		

- Molecule 37 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	BN	267	Total	C	N	O	S	0	0
			2053	1271	416	359	7		

- Molecule 38 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
38	BO	102	Total	C	N	O	0	0
			779	492	146	141		

- Molecule 39 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	BP	84	Total	C	N	O	S	0	0
			633	391	129	112	1		

- Molecule 40 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	BQ	63	Total	C	N	O	S	0	0
			508	313	99	94	2		

- Molecule 41 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	BR	58	Total	C	N	O	S	0	0
			448	281	87	78	2		

- Molecule 42 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	BS	70	Total	C	N	O	S	0	0
			548	339	104	99	6		

- Molecule 43 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	BT	56	Total	C	N	O	S	0	0
			443	269	94	79	1		

- Molecule 44 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	BU	54	Total	C	N	O	S	0	0
			440	284	81	75			

- Molecule 45 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	BV	46	Total	C	N	O	S	0	0
			376	228	90	56	2		

- Molecule 46 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	BW	64	Total	C	N	O	S	0	0
			503	323	105	73	2		

- Molecule 47 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	BX	38	Total	C	N	O	S	0	0
			301	185	65	47	4		

- Molecule 48 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	BY	209	Total	C	N	O	S	0	0
			1564	979	288	293	4		

- Molecule 49 is a protein called 50S ribosomal protein L1P.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	BZ	213	Total	C	N	O	S	0	0
			1687	1078	300	308	1		

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BZ	1	MET	-	insertion	UNP P35024
BZ	?	-	MET	deletion	UNP P35024
BZ	70	SER	PHE	conflict	UNP P35024
BZ	82	LYS	ASN	conflict	UNP P35024
BZ	?	-	MET	deletion	UNP P35024
BZ	?	-	MET	deletion	UNP P35024
BZ	?	-	MET	deletion	UNP P35024

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

Mol	Chain	Residues	Atoms					AltConf	Trace
50	B1	201	Total	C	N	O	S	0	0
			1551	974	283	289	5		

- Molecule 51 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	B2	178	Total	C	N	O	S	0	0
			1419	905	251	257	6		

- Molecule 52 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	B3	176	Total	C	N	O	S	0	0
			1322	832	243	245	2		

- Molecule 53 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	B4	149	Total	C	N	O	S	0	0
			1110	699	197	213	1		

- Molecule 54 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	B5	141	Total	C	N	O	S	0	0
			1031	651	179	195	6		

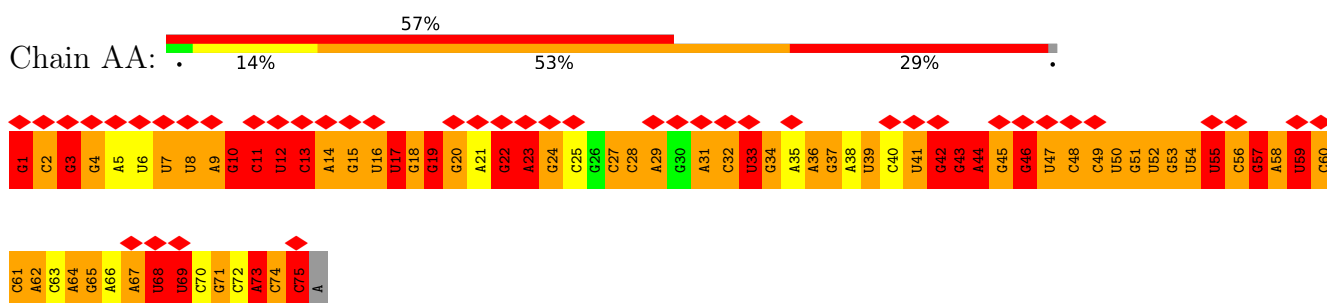
- Molecule 55 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	B6	140	Total	C	N	O	S	0	0
			1112	704	210	194	4		

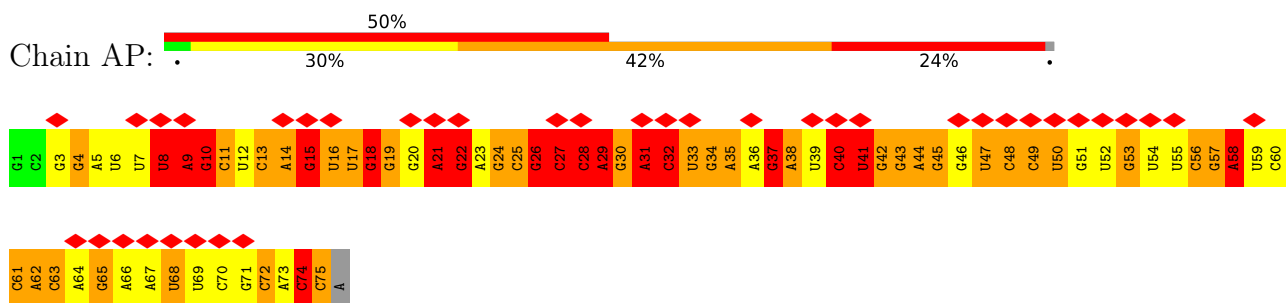
3 Residue-property plots

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.

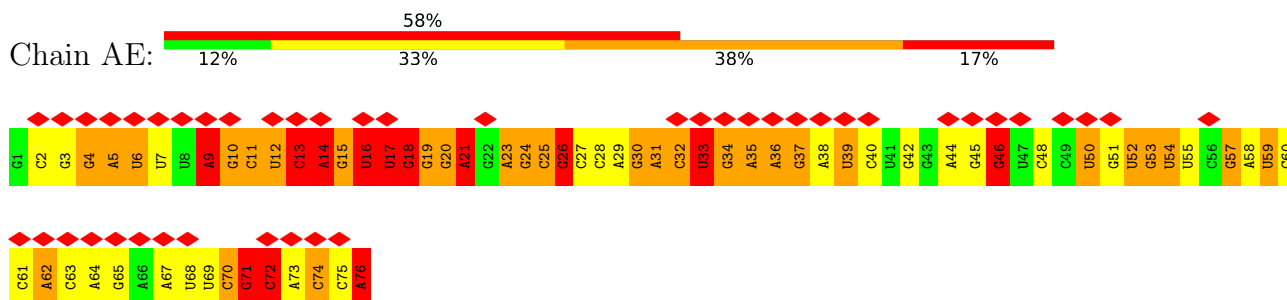
- Molecule 1: A/T, P and E-site tRNAs



- Molecule 1: A/T, P and E-site tRNAs



- Molecule 1: A/T, P and E-site tRNAs



- Molecule 2: mRNA model



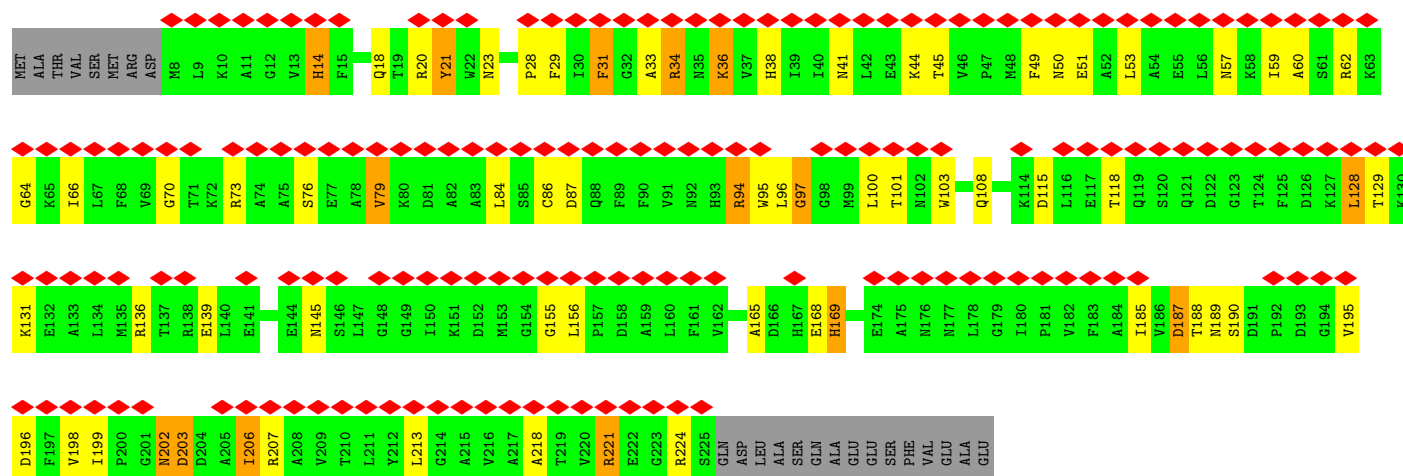
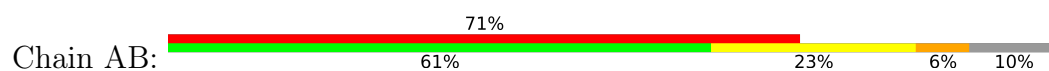
Chain A1: 6% 25% 40% 29%



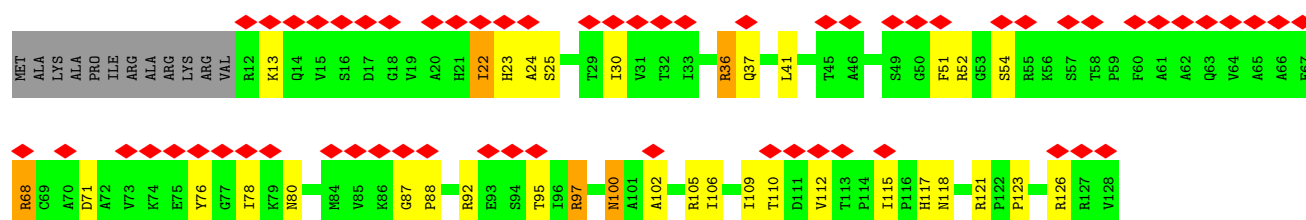
U1445	U1446	A1447	C1448	C1449	U1450	U1451	C1452	C1453	G1454	G1455	A1456	G1457	G1458	G1459	C1460	G1461	C1462	U1463	U1464	A1465	C1466	C1467	A1468	C1469	U1470	U1471	U1472	G1473	G1474	G1475	A1476	U1477	U1478	C1479	A1480	U1481	G1482	A1483	C1484	U1485	G1486	G1487	G1488	G1489	U1490	G1491	A1492	A1493	G1494	U1495	C1496	G1497	U1498	A1499	A1500	C1501	A1502	A1503	G1504	
C1325	U1326	C1327	C1328	A1329	U1330	G1331	A1332	A1333	G1334	U1335	C1336	G1337	G1338	A1339	A1340	U1341	C1342	G1343	C1344	U1345	A1346	G1347	U1348	A1349	A1350	U1351	C1352	G1353	U1354	G1355	G1356	A1357	U1358	G1359	A1360	U1361	G1362	A1363	U1364	G1365	C1366	C1367	A1368	C1369	U1370	A1371	U1372	G1373	A1374	U1375	U1376	U1377	C1378	G1379	U1380	U1381	C1382	C1383	C1384	
C1265	G1266	C1267	G1268	A1269	G1270	A1271	G1272	C1273	A1274	G1275	A1276	G1276	C1277	G1278	G1279	A1280	C1281	C1282	U1283	C1284	A1285	U1286	A1287	A1288	A1289	U1290	U1291	G1292	C1293	G1294	U1295	C1296	G1297	U1298	A1299	U1240	U1241	C1242	C1243	G1244	C1245	A1246	U1247	A1248	C1249	U1250	A1251	A1252	G1253	A1254	G1255	A1256	G1257	G1258	C1259	U1260	A1261	C1262	U1263	A1264
U1085	U1086	G1087	G1088	U1089	U1091	A1092	A1093	G1094	U1095	C1096	C1097	C1098	G1099	U1100	A1101	A1102	G1103	G1104	A1105	G1106	C1107	G1108	C1109	A1110	A1111	C1112	C1113	C1114	U1115	U1116	A1117	U1118	C1119	C1120	U1121	U1122	U1123	U1124	U1125	U1126	G1127	C1128	C1129	A1130	G1131	C1132	G1133	U1134	U1135	C1136	C1137	G1138	U1139	C1140	C1141	G1142	G1143	G1144		
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U985	G986	C987	A988	A989	C990	G991	G992	A993	A994	G995	A996	C997	C998	G999	U982	A983	C984	G985	U986	G987	G988	C990	G990	C991	C992	C993	C994	C995	A996	U997	C998	C999	A1000	C1001	G942	U943	G944	G945	A946	G947	C948	A949	U950	G951	U952	G953	G954	U955	U956	G957	A958	A959	U960	U961	C962	G963	A964			
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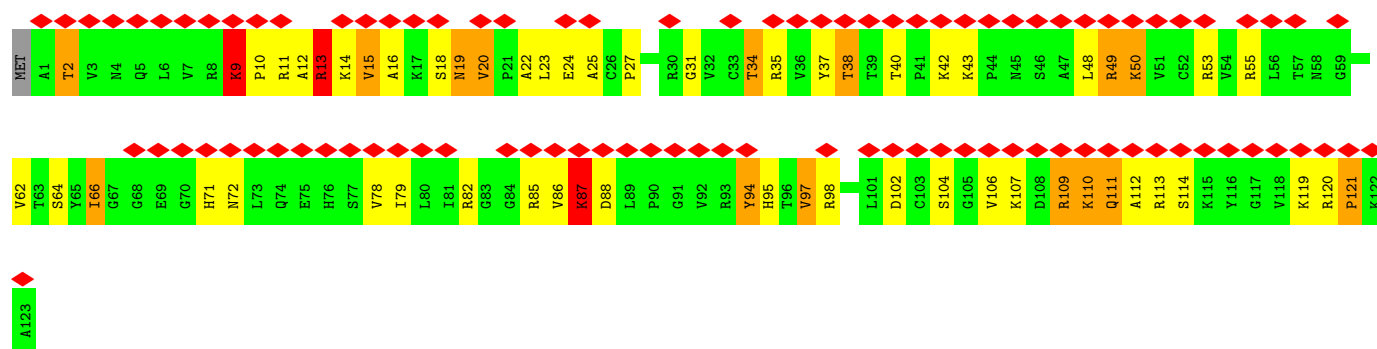
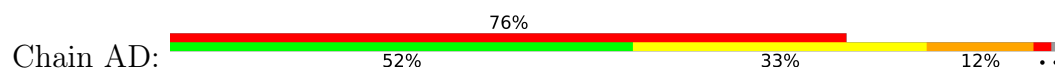
• Molecule 4: 30S ribosomal protein S2



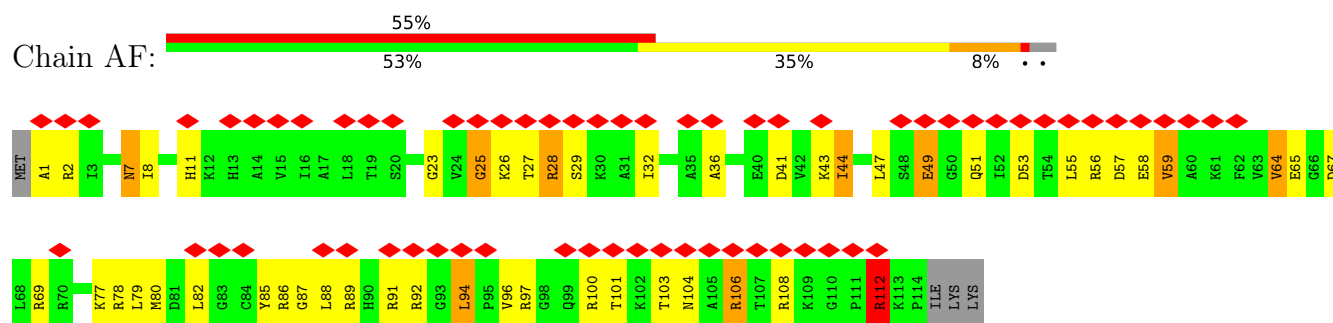
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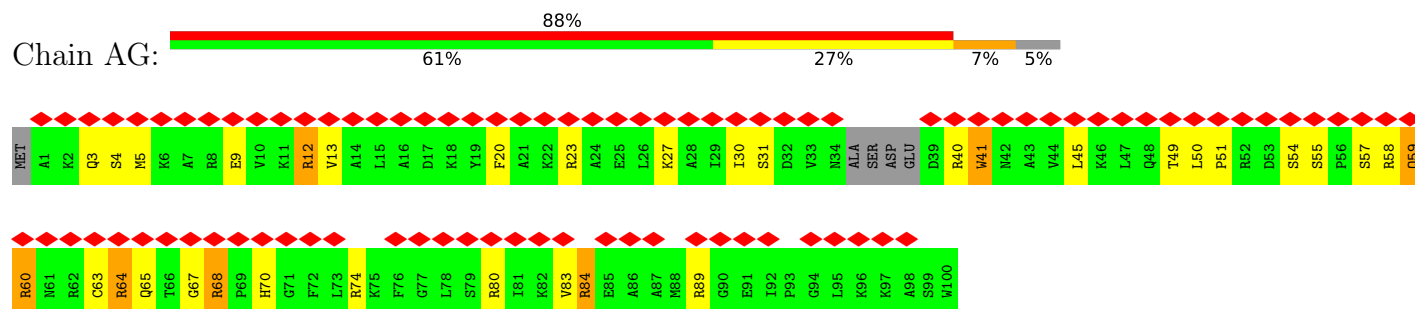
• Molecule 6: 30S ribosomal protein S12



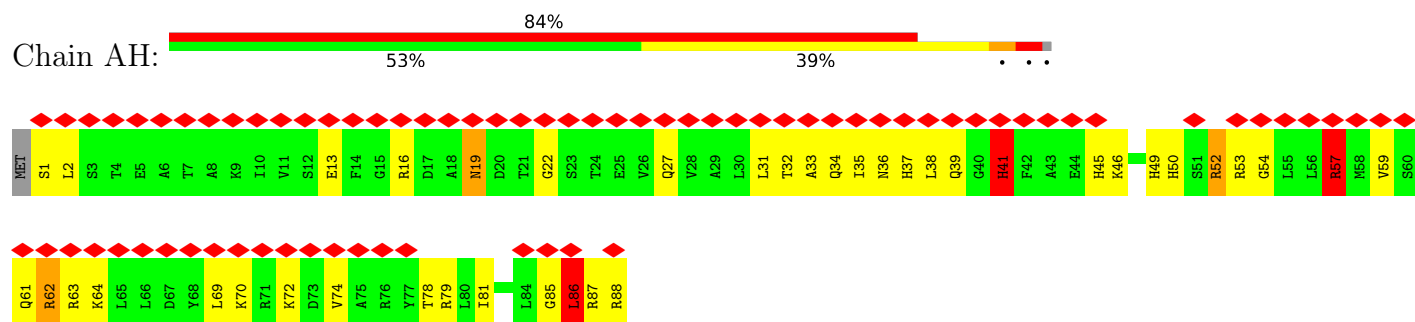
• Molecule 7: 30S ribosomal protein S13



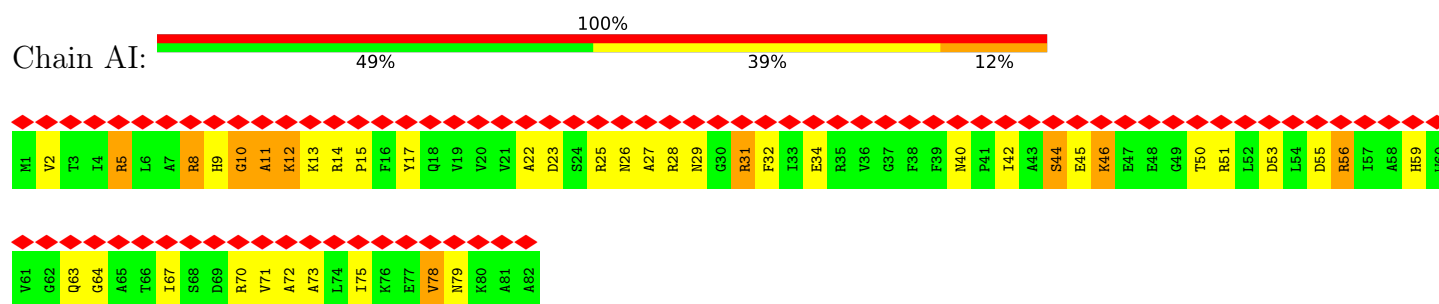
- Molecule 8: 30S ribosomal protein S14



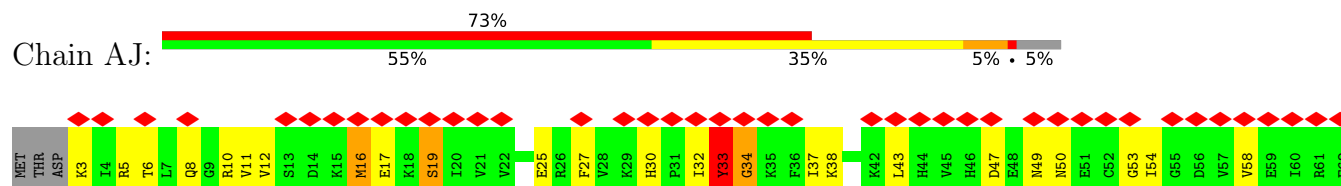
- Molecule 9: 30S ribosomal protein S15



- Molecule 10: 30S ribosomal protein S16

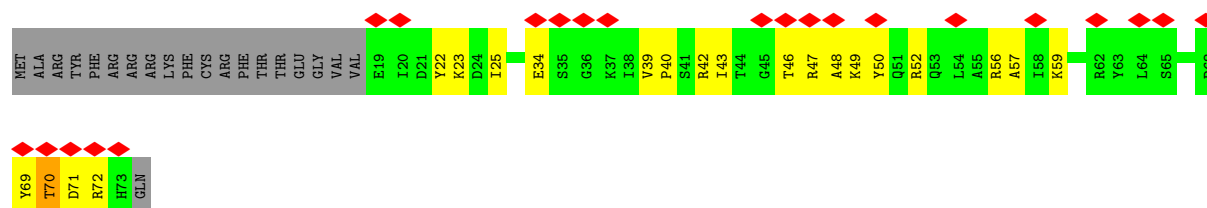


- Molecule 11: 30S ribosomal protein S17

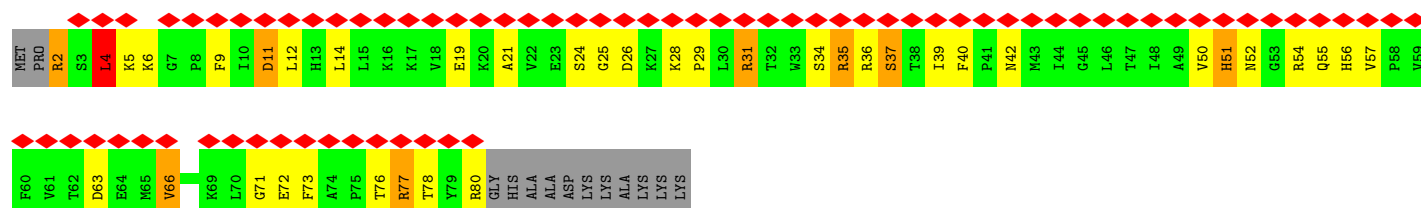
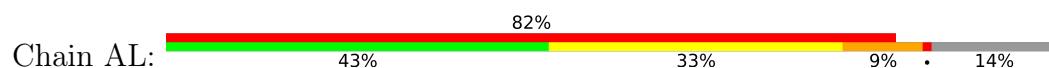




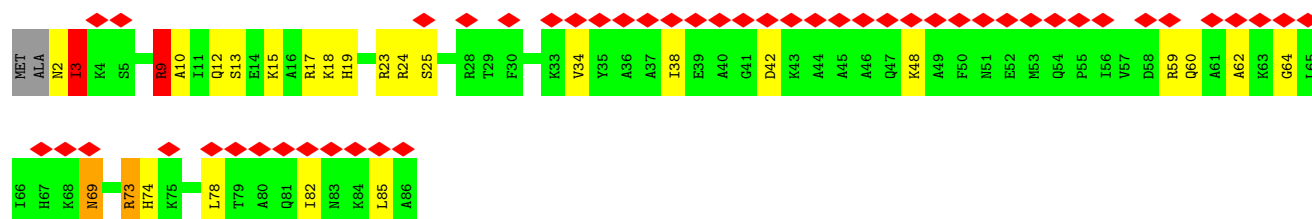
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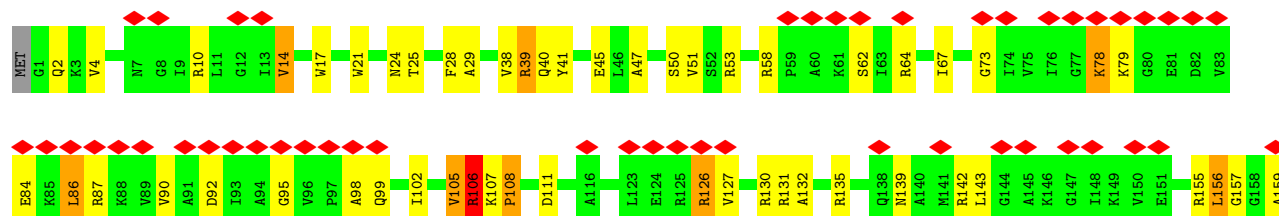
• Molecule 13: 30S ribosomal protein S19



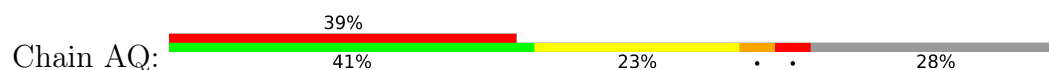
• Molecule 14: 30S ribosomal protein S20



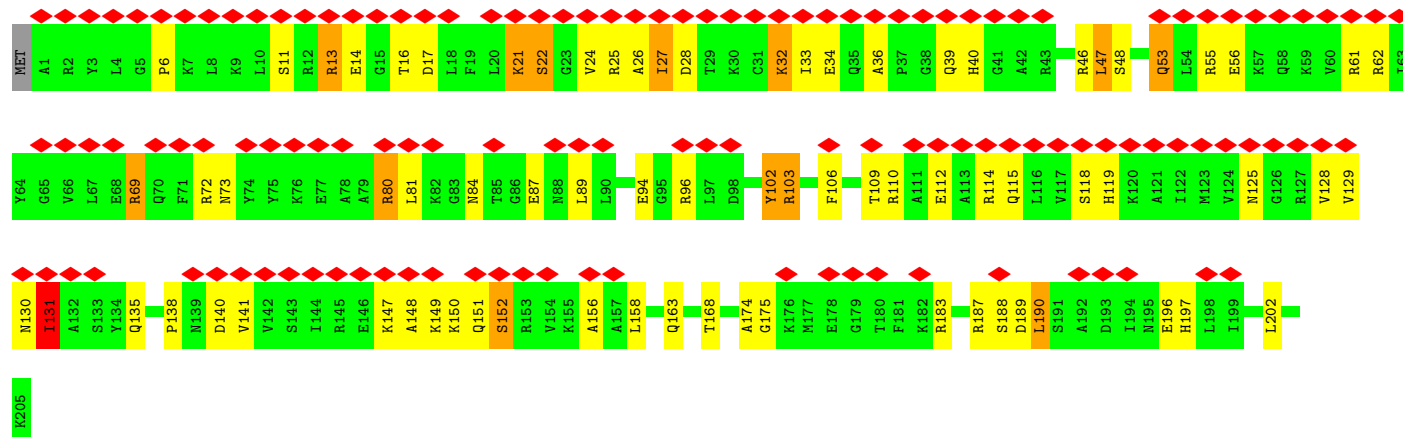
• Molecule 15: 30S ribosomal protein S3



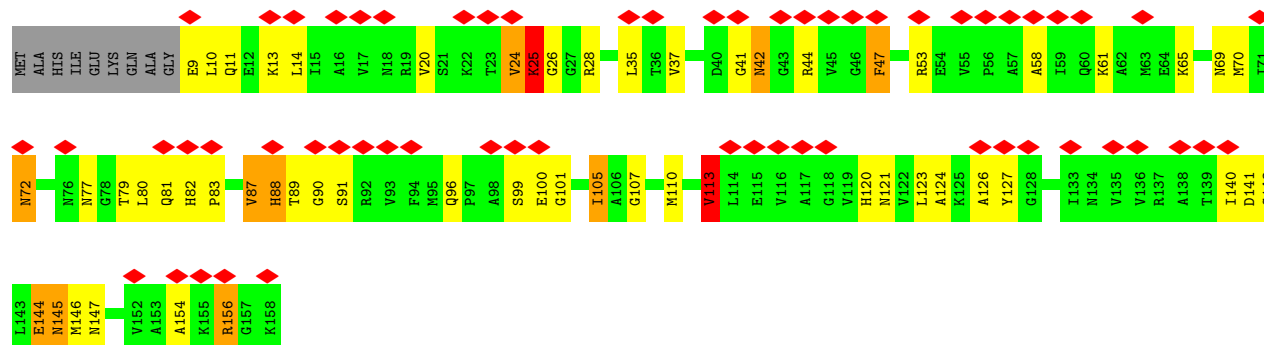
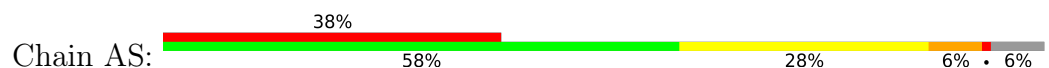
- Molecule 16: 30S ribosomal protein S21



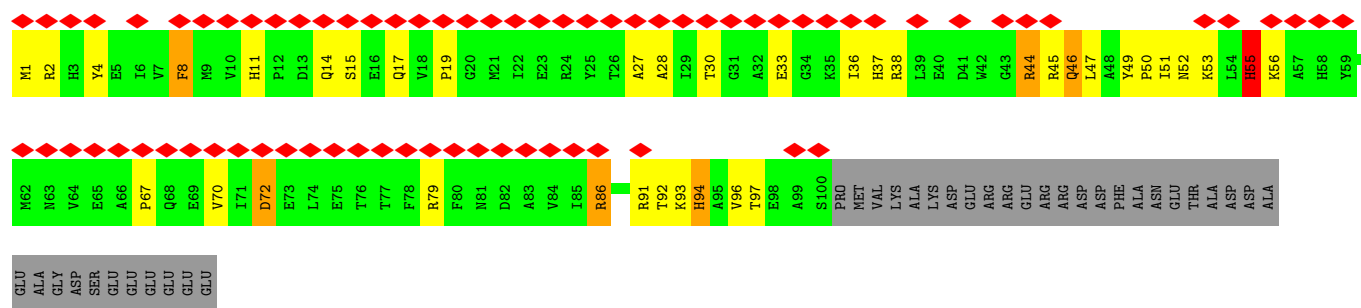
- Molecule 17: 30S ribosomal protein S4



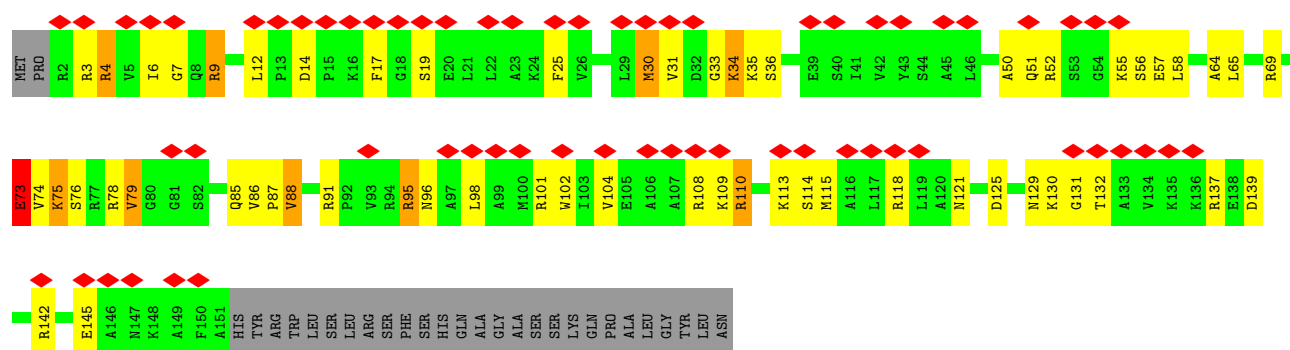
- Molecule 18: 30S ribosomal protein S5



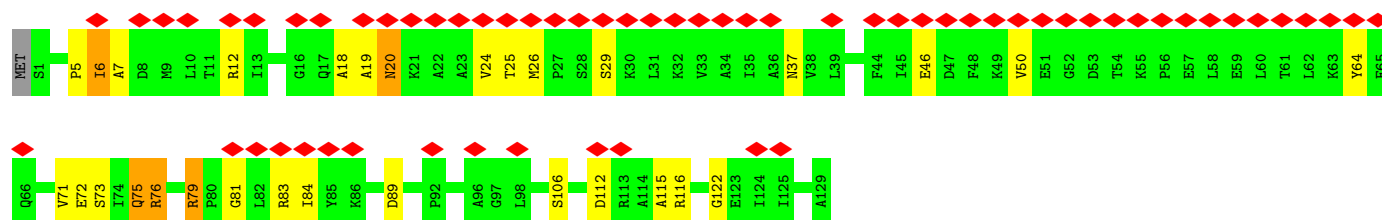
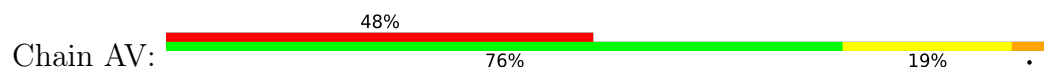
- Molecule 19: 30S ribosomal protein S6



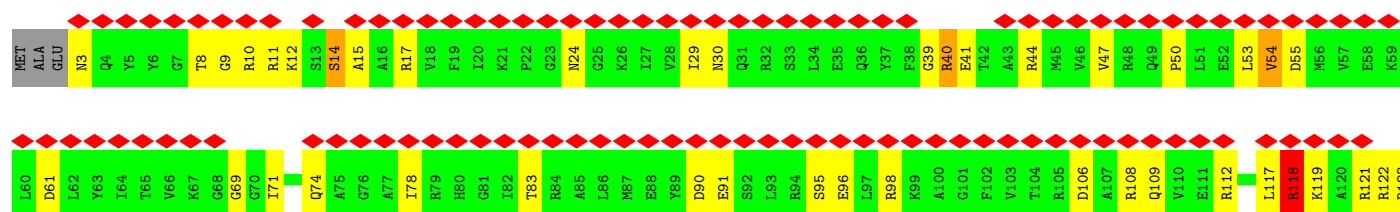
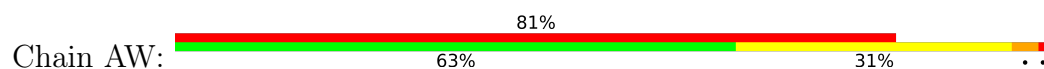
• Molecule 20: 30S ribosomal protein S7

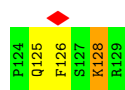


• Molecule 21: 30S ribosomal protein S8

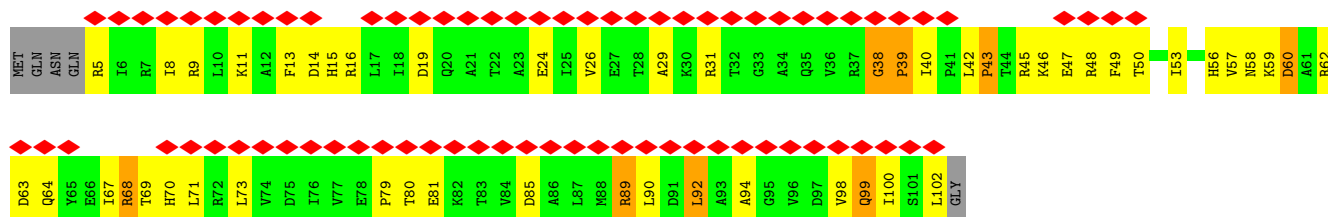
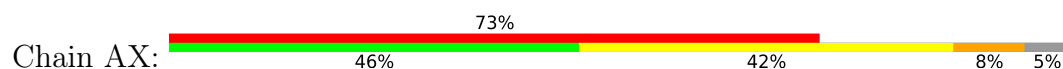


• Molecule 22: 30S ribosomal protein S9

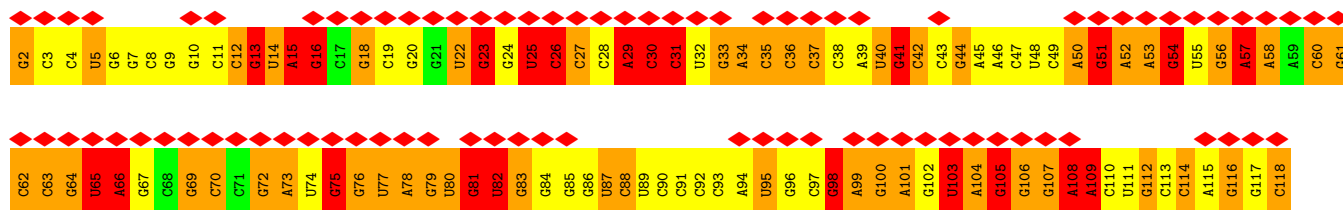
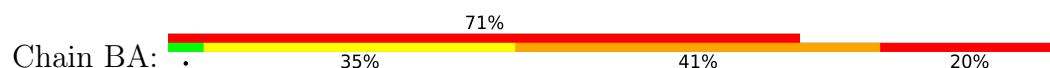




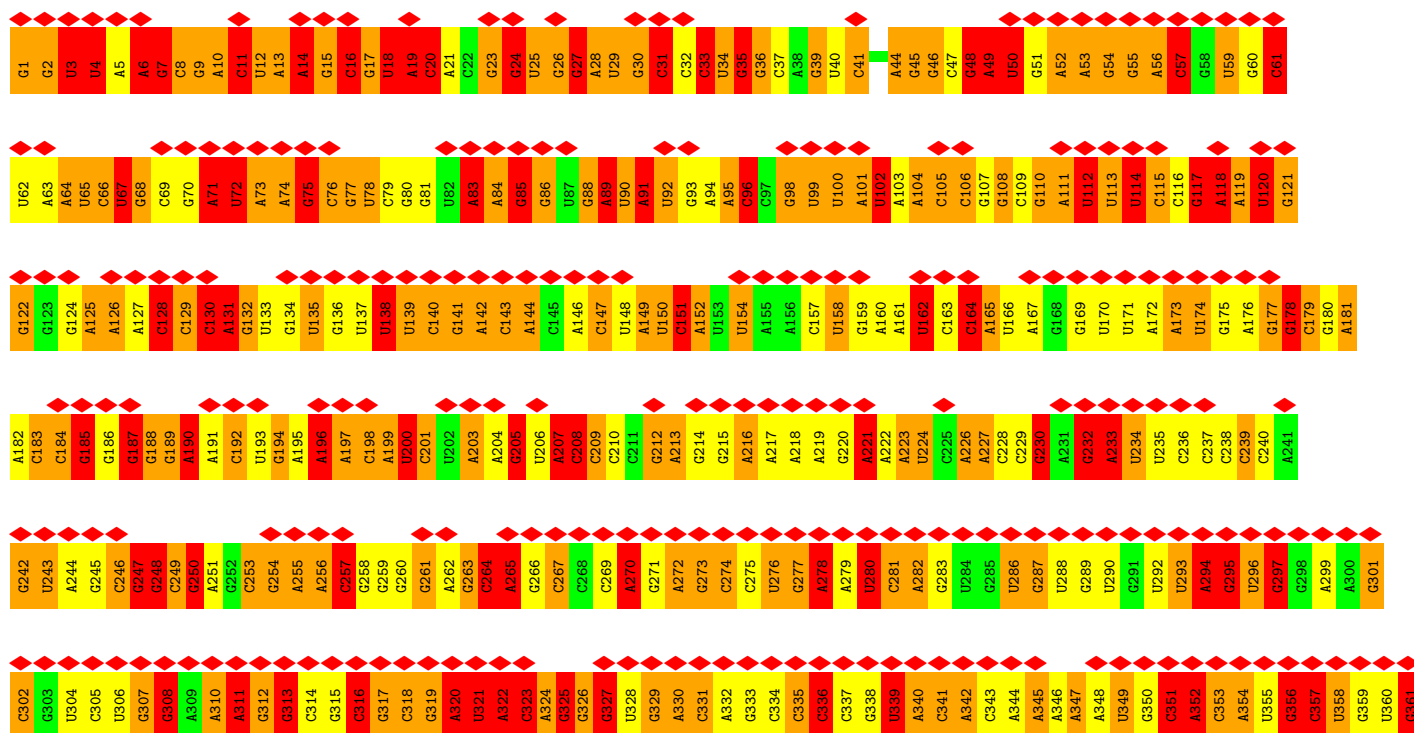
• Molecule 23: 30S ribosomal protein S10

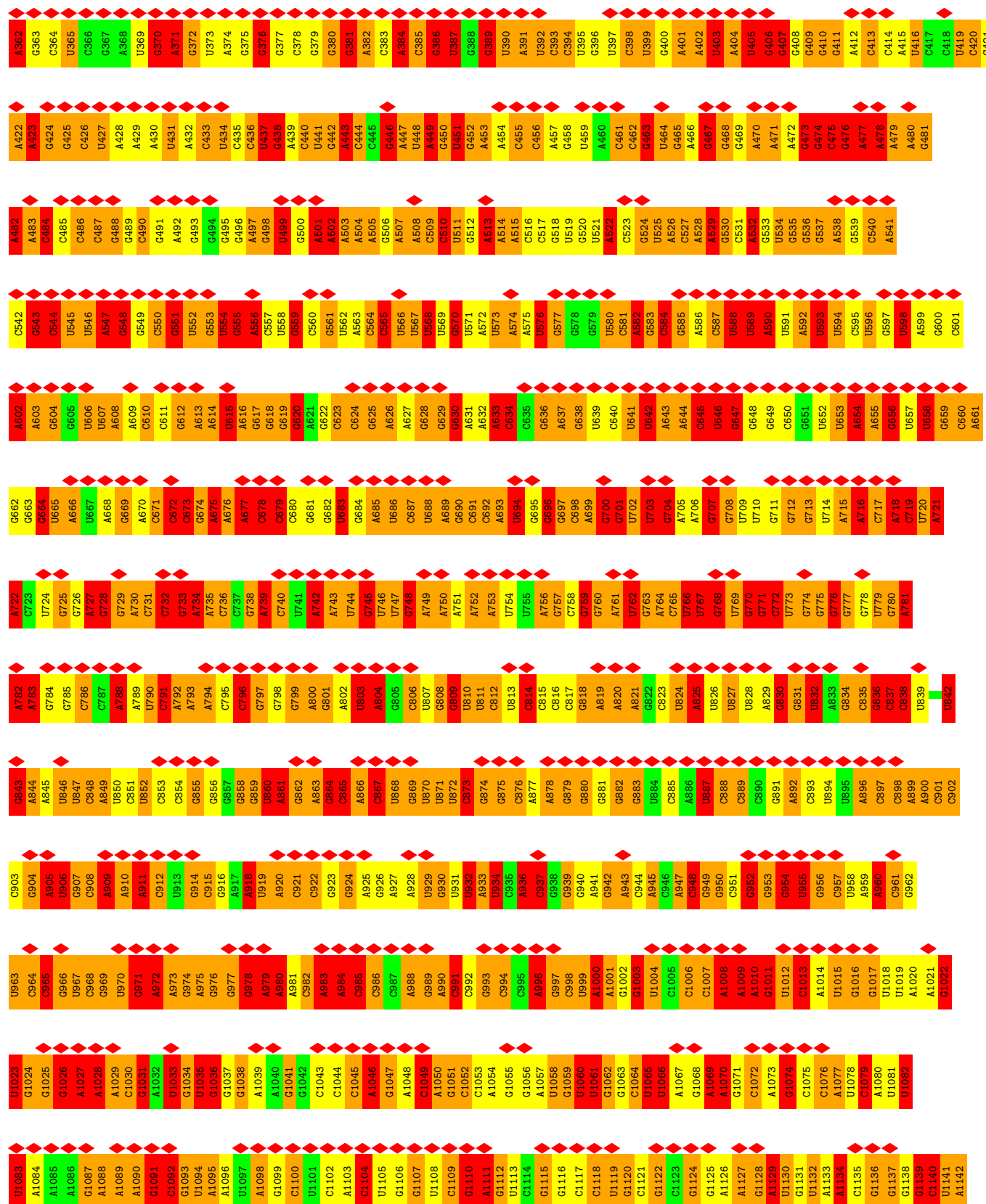


• Molecule 24: 5S rRNA



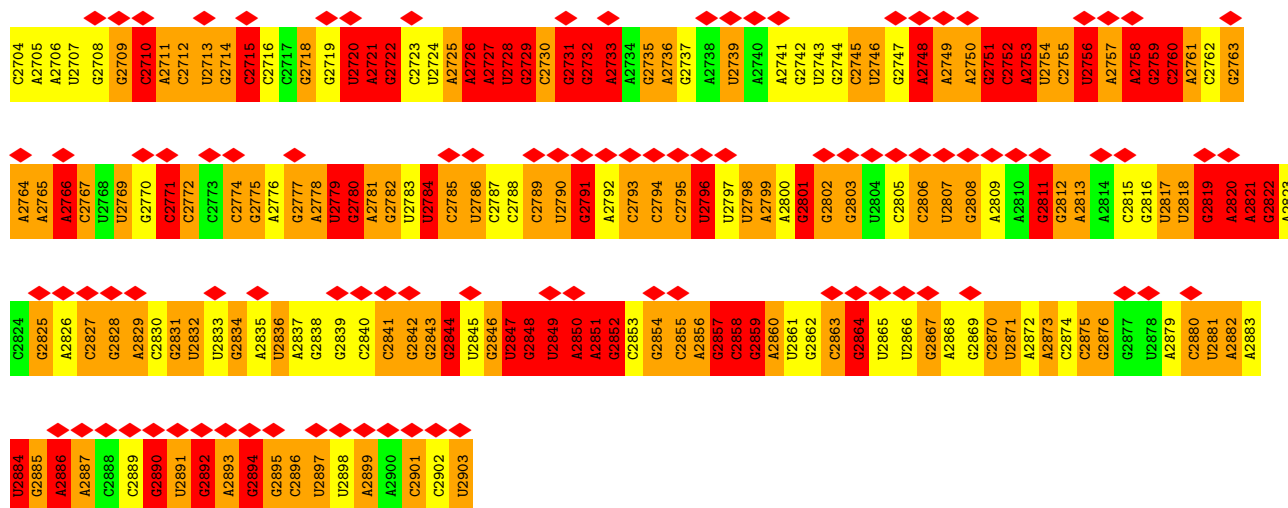
• Molecule 25: 23S rRNA



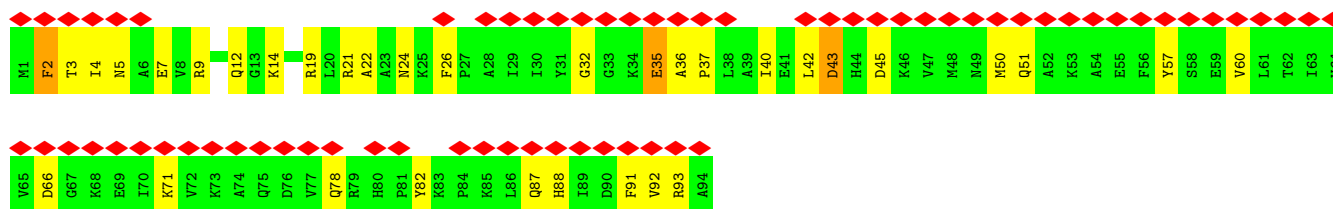
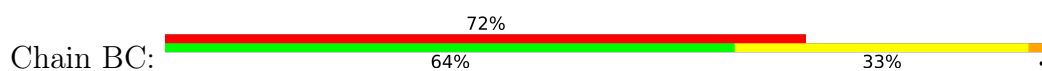


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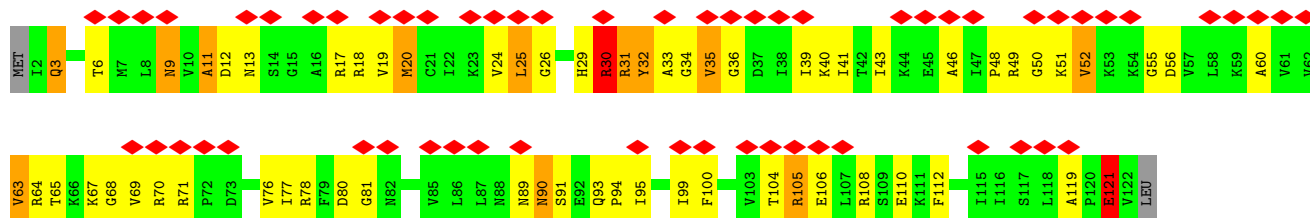
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G2608	G2608	G2487	U2547	G2487	C2427	G2364	G2304	G2246	A2184	G2124	C2065	C2006	U1946
U2609	U2609	U2488	A2548	U2488	G2428	G2365	C2305	G2247	U2185	G2125	C2066	C2007	C1947
G2610	G2610	G2489	G2549	G2489	C2429	A2366	G2306	A2248	U2186	A2126	G2067	C2008	G1948
C2611	C2611	U2491	G2550	U2491	A2430	G2367	G2307	C2248	G2187	G2127	U2068	A2009	G1949
G2612	U2612	U2492	C2551	U2492	U2431	C2368	A2308	U2249	U2188	G2128	G2069	G2010	U1951
U2613	G2613	G2493	U2552	G2493	A2432	A2369	C2310	G2250	U2189	C2129	A2071	G2012	A1952
A2614	U2614	G2494	U2553	G2494	A2433	G2370	U2312	G2251	G2190	U2130	C2072	A2013	A1953
G2615	G2615	G2495	U2554	G2495	A2434	G2371	C2313	G2252	A2191	U2131	C2073	A2014	G1954
C2616	U2616	G2496	U2555	G2496	A2435	U2372	G2314	G2253	U2192	U2132	U2074	A2015	U1955
U2617	G2617	A2497	C2556	A2497	G2436	G2373	G2315	G2254	U2193	G2133	U2075	U2016	U1956
G2618	G2618	C2498	C2557	C2498	G2437	C2374	A2317	G2255	U2194	U2076	U2076	U2017	C1957
C2619	C2619	C2499	C2558	C2499	U2438	C2375	G2318	G2256	C2196	U2077	A2077	G2018	G1958
G2620	G2620	U2500	C2559	U2500	A2439	A2376	G2319	U2257	U2197	G2136	G2078	A2019	G1959
C2621	U2621	C2501	A2560	C2501	C2440	A2377	U2320	U2258	A2198	U2137	A2080	C2021	C1961
G2622	G2622	G2502	U2561	G2502	U2441	A2378	U2321	C2260	U2199	G2138	U2081	U2022	U1962
C2623	A2623	A2503	U2562	A2503	C2442	G2379	A2322	U2261	C2200	U2139	A2082	G2023	G1964
G2624	G2624	U2504	U2563	U2504	C2443	C2380	G2323	U2262	G2201	G2140	C2083	G2024	C1965
U2625	C2625	G2505	A2564	G2505	G2444	C2381	U2324	C2263	U2202	G2141	C2084	C2025	A1966
G2626	G2626	U2506	A2565	G2506	G2445	A2382	G2325	U2264	U2203	G2142	U2085	U2026	C1967
C2627	G2627	C2507	C2566	C2507	G2446	G2383	A2327	U2265	G2204	U2143	U2086	G2027	G1968
U2628	U2628	U2508	A2567	U2508	A2448	U2384	G2328	U2266	A2205	C2143	G2087	U2028	A1969
G2629	G2629	G2509	U2568	G2509	U2449	C2385	U2329	A2267	G2206	G2144	A2088	G2029	U1971
C2630	C2630	C2510	A2569	C2510	A2450	A2386	U2330	A2268	C2207	C2145	A2089	A2031	G1972
G2631	G2631	U2511	U2570	U2511	A2451	A2387	G2331	U2271	C2208	C2146	G2090	G2032	G1973
A2632	G2632	C2512	A2571	C2512	G2452	U2388	G2332	U2272	U2210	A2147	A2091	G2033	C1974
U2633	A2633	U2513	A2572	U2513	A2453	A2389	U2333	A2273	U2211	G2148	U2092	U2034	G1975
G2634	G2634	G2514	C2573	G2514	G2454	U2390	G2334	U2274	A2212	U2149	G2093	G2035	A1976
A2635	C2635	C2515	U2574	C2515	G2455	U2391	A2335	C2275	G2213	C2150	A2094	C2036	A1977
G2636	U2636	U2516	G2575	U2516	G2456	U2392	A2336	A2276	U2214	U2151	A2095	A2037	U1978
U2637	G2637	C2517	C2576	C2517	U2457	A2393	A2337	G2277	C2215	G2152	C2096	G2038	U1979
G2638	A2638	U2518	A2577	U2518	G2458	A2394	A2338	G2278	G2216	C2153	A2097	U2039	G1980
U2639	U2639	G2519	C2578	G2519	A2459	U2395	A2339	A2279	G2217	A2154	U2098	G2040	A1981
G2640	G2640	C2520	U2579	C2520	U2460	U2396	A2340	G2280	G2218	U2155	U2099	U2041	U1982
U2641	G2641	U2521	A2580	U2521	A2461	U2397	G2341	A2281	U2219	G2156	G2100	A2042	G1983
G2642	G2642	C2522	C2581	C2522	C2462	U2398	G2342	G2282	G2221	A2101	A2102	C2043	
C2643	C2643	G2523	G2582	G2523	C2463	G2399	U2343	C2283	G2223	G2158	G2103		
			G2583										



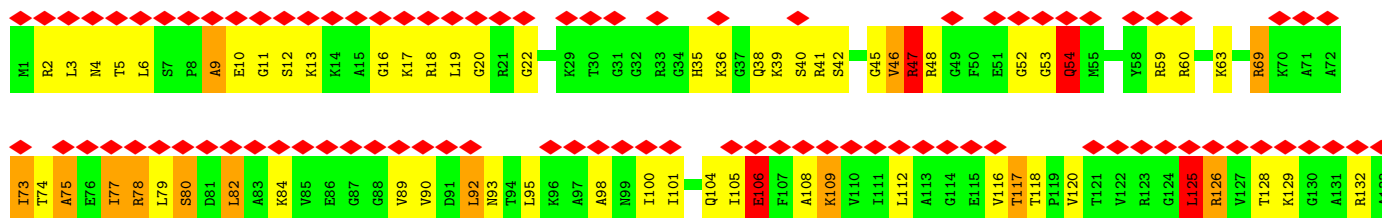
• Molecule 26: 50S ribosomal protein L25

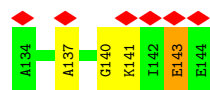


• Molecule 27: 50S ribosomal protein L14

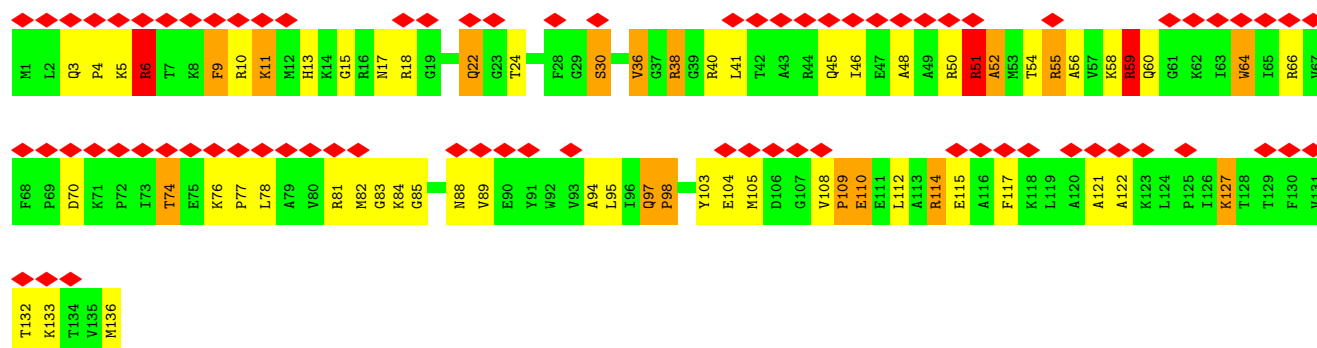


• Molecule 28: 50S ribosomal protein L15

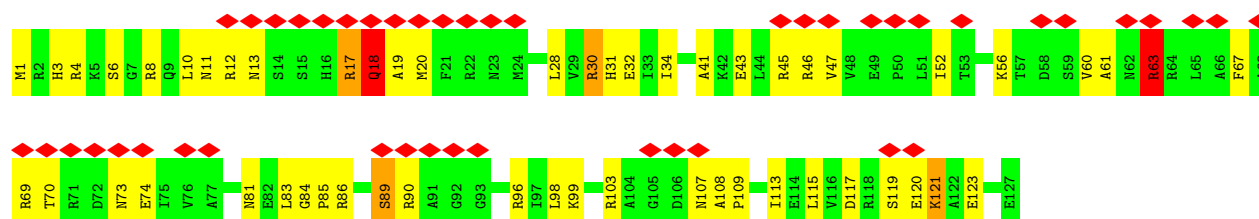




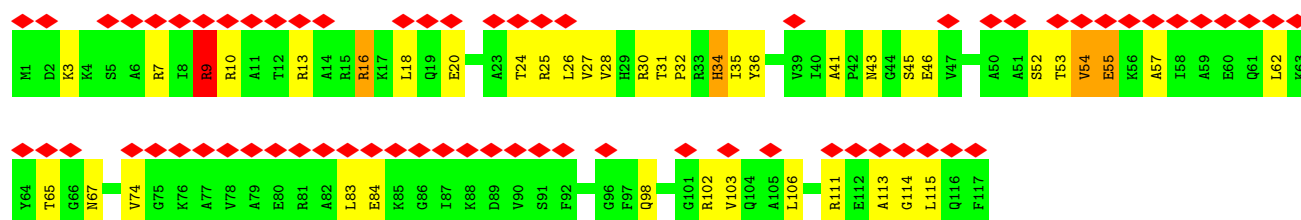
• Molecule 29: 50S ribosomal protein L16



• Molecule 30: 50S ribosomal protein L17

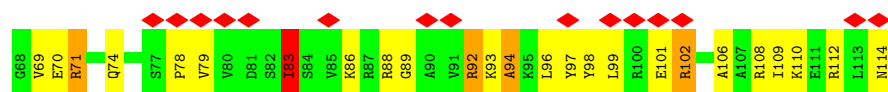


• Molecule 31: 50S ribosomal protein L18

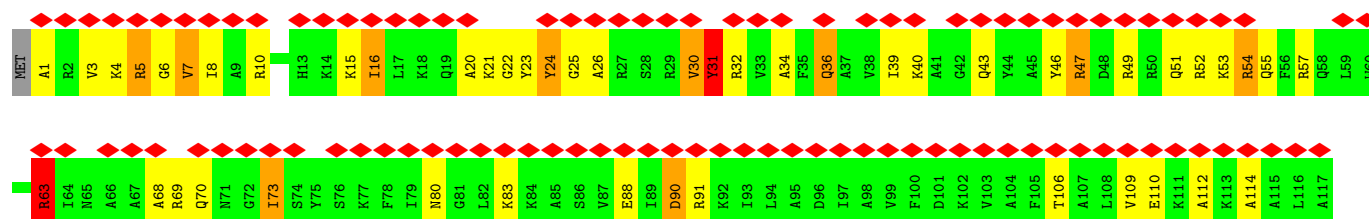
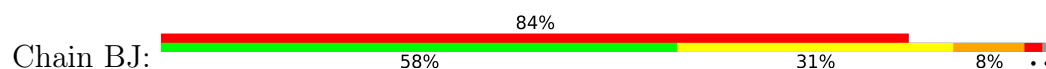


• Molecule 32: 50S ribosomal protein L19

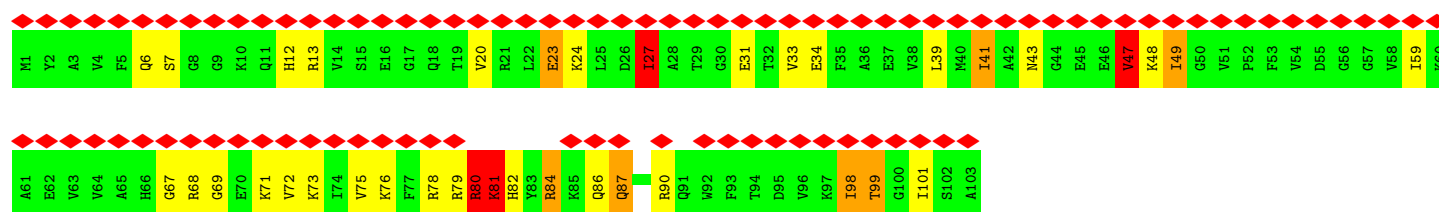




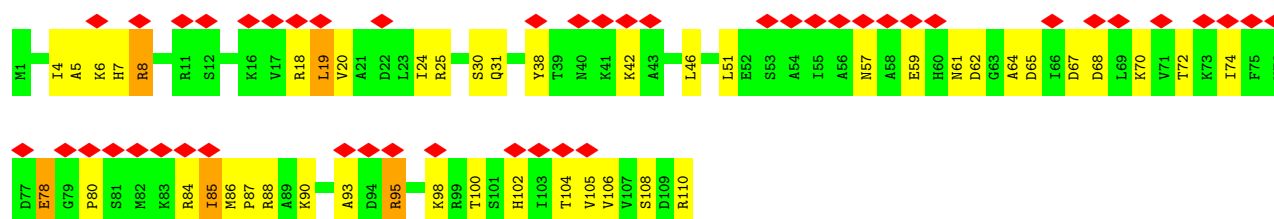
- Molecule 33: 50S ribosomal protein L20



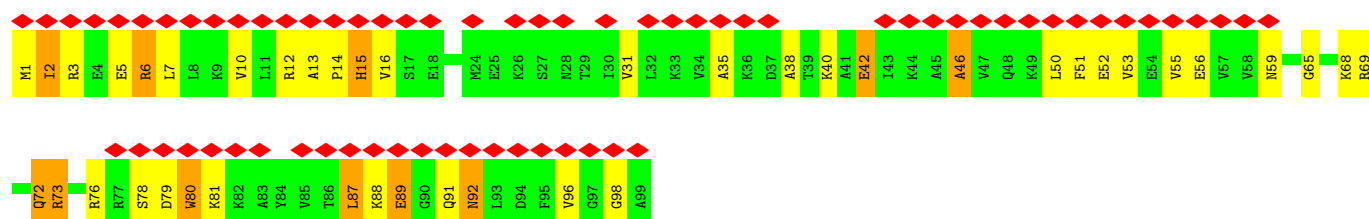
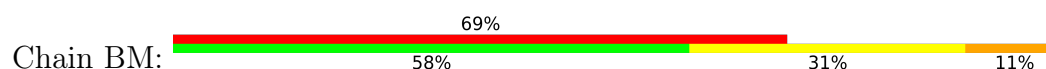
- Molecule 34: 50S ribosomal protein L21



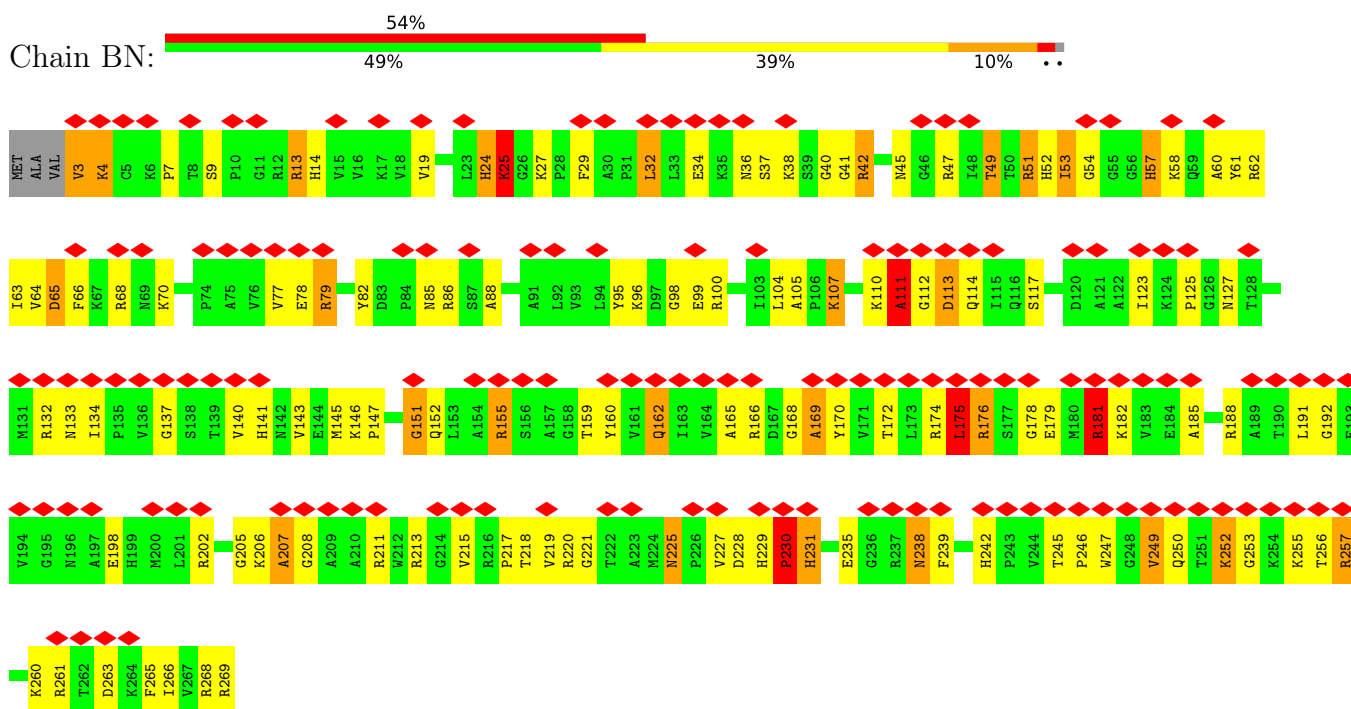
- Molecule 35: 50S ribosomal protein L22



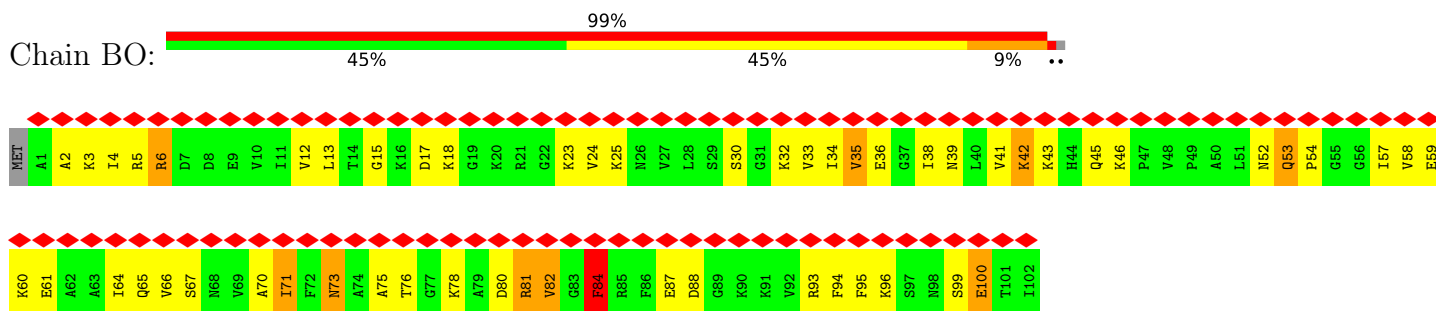
- Molecule 36: 50S ribosomal protein L23



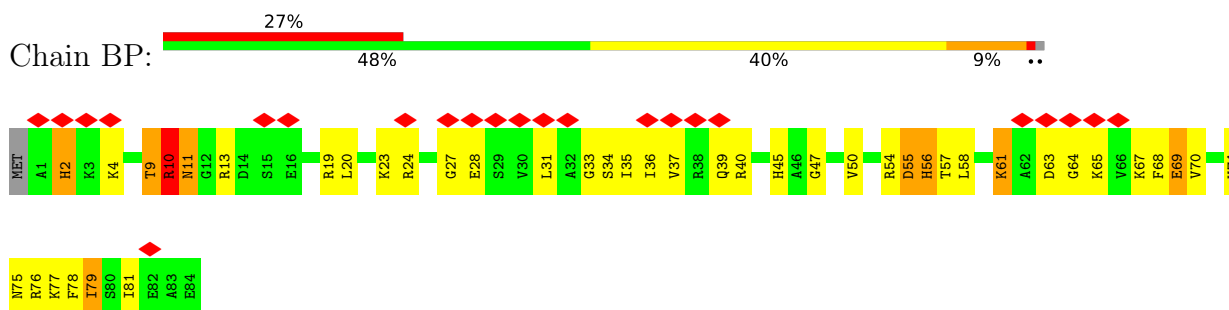
- Molecule 37: 50S ribosomal protein L2



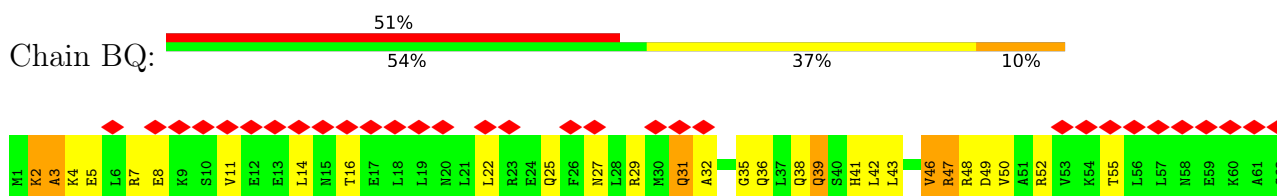
• Molecule 38: 50S ribosomal protein L24



• Molecule 39: 50S ribosomal protein L27

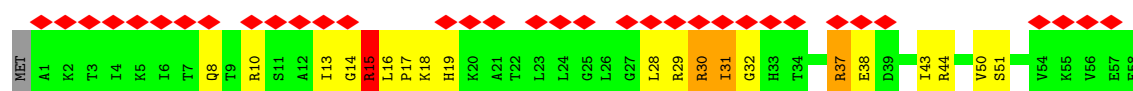


• Molecule 40: 50S ribosomal protein L29

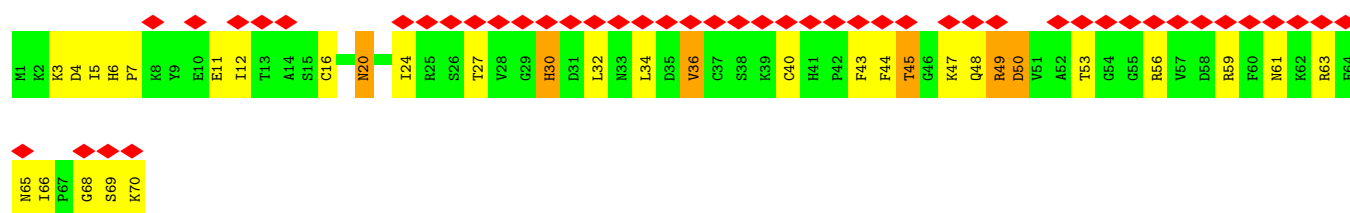




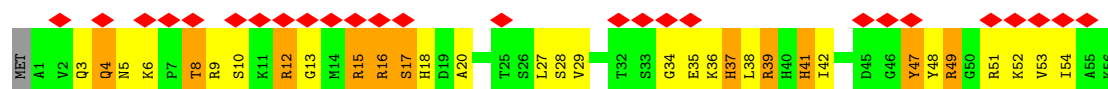
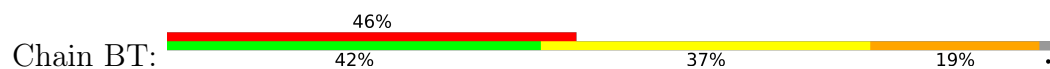
- Molecule 41: 50S ribosomal protein L30



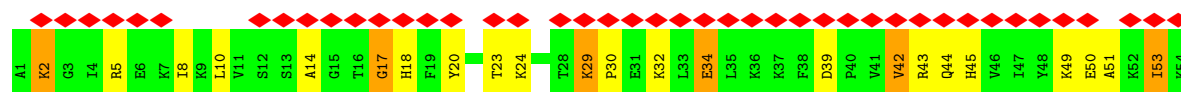
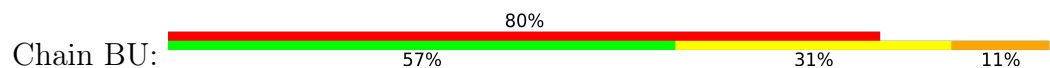
- Molecule 42: 50S ribosomal protein L31



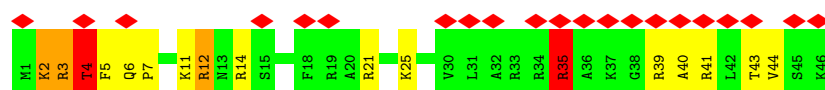
- Molecule 43: 50S ribosomal protein L32



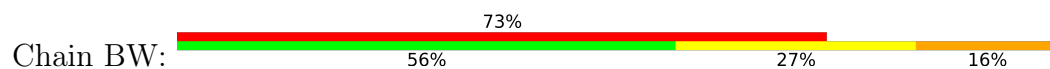
- Molecule 44: 50S ribosomal protein L33

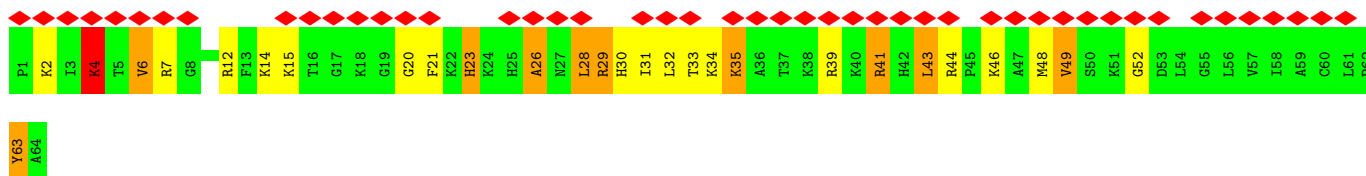


- Molecule 45: 50S ribosomal protein L34

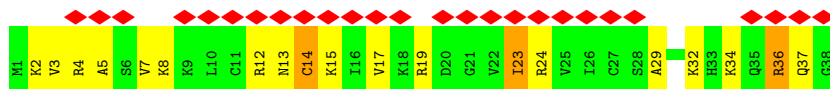


- Molecule 46: 50S ribosomal protein L35

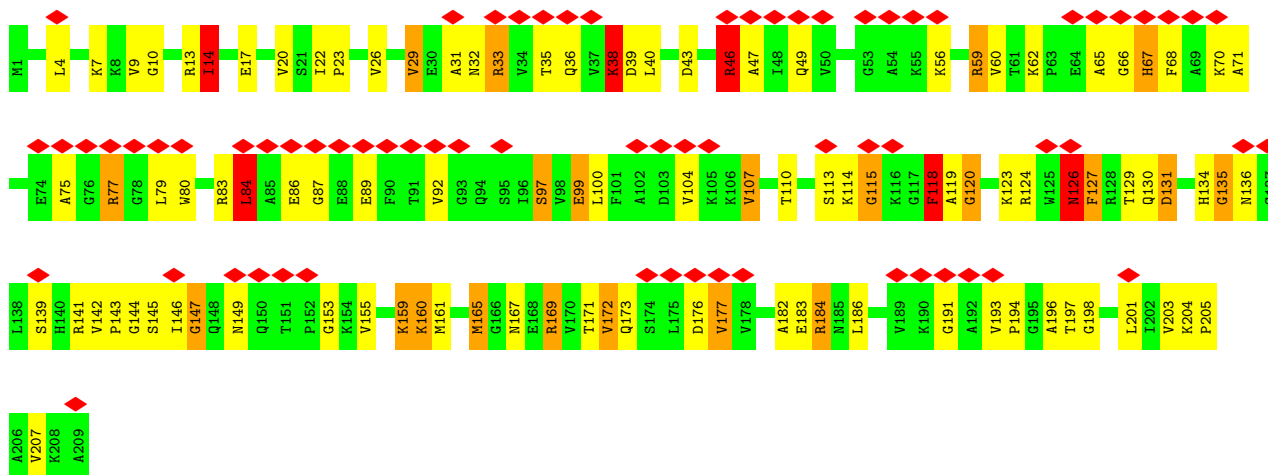




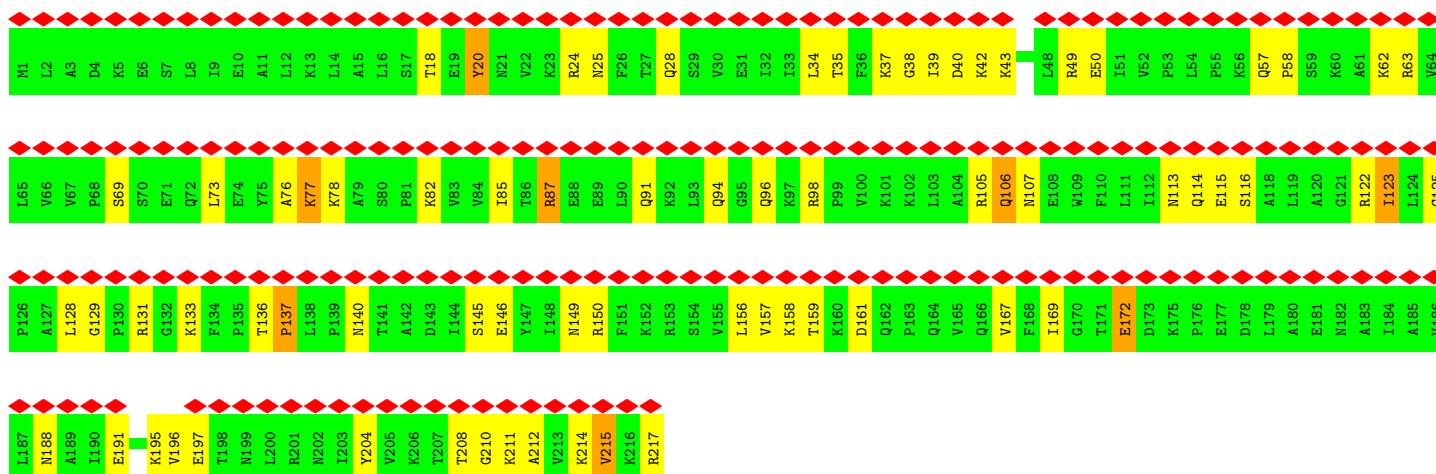
- Molecule 47: 50S ribosomal protein L36



- Molecule 48: 50S ribosomal protein L3

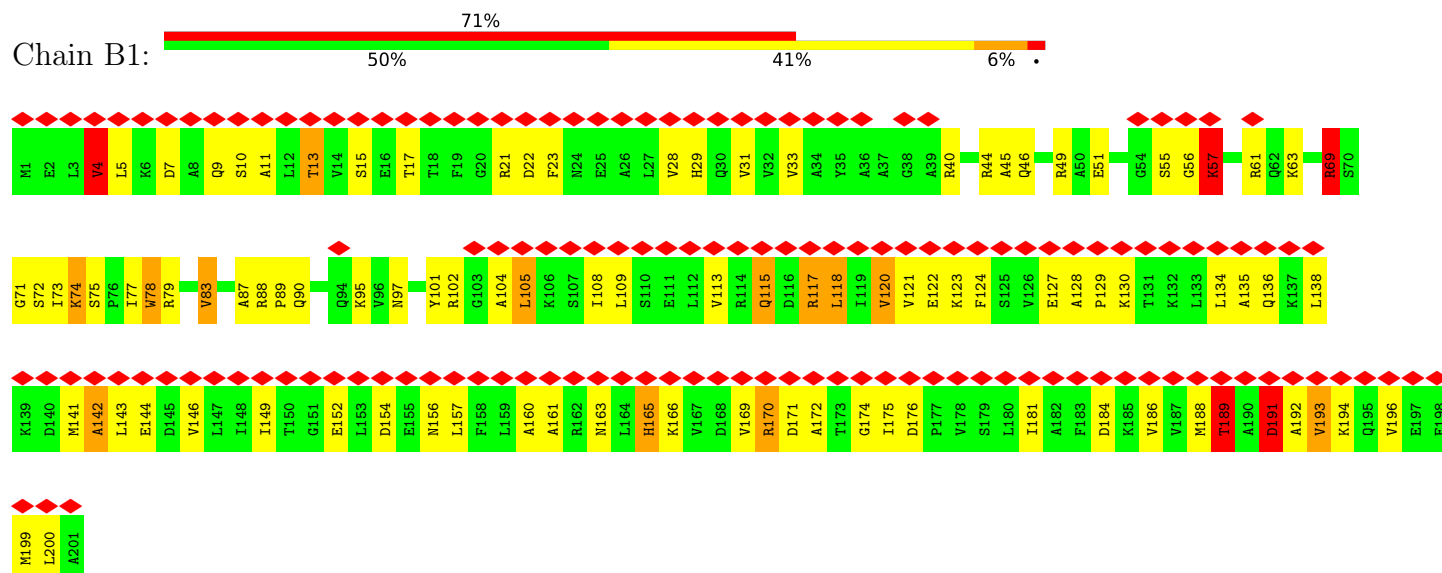


- Molecule 49: 50S ribosomal protein L1P



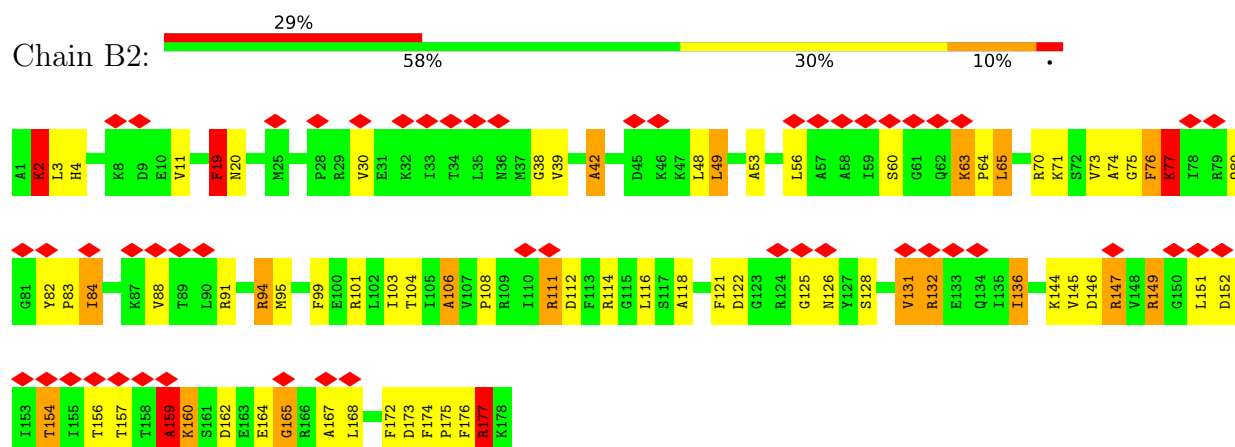
- Molecule 50: 50S ribosomal protein L4

Chain B1:



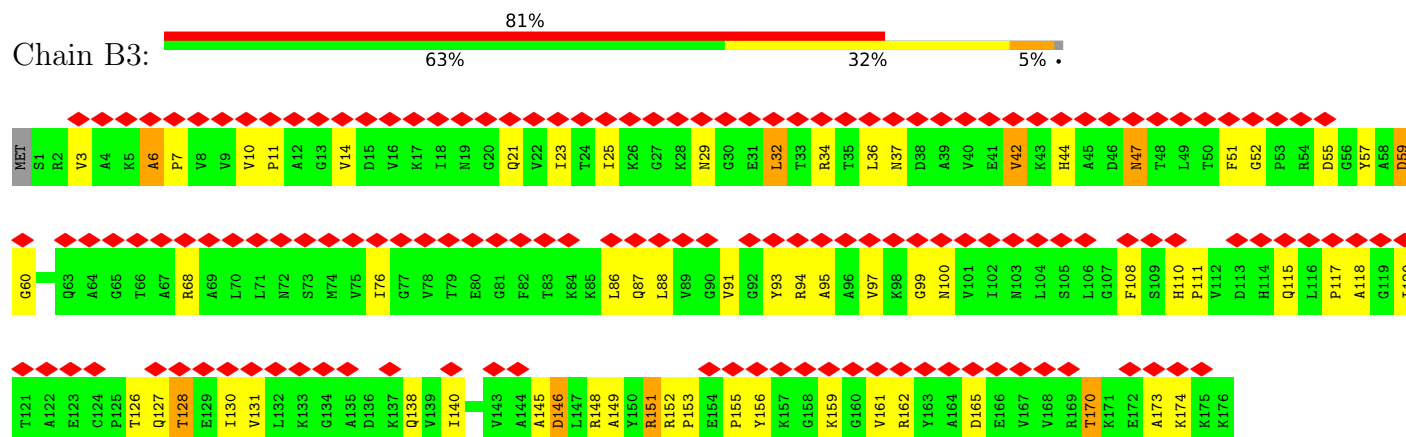
- Molecule 51: 50S ribosomal protein L5

Chain B2:

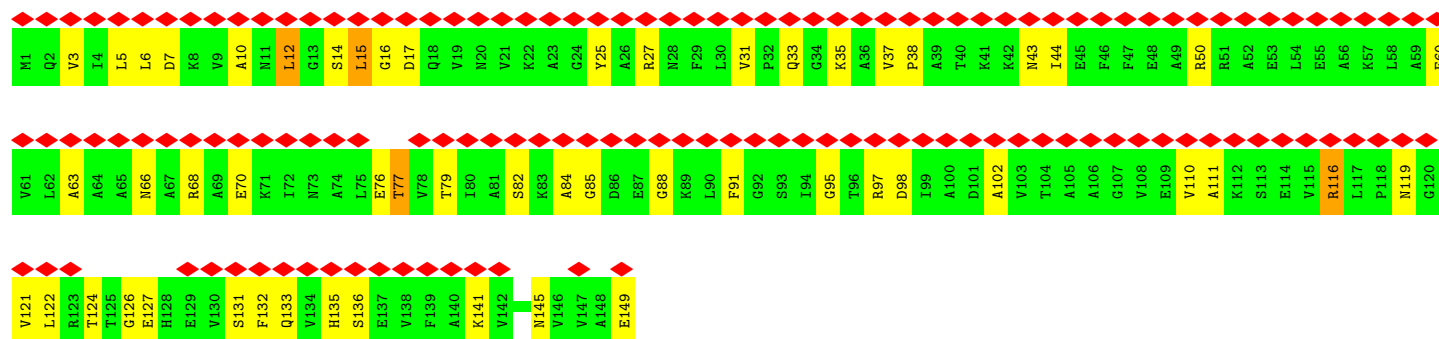
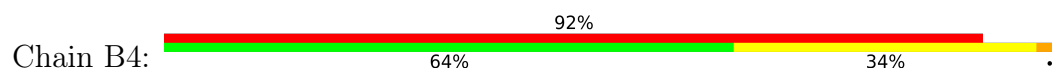


- Molecule 52: 50S ribosomal protein L6

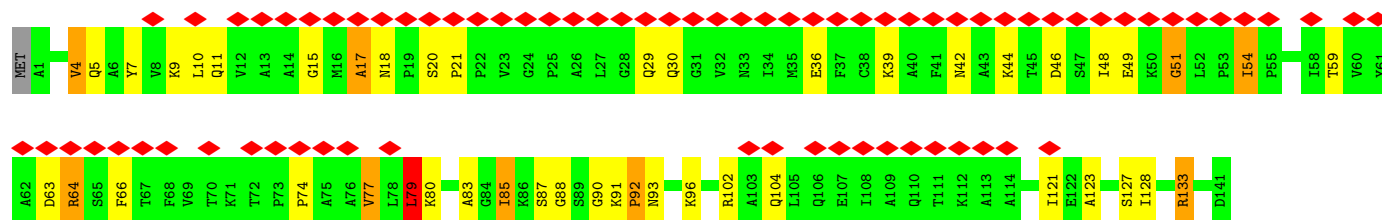
Chain B3:



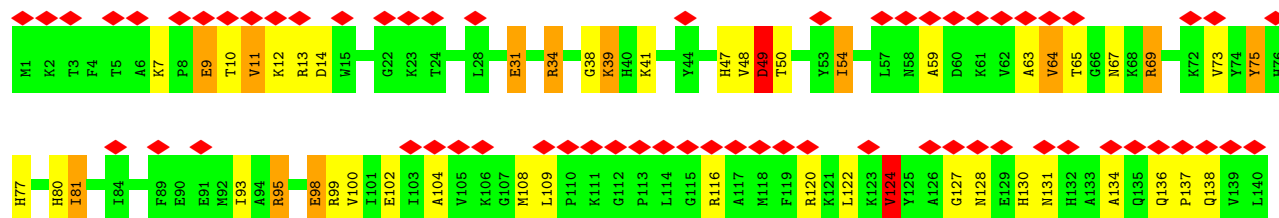
- Molecule 53: 50S ribosomal protein L9



• Molecule 54: 50S ribosomal protein L11



• Molecule 55: 50S ribosomal protein L13



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	75996	Depositor
Resolution determination method	Not provided	
CTF correction method	Not provided	
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	15	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	50000	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	250.984	Depositor
Minimum map value	-85.859	Depositor
Average map value	4.444	Depositor
Map value standard deviation	25.344	Depositor
Recommended contour level	57.2	Depositor
Map size ($\text{\AA}$)	366.6, 366.6, 366.6	wwPDB
Map dimensions	130, 130, 130	wwPDB
Map angles ($^\circ$)	90, 90, 90	wwPDB
Pixel spacing ($\text{\AA}$)	2.82, 2.82, 2.82	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	AA	1.53	4/1789 (0.2%)	2.26	134/2788 (4.8%)
1	AE	1.35	4/1814 (0.2%)	1.98	96/2827 (3.4%)
1	AP	2.20	16/1789 (0.9%)	2.49	92/2788 (3.3%)
2	AM	1.64	2/436 (0.5%)	2.34	42/672 (6.2%)
3	A1	1.51	105/36759 (0.3%)	2.00	1869/57346 (3.3%)
4	AB	1.30	4/1735 (0.2%)	2.22	74/2338 (3.2%)
5	AC	1.37	5/892 (0.6%)	2.16	26/1205 (2.2%)
6	AD	1.47	3/968 (0.3%)	2.38	59/1300 (4.5%)
7	AF	1.46	9/892 (1.0%)	2.47	65/1193 (5.4%)
8	AG	1.44	3/785 (0.4%)	2.36	38/1046 (3.6%)
9	AH	1.53	5/723 (0.7%)	2.53	56/966 (5.8%)
10	AI	1.46	4/658 (0.6%)	2.33	38/884 (4.3%)
11	AJ	1.37	0/657	2.30	33/881 (3.7%)
12	AK	1.44	4/462 (0.9%)	2.29	24/621 (3.9%)
13	AL	1.40	5/652 (0.8%)	2.37	35/877 (4.0%)
14	AN	1.39	4/670 (0.6%)	2.15	26/888 (2.9%)
15	AO	1.41	6/1651 (0.4%)	2.19	55/2225 (2.5%)
16	AQ	1.48	2/430 (0.5%)	2.35	22/570 (3.9%)
17	AR	1.34	6/1664 (0.4%)	2.22	65/2227 (2.9%)
18	AS	1.34	0/1118	2.16	45/1504 (3.0%)
19	AT	1.36	1/835 (0.1%)	2.19	41/1128 (3.6%)
20	AU	1.38	8/1187 (0.7%)	2.26	57/1591 (3.6%)
21	AV	1.22	0/988	2.12	31/1326 (2.3%)
22	AW	1.41	4/1033 (0.4%)	2.26	47/1375 (3.4%)
23	AX	1.36	3/796 (0.4%)	2.49	62/1077 (5.8%)
24	BA	1.34	3/2800 (0.1%)	1.94	137/4367 (3.1%)
25	BB	1.35	138/69795 (0.2%)	1.95	3212/108884 (2.9%)
26	BC	1.29	0/765	2.20	29/1025 (2.8%)
27	BD	1.47	4/939 (0.4%)	2.54	66/1258 (5.2%)
28	BE	1.47	6/1061 (0.6%)	2.34	57/1413 (4.0%)
29	BF	1.40	4/1092 (0.4%)	2.38	63/1460 (4.3%)
30	BG	1.44	5/1020 (0.5%)	2.30	50/1364 (3.7%)
31	BH	1.43	3/909 (0.3%)	2.30	42/1219 (3.4%)
32	BI	1.43	3/928 (0.3%)	2.32	56/1242 (4.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	BJ	1.40	3/959 (0.3%)	2.22	47/1278 (3.7%)
34	BK	1.34	1/828 (0.1%)	2.29	38/1107 (3.4%)
35	BL	1.37	3/863 (0.3%)	2.21	39/1156 (3.4%)
36	BM	1.29	2/784 (0.3%)	2.19	42/1048 (4.0%)
37	BN	1.44	15/2092 (0.7%)	2.35	114/2813 (4.1%)
38	BO	1.35	2/787 (0.3%)	2.49	64/1051 (6.1%)
39	BP	1.39	2/641 (0.3%)	2.46	44/848 (5.2%)
40	BQ	1.39	1/509 (0.2%)	2.27	20/677 (3.0%)
41	BR	1.33	2/452 (0.4%)	2.19	16/605 (2.6%)
42	BS	1.39	1/558 (0.2%)	2.31	31/745 (4.2%)
43	BT	1.50	2/449 (0.4%)	2.39	27/599 (4.5%)
44	BU	1.46	1/447 (0.2%)	2.27	17/594 (2.9%)
45	BV	1.45	0/379	2.32	22/498 (4.4%)
46	BW	1.39	0/512	2.15	27/676 (4.0%)
47	BX	1.45	2/302 (0.7%)	2.61	20/397 (5.0%)
48	BY	1.32	2/1585 (0.1%)	2.37	98/2134 (4.6%)
49	BZ	1.28	5/1711 (0.3%)	2.09	65/2305 (2.8%)
50	B1	1.33	3/1570 (0.2%)	2.28	86/2113 (4.1%)
51	B2	1.36	3/1443 (0.2%)	2.22	73/1937 (3.8%)
52	B3	1.36	2/1342 (0.1%)	2.26	66/1816 (3.6%)
53	B4	1.35	2/1121 (0.2%)	2.21	42/1515 (2.8%)
54	B5	1.32	2/1045 (0.2%)	2.24	50/1410 (3.5%)
55	B6	1.37	2/1135 (0.2%)	2.17	42/1529 (2.7%)
All	All	1.41	431/162206 (0.3%)	2.06	7934/242726 (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
1	AA	0	55
1	AE	0	49
1	AP	2	50
2	AM	0	9
3	A1	4	945
4	AB	0	3
5	AC	0	3
6	AD	0	7
7	AF	0	5
8	AG	0	4
9	AH	0	5

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
10	AI	0	3
11	AJ	0	4
13	AL	0	8
14	AN	1	1
15	AO	0	3
16	AQ	0	4
17	AR	0	7
18	AS	0	3
19	AT	0	4
20	AU	0	4
21	AV	0	2
22	AW	0	4
23	AX	0	4
24	BA	0	66
25	BB	3	1717
26	BC	0	3
27	BD	0	6
28	BE	0	6
29	BF	0	4
30	BG	0	4
31	BH	0	1
32	BI	0	4
33	BJ	0	4
34	BK	0	5
35	BL	0	5
36	BM	0	1
37	BN	0	12
38	BO	0	4
39	BP	0	3
40	BQ	0	3
41	BR	0	3
42	BS	0	3
43	BT	0	2
44	BU	0	5
45	BV	0	2
46	BW	0	4
47	BX	0	2
48	BY	0	9
49	BZ	0	2
50	B1	0	9
51	B2	0	6
52	B3	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
53	B4	0	4
54	B5	0	3
55	B6	0	8
All	All	10	3101

All (431) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A1	1429	A	P-O5'	89.08	3.38	1.59
3	A1	1340	A	C3'-O3'	70.07	2.82	1.42
1	AP	74	C	O3'-P	-34.97	1.08	1.61
25	BB	1687	G	O4'-C1'	30.64	1.87	1.41
1	AP	31	A	C4'-C3'	29.64	2.11	1.52
25	BB	1687	G	C4'-C3'	29.55	1.96	1.52
1	AP	31	A	C4'-O4'	29.11	2.03	1.45
1	AP	31	A	O4'-C1'	28.79	1.99	1.41
25	BB	1687	G	C4'-O4'	28.04	1.87	1.45
25	BB	1687	G	C2'-C1'	26.95	1.93	1.53
25	BB	1687	G	C3'-C2'	25.62	1.91	1.52
1	AP	31	A	C2'-C1'	24.75	2.02	1.53
1	AP	31	A	C3'-C2'	23.95	2.00	1.53
3	A1	1418	A	C5-C6	13.39	1.67	1.41
3	A1	1418	A	N3-C4	12.38	1.59	1.34
3	A1	1418	A	C6-N1	12.21	1.59	1.35
3	A1	1418	A	C2-N3	11.80	1.57	1.33
3	A1	1418	A	N1-C2	11.30	1.56	1.34
25	BB	2802	G	O3'-P	-9.52	1.46	1.61
9	AH	32	THR	C-N	9.51	1.46	1.34
3	A1	1418	A	C5-C4	9.25	1.57	1.38
9	AH	32	THR	C-O	9.08	1.34	1.24
3	A1	51	A	O3'-P	-7.63	1.49	1.61
7	AF	100	ARG	CZ-NH2	-7.60	1.23	1.33
3	A1	107	G	O3'-P	-7.54	1.49	1.61
3	A1	1219	A	O3'-P	-7.54	1.49	1.61
3	A1	1082	A	O3'-P	-7.52	1.49	1.61
24	BA	90	C	O3'-P	-7.43	1.50	1.61
25	BB	1560	G	O3'-P	-7.39	1.50	1.61
25	BB	2	G	O3'-P	-7.15	1.50	1.61
5	AC	97	ARG	CZ-NH1	-7.11	1.22	1.32
25	BB	753	A	O3'-P	-7.10	1.50	1.61
1	AA	44	A	P-O5'	-7.09	1.49	1.59
4	AB	156	LEU	CA-C	7.07	1.60	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A1	207	C	O3'-P	-7.02	1.50	1.61
36	BM	56	GLU	CA-C	7.01	1.57	1.52
3	A1	669	G	P-O5'	-6.98	1.49	1.59
3	A1	127	G	O3'-P	-6.97	1.50	1.61
1	AP	45	G	O3'-P	-6.97	1.50	1.61
25	BB	1951	U	O3'-P	-6.90	1.50	1.61
3	A1	531	U	C5'-C4'	6.90	1.61	1.51
25	BB	1435	G	O3'-P	-6.89	1.50	1.61
1	AE	26	G	O3'-P	-6.88	1.50	1.61
10	AI	28	ARG	CZ-NH2	-6.88	1.24	1.33
25	BB	702	U	O3'-P	-6.85	1.50	1.61
3	A1	1362	A	O3'-P	-6.85	1.50	1.61
3	A1	1013	G	O3'-P	-6.84	1.50	1.61
3	A1	1175	G	P-O5'	-6.84	1.49	1.59
3	A1	1257	A	O3'-P	-6.84	1.50	1.61
1	AA	65	G	O3'-P	-6.83	1.50	1.61
25	BB	978	G	O3'-P	-6.82	1.50	1.61
27	BD	50	GLY	N-CA	6.81	1.49	1.44
25	BB	497	A	P-O5'	-6.78	1.49	1.59
25	BB	2628	C	O3'-P	-6.76	1.51	1.61
3	A1	1531	A	O3'-P	-6.74	1.51	1.61
25	BB	1659	G	P-O5'	6.70	1.69	1.59
37	BN	132	ARG	NE-CZ	-6.67	1.25	1.33
49	BZ	122	ARG	CZ-NH1	-6.66	1.23	1.32
3	A1	413	G	P-O5'	-6.65	1.49	1.59
25	BB	1883	U	P-O5'	-6.65	1.49	1.59
3	A1	1441	A	O3'-P	-6.63	1.51	1.61
37	BN	185	ALA	CA-C	6.61	1.62	1.52
25	BB	658	U	O3'-P	-6.61	1.51	1.61
3	A1	1492	A	O3'-P	-6.60	1.51	1.61
39	BP	19	ARG	CZ-NH2	-6.58	1.24	1.33
3	A1	1115	U	O3'-P	-6.56	1.51	1.61
31	BH	113	ALA	CA-C	6.54	1.61	1.52
3	A1	1202	U	P-O5'	-6.53	1.50	1.59
7	AF	91	ARG	CZ-NH2	-6.50	1.25	1.33
3	A1	1167	A	O3'-P	-6.48	1.51	1.61
25	BB	1522	A	O3'-P	-6.46	1.51	1.61
37	BN	176	ARG	CZ-NH2	-6.46	1.25	1.33
1	AP	36	A	C5'-C4'	6.45	1.60	1.51
25	BB	294	A	O3'-P	-6.45	1.51	1.61
3	A1	524	G	C1'-N9	6.44	1.57	1.48
25	BB	336	C	O3'-P	-6.44	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	B1	5	LEU	CA-C	6.44	1.60	1.52
7	AF	106	ARG	CZ-NH2	-6.44	1.25	1.33
15	AO	135	ARG	CZ-NH2	-6.44	1.25	1.33
3	A1	1523	G	P-O5'	6.42	1.69	1.59
3	A1	539	A	P-O5'	6.42	1.69	1.59
25	BB	1745	A	C5'-C4'	6.42	1.60	1.51
3	A1	986	U	O3'-P	-6.36	1.51	1.61
14	AN	73	ARG	CZ-NH2	-6.36	1.25	1.33
32	BI	71	ARG	CZ-NH2	-6.33	1.25	1.33
3	A1	1268	G	P-O5'	6.33	1.69	1.59
25	BB	2895	G	O3'-P	-6.33	1.51	1.61
3	A1	1369	C	O3'-P	-6.31	1.51	1.61
25	BB	112	U	O3'-P	-6.29	1.51	1.61
25	BB	1072	C	O3'-P	-6.29	1.51	1.61
3	A1	360	G	O3'-P	-6.28	1.51	1.61
25	BB	159	G	O3'-P	-6.24	1.51	1.61
37	BN	134	ILE	N-CA	6.23	1.52	1.46
25	BB	2834	G	O3'-P	-6.22	1.51	1.61
3	A1	1340	A	C3'-C2'	6.20	1.65	1.53
28	BE	118	THR	N-CA	6.18	1.53	1.46
10	AI	31	ARG	NE-CZ	-6.17	1.26	1.33
3	A1	255	G	P-O5'	6.17	1.69	1.59
49	BZ	150	ARG	CZ-NH2	-6.15	1.25	1.33
3	A1	754	C	O3'-P	-6.15	1.51	1.61
2	AM	9	U	C3'-O3'	6.14	1.51	1.42
3	A1	1136	C	O3'-P	-6.14	1.51	1.61
3	A1	894	G	P-O5'	-6.14	1.50	1.59
3	A1	1476	A	O3'-P	-6.14	1.51	1.61
25	BB	1432	G	O3'-P	-6.13	1.51	1.61
23	AX	68	ARG	CZ-NH2	-6.11	1.25	1.33
3	A1	431	A	O3'-P	-6.10	1.52	1.61
25	BB	1910	G	P-O5'	6.09	1.68	1.59
9	AH	88	ARG	CZ-NH2	-6.09	1.25	1.33
37	BN	174	ARG	CZ-NH2	-6.09	1.25	1.33
20	AU	69	ARG	CZ-NH2	-6.08	1.25	1.33
25	BB	1489	C	P-O5'	6.07	1.68	1.59
30	BG	46	ARG	CZ-NH2	-6.05	1.25	1.33
51	B2	84	ILE	N-CA	6.05	1.51	1.46
15	AO	53	ARG	CZ-NH2	-6.05	1.25	1.33
3	A1	722	G	O3'-P	-6.04	1.52	1.61
25	BB	1053	C	O3'-P	-6.04	1.52	1.61
3	A1	1135	U	P-O5'	-6.02	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AC	105	ARG	CZ-NH1	-6.02	1.24	1.32
3	A1	75	G	O3'-P	-6.02	1.52	1.61
1	AE	24	G	O3'-P	-6.02	1.52	1.61
3	A1	912	C	O3'-P	-6.02	1.52	1.61
3	A1	517	G	O3'-P	-6.00	1.52	1.61
8	AG	58	ARG	CZ-NH2	-6.00	1.25	1.33
25	BB	1942	C	O3'-P	6.00	1.70	1.61
3	A1	1024	G	O3'-P	-5.99	1.52	1.61
4	AB	50	ASN	CA-C	5.99	1.58	1.52
25	BB	2658	C	O3'-P	-5.98	1.52	1.61
3	A1	1352	C	P-O5'	-5.98	1.50	1.59
48	BY	169	ARG	CZ-NH1	-5.97	1.24	1.32
25	BB	1738	G	P-O5'	5.97	1.68	1.59
47	BX	7	VAL	CA-C	5.96	1.59	1.53
14	AN	59	ARG	CZ-NH1	-5.96	1.24	1.32
28	BE	18	ARG	CZ-NH2	-5.95	1.25	1.33
14	AN	24	ARG	CZ-NH2	-5.95	1.25	1.33
25	BB	2408	U	O3'-P	-5.94	1.52	1.61
3	A1	926	G	O3'-P	-5.94	1.52	1.61
3	A1	170	U	O3'-P	5.94	1.70	1.61
29	BF	114	ARG	CZ-NH2	-5.93	1.25	1.33
25	BB	392	U	O3'-P	-5.93	1.52	1.61
25	BB	1869	G	O3'-P	-5.93	1.52	1.61
24	BA	18	G	O3'-P	-5.92	1.52	1.61
31	BH	10	ARG	CZ-NH1	-5.92	1.24	1.32
25	BB	652	U	O3'-P	5.91	1.70	1.61
30	BG	30	ARG	CZ-NH2	-5.91	1.25	1.33
1	AP	36	A	C4'-C3'	5.91	1.61	1.52
38	BO	93	ARG	CZ-NH1	-5.90	1.24	1.32
27	BD	105	ARG	CZ-NH2	-5.90	1.25	1.33
37	BN	40	GLY	CA-C	5.89	1.56	1.52
33	BJ	54	ARG	CZ-NH2	-5.88	1.25	1.33
25	BB	1694	C	P-O5'	5.88	1.68	1.59
25	BB	1458	U	P-O5'	5.88	1.68	1.59
22	AW	50	PRO	CA-C	5.87	1.58	1.52
25	BB	1946	U	P-O5'	5.87	1.68	1.59
20	AU	91	ARG	CZ-NH2	-5.87	1.25	1.33
36	BM	12	ARG	CZ-NH2	-5.87	1.25	1.33
25	BB	1975	G	P-O5'	-5.85	1.50	1.59
3	A1	92	U	P-O5'	-5.85	1.50	1.59
3	A1	794	A	O3'-P	-5.84	1.52	1.61
25	BB	260	G	O3'-P	-5.83	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	AK	72	ARG	CZ-NH2	-5.82	1.25	1.33
2	AM	6	U	O3'-P	-5.82	1.52	1.61
37	BN	166	ARG	CZ-NH2	-5.82	1.25	1.33
20	AU	79	VAL	N-CA	5.82	1.53	1.46
12	AK	52	ARG	CZ-NH2	-5.81	1.25	1.33
5	AC	36	ARG	CZ-NH1	-5.80	1.24	1.32
41	BR	37	ARG	CZ-NH2	-5.80	1.25	1.33
12	AK	47	ARG	CZ-NH2	-5.80	1.25	1.33
51	B2	101	ARG	CZ-NH2	-5.80	1.25	1.33
25	BB	2764	A	O3'-P	-5.80	1.52	1.61
3	A1	68	G	P-O5'	5.79	1.68	1.59
25	BB	2307	G	O3'-P	-5.79	1.52	1.61
25	BB	2140	G	P-O5'	5.78	1.68	1.59
3	A1	1030	U	O3'-P	-5.78	1.52	1.61
3	A1	1368	A	P-O5'	-5.78	1.51	1.59
55	B6	13	ARG	CZ-NH2	-5.76	1.25	1.33
38	BO	36	GLU	CA-C	5.76	1.59	1.52
25	BB	2722	G	O3'-P	-5.75	1.52	1.61
20	AU	95	ARG	CZ-NH2	-5.75	1.25	1.33
3	A1	100	G	O3'-P	-5.75	1.52	1.61
3	A1	904	U	P-O5'	-5.74	1.51	1.59
3	A1	99	C	P-O5'	-5.74	1.51	1.59
13	AL	31	ARG	CZ-NH2	-5.73	1.26	1.33
3	A1	877	G	O3'-P	-5.72	1.52	1.61
10	AI	50	THR	N-CA	5.72	1.52	1.46
7	AF	53	ASP	CA-C	5.72	1.60	1.52
24	BA	95	U	O3'-P	-5.72	1.52	1.61
1	AP	34	G	C2-N2	-5.72	1.23	1.34
25	BB	2341	G	P-O5'	5.72	1.68	1.59
3	A1	677	U	O3'-P	-5.71	1.52	1.61
27	BD	30	ARG	CZ-NH1	-5.71	1.24	1.32
25	BB	296	U	P-O5'	5.70	1.68	1.59
27	BD	108	ARG	CZ-NH1	-5.69	1.24	1.32
3	A1	1340	A	O3'-P	5.69	1.69	1.61
7	AF	89	ARG	CZ-NH2	-5.68	1.26	1.33
17	AR	183	ARG	CZ-NH1	-5.68	1.24	1.32
3	A1	936	C	O3'-P	-5.68	1.52	1.61
25	BB	1882	U	O3'-P	-5.67	1.52	1.61
15	AO	131	ARG	N-CA	5.67	1.53	1.46
6	AD	35	ARG	CZ-NH2	-5.67	1.26	1.33
25	BB	414	C	P-O5'	5.66	1.68	1.59
23	AX	16	ARG	CZ-NH2	-5.66	1.26	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BL	31	GLN	CA-C	5.65	1.59	1.53
19	AT	86	ARG	CZ-NH2	-5.65	1.26	1.33
3	A1	808	C	O3'-P	-5.64	1.52	1.61
1	AP	49	C	P-O5'	5.64	1.68	1.59
25	BB	2339	C	O3'-P	-5.63	1.52	1.61
3	A1	482	A	O3'-P	-5.63	1.52	1.61
7	AF	97	ARG	CZ-NH2	-5.63	1.26	1.33
25	BB	2139	U	P-O5'	5.62	1.68	1.59
1	AE	21	A	P-O5'	-5.61	1.51	1.59
25	BB	1037	G	O3'-P	-5.60	1.52	1.61
28	BE	143	GLU	CA-C	5.59	1.60	1.52
25	BB	2537	U	O3'-P	-5.59	1.52	1.61
25	BB	2073	C	O3'-P	-5.59	1.52	1.61
25	BB	718	A	O3'-P	-5.58	1.52	1.61
10	AI	31	ARG	CZ-NH2	-5.58	1.26	1.33
3	A1	65	A	O3'-P	-5.58	1.52	1.61
16	AQ	32	ARG	CZ-NH2	-5.58	1.26	1.33
25	BB	1315	C	O3'-P	-5.57	1.52	1.61
42	BS	40	CYS	CA-C	5.57	1.60	1.52
1	AP	67	A	P-O5'	-5.56	1.51	1.59
3	A1	361	G	P-O5'	-5.56	1.51	1.59
25	BB	1981	A	C3'-C2'	5.56	1.61	1.52
25	BB	2743	U	P-O5'	-5.56	1.51	1.59
20	AU	142	ARG	CZ-NH1	-5.55	1.25	1.32
1	AA	72	C	P-O5'	5.54	1.68	1.59
37	BN	49	THR	N-CA	5.54	1.53	1.46
3	A1	616	G	O3'-P	-5.54	1.52	1.61
25	BB	86	G	O3'-P	-5.54	1.52	1.61
25	BB	752	A	O3'-P	-5.54	1.52	1.61
50	B1	10	SER	N-CA	5.54	1.53	1.46
34	BK	68	ARG	CZ-NH2	-5.53	1.26	1.33
25	BB	352	A	P-O5'	-5.52	1.51	1.59
3	A1	749	A	O3'-P	-5.52	1.52	1.61
50	B1	156	ASN	CA-C	5.51	1.59	1.52
25	BB	135	U	O3'-P	-5.50	1.52	1.61
54	B5	21	PRO	CA-C	5.50	1.57	1.52
52	B3	173	ALA	CA-C	5.50	1.59	1.52
3	A1	123	U	O3'-P	-5.50	1.52	1.61
3	A1	1340	A	C4'-C3'	5.49	1.63	1.52
54	B5	17	ALA	CA-C	5.49	1.60	1.52
7	AF	2	ARG	CZ-NH2	-5.48	1.26	1.33
25	BB	1478	G	O3'-P	-5.48	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A1	555	U	O3'-P	-5.47	1.52	1.61
25	BB	1929	G	P-O5'	5.47	1.68	1.59
15	AO	39	ARG	CZ-NH2	-5.46	1.26	1.33
25	BB	1486	U	O3'-P	-5.46	1.52	1.61
3	A1	708	C	O3'-P	-5.46	1.52	1.61
8	AG	68	ARG	CZ-NH1	-5.46	1.25	1.32
3	A1	918	A	P-O5'	-5.45	1.51	1.59
25	BB	2832	U	O3'-P	-5.45	1.52	1.61
3	A1	498	A	P-O5'	-5.45	1.51	1.59
25	BB	2671	G	P-O5'	-5.44	1.51	1.59
7	AF	112	ARG	N-CA	5.43	1.53	1.46
5	AC	68	ARG	CZ-NH2	-5.43	1.26	1.33
3	A1	394	G	O3'-P	-5.42	1.53	1.61
6	AD	43	LYS	N-CA	5.42	1.50	1.46
9	AH	53	ARG	CZ-NH2	-5.42	1.26	1.33
25	BB	1962	C	O3'-P	-5.42	1.53	1.61
40	BQ	5	GLU	N-CA	5.41	1.53	1.46
3	A1	993	G	C3'-C2'	5.41	1.61	1.52
3	A1	728	A	O3'-P	-5.41	1.53	1.61
13	AL	80	ARG	CZ-NH2	-5.41	1.26	1.33
4	AB	73	ARG	CZ-NH1	-5.40	1.25	1.32
1	AP	62	A	O3'-P	-5.40	1.53	1.61
55	B6	11	VAL	N-CA	5.40	1.53	1.46
37	BN	134	ILE	CA-C	5.40	1.57	1.52
25	BB	49	A	C4'-O4'	-5.40	1.37	1.45
3	A1	481	G	O3'-P	-5.39	1.53	1.61
7	AF	108	ARG	CZ-NH1	-5.39	1.25	1.32
8	AG	64	ARG	CZ-NH1	-5.39	1.25	1.32
29	BF	6	ARG	CZ-NH2	-5.39	1.26	1.33
25	BB	1447	C	O3'-P	-5.39	1.53	1.61
30	BG	90	ARG	CZ-NH2	-5.39	1.26	1.33
31	BH	41	ALA	CA-C	5.39	1.59	1.53
12	AK	56	ARG	CZ-NH2	-5.38	1.26	1.33
32	BI	108	ARG	CZ-NH2	-5.38	1.26	1.33
3	A1	950	U	P-O5'	-5.38	1.51	1.59
25	BB	2517	C	C5'-C4'	5.38	1.59	1.51
15	AO	178	ARG	CZ-NH2	-5.37	1.26	1.33
25	BB	2291	U	O3'-P	-5.37	1.53	1.61
47	BX	19	ARG	CZ-NH2	-5.37	1.26	1.33
33	BJ	91	ARG	CZ-NH2	-5.37	1.26	1.33
5	AC	105	ARG	CZ-NH2	-5.37	1.26	1.33
41	BR	29	ARG	CZ-NH2	-5.37	1.26	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BN	42	ARG	CZ-NH2	-5.36	1.26	1.33
53	B4	110	VAL	N-CA	5.36	1.52	1.46
3	A1	164	G	O3'-P	-5.35	1.53	1.61
30	BG	8	ARG	CZ-NH2	-5.35	1.26	1.33
25	BB	345	A	O3'-P	-5.34	1.53	1.61
25	BB	118	A	O3'-P	-5.34	1.53	1.61
49	BZ	98	ARG	CZ-NH2	-5.34	1.26	1.33
13	AL	26	ASP	CA-C	5.34	1.60	1.52
32	BI	52	ARG	CZ-NH2	-5.34	1.26	1.33
3	A1	381	C	P-O5'	-5.33	1.51	1.59
25	BB	1297	C	O3'-P	-5.33	1.53	1.61
25	BB	2462	C	O3'-P	-5.32	1.53	1.61
3	A1	223	A	O3'-P	-5.32	1.53	1.61
9	AH	16	ARG	CZ-NH2	-5.32	1.26	1.33
25	BB	2891	U	P-O5'	-5.30	1.51	1.59
33	BJ	47	ARG	CZ-NH2	-5.29	1.26	1.33
25	BB	2675	A	O3'-P	-5.29	1.53	1.61
48	BY	60	VAL	N-CA	5.29	1.51	1.46
17	AR	55	ARG	CZ-NH2	-5.28	1.26	1.33
25	BB	2633	G	O3'-P	-5.28	1.53	1.61
28	BE	92	LEU	N-CA	5.28	1.52	1.46
35	BL	95	ARG	CZ-NH2	-5.28	1.26	1.33
25	BB	2153	C	P-O5'	-5.28	1.51	1.59
25	BB	2181	U	P-O5'	-5.28	1.51	1.59
37	BN	169	ALA	CA-C	5.28	1.59	1.52
25	BB	1953	A	O3'-P	-5.28	1.53	1.61
30	BG	69	ARG	CZ-NH2	-5.28	1.26	1.33
25	BB	426	C	C4'-O4'	-5.28	1.37	1.45
23	AX	89	ARG	CZ-NH2	-5.27	1.26	1.33
25	BB	611	C	C4'-O4'	-5.27	1.37	1.45
22	AW	91	GLU	N-CA	5.27	1.53	1.46
3	A1	1355	G	C2-N2	-5.27	1.24	1.34
25	BB	1264	A	O3'-P	-5.26	1.53	1.61
22	AW	90	ASP	CA-C	5.26	1.58	1.52
35	BL	88	ARG	CZ-NH2	-5.26	1.26	1.33
25	BB	1914	C	P-O5'	-5.26	1.51	1.59
17	AR	103	ARG	CZ-NH2	-5.25	1.26	1.33
3	A1	879	C	P-O5'	-5.25	1.51	1.59
25	BB	78	U	O3'-P	-5.25	1.53	1.61
25	BB	218	A	O3'-P	-5.25	1.53	1.61
3	A1	1390	U	O3'-P	-5.24	1.53	1.61
25	BB	1000	A	P-O5'	5.24	1.67	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	BB	2676	C	O3'-P	-5.24	1.53	1.61
3	A1	991	U	O3'-P	-5.24	1.53	1.61
25	BB	2279	G	O3'-P	-5.24	1.53	1.61
25	BB	1907	G	O3'-P	-5.23	1.53	1.61
25	BB	2081	U	O3'-P	-5.23	1.53	1.61
1	AP	14	A	O3'-P	-5.23	1.53	1.61
25	BB	1559	U	O3'-P	-5.23	1.53	1.61
25	BB	962	G	O3'-P	-5.23	1.53	1.61
14	AN	17	ARG	CZ-NH2	-5.22	1.26	1.33
20	AU	142	ARG	CZ-NH2	-5.22	1.26	1.33
3	A1	793	U	O3'-P	-5.22	1.53	1.61
1	AP	26	G	O3'-P	-5.22	1.53	1.61
25	BB	405	U	O3'-P	-5.22	1.53	1.61
43	BT	52	LYS	CA-C	5.21	1.54	1.52
25	BB	551	G	O3'-P	-5.21	1.53	1.61
25	BB	1883	U	O3'-P	-5.21	1.53	1.61
25	BB	304	U	P-O5'	-5.21	1.51	1.59
25	BB	1031	G	C5'-C4'	5.21	1.59	1.51
25	BB	2656	U	P-O5'	-5.21	1.51	1.59
3	A1	915	A	O3'-P	-5.20	1.53	1.61
25	BB	203	A	P-O5'	-5.20	1.51	1.59
25	BB	2117	A	C5'-C4'	5.20	1.59	1.51
37	BN	188	ARG	CZ-NH2	-5.20	1.26	1.33
53	B4	77	THR	N-CA	5.20	1.52	1.46
3	A1	817	C	O3'-P	-5.20	1.53	1.61
3	A1	897	C	O3'-P	-5.20	1.53	1.61
20	AU	4	ARG	CZ-NH2	-5.20	1.26	1.33
51	B2	94	ARG	CZ-NH2	-5.20	1.26	1.33
3	A1	36	C	O3'-P	-5.19	1.53	1.61
3	A1	1427	C	C5'-C4'	5.19	1.59	1.51
37	BN	51	ARG	CZ-NH2	-5.19	1.26	1.33
1	AP	35	A	C6-N6	-5.18	1.23	1.33
3	A1	37	U	O3'-P	-5.18	1.53	1.61
25	BB	2231	U	O3'-P	-5.18	1.53	1.61
25	BB	2221	G	O3'-P	-5.18	1.53	1.61
3	A1	196	A	O3'-P	-5.18	1.53	1.61
25	BB	766	U	O3'-P	-5.17	1.53	1.61
25	BB	2293	G	P-O5'	5.17	1.67	1.59
25	BB	327	G	C4'-C3'	5.17	1.60	1.52
25	BB	1503	A	O3'-P	-5.17	1.53	1.61
25	BB	80	G	P-O5'	-5.17	1.51	1.59
25	BB	1724	G	P-O5'	-5.17	1.52	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A1	54	C	C5'-C4'	5.16	1.58	1.51
3	A1	551	U	O3'-P	5.15	1.68	1.61
15	AO	87	ARG	CZ-NH2	-5.15	1.26	1.33
28	BE	60	ARG	CZ-NH2	-5.15	1.26	1.33
28	BE	92	LEU	CA-C	5.14	1.60	1.52
25	BB	1636	U	O3'-P	-5.14	1.53	1.61
25	BB	1870	C	P-O5'	5.14	1.67	1.59
29	BF	36	VAL	N-CA	5.14	1.50	1.46
25	BB	2350	C	O3'-P	-5.13	1.53	1.61
25	BB	2334	U	O3'-P	-5.13	1.53	1.61
1	AA	36	A	P-O5'	5.13	1.67	1.59
25	BB	2188	U	P-O5'	5.13	1.67	1.59
25	BB	2105	U	C4'-O4'	-5.12	1.37	1.45
25	BB	2208	C	P-O5'	5.12	1.67	1.59
52	B3	14	VAL	N-CA	5.12	1.52	1.46
6	AD	13	ARG	CZ-NH1	-5.11	1.25	1.32
25	BB	838	C	P-O5'	-5.11	1.52	1.59
25	BB	2279	G	P-O5'	5.11	1.67	1.59
3	A1	1138	G	C5'-C4'	5.11	1.58	1.51
3	A1	22	G	P-O5'	-5.10	1.52	1.59
3	A1	1078	U	P-O5'	-5.10	1.52	1.59
49	BZ	49	ARG	N-CA	5.09	1.51	1.47
25	BB	327	G	C5'-C4'	5.09	1.58	1.51
37	BN	132	ARG	CZ-NH2	-5.09	1.26	1.33
17	AR	174	ALA	CA-C	5.08	1.59	1.52
13	AL	54	ARG	CZ-NH2	-5.08	1.26	1.33
25	BB	1601	G	P-O5'	5.08	1.67	1.59
3	A1	817	C	P-O5'	5.08	1.67	1.59
17	AR	168	THR	N-CA	5.07	1.52	1.46
25	BB	1027	A	P-O5'	5.07	1.67	1.59
49	BZ	105	ARG	CZ-NH2	-5.07	1.26	1.33
4	AB	136	ARG	CZ-NH2	-5.07	1.26	1.33
3	A1	181	A	P-O5'	-5.06	1.52	1.59
25	BB	2330	G	C3'-C2'	5.06	1.60	1.52
25	BB	2870	C	O3'-P	-5.06	1.53	1.61
25	BB	2648	G	P-O5'	5.05	1.67	1.59
17	AR	33	ILE	CA-C	5.05	1.59	1.52
3	A1	494	G	O3'-P	-5.05	1.53	1.61
44	BU	39	ASP	CA-C	5.05	1.58	1.52
25	BB	229	C	P-O5'	-5.05	1.52	1.59
25	BB	1490	A	O3'-P	-5.04	1.53	1.61
13	AL	40	PHE	N-CA	5.04	1.50	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A1	1267	C	C4'-O4'	-5.04	1.38	1.45
25	BB	1838	C	O3'-P	-5.04	1.53	1.61
25	BB	2606	C	O3'-P	-5.03	1.53	1.61
43	BT	37	HIS	N-CA	5.03	1.52	1.45
16	AQ	44	ARG	CZ-NH2	-5.03	1.26	1.33
25	BB	1319	C	C5'-C4'	5.03	1.58	1.51
3	A1	480	U	C4'-O4'	-5.03	1.38	1.45
29	BF	22	GLN	CA-C	5.02	1.59	1.52
22	AW	108	ARG	CZ-NH2	-5.02	1.26	1.33
25	BB	1764	C	P-O5'	5.02	1.67	1.59
20	AU	108	ARG	CZ-NH2	-5.01	1.26	1.33
25	BB	1298	C	C5'-C4'	5.01	1.58	1.51
37	BN	85	ASN	CA-C	5.01	1.59	1.52
1	AE	14	A	O3'-P	-5.01	1.53	1.61
3	A1	750	C	O3'-P	-5.01	1.53	1.61
25	BB	1127	A	C4'-O4'	-5.01	1.38	1.45
25	BB	2849	U	C4'-O4'	-5.00	1.38	1.45
25	BB	2424	C	O3'-P	-5.00	1.53	1.61
39	BP	79	ILE	CA-C	5.00	1.58	1.52

All (7934) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AP	74	C	P-O3'-C3'	-63.20	25.40	120.20
1	AP	74	C	O3'-P-O5'	-50.70	27.95	104.00
3	A1	1340	A	P-O3'-C3'	16.53	145.00	120.20
27	BD	108	ARG	NE-CZ-NH2	14.80	132.52	119.20
13	AL	55	GLN	OE1-CD-NE2	-13.56	109.04	122.60
3	A1	268	U	C1'-O4'-C4'	-12.73	97.17	109.90
29	BF	55	ARG	NE-CZ-NH2	12.10	130.09	119.20
1	AA	75	C	C3'-C2'-O2'	11.95	132.52	114.60
25	BB	205	G	O4'-C1'-C2'	-11.92	93.88	105.80
21	AV	20	ASN	CA-CB-CG	11.90	124.50	112.60
44	BU	44	GLN	OE1-CD-NE2	-11.89	110.71	122.60
43	BT	12	ARG	NE-CZ-NH2	11.69	129.72	119.20
3	A1	421	U	O4'-C4'-C3'	11.68	115.68	104.00
25	BB	376	G	C1'-O4'-C4'	-11.64	98.06	109.70
25	BB	1774	C	C1'-O4'-C4'	-11.62	98.08	109.70
3	A1	650	G	C1'-O4'-C4'	-11.50	98.40	109.90
17	AR	80	ARG	CD-NE-CZ	11.47	140.46	124.40
25	BB	1090	A	C2'-C3'-O3'	11.47	126.70	109.50
10	AI	8	ARG	NE-CZ-NH2	11.38	129.44	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	345	C	C4'-C3'-C2'	-11.31	91.28	102.60
25	BB	1471	G	C4'-C3'-C2'	-11.27	91.33	102.60
1	AA	14	A	O3'-P-O5'	-11.24	87.13	104.00
3	A1	1391	U	C2'-C3'-O3'	11.07	126.11	109.50
3	A1	867	G	C2'-C3'-O3'	11.04	126.06	109.50
25	BB	1626	A	O4'-C1'-C2'	-10.99	96.61	107.60
16	AQ	33	ARG	CA-C-N	10.96	141.43	121.70
16	AQ	33	ARG	C-N-CA	10.96	141.43	121.70
3	A1	1125	U	C1'-O4'-C4'	-10.93	98.77	109.70
3	A1	1044	A	O4'-C1'-N9	10.87	124.81	108.50
3	A1	1183	U	C4'-C3'-C2'	-10.87	91.73	102.60
54	B5	90	GLY	CA-C-N	10.84	132.45	122.37
54	B5	90	GLY	C-N-CA	10.84	132.45	122.37
6	AD	53	ARG	NH1-CZ-NH2	-10.81	105.25	119.30
25	BB	1960	A	O3'-P-O5'	10.80	120.21	104.00
1	AA	51	G	C3'-C2'-O2'	10.78	126.86	110.70
47	BX	13	ASN	OD1-CG-ND2	-10.77	111.83	122.60
3	A1	335	C	C4'-C3'-C2'	-10.75	91.85	102.60
7	AF	87	GLY	N-CA-C	10.58	125.17	111.09
42	BS	45	THR	CA-C-N	10.56	131.09	120.31
42	BS	45	THR	C-N-CA	10.56	131.09	120.31
3	A1	198	G	C4'-C3'-C2'	-10.54	92.06	102.60
3	A1	1206	G	C5'-C4'-C3'	-10.53	100.21	116.00
9	AH	13	GLU	N-CA-C	10.53	122.84	111.36
7	AF	106	ARG	NE-CZ-NH1	10.49	131.99	121.50
1	AA	42	G	C2'-C3'-O3'	10.44	129.35	113.70
27	BD	30	ARG	CD-NE-CZ	10.42	138.98	124.40
7	AF	85	TYR	CA-C-N	10.41	140.44	121.70
7	AF	85	TYR	C-N-CA	10.41	140.44	121.70
3	A1	363	A	O4'-C4'-C3'	10.40	114.40	104.00
1	AA	1	G	C5'-C4'-O4'	10.27	125.20	109.80
3	A1	1489	G	C4'-C3'-C2'	-10.27	92.33	102.60
25	BB	1175	A	C4'-C3'-C2'	-10.22	92.38	102.60
17	AR	80	ARG	NE-CZ-NH2	10.21	128.39	119.20
25	BB	1090	A	C4'-C3'-O3'	-10.21	94.09	109.40
34	BK	6	GLN	OE1-CD-NE2	-10.21	112.39	122.60
25	BB	1687	G	C5'-C4'-C3'	10.19	131.29	116.00
3	A1	182	A	O4'-C1'-C2'	-10.12	95.68	105.80
25	BB	2282	G	C2'-C3'-O3'	10.11	124.67	109.50
25	BB	2329	U	O3'-P-O5'	10.06	119.10	104.00
24	BA	54	G	O4'-C4'-C3'	10.05	114.05	104.00
25	BB	1927	A	O4'-C4'-C3'	10.03	114.03	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1409	C	C3'-C2'-C1'	10.01	111.31	101.30
25	BB	1206	G	C2'-C3'-O3'	10.00	124.50	109.50
22	AW	122	ARG	NE-CZ-NH2	9.99	128.19	119.20
1	AA	1	G	C4'-C3'-C2'	-9.98	92.62	102.60
3	A1	1497	G	C2'-C3'-O3'	9.97	128.66	113.70
25	BB	1934	C	C2'-C3'-O3'	9.94	124.41	109.50
2	AM	4	U	O5'-C5'-C4'	9.92	126.38	111.50
37	BN	47	ARG	NE-CZ-NH2	9.89	128.10	119.20
3	A1	316	C	O5'-C5'-C4'	9.86	126.48	111.70
25	BB	1917	U	O4'-C4'-C3'	-9.85	96.25	106.10
25	BB	1825	U	C1'-O4'-C4'	-9.84	100.06	109.90
3	A1	115	G	C1'-O4'-C4'	-9.83	99.87	109.70
3	A1	923	A	C5'-C4'-C3'	-9.83	100.45	115.20
25	BB	909	A	O3'-P-O5'	9.81	118.72	104.00
1	AA	42	G	C4'-C3'-C2'	-9.79	92.81	102.60
33	BJ	80	ASN	CA-CB-CG	9.79	122.39	112.60
29	BF	55	ARG	NH1-CZ-NH2	-9.78	106.59	119.30
1	AP	29	A	O4'-C4'-C3'	9.77	113.77	104.00
38	BO	65	GLN	OE1-CD-NE2	-9.77	112.83	122.60
3	A1	87	C	C3'-C2'-O2'	9.77	125.35	110.70
25	BB	2577	A	C4'-C3'-C2'	-9.76	92.84	102.60
3	A1	1306	A	C4'-C3'-C2'	-9.75	92.85	102.60
3	A1	1340	A	C2'-C3'-O3'	9.75	133.29	113.80
25	BB	898	C	C3'-C2'-O2'	9.74	125.30	110.70
25	BB	121	G	C3'-C2'-C1'	9.73	111.23	101.50
3	A1	833	G	C4'-C3'-C2'	-9.73	92.87	102.60
25	BB	488	G	O4'-C4'-C3'	9.71	113.71	104.00
29	BF	50	ARG	NE-CZ-NH2	9.69	127.92	119.20
25	BB	34	U	C1'-O4'-C4'	-9.69	100.21	109.90
3	A1	6	G	O3'-P-O5'	-9.65	89.53	104.00
25	BB	1462	C	C1'-O4'-C4'	-9.63	100.06	109.70
3	A1	160	A	C3'-C2'-O2'	9.63	125.15	110.70
25	BB	990	A	O3'-P-O5'	9.63	118.44	104.00
25	BB	1074	G	C1'-O4'-C4'	-9.62	100.28	109.90
25	BB	1523	U	C4'-C3'-C2'	-9.61	92.99	102.60
49	BZ	25	ASN	CA-CB-CG	9.61	122.21	112.60
25	BB	2498	C	O3'-P-O5'	-9.59	89.62	104.00
1	AP	40	C	C3'-C2'-O2'	9.58	125.08	110.70
3	A1	654	G	O4'-C1'-C2'	-9.56	98.04	107.60
25	BB	2049	G	O3'-P-O5'	9.55	118.33	104.00
25	BB	2266	A	O4'-C1'-C2'	-9.54	98.06	107.60
25	BB	2720	U	O4'-C1'-N1	9.55	122.52	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	158	U	C4'-C3'-C2'	-9.54	93.06	102.60
15	AO	142	ARG	NE-CZ-NH1	9.53	131.03	121.50
24	BA	42	C	C1'-O4'-C4'	-9.53	100.37	109.90
3	A1	70	U	O4'-C1'-N1	9.52	122.48	108.20
3	A1	530	G	O4'-C4'-C3'	9.50	113.50	104.00
54	B5	30	GLN	OE1-CD-NE2	-9.50	113.10	122.60
9	AH	52	ARG	NE-CZ-NH2	9.48	127.73	119.20
1	AA	58	A	C3'-C2'-O2'	9.48	128.82	114.60
28	BE	45	GLY	O-C-N	-9.48	114.35	123.35
3	A1	957	U	C1'-O4'-C4'	-9.46	100.44	109.90
47	BX	4	ARG	NE-CZ-NH2	9.45	127.71	119.20
1	AP	22	G	O4'-C1'-C2'	-9.44	98.16	107.60
3	A1	715	A	O4'-C1'-C2'	-9.44	96.36	105.80
3	A1	519	C	O3'-P-O5'	9.43	118.14	104.00
3	A1	1197	A	C2'-C3'-O3'	9.40	127.81	113.70
3	A1	914	A	C1'-O4'-C4'	-9.39	100.31	109.70
25	BB	304	U	C3'-C2'-C1'	9.39	110.69	101.30
3	A1	372	C	C3'-C2'-C1'	-9.38	92.12	101.50
44	BU	2	LYS	CA-C-N	9.38	130.78	122.43
44	BU	2	LYS	C-N-CA	9.38	130.78	122.43
11	AJ	33	TYR	N-CA-C	9.38	121.19	110.97
25	BB	345	A	O5'-C5'-C4'	-9.36	97.45	111.50
25	BB	772	C	O4'-C4'-C3'	9.36	113.36	104.00
25	BB	1572	A	C4'-C3'-C2'	-9.36	93.24	102.60
3	A1	1494	G	C5'-C4'-O4'	9.36	123.83	109.80
25	BB	1913	A	C2'-C3'-O3'	9.35	123.53	109.50
25	BB	2508	G	C2'-C3'-O3'	9.35	123.52	109.50
3	A1	1494	G	C5'-C4'-C3'	-9.34	101.99	116.00
4	AB	103	TRP	CA-C-N	9.33	134.00	120.38
4	AB	103	TRP	C-N-CA	9.33	134.00	120.38
25	BB	1207	C	C4'-C3'-C2'	-9.32	93.28	102.60
27	BD	108	ARG	NH1-CZ-NH2	-9.32	107.18	119.30
3	A1	1241	G	O3'-P-O5'	9.31	117.97	104.00
16	AQ	34	ARG	NE-CZ-NH2	9.31	127.58	119.20
3	A1	518	C	C3'-C2'-C1'	-9.29	92.21	101.50
25	BB	2637	U	C3'-C2'-C1'	9.29	110.59	101.30
3	A1	100	G	C1'-O4'-C4'	-9.28	100.62	109.90
52	B3	10	VAL	N-CA-C	9.28	119.17	108.96
25	BB	2253	G	O4'-C4'-C3'	9.28	113.28	104.00
1	AE	16	U	C2'-C3'-O3'	9.27	123.41	109.50
25	BB	476	G	C2'-C3'-O3'	9.27	123.41	109.50
50	B1	192	ALA	N-CA-C	9.26	123.99	112.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	BP	11	ASN	CA-CB-CG	9.25	121.85	112.60
25	BB	2110	G	O3'-P-O5'	-9.24	90.14	104.00
25	BB	1361	G	O3'-P-O5'	-9.23	90.15	104.00
2	AM	14	U	C4'-C3'-O3'	9.23	123.25	109.40
3	A1	1051	C	C4'-C3'-C2'	-9.23	93.37	102.60
25	BB	1244	A	C4'-C3'-C2'	-9.23	93.37	102.60
3	A1	166	U	C5'-C4'-C3'	-9.21	102.18	116.00
52	B3	151	ARG	NE-CZ-NH2	9.21	127.48	119.20
25	BB	768	G	C1'-O4'-C4'	-9.20	100.70	109.90
25	BB	2483	C	O4'-C1'-C2'	-9.20	98.41	107.60
25	BB	1929	G	C3'-C2'-C1'	9.19	110.49	101.30
25	BB	1673	G	C4'-C3'-C2'	-9.19	93.41	102.60
3	A1	1443	C	C4'-C3'-C2'	-9.18	93.42	102.60
3	A1	693	G	O4'-C4'-C3'	9.18	113.17	104.00
3	A1	1498	U	C3'-C2'-C1'	9.17	110.47	101.30
25	BB	1145	C	O4'-C4'-C3'	9.17	113.17	104.00
25	BB	2345	G	C2'-C3'-O3'	9.17	123.26	109.50
25	BB	1680	U	P-O5'-C5'	9.17	134.66	120.90
3	A1	100	G	C4'-C3'-C2'	-9.17	93.43	102.60
3	A1	881	G	C3'-C2'-O2'	9.17	124.45	110.70
24	BA	73	A	C5'-C4'-C3'	-9.16	102.26	116.00
19	AT	46	GLN	OE1-CD-NE2	-9.16	113.44	122.60
4	AB	202	ASN	CA-CB-CG	9.15	121.75	112.60
25	BB	274	C	C4'-C3'-C2'	-9.15	93.45	102.60
25	BB	413	C	C3'-C2'-C1'	9.15	110.45	101.30
3	A1	1489	G	C3'-C2'-C1'	9.14	110.44	101.30
25	BB	1004	U	O3'-P-O5'	-9.14	90.28	104.00
25	BB	2092	U	C5'-C4'-C3'	-9.13	102.31	116.00
3	A1	51	A	C4'-C3'-C2'	-9.12	93.47	102.60
3	A1	625	U	C4'-C3'-C2'	-9.12	93.47	102.60
25	BB	1803	A	O4'-C4'-C3'	9.13	113.13	104.00
25	BB	2885	G	C4'-C3'-C2'	-9.12	93.47	102.60
25	BB	2461	A	O4'-C4'-C3'	9.11	113.11	104.00
3	A1	1295	U	O4'-C4'-C3'	9.11	113.11	104.00
25	BB	2529	G	O3'-P-O5'	9.11	117.66	104.00
3	A1	1409	C	O4'-C1'-C2'	-9.10	98.50	107.60
1	AA	55	U	C1'-O4'-C4'	-9.09	100.81	109.90
25	BB	1318	U	C5'-C4'-C3'	-9.09	102.37	116.00
7	AF	2	ARG	NE-CZ-NH1	9.09	130.59	121.50
25	BB	1660	G	O4'-C1'-N9	9.08	121.82	108.20
25	BB	400	G	C4'-C3'-C2'	-9.08	93.52	102.60
27	BD	31	ARG	NE-CZ-NH1	9.07	130.57	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1068	G	O3'-P-O5'	9.07	117.60	104.00
25	BB	617	G	C3'-C2'-O2'	9.06	124.29	110.70
13	AL	5	LYS	N-CA-C	9.06	122.13	111.71
1	AA	42	G	O5'-C5'-C4'	-9.06	97.91	111.50
8	AG	80	ARG	NH1-CZ-NH2	-9.05	107.53	119.30
16	AQ	33	ARG	CD-NE-CZ	9.05	137.07	124.40
25	BB	2633	G	O4'-C4'-C3'	9.05	113.05	104.00
3	A1	353	A	O4'-C1'-N9	9.03	122.04	108.50
25	BB	2063	C	C4'-C3'-C2'	-9.02	93.58	102.60
25	BB	323	C	O4'-C1'-C2'	-9.01	96.79	105.80
4	AB	108	GLN	OE1-CD-NE2	-9.01	113.59	122.60
6	AD	53	ARG	NE-CZ-NH1	9.00	130.50	121.50
33	BJ	49	ARG	NE-CZ-NH2	9.00	127.30	119.20
3	A1	1340	A	C3'-C2'-O2'	8.99	127.79	109.80
3	A1	122	G	O4'-C4'-C3'	8.99	112.99	104.00
3	A1	1169	A	C5'-C4'-C3'	-8.98	102.52	116.00
36	BM	92	ASN	OD1-CG-ND2	-8.98	113.62	122.60
25	BB	1617	C	C2'-C3'-O3'	8.98	122.97	109.50
27	BD	29	HIS	CA-C-N	8.98	138.69	121.54
27	BD	29	HIS	C-N-CA	8.98	138.69	121.54
25	BB	2518	A	O3'-P-O5'	8.98	117.47	104.00
25	BB	99	U	O3'-P-O5'	-8.97	90.54	104.00
37	BN	268	ARG	NE-CZ-NH1	8.97	130.47	121.50
48	BY	127	PHE	CA-CB-CG	8.95	122.75	113.80
25	BB	1703	G	C2'-C3'-O3'	8.95	122.92	109.50
13	AL	42	ASN	OD1-CG-ND2	-8.95	113.65	122.60
25	BB	2654	A	O4'-C4'-C3'	8.95	112.95	104.00
25	BB	2646	C	C1'-O4'-C4'	-8.95	100.75	109.70
1	AE	37	G	C4'-C3'-C2'	-8.94	93.66	102.60
25	BB	1196	C	C5'-C4'-C3'	-8.94	102.59	116.00
3	A1	421	U	C3'-C2'-C1'	8.93	110.23	101.30
27	BD	70	ARG	CA-C-N	8.93	132.81	120.39
27	BD	70	ARG	C-N-CA	8.93	132.81	120.39
37	BN	207	ALA	CA-C-N	8.93	130.12	122.17
37	BN	207	ALA	C-N-CA	8.93	130.12	122.17
24	BA	96	G	C5'-C4'-C3'	-8.93	102.61	116.00
25	BB	2668	G	C1'-O4'-C4'	-8.93	100.97	109.90
25	BB	1614	A	C2'-C3'-O3'	8.92	122.89	109.50
10	AI	79	ASN	OD1-CG-ND2	-8.92	113.68	122.60
25	BB	1474	U	O4'-C4'-C3'	8.91	115.01	106.10
25	BB	2248	C	O3'-P-O5'	-8.91	90.63	104.00
25	BB	845	A	C4'-C3'-C2'	-8.91	93.69	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	517	G	C2'-C3'-O3'	8.91	122.86	109.50
3	A1	1031	C	C1'-O4'-C4'	-8.91	100.79	109.70
1	AA	3	G	O4'-C1'-C2'	-8.90	98.69	107.60
25	BB	131	A	C5'-C4'-O4'	8.90	123.16	109.80
23	AX	43	PRO	CA-C-N	8.90	135.41	121.26
23	AX	43	PRO	C-N-CA	8.90	135.41	121.26
55	B6	116	ARG	NE-CZ-NH2	8.89	127.20	119.20
3	A1	65	A	C4'-C3'-O3'	8.89	122.73	109.40
25	BB	1731	G	C2'-C3'-O3'	8.89	122.83	109.50
15	AO	139	ASN	CA-CB-CG	8.88	121.48	112.60
48	BY	169	ARG	NE-CZ-NH1	8.88	130.38	121.50
25	BB	2486	C	C1'-O4'-C4'	-8.87	101.03	109.90
27	BD	65	THR	CA-C-N	8.86	132.86	120.29
27	BD	65	THR	C-N-CA	8.86	132.86	120.29
3	A1	987	G	O3'-P-O5'	8.84	117.26	104.00
3	A1	344	A	C4'-C3'-C2'	-8.84	93.76	102.60
3	A1	76	G	C4'-C3'-C2'	-8.84	93.76	102.60
3	A1	833	G	O4'-C4'-C3'	8.84	112.83	104.00
3	A1	1489	G	O4'-C4'-C3'	8.82	112.82	104.00
3	A1	523	A	O4'-C4'-C3'	8.82	112.82	104.00
25	BB	2631	G	O4'-C4'-C3'	8.82	112.82	104.00
40	BQ	46	VAL	N-CA-C	8.82	118.58	111.62
25	BB	2594	C	O4'-C1'-C2'	-8.81	96.99	105.80
1	AA	46	G	O5'-C5'-C4'	8.81	124.91	111.70
22	AW	11	ARG	NE-CZ-NH2	8.80	127.12	119.20
25	BB	1316	U	O5'-C5'-C4'	8.80	124.69	111.50
45	BV	12	ARG	NE-CZ-NH2	8.79	127.11	119.20
3	A1	627	G	C4'-C3'-C2'	-8.79	93.81	102.60
25	BB	127	A	C3'-C2'-C1'	8.79	110.29	101.50
14	AN	2	ASN	OD1-CG-ND2	-8.78	113.83	122.60
25	BB	1413	A	C3'-C2'-C1'	-8.77	92.53	101.30
1	AP	47	U	C2'-C3'-O3'	8.76	122.65	109.50
3	A1	88	U	C2'-C3'-O3'	8.76	122.64	109.50
25	BB	642	U	C4'-C3'-C2'	-8.76	93.84	102.60
25	BB	2821	A	O3'-P-O5'	8.76	117.14	104.00
25	BB	1925	C	C4'-C3'-C2'	-8.75	93.85	102.60
3	A1	1056	U	C2'-C3'-O3'	8.75	126.82	113.70
15	AO	95	GLY	CA-C-N	8.74	134.01	121.68
15	AO	95	GLY	C-N-CA	8.74	134.01	121.68
25	BB	1084	A	C1'-O4'-C4'	-8.74	101.16	109.90
25	BB	484	C	C1'-O4'-C4'	-8.74	101.16	109.90
3	A1	427	U	C4'-C3'-O3'	8.74	122.50	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	539	G	C2'-C3'-O3'	8.74	122.60	109.50
30	BG	84	GLY	CA-C-N	8.73	128.38	119.82
30	BG	84	GLY	C-N-CA	8.73	128.38	119.82
39	BP	79	ILE	N-CA-C	8.73	121.09	109.21
25	BB	2831	G	O4'-C4'-C3'	8.73	112.73	104.00
1	AA	16	U	C2'-C3'-O3'	-8.72	100.61	113.70
25	BB	2863	C	O4'-C4'-C3'	8.72	112.72	104.00
25	BB	386	G	C4'-C3'-C2'	-8.71	93.89	102.60
39	BP	54	ARG	CD-NE-CZ	8.71	136.60	124.40
37	BN	137	GLY	CA-C-N	8.70	132.65	120.29
37	BN	137	GLY	C-N-CA	8.70	132.65	120.29
3	A1	959	A	C3'-C2'-C1'	8.70	110.00	101.30
23	AX	50	THR	CA-C-N	8.70	133.98	123.19
23	AX	50	THR	C-N-CA	8.70	133.98	123.19
7	AF	29	SER	CA-C-N	8.70	132.13	120.65
7	AF	29	SER	C-N-CA	8.70	132.13	120.65
25	BB	2278	A	C3'-C2'-O2'	8.69	123.74	110.70
1	AE	34	G	O4'-C4'-C3'	8.69	112.69	104.00
25	BB	2076	U	O4'-C1'-C2'	-8.69	97.11	105.80
9	AH	79	ARG	NE-CZ-NH2	8.68	127.02	119.20
11	AJ	49	ASN	OD1-CG-ND2	-8.68	113.92	122.60
27	BD	112	PHE	CA-CB-CG	8.67	122.47	113.80
25	BB	1505	A	O3'-P-O5'	8.67	117.00	104.00
25	BB	701	G	C1'-C2'-O2'	-8.66	98.80	111.80
54	B5	64	ARG	NE-CZ-NH2	8.66	127.00	119.20
1	AA	25	C	O4'-C4'-C3'	8.66	112.66	104.00
3	A1	120	A	C1'-O4'-C4'	-8.66	101.04	109.70
9	AH	16	ARG	NE-CZ-NH2	8.65	126.98	119.20
48	BY	118	PHE	CA-CB-CG	8.64	122.44	113.80
25	BB	963	U	C5'-C4'-C3'	-8.63	103.05	116.00
1	AP	36	A	C4'-C3'-C2'	-8.63	93.97	102.60
3	A1	73	C	C3'-C2'-O2'	8.63	123.65	110.70
27	BD	3	GLN	OE1-CD-NE2	-8.62	113.98	122.60
38	BO	30	SER	CA-C-N	8.62	128.29	120.10
38	BO	30	SER	C-N-CA	8.62	128.29	120.10
3	A1	1529	G	O4'-C1'-C2'	-8.62	98.98	107.60
3	A1	255	G	O4'-C4'-C3'	8.61	112.61	104.00
3	A1	1339	A	O3'-P-O5'	8.61	116.92	104.00
1	AA	1	G	O4'-C4'-C3'	8.61	112.61	104.00
3	A1	755	G	C2'-C3'-O3'	8.61	126.61	113.70
32	BI	20	ARG	NE-CZ-NH1	-8.60	112.90	121.50
3	A1	412	A	C3'-C2'-C1'	-8.60	92.91	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1196	A	C1'-O4'-C4'	-8.59	101.31	109.90
25	BB	2529	G	O4'-C4'-C3'	8.59	112.59	104.00
17	AR	53	GLN	OE1-CD-NE2	-8.59	114.01	122.60
3	A1	328	C	C1'-O4'-C4'	-8.59	101.11	109.70
25	BB	2301	C	C5'-C4'-C3'	-8.59	103.12	116.00
3	A1	1532	U	C5'-C4'-C3'	-8.58	103.13	116.00
1	AA	70	C	O4'-C1'-N1	8.58	121.37	108.50
8	AG	74	ARG	NE-CZ-NH2	8.58	126.92	119.20
52	B3	87	GLN	OE1-CD-NE2	-8.57	114.03	122.60
25	BB	2637	U	O4'-C1'-C2'	-8.57	99.03	107.60
25	BB	2756	U	C2'-C3'-O3'	8.56	122.35	109.50
25	BB	2478	A	C3'-C2'-O2'	8.56	123.54	110.70
55	B6	131	ASN	OD1-CG-ND2	-8.56	114.04	122.60
2	AM	13	U	O5'-C5'-C4'	8.56	124.33	111.50
3	A1	357	G	C1'-C2'-O2'	-8.56	98.97	111.80
3	A1	118	U	O4'-C1'-C2'	-8.55	99.05	107.60
10	AI	28	ARG	NE-CZ-NH1	8.55	130.05	121.50
25	BB	1361	G	C5'-C4'-C3'	-8.55	103.18	116.00
25	BB	2328	A	O3'-P-O5'	-8.55	91.18	104.00
25	BB	1062	G	C3'-C2'-C1'	8.54	109.84	101.30
3	A1	850	U	C3'-C2'-O2'	8.54	123.51	110.70
3	A1	423	G	O4'-C1'-N9	8.54	121.30	108.50
3	A1	514	C	C3'-C2'-C1'	8.53	109.83	101.30
3	A1	1306	A	O4'-C4'-C3'	8.53	112.53	104.00
3	A1	477	C	C4'-C3'-C2'	-8.52	94.08	102.60
25	BB	1756	G	C5'-C4'-C3'	-8.52	103.22	116.00
25	BB	1852	U	N1-C1'-C2'	8.52	126.78	114.00
25	BB	425	G	O4'-C1'-C2'	-8.52	97.28	105.80
27	BD	13	ASN	CA-CB-CG	8.52	121.11	112.60
4	AB	224	ARG	NE-CZ-NH2	8.51	126.86	119.20
25	BB	1589	U	C4'-C3'-C2'	-8.51	94.09	102.60
25	BB	2669	G	C5'-C4'-C3'	-8.51	103.24	116.00
11	AJ	8	GLN	OE1-CD-NE2	-8.50	114.10	122.60
24	BA	114	C	O4'-C4'-C3'	8.50	112.50	104.00
18	AS	91	SER	CA-C-N	8.50	137.00	121.70
18	AS	91	SER	C-N-CA	8.50	137.00	121.70
25	BB	819	A	O4'-C1'-N9	8.49	121.24	108.50
1	AA	29	A	O4'-C4'-C3'	8.48	112.48	104.00
3	A1	618	C	C3'-C2'-O2'	8.48	123.41	110.70
3	A1	954	G	O4'-C1'-C2'	-8.47	99.13	107.60
3	A1	405	U	O3'-P-O5'	8.47	116.70	104.00
9	AH	19	ASN	OD1-CG-ND2	-8.47	114.13	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	346	A	C1'-O4'-C4'	-8.47	101.43	109.90
25	BB	1680	U	O4'-C1'-C2'	-8.46	97.33	105.80
25	BB	2537	U	O5'-C5'-C4'	8.46	124.40	111.70
25	BB	1141	U	O3'-P-O5'	8.46	116.69	104.00
25	BB	2811	G	C5'-C4'-C3'	-8.46	103.31	116.00
25	BB	1752	C	C4'-C3'-C2'	-8.46	94.14	102.60
25	BB	702	U	C1'-O4'-C4'	-8.46	101.44	109.90
25	BB	1003	G	O4'-C4'-C3'	8.46	112.46	104.00
25	BB	80	G	C3'-C2'-C1'	8.45	109.75	101.30
25	BB	1474	U	C3'-C2'-C1'	8.44	109.94	101.50
25	BB	1854	A	C2'-C3'-O3'	8.44	126.36	113.70
3	A1	1340	A	C4'-C3'-C2'	-8.44	85.43	102.30
25	BB	1538	G	O4'-C4'-C3'	8.44	112.44	104.00
25	BB	2268	A	C5'-C4'-C3'	-8.43	103.35	116.00
3	A1	159	G	C1'-O4'-C4'	-8.43	101.47	109.90
25	BB	1096	A	C4'-C3'-C2'	-8.43	94.17	102.60
25	BB	1715	G	C4'-C3'-C2'	-8.43	94.17	102.60
36	BM	3	ARG	NE-CZ-NH1	8.42	129.92	121.50
37	BN	32	LEU	CA-C-N	8.42	133.20	120.82
37	BN	32	LEU	C-N-CA	8.42	133.20	120.82
48	BY	71	ALA	CA-C-N	8.42	136.86	121.70
48	BY	71	ALA	C-N-CA	8.42	136.86	121.70
1	AE	39	U	C3'-C2'-C1'	-8.42	92.88	101.30
25	BB	2538	C	O4'-C1'-C2'	-8.42	97.38	105.80
19	AT	79	ARG	N-CA-C	8.41	120.07	111.07
25	BB	1847	A	C5'-C4'-C3'	-8.41	103.39	116.00
25	BB	2706	A	O4'-C4'-C3'	8.41	112.41	104.00
25	BB	2771	C	O3'-P-O5'	8.41	116.61	104.00
1	AP	48	C	C5'-C4'-C3'	-8.40	102.59	115.20
25	BB	484	C	O4'-C4'-C3'	8.40	112.40	104.00
25	BB	2556	C	C4'-C3'-C2'	-8.40	94.20	102.60
3	A1	60	A	O4'-C1'-C2'	-8.40	97.40	105.80
25	BB	53	A	O4'-C4'-C3'	8.40	112.40	104.00
25	BB	1228	G	O3'-P-O5'	-8.40	91.40	104.00
1	AA	74	C	C4'-C3'-C2'	-8.40	94.20	102.60
25	BB	2191	A	C3'-C2'-O2'	8.39	123.28	110.70
25	BB	2548	U	O4'-C4'-C3'	8.38	112.38	104.00
3	A1	156	C	C5'-C4'-O4'	8.38	122.37	109.80
37	BN	229	HIS	CA-C-N	8.38	130.31	119.84
37	BN	229	HIS	C-N-CA	8.38	130.31	119.84
25	BB	1270	C	C1'-O4'-C4'	-8.38	101.33	109.70
50	B1	97	ASN	CA-C-N	8.37	131.84	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	B1	97	ASN	C-N-CA	8.37	131.84	120.54
3	A1	1025	U	O4'-C4'-C3'	8.36	114.46	106.10
25	BB	17	G	C5'-C4'-C3'	-8.36	103.46	116.00
25	BB	1203	U	C4'-C3'-O3'	8.36	121.93	109.40
25	BB	1111	A	C1'-O4'-C4'	-8.35	101.35	109.70
55	B6	31	GLU	OE1-CD-OE2	-8.35	102.86	122.90
25	BB	557	C	C3'-C2'-C1'	8.35	109.65	101.30
25	BB	1854	A	C4'-C3'-C2'	-8.35	94.25	102.60
25	BB	2215	C	C3'-C2'-O2'	8.34	123.22	110.70
3	A1	1276	G	O5'-C5'-C4'	8.34	124.01	111.50
25	BB	2642	G	O4'-C4'-C3'	8.34	112.34	104.00
9	AH	52	ARG	NH1-CZ-NH2	-8.34	108.46	119.30
25	BB	557	C	C4'-C3'-C2'	-8.34	94.26	102.60
5	AC	118	ASN	OD1-CG-ND2	-8.33	114.27	122.60
25	BB	2096	C	O3'-P-O5'	8.33	116.50	104.00
3	A1	1168	U	P-O3'-C3'	8.33	132.69	120.20
55	B6	38	GLY	CA-C-N	8.33	137.44	121.54
55	B6	38	GLY	C-N-CA	8.33	137.44	121.54
3	A1	418	C	O4'-C4'-C3'	8.32	112.32	104.00
25	BB	2731	G	C2'-C3'-O3'	8.31	126.17	113.70
25	BB	2896	C	C4'-C3'-C2'	-8.31	94.29	102.60
30	BG	70	THR	CA-C-N	8.31	132.24	120.28
30	BG	70	THR	C-N-CA	8.31	132.24	120.28
31	BH	30	ARG	NH1-CZ-NH2	-8.31	108.50	119.30
37	BN	62	ARG	NE-CZ-NH2	8.30	126.67	119.20
3	A1	509	A	C1'-O4'-C4'	-8.30	101.60	109.90
28	BE	132	ARG	NE-CZ-NH2	8.30	126.67	119.20
25	BB	2078	C	O4'-C4'-C3'	8.30	112.30	104.00
25	BB	2439	A	C3'-C2'-C1'	8.30	109.80	101.50
17	AR	21	LYS	CA-C-N	8.29	132.07	120.29
17	AR	21	LYS	C-N-CA	8.29	132.07	120.29
25	BB	510	C	O4'-C4'-C3'	8.29	112.29	104.00
25	BB	2158	A	O4'-C1'-N9	8.29	120.94	108.50
53	B4	66	ASN	CA-CB-CG	8.29	120.89	112.60
25	BB	365	U	C5'-C4'-C3'	-8.29	103.56	116.00
25	BB	287	G	C4'-C3'-C2'	-8.29	94.31	102.60
25	BB	1773	A	C5'-C4'-C3'	-8.29	103.56	116.00
3	A1	236	A	O4'-C4'-C3'	8.29	112.29	104.00
3	A1	886	G	C5'-C4'-C3'	-8.28	103.58	116.00
25	BB	1473	G	C2'-C3'-O3'	8.28	121.92	109.50
25	BB	666	A	O4'-C4'-C3'	8.28	112.28	104.00
25	BB	1949	G	C5'-C4'-C3'	-8.28	103.59	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2870	C	C2'-C3'-O3'	8.28	126.11	113.70
30	BG	117	ASP	CA-CB-CG	8.28	120.88	112.60
36	BM	76	ARG	CD-NE-CZ	8.27	135.98	124.40
37	BN	134	ILE	N-CA-C	8.27	118.37	108.45
3	A1	970	C	C1'-O4'-C4'	-8.27	101.63	109.90
25	BB	1608	A	C2'-C3'-O3'	8.27	121.90	109.50
3	A1	604	G	C5'-C4'-C3'	-8.26	103.61	116.00
25	BB	2171	A	C1'-O4'-C4'	-8.26	101.44	109.70
25	BB	2704	C	C3'-C2'-C1'	8.26	109.56	101.30
32	BI	20	ARG	NE-CZ-NH2	8.25	126.63	119.20
25	BB	1800	C	C4'-C3'-C2'	-8.25	94.35	102.60
25	BB	430	A	O4'-C4'-C3'	8.24	112.24	104.00
1	AA	22	G	C3'-C2'-O2'	8.24	123.06	110.70
25	BB	921	C	C3'-C2'-C1'	8.23	109.53	101.30
25	BB	132	G	C5'-C4'-C3'	-8.23	103.65	116.00
25	BB	1694	C	C3'-C2'-C1'	-8.23	93.27	101.50
25	BB	2666	C	O4'-C4'-C3'	8.23	112.23	104.00
25	BB	1730	C	O4'-C1'-N1	8.23	120.84	108.50
24	BA	64	G	C5'-C4'-C3'	-8.22	103.66	116.00
1	AE	34	G	C3'-C2'-C1'	8.22	109.52	101.30
25	BB	918	A	O4'-C1'-C2'	-8.22	99.38	107.60
25	BB	1538	G	C4'-C3'-C2'	-8.22	94.38	102.60
25	BB	1800	C	C1'-O4'-C4'	-8.22	101.68	109.90
3	A1	788	U	C4'-C3'-C2'	-8.21	94.39	102.60
25	BB	2193	G	C5'-C4'-C3'	-8.21	103.68	116.00
34	BK	73	LYS	CA-C-N	8.20	132.75	120.77
34	BK	73	LYS	C-N-CA	8.20	132.75	120.77
25	BB	1159	U	C4'-C3'-C2'	-8.20	94.40	102.60
25	BB	2175	C	C4'-C3'-O3'	-8.20	100.70	113.00
54	B5	20	SER	CA-C-N	8.20	128.83	120.38
54	B5	20	SER	C-N-CA	8.20	128.83	120.38
25	BB	190	A	O4'-C4'-C3'	-8.20	95.80	104.00
6	AD	109	ARG	NE-CZ-NH2	8.20	126.58	119.20
3	A1	23	C	C4'-C3'-C2'	-8.19	94.41	102.60
3	A1	522	C	C3'-C2'-O2'	8.19	122.99	110.70
3	A1	45	G	O4'-C4'-C3'	8.19	112.19	104.00
18	AS	42	ASN	OD1-CG-ND2	-8.19	114.41	122.60
3	A1	1390	U	C1'-O4'-C4'	-8.19	101.71	109.90
18	AS	110	MET	CA-C-N	8.19	131.59	120.38
18	AS	110	MET	C-N-CA	8.19	131.59	120.38
37	BN	13	ARG	CD-NE-CZ	8.19	135.86	124.40
3	A1	1059	C	C5'-C4'-C3'	-8.18	103.72	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	936	A	O4'-C4'-C3'	8.18	112.18	104.00
24	BA	70	C	O4'-C4'-C3'	8.18	112.18	104.00
25	BB	1048	A	C3'-C2'-O2'	8.17	122.96	110.70
25	BB	236	C	C5'-C4'-C3'	-8.17	103.75	116.00
25	BB	2067	G	O4'-C1'-N9	8.16	120.45	108.20
25	BB	1366	A	C4'-C3'-C2'	-8.16	94.44	102.60
38	BO	5	ARG	CA-C-N	8.16	137.13	121.54
38	BO	5	ARG	C-N-CA	8.16	137.13	121.54
25	BB	637	A	C1'-O4'-C4'	-8.16	101.54	109.70
3	A1	134	G	O4'-C4'-C3'	8.15	112.15	104.00
25	BB	2222	C	O3'-P-O5'	-8.15	91.77	104.00
25	BB	2813	A	O4'-C4'-C3'	8.15	112.15	104.00
25	BB	1545	A	C4'-C3'-C2'	-8.14	94.46	102.60
25	BB	861	A	C2'-C3'-O3'	8.14	125.91	113.70
25	BB	2264	C	O4'-C4'-C3'	-8.14	95.86	104.00
3	A1	47	C	C2'-C3'-O3'	8.13	121.70	109.50
51	B2	176	PHE	CA-C-N	8.13	137.07	121.54
51	B2	176	PHE	C-N-CA	8.13	137.07	121.54
25	BB	1699	G	O4'-C4'-C3'	8.13	112.13	104.00
25	BB	703	U	C4'-C3'-C2'	-8.12	94.48	102.60
25	BB	1582	C	C2'-C3'-O3'	-8.12	101.52	113.70
25	BB	2120	G	C4'-C3'-C2'	-8.12	94.48	102.60
3	A1	1062	U	C4'-C3'-C2'	-8.11	94.49	102.60
54	B5	63	ASP	CA-CB-CG	-8.11	104.49	112.60
51	B2	157	THR	CA-C-N	8.11	132.21	120.38
51	B2	157	THR	C-N-CA	8.11	132.21	120.38
25	BB	2562	U	O4'-C1'-C2'	-8.10	97.70	105.80
25	BB	2469	A	O3'-P-O5'	8.10	116.15	104.00
25	BB	2655	G	C1'-C2'-O2'	8.09	123.93	111.80
13	AL	52	ASN	CA-CB-CG	8.08	120.68	112.60
25	BB	767	U	C1'-O4'-C4'	-8.08	101.82	109.90
33	BJ	91	ARG	CA-C-N	8.08	131.10	120.28
33	BJ	91	ARG	C-N-CA	8.08	131.10	120.28
28	BE	132	ARG	CD-NE-CZ	8.08	135.71	124.40
43	BT	15	ARG	NE-CZ-NH1	8.07	129.57	121.50
3	A1	40	C	C5'-C4'-C3'	-8.07	103.89	116.00
25	BB	2229	U	O4'-C1'-C2'	-8.07	99.53	107.60
25	BB	1258	U	C4'-C3'-C2'	-8.07	94.53	102.60
25	BB	2595	G	C5'-C4'-C3'	-8.06	103.91	116.00
3	A1	580	C	O4'-C1'-C2'	-8.06	99.54	107.60
23	AX	5	ARG	NE-CZ-NH1	8.06	129.56	121.50
3	A1	1009	U	C1'-O4'-C4'	-8.05	101.65	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1241	A	O4'-C1'-N9	8.05	120.58	108.50
25	BB	855	G	O4'-C1'-N9	8.05	120.28	108.20
23	AX	99	GLN	OE1-CD-NE2	-8.04	114.56	122.60
16	AQ	16	ARG	NE-CZ-NH1	8.04	129.54	121.50
25	BB	2506	U	C4'-C3'-O3'	8.04	125.06	113.00
25	BB	2589	A	C3'-C2'-O2'	8.04	122.76	110.70
1	AP	10	G	O4'-C4'-C3'	8.03	112.03	104.00
25	BB	2796	U	C4'-C3'-C2'	-8.03	94.57	102.60
50	B1	74	LYS	CA-C-N	8.03	136.16	121.70
50	B1	74	LYS	C-N-CA	8.03	136.16	121.70
6	AD	55	ARG	NE-CZ-NH1	8.03	129.53	121.50
1	AE	51	G	C5'-C4'-C3'	-8.02	103.97	116.00
3	A1	891	U	O4'-C1'-N1	8.02	120.23	108.20
25	BB	2458	G	C3'-C2'-C1'	8.02	109.32	101.30
30	BG	107	ASN	OD1-CG-ND2	-8.02	114.58	122.60
25	BB	510	C	C4'-C3'-C2'	-8.02	94.58	102.60
25	BB	151	C	C5'-C4'-C3'	-8.02	103.98	116.00
25	BB	1983	G	C4'-C3'-C2'	8.01	110.61	102.60
25	BB	2567	G	O4'-C4'-C3'	8.01	112.01	104.00
25	BB	1861	G	O4'-C4'-C3'	8.01	112.01	104.00
3	A1	1482	G	O4'-C1'-C2'	-8.00	99.60	107.60
25	BB	1367	A	C5'-C4'-C3'	-8.00	104.00	116.00
3	A1	1044	A	O4'-C1'-C2'	-8.00	99.60	107.60
25	BB	865	C	O4'-C1'-N1	8.00	120.20	108.20
48	BY	68	PHE	CA-CB-CG	8.00	121.80	113.80
25	BB	1963	U	O4'-C4'-C3'	-8.00	96.00	104.00
3	A1	353	A	C2'-C3'-O3'	-8.00	101.71	113.70
25	BB	2472	G	O4'-C1'-N9	8.00	120.49	108.50
25	BB	1149	G	C5'-C4'-C3'	-7.99	104.01	116.00
19	AT	44	ARG	NE-CZ-NH1	7.99	129.49	121.50
25	BB	2056	G	O5'-C5'-C4'	7.99	123.48	111.50
3	A1	962	C	C5'-C4'-C3'	-7.99	104.02	116.00
25	BB	1663	G	C3'-C2'-C1'	7.98	109.28	101.30
32	BI	32	VAL	N-CA-C	7.98	118.03	110.53
3	A1	427	U	C1'-C2'-O2'	-7.98	99.83	111.80
4	AB	198	VAL	N-CA-CB	7.98	121.19	110.26
3	A1	7	A	O4'-C1'-N9	7.98	120.16	108.20
25	BB	1055	G	C4'-C3'-C2'	-7.98	94.62	102.60
3	A1	1378	C	C5'-C4'-O4'	7.97	121.76	109.80
4	AB	221	ARG	NH1-CZ-NH2	-7.97	108.93	119.30
35	BL	110	ARG	NH1-CZ-NH2	-7.97	108.93	119.30
3	A1	1200	C	C2'-C3'-O3'	7.97	121.45	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	BY	149	ASN	CA-C-N	7.97	131.29	120.38
48	BY	149	ASN	C-N-CA	7.97	131.29	120.38
25	BB	602	A	C4'-C3'-C2'	-7.96	94.64	102.60
25	BB	534	U	O3'-P-O5'	7.96	115.94	104.00
25	BB	2858	C	C3'-C2'-C1'	7.96	109.26	101.30
38	BO	46	LYS	CA-C-N	7.96	129.79	119.84
38	BO	46	LYS	C-N-CA	7.96	129.79	119.84
1	AE	37	G	C3'-C2'-C1'	7.96	109.26	101.30
25	BB	2298	A	C4'-C3'-O3'	-7.96	101.07	113.00
25	BB	2690	U	C4'-C3'-O3'	7.96	121.33	109.40
29	BF	38	ARG	NH1-CZ-NH2	-7.95	108.96	119.30
25	BB	2685	G	O4'-C4'-C3'	7.95	111.95	104.00
49	BZ	125	GLY	CA-C-N	7.95	127.67	119.56
49	BZ	125	GLY	C-N-CA	7.95	127.67	119.56
4	AB	203	ASP	N-CA-C	7.95	120.85	111.71
3	A1	1488	G	C3'-C2'-C1'	-7.95	93.36	101.30
25	BB	1663	G	C4'-C3'-C2'	-7.95	94.65	102.60
25	BB	2728	U	O4'-C1'-C2'	-7.94	97.86	105.80
39	BP	23	LYS	CA-C-N	7.94	133.02	122.30
39	BP	23	LYS	C-N-CA	7.94	133.02	122.30
25	BB	2587	A	C4'-C3'-C2'	-7.94	94.66	102.60
3	A1	1316	G	C5'-C4'-C3'	-7.94	104.09	116.00
48	BY	182	ALA	N-CA-C	7.94	121.43	110.24
1	AE	33	U	C5'-C4'-C3'	-7.93	104.10	116.00
3	A1	1181	G	O4'-C4'-C3'	7.93	111.94	104.00
25	BB	1734	G	O3'-P-O5'	7.93	115.90	104.00
25	BB	1387	A	O4'-C4'-C3'	7.93	111.93	104.00
3	A1	1359	C	O4'-C1'-N1	7.93	120.10	108.20
1	AA	65	G	O4'-C1'-N9	7.93	120.39	108.50
3	A1	912	C	C4'-C3'-C2'	-7.93	94.67	102.60
25	BB	1475	G	C4'-C3'-C2'	-7.93	94.67	102.60
25	BB	1547	C	C5'-C4'-C3'	-7.93	104.11	116.00
1	AA	55	U	C4'-C3'-C2'	-7.93	94.67	102.60
25	BB	2550	G	C4'-C3'-C2'	-7.93	94.67	102.60
25	BB	1774	C	O5'-C5'-C4'	-7.92	99.82	111.70
3	A1	338	A	C5'-C4'-C3'	-7.92	104.12	116.00
3	A1	1130	A	O3'-P-O5'	-7.92	92.12	104.00
25	BB	1462	C	O4'-C4'-C3'	7.92	114.02	106.10
25	BB	1870	C	O4'-C1'-N1	7.92	120.07	108.20
3	A1	170	U	O4'-C1'-C2'	-7.91	97.89	105.80
24	BA	27	C	C3'-C2'-C1'	7.91	109.21	101.30
6	AD	13	ARG	NE-CZ-NH2	7.91	126.32	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1767	G	C4'-C3'-O3'	7.91	124.86	113.00
3	A1	911	U	C4'-C3'-C2'	-7.91	94.69	102.60
15	AO	2	GLN	OE1-CD-NE2	-7.91	114.69	122.60
3	A1	826	C	C1'-O4'-C4'	-7.90	101.80	109.70
25	BB	2277	G	C2'-C3'-O3'	7.90	125.55	113.70
25	BB	1746	A	O4'-C4'-C3'	-7.90	96.10	104.00
40	BQ	11	VAL	N-CA-C	7.90	119.49	108.12
25	BB	362	A	C4'-C3'-C2'	-7.89	94.70	102.60
25	BB	2301	C	C3'-C2'-C1'	7.89	109.19	101.30
3	A1	880	C	C4'-C3'-C2'	-7.89	94.71	102.60
25	BB	1520	U	C3'-C2'-C1'	7.89	109.19	101.30
25	BB	2539	C	C4'-C3'-C2'	-7.89	94.71	102.60
3	A1	199	A	O3'-P-O5'	7.89	115.84	104.00
3	A1	1340	A	C4'-C3'-O3'	7.89	128.28	112.50
7	AF	85	TYR	O-C-N	-7.89	113.74	123.36
8	AG	58	ARG	NE-CZ-NH2	7.89	126.30	119.20
20	AU	51	GLN	OE1-CD-NE2	-7.88	114.72	122.60
52	B3	3	VAL	CA-C-N	7.88	131.18	120.38
52	B3	3	VAL	C-N-CA	7.88	131.18	120.38
25	BB	1934	C	C4'-C3'-O3'	-7.88	97.58	109.40
42	BS	56	ARG	NE-CZ-NH1	7.88	129.38	121.50
1	AA	37	G	O4'-C1'-N9	7.88	120.31	108.50
25	BB	504	A	C3'-C2'-O2'	7.87	122.51	110.70
25	BB	1096	A	O4'-C4'-C3'	7.87	111.87	104.00
25	BB	2792	A	N9-C1'-C2'	-7.87	100.19	112.00
2	AM	12	U	C3'-C2'-O2'	7.87	122.51	110.70
7	AF	57	ASP	N-CA-C	7.87	120.76	111.71
3	A1	962	C	C3'-C2'-C1'	-7.86	93.44	101.30
25	BB	2543	G	O4'-C1'-N9	7.86	119.99	108.20
3	A1	1469	C	C3'-C2'-O2'	7.86	122.49	110.70
25	BB	1494	A	C3'-C2'-C1'	7.86	109.16	101.30
17	AR	80	ARG	NH1-CZ-NH2	-7.85	109.09	119.30
1	AE	11	C	C4'-C3'-C2'	-7.85	94.75	102.60
25	BB	154	U	O4'-C4'-C3'	7.85	111.85	104.00
25	BB	617	G	C4'-C3'-C2'	7.85	110.45	102.60
27	BD	35	VAL	CA-C-N	7.84	135.82	121.70
27	BD	35	VAL	C-N-CA	7.84	135.82	121.70
3	A1	503	C	C2'-C3'-O3'	7.84	125.46	113.70
25	BB	706	A	O4'-C4'-C3'	7.84	111.84	104.00
3	A1	524	G	C5'-C4'-C3'	-7.84	104.24	116.00
35	BL	8	ARG	NE-CZ-NH1	7.83	129.34	121.50
1	AA	57	G	C4'-C3'-C2'	-7.83	94.77	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	511	U	O4'-C1'-C2'	-7.83	99.77	107.60
3	A1	313	A	O5'-C5'-C4'	-7.83	99.75	111.50
25	BB	769	U	C4'-C3'-O3'	-7.83	101.25	113.00
25	BB	880	G	C1'-O4'-C4'	-7.83	102.07	109.90
37	BN	205	GLY	N-CA-C	7.83	122.09	110.42
3	A1	337	G	O4'-C4'-C3'	7.83	111.83	104.00
3	A1	9	G	O3'-P-O5'	-7.83	92.26	104.00
4	AB	224	ARG	NH1-CZ-NH2	-7.83	109.12	119.30
15	AO	175	HIS	CB-CG-CD2	-7.83	121.02	131.20
25	BB	2063	C	O4'-C1'-C2'	-7.83	99.77	107.60
3	A1	719	C	C2'-C3'-O3'	7.83	121.24	109.50
25	BB	2538	C	N1-C1'-C2'	7.83	125.74	114.00
3	A1	605	U	C4'-C3'-O3'	-7.82	101.27	113.00
25	BB	825	A	C1'-O4'-C4'	-7.82	101.88	109.70
27	BD	41	ILE	CA-C-N	7.82	133.06	121.72
27	BD	41	ILE	C-N-CA	7.82	133.06	121.72
3	A1	744	C	O3'-P-O5'	-7.82	92.27	104.00
25	BB	2045	C	C4'-C3'-C2'	-7.82	94.78	102.60
25	BB	1572	A	C1'-O4'-C4'	-7.82	102.08	109.90
16	AQ	8	ASN	OD1-CG-ND2	-7.82	114.78	122.60
25	BB	265	A	C1'-O4'-C4'	-7.82	102.08	109.90
25	BB	2593	U	O4'-C1'-N1	7.82	120.23	108.50
30	BG	81	ASN	OD1-CG-ND2	-7.82	114.78	122.60
3	A1	586	C	C4'-C3'-C2'	-7.81	94.79	102.60
3	A1	739	C	N1-C1'-C2'	-7.81	100.28	112.00
3	A1	1420	U	C2'-C3'-O3'	7.81	121.22	109.50
25	BB	1822	C	C5'-C4'-C3'	-7.81	104.28	116.00
25	BB	1051	G	C1'-C2'-O2'	-7.81	96.68	108.40
37	BN	220	ARG	NH1-CZ-NH2	-7.81	109.15	119.30
1	AE	57	G	O4'-C4'-C3'	7.81	111.81	104.00
25	BB	1538	G	C3'-C2'-C1'	7.81	109.11	101.30
25	BB	2192	U	O4'-C1'-C2'	-7.81	99.79	107.60
25	BB	1025	G	C3'-C2'-C1'	7.81	109.31	101.50
3	A1	915	A	C4'-C3'-C2'	-7.80	94.80	102.60
33	BJ	91	ARG	NE-CZ-NH1	7.80	129.30	121.50
3	A1	821	G	C4'-C3'-O3'	7.80	121.10	109.40
3	A1	1350	A	C5'-C4'-C3'	-7.80	104.30	116.00
3	A1	580	C	C3'-C2'-C1'	7.80	109.10	101.30
3	A1	1209	C	O4'-C1'-C2'	-7.79	98.01	105.80
51	B2	111	ARG	NE-CZ-NH2	7.79	126.21	119.20
3	A1	745	G	C5'-C4'-O4'	7.79	121.48	109.80
25	BB	1357	C	C4'-C3'-C2'	-7.79	94.81	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1080	A	O4'-C4'-C3'	7.79	111.79	104.00
25	BB	1195	G	C5'-C4'-C3'	-7.79	104.32	116.00
25	BB	64	A	C4'-C3'-O3'	-7.79	97.72	109.40
25	BB	2420	C	O4'-C1'-C2'	-7.78	98.02	105.80
29	BF	88	ASN	OD1-CG-ND2	-7.78	114.82	122.60
30	BG	12	ARG	CD-NE-CZ	7.78	135.30	124.40
9	AH	70	LYS	CA-C-N	7.78	130.55	120.44
9	AH	70	LYS	C-N-CA	7.78	130.55	120.44
25	BB	560	C	C4'-C3'-C2'	-7.78	94.82	102.60
31	BH	102	ARG	CD-NE-CZ	7.78	135.29	124.40
25	BB	2683	C	C5'-C4'-C3'	-7.78	104.34	116.00
25	BB	199	A	C1'-O4'-C4'	-7.77	102.13	109.90
25	BB	602	A	C3'-C2'-C1'	7.77	109.07	101.30
1	AA	53	G	C4'-C3'-C2'	-7.77	94.83	102.60
1	AP	68	U	C4'-C3'-C2'	7.77	110.37	102.60
3	A1	61	G	C5'-C4'-C3'	-7.77	104.35	116.00
3	A1	1234	C	C5'-C4'-C3'	-7.77	104.35	116.00
3	A1	778	G	C2'-C3'-O3'	7.77	125.35	113.70
3	A1	1127	G	C5'-C4'-C3'	-7.76	104.35	116.00
44	BU	43	ARG	CD-NE-CZ	7.76	135.27	124.40
1	AP	24	G	C3'-C2'-O2'	7.76	122.34	110.70
33	BJ	110	GLU	CA-C-N	7.76	136.36	121.54
33	BJ	110	GLU	C-N-CA	7.76	136.36	121.54
3	A1	25	C	C1'-C2'-O2'	-7.76	100.17	111.80
25	BB	1172	C	C1'-O4'-C4'	-7.75	102.14	109.90
25	BB	1671	U	O5'-C5'-C4'	7.75	123.13	111.50
3	A1	739	C	O5'-C5'-C4'	7.75	123.12	111.50
1	AP	54	U	C3'-C2'-O2'	7.75	122.32	110.70
1	AE	69	U	C5'-C4'-C3'	-7.75	104.38	116.00
25	BB	918	A	C4'-C3'-C2'	-7.75	94.85	102.60
27	BD	121	GLU	OE1-CD-OE2	-7.75	104.31	122.90
25	BB	934	U	C4'-C3'-C2'	-7.74	94.86	102.60
53	B4	33	GLN	OE1-CD-NE2	-7.73	114.87	122.60
25	BB	764	A	O4'-C1'-C2'	-7.73	98.07	105.80
25	BB	2266	A	O4'-C4'-C3'	7.73	111.73	104.00
34	BK	49	ILE	CA-C-N	7.73	129.81	120.92
34	BK	49	ILE	C-N-CA	7.73	129.81	120.92
3	A1	93	U	C2'-C3'-O3'	7.73	121.09	109.50
25	BB	2743	U	O4'-C4'-C3'	7.73	111.73	104.00
25	BB	1966	A	C5'-C4'-C3'	-7.72	103.61	115.20
48	BY	130	GLN	N-CA-C	7.72	120.73	110.53
55	B6	130	HIS	CB-CG-CD2	-7.72	121.17	131.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	735	A	O4'-C4'-C3'	7.72	111.72	104.00
32	BI	5	LYS	CA-C-N	7.71	131.51	120.79
32	BI	5	LYS	C-N-CA	7.71	131.51	120.79
25	BB	2626	C	C4'-C3'-O3'	7.71	124.57	113.00
3	A1	100	G	O3'-P-O5'	-7.71	92.44	104.00
25	BB	1150	C	C5'-C4'-O4'	7.71	121.36	109.80
34	BK	43	ASN	CA-C-N	7.71	128.54	119.98
34	BK	43	ASN	C-N-CA	7.71	128.54	119.98
3	A1	706	A	C1'-O4'-C4'	-7.71	102.19	109.90
19	AT	86	ARG	NE-CZ-NH2	7.71	126.14	119.20
3	A1	397	A	O4'-C1'-N9	7.70	119.76	108.20
3	A1	1220	G	C3'-C2'-O2'	7.70	122.25	110.70
3	A1	1292	G	C4'-C3'-C2'	-7.70	94.90	102.60
25	BB	1179	G	C5'-C4'-C3'	-7.70	104.45	116.00
25	BB	41	C	C1'-O4'-C4'	-7.70	102.20	109.90
25	BB	908	C	C2'-C3'-O3'	7.70	121.04	109.50
3	A1	964	A	C3'-C2'-O2'	7.69	122.24	110.70
25	BB	2067	G	C3'-C2'-C1'	-7.69	93.81	101.50
11	AJ	50	ASN	CA-C-N	7.69	130.92	120.38
11	AJ	50	ASN	C-N-CA	7.69	130.92	120.38
25	BB	2266	A	C4'-C3'-C2'	-7.69	94.91	102.60
3	A1	509	A	C4'-C3'-C2'	-7.69	94.91	102.60
3	A1	418	C	C3'-C2'-C1'	7.69	108.99	101.30
3	A1	776	G	N9-C1'-C2'	-7.69	102.47	114.00
25	BB	1038	G	C2'-C3'-O3'	7.69	125.23	113.70
25	BB	421	C	O4'-C4'-C3'	7.68	111.69	104.00
25	BB	1056	G	O3'-P-O5'	-7.68	92.48	104.00
25	BB	2291	U	C5'-C4'-C3'	-7.68	104.49	116.00
48	BY	165	MET	O-C-N	-7.68	114.38	123.28
25	BB	2590	A	C1'-O4'-C4'	-7.67	102.03	109.70
3	A1	502	A	C2'-C3'-O3'	7.67	125.21	113.70
26	BC	2	PHE	CA-CB-CG	7.67	121.47	113.80
3	A1	930	C	C4'-C3'-C2'	-7.67	94.94	102.60
25	BB	1523	U	O4'-C4'-C3'	7.67	111.67	104.00
3	A1	710	G	O4'-C4'-C3'	7.66	111.66	104.00
25	BB	1589	U	O4'-C1'-C2'	-7.66	98.14	105.80
3	A1	1295	U	C4'-C3'-C2'	-7.66	94.94	102.60
25	BB	2620	C	C2'-C3'-O3'	7.66	120.99	109.50
1	AA	25	C	C4'-C3'-C2'	-7.65	94.95	102.60
3	A1	434	U	O3'-P-O5'	-7.65	92.53	104.00
20	AU	30	MET	CA-C-N	7.65	135.74	121.97
20	AU	30	MET	C-N-CA	7.65	135.74	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1466	U	O4'-C1'-C2'	7.65	113.45	105.80
3	A1	965	U	C4'-C3'-O3'	7.65	120.87	109.40
7	AF	51	GLN	OE1-CD-NE2	-7.65	114.95	122.60
25	BB	1061	U	C2'-C3'-O3'	7.64	120.96	109.50
25	BB	2661	G	O5'-C5'-C4'	7.64	122.96	111.50
37	BN	238	ASN	CA-CB-CG	7.64	120.24	112.60
25	BB	281	C	O4'-C4'-C3'	-7.64	96.36	104.00
25	BB	1690	A	C3'-C2'-O2'	7.64	122.15	110.70
25	BB	2725	A	C4'-C3'-O3'	7.64	120.86	109.40
3	A1	226	G	C2'-C3'-O3'	7.63	125.15	113.70
36	BM	72	GLN	CA-C-N	7.63	136.12	121.54
36	BM	72	GLN	C-N-CA	7.63	136.12	121.54
35	BL	110	ARG	NE-CZ-NH2	7.63	126.07	119.20
3	A1	55	A	C3'-C2'-O2'	7.63	122.14	110.70
24	BA	29	A	C1'-O4'-C4'	-7.63	102.27	109.90
25	BB	574	A	C5'-C4'-C3'	-7.63	103.76	115.20
20	AU	91	ARG	NE-CZ-NH1	7.62	129.12	121.50
25	BB	975	A	C2'-C3'-O3'	7.62	120.93	109.50
1	AA	12	U	O4'-C1'-N1	7.62	119.93	108.50
3	A1	160	A	C1'-O4'-C4'	-7.62	102.28	109.90
6	AD	72	ASN	OD1-CG-ND2	-7.62	114.98	122.60
25	BB	160	A	O5'-C5'-C4'	-7.61	100.08	111.50
49	BZ	128	LEU	CA-C-N	7.61	133.82	121.87
49	BZ	128	LEU	C-N-CA	7.61	133.82	121.87
3	A1	766	A	C4'-C3'-C2'	-7.61	94.99	102.60
25	BB	568	U	C1'-O4'-C4'	-7.61	102.09	109.70
25	BB	193	U	O4'-C4'-C3'	7.61	111.61	104.00
25	BB	1475	G	O4'-C1'-C2'	-7.61	98.19	105.80
28	BE	84	LYS	CA-C-N	7.61	130.30	120.56
28	BE	84	LYS	C-N-CA	7.61	130.30	120.56
34	BK	80	ARG	NE-CZ-NH1	-7.61	113.89	121.50
3	A1	1335	U	O3'-P-O5'	-7.61	92.59	104.00
1	AA	67	A	C1'-C2'-O2'	-7.60	97.00	108.40
2	AM	5	U	O4'-C4'-C3'	-7.60	98.50	106.10
17	AR	39	GLN	OE1-CD-NE2	-7.60	115.00	122.60
25	BB	141	G	C3'-C2'-C1'	7.60	108.90	101.30
25	BB	545	U	C1'-O4'-C4'	-7.60	102.10	109.70
33	BJ	54	ARG	NE-CZ-NH2	7.60	126.04	119.20
25	BB	2083	G	O3'-P-O5'	7.60	115.40	104.00
6	AD	35	ARG	NE-CZ-NH1	7.60	129.10	121.50
3	A1	1489	G	C2'-C3'-O3'	7.59	125.09	113.70
25	BB	2489	U	C1'-C2'-O2'	-7.59	100.42	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1633	G	O4'-C4'-C3'	7.58	111.58	104.00
29	BF	114	ARG	NE-CZ-NH1	7.58	129.08	121.50
3	A1	1346	A	C1'-O4'-C4'	-7.58	102.12	109.70
1	AA	33	U	C4'-C3'-C2'	-7.58	95.02	102.60
25	BB	716	A	O4'-C4'-C3'	7.58	111.58	104.00
30	BG	8	ARG	NE-CZ-NH2	7.58	126.02	119.20
47	BX	19	ARG	N-CA-C	7.58	119.18	111.07
25	BB	503	A	C2'-C3'-O3'	7.58	120.87	109.50
40	BQ	47	ARG	NE-CZ-NH2	7.58	126.02	119.20
24	BA	108	A	O4'-C4'-C3'	7.58	111.58	104.00
25	BB	2758	A	C2'-C3'-O3'	7.57	125.06	113.70
1	AE	72	C	O4'-C1'-N1	7.57	119.86	108.50
25	BB	2333	A	C5'-C4'-O4'	7.57	120.46	109.10
26	BC	12	GLN	CB-CA-C	7.57	120.72	109.29
3	A1	1353	G	C4'-C3'-C2'	-7.57	95.03	102.60
25	BB	274	C	O4'-C1'-C2'	-7.57	100.03	107.60
25	BB	428	A	C3'-C2'-O2'	7.56	122.05	110.70
16	AQ	20	ARG	CD-NE-CZ	7.56	134.98	124.40
6	AD	106	VAL	O-C-N	-7.56	114.18	122.64
25	BB	1736	U	C5'-C4'-C3'	-7.56	104.67	116.00
25	BB	2766	A	O4'-C4'-C3'	7.56	111.56	104.00
25	BB	1345	C	O4'-C4'-C3'	7.55	111.56	104.00
3	A1	399	G	O4'-C4'-C3'	7.55	111.55	104.00
3	A1	462	G	O3'-P-O5'	7.55	115.33	104.00
3	A1	924	C	O4'-C1'-N1	7.55	119.53	108.20
23	AX	48	ARG	NE-CZ-NH2	7.55	126.00	119.20
3	A1	453	G	C4'-C3'-C2'	-7.55	95.05	102.60
3	A1	1297	G	O4'-C1'-C2'	-7.55	98.25	105.80
25	BB	939	G	C5'-C4'-C3'	-7.55	104.68	116.00
15	AO	78	LYS	CA-C-N	7.54	135.95	121.54
15	AO	78	LYS	C-N-CA	7.54	135.95	121.54
25	BB	801	G	C2'-C3'-O3'	7.54	120.82	109.50
3	A1	68	G	C3'-C2'-C1'	-7.54	93.76	101.30
3	A1	249	U	C5'-C4'-C3'	-7.54	103.89	115.20
15	AO	126	ARG	NE-CZ-NH1	7.54	129.04	121.50
25	BB	1520	U	O4'-C4'-C3'	7.54	111.54	104.00
47	BX	37	GLN	OE1-CD-NE2	-7.54	115.06	122.60
25	BB	109	C	O4'-C1'-N1	7.54	119.80	108.50
25	BB	1104	C	O4'-C4'-C3'	7.54	111.54	104.00
25	BB	1393	A	C1'-O4'-C4'	-7.53	102.17	109.70
3	A1	524	G	O3'-P-O5'	7.53	115.30	104.00
37	BN	40	GLY	CA-C-N	7.53	136.17	121.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	BN	40	GLY	C-N-CA	7.53	136.17	121.41
25	BB	2471	A	O3'-P-O5'	-7.53	92.70	104.00
1	AE	46	G	C3'-C2'-C1'	7.53	109.03	101.50
3	A1	665	A	C1'-O4'-C4'	-7.53	102.17	109.70
3	A1	1325	C	O3'-P-O5'	7.52	115.28	104.00
25	BB	2668	G	O4'-C4'-C3'	7.52	111.52	104.00
42	BS	24	ILE	CA-C-N	7.52	130.69	120.54
42	BS	24	ILE	C-N-CA	7.52	130.69	120.54
3	A1	511	C	C3'-C2'-C1'	-7.52	93.98	101.50
25	BB	783	A	C5'-C4'-C3'	-7.52	104.72	116.00
25	BB	1026	G	C4'-C3'-C2'	-7.52	95.08	102.60
47	BX	36	ARG	CA-C-N	7.52	131.24	120.79
47	BX	36	ARG	C-N-CA	7.52	131.24	120.79
3	A1	1263	C	C5'-C4'-C3'	-7.51	104.73	116.00
3	A1	1305	G	O4'-C1'-N9	7.51	119.47	108.20
1	AA	70	C	O3'-P-O5'	-7.51	92.73	104.00
25	BB	2735	G	C5'-C4'-C3'	-7.51	104.73	116.00
1	AE	37	G	O4'-C4'-C3'	7.51	111.51	104.00
3	A1	986	U	C1'-O4'-C4'	-7.51	102.39	109.90
1	AE	61	C	C3'-C2'-C1'	-7.51	93.79	101.30
3	A1	442	G	C4'-C3'-C2'	-7.51	95.09	102.60
21	AV	76	ARG	NE-CZ-NH2	7.50	125.95	119.20
25	BB	1520	U	C4'-C3'-C2'	-7.50	95.10	102.60
25	BB	2372	U	O3'-P-O5'	-7.50	92.75	104.00
25	BB	541	A	C4'-C3'-C2'	-7.50	95.10	102.60
5	AC	92	ARG	N-CA-C	7.50	119.45	111.28
25	BB	2079	U	C2'-C3'-O3'	7.50	120.75	109.50
22	AW	61	ASP	CA-CB-CG	7.50	120.09	112.60
25	BB	2148	G	O4'-C4'-C3'	7.50	111.50	104.00
3	A1	98	A	O3'-P-O5'	-7.49	92.76	104.00
25	BB	1699	G	C3'-C2'-C1'	7.49	108.79	101.30
3	A1	1497	G	C3'-C2'-O2'	7.49	121.94	110.70
25	BB	501	A	O4'-C4'-C3'	7.49	111.49	104.00
53	B4	82	SER	N-CA-C	7.49	119.52	108.14
25	BB	646	U	C1'-O4'-C4'	-7.49	102.41	109.90
3	A1	592	G	O4'-C4'-C3'	7.48	111.48	104.00
25	BB	2253	G	C3'-C2'-C1'	7.48	108.78	101.30
48	BY	204	LYS	CA-C-N	7.48	129.19	119.84
48	BY	204	LYS	C-N-CA	7.48	129.19	119.84
49	BZ	63	ARG	CA-C-N	7.48	131.83	122.48
49	BZ	63	ARG	C-N-CA	7.48	131.83	122.48
25	BB	1420	A	O4'-C1'-N9	7.48	119.42	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1401	G	C1'-O4'-C4'	-7.48	102.22	109.70
25	BB	679	C	C5'-C4'-C3'	-7.47	104.79	116.00
25	BB	1461	C	O4'-C1'-C2'	-7.47	98.33	105.80
3	A1	480	U	C4'-C3'-O3'	-7.47	101.79	113.00
18	AS	47	PHE	CA-CB-CG	7.47	121.27	113.80
25	BB	1368	G	O4'-C4'-C3'	7.47	111.47	104.00
25	BB	2762	C	C4'-C3'-C2'	-7.47	95.13	102.60
50	B1	118	LEU	CA-C-N	7.47	130.81	122.22
50	B1	118	LEU	C-N-CA	7.47	130.81	122.22
3	A1	348	G	C5'-C4'-O4'	7.47	121.01	109.80
25	BB	1023	U	C2'-C3'-O3'	7.47	120.70	109.50
25	BB	1474	U	C4'-C3'-O3'	7.47	120.60	109.40
2	AM	11	U	C4'-C3'-C2'	-7.47	95.13	102.60
3	A1	699	C	O4'-C4'-C3'	7.47	111.47	104.00
38	BO	80	ASP	CA-C-N	7.47	130.62	120.54
38	BO	80	ASP	C-N-CA	7.47	130.62	120.54
17	AR	197	HIS	N-CA-C	7.46	122.21	113.18
25	BB	2545	G	C3'-C2'-C1'	7.46	108.76	101.30
25	BB	2787	C	O4'-C4'-C3'	7.46	111.46	104.00
25	BB	574	A	C2'-C3'-O3'	7.46	120.69	109.50
3	A1	886	G	O4'-C1'-C2'	-7.46	100.14	107.60
25	BB	1908	C	O4'-C1'-C2'	-7.46	98.34	105.80
24	BA	36	C	O4'-C1'-N1	7.46	119.39	108.20
3	A1	1449	C	C4'-C3'-C2'	-7.46	95.14	102.60
25	BB	1929	G	O4'-C1'-C2'	-7.46	100.14	107.60
3	A1	311	C	C4'-C3'-C2'	-7.45	95.15	102.60
3	A1	664	G	O4'-C4'-C3'	7.45	111.45	104.00
17	AR	150	LYS	CA-C-N	7.45	135.78	121.54
17	AR	150	LYS	C-N-CA	7.45	135.78	121.54
25	BB	335	C	C4'-C3'-C2'	-7.45	95.15	102.60
25	BB	2860	A	C4'-C3'-C2'	-7.45	95.15	102.60
3	A1	334	C	O4'-C4'-C3'	7.45	111.45	104.00
8	AG	68	ARG	NE-CZ-NH2	7.45	125.91	119.20
25	BB	2579	C	C2'-C3'-O3'	7.45	120.67	109.50
52	B3	152	ARG	CD-NE-CZ	7.45	134.83	124.40
25	BB	672	C	C2'-C3'-O3'	7.45	120.67	109.50
25	BB	926	G	C3'-C2'-O2'	7.45	121.87	110.70
25	BB	1721	G	C3'-C2'-C1'	7.45	108.95	101.50
25	BB	2001	C	O4'-C4'-C3'	7.45	111.45	104.00
3	A1	225	C	C2'-C3'-O3'	7.45	124.87	113.70
25	BB	798	G	C3'-C2'-C1'	-7.45	93.85	101.30
50	B1	170	ARG	NE-CZ-NH2	7.45	125.90	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	169	C	C1'-O4'-C4'	-7.44	102.26	109.70
3	A1	327	A	C3'-C2'-C1'	-7.44	94.06	101.50
3	A1	1081	A	C5'-C4'-O4'	7.44	120.96	109.80
25	BB	2806	C	C4'-C3'-C2'	-7.44	95.16	102.60
29	BF	50	ARG	NH1-CZ-NH2	-7.44	109.62	119.30
25	BB	2389	G	O4'-C4'-C3'	7.44	111.44	104.00
25	BB	2525	G	O4'-C1'-C2'	-7.44	100.16	107.60
1	AA	24	G	O4'-C4'-C3'	7.44	111.44	104.00
25	BB	892	A	O4'-C1'-C2'	-7.44	100.16	107.60
25	BB	1260	A	C3'-C2'-O2'	7.44	121.86	110.70
25	BB	2509	G	C3'-C2'-O2'	7.44	121.86	110.70
25	BB	2516	A	C4'-C3'-C2'	-7.44	95.16	102.60
25	BB	1714	U	C1'-O4'-C4'	-7.43	102.47	109.90
3	A1	807	A	O3'-P-O5'	7.43	115.14	104.00
25	BB	198	C	C3'-C2'-C1'	7.43	108.93	101.50
50	B1	141	MET	CA-C-N	7.43	135.72	121.54
50	B1	141	MET	C-N-CA	7.43	135.72	121.54
1	AE	69	U	C3'-C2'-O2'	7.42	121.83	110.70
3	A1	1295	U	C3'-C2'-C1'	7.42	108.72	101.30
24	BA	105	G	C3'-C2'-O2'	7.42	121.84	110.70
35	BL	87	PRO	CA-C-N	7.42	130.83	120.29
35	BL	87	PRO	C-N-CA	7.42	130.83	120.29
52	B3	110	HIS	CB-CG-CD2	-7.42	121.55	131.20
3	A1	334	C	C4'-C3'-C2'	-7.42	95.18	102.60
9	AH	39	GLN	OE1-CD-NE2	-7.42	115.18	122.60
25	BB	612	G	C3'-C2'-C1'	7.42	108.72	101.30
25	BB	2758	A	C3'-C2'-O2'	7.42	121.83	110.70
3	A1	938	A	C2'-C3'-O3'	7.42	124.83	113.70
25	BB	2652	C	O4'-C4'-C3'	7.42	113.52	106.10
51	B2	132	ARG	NE-CZ-NH1	7.42	128.92	121.50
1	AA	10	G	O4'-C4'-C3'	7.42	111.42	104.00
25	BB	1179	G	C1'-O4'-C4'	-7.42	102.48	109.90
25	BB	3	U	C5'-C4'-O4'	7.41	120.22	109.10
25	BB	434	U	C3'-C2'-C1'	-7.41	94.09	101.50
1	AA	12	U	C4'-C3'-O3'	7.41	124.11	113.00
3	A1	847	G	C5'-C4'-C3'	-7.41	104.88	116.00
3	A1	181	A	O4'-C4'-C3'	7.41	113.51	106.10
3	A1	235	C	C5'-C4'-C3'	-7.41	104.89	116.00
24	BA	15	A	O4'-C1'-N9	7.40	119.61	108.50
3	A1	1155	A	O4'-C4'-C3'	7.40	111.40	104.00
25	BB	1647	U	O4'-C1'-N1	7.40	119.61	108.50
1	AA	53	G	C1'-C2'-O2'	-7.40	97.30	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1935	G	O4'-C1'-C2'	7.40	113.20	105.80
31	BH	43	ASN	OD1-CG-ND2	-7.40	115.20	122.60
3	A1	128	G	C3'-C2'-O2'	7.40	121.80	110.70
3	A1	717	U	C4'-C3'-O3'	7.40	120.50	109.40
3	A1	1065	U	O4'-C1'-C2'	-7.40	98.40	105.80
25	BB	1680	U	O5'-C5'-C4'	7.39	122.79	111.70
25	BB	1464	G	P-O5'-C5'	7.39	131.99	120.90
25	BB	2156	G	O4'-C4'-C3'	7.39	111.39	104.00
3	A1	474	G	C4'-C3'-C2'	-7.39	95.21	102.60
25	BB	35	G	C3'-C2'-C1'	7.39	108.69	101.30
25	BB	2382	G	O3'-P-O5'	-7.39	92.92	104.00
32	BI	24	THR	CA-C-N	7.39	132.37	120.55
32	BI	24	THR	C-N-CA	7.39	132.37	120.55
29	BF	51	ARG	CD-NE-CZ	7.38	134.73	124.40
32	BI	51	ASN	OD1-CG-ND2	-7.38	115.22	122.60
45	BV	3	ARG	CA-C-N	7.38	134.98	121.70
45	BV	3	ARG	C-N-CA	7.38	134.98	121.70
3	A1	545	C	C5'-C4'-O4'	7.38	120.87	109.80
1	AP	8	U	C4'-C3'-C2'	-7.38	95.22	102.60
21	AV	116	ARG	NE-CZ-NH2	7.38	125.84	119.20
25	BB	1522	A	C4'-C3'-C2'	-7.38	95.22	102.60
25	BB	2155	U	C4'-C3'-C2'	-7.38	95.22	102.60
25	BB	1367	A	O4'-C4'-C3'	7.38	111.38	104.00
3	A1	925	G	O4'-C4'-C3'	7.37	111.37	104.00
25	BB	638	G	C5'-C4'-C3'	-7.37	104.94	116.00
25	BB	1634	A	C3'-C2'-C1'	7.37	108.67	101.30
25	BB	1780	A	O4'-C1'-C2'	-7.37	100.23	107.60
25	BB	2283	C	C5'-C4'-C3'	-7.36	104.96	116.00
3	A1	527	G	C4'-C3'-C2'	-7.36	95.24	102.60
4	AB	190	SER	N-CA-C	7.36	119.83	110.33
25	BB	2882	A	O4'-C1'-C2'	-7.36	100.24	107.60
29	BF	81	ARG	NE-CZ-NH2	7.36	125.83	119.20
32	BI	15	ASP	CA-CB-CG	7.36	119.96	112.60
3	A1	955	U	C3'-C2'-O2'	7.36	121.74	110.70
25	BB	2307	G	C4'-C3'-C2'	-7.36	95.24	102.60
25	BB	2385	C	P-O3'-C3'	7.36	131.24	120.20
25	BB	438	G	C5'-C4'-O4'	7.36	120.83	109.80
3	A1	1112	C	C1'-C2'-O2'	-7.35	97.37	108.40
25	BB	957	C	P-O3'-C3'	7.35	131.23	120.20
3	A1	609	A	C3'-C2'-C1'	-7.35	93.95	101.30
3	A1	1215	G	C4'-C3'-O3'	-7.35	101.98	113.00
25	BB	1918	A	O4'-C1'-N9	7.35	119.22	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	104	A	C5'-C4'-C3'	-7.35	104.98	116.00
3	A1	1043	G	O4'-C4'-C3'	7.34	111.34	104.00
3	A1	1066	C	C4'-C3'-C2'	-7.34	95.26	102.60
25	BB	2668	G	C4'-C3'-C2'	-7.34	95.25	102.60
25	BB	401	A	C4'-C3'-C2'	-7.34	95.26	102.60
25	BB	593	U	O3'-P-O5'	-7.34	92.99	104.00
1	AE	60	C	C5'-C4'-C3'	-7.34	104.19	115.20
25	BB	2629	U	C1'-O4'-C4'	-7.34	102.36	109.70
3	A1	1201	A	C1'-C2'-O2'	7.34	122.81	111.80
25	BB	1006	C	O4'-C1'-C2'	-7.34	100.26	107.60
25	BB	2324	U	O4'-C1'-C2'	-7.33	98.47	105.80
3	A1	1046	A	O3'-P-O5'	-7.33	93.00	104.00
3	A1	1049	U	C3'-C2'-C1'	7.33	108.63	101.30
3	A1	530	G	C3'-C2'-C1'	7.33	108.63	101.30
25	BB	828	U	O3'-P-O5'	7.33	115.00	104.00
25	BB	1082	U	O4'-C1'-C2'	-7.33	100.27	107.60
25	BB	1290	C	C5'-C4'-C3'	-7.33	105.00	116.00
25	BB	2570	G	C2'-C3'-O3'	7.33	120.49	109.50
3	A1	91	U	O4'-C4'-C3'	7.33	111.33	104.00
25	BB	74	A	O4'-C1'-N9	7.33	119.19	108.20
23	AX	60	ASP	CA-CB-CG	-7.32	105.28	112.60
25	BB	471	A	C4'-C3'-C2'	-7.32	95.28	102.60
1	AA	3	G	C5'-C4'-C3'	-7.32	105.02	116.00
3	A1	91	U	O4'-C1'-N1	7.32	119.48	108.50
25	BB	2091	C	C1'-O4'-C4'	-7.32	102.58	109.90
25	BB	2317	A	C2'-C3'-O3'	7.32	124.68	113.70
25	BB	2693	G	C2'-C3'-O3'	7.32	120.47	109.50
1	AA	50	U	O4'-C4'-C3'	7.31	111.31	104.00
25	BB	1094	U	O3'-P-O5'	7.31	114.97	104.00
24	BA	27	C	O4'-C1'-C2'	-7.31	100.29	107.60
25	BB	1940	U	C2'-C3'-O3'	7.31	120.47	109.50
1	AA	20	G	O4'-C4'-C3'	7.31	111.31	104.00
3	A1	921	U	C2'-C3'-O3'	7.31	124.66	113.70
25	BB	1090	A	C1'-C2'-O2'	7.31	122.76	111.80
27	BD	105	ARG	NE-CZ-NH2	-7.31	112.62	119.20
8	AG	12	ARG	CD-NE-CZ	7.31	134.63	124.40
3	A1	25	C	C2'-C3'-O3'	7.30	120.46	109.50
3	A1	421	U	C4'-C3'-C2'	-7.30	95.30	102.60
3	A1	599	C	C4'-C3'-C2'	-7.30	95.30	102.60
3	A1	1219	A	O4'-C4'-C3'	-7.30	96.70	104.00
3	A1	264	C	C2'-C3'-O3'	7.30	120.45	109.50
25	BB	1790	C	O4'-C1'-N1	7.30	119.45	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	522	A	O5'-C5'-C4'	-7.30	100.55	111.50
25	BB	863	A	C4'-C3'-C2'	-7.29	95.31	102.60
25	BB	1926	U	O4'-C4'-C3'	7.29	111.30	104.00
3	A1	287	U	C5'-C4'-O4'	7.29	120.74	109.80
3	A1	901	A	O4'-C4'-C3'	-7.29	96.71	104.00
25	BB	413	C	C4'-C3'-C2'	-7.29	95.31	102.60
3	A1	287	U	C5'-C4'-C3'	-7.29	105.07	116.00
3	A1	955	U	C5'-C4'-C3'	-7.29	105.07	116.00
7	AF	69	ARG	NE-CZ-NH2	7.29	125.76	119.20
25	BB	1635	A	C4'-C3'-C2'	-7.29	95.31	102.60
37	BN	51	ARG	NE-CZ-NH2	7.29	125.76	119.20
54	B5	127	SER	CA-C-N	7.29	129.81	120.70
54	B5	127	SER	C-N-CA	7.29	129.81	120.70
3	A1	700	G	O4'-C4'-C3'	7.28	111.28	104.00
3	A1	1000	A	C4'-C3'-C2'	-7.28	95.32	102.60
25	BB	830	G	N9-C1'-C2'	-7.28	103.08	114.00
25	BB	1486	U	O3'-P-O5'	7.28	114.92	104.00
25	BB	1886	U	C4'-C3'-C2'	-7.28	95.32	102.60
34	BK	68	ARG	NE-CZ-NH1	7.28	128.78	121.50
46	BW	7	ARG	NE-CZ-NH2	7.28	125.75	119.20
3	A1	603	U	C3'-C2'-C1'	7.28	108.58	101.30
12	AK	46	THR	CA-C-N	7.28	131.16	120.90
12	AK	46	THR	C-N-CA	7.28	131.16	120.90
1	AA	3	G	O4'-C1'-N9	7.28	119.42	108.50
25	BB	234	U	C3'-C2'-C1'	7.28	108.58	101.30
8	AG	59	GLN	OE1-CD-NE2	-7.28	115.32	122.60
25	BB	523	C	O5'-C5'-C4'	-7.28	100.58	111.50
1	AA	1	G	O5'-C5'-C4'	7.28	122.41	111.50
24	BA	112	G	C3'-C2'-O2'	7.27	121.61	110.70
25	BB	713	G	C3'-C2'-C1'	7.27	108.57	101.30
25	BB	936	A	O3'-P-O5'	7.27	114.91	104.00
1	AA	65	G	C4'-C3'-C2'	-7.27	95.33	102.60
20	AU	4	ARG	CD-NE-CZ	7.27	134.58	124.40
25	BB	557	C	C5'-C4'-C3'	-7.27	105.10	116.00
28	BE	129	LYS	CA-C-N	7.27	128.20	119.99
28	BE	129	LYS	C-N-CA	7.27	128.20	119.99
53	B4	126	GLY	N-CA-C	7.27	119.61	110.96
25	BB	1885	A	C4'-C3'-C2'	-7.27	95.33	102.60
25	BB	2890	G	C3'-C2'-C1'	7.27	108.57	101.30
25	BB	701	G	O4'-C1'-N9	7.26	119.10	108.20
25	BB	921	C	O4'-C4'-C3'	7.26	111.26	104.00
48	BY	197	THR	CA-C-N	7.26	134.77	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	BY	197	THR	C-N-CA	7.26	134.77	121.70
3	A1	189	A	O4'-C1'-N9	7.26	119.39	108.50
3	A1	978	A	C4'-C3'-C2'	-7.26	95.34	102.60
25	BB	2350	C	C5'-C4'-C3'	-7.26	105.11	116.00
48	BY	83	ARG	CA-C-N	7.26	135.41	121.54
48	BY	83	ARG	C-N-CA	7.26	135.41	121.54
49	BZ	18	THR	CA-C-N	7.26	130.33	120.38
49	BZ	18	THR	C-N-CA	7.26	130.33	120.38
50	B1	88	ARG	NE-CZ-NH1	7.26	128.76	121.50
25	BB	1843	C	O4'-C4'-C3'	7.26	111.26	104.00
24	BA	107	G	O3'-P-O5'	-7.26	93.11	104.00
25	BB	1170	C	C1'-C2'-O2'	-7.26	97.52	108.40
25	BB	1743	G	O3'-P-O5'	7.26	114.89	104.00
25	BB	2212	A	C5'-C4'-C3'	-7.26	104.31	115.20
25	BB	2221	G	C5'-C4'-C3'	-7.26	105.11	116.00
33	BJ	69	ARG	CA-C-N	7.26	130.23	120.65
33	BJ	69	ARG	C-N-CA	7.26	130.23	120.65
3	A1	50	A	C4'-C3'-O3'	7.25	120.28	109.40
3	A1	1013	G	N9-C1'-C2'	-7.25	101.12	112.00
25	BB	720	U	C5'-C4'-C3'	-7.25	105.12	116.00
25	BB	1307	A	C4'-C3'-C2'	-7.25	95.35	102.60
25	BB	2098	U	C4'-C3'-O3'	-7.25	102.12	113.00
25	BB	2764	A	C5'-C4'-C3'	-7.25	105.12	116.00
3	A1	1248	A	C4'-C3'-C2'	-7.25	95.35	102.60
3	A1	1450	U	O4'-C4'-C3'	7.25	111.25	104.00
39	BP	55	ASP	CA-C-N	7.25	135.39	121.54
39	BP	55	ASP	C-N-CA	7.25	135.39	121.54
40	BQ	29	ARG	NE-CZ-NH2	-7.25	112.67	119.20
25	BB	680	C	C4'-C3'-C2'	-7.25	95.35	102.60
3	A1	450	G	C2'-C3'-O3'	-7.25	102.83	113.70
3	A1	607	A	O4'-C4'-C3'	7.25	111.25	104.00
25	BB	965	C	C2'-C3'-O3'	7.25	120.37	109.50
25	BB	2461	A	C4'-C3'-O3'	-7.25	102.13	113.00
38	BO	65	GLN	N-CA-C	7.25	119.66	110.24
45	BV	35	ARG	NH1-CZ-NH2	-7.25	109.88	119.30
3	A1	725	G	C5'-C4'-C3'	-7.24	105.13	116.00
25	BB	194	G	O4'-C4'-C3'	7.24	113.34	106.10
25	BB	1924	C	C4'-C3'-C2'	-7.24	95.36	102.60
25	BB	17	G	O4'-C4'-C3'	7.24	111.24	104.00
54	B5	48	ILE	CB-CA-C	7.24	121.06	111.94
25	BB	1461	C	C2'-C3'-O3'	7.24	120.36	109.50
25	BB	2580	U	O3'-P-O5'	7.24	114.86	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	372	C	O4'-C1'-N1	7.24	119.05	108.20
3	A1	676	A	C4'-C3'-C2'	-7.24	95.36	102.60
27	BD	64	ARG	NE-CZ-NH1	7.24	128.74	121.50
25	BB	270	A	C1'-O4'-C4'	-7.23	102.67	109.90
3	A1	881	G	C4'-C3'-C2'	-7.23	95.37	102.60
9	AH	34	GLN	OE1-CD-NE2	-7.23	115.37	122.60
20	AU	129	ASN	CA-C-N	7.23	132.80	120.72
20	AU	129	ASN	C-N-CA	7.23	132.80	120.72
52	B3	149	ALA	N-CA-C	7.23	121.74	112.34
18	AS	121	ASN	CA-CB-CG	-7.23	105.37	112.60
25	BB	2647	U	C5'-C4'-O4'	7.23	120.64	109.80
25	BB	1210	G	O4'-C1'-N9	7.23	119.04	108.20
25	BB	1974	C	C1'-O4'-C4'	-7.23	102.67	109.90
3	A1	1036	A	C4'-C3'-C2'	-7.22	95.38	102.60
25	BB	1707	G	O3'-P-O5'	-7.22	93.17	104.00
25	BB	2266	A	C3'-C2'-C1'	7.22	108.53	101.30
3	A1	375	U	O5'-C5'-C4'	-7.22	100.67	111.50
25	BB	2894	G	C1'-C2'-O2'	-7.22	97.57	108.40
3	A1	1258	G	C5'-C4'-O4'	7.22	120.63	109.80
25	BB	1959	G	O4'-C4'-C3'	7.22	111.22	104.00
40	BQ	7	ARG	NE-CZ-NH1	7.22	128.72	121.50
3	A1	71	A	O3'-P-O5'	7.22	114.83	104.00
25	BB	792	A	C1'-O4'-C4'	-7.21	102.49	109.70
25	BB	1545	A	O4'-C4'-C3'	7.21	111.22	104.00
3	A1	363	A	C3'-C2'-C1'	7.21	108.51	101.30
25	BB	1104	C	C3'-C2'-C1'	7.21	108.51	101.30
25	BB	2902	C	C2'-C3'-O3'	7.21	120.32	109.50
3	A1	253	A	C3'-C2'-C1'	7.21	108.51	101.30
3	A1	1193	G	C4'-C3'-O3'	7.21	123.82	113.00
3	A1	330	C	C3'-C2'-C1'	7.21	108.51	101.30
3	A1	1327	C	C3'-C2'-C1'	7.21	108.51	101.30
25	BB	2787	C	C4'-C3'-C2'	-7.21	95.39	102.60
25	BB	2081	U	C4'-C3'-C2'	-7.21	95.39	102.60
25	BB	2699	C	C5'-C4'-C3'	-7.21	105.19	116.00
3	A1	421	U	C1'-O4'-C4'	-7.20	102.70	109.90
4	AB	224	ARG	CA-C-N	7.20	134.66	121.70
4	AB	224	ARG	C-N-CA	7.20	134.66	121.70
25	BB	2465	C	O3'-P-O5'	7.20	114.80	104.00
3	A1	1254	A	C4'-C3'-C2'	-7.20	95.40	102.60
3	A1	249	U	N1-C1'-C2'	-7.20	103.21	114.00
14	AN	48	LYS	CA-C-O	-7.20	112.92	120.55
25	BB	356	G	O3'-P-O5'	-7.20	93.21	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	193	C	O4'-C1'-C2'	-7.19	100.41	107.60
24	BA	35	C	C4'-C3'-C2'	-7.19	95.41	102.60
25	BB	819	A	C1'-O4'-C4'	-7.19	102.71	109.90
29	BF	4	PRO	CA-C-N	7.19	135.27	121.54
29	BF	4	PRO	C-N-CA	7.19	135.27	121.54
40	BQ	49	ASP	N-CA-C	7.19	119.98	111.71
37	BN	256	THR	CA-CB-CG2	7.19	122.72	110.50
7	AF	96	VAL	N-CA-C	7.19	121.07	111.44
25	BB	1912	A	C2'-C3'-O3'	7.19	120.28	109.50
3	A1	988	G	C4'-C3'-C2'	-7.19	95.41	102.60
25	BB	1779	U	O4'-C1'-N1	7.18	119.28	108.50
15	AO	161	ILE	N-CA-C	7.18	119.17	108.54
25	BB	949	G	C4'-C3'-C2'	-7.18	95.42	102.60
25	BB	954	G	C2'-C3'-O3'	7.18	120.28	109.50
25	BB	2476	A	O4'-C4'-C3'	7.18	111.18	104.00
25	BB	2835	A	C4'-C3'-C2'	-7.18	95.42	102.60
37	BN	99	GLU	N-CA-C	7.18	120.27	108.99
3	A1	288	A	C3'-C2'-O2'	7.18	121.47	110.70
25	BB	96	C	C4'-C3'-C2'	-7.18	95.42	102.60
24	BA	91	C	C4'-C3'-O3'	-7.18	102.23	113.00
3	A1	590	U	O3'-P-O5'	-7.17	93.24	104.00
3	A1	857	C	C2'-C3'-O3'	7.17	120.26	109.50
25	BB	1068	G	O4'-C1'-C2'	-7.17	100.42	107.60
25	BB	2376	A	C5'-C4'-C3'	-7.17	105.24	116.00
1	AE	53	G	C4'-C3'-C2'	-7.17	95.43	102.60
3	A1	1022	A	C5'-C4'-C3'	-7.17	105.24	116.00
25	BB	679	C	C3'-C2'-C1'	7.17	108.47	101.30
13	AL	26	ASP	CA-C-N	7.17	132.20	120.94
13	AL	26	ASP	C-N-CA	7.17	132.20	120.94
3	A1	1459	G	C4'-C3'-C2'	-7.17	95.44	102.60
25	BB	2157	G	O3'-P-O5'	7.16	114.75	104.00
37	BN	176	ARG	NE-CZ-NH1	7.16	128.66	121.50
3	A1	703	G	O4'-C4'-C3'	7.16	113.26	106.10
3	A1	472	U	O4'-C4'-C3'	7.16	111.16	104.00
24	BA	63	C	C3'-C2'-O2'	7.16	121.44	110.70
24	BA	103	U	O4'-C4'-C3'	7.16	111.16	104.00
25	BB	1298	C	C2'-C3'-O3'	-7.16	102.97	113.70
31	BH	53	THR	CA-C-N	7.16	134.85	121.97
31	BH	53	THR	C-N-CA	7.16	134.85	121.97
1	AE	62	A	O5'-C5'-C4'	-7.16	100.77	111.50
22	AW	12	LYS	N-CA-C	7.16	121.27	111.54
25	BB	2428	G	C3'-C2'-C1'	-7.16	94.34	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1415	U	O4'-C1'-C2'	-7.15	100.45	107.60
25	BB	2715	C	C4'-C3'-C2'	-7.15	95.45	102.60
1	AP	52	U	C4'-C3'-C2'	-7.15	95.45	102.60
25	BB	541	A	C3'-C2'-O2'	7.15	121.43	110.70
25	BB	700	G	C1'-C2'-O2'	-7.15	101.07	111.80
25	BB	1615	C	C3'-C2'-O2'	-7.15	103.87	114.60
25	BB	1954	G	P-O3'-C3'	7.15	130.93	120.20
25	BB	2827	C	O4'-C1'-N1	7.15	118.93	108.20
32	BI	61	ARG	NE-CZ-NH1	7.15	128.65	121.50
50	B1	121	VAL	CA-C-N	7.15	131.33	120.82
50	B1	121	VAL	C-N-CA	7.15	131.33	120.82
25	BB	1069	A	O3'-P-O5'	-7.15	93.28	104.00
22	AW	3	ASN	OD1-CG-ND2	-7.15	115.45	122.60
39	BP	10	ARG	NE-CZ-NH2	7.14	125.63	119.20
3	A1	1410	A	C3'-C2'-O2'	7.14	121.41	110.70
6	AD	42	LYS	CA-C-N	7.14	127.76	119.83
6	AD	42	LYS	C-N-CA	7.14	127.76	119.83
25	BB	416	U	C3'-C2'-O2'	7.14	121.41	110.70
3	A1	827	U	C5'-C4'-O4'	7.14	119.80	109.10
25	BB	173	A	C5'-C4'-C3'	-7.14	105.30	116.00
25	BB	1918	A	C3'-C2'-C1'	-7.14	94.36	101.50
25	BB	2489	U	C2'-C3'-O3'	7.14	120.20	109.50
2	AM	5	U	C4'-C3'-O3'	7.13	120.10	109.40
25	BB	61	C	C1'-O4'-C4'	-7.13	102.56	109.70
8	AG	84	ARG	N-CA-C	7.13	119.91	111.71
1	AA	57	G	O4'-C4'-C3'	7.13	111.13	104.00
3	A1	381	C	O4'-C1'-C2'	-7.13	98.67	105.80
3	A1	441	A	C3'-C2'-C1'	7.13	108.43	101.30
3	A1	1353	G	C3'-C2'-C1'	7.13	108.43	101.30
3	A1	1032	G	O3'-P-O5'	7.13	114.70	104.00
25	BB	2763	G	O4'-C4'-C3'	7.13	111.13	104.00
7	AF	64	VAL	CA-C-N	7.13	135.16	121.54
7	AF	64	VAL	C-N-CA	7.13	135.16	121.54
25	BB	2001	C	C4'-C3'-C2'	-7.13	95.47	102.60
3	A1	198	G	C1'-O4'-C4'	-7.12	102.78	109.90
38	BO	2	ALA	CA-C-N	7.12	135.14	121.54
38	BO	2	ALA	C-N-CA	7.12	135.14	121.54
3	A1	190	A	C4'-C3'-C2'	-7.12	95.48	102.60
25	BB	101	A	C1'-O4'-C4'	-7.12	102.58	109.70
25	BB	221	A	P-O5'-C5'	7.12	131.58	120.90
25	BB	313	G	C3'-C2'-O2'	7.12	121.38	110.70
25	BB	1000	A	C3'-C2'-O2'	7.12	121.38	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	44	A	O3'-P-O5'	7.12	114.68	104.00
25	BB	1545	A	C4'-C3'-O3'	-7.12	102.32	113.00
25	BB	2852	G	C5'-C4'-O4'	7.12	120.48	109.80
51	B2	157	THR	CA-CB-CG2	7.12	122.60	110.50
25	BB	824	U	C1'-O4'-C4'	-7.12	102.58	109.70
25	BB	2197	U	O4'-C1'-C2'	-7.11	98.69	105.80
3	A1	935	A	O3'-P-O5'	7.11	114.67	104.00
25	BB	234	U	C4'-C3'-C2'	-7.11	95.49	102.60
3	A1	238	A	C3'-C2'-C1'	7.11	108.41	101.30
3	A1	1318	A	C4'-C3'-O3'	-7.11	102.34	113.00
25	BB	1391	U	C5'-C4'-O4'	7.11	120.46	109.80
3	A1	850	U	C1'-O4'-C4'	-7.11	102.80	109.90
8	AG	74	ARG	NH1-CZ-NH2	-7.11	110.06	119.30
20	AU	109	LYS	CA-C-N	7.11	135.11	121.54
20	AU	109	LYS	C-N-CA	7.11	135.11	121.54
25	BB	528	A	C3'-C2'-O2'	7.11	121.36	110.70
25	BB	1316	U	C1'-O4'-C4'	-7.11	102.79	109.90
3	A1	258	G	N9-C1'-C2'	7.10	122.66	112.00
3	A1	553	A	C4'-C3'-C2'	-7.10	95.50	102.60
25	BB	443	A	C4'-C3'-O3'	-7.10	102.35	113.00
25	BB	1676	A	O4'-C4'-C3'	7.10	111.10	104.00
3	A1	604	G	C5'-C4'-O4'	7.10	120.45	109.80
3	A1	948	C	C4'-C3'-C2'	-7.10	95.50	102.60
3	A1	960	U	O4'-C1'-N1	7.10	118.85	108.20
3	A1	1286	U	O4'-C1'-N1	7.10	118.85	108.20
25	BB	438	G	C1'-O4'-C4'	-7.10	102.80	109.90
25	BB	1025	G	O3'-P-O5'	-7.10	93.35	104.00
25	BB	1641	A	C1'-O4'-C4'	7.10	117.00	109.90
25	BB	720	U	C3'-C2'-O2'	7.10	121.35	110.70
25	BB	1582	C	C4'-C3'-O3'	7.10	123.64	113.00
25	BB	2726	A	O4'-C1'-N9	7.10	118.84	108.20
8	AG	57	SER	CA-C-N	7.10	132.89	122.39
8	AG	57	SER	C-N-CA	7.10	132.89	122.39
3	A1	1229	A	C5'-C4'-C3'	-7.09	105.36	116.00
18	AS	69	ASN	OD1-CG-ND2	-7.09	115.51	122.60
25	BB	2201	G	C4'-C3'-C2'	-7.09	95.51	102.60
3	A1	117	G	C3'-C2'-O2'	7.09	121.34	110.70
25	BB	208	C	C3'-C2'-C1'	7.09	108.39	101.30
25	BB	1281	G	C3'-C2'-C1'	7.09	108.39	101.30
24	BA	23	G	C3'-C2'-O2'	7.09	121.33	110.70
25	BB	1348	C	C4'-C3'-C2'	-7.09	95.51	102.60
3	A1	1138	G	O5'-C5'-C4'	7.09	122.13	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	492	C	C3'-C2'-C1'	7.08	108.58	101.50
25	BB	2126	A	C5'-C4'-O4'	7.08	119.73	109.10
25	BB	2245	U	O4'-C1'-N1	7.08	119.13	108.50
24	BA	15	A	O4'-C1'-C2'	-7.08	100.52	107.60
25	BB	612	G	O4'-C4'-C3'	7.08	111.08	104.00
30	BG	86	ARG	NH1-CZ-NH2	-7.08	110.10	119.30
25	BB	2482	A	O3'-P-O5'	-7.08	93.38	104.00
3	A1	967	C	C4'-C3'-O3'	7.08	123.61	113.00
24	BA	51	G	C1'-C2'-O2'	-7.08	101.19	111.80
25	BB	1238	G	O3'-P-O5'	7.07	114.61	104.00
1	AA	57	G	O4'-C1'-C2'	-7.07	100.53	107.60
25	BB	970	U	O4'-C1'-N1	7.07	118.81	108.20
28	BE	118	THR	CA-C-N	7.07	126.75	119.82
28	BE	118	THR	C-N-CA	7.07	126.75	119.82
3	A1	960	U	C3'-C2'-C1'	-7.07	94.43	101.50
25	BB	2345	G	C4'-C3'-C2'	-7.07	95.53	102.60
32	BI	64	SER	N-CA-C	7.07	121.53	112.34
25	BB	1405	U	C3'-C2'-O2'	7.07	121.30	110.70
25	BB	2557	G	O4'-C1'-C2'	-7.07	100.53	107.60
3	A1	486	U	O4'-C4'-C3'	7.06	111.06	104.00
25	BB	2452	C	O5'-C5'-C4'	7.06	122.30	111.70
3	A1	539	A	C1'-C2'-O2'	-7.06	97.81	108.40
24	BA	18	G	C4'-C3'-O3'	-7.06	102.41	113.00
3	A1	649	A	P-O3'-C3'	7.06	130.79	120.20
3	A1	699	C	C5'-C4'-C3'	-7.06	105.41	116.00
11	AJ	3	LYS	CA-C-N	7.06	131.06	120.75
11	AJ	3	LYS	C-N-CA	7.06	131.06	120.75
25	BB	576	U	O3'-P-O5'	7.06	114.59	104.00
25	BB	1736	U	C1'-C2'-O2'	-7.06	97.81	108.40
3	A1	476	U	C4'-C3'-C2'	-7.06	95.54	102.60
25	BB	1959	G	O5'-C5'-C4'	7.06	122.09	111.50
3	A1	274	A	N9-C1'-C2'	-7.05	103.42	114.00
3	A1	629	A	C3'-C2'-O2'	7.05	121.28	110.70
25	BB	692	C	C1'-O4'-C4'	-7.05	102.84	109.90
25	BB	2175	C	O4'-C4'-C3'	7.05	111.06	104.00
25	BB	2152	G	C5'-C4'-C3'	-7.05	105.42	116.00
23	AX	49	PHE	CA-CB-CG	7.05	120.85	113.80
25	BB	1806	C	C4'-C3'-O3'	7.05	123.57	113.00
25	BB	1963	U	O3'-P-O5'	7.05	114.57	104.00
25	BB	2301	C	O4'-C4'-C3'	7.05	111.05	104.00
25	BB	2705	A	C3'-C2'-C1'	7.05	108.35	101.30
3	A1	548	G	O4'-C1'-C2'	-7.04	100.56	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	475	C	C4'-C3'-C2'	-7.04	95.56	102.60
25	BB	1459	G	C1'-O4'-C4'	-7.04	102.66	109.70
3	A1	341	C	C1'-C2'-O2'	-7.04	97.84	108.40
3	A1	1054	C	C4'-C3'-C2'	7.04	109.64	102.60
3	A1	1193	G	C5'-C4'-C3'	-7.04	105.44	116.00
3	A1	1479	C	C2'-C3'-O3'	7.04	120.06	109.50
22	AW	74	GLN	OE1-CD-NE2	-7.04	115.56	122.60
50	B1	163	ASN	OD1-CG-ND2	-7.04	115.56	122.60
25	BB	1914	C	C5'-C4'-C3'	-7.04	105.44	116.00
25	BB	2525	G	N9-C1'-C2'	7.04	122.56	112.00
25	BB	1309	G	O4'-C1'-C2'	-7.04	98.76	105.80
25	BB	915	C	C5'-C4'-O4'	7.03	120.35	109.80
3	A1	965	U	C1'-O4'-C4'	-7.03	102.67	109.70
25	BB	179	C	O4'-C4'-C3'	-7.03	96.97	104.00
3	A1	174	A	C2'-C3'-O3'	7.03	120.04	109.50
3	A1	993	G	O4'-C1'-N9	7.03	118.74	108.20
3	A1	1405	G	C1'-O4'-C4'	-7.03	102.67	109.70
18	AS	99	SER	CA-C-N	7.03	134.96	121.54
18	AS	99	SER	C-N-CA	7.03	134.96	121.54
25	BB	874	G	C4'-C3'-C2'	-7.03	95.57	102.60
3	A1	1229	A	O4'-C1'-N9	7.03	119.04	108.50
4	AB	221	ARG	NE-CZ-NH1	7.03	128.53	121.50
3	A1	307	C	O4'-C4'-C3'	7.02	111.02	104.00
3	A1	1199	U	C5'-C4'-O4'	7.02	120.33	109.80
25	BB	1662	U	C1'-O4'-C4'	-7.02	102.88	109.90
25	BB	2652	C	C4'-C3'-C2'	-7.02	95.58	102.60
54	B5	104	GLN	OE1-CD-NE2	-7.02	115.58	122.60
25	BB	642	U	O4'-C1'-C2'	-7.02	98.78	105.80
25	BB	2731	G	C3'-C2'-O2'	7.02	121.23	110.70
3	A1	86	G	O4'-C1'-N9	7.02	118.73	108.20
3	A1	1331	G	C1'-C2'-O2'	7.02	122.33	111.80
3	A1	1317	C	C4'-C3'-O3'	-7.02	102.48	113.00
48	BY	130	GLN	CA-C-N	7.02	134.94	121.54
48	BY	130	GLN	C-N-CA	7.02	134.94	121.54
3	A1	376	G	O4'-C1'-N9	7.01	119.02	108.50
3	A1	859	G	C4'-C3'-O3'	7.01	123.52	113.00
25	BB	1891	G	O5'-C5'-C4'	-7.01	100.98	111.50
25	BB	2556	C	O4'-C1'-C2'	-7.01	100.58	107.60
50	B1	46	GLN	OE1-CD-NE2	-7.01	115.59	122.60
3	A1	747	A	O4'-C1'-C2'	-7.01	100.59	107.60
7	AF	57	ASP	CA-CB-CG	7.01	119.61	112.60
25	BB	1167	C	C5'-C4'-O4'	7.01	120.32	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	BN	228	ASP	CA-C-N	7.01	131.34	120.68
37	BN	228	ASP	C-N-CA	7.01	131.34	120.68
3	A1	965	U	C3'-C2'-C1'	-7.01	94.49	101.50
25	BB	1026	G	O3'-P-O5'	7.01	114.52	104.00
23	AX	31	ARG	N-CA-C	7.01	119.52	111.11
3	A1	679	C	C3'-C2'-C1'	7.01	108.31	101.30
3	A1	729	A	C4'-C3'-C2'	-7.01	95.59	102.60
29	BF	10	ARG	NE-CZ-NH1	7.01	128.51	121.50
3	A1	516	U	C5'-C4'-C3'	-7.00	105.49	116.00
3	A1	1029	U	C1'-O4'-C4'	-7.00	102.89	109.90
25	BB	868	U	C5'-C4'-C3'	-7.00	105.49	116.00
25	BB	1687	G	C3'-C2'-C1'	7.00	108.31	101.30
25	BB	1984	G	C1'-O4'-C4'	-7.00	102.89	109.90
25	BB	2542	A	O3'-P-O5'	-7.00	93.50	104.00
3	A1	915	A	C2'-C3'-O3'	7.00	120.00	109.50
3	A1	1151	A	C1'-O4'-C4'	-7.00	102.70	109.70
5	AC	24	ALA	CA-C-N	7.00	134.30	121.70
5	AC	24	ALA	C-N-CA	7.00	134.30	121.70
25	BB	1501	G	O3'-P-O5'	-7.00	93.50	104.00
25	BB	1778	U	C1'-O4'-C4'	-7.00	102.70	109.70
44	BU	44	GLN	O-C-N	-7.00	116.48	123.62
2	AM	5	U	C2'-C3'-O3'	7.00	120.00	109.50
25	BB	2499	C	O4'-C1'-N1	7.00	119.00	108.50
3	A1	839	C	O4'-C1'-N1	7.00	119.00	108.50
3	A1	1354	U	C5'-C4'-C3'	-7.00	105.50	116.00
25	BB	1215	G	C5'-C4'-O4'	-7.00	99.30	109.80
25	BB	2546	U	O5'-C5'-C4'	-7.00	101.00	111.50
42	BS	63	ARG	NH1-CZ-NH2	-7.00	110.20	119.30
3	A1	1397	C	C4'-C3'-O3'	7.00	119.89	109.40
3	A1	1462	C	C4'-C3'-C2'	-7.00	95.60	102.60
25	BB	954	G	C4'-C3'-O3'	7.00	119.90	109.40
1	AP	12	U	C4'-C3'-C2'	-7.00	95.61	102.60
4	AB	14	HIS	CA-CB-CG	6.99	120.79	113.80
25	BB	1412	U	C5'-C4'-C3'	-6.99	105.51	116.00
25	BB	1522	A	O4'-C4'-C3'	6.99	113.09	106.10
25	BB	1955	U	C4'-C3'-C2'	-6.99	95.61	102.60
1	AA	50	U	C3'-C2'-C1'	6.99	108.29	101.30
25	BB	1612	C	O4'-C4'-C3'	6.99	110.99	104.00
3	A1	1466	C	O4'-C4'-C3'	6.99	110.99	104.00
25	BB	775	G	O4'-C1'-N9	6.99	118.68	108.20
25	BB	1810	A	C2'-C3'-O3'	6.99	124.18	113.70
25	BB	1547	C	C1'-C2'-O2'	-6.99	97.92	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1701	A	C5'-C4'-C3'	-6.99	105.52	116.00
3	A1	553	A	C1'-O4'-C4'	-6.99	102.71	109.70
30	BG	31	HIS	CB-CG-CD2	-6.99	122.12	131.20
52	B3	162	ARG	NH1-CZ-NH2	-6.99	110.22	119.30
25	BB	2663	G	O4'-C1'-N9	6.98	118.97	108.50
3	A1	57	G	C5'-C4'-C3'	-6.98	105.53	116.00
17	AR	149	LYS	N-CA-C	6.98	119.92	111.82
25	BB	2438	U	C4'-C3'-C2'	-6.98	95.62	102.60
51	B2	114	ARG	CD-NE-CZ	6.98	134.17	124.40
8	AG	40	ARG	CD-NE-CZ	6.98	134.17	124.40
3	A1	723	U	N1-C1'-C2'	6.98	122.47	112.00
25	BB	1982	U	C3'-C2'-C1'	6.98	108.48	101.50
25	BB	2459	A	C1'-O4'-C4'	-6.98	102.92	109.90
1	AE	54	U	C5'-C4'-C3'	-6.97	105.54	116.00
25	BB	1015	U	O4'-C1'-N1	6.97	118.96	108.50
25	BB	793	A	O3'-P-O5'	-6.97	93.54	104.00
3	A1	811	C	O3'-P-O5'	-6.97	93.54	104.00
3	A1	1327	C	C4'-C3'-C2'	-6.97	95.63	102.60
25	BB	2095	A	O4'-C4'-C3'	6.97	110.97	104.00
1	AP	10	G	C1'-O4'-C4'	-6.97	102.93	109.90
48	BY	135	GLY	CA-C-N	6.97	134.85	121.54
48	BY	135	GLY	C-N-CA	6.97	134.85	121.54
3	A1	1428	A	C5'-C4'-O4'	6.97	119.55	109.10
3	A1	1084	G	C4'-C3'-C2'	-6.96	95.64	102.60
25	BB	131	A	C5'-C4'-C3'	-6.96	105.55	116.00
25	BB	962	G	O4'-C4'-C3'	6.96	110.96	104.00
25	BB	2488	G	O3'-P-O5'	6.96	114.45	104.00
25	BB	1441	G	C3'-C2'-O2'	6.96	121.14	110.70
25	BB	1061	U	C4'-C3'-O3'	-6.96	98.96	109.40
25	BB	2137	U	C3'-C2'-O2'	6.96	125.04	114.60
3	A1	1296	C	C2'-C3'-O3'	6.96	119.94	109.50
25	BB	678	C	C3'-C2'-C1'	6.96	108.26	101.30
1	AE	35	A	C4'-C3'-C2'	-6.96	95.64	102.60
3	A1	867	G	O4'-C4'-C3'	-6.96	99.14	106.10
3	A1	580	C	C5'-C4'-C3'	-6.96	105.57	116.00
6	AD	112	ALA	CA-C-N	6.96	134.82	121.54
6	AD	112	ALA	C-N-CA	6.96	134.82	121.54
3	A1	567	G	N9-C1'-C2'	-6.95	103.57	114.00
25	BB	393	C	O3'-P-O5'	6.95	114.43	104.00
25	BB	927	A	C4'-C3'-C2'	-6.95	95.65	102.60
25	BB	1538	G	C5'-C4'-C3'	-6.95	105.57	116.00
3	A1	353	A	C4'-C3'-O3'	6.95	123.43	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1621	U	C5'-C4'-C3'	-6.95	105.57	116.00
25	BB	85	G	O4'-C4'-C3'	6.95	110.95	104.00
34	BK	6	GLN	CG-CD-NE2	6.95	126.83	116.40
51	B2	106	ALA	CA-C-N	6.95	124.62	120.24
51	B2	106	ALA	C-N-CA	6.95	124.62	120.24
3	A1	159	G	O4'-C4'-C3'	6.95	110.95	104.00
3	A1	394	G	C1'-C2'-O2'	-6.95	97.98	108.40
10	AI	8	ARG	NE-CZ-NH1	-6.95	114.55	121.50
25	BB	1122	G	O5'-C5'-C4'	-6.95	101.08	111.50
25	BB	2692	G	N9-C1'-C2'	6.95	122.42	112.00
3	A1	603	U	O4'-C4'-C3'	6.95	110.94	104.00
25	BB	2722	G	C3'-C2'-C1'	-6.94	94.36	101.30
48	BY	39	ASP	N-CA-C	6.94	120.64	111.75
1	AE	45	G	O4'-C1'-C2'	-6.94	100.66	107.60
3	A1	703	G	C5'-C4'-O4'	-6.94	98.69	109.10
10	AI	17	TYR	N-CA-C	6.94	118.32	108.74
25	BB	1466	U	C4'-C3'-O3'	6.94	119.81	109.40
37	BN	175	LEU	CA-C-N	6.94	134.80	121.54
37	BN	175	LEU	C-N-CA	6.94	134.80	121.54
3	A1	173	U	O4'-C1'-N1	6.94	118.61	108.20
24	BA	14	U	C2'-C3'-O3'	6.94	119.91	109.50
25	BB	342	A	C3'-C2'-O2'	6.94	121.11	110.70
25	BB	1763	G	C1'-O4'-C4'	-6.94	102.76	109.70
29	BF	10	ARG	N-CA-C	6.94	121.34	113.01
3	A1	904	U	O4'-C4'-C3'	6.94	110.94	104.00
3	A1	1270	G	C4'-C3'-C2'	-6.94	95.66	102.60
9	AH	62	ARG	CA-C-N	6.94	129.58	120.28
9	AH	62	ARG	C-N-CA	6.94	129.58	120.28
25	BB	440	C	C5'-C4'-C3'	-6.94	105.59	116.00
43	BT	15	ARG	CA-C-N	6.94	130.51	120.38
43	BT	15	ARG	C-N-CA	6.94	130.51	120.38
25	BB	683	U	O4'-C1'-N1	6.94	118.60	108.20
25	BB	1368	G	C4'-C3'-C2'	-6.93	95.67	102.60
25	BB	2330	G	C3'-C2'-O2'	6.93	121.10	110.70
25	BB	2654	A	C3'-C2'-C1'	6.93	108.23	101.30
1	AP	18	G	C2'-C3'-O3'	-6.93	99.10	109.50
25	BB	2567	G	C1'-O4'-C4'	-6.93	102.97	109.90
3	A1	76	G	O5'-C5'-C4'	-6.93	101.11	111.50
3	A1	1155	A	C3'-C2'-O2'	6.93	121.09	110.70
3	A1	1242	G	C1'-O4'-C4'	-6.93	102.97	109.90
3	A1	1305	G	C4'-C3'-C2'	-6.93	95.67	102.60
25	BB	426	C	C4'-C3'-O3'	-6.93	102.61	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1223	G	C1'-O4'-C4'	-6.93	102.97	109.90
48	BY	130	GLN	OE1-CD-NE2	-6.93	115.67	122.60
3	A1	672	U	O4'-C1'-N1	6.93	118.59	108.20
25	BB	1554	U	O4'-C1'-C2'	-6.93	98.87	105.80
25	BB	883	G	O4'-C1'-C2'	6.92	114.53	107.60
25	BB	2065	C	N1-C1'-C2'	6.92	122.39	112.00
49	BZ	87	ARG	CD-NE-CZ	6.92	134.09	124.40
25	BB	467	G	C1'-O4'-C4'	-6.92	102.98	109.90
25	BB	1934	C	C4'-C3'-C2'	-6.92	95.68	102.60
25	BB	10	A	C3'-C2'-C1'	6.92	108.22	101.30
25	BB	148	U	C1'-O4'-C4'	6.92	116.62	109.70
3	A1	910	C	C4'-C3'-C2'	-6.92	95.68	102.60
25	BB	191	A	O4'-C4'-C3'	6.92	110.92	104.00
25	BB	2319	G	O4'-C1'-N9	6.92	118.88	108.50
3	A1	305	G	C5'-C4'-C3'	-6.92	104.83	115.20
10	AI	23	ASP	OD1-CG-OD2	-6.92	106.30	122.90
15	AO	38	VAL	CA-C-N	6.92	129.43	120.44
15	AO	38	VAL	C-N-CA	6.92	129.43	120.44
25	BB	2036	C	C5'-C4'-O4'	6.92	120.18	109.80
39	BP	24	ARG	NE-CZ-NH2	6.92	125.42	119.20
51	B2	91	ARG	NE-CZ-NH1	6.92	128.42	121.50
3	A1	81	A	O5'-C5'-C4'	-6.92	101.13	111.50
25	BB	416	U	C5'-C4'-O4'	-6.92	99.43	109.80
25	BB	1046	A	C1'-C2'-O2'	-6.92	101.43	111.80
25	BB	2222	C	C3'-C2'-C1'	6.92	108.22	101.30
3	A1	46	G	C1'-C2'-O2'	-6.91	101.43	111.80
28	BE	116	VAL	CB-CA-C	-6.91	104.47	111.80
2	AM	14	U	C5'-C4'-C3'	6.91	125.57	115.20
3	A1	708	C	C5'-C4'-C3'	-6.91	105.63	116.00
25	BB	53	A	C4'-C3'-C2'	-6.91	95.69	102.60
25	BB	2123	G	O5'-C5'-C4'	-6.91	101.13	111.50
25	BB	2472	G	C4'-C3'-C2'	6.91	109.51	102.60
3	A1	1211	U	C5'-C4'-C3'	-6.91	105.64	116.00
7	AF	69	ARG	NH1-CZ-NH2	-6.91	110.32	119.30
3	A1	71	A	O4'-C1'-C2'	-6.91	98.89	105.80
3	A1	600	A	C3'-C2'-C1'	6.91	108.21	101.30
3	A1	743	A	C3'-C2'-C1'	6.91	108.41	101.50
25	BB	265	A	O5'-C5'-C4'	6.91	121.86	111.50
25	BB	2514	U	C5'-C4'-C3'	-6.91	105.64	116.00
52	B3	110	HIS	O-C-N	-6.91	117.29	121.71
1	AA	53	G	C2'-C3'-O3'	-6.91	103.34	113.70
3	A1	359	G	C5'-C4'-O4'	6.91	120.16	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	972	C	C3'-C2'-C1'	6.91	108.20	101.30
13	AL	24	SER	CA-C-N	6.91	134.94	121.41
13	AL	24	SER	C-N-CA	6.91	134.94	121.41
3	A1	92	U	O4'-C1'-C2'	-6.90	98.90	105.80
25	BB	1512	C	C5'-C4'-C3'	-6.90	105.64	116.00
31	BH	67	ASN	CA-CB-CG	6.90	119.50	112.60
3	A1	5	U	C1'-C2'-O2'	-6.90	101.44	111.80
3	A1	49	U	O3'-P-O5'	6.90	114.35	104.00
12	AK	22	TYR	N-CA-C	6.90	118.46	111.07
25	BB	497	A	C2'-C3'-O3'	6.90	124.06	113.70
25	BB	1139	G	N9-C1'-C2'	6.90	124.35	114.00
1	AP	36	A	C3'-C2'-O2'	6.90	121.05	110.70
4	AB	96	LEU	CA-C-N	6.90	134.93	121.41
4	AB	96	LEU	C-N-CA	6.90	134.93	121.41
25	BB	1314	C	C5'-C4'-C3'	-6.90	105.65	116.00
25	BB	2761	A	C1'-O4'-C4'	-6.90	103.00	109.90
25	BB	2786	U	C4'-C3'-O3'	6.90	123.35	113.00
8	AG	80	ARG	NE-CZ-NH1	6.90	128.40	121.50
3	A1	929	G	C3'-C2'-O2'	6.90	121.05	110.70
25	BB	1914	C	O4'-C1'-N1	6.90	118.85	108.50
25	BB	1699	G	O4'-C1'-N9	6.90	118.84	108.50
25	BB	654	A	C3'-C2'-O2'	6.89	121.04	110.70
3	A1	379	C	C4'-C3'-C2'	-6.89	95.71	102.60
39	BP	2	HIS	CB-CG-CD2	-6.89	122.24	131.20
24	BA	56	G	C3'-C2'-C1'	6.89	108.39	101.50
25	BB	395	U	C4'-C3'-C2'	-6.89	95.71	102.60
25	BB	1672	A	C3'-C2'-O2'	6.89	121.03	110.70
42	BS	48	GLN	CA-C-N	6.89	134.10	121.70
42	BS	48	GLN	C-N-CA	6.89	134.10	121.70
3	A1	1202	U	C5'-C4'-O4'	6.89	120.13	109.80
25	BB	2263	C	C5'-C4'-O4'	6.89	120.13	109.80
38	BO	88	ASP	O-C-N	-6.89	114.28	122.27
3	A1	593	U	C5'-C4'-C3'	-6.88	105.67	116.00
25	BB	2286	G	C3'-C2'-C1'	6.88	108.18	101.30
29	BF	133	LYS	CA-C-N	6.88	129.50	120.28
29	BF	133	LYS	C-N-CA	6.88	129.50	120.28
3	A1	58	C	C5'-C4'-C3'	-6.88	105.68	116.00
3	A1	838	G	O3'-P-O5'	6.88	114.32	104.00
3	A1	1369	C	O4'-C1'-C2'	-6.88	98.92	105.80
25	BB	1715	G	O3'-P-O5'	-6.88	93.68	104.00
25	BB	2195	U	C5'-C4'-C3'	-6.88	104.88	115.20
25	BB	2635	A	C4'-C3'-C2'	-6.88	95.72	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2884	U	O5'-C5'-C4'	-6.88	101.18	111.50
3	A1	1482	G	C1'-O4'-C4'	-6.88	103.02	109.90
25	BB	2491	U	O4'-C4'-C3'	6.88	110.88	104.00
50	B1	181	ILE	CA-C-N	6.88	134.08	121.70
50	B1	181	ILE	C-N-CA	6.88	134.08	121.70
1	AA	66	A	C3'-C2'-C1'	6.88	108.18	101.30
25	BB	1029	A	C1'-O4'-C4'	-6.88	103.02	109.90
3	A1	751	U	O3'-P-O5'	-6.88	93.69	104.00
25	BB	200	U	O4'-C4'-C3'	6.88	110.88	104.00
25	BB	871	U	O3'-P-O5'	6.88	114.31	104.00
50	B1	57	LYS	CA-C-N	6.88	134.08	121.70
50	B1	57	LYS	C-N-CA	6.88	134.08	121.70
3	A1	82	G	O4'-C4'-C3'	6.87	110.87	104.00
25	BB	483	A	O5'-C5'-C4'	-6.87	101.19	111.50
25	BB	1177	G	C4'-C3'-O3'	-6.87	102.69	113.00
25	BB	2844	G	C4'-C3'-C2'	-6.87	95.73	102.60
3	A1	85	U	O4'-C1'-C2'	-6.87	98.93	105.80
3	A1	862	C	O3'-P-O5'	6.87	114.31	104.00
3	A1	1088	G	C3'-C2'-C1'	-6.87	94.43	101.30
3	A1	1415	G	C5'-C4'-C3'	-6.87	105.69	116.00
48	BY	13	ARG	CD-NE-CZ	6.87	134.02	124.40
55	B6	69	ARG	NH1-CZ-NH2	-6.87	110.37	119.30
3	A1	524	G	C4'-C3'-O3'	6.87	123.31	113.00
25	BB	1378	A	O4'-C1'-N9	6.87	118.51	108.20
25	BB	2474	U	O4'-C1'-C2'	-6.87	98.93	105.80
3	A1	638	U	C5'-C4'-C3'	-6.87	105.70	116.00
3	A1	1087	G	C4'-C3'-O3'	6.87	123.30	113.00
8	AG	41	TRP	CA-C-N	6.87	130.17	120.28
8	AG	41	TRP	C-N-CA	6.87	130.17	120.28
13	AL	76	THR	N-CA-C	6.87	121.75	113.23
25	BB	1677	A	O3'-P-O5'	-6.87	93.70	104.00
25	BB	1981	A	C2'-C3'-O3'	6.87	124.00	113.70
20	AU	36	SER	N-CA-C	6.87	119.40	111.02
25	BB	2416	C	C2'-C3'-O3'	-6.87	103.40	113.70
29	BF	114	ARG	NH1-CZ-NH2	-6.87	110.38	119.30
25	BB	1992	G	C1'-C2'-O2'	6.86	122.09	111.80
3	A1	169	C	O4'-C1'-N1	6.86	118.49	108.20
3	A1	1232	U	C4'-C3'-C2'	6.86	109.46	102.60
4	AB	189	ASN	OD1-CG-ND2	-6.86	115.74	122.60
25	BB	791	C	C5'-C4'-C3'	-6.86	105.71	116.00
25	BB	1107	G	O5'-C5'-C4'	-6.86	101.22	111.50
25	BB	2766	A	N9-C1'-C2'	6.86	122.29	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AP	29	A	C1'-O4'-C4'	-6.86	103.05	109.90
3	A1	1210	C	C3'-C2'-C1'	6.86	108.16	101.30
25	BB	2141	G	O4'-C4'-C3'	6.85	110.85	104.00
25	BB	1140	C	O4'-C1'-C2'	-6.85	98.95	105.80
25	BB	2075	U	O3'-P-O5'	6.85	114.28	104.00
3	A1	1035	A	C3'-C2'-C1'	6.85	108.15	101.30
3	A1	928	G	O4'-C4'-C3'	6.85	110.85	104.00
48	BY	17	GLU	CA-C-N	6.85	133.97	121.85
48	BY	17	GLU	C-N-CA	6.85	133.97	121.85
3	A1	988	G	C3'-C2'-O2'	6.85	120.97	110.70
25	BB	1523	U	C3'-C2'-C1'	6.85	108.15	101.30
2	AM	12	U	C4'-C3'-O3'	6.85	123.27	113.00
25	BB	514	A	O4'-C4'-C3'	-6.85	97.15	104.00
1	AP	50	U	C4'-C3'-C2'	-6.84	95.76	102.60
25	BB	2681	C	O4'-C1'-C2'	-6.84	98.96	105.80
3	A1	288	A	C5'-C4'-O4'	-6.84	99.54	109.80
33	BJ	52	ARG	NE-CZ-NH2	6.84	125.36	119.20
34	BK	76	LYS	N-CA-C	6.84	120.47	107.75
3	A1	330	C	N1-C1'-C2'	6.84	122.26	112.00
25	BB	2166	U	O4'-C4'-C3'	-6.84	97.16	104.00
25	BB	2293	G	C3'-C2'-C1'	-6.84	94.46	101.30
3	A1	554	A	C3'-C2'-O2'	6.84	120.95	110.70
3	A1	791	G	O3'-P-O5'	6.84	114.25	104.00
3	A1	1043	G	C4'-C3'-C2'	-6.84	95.76	102.60
25	BB	1823	G	C4'-C3'-C2'	-6.84	95.76	102.60
3	A1	587	G	O4'-C1'-C2'	-6.83	100.77	107.60
3	A1	631	C	C3'-C2'-C1'	6.83	108.13	101.30
25	BB	525	U	C4'-C3'-C2'	-6.83	95.77	102.60
25	BB	2365	G	C3'-C2'-C1'	-6.83	94.47	101.30
3	A1	224	U	C2'-C3'-O3'	6.83	123.95	113.70
25	BB	830	G	O4'-C1'-N9	6.83	118.45	108.20
25	BB	1071	G	O3'-P-O5'	6.83	114.25	104.00
25	BB	2649	C	C3'-C2'-O2'	6.83	120.95	110.70
3	A1	1488	G	O5'-C5'-C4'	-6.83	101.25	111.50
25	BB	1886	U	C3'-C2'-C1'	6.83	108.13	101.30
35	BL	5	ALA	CA-C-N	6.83	130.35	120.38
35	BL	5	ALA	C-N-CA	6.83	130.35	120.38
3	A1	720	C	C3'-C2'-O2'	6.83	120.94	110.70
3	A1	1258	G	C5'-C4'-C3'	-6.83	105.76	116.00
25	BB	480	A	C5'-C4'-C3'	-6.83	105.76	116.00
25	BB	1920	C	C3'-C2'-O2'	6.83	120.94	110.70
51	B2	162	ASP	CA-C-N	6.83	129.91	120.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	B2	162	ASP	C-N-CA	6.83	129.91	120.63
3	A1	937	A	C2'-C3'-O3'	6.83	119.74	109.50
25	BB	1680	U	C4'-C3'-C2'	-6.83	95.77	102.60
25	BB	2580	U	C4'-C3'-C2'	-6.83	95.77	102.60
25	BB	2811	G	O4'-C4'-C3'	6.83	110.83	104.00
15	AO	143	LEU	CA-C-N	6.82	130.33	120.91
15	AO	143	LEU	C-N-CA	6.82	130.33	120.91
25	BB	2466	C	C5'-C4'-C3'	-6.82	105.76	116.00
3	A1	1406	U	C4'-C3'-C2'	-6.82	95.78	102.60
3	A1	1089	G	C3'-C2'-C1'	6.82	108.12	101.30
25	BB	1356	G	C3'-C2'-C1'	6.82	108.12	101.30
25	BB	547	A	C5'-C4'-O4'	6.82	120.03	109.80
1	AP	46	G	P-O3'-C3'	6.82	130.43	120.20
3	A1	1205	U	C4'-C3'-C2'	6.82	109.42	102.60
3	A1	1232	U	C4'-C3'-O3'	-6.82	102.77	113.00
3	A1	866	C	O4'-C1'-N1	6.82	118.72	108.50
25	BB	1885	A	C3'-C2'-C1'	6.82	108.11	101.30
25	BB	2201	G	O4'-C4'-C3'	6.82	110.81	104.00
3	A1	966	G	O3'-P-O5'	6.81	114.22	104.00
1	AP	74	C	OP1-P-O3'	-6.81	87.57	108.00
27	BD	9	ASN	CA-CB-CG	-6.81	105.79	112.60
13	AL	57	VAL	CA-C-N	6.81	126.79	119.78
13	AL	57	VAL	C-N-CA	6.81	126.79	119.78
25	BB	2564	A	C5'-C4'-O4'	6.81	119.31	109.10
25	BB	345	A	C5'-C4'-C3'	-6.81	105.79	116.00
25	BB	2239	G	C3'-C2'-O2'	6.81	120.91	110.70
3	A1	1498	U	O4'-C4'-C3'	6.81	110.81	104.00
25	BB	2024	G	O4'-C4'-C3'	6.80	110.81	104.00
25	BB	2084	C	O4'-C4'-C3'	6.80	110.80	104.00
25	BB	2556	C	C5'-C4'-O4'	6.80	120.01	109.80
25	BB	2833	U	O4'-C4'-C3'	6.80	112.91	106.10
3	A1	852	G	C5'-C4'-O4'	6.80	120.00	109.80
3	A1	951	G	C3'-C2'-C1'	-6.80	94.50	101.30
25	BB	504	A	C2'-C3'-O3'	-6.80	103.50	113.70
25	BB	2513	A	C2'-C3'-O3'	6.80	119.70	109.50
25	BB	2516	A	O4'-C4'-C3'	6.80	112.90	106.10
2	AM	5	U	C1'-C2'-O2'	-6.80	101.60	111.80
3	A1	1320	C	C4'-C3'-C2'	-6.80	95.80	102.60
25	BB	108	G	C2'-C3'-O3'	6.80	123.90	113.70
25	BB	2190	G	O3'-P-O5'	6.80	114.20	104.00
1	AE	36	A	C4'-C3'-C2'	-6.80	95.80	102.60
25	BB	1222	U	C1'-O4'-C4'	-6.80	103.10	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1480	C	C5'-C4'-O4'	6.80	120.00	109.80
25	BB	1736	U	N1-C1'-C2'	6.80	122.20	112.00
25	BB	1830	C	O3'-P-O5'	6.79	114.19	104.00
1	AA	3	G	C3'-C2'-C1'	6.79	108.09	101.30
22	AW	112	ARG	CA-C-N	6.79	132.16	121.56
22	AW	112	ARG	C-N-CA	6.79	132.16	121.56
25	BB	867	C	C3'-C2'-O2'	6.79	120.89	110.70
25	BB	2158	A	C1'-O4'-C4'	-6.79	103.11	109.90
29	BF	10	ARG	CA-C-N	6.79	134.51	121.54
29	BF	10	ARG	C-N-CA	6.79	134.51	121.54
3	A1	701	U	C3'-C2'-O2'	-6.79	104.42	114.60
10	AI	25	ARG	NE-CZ-NH2	6.79	125.31	119.20
25	BB	502	A	O4'-C4'-C3'	6.79	110.79	104.00
3	A1	303	A	C4'-C3'-C2'	-6.79	95.81	102.60
17	AR	183	ARG	CD-NE-CZ	6.79	133.90	124.40
24	BA	89	U	C3'-C2'-C1'	6.79	108.09	101.30
25	BB	546	U	C5'-C4'-O4'	6.79	119.28	109.10
44	BU	34	GLU	N-CA-C	6.79	120.23	108.76
25	BB	1883	U	C5'-C4'-C3'	-6.79	105.82	116.00
25	BB	2761	A	C4'-C3'-C2'	-6.79	95.81	102.60
25	BB	719	C	O3'-P-O5'	-6.79	93.82	104.00
1	AA	53	G	C3'-C2'-O2'	6.78	120.88	110.70
3	A1	1446	A	C2'-C3'-O3'	6.78	119.67	109.50
25	BB	2291	U	C1'-O4'-C4'	-6.78	103.12	109.90
52	B3	173	ALA	N-CA-CB	-6.78	99.92	110.57
10	AI	55	ASP	CA-C-N	6.78	133.23	122.11
10	AI	55	ASP	C-N-CA	6.78	133.23	122.11
25	BB	2886	A	P-O3'-C3'	6.78	130.37	120.20
3	A1	332	G	C4'-C3'-C2'	-6.78	95.82	102.60
3	A1	683	G	O4'-C4'-C3'	-6.78	97.22	104.00
17	AR	187	ARG	NE-CZ-NH2	-6.78	113.10	119.20
1	AA	3	G	O4'-C4'-C3'	-6.78	97.22	104.00
25	BB	1922	G	O4'-C4'-C3'	6.78	110.78	104.00
25	BB	2322	A	C3'-C2'-C1'	-6.78	94.72	101.50
25	BB	1972	G	C2'-C3'-O3'	6.78	119.67	109.50
25	BB	2346	A	C5'-C4'-O4'	6.78	119.27	109.10
25	BB	2626	C	C2'-C3'-O3'	-6.78	103.53	113.70
3	A1	200	G	C4'-C3'-O3'	-6.78	102.84	113.00
3	A1	480	U	C2'-C3'-O3'	6.78	123.86	113.70
25	BB	120	U	C1'-C2'-O2'	6.78	118.56	108.40
25	BB	1785	A	C4'-C3'-C2'	-6.77	95.83	102.60
31	BH	54	VAL	CA-C-N	6.77	134.48	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BH	54	VAL	C-N-CA	6.77	134.48	121.54
17	AR	40	HIS	CB-CG-CD2	-6.77	122.40	131.20
3	A1	203	G	C4'-C3'-O3'	-6.77	102.85	113.00
3	A1	893	C	C1'-O4'-C4'	6.77	116.47	109.70
25	BB	1961	C	C4'-C3'-C2'	-6.77	95.83	102.60
3	A1	1431	A	O5'-C5'-C4'	-6.77	101.35	111.50
33	BJ	55	GLN	OE1-CD-NE2	-6.77	115.83	122.60
1	AA	46	G	O3'-P-O5'	6.76	114.15	104.00
3	A1	1445	U	C5'-C4'-C3'	-6.76	105.85	116.00
25	BB	203	A	C3'-C2'-O2'	6.76	120.85	110.70
25	BB	1898	U	O4'-C1'-C2'	-6.76	99.04	105.80
25	BB	733	G	C4'-C3'-C2'	-6.76	95.84	102.60
1	AE	75	C	O5'-C5'-C4'	-6.76	101.36	111.50
14	AN	9	ARG	NH1-CZ-NH2	-6.76	110.51	119.30
25	BB	561	G	C4'-C3'-C2'	-6.76	95.84	102.60
27	BD	60	ALA	N-CA-C	6.76	117.51	108.38
50	B1	117	ARG	CA-C-N	6.76	134.45	121.54
50	B1	117	ARG	C-N-CA	6.76	134.45	121.54
25	BB	194	G	C1'-C2'-O2'	-6.76	101.66	111.80
25	BB	2424	C	C1'-O4'-C4'	-6.76	103.14	109.90
38	BO	58	VAL	CA-C-N	6.76	134.45	121.54
38	BO	58	VAL	C-N-CA	6.76	134.45	121.54
51	B2	147	ARG	NH1-CZ-NH2	-6.76	110.52	119.30
25	BB	1920	C	C4'-C3'-C2'	-6.76	95.84	102.60
25	BB	2712	C	N1-C1'-C2'	6.76	122.13	112.00
37	BN	113	ASP	CA-CB-CG	-6.76	105.84	112.60
53	B4	122	LEU	CA-C-N	6.76	132.36	122.63
53	B4	122	LEU	C-N-CA	6.76	132.36	122.63
3	A1	757	U	O4'-C4'-C3'	6.75	110.75	104.00
25	BB	636	G	O4'-C4'-C3'	6.75	110.75	104.00
3	A1	430	A	C4'-C3'-C2'	-6.75	95.85	102.60
3	A1	449	G	C5'-C4'-C3'	-6.75	105.87	116.00
3	A1	599	C	O4'-C1'-C2'	-6.75	100.85	107.60
3	A1	853	C	C5'-C4'-C3'	-6.75	105.87	116.00
25	BB	1507	C	C4'-C3'-O3'	6.75	123.13	113.00
25	BB	2420	C	C2'-C3'-O3'	6.75	119.63	109.50
3	A1	916	U	O4'-C4'-C3'	6.75	110.75	104.00
25	BB	2817	U	O4'-C1'-C2'	-6.75	100.85	107.60
37	BN	202	ARG	CA-C-N	6.75	129.61	120.63
37	BN	202	ARG	C-N-CA	6.75	129.61	120.63
25	BB	1655	A	C2'-C3'-O3'	6.75	123.83	113.70
25	BB	1964	G	C3'-C2'-O2'	6.75	120.83	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	924	C	C4'-C3'-O3'	6.75	119.52	109.40
25	BB	1626	A	C1'-C2'-O2'	6.75	118.52	108.40
25	BB	2168	G	O4'-C4'-C3'	6.75	110.75	104.00
25	BB	1678	A	C5'-C4'-O4'	-6.75	99.68	109.80
25	BB	1926	U	C1'-O4'-C4'	-6.75	103.15	109.90
25	BB	2421	G	C4'-C3'-O3'	-6.75	99.28	109.40
25	BB	516	C	O4'-C4'-C3'	6.75	110.75	104.00
25	BB	2516	A	C2'-C3'-O3'	6.74	119.62	109.50
40	BQ	22	LEU	CA-C-N	6.74	129.64	120.54
40	BQ	22	LEU	C-N-CA	6.74	129.64	120.54
53	B4	84	ALA	CA-C-N	6.74	129.69	120.72
53	B4	84	ALA	C-N-CA	6.74	129.69	120.72
3	A1	461	A	C5'-C4'-C3'	-6.74	105.89	116.00
3	A1	1275	A	C5'-C4'-O4'	6.74	119.91	109.80
25	BB	552	U	C4'-C3'-O3'	6.74	123.11	113.00
25	BB	1879	C	C5'-C4'-O4'	6.74	119.91	109.80
25	BB	1681	G	C3'-C2'-O2'	6.74	120.81	110.70
32	BI	74	GLN	CB-CG-CD	-6.74	101.15	112.60
25	BB	1180	U	C4'-C3'-C2'	-6.74	95.86	102.60
25	BB	1543	G	C4'-C3'-C2'	-6.74	95.86	102.60
25	BB	2629	U	O4'-C4'-C3'	6.74	112.83	106.10
32	BI	93	LYS	CA-C-N	6.74	134.41	121.54
32	BI	93	LYS	C-N-CA	6.74	134.41	121.54
25	BB	2794	C	C4'-C3'-C2'	-6.73	95.87	102.60
35	BL	62	ASP	CA-CB-CG	6.73	119.33	112.60
25	BB	2630	G	O3'-P-O5'	6.73	114.10	104.00
30	BG	67	PHE	CA-CB-CG	6.73	120.53	113.80
25	BB	311	A	C5'-C4'-O4'	6.73	119.20	109.10
25	BB	2334	U	C5'-C4'-O4'	6.73	119.90	109.80
36	BM	69	ARG	NE-CZ-NH2	6.73	125.26	119.20
25	BB	1861	G	C4'-C3'-C2'	-6.73	95.87	102.60
25	BB	1886	U	O4'-C1'-N1	6.73	118.59	108.50
3	A1	1382	C	C2'-C3'-O3'	6.73	123.79	113.70
31	BH	54	VAL	N-CA-C	6.73	123.33	109.34
25	BB	508	A	C3'-C2'-O2'	6.73	120.79	110.70
25	BB	1852	U	C3'-C2'-C1'	-6.73	94.77	101.50
1	AP	68	U	C3'-C2'-C1'	-6.72	94.58	101.30
3	A1	502	A	C3'-C2'-C1'	6.72	108.03	101.30
3	A1	767	A	C3'-C2'-O2'	6.72	120.79	110.70
8	AG	3	GLN	OE1-CD-NE2	-6.72	115.88	122.60
25	BB	1793	C	C5'-C4'-C3'	-6.72	105.91	116.00
32	BI	61	ARG	CA-C-N	6.72	130.26	120.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	BI	61	ARG	C-N-CA	6.72	130.26	120.71
3	A1	1506	U	C2'-C3'-O3'	-6.72	103.62	113.70
25	BB	66	C	O4'-C1'-N1	6.72	118.58	108.50
25	BB	1669	A	O4'-C4'-C3'	6.72	110.72	104.00
3	A1	308	C	C4'-C3'-C2'	-6.72	95.88	102.60
25	BB	1929	G	C4'-C3'-C2'	-6.72	95.88	102.60
1	AE	46	G	C4'-C3'-C2'	-6.72	95.88	102.60
10	AI	28	ARG	NH1-CZ-NH2	-6.72	110.56	119.30
3	A1	396	C	O4'-C1'-N1	6.72	118.58	108.50
25	BB	2355	G	C5'-C4'-C3'	-6.72	105.92	116.00
3	A1	1236	A	C4'-C3'-C2'	-6.72	95.88	102.60
25	BB	1666	G	C5'-C4'-O4'	6.72	119.88	109.80
30	BG	86	ARG	NE-CZ-NH1	6.72	128.22	121.50
50	B1	21	ARG	NE-CZ-NH1	6.72	128.22	121.50
1	AP	4	G	C4'-C3'-C2'	-6.71	95.89	102.60
3	A1	143	A	O4'-C1'-C2'	6.71	114.31	107.60
6	AD	66	ILE	CA-CB-CG1	6.71	121.81	110.40
25	BB	1400	U	O4'-C4'-C3'	-6.71	97.29	104.00
25	BB	2421	G	C2'-C3'-O3'	6.71	119.57	109.50
25	BB	1058	U	C4'-C3'-C2'	-6.71	95.89	102.60
25	BB	2117	A	C1'-C2'-O2'	-6.71	98.33	108.40
25	BB	2735	G	O3'-P-O5'	6.71	114.07	104.00
25	BB	35	G	O4'-C4'-C3'	6.71	110.71	104.00
25	BB	273	G	O3'-P-O5'	6.71	114.07	104.00
25	BB	2229	U	C3'-C2'-C1'	6.71	108.01	101.30
40	BQ	47	ARG	NH1-CZ-NH2	-6.71	110.58	119.30
3	A1	441	A	N9-C1'-C2'	6.71	122.06	112.00
3	A1	1058	G	O4'-C1'-N9	6.71	118.56	108.50
3	A1	1293	C	C4'-C3'-C2'	-6.71	95.89	102.60
3	A1	1493	A	O3'-P-O5'	6.71	114.06	104.00
25	BB	1153	C	O4'-C1'-N1	6.71	118.56	108.50
3	A1	1128	C	C4'-C3'-O3'	6.71	123.06	113.00
25	BB	1643	G	C2'-C3'-O3'	6.71	123.76	113.70
25	BB	1591	A	C5'-C4'-C3'	-6.70	105.94	116.00
3	A1	1500	A	C5'-C4'-C3'	-6.70	105.95	116.00
18	AS	144	GLU	OE1-CD-OE2	-6.70	106.82	122.90
25	BB	1346	G	C3'-C2'-O2'	6.70	120.75	110.70
49	BZ	145	SER	N-CA-C	6.70	118.27	110.97
3	A1	1055	A	C4'-C3'-C2'	-6.70	95.90	102.60
4	AB	131	LYS	CA-C-O	-6.70	113.32	120.42
25	BB	1937	A	C5'-C4'-C3'	-6.70	105.95	116.00
2	AM	4	U	C5'-C4'-C3'	6.70	126.04	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	346	A	O4'-C1'-N9	6.70	118.54	108.50
25	BB	2171	A	O4'-C4'-C3'	6.70	112.80	106.10
3	A1	363	A	O4'-C1'-N9	6.69	118.54	108.50
3	A1	413	G	C4'-C3'-O3'	6.69	123.04	113.00
3	A1	992	U	C1'-C2'-O2'	6.69	121.84	111.80
3	A1	1265	C	C4'-C3'-O3'	6.69	123.04	113.00
25	BB	1876	A	C1'-O4'-C4'	-6.69	103.21	109.90
3	A1	1432	G	O4'-C4'-C3'	6.69	110.69	104.00
7	AF	108	ARG	NE-CZ-NH2	6.69	125.22	119.20
24	BA	82	U	O5'-C5'-C4'	6.69	121.54	111.50
29	BF	24	THR	CA-CB-CG2	6.69	121.88	110.50
37	BN	263	ASP	CA-C-N	6.69	134.32	121.54
37	BN	263	ASP	C-N-CA	6.69	134.32	121.54
25	BB	99	U	P-O5'-C5'	6.69	130.94	120.90
25	BB	908	C	C4'-C3'-O3'	6.69	119.44	109.40
25	BB	1825	U	C5'-C4'-O4'	6.69	119.84	109.80
25	BB	2251	G	C1'-O4'-C4'	-6.69	103.21	109.90
20	AU	19	SER	N-CA-C	6.69	119.84	109.07
25	BB	887	U	C1'-C2'-O2'	6.69	121.83	111.80
3	A1	531	U	C3'-C2'-O2'	-6.69	104.57	114.60
11	AJ	77	VAL	CA-C-N	6.69	128.98	120.56
11	AJ	77	VAL	C-N-CA	6.69	128.98	120.56
25	BB	1352	U	O3'-P-O5'	6.69	114.03	104.00
25	BB	1491	G	C4'-C3'-C2'	-6.69	95.91	102.60
25	BB	1	G	C5'-C4'-C3'	-6.68	105.97	116.00
25	BB	267	C	C4'-C3'-C2'	-6.68	95.92	102.60
25	BB	2024	G	O3'-P-O5'	6.68	114.03	104.00
25	BB	2817	U	C5'-C4'-C3'	-6.68	105.97	116.00
30	BG	45	ARG	NE-CZ-NH1	6.68	128.19	121.50
25	BB	2858	C	O4'-C4'-C3'	6.68	110.68	104.00
3	A1	1379	G	O4'-C1'-N9	6.68	118.22	108.20
17	AR	26	ALA	CA-C-N	6.68	129.71	120.49
17	AR	26	ALA	C-N-CA	6.68	129.71	120.49
25	BB	1175	A	O4'-C4'-C3'	6.68	110.68	104.00
1	AA	50	U	C4'-C3'-C2'	-6.68	95.92	102.60
25	BB	1979	U	C5'-C4'-C3'	-6.68	105.98	116.00
48	BY	100	LEU	CA-C-N	6.68	129.56	120.54
48	BY	100	LEU	C-N-CA	6.68	129.56	120.54
3	A1	888	G	C4'-C3'-O3'	6.68	123.02	113.00
20	AU	85	GLN	OE1-CD-NE2	-6.68	115.92	122.60
25	BB	2217	G	C1'-C2'-O2'	-6.68	98.38	108.40
25	BB	2530	A	C1'-O4'-C4'	-6.68	103.22	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	B3	165	ASP	CA-CB-CG	6.68	119.28	112.60
17	AR	84	ASN	CA-C-N	6.67	129.52	120.38
17	AR	84	ASN	C-N-CA	6.67	129.52	120.38
25	BB	557	C	O4'-C4'-C3'	6.67	110.67	104.00
25	BB	1200	C	C1'-O4'-C4'	-6.67	103.03	109.70
25	BB	1201	U	C1'-O4'-C4'	-6.67	103.23	109.90
25	BB	1914	C	O4'-C4'-C3'	6.67	110.67	104.00
25	BB	2885	G	O4'-C1'-C2'	-6.67	100.93	107.60
50	B1	7	ASP	N-CA-C	6.67	118.66	109.18
3	A1	86	G	C4'-C3'-C2'	-6.67	95.93	102.60
25	BB	565	C	C2'-C3'-O3'	6.67	119.51	109.50
25	BB	1052	C	O4'-C4'-C3'	6.67	110.67	104.00
25	BB	2155	U	C3'-C2'-C1'	6.67	107.97	101.30
25	BB	2005	A	C4'-C3'-C2'	-6.67	95.93	102.60
3	A1	1050	G	C1'-O4'-C4'	-6.67	103.23	109.90
25	BB	390	U	O4'-C1'-C2'	-6.67	99.13	105.80
25	BB	1739	A	C4'-C3'-C2'	-6.67	95.93	102.60
25	BB	2206	C	C1'-C2'-O2'	6.67	118.40	108.40
20	AU	73	GLU	OE1-CD-OE2	-6.67	106.90	122.90
39	BP	76	ARG	CA-C-N	6.67	134.27	121.54
39	BP	76	ARG	C-N-CA	6.67	134.27	121.54
25	BB	792	A	C4'-C3'-O3'	-6.66	99.41	109.40
25	BB	1164	C	C3'-C2'-C1'	6.66	107.96	101.30
30	BG	103	ARG	NE-CZ-NH2	6.66	125.20	119.20
10	AI	56	ARG	NH1-CZ-NH2	-6.66	110.64	119.30
3	A1	818	G	C4'-C3'-C2'	6.66	109.26	102.60
25	BB	1375	U	C3'-C2'-C1'	6.66	107.96	101.30
25	BB	2513	A	O3'-P-O5'	-6.66	94.01	104.00
25	BB	1957	C	C3'-C2'-C1'	6.66	107.96	101.30
3	A1	372	C	C3'-C2'-O2'	6.66	124.58	114.60
25	BB	624	C	C4'-C3'-C2'	-6.66	95.94	102.60
25	BB	759	G	C2'-C3'-O3'	6.66	119.48	109.50
23	AX	90	LEU	CA-C-N	6.65	129.50	120.38
23	AX	90	LEU	C-N-CA	6.65	129.50	120.38
37	BN	100	ARG	CD-NE-CZ	6.65	133.72	124.40
40	BQ	29	ARG	NE-CZ-NH1	6.65	128.15	121.50
24	BA	53	A	C4'-C3'-C2'	-6.65	95.95	102.60
25	BB	2483	C	O4'-C4'-C3'	-6.65	97.35	104.00
25	BB	2886	A	C1'-C2'-O2'	6.65	121.78	111.80
1	AP	31	A	C4'-C3'-O3'	6.65	125.80	112.50
3	A1	1066	C	O3'-P-O5'	-6.65	94.02	104.00
11	AJ	76	ARG	NE-CZ-NH1	6.65	128.15	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BK	23	GLU	OE1-CD-OE2	-6.65	106.94	122.90
54	B5	21	PRO	N-CA-C	6.65	118.81	110.70
3	A1	462	G	O4'-C1'-N9	6.65	118.17	108.20
24	BA	26	C	C1'-O4'-C4'	-6.65	103.05	109.70
25	BB	181	A	C4'-C3'-C2'	-6.65	95.95	102.60
25	BB	843	G	C1'-C2'-O2'	-6.65	98.43	108.40
3	A1	444	G	C4'-C3'-C2'	-6.65	95.95	102.60
3	A1	1369	C	C2'-C3'-O3'	6.65	119.47	109.50
3	A1	1445	U	C4'-C3'-C2'	-6.65	95.95	102.60
25	BB	196	A	C3'-C2'-C1'	6.65	108.15	101.50
3	A1	935	A	C3'-C2'-O2'	6.65	120.67	110.70
43	BT	9	ARG	NE-CZ-NH2	6.64	125.18	119.20
1	AP	44	A	C3'-C2'-C1'	6.64	107.94	101.30
19	AT	55	HIS	CB-CG-CD2	-6.64	122.56	131.20
48	BY	141	ARG	NE-CZ-NH1	-6.64	114.86	121.50
25	BB	1175	A	C2'-C3'-O3'	6.64	123.66	113.70
25	BB	1680	U	N1-C1'-C2'	6.64	123.96	114.00
3	A1	1081	A	O5'-C5'-C4'	-6.64	101.54	111.50
43	BT	16	ARG	NE-CZ-NH1	-6.64	114.86	121.50
25	BB	274	C	C3'-C2'-C1'	6.64	107.94	101.30
3	A1	1229	A	C3'-C2'-C1'	6.63	107.94	101.30
25	BB	1494	A	O4'-C1'-C2'	-6.63	100.97	107.60
52	B3	29	ASN	OD1-CG-ND2	-6.63	115.97	122.60
3	A1	462	G	C3'-C2'-C1'	6.63	108.13	101.50
3	A1	1493	A	O4'-C4'-C3'	-6.63	99.47	106.10
25	BB	2595	G	C4'-C3'-O3'	6.63	122.94	113.00
15	AO	111	ASP	N-CA-C	6.63	119.28	110.53
25	BB	281	C	C3'-C2'-O2'	6.63	120.64	110.70
25	BB	545	U	O4'-C4'-C3'	6.63	112.73	106.10
3	A1	1480	A	C4'-C3'-C2'	-6.63	95.97	102.60
25	BB	1206	G	C1'-O4'-C4'	-6.63	103.07	109.70
25	BB	1747	U	C3'-C2'-O2'	6.63	120.64	110.70
25	BB	2191	A	C5'-C4'-C3'	-6.62	106.06	116.00
25	BB	706	A	C3'-C2'-C1'	6.62	107.92	101.30
25	BB	1176	U	O4'-C1'-N1	6.62	118.43	108.50
25	BB	2214	C	O4'-C1'-C2'	-6.62	100.98	107.60
28	BE	105	ILE	CA-C-N	6.62	131.78	120.72
28	BE	105	ILE	C-N-CA	6.62	131.78	120.72
1	AA	19	G	O4'-C1'-C2'	-6.62	99.18	105.80
36	BM	35	ALA	CA-C-N	6.62	130.04	120.38
36	BM	35	ALA	C-N-CA	6.62	130.04	120.38
3	A1	129	A	O3'-P-O5'	-6.62	94.08	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1043	G	C3'-C2'-O2'	6.62	120.62	110.70
25	BB	253	C	C5'-C4'-C3'	-6.62	106.08	116.00
25	BB	414	C	C5'-C4'-C3'	-6.62	106.08	116.00
34	BK	20	VAL	N-CA-C	6.62	117.69	110.21
3	A1	1205	U	C1'-O4'-C4'	6.61	116.51	109.90
3	A1	1404	C	C4'-C3'-C2'	-6.61	95.99	102.60
25	BB	320	A	O4'-C1'-N9	6.61	118.12	108.20
25	BB	735	A	O4'-C1'-C2'	-6.61	100.99	107.60
25	BB	1588	G	O4'-C1'-C2'	6.61	112.41	105.80
25	BB	295	G	C3'-C2'-O2'	6.61	120.62	110.70
3	A1	828	U	O4'-C4'-C3'	6.61	110.61	104.00
25	BB	1343	G	C4'-C3'-O3'	6.61	119.32	109.40
25	BB	2056	G	C1'-O4'-C4'	-6.61	103.29	109.90
25	BB	2098	U	C1'-O4'-C4'	-6.61	103.29	109.90
25	BB	2144	G	C5'-C4'-C3'	-6.61	105.28	115.20
25	BB	2619	C	C2'-C3'-O3'	6.61	119.42	109.50
49	BZ	42	LYS	N-CA-C	6.61	120.93	112.34
3	A1	270	A	O4'-C1'-N9	6.61	118.41	108.50
3	A1	1023	U	C4'-C3'-O3'	-6.61	103.09	113.00
3	A1	1294	G	O3'-P-O5'	6.61	113.91	104.00
25	BB	36	G	O4'-C4'-C3'	6.61	110.61	104.00
3	A1	846	G	O3'-P-O5'	-6.61	94.09	104.00
3	A1	1411	C	C2'-C3'-O3'	6.61	123.61	113.70
25	BB	652	U	C5'-C4'-O4'	6.61	119.71	109.80
25	BB	2548	U	O4'-C1'-C2'	6.61	114.21	107.60
25	BB	2613	U	O4'-C1'-C2'	-6.61	99.19	105.80
3	A1	1395	C	C2'-C3'-O3'	6.60	119.41	109.50
3	A1	289	G	O4'-C4'-C3'	6.60	112.70	106.10
3	A1	539	A	C3'-C2'-O2'	6.60	120.61	110.70
25	BB	47	C	O4'-C4'-C3'	6.60	110.60	104.00
17	AR	135	GLN	OE1-CD-NE2	-6.60	116.00	122.60
25	BB	2093	G	C3'-C2'-O2'	6.60	120.60	110.70
25	BB	2208	C	C3'-C2'-O2'	6.60	120.60	110.70
3	A1	378	G	C5'-C4'-C3'	-6.60	106.10	116.00
3	A1	764	C	O4'-C4'-C3'	6.60	110.60	104.00
14	AN	73	ARG	NE-CZ-NH1	6.60	128.10	121.50
25	BB	1953	A	O4'-C4'-C3'	6.60	110.60	104.00
25	BB	2199	A	O4'-C4'-C3'	6.60	110.60	104.00
25	BB	2297	A	C2'-C3'-O3'	6.60	123.60	113.70
25	BB	2482	A	C4'-C3'-C2'	-6.60	96.00	102.60
25	BB	2539	C	O4'-C4'-C3'	6.60	112.70	106.10
27	BD	48	PRO	CA-C-N	6.60	129.78	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BD	48	PRO	C-N-CA	6.60	129.78	120.28
3	A1	425	G	C4'-C3'-O3'	-6.60	103.11	113.00
3	A1	721	G	C4'-C3'-O3'	-6.60	99.51	109.40
3	A1	343	U	O3'-P-O5'	6.59	113.89	104.00
17	AR	138	PRO	CA-C-N	6.59	134.14	121.54
17	AR	138	PRO	C-N-CA	6.59	134.14	121.54
25	BB	1089	A	O4'-C1'-N9	6.59	118.09	108.20
25	BB	1158	C	C5'-C4'-C3'	-6.59	105.31	115.20
25	BB	1507	C	C4'-C3'-C2'	-6.59	96.01	102.60
25	BB	2217	G	C3'-C2'-O2'	6.59	120.59	110.70
25	BB	2553	G	C3'-C2'-O2'	6.59	120.59	110.70
25	BB	2743	U	C1'-O4'-C4'	-6.59	103.31	109.90
3	A1	1393	U	O4'-C1'-C2'	6.59	112.39	105.80
25	BB	149	A	C4'-C3'-O3'	6.59	122.89	113.00
24	BA	30	C	O4'-C4'-C3'	6.59	110.59	104.00
24	BA	103	U	C4'-C3'-C2'	-6.59	96.01	102.60
25	BB	1641	A	C2'-C3'-O3'	6.59	123.59	113.70
25	BB	1808	A	C2'-C3'-O3'	6.59	119.39	109.50
1	AA	33	U	C4'-C3'-O3'	6.59	122.89	113.00
1	AA	58	A	C5'-C4'-O4'	-6.59	99.21	109.10
3	A1	930	C	C3'-C2'-O2'	6.59	120.58	110.70
17	AR	24	VAL	N-CA-C	6.59	118.28	108.46
25	BB	568	U	O4'-C1'-N1	6.59	118.08	108.20
25	BB	2095	A	C1'-O4'-C4'	-6.59	103.31	109.90
14	AN	12	GLN	OE1-CD-NE2	-6.58	116.02	122.60
50	B1	4	VAL	N-CA-C	6.58	123.04	109.34
3	A1	315	A	C1'-O4'-C4'	-6.58	103.12	109.70
3	A1	1087	G	C3'-C2'-C1'	6.58	107.88	101.30
3	A1	1482	G	O4'-C4'-C3'	6.58	110.58	104.00
25	BB	1545	A	C5'-C4'-C3'	-6.58	106.12	116.00
25	BB	1807	G	C1'-O4'-C4'	-6.58	103.32	109.90
3	A1	34	C	C4'-C3'-O3'	-6.58	103.13	113.00
25	BB	41	C	C5'-C4'-O4'	-6.58	99.93	109.80
29	BF	38	ARG	NE-CZ-NH2	6.58	125.12	119.20
50	B1	56	GLY	CA-C-N	6.58	133.55	121.70
50	B1	56	GLY	C-N-CA	6.58	133.55	121.70
3	A1	818	G	C5'-C4'-C3'	-6.58	105.33	115.20
3	A1	1445	U	O3'-P-O5'	6.58	113.87	104.00
3	A1	913	A	C4'-C3'-C2'	-6.58	96.02	102.60
25	BB	2458	G	O4'-C4'-C3'	6.58	110.58	104.00
3	A1	51	A	O3'-P-O5'	6.58	113.86	104.00
3	A1	118	U	C3'-C2'-C1'	6.58	107.88	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	AK	43	ILE	N-CA-C	6.58	119.31	111.09
3	A1	264	C	C4'-C3'-O3'	6.57	119.26	109.40
3	A1	1382	C	C3'-C2'-O2'	6.57	120.56	110.70
25	BB	1467	U	C5'-C4'-C3'	-6.57	106.14	116.00
25	BB	1710	G	C1'-C2'-O2'	-6.57	98.54	108.40
26	BC	12	GLN	OE1-CD-NE2	-6.57	116.03	122.60
31	BH	30	ARG	NE-CZ-NH1	6.57	128.07	121.50
3	A1	1063	C	O4'-C4'-C3'	-6.57	97.43	104.00
8	AG	65	GLN	OE1-CD-NE2	-6.57	116.03	122.60
15	AO	171	ARG	NE-CZ-NH1	6.57	128.07	121.50
25	BB	233	A	O4'-C4'-C3'	6.57	110.57	104.00
25	BB	323	C	O4'-C1'-N1	6.57	118.06	108.20
3	A1	345	C	C2'-C3'-O3'	6.57	119.35	109.50
3	A1	667	G	C5'-C4'-O4'	6.57	119.65	109.80
9	AH	86	LEU	N-CA-C	6.57	124.79	110.80
25	BB	426	C	O4'-C1'-C2'	-6.57	101.03	107.60
39	BP	64	GLY	CA-C-N	6.57	134.08	121.54
39	BP	64	GLY	C-N-CA	6.57	134.08	121.54
51	B2	177	ARG	CA-C-N	6.57	133.52	121.70
51	B2	177	ARG	C-N-CA	6.57	133.52	121.70
3	A1	299	G	C1'-O4'-C4'	6.56	116.26	109.70
11	AJ	30	HIS	CA-CB-CG	6.56	120.36	113.80
25	BB	1626	A	O4'-C1'-N9	6.56	118.34	108.50
25	BB	2568	U	O3'-P-O5'	-6.56	94.16	104.00
3	A1	1111	A	C4'-C3'-O3'	-6.56	99.56	109.40
25	BB	1035	U	O4'-C1'-C2'	-6.56	99.24	105.80
25	BB	2546	U	C1'-O4'-C4'	6.56	116.46	109.90
25	BB	710	U	C5'-C4'-O4'	6.55	119.63	109.80
25	BB	1966	A	C4'-C3'-C2'	-6.55	96.05	102.60
49	BZ	87	ARG	NH1-CZ-NH2	-6.55	110.78	119.30
1	AA	46	G	C3'-C2'-C1'	-6.55	94.95	101.50
19	AT	86	ARG	NH1-CZ-NH2	-6.55	110.78	119.30
3	A1	1033	G	C3'-C2'-O2'	6.55	120.53	110.70
19	AT	8	PHE	CA-CB-CG	6.55	120.35	113.80
1	AA	58	A	C1'-C2'-O2'	-6.55	101.98	111.80
1	AP	23	A	C5'-C4'-O4'	6.55	119.62	109.80
3	A1	925	G	C3'-C2'-C1'	6.55	107.85	101.30
9	AH	16	ARG	NH1-CZ-NH2	-6.55	110.79	119.30
2	AM	4	U	C4'-C3'-O3'	6.55	122.82	113.00
25	BB	83	A	O4'-C1'-N9	6.55	118.02	108.20
25	BB	717	C	C3'-C2'-O2'	6.55	120.52	110.70
25	BB	1485	U	O4'-C4'-C3'	6.55	110.55	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1889	A	C5'-C4'-O4'	-6.55	99.28	109.10
3	A1	331	G	C3'-C2'-O2'	6.54	120.52	110.70
3	A1	1482	G	C1'-C2'-O2'	6.54	118.22	108.40
25	BB	1223	G	C5'-C4'-C3'	-6.54	106.18	116.00
25	BB	2655	G	C2'-C3'-O3'	6.54	119.31	109.50
37	BN	162	GLN	OE1-CD-NE2	-6.54	116.06	122.60
3	A1	1278	G	C5'-C4'-C3'	-6.54	106.19	116.00
25	BB	148	U	C2'-C3'-O3'	6.54	119.31	109.50
25	BB	899	A	C1'-O4'-C4'	-6.54	103.16	109.70
25	BB	919	U	O3'-P-O5'	-6.54	94.19	104.00
25	BB	1716	U	O3'-P-O5'	-6.54	94.19	104.00
25	BB	2702	G	O4'-C1'-N9	6.54	118.31	108.50
25	BB	1367	A	C4'-C3'-C2'	-6.54	96.06	102.60
25	BB	1780	A	C1'-C2'-O2'	-6.54	98.59	108.40
3	A1	50	A	C3'-C2'-C1'	6.54	108.04	101.50
3	A1	1469	C	C4'-C3'-C2'	-6.54	96.06	102.60
3	A1	1489	G	C1'-O4'-C4'	-6.54	103.36	109.90
25	BB	604	G	C5'-C4'-C3'	-6.54	106.19	116.00
25	BB	1585	C	O4'-C1'-C2'	6.54	114.14	107.60
31	BH	7	ARG	NE-CZ-NH1	6.54	128.04	121.50
25	BB	645	C	O4'-C4'-C3'	6.54	112.64	106.10
25	BB	1173	U	C3'-C2'-O2'	6.54	120.51	110.70
3	A1	672	U	N1-C1'-C2'	-6.54	104.20	114.00
25	BB	975	A	O4'-C1'-N9	6.54	118.00	108.20
25	BB	1725	U	C4'-C3'-O3'	6.54	122.80	113.00
33	BJ	51	GLN	OE1-CD-NE2	-6.54	116.06	122.60
3	A1	729	A	C3'-C2'-O2'	6.53	120.50	110.70
25	BB	200	U	C3'-C2'-C1'	6.53	107.83	101.30
25	BB	335	C	C1'-O4'-C4'	-6.53	103.37	109.90
25	BB	476	G	C1'-C2'-O2'	-6.53	102.00	111.80
25	BB	2471	A	O4'-C1'-C2'	6.53	112.33	105.80
28	BE	3	LEU	CA-C-N	6.53	129.03	120.28
28	BE	3	LEU	C-N-CA	6.53	129.03	120.28
1	AE	69	U	C4'-C3'-C2'	-6.53	96.07	102.60
3	A1	64	G	O3'-P-O5'	-6.53	94.21	104.00
3	A1	1229	A	C1'-O4'-C4'	-6.53	103.37	109.90
25	BB	1573	G	C5'-C4'-C3'	-6.53	106.21	116.00
31	BH	43	ASN	CA-CB-CG	6.53	119.13	112.60
3	A1	197	A	C4'-C3'-O3'	6.53	119.19	109.40
3	A1	841	C	C3'-C2'-O2'	6.53	120.49	110.70
3	A1	1340	A	OP1-P-OP2	-6.53	100.02	119.60
24	BA	83	G	O4'-C4'-C3'	6.53	110.53	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1197	G	C4'-C3'-C2'	-6.53	96.07	102.60
48	BY	67	HIS	ND1-CE1-NE2	6.53	114.93	108.40
1	AA	73	A	O4'-C1'-C2'	-6.52	101.08	107.60
18	AS	146	MET	CA-C-N	6.52	132.20	123.00
18	AS	146	MET	C-N-CA	6.52	132.20	123.00
3	A1	119	A	C4'-C3'-O3'	6.52	119.18	109.40
25	BB	2373	G	C3'-C2'-C1'	-6.52	94.98	101.50
3	A1	618	C	C3'-C2'-C1'	6.52	107.82	101.30
3	A1	820	U	C4'-C3'-C2'	-6.52	96.08	102.60
25	BB	2782	G	O4'-C4'-C3'	6.52	110.52	104.00
25	BB	2537	U	C2'-C3'-O3'	6.52	119.28	109.50
35	BL	8	ARG	NE-CZ-NH2	-6.52	113.33	119.20
40	BQ	35	GLY	N-CA-C	6.52	120.53	110.88
3	A1	1168	U	C2'-C3'-O3'	6.52	119.28	109.50
3	A1	1183	U	C3'-C2'-C1'	6.52	107.82	101.30
25	BB	375	G	O4'-C4'-C3'	6.52	110.52	104.00
25	BB	957	C	C5'-C4'-O4'	6.52	119.58	109.80
25	BB	1023	U	C4'-C3'-C2'	-6.52	96.08	102.60
25	BB	1600	C	O3'-P-O5'	6.52	113.78	104.00
25	BB	2483	C	O3'-P-O5'	-6.52	94.22	104.00
25	BB	2711	A	O4'-C1'-C2'	-6.52	99.28	105.80
3	A1	358	U	O4'-C1'-C2'	-6.52	99.28	105.80
25	BB	2443	C	C2'-C3'-O3'	6.52	123.47	113.70
52	B3	59	ASP	CA-C-N	6.52	127.17	120.00
52	B3	59	ASP	C-N-CA	6.52	127.17	120.00
37	BN	24	HIS	CB-CG-CD2	-6.51	122.73	131.20
6	AD	38	THR	CA-C-N	6.51	133.31	121.06
6	AD	38	THR	C-N-CA	6.51	133.31	121.06
3	A1	36	C	O4'-C1'-C2'	-6.51	101.09	107.60
3	A1	1477	U	O4'-C4'-C3'	6.51	110.51	104.00
25	BB	1394	U	O4'-C1'-C2'	-6.51	99.29	105.80
25	BB	2290	G	C2'-C3'-O3'	6.51	119.27	109.50
25	BB	2508	G	C4'-C3'-C2'	-6.51	96.09	102.60
3	A1	822	U	C5'-C4'-C3'	-6.51	106.24	116.00
25	BB	8	C	C4'-C3'-C2'	-6.51	96.09	102.60
25	BB	345	A	O4'-C1'-C2'	-6.51	101.09	107.60
25	BB	770	G	O4'-C4'-C3'	6.51	110.51	104.00
25	BB	1336	A	C4'-C3'-C2'	-6.51	96.09	102.60
25	BB	1473	G	C1'-C2'-O2'	6.51	121.56	111.80
25	BB	2204	G	O3'-P-O5'	-6.51	94.23	104.00
9	AH	81	ILE	N-CA-C	6.51	119.19	111.05
25	BB	2242	G	C2'-C3'-O3'	6.51	123.46	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	BF	51	ARG	NE-CZ-NH2	6.51	125.06	119.20
52	B3	127	GLN	OE1-CD-NE2	-6.50	116.09	122.60
25	BB	2158	A	C3'-C2'-C1'	6.50	107.80	101.30
49	BZ	149	ASN	CA-CB-CG	6.50	119.10	112.60
3	A1	1049	U	O4'-C4'-C3'	6.50	110.50	104.00
23	AX	13	PHE	CA-CB-CG	6.50	120.30	113.80
25	BB	761	A	C4'-C3'-C2'	-6.50	96.10	102.60
25	BB	1859	U	O3'-P-O5'	-6.50	94.25	104.00
25	BB	2032	G	C2'-C3'-O3'	6.50	119.25	109.50
3	A1	1256	A	O3'-P-O5'	-6.50	94.25	104.00
25	BB	1647	U	C5'-C4'-C3'	-6.50	106.25	116.00
25	BB	1749	A	O4'-C4'-C3'	6.50	110.50	104.00
25	BB	2560	A	C4'-C3'-C2'	-6.50	96.10	102.60
36	BM	89	GLU	N-CA-C	6.50	118.05	110.97
50	B1	31	VAL	N-CA-C	6.50	118.03	110.62
3	A1	1111	A	C5'-C4'-C3'	-6.50	105.45	115.20
5	AC	37	GLN	OE1-CD-NE2	-6.50	116.10	122.60
25	BB	2254	C	O4'-C1'-C2'	-6.50	99.30	105.80
25	BB	2662	A	O4'-C4'-C3'	6.50	110.50	104.00
23	AX	16	ARG	NE-CZ-NH1	6.50	128.00	121.50
3	A1	468	A	C4'-C3'-O3'	6.49	122.74	113.00
3	A1	1449	C	C3'-C2'-O2'	6.49	120.44	110.70
14	AN	42	ASP	CA-C-N	6.49	129.86	120.38
14	AN	42	ASP	C-N-CA	6.49	129.86	120.38
18	AS	82	HIS	CA-C-N	6.49	127.96	119.84
18	AS	82	HIS	C-N-CA	6.49	127.96	119.84
25	BB	325	G	C4'-C3'-O3'	-6.49	103.26	113.00
25	BB	900	A	C3'-C2'-C1'	-6.49	95.01	101.50
25	BB	1309	G	C4'-C3'-C2'	-6.49	96.11	102.60
25	BB	2648	G	C3'-C2'-C1'	6.49	107.99	101.50
25	BB	2751	G	C2'-C3'-O3'	6.49	119.24	109.50
25	BB	1610	A	C1'-O4'-C4'	-6.49	103.41	109.90
25	BB	2466	C	O4'-C4'-C3'	6.49	110.49	104.00
1	AE	39	U	C5'-C4'-O4'	6.49	119.53	109.80
3	A1	150	U	C2'-C3'-O3'	6.49	123.44	113.70
3	A1	336	A	C3'-C2'-O2'	6.49	120.44	110.70
3	A1	978	A	O4'-C1'-C2'	-6.49	101.11	107.60
25	BB	187	G	C3'-C2'-C1'	6.49	107.79	101.30
25	BB	1804	C	O3'-P-O5'	6.49	113.74	104.00
8	AG	83	VAL	N-CA-C	6.49	118.02	110.62
25	BB	521	U	N1-C1'-C2'	6.49	121.73	112.00
25	BB	2698	U	C1'-O4'-C4'	-6.49	103.41	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
47	BX	2	LYS	N-CA-C	6.49	120.80	113.01
25	BB	2849	U	C1'-O4'-C4'	-6.49	103.21	109.70
3	A1	649	A	C4'-C3'-O3'	6.49	122.73	113.00
3	A1	1505	G	O3'-P-O5'	6.49	113.73	104.00
19	AT	30	THR	OG1-CB-CG2	-6.49	96.33	109.30
25	BB	1022	G	C5'-C4'-O4'	6.49	118.83	109.10
25	BB	1766	G	C3'-C2'-C1'	6.49	107.99	101.50
37	BN	42	ARG	NH1-CZ-NH2	-6.49	110.87	119.30
3	A1	1154	G	C4'-C3'-C2'	-6.48	96.12	102.60
6	AD	106	VAL	N-CA-C	6.48	116.81	108.12
25	BB	2700	A	O4'-C1'-C2'	6.48	112.28	105.80
3	A1	284	C	O3'-P-O5'	-6.48	94.28	104.00
3	A1	519	C	C4'-C3'-C2'	-6.48	96.12	102.60
3	A1	905	U	C1'-O4'-C4'	-6.48	103.42	109.90
25	BB	781	A	C1'-O4'-C4'	-6.48	103.22	109.70
3	A1	120	A	O4'-C4'-C3'	6.48	112.58	106.10
24	BA	84	G	O4'-C1'-C2'	6.48	114.08	107.60
3	A1	204	G	C1'-O4'-C4'	-6.48	103.42	109.90
45	BV	12	ARG	CA-C-N	6.48	129.25	120.38
45	BV	12	ARG	C-N-CA	6.48	129.25	120.38
1	AE	65	G	O4'-C4'-C3'	-6.47	97.53	104.00
3	A1	147	G	C3'-C2'-C1'	6.47	107.78	101.30
25	BB	2694	G	O4'-C1'-C2'	-6.47	99.33	105.80
40	BQ	11	VAL	CA-CB-CG1	6.47	121.41	110.40
51	B2	82	TYR	CA-C-N	6.47	127.93	119.84
51	B2	82	TYR	C-N-CA	6.47	127.93	119.84
22	AW	123	ARG	CD-NE-CZ	6.47	133.46	124.40
23	AX	14	ASP	CA-C-N	6.47	130.53	120.82
23	AX	14	ASP	C-N-CA	6.47	130.53	120.82
24	BA	3	C	C4'-C3'-C2'	-6.47	96.13	102.60
25	BB	2867	G	C5'-C4'-C3'	-6.47	105.49	115.20
2	AM	17	U	C5'-C4'-C3'	-6.47	106.29	116.00
3	A1	1030	U	C2'-C3'-O3'	6.47	119.21	109.50
25	BB	2155	U	O4'-C4'-C3'	6.47	110.47	104.00
31	BH	9	ARG	NH1-CZ-NH2	-6.47	110.89	119.30
39	BP	10	ARG	CD-NE-CZ	6.47	133.46	124.40
1	AE	3	G	C3'-C2'-O2'	6.47	120.40	110.70
3	A1	104	G	C3'-C2'-C1'	-6.47	95.03	101.50
3	A1	419	C	C5'-C4'-O4'	6.47	119.50	109.80
3	A1	1344	C	C3'-C2'-O2'	6.47	120.40	110.70
3	A1	1476	A	C1'-O4'-C4'	-6.47	103.43	109.90
22	AW	53	LEU	CA-C-N	6.47	133.62	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	AW	53	LEU	C-N-CA	6.47	133.62	121.97
25	BB	339	U	C3'-C2'-C1'	6.47	107.97	101.50
25	BB	850	U	O4'-C4'-C3'	6.47	110.47	104.00
25	BB	2106	U	O4'-C4'-C3'	6.47	110.47	104.00
33	BJ	6	GLY	CA-C-N	6.47	133.61	121.97
33	BJ	6	GLY	C-N-CA	6.47	133.61	121.97
25	BB	2809	A	C3'-C2'-C1'	6.47	107.77	101.30
10	AI	73	ALA	N-CA-C	6.46	120.03	111.75
25	BB	599	A	O4'-C1'-N9	6.46	118.20	108.50
55	B6	13	ARG	NE-CZ-NH1	6.46	127.97	121.50
3	A1	427	U	C3'-C2'-C1'	6.46	107.96	101.50
25	BB	1290	C	O4'-C4'-C3'	6.46	110.46	104.00
3	A1	1243	C	C4'-C3'-C2'	-6.46	96.14	102.60
25	BB	119	A	O4'-C1'-C2'	-6.46	99.34	105.80
25	BB	2021	C	C2'-C3'-O3'	6.46	119.19	109.50
52	B3	25	ILE	N-CA-C	6.46	116.88	108.35
25	BB	534	U	C4'-C3'-C2'	-6.46	96.14	102.60
42	BS	3	LYS	CA-C-N	6.46	133.88	121.54
42	BS	3	LYS	C-N-CA	6.46	133.88	121.54
9	AH	64	LYS	CA-C-N	6.46	129.58	120.28
9	AH	64	LYS	C-N-CA	6.46	129.58	120.28
25	BB	2198	A	O4'-C1'-N9	6.46	117.89	108.20
3	A1	709	U	C4'-C3'-C2'	-6.46	96.14	102.60
3	A1	773	G	C4'-C3'-C2'	-6.46	96.14	102.60
3	A1	1078	U	O4'-C4'-C3'	6.46	110.46	104.00
22	AW	122	ARG	NH1-CZ-NH2	-6.46	110.91	119.30
25	BB	700	G	C1'-O4'-C4'	-6.46	103.24	109.70
25	BB	861	A	O4'-C4'-C3'	6.46	110.46	104.00
25	BB	2880	C	C1'-C2'-O2'	-6.46	102.11	111.80
20	AU	3	ARG	NH1-CZ-NH2	-6.46	110.91	119.30
25	BB	929	U	C4'-C3'-C2'	-6.46	96.14	102.60
25	BB	991	C	OP1-P-OP2	-6.46	100.24	119.60
15	AO	28	PHE	CA-CB-CG	-6.45	107.35	113.80
25	BB	207	A	O3'-P-O5'	6.45	113.68	104.00
25	BB	1973	G	C4'-C3'-O3'	-6.45	103.32	113.00
25	BB	2565	A	O4'-C4'-C3'	6.45	112.55	106.10
45	BV	4	THR	CA-C-N	6.45	130.93	120.60
45	BV	4	THR	C-N-CA	6.45	130.93	120.60
37	BN	70	LYS	CA-C-N	6.45	133.86	121.54
37	BN	70	LYS	C-N-CA	6.45	133.86	121.54
1	AA	9	A	C3'-C2'-C1'	6.45	107.95	101.50
15	AO	24	ASN	CA-C-N	6.45	133.86	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	AO	24	ASN	C-N-CA	6.45	133.86	121.54
24	BA	34	A	C4'-C3'-C2'	-6.45	96.15	102.60
25	BB	7	G	O4'-C1'-N9	6.45	118.18	108.50
37	BN	52	HIS	CB-CG-CD2	-6.45	122.81	131.20
53	B4	68	ARG	NH1-CZ-NH2	-6.45	110.91	119.30
25	BB	1607	C	O4'-C4'-C3'	6.45	112.55	106.10
25	BB	1820	U	C1'-O4'-C4'	-6.45	103.25	109.70
25	BB	1935	G	O3'-P-O5'	-6.45	94.33	104.00
48	BY	203	VAL	N-CA-C	6.45	116.91	107.37
25	BB	1606	C	O4'-C1'-N1	-6.45	98.83	108.50
25	BB	2822	G	N9-C1'-C2'	6.45	121.67	112.00
1	AE	24	G	C5'-C4'-O4'	6.45	119.47	109.80
3	A1	1275	A	C3'-C2'-C1'	6.45	107.75	101.30
25	BB	162	U	C5'-C4'-C3'	-6.45	105.53	115.20
25	BB	1917	U	C4'-C3'-C2'	6.45	109.05	102.60
1	AA	57	G	C3'-C2'-C1'	6.44	107.74	101.30
25	BB	1763	G	C3'-C2'-C1'	-6.44	95.06	101.50
25	BB	2895	G	C3'-C2'-C1'	6.44	107.74	101.30
1	AA	27	C	C1'-O4'-C4'	-6.44	103.46	109.90
3	A1	640	A	O4'-C4'-C3'	6.44	110.44	104.00
11	AJ	38	LYS	CA-C-N	6.44	133.45	122.37
11	AJ	38	LYS	C-N-CA	6.44	133.45	122.37
25	BB	1348	C	O4'-C4'-C3'	6.44	110.44	104.00
55	B6	98	GLU	OE1-CD-OE2	-6.44	107.44	122.90
3	A1	923	A	C5'-C4'-O4'	6.44	118.76	109.10
25	BB	971	G	O3'-P-O5'	-6.44	94.34	104.00
18	AS	11	GLN	OE1-CD-NE2	-6.44	116.16	122.60
25	BB	1806	C	C1'-O4'-C4'	-6.44	103.46	109.90
25	BB	2868	A	C3'-C2'-O2'	6.44	120.36	110.70
3	A1	318	G	C1'-O4'-C4'	-6.44	103.46	109.90
3	A1	739	C	C2'-C3'-O3'	-6.44	104.05	113.70
3	A1	353	A	C4'-C3'-C2'	-6.43	96.17	102.60
25	BB	421	C	C4'-C3'-C2'	-6.43	96.17	102.60
25	BB	1406	U	C3'-C2'-C1'	6.43	107.73	101.30
25	BB	2845	U	C3'-C2'-C1'	6.43	107.73	101.30
25	BB	1307	A	C4'-C3'-O3'	6.43	122.65	113.00
25	BB	391	A	C3'-C2'-O2'	6.43	120.35	110.70
25	BB	1211	C	O4'-C1'-N1	6.43	117.85	108.20
25	BB	1870	C	O5'-C5'-C4'	6.43	121.35	111.70
25	BB	2197	U	O4'-C1'-N1	6.43	117.85	108.20
3	A1	335	C	C3'-C2'-C1'	6.43	107.73	101.30
3	A1	1274	A	N9-C1'-C2'	6.43	121.64	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2325	G	C4'-C3'-C2'	-6.43	96.17	102.60
20	AU	78	ARG	NE-CZ-NH2	6.43	124.98	119.20
3	A1	1181	G	C3'-C2'-C1'	6.43	107.73	101.30
3	A1	1224	U	O3'-P-O5'	-6.43	94.36	104.00
4	AB	165	ALA	N-CA-CB	-6.43	102.50	110.98
25	BB	2296	U	C5'-C4'-C3'	-6.43	105.56	115.20
29	BF	76	LYS	N-CA-C	6.43	115.70	108.25
38	BO	84	PHE	CA-CB-CG	6.42	120.22	113.80
37	BN	34	GLU	OE1-CD-OE2	-6.42	107.48	122.90
3	A1	835	U	C4'-C3'-C2'	-6.42	96.18	102.60
3	A1	1404	C	C3'-C2'-C1'	6.42	107.72	101.30
26	BC	5	ASN	OD1-CG-ND2	-6.42	116.18	122.60
25	BB	3	U	O5'-C5'-C4'	-6.42	102.07	111.70
24	BA	34	A	C2'-C3'-O3'	6.42	123.33	113.70
25	BB	2066	C	O4'-C4'-C3'	6.42	112.52	106.10
25	BB	2480	C	O4'-C4'-C3'	6.42	110.42	104.00
48	BY	71	ALA	O-C-N	-6.42	114.80	122.63
48	BY	77	ARG	NE-CZ-NH1	6.42	127.92	121.50
6	AD	95	HIS	CA-CB-CG	6.42	120.22	113.80
25	BB	218	A	P-O3'-C3'	6.42	129.82	120.20
25	BB	287	G	O4'-C4'-C3'	6.42	110.42	104.00
25	BB	904	G	O4'-C4'-C3'	6.42	110.42	104.00
25	BB	1842	G	C5'-C4'-C3'	-6.42	106.38	116.00
25	BB	1874	C	O3'-P-O5'	6.42	113.62	104.00
25	BB	2870	C	C1'-O4'-C4'	-6.42	103.48	109.90
51	B2	177	ARG	NE-CZ-NH2	6.42	124.97	119.20
3	A1	400	C	C3'-C2'-C1'	-6.42	95.08	101.50
3	A1	1124	G	C3'-C2'-O2'	6.42	120.32	110.70
3	A1	639	G	C3'-C2'-C1'	6.41	107.71	101.30
35	BL	6	LYS	N-CA-C	6.41	119.96	111.75
7	AF	57	ASP	CA-C-N	6.41	129.16	120.44
7	AF	57	ASP	C-N-CA	6.41	129.16	120.44
25	BB	1089	A	C3'-C2'-C1'	6.41	107.91	101.50
25	BB	1156	A	O4'-C1'-C2'	-6.41	99.39	105.80
26	BC	3	THR	CA-CB-OG1	6.41	119.22	109.60
51	B2	173	ASP	N-CA-C	6.41	120.56	112.87
1	AP	70	C	C1'-O4'-C4'	-6.41	103.49	109.90
3	A1	935	A	C3'-C2'-C1'	6.41	107.71	101.30
3	A1	1396	A	C3'-C2'-C1'	-6.41	95.09	101.50
9	AH	31	LEU	O-C-N	-6.41	114.39	122.27
25	BB	1281	G	O4'-C4'-C3'	6.41	110.41	104.00
33	BJ	57	ARG	CA-C-N	6.41	130.85	120.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	BJ	57	ARG	C-N-CA	6.41	130.85	120.60
48	BY	46	ARG	CD-NE-CZ	6.41	133.37	124.40
3	A1	204	G	O4'-C1'-C2'	6.41	114.01	107.60
3	A1	1025	U	C1'-O4'-C4'	-6.41	103.29	109.70
3	A1	1049	U	P-O3'-C3'	6.41	129.81	120.20
20	AU	145	GLU	CA-C-N	6.41	129.15	120.44
20	AU	145	GLU	C-N-CA	6.41	129.15	120.44
25	BB	920	A	O4'-C4'-C3'	6.41	110.41	104.00
33	BJ	70	GLN	OE1-CD-NE2	-6.41	116.19	122.60
3	A1	823	C	C2'-C3'-O3'	6.40	123.31	113.70
17	AR	183	ARG	O-C-N	-6.40	116.53	123.26
25	BB	2670	A	O3'-P-O5'	6.40	113.61	104.00
1	AA	75	C	C2'-C3'-O3'	6.40	119.10	109.50
3	A1	1431	A	O4'-C4'-C3'	6.40	110.40	104.00
14	AN	3	ILE	CA-CB-CG1	6.40	121.28	110.40
25	BB	2609	U	C2'-C3'-O3'	6.40	119.10	109.50
25	BB	2682	A	C2'-C3'-O3'	6.40	119.11	109.50
1	AA	21	A	O3'-P-O5'	6.40	113.60	104.00
25	BB	323	C	C1'-O4'-C4'	6.40	116.10	109.70
25	BB	1699	G	C5'-C4'-C3'	-6.40	106.40	116.00
25	BB	2348	U	C3'-C2'-C1'	6.40	107.70	101.30
37	BN	168	GLY	N-CA-C	6.40	123.76	114.10
3	A1	491	G	O4'-C4'-C3'	6.40	110.40	104.00
3	A1	1363	A	C3'-C2'-O2'	6.40	120.30	110.70
25	BB	265	A	C4'-C3'-C2'	-6.40	96.20	102.60
25	BB	996	A	C5'-C4'-O4'	6.40	119.40	109.80
3	A1	1178	G	O5'-C5'-C4'	-6.40	101.91	111.50
23	AX	67	ILE	CA-CB-CG1	6.40	121.27	110.40
25	BB	2662	A	C4'-C3'-C2'	-6.40	96.20	102.60
1	AA	70	C	N1-C1'-C2'	-6.39	102.41	112.00
25	BB	102	U	C2'-C3'-O3'	6.39	119.09	109.50
25	BB	508	A	C1'-O4'-C4'	-6.39	103.51	109.90
45	BV	5	PHE	N-CA-C	6.39	120.18	112.38
50	B1	117	ARG	CD-NE-CZ	6.39	133.35	124.40
3	A1	546	A	O3'-P-O5'	6.39	113.59	104.00
3	A1	1432	G	P-O3'-C3'	6.39	129.79	120.20
25	BB	378	C	C5'-C4'-C3'	-6.39	106.41	116.00
25	BB	2300	C	O4'-C4'-C3'	6.39	110.39	104.00
25	BB	653	U	O4'-C1'-C2'	-6.39	99.41	105.80
3	A1	713	G	O4'-C4'-C3'	-6.39	97.61	104.00
25	BB	724	U	O4'-C4'-C3'	6.39	110.39	104.00
42	BS	50	ASP	CA-CB-CG	6.39	118.99	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1955	U	O4'-C1'-C2'	-6.39	99.41	105.80
25	BB	2555	U	C3'-C2'-O2'	6.39	120.28	110.70
25	BB	80	G	O3'-P-O5'	6.39	113.58	104.00
25	BB	1209	U	C4'-C3'-C2'	-6.39	96.21	102.60
25	BB	1656	C	C2'-C3'-O3'	6.39	119.08	109.50
3	A1	1159	U	C2'-C3'-O3'	6.38	119.08	109.50
25	BB	1510	G	C3'-C2'-C1'	-6.38	94.92	101.30
25	BB	2658	C	C3'-C2'-O2'	6.38	120.28	110.70
25	BB	2736	A	O4'-C4'-C3'	6.38	110.39	104.00
3	A1	1474	U	O3'-P-O5'	6.38	113.58	104.00
35	BL	30	SER	CA-C-N	6.38	135.19	122.62
35	BL	30	SER	C-N-CA	6.38	135.19	122.62
3	A1	692	U	O4'-C4'-C3'	6.38	110.38	104.00
25	BB	646	U	C4'-C3'-O3'	-6.38	103.43	113.00
25	BB	2178	C	C1'-O4'-C4'	-6.38	103.32	109.70
25	BB	2677	G	C1'-C2'-O2'	-6.38	102.23	111.80
28	BE	141	LYS	CA-C-O	-6.38	113.65	120.92
37	BN	88	ALA	N-CA-C	6.38	119.16	110.55
3	A1	931	C	C4'-C3'-C2'	-6.38	96.22	102.60
25	BB	126	A	C4'-C3'-C2'	-6.38	96.22	102.60
3	A1	1344	C	O4'-C1'-N1	6.38	118.07	108.50
7	AF	7	ASN	OD1-CG-ND2	-6.38	116.22	122.60
20	AU	78	ARG	CD-NE-CZ	6.38	133.33	124.40
25	BB	1578	U	O4'-C1'-C2'	-6.38	101.22	107.60
3	A1	833	G	C3'-C2'-C1'	6.38	107.67	101.30
25	BB	1709	U	N1-C1'-C2'	6.38	121.56	112.00
3	A1	308	C	C5'-C4'-C3'	-6.37	106.44	116.00
24	BA	13	G	O3'-P-O5'	6.37	113.56	104.00
25	BB	1712	U	O4'-C4'-C3'	6.37	110.37	104.00
25	BB	1920	C	O4'-C1'-C2'	-6.37	101.23	107.60
25	BB	2267	A	O4'-C4'-C3'	6.37	110.37	104.00
25	BB	2462	C	N1-C1'-C2'	6.37	121.56	112.00
25	BB	2565	A	C4'-C3'-C2'	-6.37	96.23	102.60
50	B1	165	HIS	CB-CG-CD2	-6.37	122.92	131.20
50	B1	163	ASN	N-CA-C	6.37	120.15	112.38
3	A1	245	U	O4'-C1'-C2'	6.37	112.17	105.80
3	A1	963	G	C5'-C4'-O4'	6.37	119.35	109.80
25	BB	912	C	C4'-C3'-C2'	-6.37	96.23	102.60
38	BO	39	ASN	N-CA-C	6.37	118.94	110.53
3	A1	1397	C	C1'-C2'-O2'	-6.37	102.25	111.80
3	A1	446	G	C5'-C4'-O4'	6.37	119.35	109.80
3	A1	1212	U	O3'-P-O5'	6.36	113.54	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	16	C	N1-C1'-C2'	6.36	121.55	112.00
25	BB	2851	A	O5'-C5'-C4'	6.36	121.05	111.50
32	BI	78	PRO	CA-C-N	6.36	133.42	121.97
32	BI	78	PRO	C-N-CA	6.36	133.42	121.97
51	B2	118	ALA	N-CA-C	6.36	120.30	112.54
5	AC	24	ALA	N-CA-C	6.36	118.74	111.11
3	A1	693	G	C4'-C3'-C2'	-6.36	96.24	102.60
34	BK	27	ILE	CA-C-N	6.36	131.61	121.18
34	BK	27	ILE	C-N-CA	6.36	131.61	121.18
3	A1	1218	C	O4'-C1'-N1	6.36	118.03	108.50
25	BB	261	G	C1'-O4'-C4'	-6.36	103.54	109.90
25	BB	301	G	O4'-C1'-C2'	-6.36	99.44	105.80
29	BF	45	GLN	OE1-CD-NE2	-6.36	116.24	122.60
4	AB	62	ARG	CD-NE-CZ	6.36	133.30	124.40
24	BA	15	A	C3'-C2'-C1'	6.36	107.66	101.30
25	BB	888	C	C4'-C3'-O3'	-6.36	99.86	109.40
25	BB	1356	G	O4'-C1'-C2'	-6.36	101.25	107.60
49	BZ	140	ASN	OD1-CG-ND2	-6.35	116.25	122.60
3	A1	1044	A	C3'-C2'-C1'	6.35	107.65	101.30
25	BB	80	G	C5'-C4'-C3'	-6.35	106.47	116.00
25	BB	807	U	C2'-C3'-O3'	-6.35	104.17	113.70
48	BY	160	LYS	CA-C-N	6.35	129.66	120.38
48	BY	160	LYS	C-N-CA	6.35	129.66	120.38
54	B5	91	LYS	N-CA-CB	-6.35	103.53	110.71
3	A1	702	A	C3'-C2'-C1'	6.35	107.85	101.50
3	A1	855	U	C4'-C3'-C2'	-6.35	96.25	102.60
3	A1	1340	A	O4'-C1'-N9	6.35	121.20	108.50
15	AO	10	ARG	NE-CZ-NH2	6.35	124.92	119.20
24	BA	116	G	C4'-C3'-O3'	-6.35	103.47	113.00
7	AF	49	GLU	CB-CG-CD	-6.35	101.81	112.60
18	AS	44	ARG	NE-CZ-NH2	6.35	124.91	119.20
25	BB	903	C	C5'-C4'-O4'	6.35	119.32	109.80
25	BB	1644	C	N1-C1'-C2'	6.35	121.52	112.00
25	BB	2578	G	N9-C1'-C2'	6.35	121.52	112.00
3	A1	685	G	C1'-O4'-C4'	-6.35	103.55	109.90
20	AU	34	LYS	CA-C-N	6.35	133.66	121.54
20	AU	34	LYS	C-N-CA	6.35	133.66	121.54
36	BM	50	LEU	N-CA-CB	-6.35	102.46	110.90
1	AP	18	G	C3'-C2'-C1'	-6.34	95.16	101.50
1	AP	37	G	O4'-C1'-C2'	-6.34	101.26	107.60
3	A1	519	C	N1-C1'-C2'	6.34	121.51	112.00
25	BB	726	G	C2'-C3'-O3'	6.34	119.01	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AE	53	G	O4'-C4'-C3'	6.34	110.34	104.00
3	A1	92	U	O4'-C1'-N1	6.34	117.71	108.20
3	A1	100	G	O4'-C4'-C3'	6.34	110.34	104.00
3	A1	1013	G	O4'-C1'-N9	6.34	118.01	108.50
25	BB	216	A	C4'-C3'-C2'	-6.34	96.26	102.60
25	BB	2330	G	C5'-C4'-O4'	6.34	119.31	109.80
25	BB	793	A	O4'-C4'-C3'	6.34	110.34	104.00
25	BB	2131	U	O4'-C1'-C2'	-6.34	101.26	107.60
25	BB	1162	G	C2'-C3'-O3'	6.34	123.21	113.70
25	BB	1282	U	C4'-C3'-C2'	-6.34	96.26	102.60
25	BB	2108	A	C3'-C2'-C1'	-6.34	95.16	101.50
25	BB	2822	G	C3'-C2'-C1'	6.34	107.64	101.30
29	BF	60	GLN	OE1-CD-NE2	-6.34	116.26	122.60
33	BJ	88	GLU	N-CA-C	6.34	119.21	107.99
19	AT	47	LEU	CA-C-N	6.33	128.77	120.28
19	AT	47	LEU	C-N-CA	6.33	128.77	120.28
1	AA	46	G	O4'-C1'-N9	6.33	117.70	108.20
3	A1	1051	C	C2'-C3'-O3'	6.33	119.00	109.50
13	AL	2	ARG	CD-NE-CZ	6.33	133.26	124.40
25	BB	232	G	C4'-C3'-O3'	-6.33	99.90	109.40
25	BB	1538	G	C1'-O4'-C4'	-6.33	103.57	109.90
25	BB	2060	A	C1'-O4'-C4'	-6.33	103.57	109.90
3	A1	354	G	C3'-C2'-O2'	6.33	120.19	110.70
3	A1	1369	C	C4'-C3'-C2'	-6.33	96.27	102.60
11	AJ	30	HIS	N-CA-C	6.33	113.92	108.22
25	BB	287	G	C1'-O4'-C4'	-6.33	103.57	109.90
25	BB	132	G	C3'-C2'-C1'	6.33	107.63	101.30
25	BB	1206	G	C5'-C4'-C3'	-6.33	105.71	115.20
3	A1	1315	U	C3'-C2'-O2'	6.33	120.19	110.70
25	BB	440	C	C3'-C2'-C1'	6.33	107.62	101.30
25	BB	615	U	O4'-C1'-C2'	-6.33	101.27	107.60
16	AQ	11	PHE	CA-CB-CG	6.32	120.12	113.80
25	BB	438	G	O4'-C1'-N9	6.32	117.99	108.50
25	BB	613	A	C4'-C3'-C2'	6.32	108.92	102.60
25	BB	1039	A	C3'-C2'-C1'	6.32	107.62	101.30
25	BB	1570	A	O4'-C4'-C3'	6.32	110.32	104.00
3	A1	641	U	C1'-O4'-C4'	6.32	116.02	109.70
3	A1	1019	A	O4'-C4'-C3'	6.32	110.32	104.00
25	BB	1850	G	C5'-C4'-C3'	-6.32	106.52	116.00
3	A1	138	G	C1'-C2'-O2'	-6.32	98.92	108.40
25	BB	2687	U	O3'-P-O5'	6.32	113.48	104.00
25	BB	2857	G	O4'-C1'-N9	6.32	117.98	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BD	34	GLY	CA-C-N	6.32	131.13	120.64
27	BD	34	GLY	C-N-CA	6.32	131.13	120.64
25	BB	1341	G	O4'-C1'-C2'	-6.32	99.48	105.80
3	A1	502	A	C1'-O4'-C4'	-6.32	103.58	109.90
49	BZ	43	LYS	N-CA-C	6.32	118.69	111.11
3	A1	32	A	C4'-C3'-C2'	-6.32	96.28	102.60
3	A1	884	U	O3'-P-O5'	-6.32	94.53	104.00
3	A1	959	A	O4'-C4'-C3'	6.32	110.31	104.00
3	A1	1197	A	O4'-C4'-C3'	6.32	110.32	104.00
4	AB	20	ARG	NE-CZ-NH1	6.32	127.81	121.50
55	B6	10	THR	CA-C-N	6.32	133.34	121.97
55	B6	10	THR	C-N-CA	6.32	133.34	121.97
3	A1	1029	U	C5'-C4'-C3'	-6.31	106.53	116.00
1	AP	51	G	C3'-C2'-O2'	6.31	120.17	110.70
25	BB	1929	G	P-O5'-C5'	-6.31	111.43	120.90
3	A1	1281	C	O4'-C1'-C2'	-6.31	99.49	105.80
49	BZ	157	VAL	CA-C-N	6.31	129.37	120.28
49	BZ	157	VAL	C-N-CA	6.31	129.37	120.28
17	AR	158	LEU	N-CA-C	6.31	118.16	111.28
25	BB	8	C	C5'-C4'-C3'	-6.31	106.53	116.00
25	BB	1260	A	C1'-O4'-C4'	-6.31	103.59	109.90
3	A1	7	A	O4'-C1'-C2'	-6.31	99.49	105.80
3	A1	577	G	C4'-C3'-C2'	-6.31	96.29	102.60
3	A1	1114	C	O3'-P-O5'	-6.31	94.54	104.00
3	A1	1490	U	P-O5'-C5'	6.31	130.36	120.90
6	AD	88	ASP	CA-CB-CG	6.31	118.91	112.60
25	BB	1065	U	C1'-O4'-C4'	-6.31	103.59	109.90
25	BB	1679	A	C4'-C3'-C2'	-6.31	96.29	102.60
3	A1	435	A	O4'-C1'-C2'	-6.31	101.29	107.60
25	BB	1910	G	C4'-C3'-C2'	-6.31	96.29	102.60
25	BB	634	C	C3'-C2'-O2'	6.30	120.16	110.70
25	BB	1589	U	O4'-C4'-C3'	6.30	112.40	106.10
25	BB	1859	U	C4'-C3'-C2'	-6.30	96.30	102.60
25	BB	2043	C	C1'-O4'-C4'	6.30	116.20	109.90
3	A1	601	G	O4'-C4'-C3'	6.30	110.30	104.00
3	A1	996	A	O4'-C4'-C3'	6.30	110.30	104.00
25	BB	2348	U	O4'-C4'-C3'	6.30	110.30	104.00
25	BB	860	U	O4'-C1'-C2'	-6.30	101.30	107.60
25	BB	1061	U	N1-C1'-C2'	6.30	123.45	114.00
25	BB	2058	A	C3'-C2'-C1'	6.30	107.60	101.30
50	B1	136	GLN	OE1-CD-NE2	-6.30	116.30	122.60
2	AM	4	U	C1'-O4'-C4'	-6.30	103.60	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1408	A	C1'-C2'-O2'	6.30	117.85	108.40
25	BB	956	G	O4'-C4'-C3'	6.30	110.30	104.00
1	AE	25	C	O4'-C4'-C3'	6.30	110.30	104.00
3	A1	92	U	C4'-C3'-C2'	-6.30	96.30	102.60
3	A1	1335	U	C4'-C3'-O3'	-6.30	103.56	113.00
25	BB	647	G	O4'-C4'-C3'	6.30	110.30	104.00
25	BB	836	G	C1'-O4'-C4'	-6.30	103.40	109.70
24	BA	18	G	C3'-C2'-O2'	6.29	120.14	110.70
25	BB	2644	G	C5'-C4'-C3'	-6.29	106.56	116.00
3	A1	1395	C	O4'-C1'-N1	6.29	117.64	108.20
41	BR	37	ARG	NH1-CZ-NH2	-6.29	111.12	119.30
50	B1	127	GLU	CA-C-N	6.29	133.02	121.70
50	B1	127	GLU	C-N-CA	6.29	133.02	121.70
3	A1	1385	G	O4'-C4'-C3'	6.29	110.29	104.00
3	A1	1432	G	C3'-C2'-O2'	6.29	120.13	110.70
25	BB	1070	A	C2'-C3'-O3'	6.29	118.93	109.50
30	BG	30	ARG	O-C-N	6.29	129.34	122.11
37	BN	60	ALA	CB-CA-C	6.29	119.93	110.50
1	AE	21	A	O3'-P-O5'	-6.29	94.57	104.00
3	A1	1269	A	C2'-C3'-O3'	6.29	123.13	113.70
25	BB	370	G	N9-C1'-C2'	6.29	121.43	112.00
25	BB	1589	U	C1'-O4'-C4'	-6.29	103.41	109.70
2	AM	12	U	C4'-C3'-C2'	-6.29	96.31	102.60
4	AB	18	GLN	OE1-CD-NE2	-6.29	116.31	122.60
25	BB	1793	C	C1'-O4'-C4'	-6.29	103.61	109.90
25	BB	2079	U	C4'-C3'-O3'	6.29	118.83	109.40
1	AE	17	U	N1-C1'-C2'	-6.28	104.57	114.00
1	AE	26	G	C4'-C3'-C2'	-6.28	96.32	102.60
3	A1	40	C	O3'-P-O5'	-6.28	94.57	104.00
25	BB	872	U	C5'-C4'-C3'	-6.28	106.57	116.00
25	BB	2286	G	P-O5'-C5'	6.28	130.32	120.90
3	A1	1249	C	C5'-C4'-C3'	-6.28	106.58	116.00
25	BB	1562	U	C3'-C2'-O2'	6.28	120.12	110.70
3	A1	989	U	C1'-C2'-O2'	-6.28	98.98	108.40
3	A1	1414	U	C4'-C3'-O3'	-6.28	99.98	109.40
25	BB	1804	C	O4'-C4'-C3'	6.28	110.28	104.00
3	A1	956	U	C4'-C3'-O3'	6.28	118.82	109.40
25	BB	563	A	O4'-C4'-C3'	6.28	110.28	104.00
25	BB	1599	U	O4'-C1'-C2'	-6.28	101.32	107.60
3	A1	329	A	O4'-C1'-C2'	6.28	112.08	105.80
3	A1	516	U	C1'-C2'-O2'	6.28	117.82	108.40
25	BB	425	G	O5'-C5'-C4'	-6.28	102.28	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	704	G	O3'-P-O5'	6.28	113.42	104.00
37	BN	38	LYS	N-CA-C	6.28	118.73	109.69
2	AM	9	U	C3'-C2'-C1'	6.28	107.58	101.30
3	A1	701	U	C1'-C2'-O2'	6.28	121.21	111.80
3	A1	826	C	O5'-C5'-C4'	-6.28	102.29	111.70
25	BB	131	A	C1'-O4'-C4'	-6.28	103.62	109.90
25	BB	1935	G	C2'-C3'-O3'	6.28	118.91	109.50
3	A1	1001	C	C3'-C2'-O2'	6.27	120.11	110.70
49	BZ	96	GLN	CA-C-N	6.27	131.17	121.19
49	BZ	96	GLN	C-N-CA	6.27	131.17	121.19
25	BB	463	G	C2'-C3'-O3'	-6.27	104.29	113.70
3	A1	77	A	O4'-C4'-C3'	6.27	110.27	104.00
3	A1	864	A	C1'-O4'-C4'	-6.27	103.43	109.70
25	BB	282	A	C5'-C4'-C3'	-6.27	106.59	116.00
25	BB	2130	U	C5'-C4'-C3'	-6.27	106.59	116.00
1	AA	49	C	C4'-C3'-C2'	-6.27	96.33	102.60
25	BB	1015	U	O4'-C1'-C2'	-6.27	101.33	107.60
25	BB	2760	C	C4'-C3'-C2'	-6.27	96.33	102.60
3	A1	334	C	C2'-C3'-O3'	6.27	123.10	113.70
3	A1	1181	G	O3'-P-O5'	6.27	113.40	104.00
25	BB	2012	G	O3'-P-O5'	-6.27	94.60	104.00
25	BB	2876	G	O3'-P-O5'	6.27	113.40	104.00
3	A1	295	C	N1-C1'-C2'	6.26	121.40	112.00
13	AL	28	LYS	CA-C-N	6.26	126.23	120.03
13	AL	28	LYS	C-N-CA	6.26	126.23	120.03
24	BA	83	G	C5'-C4'-C3'	-6.26	106.60	116.00
25	BB	449	A	C2'-C3'-O3'	6.26	123.10	113.70
25	BB	1068	G	C3'-C2'-C1'	6.26	107.56	101.30
25	BB	1458	U	N1-C1'-C2'	6.26	123.40	114.00
25	BB	2870	C	N1-C1'-C2'	6.26	121.40	112.00
45	BV	11	LYS	CA-C-N	6.26	128.67	120.28
45	BV	11	LYS	C-N-CA	6.26	128.67	120.28
3	A1	1256	A	C4'-C3'-C2'	6.26	108.86	102.60
55	B6	138	GLN	OE1-CD-NE2	-6.26	116.34	122.60
3	A1	577	G	C3'-C2'-O2'	6.26	120.09	110.70
22	AW	96	GLU	CA-C-N	6.26	128.96	120.38
22	AW	96	GLU	C-N-CA	6.26	128.96	120.38
25	BB	2736	A	C4'-C3'-C2'	-6.26	96.34	102.60
7	AF	11	HIS	CA-CB-CG	6.26	120.06	113.80
25	BB	472	A	O4'-C4'-C3'	6.26	110.26	104.00
25	BB	1865	U	C3'-C2'-C1'	6.26	107.56	101.30
25	BB	2193	G	O4'-C4'-C3'	6.26	110.26	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2261	C	O4'-C1'-N1	6.26	117.89	108.50
3	A1	419	C	O4'-C4'-C3'	-6.26	97.74	104.00
25	BB	1437	C	C4'-C3'-C2'	-6.26	96.34	102.60
1	AE	13	C	C5'-C4'-C3'	6.26	125.38	116.00
3	A1	1003	G	C5'-C4'-C3'	-6.26	106.62	116.00
25	BB	1417	C	O4'-C4'-C3'	6.26	110.26	104.00
25	BB	1507	C	O3'-P-O5'	6.26	113.39	104.00
25	BB	1619	G	O3'-P-O5'	6.26	113.38	104.00
25	BB	1895	C	O4'-C4'-C3'	6.26	110.26	104.00
28	BE	82	LEU	O-C-N	-6.26	114.50	123.07
31	BH	115	LEU	CA-C-N	6.26	130.97	122.84
31	BH	115	LEU	C-N-CA	6.26	130.97	122.84
3	A1	1188	A	C2'-C3'-O3'	6.25	123.08	113.70
1	AP	4	G	C3'-C2'-O2'	6.25	120.08	110.70
3	A1	1072	G	O5'-C5'-C4'	6.25	120.88	111.50
25	BB	930	G	O4'-C4'-C3'	6.25	110.25	104.00
36	BM	98	GLY	CA-C-N	6.25	132.96	121.70
36	BM	98	GLY	C-N-CA	6.25	132.96	121.70
7	AF	43	LYS	CA-C-N	6.25	133.22	121.97
7	AF	43	LYS	C-N-CA	6.25	133.22	121.97
25	BB	883	G	O5'-C5'-C4'	-6.25	102.12	111.50
25	BB	2530	A	C3'-C2'-O2'	6.25	120.08	110.70
3	A1	497	G	C1'-C2'-O2'	6.25	121.17	111.80
3	A1	1208	C	O4'-C4'-C3'	6.25	110.25	104.00
25	BB	420	C	C5'-C4'-C3'	-6.25	106.63	116.00
26	BC	9	ARG	NE-CZ-NH1	6.25	127.75	121.50
10	AI	11	ALA	CB-CA-C	6.25	119.87	110.50
25	BB	543	G	O3'-P-O5'	-6.25	94.63	104.00
25	BB	2604	U	O4'-C1'-N1	6.25	117.57	108.20
3	A1	602	A	P-O5'-C5'	6.25	130.27	120.90
3	A1	163	C	O4'-C4'-C3'	-6.24	97.76	104.00
3	A1	1482	G	C4'-C3'-C2'	-6.24	96.36	102.60
30	BG	85	PRO	N-CA-C	6.24	122.03	113.98
25	BB	1246	A	C5'-C4'-C3'	-6.24	106.64	116.00
25	BB	1988	G	C4'-C3'-C2'	-6.24	96.36	102.60
25	BB	626	A	C4'-C3'-C2'	6.24	108.84	102.60
25	BB	2063	C	C4'-C3'-O3'	6.24	122.36	113.00
36	BM	31	VAL	N-CA-C	6.24	117.70	109.21
3	A1	529	G	C1'-O4'-C4'	-6.24	103.66	109.90
3	A1	1442	G	O5'-C5'-C4'	-6.24	102.14	111.50
25	BB	2275	C	C3'-C2'-C1'	6.24	107.54	101.30
26	BC	26	PHE	CA-C-N	6.24	127.64	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	BC	26	PHE	C-N-CA	6.24	127.64	119.84
25	BB	1635	A	C3'-C2'-C1'	6.24	107.54	101.30
37	BN	220	ARG	NE-CZ-NH2	6.24	124.81	119.20
3	A1	840	C	C3'-C2'-C1'	6.24	107.74	101.50
3	A1	866	C	C3'-C2'-O2'	6.24	120.05	110.70
3	A1	964	A	C4'-C3'-O3'	6.24	122.35	113.00
6	AD	120	ARG	NE-CZ-NH2	6.24	124.81	119.20
25	BB	56	A	C3'-C2'-O2'	6.24	120.05	110.70
25	BB	1498	C	O4'-C4'-C3'	6.24	110.23	104.00
53	B4	135	HIS	ND1-CE1-NE2	6.24	114.64	108.40
25	BB	888	C	C4'-C3'-C2'	-6.23	96.37	102.60
1	AP	55	U	C3'-C2'-C1'	6.23	107.53	101.30
3	A1	360	G	C5'-C4'-C3'	-6.23	106.65	116.00
25	BB	2431	U	P-O3'-C3'	6.23	129.55	120.20
3	A1	962	C	C2'-C3'-O3'	6.23	123.04	113.70
3	A1	1507	A	O3'-P-O5'	-6.23	94.66	104.00
17	AR	114	ARG	NE-CZ-NH2	6.23	124.81	119.20
25	BB	292	U	O4'-C4'-C3'	6.23	110.23	104.00
39	BP	20	LEU	CA-C-N	6.23	130.00	122.03
39	BP	20	LEU	C-N-CA	6.23	130.00	122.03
45	BV	12	ARG	NE-CZ-NH1	-6.23	115.27	121.50
3	A1	167	A	C5'-C4'-C3'	-6.23	106.66	116.00
25	BB	1612	C	O4'-C1'-N1	6.23	117.84	108.50
25	BB	2548	U	C1'-O4'-C4'	-6.23	103.67	109.90
3	A1	1150	A	C1'-O4'-C4'	-6.23	103.67	109.90
25	BB	1245	G	O3'-P-O5'	-6.23	94.66	104.00
25	BB	1828	G	C4'-C3'-C2'	-6.23	96.37	102.60
25	BB	2205	A	C4'-C3'-C2'	-6.23	96.37	102.60
25	BB	272	A	C5'-C4'-C3'	-6.23	106.66	116.00
3	A1	415	A	C4'-C3'-O3'	6.22	122.33	113.00
14	AN	23	ARG	NE-CZ-NH1	6.22	127.72	121.50
25	BB	1145	C	C3'-C2'-C1'	6.22	107.52	101.30
25	BB	1338	G	C5'-C4'-C3'	-6.22	106.66	116.00
29	BF	3	GLN	OE1-CD-NE2	-6.22	116.38	122.60
53	B4	7	ASP	N-CA-C	6.22	118.86	108.96
54	B5	11	GLN	OE1-CD-NE2	-6.22	116.38	122.60
3	A1	728	A	C4'-C3'-C2'	-6.22	96.38	102.60
3	A1	1037	C	C4'-C3'-C2'	-6.22	96.38	102.60
8	AG	60	ARG	CA-C-N	6.22	133.43	121.54
8	AG	60	ARG	C-N-CA	6.22	133.43	121.54
22	AW	91	GLU	CA-C-N	6.22	128.62	120.28
22	AW	91	GLU	C-N-CA	6.22	128.62	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	870	U	C4'-C3'-C2'	-6.22	96.38	102.60
25	BB	1286	A	C2'-C3'-O3'	6.22	118.83	109.50
25	BB	1641	A	O4'-C1'-C2'	-6.22	101.38	107.60
25	BB	2189	U	C3'-C2'-O2'	6.22	120.03	110.70
37	BN	3	VAL	CA-C-N	6.22	133.42	121.54
37	BN	3	VAL	C-N-CA	6.22	133.42	121.54
4	AB	131	LYS	CA-C-N	6.22	129.24	120.28
4	AB	131	LYS	C-N-CA	6.22	129.24	120.28
9	AH	50	HIS	CA-C-N	6.22	129.09	120.63
9	AH	50	HIS	C-N-CA	6.22	129.09	120.63
25	BB	345	A	C5'-C4'-O4'	6.22	119.13	109.80
25	BB	555	G	O4'-C4'-C3'	6.22	110.22	104.00
25	BB	904	G	C3'-C2'-C1'	6.22	107.52	101.30
25	BB	1947	C	C3'-C2'-C1'	-6.22	95.08	101.30
25	BB	2414	G	O4'-C4'-C3'	6.22	110.22	104.00
25	BB	2737	G	C4'-C3'-C2'	-6.22	96.38	102.60
27	BD	52	VAL	CA-CB-CG1	6.22	120.97	110.40
30	BG	89	SER	N-CA-C	6.22	120.55	113.15
3	A1	504	C	C4'-C3'-O3'	6.22	118.73	109.40
3	A1	650	G	O4'-C4'-C3'	6.22	110.22	104.00
3	A1	1080	A	C3'-C2'-C1'	6.22	107.52	101.30
25	BB	1865	U	C3'-C2'-O2'	6.22	120.03	110.70
25	BB	2283	C	C4'-C3'-C2'	-6.22	96.38	102.60
46	BW	6	VAL	CA-C-N	6.22	130.22	120.89
46	BW	6	VAL	C-N-CA	6.22	130.22	120.89
3	A1	932	C	O4'-C1'-C2'	-6.22	101.38	107.60
25	BB	304	U	O5'-C5'-C4'	-6.22	102.17	111.50
25	BB	475	C	N1-C1'-C2'	6.22	121.32	112.00
25	BB	1491	G	O4'-C1'-C2'	-6.22	101.38	107.60
3	A1	392	C	C3'-C2'-O2'	6.21	120.02	110.70
3	A1	649	A	C2'-C3'-O3'	6.21	123.02	113.70
3	A1	840	C	O4'-C1'-N1	6.21	117.52	108.20
7	AF	25	GLY	CA-C-N	6.21	128.61	120.28
7	AF	25	GLY	C-N-CA	6.21	128.61	120.28
25	BB	330	A	O4'-C1'-N9	6.21	117.82	108.50
25	BB	2127	G	C4'-C3'-C2'	-6.21	96.39	102.60
51	B2	168	LEU	N-CA-C	6.21	118.85	111.33
1	AP	22	G	C5'-C4'-O4'	6.21	119.12	109.80
3	A1	1482	G	O3'-P-O5'	6.21	113.32	104.00
25	BB	177	G	C5'-C4'-C3'	-6.21	106.68	116.00
25	BB	196	A	O4'-C1'-C2'	-6.21	99.59	105.80
25	BB	739	A	O5'-C5'-C4'	-6.21	102.38	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AP	65	G	C4'-C3'-C2'	-6.21	96.39	102.60
3	A1	662	U	O5'-C5'-C4'	-6.21	102.19	111.50
25	BB	2467	C	C2'-C3'-O3'	6.21	118.81	109.50
53	B4	50	ARG	NE-CZ-NH1	6.21	127.71	121.50
1	AA	71	G	O4'-C4'-C3'	6.21	110.21	104.00
3	A1	1072	G	C5'-C4'-O4'	6.21	119.11	109.80
3	A1	1440	U	O4'-C4'-C3'	6.21	110.21	104.00
16	AQ	15	LEU	CA-C-N	6.21	133.40	121.54
16	AQ	15	LEU	C-N-CA	6.21	133.40	121.54
25	BB	1675	C	C5'-C4'-O4'	-6.21	100.49	109.80
25	BB	2640	G	C4'-C3'-C2'	-6.21	96.39	102.60
25	BB	2756	U	O4'-C1'-C2'	-6.21	99.59	105.80
28	BE	89	VAL	N-CA-C	6.21	122.25	109.34
20	AU	51	GLN	CG-CD-NE2	6.21	125.71	116.40
25	BB	2173	A	C5'-C4'-O4'	6.21	119.11	109.80
25	BB	2564	A	C3'-C2'-O2'	6.21	123.91	114.60
25	BB	2610	C	C2'-C3'-O3'	6.21	118.81	109.50
1	AP	28	C	C3'-C2'-O2'	6.20	120.01	110.70
3	A1	594	U	O3'-P-O5'	-6.20	94.70	104.00
3	A1	678	U	C3'-C2'-C1'	6.20	107.50	101.30
15	AO	87	ARG	NH1-CZ-NH2	-6.20	111.24	119.30
25	BB	1400	U	P-O5'-C5'	6.20	130.21	120.90
25	BB	127	A	O4'-C4'-C3'	6.20	112.30	106.10
25	BB	803	U	O4'-C1'-N1	6.20	117.80	108.50
1	AP	41	U	C4'-C3'-C2'	-6.20	96.40	102.60
3	A1	66	A	C5'-C4'-O4'	6.20	118.40	109.10
25	BB	1432	G	C3'-C2'-O2'	6.20	120.00	110.70
25	BB	2541	A	C4'-C3'-O3'	6.20	122.30	113.00
50	B1	56	GLY	O-C-N	-6.20	116.20	122.59
3	A1	157	U	O4'-C4'-C3'	6.20	110.20	104.00
3	A1	1267	C	C1'-O4'-C4'	-6.20	103.50	109.70
7	AF	87	GLY	CA-C-N	6.20	130.61	120.63
7	AF	87	GLY	C-N-CA	6.20	130.61	120.63
23	AX	48	ARG	CD-NE-CZ	6.20	133.08	124.40
24	BA	57	A	C3'-C2'-C1'	6.20	107.50	101.30
32	BI	34	GLY	CA-C-N	6.20	128.91	120.54
32	BI	34	GLY	C-N-CA	6.20	128.91	120.54
3	A1	246	A	O4'-C1'-C2'	6.20	112.00	105.80
12	AK	57	ALA	CA-C-N	6.20	128.59	120.60
12	AK	57	ALA	C-N-CA	6.20	128.59	120.60
21	AV	73	SER	CA-C-N	6.20	128.96	120.35
21	AV	73	SER	C-N-CA	6.20	128.96	120.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	661	A	C4'-C3'-O3'	-6.20	103.70	113.00
25	BB	1641	A	O4'-C4'-C3'	-6.20	97.80	104.00
43	BT	47	TYR	N-CA-C	6.20	118.71	110.53
3	A1	765	G	O4'-C1'-N9	6.19	117.79	108.50
24	BA	70	C	C2'-C3'-O3'	-6.19	104.41	113.70
41	BR	28	LEU	CA-C-N	6.19	133.37	121.54
41	BR	28	LEU	C-N-CA	6.19	133.37	121.54
48	BY	193	VAL	CA-C-N	6.19	126.21	119.89
48	BY	193	VAL	C-N-CA	6.19	126.21	119.89
1	AA	72	C	O4'-C1'-C2'	-6.19	101.41	107.60
1	AE	59	U	C3'-C2'-O2'	6.19	119.99	110.70
25	BB	996	A	O5'-C5'-C4'	6.19	120.79	111.50
36	BM	13	ALA	CA-C-N	6.19	126.16	119.78
36	BM	13	ALA	C-N-CA	6.19	126.16	119.78
3	A1	744	C	N1-C1'-C2'	6.19	123.29	114.00
3	A1	1189	U	O3'-P-O5'	6.19	113.29	104.00
13	AL	35	ARG	CD-NE-CZ	6.19	133.07	124.40
25	BB	773	U	C4'-C3'-C2'	-6.19	96.41	102.60
25	BB	2544	G	C4'-C3'-C2'	-6.19	96.41	102.60
32	BI	102	ARG	NH1-CZ-NH2	-6.19	111.25	119.30
52	B3	117	PRO	CB-CA-C	-6.19	103.13	111.12
3	A1	387	U	C3'-C2'-C1'	6.19	107.49	101.30
3	A1	1102	A	C2'-C3'-O3'	6.19	118.78	109.50
25	BB	1049	C	C1'-C2'-O2'	-6.19	99.12	108.40
3	A1	684	U	C1'-O4'-C4'	-6.19	103.51	109.70
3	A1	1256	A	C4'-C3'-O3'	-6.19	103.72	113.00
14	AN	73	ARG	NH1-CZ-NH2	-6.19	111.26	119.30
3	A1	47	C	C4'-C3'-C2'	-6.18	96.42	102.60
3	A1	1136	C	O4'-C1'-N1	6.18	117.48	108.20
39	BP	13	ARG	CD-NE-CZ	6.18	133.06	124.40
1	AA	59	U	O3'-P-O5'	-6.18	94.73	104.00
3	A1	811	C	C2'-C3'-O3'	6.18	118.77	109.50
4	AB	139	GLU	CA-C-N	6.18	128.48	120.44
4	AB	139	GLU	C-N-CA	6.18	128.48	120.44
10	AI	22	ALA	N-CA-C	6.18	118.35	109.14
3	A1	668	G	C4'-C3'-C2'	-6.18	96.42	102.60
7	AF	53	ASP	CA-C-N	6.18	130.58	120.63
7	AF	53	ASP	C-N-CA	6.18	130.58	120.63
14	AN	9	ARG	NE-CZ-NH1	6.18	127.68	121.50
3	A1	1492	A	P-O3'-C3'	6.18	129.47	120.20
25	BB	1088	A	O4'-C1'-N9	6.18	117.77	108.50
25	BB	2198	A	O4'-C4'-C3'	6.18	112.28	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	B2	121	PHE	CA-CB-CG	6.18	119.98	113.80
3	A1	47	C	C5'-C4'-C3'	6.18	124.47	115.20
3	A1	359	G	C5'-C4'-C3'	-6.18	106.73	116.00
25	BB	180	G	C5'-C4'-C3'	-6.18	106.73	116.00
25	BB	2061	G	O5'-C5'-C4'	-6.18	102.43	111.70
18	AS	41	GLY	N-CA-C	6.18	121.90	113.99
25	BB	423	A	C5'-C4'-C3'	-6.18	106.74	116.00
25	BB	821	A	C5'-C4'-C3'	-6.18	106.73	116.00
38	BO	6	ARG	N-CA-C	6.18	123.96	110.80
39	BP	54	ARG	NE-CZ-NH2	6.18	124.76	119.20
41	BR	15	ARG	NE-CZ-NH2	6.18	124.76	119.20
3	A1	98	A	O4'-C4'-C3'	6.17	110.17	104.00
25	BB	2019	A	O5'-C5'-C4'	6.17	120.76	111.50
3	A1	875	U	C3'-C2'-O2'	6.17	119.96	110.70
3	A1	1293	C	O4'-C4'-C3'	6.17	110.17	104.00
25	BB	359	G	O4'-C4'-C3'	6.17	110.17	104.00
25	BB	2140	G	N9-C1'-C2'	6.17	121.26	112.00
3	A1	1358	U	C3'-C2'-C1'	6.17	107.47	101.30
4	AB	145	ASN	O-C-N	-6.17	115.00	122.22
25	BB	1947	C	C5'-C4'-O4'	-6.17	100.54	109.80
25	BB	2412	A	C5'-C4'-C3'	-6.17	106.74	116.00
28	BE	69	ARG	NE-CZ-NH1	6.17	127.67	121.50
30	BG	30	ARG	CA-C-N	6.17	129.97	121.33
30	BG	30	ARG	C-N-CA	6.17	129.97	121.33
43	BT	28	SER	CA-C-N	6.17	133.08	121.97
43	BT	28	SER	C-N-CA	6.17	133.08	121.97
3	A1	651	C	C2'-C3'-O3'	6.17	118.75	109.50
25	BB	304	U	O4'-C1'-C2'	-6.17	101.43	107.60
3	A1	292	G	C4'-C3'-C2'	-6.17	96.43	102.60
25	BB	351	C	O4'-C4'-C3'	-6.17	97.83	104.00
25	BB	1625	C	C3'-C2'-O2'	6.17	123.85	114.60
42	BS	44	PHE	CA-CB-CG	6.17	119.97	113.80
3	A1	306	A	O4'-C1'-C2'	-6.17	99.63	105.80
3	A1	1040	U	C5'-C4'-O4'	6.17	119.05	109.80
4	AB	196	ASP	CA-C-N	6.17	131.72	122.47
4	AB	196	ASP	C-N-CA	6.17	131.72	122.47
25	BB	1115	G	C5'-C4'-C3'	-6.17	106.75	116.00
25	BB	1172	C	O5'-C5'-C4'	6.17	120.75	111.50
25	BB	1281	G	C4'-C3'-C2'	-6.17	96.43	102.60
30	BG	45	ARG	NH1-CZ-NH2	-6.17	111.28	119.30
1	AE	28	C	C4'-C3'-C2'	-6.17	96.44	102.60
3	A1	186	C	O3'-P-O5'	6.17	113.25	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1931	U	O4'-C1'-C2'	-6.17	101.44	107.60
2	AM	3	U	C4'-C3'-C2'	-6.16	96.44	102.60
25	BB	176	A	O4'-C1'-C2'	-6.16	101.44	107.60
25	BB	264	C	O5'-C5'-C4'	-6.16	102.25	111.50
25	BB	2697	G	C4'-C3'-O3'	6.16	122.25	113.00
25	BB	2704	C	O3'-P-O5'	-6.16	94.75	104.00
50	B1	21	ARG	NH1-CZ-NH2	-6.16	111.29	119.30
50	B1	104	ALA	CA-C-N	6.16	133.31	121.54
50	B1	104	ALA	C-N-CA	6.16	133.31	121.54
25	BB	1335	C	O4'-C4'-C3'	-6.16	97.84	104.00
34	BK	23	GLU	CA-C-N	6.16	133.31	121.54
34	BK	23	GLU	C-N-CA	6.16	133.31	121.54
1	AP	41	U	O3'-P-O5'	6.16	113.24	104.00
3	A1	570	G	C5'-C4'-C3'	-6.16	106.76	116.00
3	A1	1462	C	C5'-C4'-C3'	-6.16	106.76	116.00
3	A1	618	C	C1'-C2'-O2'	-6.16	99.16	108.40
25	BB	282	A	C4'-C3'-C2'	-6.16	96.44	102.60
25	BB	2537	U	O4'-C1'-N1	6.16	117.44	108.20
25	BB	2811	G	C4'-C3'-C2'	-6.16	96.44	102.60
25	BB	2230	G	O4'-C4'-C3'	6.16	110.16	104.00
1	AE	13	C	C4'-C3'-C2'	-6.16	96.44	102.60
1	AE	20	G	O4'-C4'-C3'	6.16	110.16	104.00
2	AM	16	U	C5'-C4'-O4'	6.16	119.03	109.80
3	A1	1309	G	C5'-C4'-C3'	-6.16	106.77	116.00
22	AW	10	ARG	NH1-CZ-NH2	-6.16	111.30	119.30
25	BB	1326	U	C1'-O4'-C4'	-6.16	103.55	109.70
25	BB	1787	A	C3'-C2'-O2'	6.16	119.93	110.70
25	BB	2674	G	C2'-C3'-O3'	-6.16	104.47	113.70
27	BD	89	ASN	CA-C-N	6.16	131.90	122.24
27	BD	89	ASN	C-N-CA	6.16	131.90	122.24
1	AA	34	G	C3'-C2'-O2'	6.15	119.93	110.70
3	A1	523	A	C4'-C3'-C2'	-6.15	96.45	102.60
3	A1	993	G	C3'-C2'-C1'	6.15	107.65	101.50
25	BB	1352	U	O4'-C1'-C2'	-6.15	99.65	105.80
25	BB	419	U	O4'-C1'-N1	6.15	117.73	108.50
25	BB	1566	A	C5'-C4'-C3'	-6.15	105.97	115.20
25	BB	1618	A	C3'-C2'-C1'	6.15	107.65	101.50
25	BB	2042	A	C4'-C3'-O3'	-6.15	103.77	113.00
1	AE	74	C	O4'-C1'-N1	6.15	117.72	108.50
3	A1	73	C	O3'-P-O5'	-6.15	94.77	104.00
3	A1	124	C	C3'-C2'-O2'	6.15	123.83	114.60
25	BB	129	C	C4'-C3'-C2'	-6.15	96.45	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	147	C	C5'-C4'-O4'	6.15	118.33	109.10
25	BB	1583	A	O3'-P-O5'	-6.15	94.78	104.00
25	BB	1944	U	O4'-C4'-C3'	6.15	110.15	104.00
25	BB	2267	A	N9-C1'-C2'	6.15	121.23	112.00
3	A1	1001	C	O4'-C1'-N1	6.15	117.72	108.50
25	BB	552	U	P-O3'-C3'	6.15	129.42	120.20
25	BB	924	G	O4'-C4'-C3'	6.15	110.15	104.00
1	AA	14	A	C2'-C3'-O3'	-6.15	104.48	113.70
3	A1	748	G	C3'-C2'-O2'	6.15	119.92	110.70
15	AO	175	HIS	CB-CG-ND1	6.15	131.92	122.70
25	BB	2721	A	C4'-C3'-C2'	-6.15	96.45	102.60
25	BB	1666	G	C5'-C4'-C3'	-6.15	106.78	116.00
24	BA	14	U	C3'-C2'-C1'	-6.14	95.36	101.50
25	BB	194	G	C1'-O4'-C4'	-6.14	103.56	109.70
25	BB	1274	A	C5'-C4'-C3'	-6.14	106.78	116.00
25	BB	1439	A	C4'-C3'-O3'	6.14	122.22	113.00
25	BB	1593	A	C1'-C2'-O2'	-6.14	99.19	108.40
3	A1	1097	C	O5'-C5'-C4'	6.14	120.71	111.50
25	BB	169	G	O3'-P-O5'	6.14	113.21	104.00
25	BB	739	A	C1'-O4'-C4'	-6.14	103.56	109.70
25	BB	1401	G	C3'-C2'-C1'	6.14	107.44	101.30
25	BB	2758	A	O4'-C1'-C2'	-6.14	101.46	107.60
51	B2	174	PHE	CA-C-N	6.14	126.04	119.28
51	B2	174	PHE	C-N-CA	6.14	126.04	119.28
25	BB	2174	C	O4'-C1'-C2'	-6.14	101.46	107.60
25	BB	2853	C	C3'-C2'-O2'	6.14	119.91	110.70
3	A1	354	G	O4'-C1'-C2'	6.14	113.74	107.60
3	A1	660	C	C3'-C2'-O2'	6.14	119.91	110.70
3	A1	1385	G	C1'-O4'-C4'	-6.14	103.76	109.90
25	BB	111	A	C2'-C3'-O3'	6.14	122.91	113.70
25	BB	1172	C	C5'-C4'-C3'	-6.14	106.79	116.00
1	AA	27	C	C4'-C3'-C2'	-6.14	96.46	102.60
3	A1	886	G	N9-C1'-C2'	6.14	121.21	112.00
25	BB	911	A	O4'-C1'-N9	6.14	117.71	108.50
3	A1	1419	G	C4'-C3'-C2'	-6.14	96.46	102.60
7	AF	47	LEU	CA-C-N	6.14	133.26	121.54
7	AF	47	LEU	C-N-CA	6.14	133.26	121.54
25	BB	559	G	C3'-C2'-O2'	6.14	119.90	110.70
25	BB	1581	G	C4'-C3'-C2'	-6.14	96.46	102.60
25	BB	2048	G	C4'-C3'-C2'	-6.14	96.46	102.60
37	BN	172	THR	CA-C-N	6.14	133.26	121.54
37	BN	172	THR	C-N-CA	6.14	133.26	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	BP	54	ARG	NH1-CZ-NH2	-6.14	111.32	119.30
1	AA	8	U	C5'-C4'-O4'	6.13	119.00	109.80
3	A1	162	A	C1'-C2'-O2'	-6.13	99.20	108.40
3	A1	1532	U	O4'-C1'-N1	6.13	117.70	108.50
25	BB	2011	U	C3'-C2'-C1'	6.13	107.44	101.30
3	A1	836	G	O4'-C1'-C2'	-6.13	101.47	107.60
3	A1	1347	G	O5'-C5'-C4'	6.13	120.90	111.70
25	BB	1317	G	C2'-C3'-O3'	6.13	122.90	113.70
25	BB	1669	A	N9-C1'-C2'	6.13	121.20	112.00
25	BB	2097	A	C4'-C3'-O3'	6.13	122.20	113.00
25	BB	2311	A	C1'-C2'-O2'	-6.13	99.20	108.40
25	BB	2553	G	O4'-C1'-N9	6.13	117.70	108.50
25	BB	2819	G	O4'-C1'-C2'	-6.13	99.67	105.80
24	BA	66	A	O4'-C4'-C3'	6.13	112.23	106.10
25	BB	1939	U	O4'-C1'-C2'	-6.13	99.67	105.80
24	BA	87	U	P-O3'-C3'	6.13	129.39	120.20
25	BB	1494	A	C4'-C3'-C2'	-6.13	96.47	102.60
25	BB	2392	A	C2'-C3'-O3'	6.13	122.89	113.70
27	BD	90	ASN	OD1-CG-ND2	-6.13	116.47	122.60
33	BJ	32	ARG	CD-NE-CZ	6.13	132.98	124.40
3	A1	1227	A	C1'-O4'-C4'	-6.13	103.57	109.70
7	AF	80	MET	N-CA-C	6.13	120.59	113.18
25	BB	710	U	C5'-C4'-C3'	-6.13	106.81	116.00
36	BM	15	HIS	CA-C-N	6.13	133.00	121.97
36	BM	15	HIS	C-N-CA	6.13	133.00	121.97
50	B1	184	ASP	N-CA-C	6.13	119.95	112.23
7	AF	59	VAL	CA-CB-CG2	6.12	120.81	110.40
25	BB	1695	G	C2'-C3'-O3'	-6.12	104.51	113.70
25	BB	1703	G	O3'-P-O5'	-6.12	94.81	104.00
13	AL	9	PHE	CA-CB-CG	6.12	119.92	113.80
14	AN	69	ASN	OD1-CG-ND2	-6.12	116.48	122.60
25	BB	321	U	C4'-C3'-C2'	-6.12	96.48	102.60
25	BB	413	C	O4'-C1'-C2'	-6.12	101.48	107.60
3	A1	118	U	O5'-C5'-C4'	6.12	120.68	111.50
3	A1	1048	G	C4'-C3'-C2'	-6.12	96.48	102.60
25	BB	878	A	O4'-C1'-C2'	-6.12	99.68	105.80
25	BB	2088	A	C4'-C3'-C2'	-6.12	96.48	102.60
25	BB	2567	G	C4'-C3'-C2'	-6.12	96.48	102.60
38	BO	45	GLN	OE1-CD-NE2	-6.12	116.48	122.60
3	A1	126	G	C3'-C2'-O2'	6.12	119.88	110.70
25	BB	1030	C	O4'-C1'-C2'	-6.12	101.48	107.60
25	BB	1079	C	C5'-C4'-C3'	-6.12	106.82	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BL	72	THR	N-CA-C	6.12	118.92	111.82
3	A1	1476	A	C2'-C3'-O3'	6.12	122.88	113.70
3	A1	1492	A	C4'-C3'-O3'	6.12	118.58	109.40
15	AO	178	ARG	NE-CZ-NH1	6.12	127.62	121.50
25	BB	2869	G	C4'-C3'-O3'	-6.12	103.83	113.00
27	BD	90	ASN	CA-CB-CG	6.12	118.72	112.60
3	A1	235	C	C3'-C2'-O2'	6.12	119.87	110.70
25	BB	2712	C	C5'-C4'-O4'	6.12	118.97	109.80
3	A1	595	A	C2'-C3'-O3'	6.11	118.67	109.50
25	BB	979	A	C5'-C4'-O4'	6.11	118.97	109.80
25	BB	2112	G	C2'-C3'-O3'	6.11	118.67	109.50
43	BT	12	ARG	CD-NE-CZ	6.11	132.96	124.40
24	BA	25	U	C5'-C4'-O4'	-6.11	99.93	109.10
25	BB	2172	U	C2'-C3'-O3'	6.11	118.67	109.50
3	A1	49	U	O4'-C4'-C3'	6.11	110.11	104.00
6	AD	35	ARG	CD-NE-CZ	6.11	132.96	124.40
21	AV	6	ILE	CA-C-N	6.11	128.75	120.38
21	AV	6	ILE	C-N-CA	6.11	128.75	120.38
25	BB	626	A	C5'-C4'-C3'	-6.11	106.83	116.00
25	BB	718	A	O4'-C1'-C2'	-6.11	101.49	107.60
3	A1	447	G	O4'-C4'-C3'	6.11	110.11	104.00
25	BB	1377	G	C3'-C2'-O2'	6.11	119.86	110.70
25	BB	1599	U	C1'-C2'-O2'	-6.11	99.24	108.40
25	BB	1645	G	O4'-C4'-C3'	6.11	110.11	104.00
25	BB	2012	G	C4'-C3'-O3'	6.11	118.56	109.40
1	AE	16	U	P-O3'-C3'	6.11	129.36	120.20
25	BB	999	U	O4'-C4'-C3'	-6.11	97.89	104.00
25	BB	1045	C	O4'-C1'-N1	6.11	117.66	108.50
25	BB	1141	U	C1'-C2'-O2'	6.11	120.96	111.80
25	BB	1494	A	O3'-P-O5'	6.11	113.16	104.00
25	BB	2022	U	O3'-P-O5'	6.11	113.16	104.00
1	AA	58	A	C2'-C3'-O3'	6.11	118.66	109.50
3	A1	269	C	C5'-C4'-C3'	-6.11	106.84	116.00
3	A1	1296	C	C1'-C2'-O2'	-6.11	102.64	111.80
25	BB	1786	A	O4'-C1'-N9	6.11	117.36	108.20
25	BB	2277	G	C5'-C4'-C3'	-6.11	106.84	116.00
28	BE	90	VAL	O-C-N	-6.11	114.94	122.57
3	A1	5	U	O4'-C4'-C3'	6.10	112.20	106.10
3	A1	1051	C	O4'-C1'-C2'	-6.10	99.70	105.80
22	AW	123	ARG	NE-CZ-NH2	6.10	124.69	119.20
24	BA	12	C	C4'-C3'-O3'	6.10	118.55	109.40
25	BB	133	U	O3'-P-O5'	-6.10	94.85	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2179	C	O4'-C1'-N1	6.10	117.65	108.50
49	BZ	156	LEU	N-CA-C	6.10	118.69	109.23
24	BA	79	G	O4'-C1'-N9	6.10	117.35	108.20
3	A1	301	G	O5'-C5'-C4'	-6.10	102.35	111.50
17	AR	16	THR	CA-C-N	6.10	133.19	121.54
17	AR	16	THR	C-N-CA	6.10	133.19	121.54
25	BB	1219	U	O4'-C1'-C2'	-6.10	101.50	107.60
25	BB	2115	G	O3'-P-O5'	-6.10	94.85	104.00
3	A1	25	C	C5'-C4'-O4'	6.10	118.25	109.10
3	A1	858	G	C4'-C3'-C2'	-6.10	96.50	102.60
25	BB	392	U	O4'-C1'-N1	6.10	117.35	108.20
25	BB	6	A	O4'-C4'-C3'	6.10	110.10	104.00
25	BB	776	G	C1'-O4'-C4'	-6.10	103.80	109.90
18	AS	96	GLN	CB-CA-C	6.09	118.66	110.13
25	BB	375	G	C2'-C3'-O3'	-6.09	104.56	113.70
25	BB	2389	G	C4'-C3'-O3'	6.09	122.14	113.00
3	A1	358	U	C4'-C3'-C2'	-6.09	96.51	102.60
25	BB	2185	U	C5'-C4'-C3'	-6.09	106.86	116.00
1	AP	39	U	C5'-C4'-O4'	6.09	118.94	109.80
1	AE	23	A	O4'-C4'-C3'	6.09	110.09	104.00
3	A1	1011	C	C5'-C4'-C3'	-6.09	106.86	116.00
42	BS	30	HIS	CA-CB-CG	6.09	119.89	113.80
25	BB	387	U	C5'-C4'-C3'	-6.09	106.07	115.20
25	BB	1676	A	C4'-C3'-C2'	-6.09	96.51	102.60
49	BZ	114	GLN	OE1-CD-NE2	-6.09	116.51	122.60
25	BB	1608	A	C3'-C2'-O2'	6.09	123.73	114.60
1	AP	21	A	C5'-C4'-C3'	-6.09	106.87	116.00
1	AP	33	U	O4'-C4'-C3'	6.09	110.09	104.00
3	A1	5	U	C4'-C3'-O3'	6.09	118.53	109.40
25	BB	429	A	C4'-C3'-C2'	-6.09	96.51	102.60
25	BB	866	A	O5'-C5'-C4'	-6.09	102.37	111.50
26	BC	82	TYR	CA-C-O	-6.09	112.15	119.27
3	A1	738	C	O4'-C4'-C3'	6.08	110.08	104.00
3	A1	1506	U	C3'-C2'-O2'	6.08	119.83	110.70
25	BB	2561	U	C2'-C3'-O3'	-6.08	104.57	113.70
25	BB	2774	C	O3'-P-O5'	6.08	113.13	104.00
25	BB	358	U	O4'-C1'-C2'	-6.08	101.52	107.60
32	BI	112	ARG	CA-C-N	6.08	129.35	120.71
32	BI	112	ARG	C-N-CA	6.08	129.35	120.71
48	BY	207	VAL	CA-C-N	6.08	128.71	120.38
48	BY	207	VAL	C-N-CA	6.08	128.71	120.38
25	BB	1255	U	C1'-O4'-C4'	-6.08	103.62	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2104	C	O4'-C1'-N1	6.08	117.62	108.50
28	BE	73	ILE	CA-CB-CG1	6.08	120.74	110.40
29	BF	48	ALA	CA-C-N	6.08	130.42	120.63
29	BF	48	ALA	C-N-CA	6.08	130.42	120.63
3	A1	480	U	O4'-C1'-N1	-6.08	99.38	108.50
3	A1	1051	C	C4'-C3'-O3'	-6.08	100.28	109.40
25	BB	663	G	C4'-C3'-C2'	-6.08	96.52	102.60
3	A1	1191	A	C3'-C2'-O2'	6.08	119.82	110.70
3	A1	1272	G	O5'-C5'-C4'	-6.08	102.38	111.50
25	BB	187	G	C2'-C3'-O3'	-6.08	104.58	113.70
25	BB	247	G	C4'-C3'-C2'	-6.08	96.52	102.60
25	BB	756	A	C1'-O4'-C4'	-6.08	103.82	109.90
25	BB	2367	G	O4'-C4'-C3'	6.08	110.08	104.00
29	BF	3	GLN	N-CA-C	6.08	121.15	113.25
19	AT	55	HIS	CA-C-N	6.08	133.03	122.82
19	AT	55	HIS	C-N-CA	6.08	133.03	122.82
21	AV	37	ASN	CA-CB-CG	6.08	118.68	112.60
25	BB	479	A	C4'-C3'-C2'	-6.08	96.52	102.60
25	BB	715	A	O4'-C1'-C2'	-6.08	101.52	107.60
25	BB	1437	C	O4'-C4'-C3'	6.08	110.08	104.00
25	BB	1485	U	N1-C1'-C2'	6.08	121.11	112.00
25	BB	2460	U	N1-C1'-C2'	6.08	123.11	114.00
3	A1	241	G	O3'-P-O5'	6.08	113.11	104.00
24	BA	35	C	C1'-O4'-C4'	-6.08	103.82	109.90
25	BB	1083	U	C4'-C3'-C2'	-6.08	96.52	102.60
25	BB	1918	A	O4'-C4'-C3'	-6.08	100.03	106.10
25	BB	2288	A	P-O3'-C3'	6.08	129.31	120.20
25	BB	2524	G	C3'-C2'-C1'	6.07	107.37	101.30
3	A1	1225	A	O4'-C4'-C3'	-6.07	100.03	106.10
25	BB	2279	G	C3'-C2'-O2'	6.07	119.81	110.70
25	BB	2432	A	C1'-C2'-O2'	6.07	120.91	111.80
52	B3	91	VAL	CA-CB-CG2	6.07	120.72	110.40
25	BB	1017	G	C5'-C4'-O4'	6.07	118.91	109.80
25	BB	1410	G	O4'-C4'-C3'	6.07	110.07	104.00
25	BB	2533	U	P-O3'-C3'	6.07	129.31	120.20
29	BF	88	ASN	N-CA-C	6.07	116.45	108.07
37	BN	52	HIS	CA-C-N	6.07	132.90	121.97
37	BN	52	HIS	C-N-CA	6.07	132.90	121.97
53	B4	136	SER	CA-C-N	6.07	129.02	120.28
53	B4	136	SER	C-N-CA	6.07	129.02	120.28
25	BB	892	A	C5'-C4'-O4'	6.07	118.90	109.80
25	BB	2629	U	P-O3'-C3'	6.07	129.30	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	B3	162	ARG	NE-CZ-NH2	6.07	124.66	119.20
3	A1	256	U	O4'-C4'-C3'	6.07	110.07	104.00
25	BB	234	U	O4'-C4'-C3'	6.07	110.07	104.00
25	BB	593	U	O4'-C4'-C3'	6.07	110.07	104.00
25	BB	2355	G	O4'-C4'-C3'	6.07	110.07	104.00
3	A1	1337	G	O4'-C4'-C3'	6.07	110.06	104.00
25	BB	1129	A	O4'-C4'-C3'	6.07	112.17	106.10
52	B3	52	GLY	CA-C-N	6.07	127.40	120.85
52	B3	52	GLY	C-N-CA	6.07	127.40	120.85
25	BB	551	G	C5'-C4'-C3'	-6.06	106.91	116.00
25	BB	1338	G	C2'-C3'-O3'	6.06	122.80	113.70
3	A1	467	U	C4'-C3'-C2'	-6.06	96.54	102.60
3	A1	679	C	O4'-C4'-C3'	6.06	110.06	104.00
25	BB	2392	A	C4'-C3'-O3'	-6.06	103.91	113.00
25	BB	2863	C	C4'-C3'-C2'	-6.06	96.54	102.60
37	BN	181	ARG	NE-CZ-NH2	6.06	124.66	119.20
1	AA	68	U	C4'-C3'-C2'	-6.06	96.54	102.60
3	A1	50	A	O3'-P-O5'	-6.06	94.91	104.00
3	A1	159	G	C4'-C3'-C2'	-6.06	96.54	102.60
3	A1	581	G	C2'-C3'-O3'	6.06	118.59	109.50
3	A1	822	U	C1'-O4'-C4'	-6.06	103.84	109.90
25	BB	71	A	C3'-C2'-C1'	6.06	107.56	101.50
25	BB	988	A	C2'-C3'-O3'	6.06	118.59	109.50
25	BB	1798	U	O5'-C5'-C4'	-6.06	102.41	111.50
25	BB	2793	C	C5'-C4'-O4'	6.06	118.89	109.80
52	B3	60	GLY	N-CA-C	6.06	120.53	112.77
10	AI	53	ASP	CA-C-N	6.06	128.72	120.54
10	AI	53	ASP	C-N-CA	6.06	128.72	120.54
11	AJ	5	ARG	CD-NE-CZ	6.06	132.88	124.40
25	BB	2580	U	N1-C1'-C2'	6.06	121.09	112.00
29	BF	52	ALA	CA-C-N	6.06	131.83	121.29
29	BF	52	ALA	C-N-CA	6.06	131.83	121.29
25	BB	653	U	O3'-P-O5'	6.06	113.09	104.00
1	AE	39	U	C1'-O4'-C4'	-6.06	103.84	109.90
25	BB	852	U	C3'-C2'-O2'	6.06	119.78	110.70
25	BB	2769	U	C1'-O4'-C4'	-6.06	103.84	109.90
3	A1	1003	G	C5'-C4'-O4'	6.05	118.88	109.80
14	AN	59	ARG	NE-CZ-NH1	6.05	127.55	121.50
25	BB	1268	A	C3'-C2'-C1'	6.05	107.35	101.30
25	BB	2414	G	C4'-C3'-C2'	-6.05	96.55	102.60
50	B1	181	ILE	O-C-N	-6.05	116.51	122.99
3	A1	90	C	C3'-C2'-O2'	6.05	119.78	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	369	G	C2'-C3'-O3'	-6.05	104.62	113.70
25	BB	1855	U	C1'-C2'-O2'	6.05	117.48	108.40
25	BB	2800	A	C5'-C4'-C3'	-6.05	106.92	116.00
3	A1	640	A	C4'-C3'-C2'	-6.05	96.55	102.60
25	BB	1959	G	C5'-C4'-O4'	6.05	118.87	109.80
25	BB	2540	C	O3'-P-O5'	6.05	113.07	104.00
49	BZ	115	GLU	CA-C-N	6.05	133.09	121.54
49	BZ	115	GLU	C-N-CA	6.05	133.09	121.54
2	AM	11	U	C3'-C2'-C1'	6.05	107.35	101.30
25	BB	112	U	C5'-C4'-C3'	-6.05	106.13	115.20
25	BB	725	G	C4'-C3'-C2'	-6.05	96.55	102.60
25	BB	2802	G	O3'-P-O5'	6.05	113.07	104.00
1	AP	8	U	C4'-C3'-O3'	6.05	122.07	113.00
3	A1	629	A	C1'-C2'-O2'	-6.05	99.33	108.40
25	BB	1439	A	C5'-C4'-C3'	-6.05	106.93	116.00
25	BB	2405	G	C2'-C3'-O3'	6.05	122.77	113.70
53	B4	135	HIS	CE1-NE2-CD2	-6.05	102.95	109.00
3	A1	1390	U	O4'-C1'-N1	6.04	117.57	108.50
25	BB	1093	G	C4'-C3'-C2'	-6.04	96.56	102.60
25	BB	2894	G	O4'-C4'-C3'	6.04	110.05	104.00
32	BI	11	GLN	CA-C-N	6.04	130.36	120.63
32	BI	11	GLN	C-N-CA	6.04	130.36	120.63
2	AM	11	U	C2'-C3'-O3'	6.04	122.77	113.70
3	A1	515	G	C5'-C4'-O4'	6.04	118.86	109.80
3	A1	875	U	C2'-C3'-O3'	6.04	122.77	113.70
3	A1	1028	C	C4'-C3'-C2'	-6.04	96.56	102.60
3	A1	1117	A	O5'-C5'-C4'	6.04	120.57	111.50
25	BB	762	U	C4'-C3'-C2'	-6.04	96.56	102.60
54	B5	91	LYS	CA-C-N	6.04	127.39	119.84
54	B5	91	LYS	C-N-CA	6.04	127.39	119.84
3	A1	1095	U	O3'-P-O5'	6.04	113.06	104.00
25	BB	835	C	C4'-C3'-C2'	-6.04	96.56	102.60
25	BB	1653	G	O3'-P-O5'	6.04	113.06	104.00
25	BB	2373	G	O3'-P-O5'	6.04	113.06	104.00
37	BN	14	HIS	CA-C-N	6.04	128.96	121.71
37	BN	14	HIS	C-N-CA	6.04	128.96	121.71
52	B3	115	GLN	OE1-CD-NE2	-6.04	116.56	122.60
25	BB	207	A	N9-C1'-C2'	6.04	121.06	112.00
25	BB	1220	G	C4'-C3'-O3'	-6.04	103.94	113.00
25	BB	2535	G	C5'-C4'-C3'	-6.04	106.94	116.00
3	A1	87	C	C5'-C4'-O4'	6.04	118.86	109.80
3	A1	127	G	O3'-P-O5'	6.04	113.06	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	512	U	C5'-C4'-C3'	-6.04	106.94	116.00
3	A1	877	G	C3'-C2'-O2'	6.04	119.76	110.70
3	A1	1251	A	O4'-C4'-C3'	6.04	110.04	104.00
23	AX	26	VAL	CA-C-N	6.04	132.86	121.81
23	AX	26	VAL	C-N-CA	6.04	132.86	121.81
25	BB	762	U	C5'-C4'-C3'	-6.04	106.14	115.20
25	BB	2499	C	C2'-C3'-O3'	-6.04	104.64	113.70
3	A1	359	G	O4'-C4'-C3'	6.04	110.04	104.00
3	A1	1237	C	C4'-C3'-C2'	-6.04	96.56	102.60
25	BB	734	A	C4'-C3'-C2'	-6.04	96.56	102.60
25	BB	2113	U	O4'-C1'-C2'	-6.04	101.56	107.60
3	A1	554	A	C2'-C3'-O3'	6.04	122.75	113.70
3	A1	613	C	C3'-C2'-O2'	6.04	119.75	110.70
3	A1	956	U	C3'-C2'-O2'	-6.04	105.55	114.60
13	AL	4	LEU	CA-C-N	6.04	128.97	120.28
13	AL	4	LEU	C-N-CA	6.04	128.97	120.28
25	BB	1100	C	O4'-C4'-C3'	-6.04	97.97	104.00
25	BB	1401	G	O4'-C4'-C3'	6.04	110.03	104.00
25	BB	1989	G	O4'-C1'-C2'	-6.04	101.56	107.60
11	AJ	69	THR	CA-CB-CG2	6.03	120.76	110.50
33	BJ	10	ARG	NE-CZ-NH2	6.03	124.63	119.20
25	BB	196	A	O5'-C5'-C4'	6.03	120.75	111.70
25	BB	2139	U	C3'-C2'-O2'	6.03	119.75	110.70
25	BB	2271	G	C2'-C3'-O3'	6.03	118.55	109.50
25	BB	2437	G	O4'-C4'-C3'	6.03	110.03	104.00
25	BB	2901	C	C4'-C3'-C2'	-6.03	96.57	102.60
25	BB	1118	C	C5'-C4'-O4'	6.03	118.85	109.80
36	BM	40	LYS	N-CA-C	6.03	118.63	111.33
44	BU	14	ALA	N-CA-C	6.03	119.00	110.50
49	BZ	123	ILE	CA-CB-CG1	6.03	120.65	110.40
1	AA	72	C	C5'-C4'-C3'	6.03	125.04	116.00
25	BB	506	G	C3'-C2'-C1'	-6.03	95.47	101.50
25	BB	2394	C	O5'-C5'-C4'	6.03	120.54	111.50
54	B5	10	LEU	CA-C-N	6.03	130.75	121.53
54	B5	10	LEU	C-N-CA	6.03	130.75	121.53
1	AE	28	C	O4'-C4'-C3'	6.03	110.03	104.00
3	A1	486	U	O4'-C1'-N1	6.03	117.54	108.50
3	A1	961	U	C2'-C3'-O3'	6.03	118.54	109.50
3	A1	1307	U	C4'-C3'-O3'	-6.03	103.96	113.00
25	BB	117	G	O4'-C4'-C3'	6.03	112.13	106.10
25	BB	540	C	C1'-O4'-C4'	-6.03	103.87	109.90
25	BB	1680	U	O4'-C1'-N1	6.03	117.24	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1790	C	O4'-C1'-C2'	-6.03	101.57	107.60
25	BB	2364	C	O4'-C4'-C3'	-6.03	97.97	104.00
50	B1	29	HIS	CB-CG-CD2	-6.03	123.36	131.20
1	AA	13	C	O4'-C4'-C3'	-6.03	97.97	104.00
3	A1	1205	U	C4'-C3'-O3'	-6.03	103.96	113.00
25	BB	1307	A	C3'-C2'-C1'	6.03	107.33	101.30
32	BI	13	LYS	N-CA-C	6.03	119.33	108.48
3	A1	1216	A	C4'-C3'-C2'	-6.02	96.58	102.60
25	BB	271	G	O4'-C1'-C2'	-6.02	99.78	105.80
25	BB	2436	G	C1'-O4'-C4'	-6.02	103.68	109.70
25	BB	2835	A	O4'-C4'-C3'	6.02	112.12	106.10
37	BN	52	HIS	CB-CG-ND1	6.02	131.74	122.70
46	BW	34	LYS	CA-C-N	6.02	131.39	121.39
46	BW	34	LYS	C-N-CA	6.02	131.39	121.39
15	AO	130	ARG	CA-C-N	6.02	133.04	121.54
15	AO	130	ARG	C-N-CA	6.02	133.04	121.54
25	BB	2118	U	O4'-C1'-N1	6.02	117.23	108.20
25	BB	2893	A	C1'-C2'-O2'	6.02	120.83	111.80
51	B2	83	PRO	CA-C-N	6.02	128.82	122.14
51	B2	83	PRO	C-N-CA	6.02	128.82	122.14
3	A1	1050	G	N9-C1'-C2'	-6.02	102.97	112.00
6	AD	37	TYR	CA-C-N	6.02	129.44	120.17
6	AD	37	TYR	C-N-CA	6.02	129.44	120.17
51	B2	156	THR	CA-CB-CG2	6.02	120.74	110.50
3	A1	756	C	C3'-C2'-O2'	6.02	119.73	110.70
13	AL	77	ARG	NH1-CZ-NH2	-6.02	111.48	119.30
25	BB	249	C	C5'-C4'-C3'	-6.02	106.17	115.20
55	B6	9	GLU	OE1-CD-OE2	-6.02	108.45	122.90
1	AA	39	U	O5'-C5'-C4'	6.02	120.53	111.50
3	A1	1158	C	N1-C1'-C2'	6.02	121.03	112.00
20	AU	129	ASN	N-CA-CB	-6.02	104.80	113.65
22	AW	12	LYS	CA-C-N	6.02	132.53	121.70
22	AW	12	LYS	C-N-CA	6.02	132.53	121.70
25	BB	2544	G	P-O5'-C5'	6.02	129.93	120.90
49	BZ	82	LYS	CA-C-N	6.02	130.39	122.51
49	BZ	82	LYS	C-N-CA	6.02	130.39	122.51
54	B5	77	VAL	N-CA-CB	6.02	117.59	110.55
3	A1	1243	C	C3'-C2'-O2'	6.02	119.72	110.70
24	BA	57	A	O4'-C1'-C2'	-6.02	101.58	107.60
25	BB	2457	U	C5'-C4'-C3'	-6.02	106.18	115.20
3	A1	532	A	O5'-C5'-C4'	-6.01	102.68	111.70
3	A1	753	A	C5'-C4'-C3'	6.01	124.22	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	AI	34	GLU	N-CA-C	6.01	118.55	109.23
15	AO	29	ALA	N-CA-C	6.01	117.53	110.97
25	BB	2474	U	C1'-C2'-O2'	-6.01	102.78	111.80
53	B4	102	ALA	N-CA-C	6.01	119.45	111.75
3	A1	1332	A	O4'-C4'-C3'	6.01	110.01	104.00
3	A1	1410	A	C4'-C3'-C2'	-6.01	96.59	102.60
25	BB	19	A	C5'-C4'-C3'	-6.01	106.98	116.00
25	BB	226	A	C4'-C3'-O3'	6.01	122.02	113.00
25	BB	881	G	C5'-C4'-C3'	-6.01	106.98	116.00
25	BB	2899	A	O4'-C4'-C3'	6.01	110.01	104.00
28	BE	69	ARG	CD-NE-CZ	6.01	132.82	124.40
1	AP	29	A	C4'-C3'-C2'	-6.01	96.59	102.60
3	A1	1376	U	C5'-C4'-C3'	-6.01	106.98	116.00
7	AF	78	ARG	NH1-CZ-NH2	-6.01	111.49	119.30
25	BB	2696	U	C5'-C4'-O4'	6.01	118.81	109.80
3	A1	933	G	O3'-P-O5'	6.01	113.01	104.00
25	BB	420	C	C3'-C2'-O2'	6.01	119.71	110.70
25	BB	1701	A	C4'-C3'-C2'	-6.01	96.59	102.60
28	BE	106	GLU	N-CA-C	6.01	119.87	112.54
47	BX	29	ALA	N-CA-C	6.01	118.79	111.82
3	A1	237	G	C2'-C3'-O3'	6.01	122.71	113.70
3	A1	355	C	C2'-C3'-O3'	6.01	122.71	113.70
3	A1	1233	G	C2'-C3'-O3'	6.01	122.71	113.70
25	BB	626	A	C3'-C2'-O2'	6.01	119.71	110.70
25	BB	1757	A	N9-C1'-C2'	6.01	121.01	112.00
25	BB	2633	G	C1'-O4'-C4'	-6.01	103.89	109.90
49	BZ	76	ALA	CA-C-N	6.01	133.01	121.54
49	BZ	76	ALA	C-N-CA	6.01	133.01	121.54
24	BA	20	G	C4'-C3'-O3'	-6.00	103.99	113.00
25	BB	2275	C	O3'-P-O5'	6.00	113.01	104.00
44	BU	53	ILE	CA-C-N	6.00	132.51	121.70
44	BU	53	ILE	C-N-CA	6.00	132.51	121.70
3	A1	361	G	O4'-C4'-C3'	6.00	110.00	104.00
20	AU	142	ARG	CD-NE-CZ	6.00	132.80	124.40
25	BB	783	A	C2'-C3'-O3'	6.00	122.70	113.70
25	BB	2330	G	C4'-C3'-C2'	-6.00	96.60	102.60
39	BP	19	ARG	CA-C-N	6.00	133.01	121.54
39	BP	19	ARG	C-N-CA	6.00	133.01	121.54
3	A1	1504	G	C1'-O4'-C4'	-6.00	103.70	109.70
25	BB	316	C	C5'-C4'-C3'	-6.00	106.20	115.20
25	BB	1083	U	C4'-C3'-O3'	-6.00	104.00	113.00
25	BB	1468	U	C2'-C3'-O3'	6.00	118.50	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	BZ	136	THR	CA-C-N	6.00	127.34	119.84
49	BZ	136	THR	C-N-CA	6.00	127.34	119.84
3	A1	781	A	C1'-O4'-C4'	-6.00	103.90	109.90
3	A1	1258	G	O3'-P-O5'	6.00	113.00	104.00
25	BB	1414	C	C3'-C2'-O2'	6.00	119.70	110.70
25	BB	1949	G	C3'-C2'-O2'	6.00	119.70	110.70
3	A1	24	U	O3'-P-O5'	6.00	113.00	104.00
3	A1	115	G	C2'-C3'-O3'	6.00	118.50	109.50
3	A1	791	G	C4'-C3'-O3'	6.00	122.00	113.00
22	AW	14	SER	CA-C-N	6.00	132.50	121.70
22	AW	14	SER	C-N-CA	6.00	132.50	121.70
25	BB	324	A	C3'-C2'-C1'	6.00	107.30	101.30
25	BB	911	A	C4'-C3'-C2'	-6.00	96.60	102.60
25	BB	1887	C	C4'-C3'-C2'	-6.00	96.60	102.60
1	AP	10	G	O5'-C5'-C4'	6.00	120.49	111.50
25	BB	1408	G	O4'-C4'-C3'	6.00	110.00	104.00
29	BF	122	ALA	CA-C-N	6.00	132.49	121.70
29	BF	122	ALA	C-N-CA	6.00	132.49	121.70
1	AA	46	G	C1'-O4'-C4'	-6.00	103.70	109.70
3	A1	198	G	C5'-C4'-C3'	-6.00	107.01	116.00
25	BB	2807	U	C4'-C3'-C2'	6.00	108.59	102.60
30	BG	20	MET	N-CA-C	6.00	119.42	111.75
37	BN	114	GLN	OE1-CD-NE2	-6.00	116.61	122.60
1	AP	31	A	C5'-C4'-O4'	5.99	121.48	109.50
25	BB	1478	G	C5'-C4'-C3'	-5.99	107.01	116.00
25	BB	2061	G	C1'-O4'-C4'	-5.99	103.71	109.70
3	A1	546	A	C5'-C4'-C3'	-5.99	107.01	116.00
3	A1	1337	G	O3'-P-O5'	5.99	112.99	104.00
25	BB	1458	U	C3'-C2'-C1'	-5.99	95.51	101.50
25	BB	1617	C	C4'-C3'-C2'	-5.99	96.61	102.60
3	A1	647	C	C3'-C2'-C1'	5.99	107.29	101.30
3	A1	1444	U	O4'-C1'-N1	5.99	117.49	108.50
24	BA	110	C	C5'-C4'-O4'	5.99	118.78	109.80
25	BB	490	C	O4'-C1'-C2'	-5.99	99.81	105.80
25	BB	2287	A	O4'-C4'-C3'	-5.99	98.01	104.00
25	BB	2651	C	O4'-C4'-C3'	5.99	109.99	104.00
3	A1	1428	A	O3'-P-O5'	5.99	112.98	104.00
22	AW	121	ARG	NH1-CZ-NH2	-5.99	111.52	119.30
25	BB	2481	G	O3'-P-O5'	-5.99	95.02	104.00
1	AE	12	U	C5'-C4'-O4'	5.99	118.78	109.80
3	A1	1213	A	O3'-P-O5'	-5.99	95.02	104.00
36	BM	40	LYS	CA-C-N	5.99	128.30	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BM	40	LYS	C-N-CA	5.99	128.30	120.28
3	A1	188	C	C1'-O4'-C4'	-5.99	103.71	109.70
3	A1	1215	G	C3'-C2'-C1'	-5.99	95.31	101.30
3	A1	1292	G	O4'-C4'-C3'	5.99	109.98	104.00
25	BB	2833	U	C1'-O4'-C4'	-5.99	103.71	109.70
49	BZ	91	GLN	OE1-CD-NE2	-5.98	116.62	122.60
51	B2	106	ALA	N-CA-C	5.98	123.55	110.80
1	AE	60	C	C5'-C4'-O4'	5.98	118.07	109.10
3	A1	553	A	C3'-C2'-O2'	-5.98	105.63	114.60
3	A1	624	C	C3'-C2'-C1'	5.98	107.28	101.30
3	A1	982	U	C4'-C3'-C2'	-5.98	96.62	102.60
3	A1	1473	G	O5'-C5'-C4'	5.98	120.47	111.50
25	BB	1346	G	C1'-O4'-C4'	-5.98	103.92	109.90
3	A1	51	A	C3'-C2'-C1'	5.98	107.28	101.30
3	A1	66	A	C1'-O4'-C4'	-5.98	103.72	109.70
3	A1	1237	C	C5'-C4'-C3'	-5.98	107.03	116.00
25	BB	1041	G	O5'-C5'-C4'	-5.98	102.53	111.50
3	A1	874	G	O4'-C4'-C3'	5.98	109.98	104.00
3	A1	1442	G	C4'-C3'-C2'	-5.98	96.62	102.60
9	AH	78	THR	CA-CB-CG2	5.98	120.66	110.50
25	BB	613	A	C1'-O4'-C4'	-5.98	103.72	109.70
25	BB	869	G	C4'-C3'-C2'	-5.98	96.62	102.60
25	BB	1840	G	O4'-C4'-C3'	5.98	109.98	104.00
25	BB	2368	C	C3'-C2'-C1'	5.98	107.28	101.30
55	B6	69	ARG	CA-C-N	5.98	131.58	122.08
55	B6	69	ARG	C-N-CA	5.98	131.58	122.08
3	A1	1124	G	O4'-C4'-C3'	-5.98	98.02	104.00
3	A1	1410	A	C1'-O4'-C4'	-5.98	103.92	109.90
3	A1	1520	C	C3'-C2'-C1'	5.98	107.48	101.50
25	BB	1578	U	C4'-C3'-O3'	5.98	121.96	113.00
25	BB	35	G	C4'-C3'-O3'	-5.97	104.04	113.00
25	BB	876	C	O4'-C1'-N1	5.97	117.16	108.20
25	BB	1959	G	C3'-C2'-C1'	5.97	107.28	101.30
27	BD	105	ARG	NE-CZ-NH1	5.97	127.47	121.50
31	BH	83	LEU	CA-C-N	5.97	128.61	120.54
31	BH	83	LEU	C-N-CA	5.97	128.61	120.54
50	B1	193	VAL	CA-CB-CG1	5.97	120.56	110.40
16	AQ	27	VAL	N-CA-C	5.97	120.34	112.76
25	BB	879	G	C4'-C3'-C2'	5.97	108.57	102.60
25	BB	2404	U	C5'-C4'-O4'	5.97	118.76	109.80
3	A1	952	U	C3'-C2'-C1'	-5.97	95.33	101.30
25	BB	6	A	C5'-C4'-C3'	-5.97	107.04	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2151	U	O4'-C4'-C3'	5.97	109.97	104.00
3	A1	1008	U	C5'-C4'-C3'	-5.97	107.05	116.00
25	BB	257	C	O4'-C1'-N1	5.97	117.45	108.50
25	BB	870	U	C3'-C2'-C1'	5.97	107.27	101.30
25	BB	1915	U	C2'-C3'-O3'	5.97	122.65	113.70
25	BB	2181	U	C4'-C3'-C2'	-5.97	96.63	102.60
25	BB	2443	C	P-O3'-C3'	5.97	129.15	120.20
41	BR	8	GLN	OE1-CD-NE2	-5.97	116.63	122.60
3	A1	1086	U	O4'-C1'-N1	5.97	117.15	108.20
3	A1	1193	G	C5'-C4'-O4'	5.97	118.75	109.80
3	A1	1388	C	C5'-C4'-C3'	-5.97	106.25	115.20
25	BB	50	U	C5'-C4'-O4'	5.97	118.05	109.10
25	BB	2327	A	O3'-P-O5'	-5.97	95.05	104.00
3	A1	927	G	C3'-C2'-C1'	5.96	107.27	101.30
25	BB	420	C	C4'-C3'-C2'	5.96	108.56	102.60
25	BB	1756	G	C4'-C3'-O3'	5.96	121.95	113.00
25	BB	2049	G	O5'-C5'-C4'	-5.96	102.55	111.50
25	BB	1481	U	O4'-C1'-N1	5.96	117.44	108.50
35	BL	31	GLN	CG-CD-NE2	5.96	125.34	116.40
3	A1	416	G	O4'-C4'-C3'	5.96	109.96	104.00
3	A1	1443	C	C3'-C2'-C1'	5.96	107.26	101.30
4	AB	198	VAL	CA-CB-CG2	5.96	120.53	110.40
25	BB	3	U	C5'-C4'-C3'	-5.96	106.26	115.20
25	BB	713	G	O4'-C1'-C2'	-5.96	101.64	107.60
25	BB	1500	G	O3'-P-O5'	-5.96	95.06	104.00
25	BB	1740	G	O4'-C4'-C3'	5.96	109.96	104.00
25	BB	1938	A	C1'-C2'-O2'	5.96	120.74	111.80
25	BB	2370	G	O4'-C4'-C3'	5.96	109.96	104.00
25	BB	2783	U	O5'-C5'-C4'	-5.96	102.56	111.50
24	BA	85	G	O5'-C5'-C4'	-5.96	102.56	111.50
25	BB	1408	G	O4'-C1'-C2'	-5.96	101.64	107.60
51	B2	42	ALA	CA-C-N	5.96	130.35	121.77
51	B2	42	ALA	C-N-CA	5.96	130.35	121.77
3	A1	587	G	C3'-C2'-C1'	5.96	107.26	101.30
25	BB	1033	U	O3'-P-O5'	-5.96	95.06	104.00
25	BB	2234	G	O4'-C1'-C2'	5.96	113.56	107.60
25	BB	2388	A	O4'-C4'-C3'	5.96	109.96	104.00
25	BB	596	U	O4'-C4'-C3'	-5.96	98.04	104.00
25	BB	1564	C	N1-C1'-C2'	5.96	120.93	112.00
25	BB	1958	C	C1'-C2'-O2'	5.96	120.73	111.80
30	BG	96	ARG	NH1-CZ-NH2	-5.96	111.56	119.30
51	B2	42	ALA	N-CA-C	5.96	123.49	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	595	C	O4'-C1'-N1	5.96	117.43	108.50
25	BB	1951	U	O4'-C1'-C2'	-5.96	101.64	107.60
25	BB	2273	A	C2'-C3'-O3'	5.96	118.43	109.50
3	A1	374	A	C3'-C2'-C1'	5.95	107.25	101.30
24	BA	66	A	C2'-C3'-O3'	5.95	118.43	109.50
25	BB	293	U	C4'-C3'-C2'	-5.95	96.65	102.60
25	BB	1461	C	C5'-C4'-O4'	5.95	118.03	109.10
25	BB	2327	A	C3'-C2'-C1'	5.95	107.25	101.30
25	BB	2385	C	C1'-O4'-C4'	-5.95	103.75	109.70
3	A1	170	U	O4'-C1'-N1	5.95	117.13	108.20
3	A1	412	A	O4'-C1'-N9	5.95	117.13	108.20
3	A1	1456	A	O4'-C4'-C3'	5.95	109.95	104.00
23	AX	39	PRO	CA-C-N	5.95	133.14	122.13
23	AX	39	PRO	C-N-CA	5.95	133.14	122.13
3	A1	390	U	O3'-P-O5'	5.95	112.93	104.00
6	AD	114	SER	CA-C-N	5.95	128.74	120.29
6	AD	114	SER	C-N-CA	5.95	128.74	120.29
25	BB	1985	C	C4'-C3'-C2'	-5.95	96.65	102.60
25	BB	2064	C	C5'-C4'-C3'	5.95	124.93	116.00
25	BB	2551	C	O4'-C4'-C3'	5.95	112.05	106.10
20	AU	52	ARG	CD-NE-CZ	5.95	132.73	124.40
37	BN	45	ASN	N-CA-C	5.95	119.36	111.75
38	BO	95	PHE	CA-C-N	5.95	132.50	121.62
38	BO	95	PHE	C-N-CA	5.95	132.50	121.62
1	AA	42	G	C3'-C2'-O2'	5.95	119.62	110.70
3	A1	282	A	C4'-C3'-O3'	5.95	121.92	113.00
25	BB	150	U	C4'-C3'-C2'	-5.95	96.65	102.60
25	BB	264	C	C3'-C2'-C1'	5.95	107.25	101.30
25	BB	1190	G	O4'-C4'-C3'	5.95	109.95	104.00
1	AA	2	C	C3'-C2'-C1'	5.95	107.25	101.30
3	A1	44	A	C5'-C4'-C3'	-5.95	107.08	116.00
3	A1	645	G	O3'-P-O5'	-5.95	95.08	104.00
23	AX	94	ALA	N-CA-C	5.95	118.52	111.33
25	BB	724	U	C3'-C2'-C1'	5.95	107.25	101.30
25	BB	1592	C	C3'-C2'-O2'	-5.95	101.78	110.70
46	BW	6	VAL	N-CA-C	5.95	118.48	111.05
3	A1	333	U	C4'-C3'-O3'	-5.94	104.08	113.00
3	A1	628	G	C2'-C3'-O3'	5.94	122.62	113.70
25	BB	2093	G	O4'-C4'-C3'	5.94	109.94	104.00
3	A1	355	C	P-O3'-C3'	5.94	129.12	120.20
15	AO	155	ARG	CD-NE-CZ	5.94	132.72	124.40
20	AU	9	ARG	N-CA-C	5.94	118.45	107.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	341	C	O4'-C4'-C3'	5.94	109.94	104.00
25	BB	371	A	C5'-C4'-C3'	-5.94	107.09	116.00
39	BP	37	VAL	N-CA-C	5.94	120.72	113.00
39	BP	45	HIS	CA-CB-CG	5.94	119.74	113.80
3	A1	1098	C	C1'-O4'-C4'	-5.94	103.96	109.90
3	A1	1522	U	O3'-P-O5'	5.94	112.91	104.00
25	BB	37	C	C5'-C4'-C3'	-5.94	107.09	116.00
25	BB	135	U	C2'-C3'-O3'	5.94	122.61	113.70
25	BB	226	A	C5'-C4'-C3'	-5.94	107.09	116.00
25	BB	1716	U	C5'-C4'-O4'	5.94	118.71	109.80
25	BB	1862	G	O5'-C5'-C4'	-5.94	102.59	111.50
25	BB	2043	C	C2'-C3'-O3'	5.94	122.61	113.70
25	BB	2319	G	C3'-C2'-C1'	5.94	107.24	101.30
49	BZ	146	GLU	N-CA-C	5.94	118.54	111.71
25	BB	360	U	O4'-C1'-C2'	5.94	111.74	105.80
1	AP	7	U	O4'-C4'-C3'	5.94	109.94	104.00
3	A1	485	U	O4'-C4'-C3'	5.94	109.94	104.00
3	A1	639	G	O3'-P-O5'	5.94	112.91	104.00
3	A1	649	A	C4'-C3'-C2'	-5.94	96.66	102.60
3	A1	706	A	C5'-C4'-O4'	5.94	118.70	109.80
3	A1	1383	C	C4'-C3'-O3'	5.94	121.91	113.00
25	BB	1268	A	O4'-C1'-N9	5.94	117.41	108.50
9	AH	46	LYS	CA-C-N	5.94	132.05	122.14
9	AH	46	LYS	C-N-CA	5.94	132.05	122.14
25	BB	677	A	O4'-C4'-C3'	5.94	109.94	104.00
25	BB	1704	C	N1-C1'-C2'	5.94	122.90	114.00
25	BB	2756	U	C4'-C3'-C2'	-5.94	96.66	102.60
3	A1	1279	G	C3'-C2'-C1'	5.93	107.44	101.50
4	AB	169	HIS	CA-C-N	5.93	128.90	120.53
4	AB	169	HIS	C-N-CA	5.93	128.90	120.53
25	BB	1357	C	N1-C1'-C2'	-5.93	103.10	112.00
25	BB	2418	A	C5'-C4'-O4'	5.93	118.70	109.80
51	B2	20	ASN	CA-C-N	5.93	129.30	120.87
51	B2	20	ASN	C-N-CA	5.93	129.30	120.87
1	AA	8	U	O4'-C4'-C3'	5.93	109.93	104.00
1	AA	9	A	C4'-C3'-C2'	-5.93	96.67	102.60
1	AA	22	G	C4'-C3'-O3'	5.93	121.90	113.00
25	BB	554	U	O5'-C5'-C4'	5.93	120.40	111.50
25	BB	616	A	O3'-P-O5'	5.93	112.90	104.00
25	BB	980	A	C4'-C3'-O3'	-5.93	104.10	113.00
25	BB	1710	G	C3'-C2'-O2'	5.93	119.60	110.70
25	BB	2432	A	C4'-C3'-C2'	-5.93	96.67	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	B6	59	ALA	N-CA-C	5.93	120.26	112.13
25	BB	1950	G	C5'-C4'-O4'	5.93	118.70	109.80
25	BB	2898	U	C4'-C3'-C2'	-5.93	96.67	102.60
9	AH	61	GLN	OE1-CD-NE2	-5.93	116.67	122.60
25	BB	625	G	C3'-C2'-C1'	-5.93	95.37	101.30
25	BB	1492	G	O3'-P-O5'	-5.93	95.11	104.00
26	BC	51	GLN	OE1-CD-NE2	-5.93	116.67	122.60
3	A1	14	U	O3'-P-O5'	-5.93	95.11	104.00
3	A1	1151	A	C2'-C3'-O3'	5.93	118.39	109.50
24	BA	60	C	C4'-C3'-O3'	-5.93	104.11	113.00
25	BB	1426	G	O3'-P-O5'	-5.93	95.11	104.00
25	BB	1791	A	C1'-C2'-O2'	-5.93	99.51	108.40
25	BB	2534	A	C4'-C3'-O3'	-5.93	104.11	113.00
25	BB	2772	C	C2'-C3'-O3'	-5.93	104.81	113.70
25	BB	2827	C	C3'-C2'-C1'	5.93	107.43	101.50
35	BL	78	GLU	OE1-CD-OE2	-5.93	108.68	122.90
3	A1	26	A	N9-C1'-C2'	5.92	120.89	112.00
3	A1	410	G	C3'-C2'-C1'	5.92	107.22	101.30
3	A1	529	G	C4'-C3'-O3'	5.92	121.89	113.00
7	AF	86	ARG	NE-CZ-NH1	5.92	127.42	121.50
9	AH	57	ARG	NH1-CZ-NH2	-5.92	111.60	119.30
38	BO	81	ARG	NH1-CZ-NH2	-5.92	111.60	119.30
3	A1	1178	G	O3'-P-O5'	5.92	112.88	104.00
3	A1	1193	G	C2'-C3'-O3'	-5.92	104.82	113.70
7	AF	86	ARG	CD-NE-CZ	5.92	132.69	124.40
25	BB	280	U	C5'-C4'-C3'	-5.92	107.12	116.00
25	BB	550	C	O3'-P-O5'	5.92	112.88	104.00
25	BB	1150	C	O4'-C4'-C3'	5.92	109.92	104.00
25	BB	1315	C	N1-C1'-C2'	5.92	122.88	114.00
25	BB	1425	G	C2'-C3'-O3'	5.92	118.38	109.50
27	BD	49	ARG	CA-C-N	5.92	128.85	122.69
27	BD	49	ARG	C-N-CA	5.92	128.85	122.69
25	BB	139	U	P-O5'-C5'	5.92	129.78	120.90
25	BB	2488	G	O4'-C1'-N9	5.92	117.38	108.50
25	BB	1752	C	O4'-C4'-C3'	5.92	109.92	104.00
25	BB	1905	C	C3'-C2'-C1'	5.92	107.42	101.50
32	BI	16	VAL	CA-C-N	5.92	126.41	120.14
32	BI	16	VAL	C-N-CA	5.92	126.41	120.14
3	A1	630	A	C5'-C4'-C3'	-5.92	107.12	116.00
3	A1	780	A	O4'-C4'-C3'	5.92	109.92	104.00
9	AH	32	THR	CA-C-O	-5.92	114.15	120.42
25	BB	1214	A	O5'-C5'-C4'	-5.92	102.63	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BD	31	ARG	NH1-CZ-NH2	-5.92	111.61	119.30
37	BN	36	ASN	OD1-CG-ND2	-5.92	116.68	122.60
37	BN	218	THR	CA-C-N	5.92	132.62	121.97
37	BN	218	THR	C-N-CA	5.92	132.62	121.97
37	BN	265	PHE	CA-C-N	5.92	132.62	121.97
37	BN	265	PHE	C-N-CA	5.92	132.62	121.97
15	AO	168	ARG	NH1-CZ-NH2	-5.92	111.61	119.30
3	A1	1325	C	C3'-C2'-O2'	5.91	119.57	110.70
3	A1	734	G	N9-C1'-C2'	-5.91	105.13	114.00
3	A1	563	A	N9-C1'-C2'	5.91	120.87	112.00
3	A1	1290	G	C2'-C3'-O3'	-5.91	104.83	113.70
3	A1	1398	A	O4'-C4'-C3'	5.91	112.01	106.10
25	BB	1359	A	O4'-C4'-C3'	5.91	109.91	104.00
30	BG	17	ARG	NH1-CZ-NH2	-5.91	111.62	119.30
3	A1	1414	U	C2'-C3'-O3'	5.91	118.36	109.50
14	AN	19	HIS	CB-CG-CD2	-5.91	123.52	131.20
25	BB	1776	G	C4'-C3'-C2'	-5.91	96.69	102.60
25	BB	2566	A	N9-C1'-C2'	5.91	122.86	114.00
25	BB	2670	A	O4'-C1'-N9	5.91	117.36	108.50
25	BB	2901	C	C1'-C2'-O2'	-5.91	99.54	108.40
28	BE	17	LYS	N-CA-C	5.91	123.39	110.80
3	A1	837	U	C4'-C3'-C2'	-5.91	96.69	102.60
3	A1	913	A	O4'-C1'-C2'	-5.91	99.89	105.80
25	BB	1100	C	C1'-O4'-C4'	5.91	115.81	109.90
46	BW	44	ARG	NH1-CZ-NH2	-5.91	111.62	119.30
1	AA	29	A	O3'-P-O5'	5.90	112.86	104.00
25	BB	1646	C	C5'-C4'-C3'	-5.90	107.14	116.00
3	A1	9	G	O4'-C1'-C2'	-5.90	99.90	105.80
3	A1	1060	U	C3'-C2'-C1'	5.90	107.20	101.30
25	BB	310	A	C4'-C3'-O3'	5.90	118.25	109.40
25	BB	2170	A	C3'-C2'-O2'	5.90	119.56	110.70
25	BB	2495	G	C4'-C3'-O3'	5.90	121.86	113.00
25	BB	2515	C	O4'-C4'-C3'	5.90	109.90	104.00
37	BN	42	ARG	CD-NE-CZ	5.90	132.66	124.40
1	AA	74	C	O4'-C4'-C3'	5.90	112.00	106.10
3	A1	616	G	C1'-O4'-C4'	-5.90	104.00	109.90
3	A1	702	A	C4'-C3'-C2'	-5.90	96.70	102.60
3	A1	1226	C	O3'-P-O5'	5.90	112.85	104.00
3	A1	1318	A	O4'-C4'-C3'	5.90	109.90	104.00
3	A1	1330	U	C1'-O4'-C4'	-5.90	104.00	109.90
11	AJ	58	VAL	N-CA-C	5.90	117.08	108.53
24	BA	98	G	C4'-C3'-C2'	-5.90	96.70	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	289	G	C4'-C3'-C2'	-5.90	96.70	102.60
25	BB	2252	G	C5'-C4'-C3'	-5.90	106.35	115.20
25	BB	2796	U	O3'-P-O5'	-5.90	95.15	104.00
48	BY	124	ARG	NH1-CZ-NH2	-5.90	111.63	119.30
50	B1	74	LYS	O-C-N	-5.90	116.51	123.41
1	AE	16	U	O3'-P-O5'	5.90	112.85	104.00
3	A1	35	G	C5'-C4'-C3'	-5.90	107.15	116.00
32	BI	71	ARG	NH1-CZ-NH2	-5.90	111.63	119.30
54	B5	87	SER	CA-C-N	5.90	129.06	122.69
54	B5	87	SER	C-N-CA	5.90	129.06	122.69
1	AP	70	C	O4'-C1'-C2'	5.90	113.50	107.60
1	AE	13	C	O5'-C5'-C4'	-5.90	102.65	111.50
3	A1	104	G	O3'-P-O5'	5.90	112.85	104.00
3	A1	321	A	C5'-C4'-O4'	-5.90	100.95	109.80
3	A1	502	A	O3'-P-O5'	5.90	112.85	104.00
25	BB	337	C	C3'-C2'-C1'	5.90	107.20	101.30
25	BB	1305	C	O4'-C4'-C3'	5.90	109.90	104.00
25	BB	1515	A	O3'-P-O5'	-5.90	95.15	104.00
25	BB	1889	A	C4'-C3'-O3'	5.90	118.25	109.40
25	BB	2178	C	C1'-C2'-O2'	-5.90	102.95	111.80
32	BI	32	VAL	CA-CB-CG2	5.90	120.43	110.40
3	A1	141	G	C3'-C2'-C1'	-5.90	95.60	101.50
25	BB	1354	A	O4'-C4'-C3'	5.90	109.90	104.00
3	A1	89	U	C3'-C2'-C1'	5.89	107.19	101.30
3	A1	196	A	O5'-C5'-C4'	-5.89	102.66	111.50
3	A1	1297	G	O4'-C1'-N9	5.89	117.04	108.20
25	BB	39	G	C5'-C4'-C3'	-5.89	107.16	116.00
25	BB	1929	G	C5'-C4'-C3'	-5.89	107.16	116.00
36	BM	42	GLU	OE1-CD-OE2	-5.89	108.75	122.90
23	AX	79	PRO	CA-C-N	5.89	132.79	121.54
23	AX	79	PRO	C-N-CA	5.89	132.79	121.54
24	BA	14	U	N1-C1'-C2'	-5.89	105.16	114.00
25	BB	1661	G	C4'-C3'-O3'	5.89	118.24	109.40
25	BB	159	G	O4'-C4'-C3'	5.89	109.89	104.00
25	BB	1400	U	C1'-O4'-C4'	-5.89	104.01	109.90
25	BB	1682	G	C5'-C4'-C3'	-5.89	107.17	116.00
38	BO	70	ALA	CA-C-N	5.89	132.57	121.97
38	BO	70	ALA	C-N-CA	5.89	132.57	121.97
43	BT	5	ASN	CA-C-N	5.89	136.17	121.80
43	BT	5	ASN	C-N-CA	5.89	136.17	121.80
51	B2	167	ALA	CA-C-N	5.89	128.45	120.38
51	B2	167	ALA	C-N-CA	5.89	128.45	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	881	G	O3'-P-O5'	-5.89	95.17	104.00
5	AC	97	ARG	CA-C-N	5.89	128.65	120.29
5	AC	97	ARG	C-N-CA	5.89	128.65	120.29
16	AQ	31	VAL	CA-CB-CG2	5.89	120.41	110.40
25	BB	693	A	N9-C1'-C2'	5.89	120.83	112.00
25	BB	973	A	N9-C1'-C2'	5.89	120.83	112.00
25	BB	1887	C	O4'-C4'-C3'	5.89	109.89	104.00
5	AC	126	ARG	CD-NE-CZ	5.88	132.64	124.40
25	BB	1107	G	C4'-C3'-C2'	5.88	108.48	102.60
25	BB	1790	C	C1'-O4'-C4'	-5.88	104.02	109.90
25	BB	1797	G	O3'-P-O5'	-5.88	95.17	104.00
26	BC	4	ILE	CA-C-N	5.88	129.71	121.24
26	BC	4	ILE	C-N-CA	5.88	129.71	121.24
1	AE	26	G	O3'-P-O5'	5.88	112.83	104.00
47	BX	2	LYS	CA-C-N	5.88	132.56	121.97
47	BX	2	LYS	C-N-CA	5.88	132.56	121.97
3	A1	485	U	O3'-P-O5'	-5.88	95.18	104.00
3	A1	868	C	C5'-C4'-C3'	-5.88	107.18	116.00
25	BB	1228	G	C5'-C4'-C3'	-5.88	107.18	116.00
25	BB	1448	G	C4'-C3'-C2'	-5.88	96.72	102.60
30	BG	120	GLU	CA-C-N	5.88	131.41	122.65
30	BG	120	GLU	C-N-CA	5.88	131.41	122.65
33	BJ	114	ALA	CA-C-N	5.88	133.05	122.46
33	BJ	114	ALA	C-N-CA	5.88	133.05	122.46
51	B2	20	ASN	CB-CA-C	5.88	119.74	111.86
3	A1	959	A	N9-C1'-C2'	5.88	120.82	112.00
9	AH	34	GLN	CB-CG-CD	-5.88	102.61	112.60
25	BB	1300	G	C2'-C3'-O3'	5.88	118.32	109.50
25	BB	2170	A	O4'-C1'-C2'	5.88	113.48	107.60
25	BB	2229	U	O4'-C1'-N1	5.88	117.32	108.50
25	BB	2543	G	C3'-C2'-C1'	5.88	107.38	101.50
1	AA	19	G	O5'-C5'-C4'	5.88	120.52	111.70
1	AE	62	A	C4'-C3'-C2'	-5.88	96.72	102.60
3	A1	264	C	O4'-C4'-C3'	-5.88	100.22	106.10
3	A1	989	U	C3'-C2'-C1'	-5.88	95.42	101.30
14	AN	62	ALA	CA-C-N	5.88	129.63	120.82
14	AN	62	ALA	C-N-CA	5.88	129.63	120.82
25	BB	64	A	C1'-O4'-C4'	-5.88	103.82	109.70
25	BB	878	A	C4'-C3'-C2'	-5.88	96.72	102.60
25	BB	2533	U	O4'-C1'-N1	5.88	117.32	108.50
48	BY	83	ARG	NH1-CZ-NH2	-5.88	111.66	119.30
2	AM	8	U	C4'-C3'-C2'	-5.88	96.72	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	71	A	C5'-C4'-C3'	-5.88	106.39	115.20
3	A1	584	G	C4'-C3'-C2'	-5.88	96.72	102.60
3	A1	927	G	C1'-C2'-O2'	-5.88	99.59	108.40
3	A1	990	C	C3'-C2'-O2'	5.88	119.51	110.70
25	BB	830	G	O4'-C1'-C2'	5.88	111.67	105.80
25	BB	2854	G	C4'-C3'-C2'	-5.88	96.72	102.60
3	A1	216	U	O4'-C4'-C3'	5.87	109.87	104.00
3	A1	1466	C	C3'-C2'-C1'	5.87	107.17	101.30
25	BB	478	A	O3'-P-O5'	5.87	112.81	104.00
48	BY	33	ARG	CD-NE-CZ	5.87	132.62	124.40
3	A1	364	A	C3'-C2'-C1'	5.87	107.17	101.30
3	A1	478	A	C5'-C4'-C3'	-5.87	107.19	116.00
7	AF	1	ALA	CA-C-N	5.87	130.71	122.08
7	AF	1	ALA	C-N-CA	5.87	130.71	122.08
25	BB	1778	U	C5'-C4'-O4'	5.87	117.91	109.10
25	BB	1867	G	C4'-C3'-C2'	-5.87	96.73	102.60
21	AV	20	ASN	OD1-CG-ND2	-5.87	116.73	122.60
37	BN	228	ASP	OD1-CG-OD2	-5.87	108.81	122.90
3	A1	73	C	C3'-C2'-C1'	5.87	107.17	101.30
3	A1	837	U	C5'-C4'-C3'	-5.87	107.20	116.00
25	BB	1321	A	O4'-C1'-C2'	-5.87	99.93	105.80
25	BB	1559	U	O4'-C1'-N1	5.87	117.00	108.20
25	BB	1665	A	C1'-O4'-C4'	-5.87	104.03	109.90
25	BB	1744	A	O4'-C4'-C3'	5.87	109.87	104.00
27	BD	91	SER	N-CA-CB	-5.87	101.53	111.27
3	A1	117	G	C2'-C3'-O3'	-5.87	104.90	113.70
25	BB	2032	G	C1'-O4'-C4'	-5.87	103.83	109.70
3	A1	530	G	C5'-C4'-C3'	-5.87	107.20	116.00
3	A1	823	C	C1'-C2'-O2'	-5.87	99.60	108.40
3	A1	1255	G	O5'-C5'-C4'	5.87	120.30	111.50
17	AR	25	ARG	NE-CZ-NH1	5.87	127.36	121.50
24	BA	64	G	C3'-C2'-O2'	5.87	119.50	110.70
25	BB	1546	G	C2'-C3'-O3'	-5.87	104.90	113.70
25	BB	1802	A	C1'-O4'-C4'	-5.87	104.03	109.90
33	BJ	26	ALA	N-CA-C	5.87	119.70	112.54
34	BK	80	ARG	NE-CZ-NH2	5.87	124.48	119.20
53	B4	27	ARG	NE-CZ-NH2	5.87	124.48	119.20
54	B5	83	ALA	CA-C-N	5.87	129.92	122.00
54	B5	83	ALA	C-N-CA	5.87	129.92	122.00
3	A1	255	G	C5'-C4'-C3'	-5.86	107.20	116.00
20	AU	113	LYS	N-CA-C	5.86	119.96	112.34
25	BB	556	A	N9-C1'-C2'	-5.86	103.20	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1957	C	O5'-C5'-C4'	5.86	120.30	111.50
25	BB	2400	G	C3'-C2'-O2'	5.86	119.50	110.70
38	BO	23	LYS	N-CA-C	5.86	118.78	109.81
17	AR	61	ARG	NE-CZ-NH2	5.86	124.48	119.20
25	BB	939	G	C4'-C3'-C2'	-5.86	96.74	102.60
39	BP	75	ASN	OD1-CG-ND2	-5.86	116.74	122.60
25	BB	673	C	C1'-O4'-C4'	-5.86	104.04	109.90
25	BB	2466	C	C4'-C3'-C2'	-5.86	96.74	102.60
25	BB	643	A	P-O3'-C3'	5.86	128.99	120.20
51	B2	2	LYS	CA-C-N	5.86	132.73	121.54
51	B2	2	LYS	C-N-CA	5.86	132.73	121.54
3	A1	1298	U	O4'-C1'-N1	5.86	116.99	108.20
25	BB	1091	G	O4'-C4'-C3'	-5.86	98.14	104.00
25	BB	2890	G	C2'-C3'-O3'	-5.86	104.92	113.70
51	B2	48	LEU	CA-C-N	5.86	132.73	121.54
51	B2	48	LEU	C-N-CA	5.86	132.73	121.54
25	BB	8	C	C3'-C2'-C1'	5.86	107.16	101.30
25	BB	278	A	N9-C1'-C2'	5.86	120.78	112.00
25	BB	314	C	C5'-C4'-O4'	5.86	118.58	109.80
25	BB	896	A	C5'-C4'-C3'	5.86	124.78	116.00
25	BB	2753	A	C5'-C4'-O4'	5.86	118.58	109.80
30	BG	31	HIS	O-C-N	-5.86	117.65	123.62
1	AP	35	A	P-O3'-C3'	5.85	128.98	120.20
3	A1	836	G	C3'-C2'-C1'	5.85	107.15	101.30
3	A1	383	A	C4'-C3'-C2'	-5.85	96.75	102.60
3	A1	807	A	C1'-C2'-O2'	-5.85	103.02	111.80
25	BB	716	A	C1'-O4'-C4'	-5.85	104.05	109.90
25	BB	912	C	C5'-C4'-C3'	-5.85	107.22	116.00
25	BB	971	G	C4'-C3'-O3'	5.85	118.18	109.40
25	BB	1773	A	O5'-C5'-C4'	5.85	120.28	111.50
9	AH	33	ALA	N-CA-CB	-5.85	101.21	110.22
18	AS	88	HIS	CB-CG-CD2	-5.85	123.59	131.20
25	BB	20	C	C5'-C4'-C3'	-5.85	107.22	116.00
3	A1	142	G	C1'-C2'-O2'	5.85	120.57	111.80
3	A1	912	C	O4'-C4'-C3'	5.85	109.85	104.00
25	BB	1558	C	C3'-C2'-C1'	5.85	107.35	101.50
25	BB	2033	A	O5'-C5'-C4'	5.85	120.28	111.50
38	BO	81	ARG	NE-CZ-NH1	5.85	127.35	121.50
1	AP	28	C	P-O5'-C5'	5.85	129.67	120.90
3	A1	134	G	C4'-C3'-C2'	-5.85	96.75	102.60
3	A1	151	A	C5'-C4'-C3'	-5.85	107.23	116.00
3	A1	559	A	O4'-C1'-N9	5.85	116.97	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1212	G	O4'-C1'-N9	-5.85	99.43	108.20
25	BB	1230	A	C5'-C4'-C3'	-5.85	107.23	116.00
25	BB	2263	C	C2'-C3'-O3'	-5.85	104.93	113.70
25	BB	2666	C	C4'-C3'-C2'	-5.85	96.75	102.60
26	BC	36	ALA	CA-C-N	5.85	127.15	119.84
26	BC	36	ALA	C-N-CA	5.85	127.15	119.84
38	BO	41	VAL	CA-CB-CG1	5.85	120.34	110.40
3	A1	11	G	C5'-C4'-C3'	-5.85	107.23	116.00
25	BB	1407	G	O5'-C5'-C4'	-5.85	102.73	111.50
25	BB	1465	G	O4'-C4'-C3'	5.85	109.85	104.00
42	BS	16	CYS	N-CA-CB	-5.85	102.16	110.58
3	A1	548	G	O3'-P-O5'	5.84	112.77	104.00
23	AX	47	GLU	N-CA-C	5.84	118.54	109.60
25	BB	1619	G	O4'-C4'-C3'	5.84	109.84	104.00
25	BB	1767	G	C4'-C3'-C2'	-5.84	96.75	102.60
38	BO	15	GLY	CA-C-N	5.84	128.91	120.38
38	BO	15	GLY	C-N-CA	5.84	128.91	120.38
3	A1	1147	C	O4'-C1'-N1	5.84	117.26	108.50
3	A1	1477	U	C1'-C2'-O2'	-5.84	99.64	108.40
25	BB	905	A	C3'-C2'-C1'	5.84	107.14	101.30
25	BB	1377	G	O3'-P-O5'	-5.84	95.23	104.00
25	BB	1504	A	O3'-P-O5'	5.84	112.76	104.00
25	BB	1983	G	C4'-C3'-O3'	-5.84	104.23	113.00
3	A1	188	C	C3'-C2'-C1'	-5.84	95.66	101.50
13	AL	26	ASP	CA-CB-CG	-5.84	106.76	112.60
23	AX	48	ARG	NH1-CZ-NH2	-5.84	111.71	119.30
28	BE	109	LYS	CA-C-N	5.84	128.55	120.49
28	BE	109	LYS	C-N-CA	5.84	128.55	120.49
48	BY	9	VAL	N-CA-C	5.84	117.33	108.80
55	B6	64	VAL	CA-CB-CG1	5.84	120.33	110.40
3	A1	464	U	O5'-C5'-C4'	5.84	120.26	111.50
13	AL	40	PHE	CA-CB-CG	5.84	119.64	113.80
25	BB	1130	U	O4'-C1'-N1	5.84	116.96	108.20
25	BB	1465	G	C5'-C4'-C3'	-5.84	107.24	116.00
25	BB	1614	A	O4'-C4'-C3'	5.84	111.94	106.10
25	BB	1924	C	O4'-C1'-N1	5.84	117.26	108.50
25	BB	2598	A	C3'-C2'-C1'	5.84	107.34	101.50
34	BK	87	GLN	OE1-CD-NE2	-5.84	116.76	122.60
37	BN	57	HIS	CB-CG-CD2	-5.84	123.61	131.20
1	AP	61	C	O4'-C1'-C2'	-5.84	101.76	107.60
1	AE	37	G	O4'-C1'-C2'	-5.84	101.76	107.60
3	A1	352	C	C5'-C4'-O4'	5.84	118.56	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1245	C	C5'-C4'-O4'	5.84	118.56	109.80
9	AH	69	LEU	CA-C-N	5.84	128.42	120.54
9	AH	69	LEU	C-N-CA	5.84	128.42	120.54
25	BB	2074	U	C3'-C2'-C1'	5.84	107.34	101.50
1	AA	24	G	C4'-C3'-O3'	5.84	121.76	113.00
3	A1	464	U	C4'-C3'-O3'	5.84	121.75	113.00
3	A1	843	U	C5'-C4'-O4'	5.84	118.55	109.80
3	A1	929	G	O5'-C5'-C4'	5.84	120.26	111.50
11	AJ	47	ASP	CA-CB-CG	5.84	118.44	112.60
25	BB	785	G	C4'-C3'-C2'	-5.84	96.76	102.60
25	BB	1141	U	C4'-C3'-O3'	5.84	118.16	109.40
25	BB	2431	U	C3'-C2'-O2'	5.84	119.45	110.70
25	BB	2751	G	O4'-C1'-N9	5.84	116.95	108.20
25	BB	2806	C	C3'-C2'-C1'	5.84	107.14	101.30
3	A1	256	U	C2'-C3'-O3'	-5.83	104.95	113.70
29	BF	51	ARG	NH1-CZ-NH2	-5.83	111.72	119.30
3	A1	378	G	C2'-C3'-O3'	5.83	122.45	113.70
17	AR	106	PHE	CA-CB-CG	5.83	119.63	113.80
20	AU	3	ARG	NE-CZ-NH1	5.83	127.33	121.50
25	BB	1500	G	O4'-C4'-C3'	5.83	109.83	104.00
25	BB	1773	A	C4'-C3'-O3'	5.83	121.75	113.00
25	BB	2515	C	N1-C1'-C2'	5.83	120.75	112.00
51	B2	126	ASN	OD1-CG-ND2	-5.83	116.77	122.60
51	B2	149	ARG	N-CA-C	5.83	120.13	113.19
3	A1	618	C	O5'-C5'-C4'	-5.83	102.75	111.50
23	AX	85	ASP	N-CA-C	5.83	118.42	111.71
25	BB	945	A	P-O3'-C3'	5.83	128.95	120.20
25	BB	2035	G	O3'-P-O5'	5.83	112.75	104.00
50	B1	143	LEU	CA-C-N	5.83	132.68	121.54
50	B1	143	LEU	C-N-CA	5.83	132.68	121.54
25	BB	551	G	C5'-C4'-O4'	5.83	118.55	109.80
25	BB	1277	G	C4'-C3'-C2'	-5.83	96.77	102.60
25	BB	1394	U	C4'-C3'-C2'	-5.83	96.77	102.60
3	A1	19	A	O3'-P-O5'	5.83	112.74	104.00
24	BA	57	A	O4'-C4'-C3'	5.83	109.83	104.00
25	BB	67	U	C4'-C3'-C2'	-5.83	96.77	102.60
25	BB	227	A	C2'-C3'-O3'	5.83	118.24	109.50
25	BB	825	A	C5'-C4'-O4'	5.83	117.84	109.10
25	BB	2149	U	O5'-C5'-C4'	5.83	120.24	111.50
30	BG	63	ARG	NE-CZ-NH2	5.83	124.45	119.20
1	AA	1	G	C4'-C3'-O3'	5.83	121.74	113.00
3	A1	153	C	C5'-C4'-C3'	-5.83	107.26	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	344	A	O4'-C1'-N9	-5.83	99.46	108.20
3	A1	505	G	O3'-P-O5'	5.83	112.74	104.00
3	A1	1112	C	O4'-C1'-N1	5.83	117.24	108.50
3	A1	1506	U	O5'-C5'-C4'	5.83	120.24	111.50
16	AQ	16	ARG	NH1-CZ-NH2	-5.83	111.73	119.30
25	BB	1331	G	C4'-C3'-C2'	-5.83	96.77	102.60
25	BB	1524	G	C5'-C4'-C3'	-5.83	107.26	116.00
25	BB	2369	A	O4'-C1'-N9	-5.83	99.76	108.50
25	BB	2502	G	C4'-C3'-C2'	-5.83	96.78	102.60
25	BB	2594	C	C5'-C4'-O4'	5.83	117.84	109.10
25	BB	2779	U	C3'-C2'-C1'	5.83	107.13	101.30
36	BM	91	GLN	CA-C-N	5.83	132.67	121.54
36	BM	91	GLN	C-N-CA	5.83	132.67	121.54
1	AA	36	A	O3'-P-O5'	5.82	112.73	104.00
3	A1	25	C	C4'-C3'-O3'	5.82	118.14	109.40
3	A1	1019	A	C4'-C3'-C2'	-5.82	96.78	102.60
3	A1	1203	C	O4'-C4'-C3'	5.82	109.82	104.00
22	AW	123	ARG	CA-C-N	5.82	125.84	119.90
22	AW	123	ARG	C-N-CA	5.82	125.84	119.90
25	BB	106	C	C3'-C2'-O2'	-5.82	105.87	114.60
25	BB	1744	A	O5'-C5'-C4'	5.82	120.24	111.50
41	BR	37	ARG	CD-NE-CZ	5.82	132.55	124.40
3	A1	186	C	O4'-C1'-C2'	-5.82	101.78	107.60
3	A1	441	A	O4'-C4'-C3'	5.82	109.82	104.00
3	A1	873	A	C2'-C3'-O3'	5.82	118.23	109.50
25	BB	2669	G	O5'-C5'-C4'	-5.82	102.77	111.50
25	BB	2685	G	C1'-O4'-C4'	-5.82	104.08	109.90
2	AM	16	U	C5'-C4'-C3'	-5.82	107.27	116.00
3	A1	251	G	C1'-O4'-C4'	-5.82	104.08	109.90
3	A1	1451	U	N1-C1'-C2'	5.82	120.73	112.00
3	A1	1525	G	C4'-C3'-O3'	5.82	121.73	113.00
25	BB	330	A	C1'-O4'-C4'	-5.82	104.08	109.90
25	BB	538	A	C4'-C3'-C2'	-5.82	96.78	102.60
3	A1	416	G	C4'-C3'-C2'	-5.82	96.78	102.60
3	A1	977	A	C3'-C2'-C1'	5.82	107.12	101.30
25	BB	960	A	C2'-C3'-O3'	5.82	118.23	109.50
1	AE	46	G	O4'-C1'-C2'	-5.82	99.98	105.80
3	A1	904	U	C3'-C2'-C1'	5.82	107.12	101.30
3	A1	1206	G	C5'-C4'-O4'	5.82	118.53	109.80
3	A1	1413	A	C4'-C3'-C2'	-5.82	96.78	102.60
25	BB	437	U	C2'-C3'-O3'	5.82	118.22	109.50
25	BB	1206	G	P-O3'-C3'	5.82	128.93	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1574	C	C4'-C3'-C2'	-5.82	96.78	102.60
25	BB	2111	U	C5'-C4'-O4'	5.82	117.83	109.10
25	BB	2376	A	N1-C6-N6	-5.82	101.15	118.60
36	BM	12	ARG	CD-NE-CZ	5.82	132.54	124.40
45	BV	7	PRO	CA-C-N	5.82	132.27	121.62
45	BV	7	PRO	C-N-CA	5.82	132.27	121.62
12	AK	23	LYS	CA-C-N	5.82	130.57	120.68
12	AK	23	LYS	C-N-CA	5.82	130.57	120.68
25	BB	732	C	O4'-C1'-N1	5.82	117.22	108.50
25	BB	1399	C	C3'-C2'-C1'	5.82	107.32	101.50
25	BB	1771	C	O4'-C1'-C2'	-5.82	99.98	105.80
45	BV	3	ARG	NE-CZ-NH2	-5.81	113.97	119.20
1	AA	39	U	C3'-C2'-O2'	5.81	119.42	110.70
3	A1	431	A	C4'-C3'-C2'	-5.81	96.79	102.60
21	AV	89	ASP	O-C-N	-5.81	115.53	122.27
25	BB	353	C	O4'-C4'-C3'	5.81	109.81	104.00
25	BB	2158	A	O4'-C4'-C3'	5.81	109.81	104.00
25	BB	2827	C	C4'-C3'-O3'	5.81	118.12	109.40
6	AD	31	GLY	CA-C-N	5.81	128.29	120.50
6	AD	31	GLY	C-N-CA	5.81	128.29	120.50
25	BB	1763	G	O4'-C1'-C2'	5.81	111.61	105.80
3	A1	1412	C	C1'-C2'-O2'	5.81	117.11	108.40
17	AR	61	ARG	NH1-CZ-NH2	-5.81	111.75	119.30
20	AU	33	GLY	CA-C-N	5.81	132.63	121.54
20	AU	33	GLY	C-N-CA	5.81	132.63	121.54
25	BB	129	C	C2'-C3'-O3'	5.81	118.21	109.50
25	BB	650	C	C5'-C4'-C3'	-5.81	107.29	116.00
25	BB	1076	C	O4'-C4'-C3'	5.81	109.81	104.00
25	BB	1252	G	C2'-C3'-O3'	5.81	118.22	109.50
25	BB	2079	U	C5'-C4'-O4'	5.81	117.81	109.10
25	BB	2416	C	P-O3'-C3'	5.81	128.91	120.20
1	AE	40	C	C4'-C3'-C2'	-5.81	96.79	102.60
25	BB	419	U	C3'-C2'-O2'	5.81	119.41	110.70
25	BB	928	A	O4'-C4'-C3'	5.81	109.81	104.00
25	BB	1428	C	C4'-C3'-C2'	-5.81	96.79	102.60
25	BB	1953	A	C1'-C2'-O2'	5.81	117.11	108.40
3	A1	554	A	C5'-C4'-C3'	-5.81	107.29	116.00
3	A1	1366	C	C2'-C3'-O3'	5.81	118.21	109.50
25	BB	1576	U	C5'-C4'-C3'	-5.81	107.29	116.00
35	BL	19	LEU	CA-C-N	5.81	132.42	121.97
35	BL	19	LEU	C-N-CA	5.81	132.42	121.97
3	A1	671	G	O4'-C4'-C3'	5.80	109.80	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	937	A	C1'-C2'-O2'	-5.80	103.09	111.80
25	BB	27	G	C3'-C2'-C1'	5.80	107.31	101.50
25	BB	1633	G	N9-C1'-C2'	5.80	120.71	112.00
25	BB	2407	A	N9-C1'-C2'	5.80	120.71	112.00
25	BB	2812	G	C5'-C4'-C3'	-5.80	107.29	116.00
37	BN	211	ARG	NE-CZ-NH2	5.80	124.42	119.20
38	BO	99	SER	CA-C-N	5.80	132.63	121.54
38	BO	99	SER	C-N-CA	5.80	132.63	121.54
3	A1	1244	G	C3'-C2'-O2'	5.80	119.41	110.70
10	AI	46	LYS	N-CA-C	5.80	118.38	111.71
3	A1	69	G	O4'-C1'-N9	5.80	116.90	108.20
3	A1	1046	A	C4'-C3'-C2'	-5.80	96.80	102.60
3	A1	1054	C	O5'-C5'-C4'	5.80	120.40	111.70
25	BB	517	C	C3'-C2'-C1'	5.80	107.30	101.50
25	BB	1426	G	C5'-C4'-C3'	-5.80	107.30	116.00
25	BB	1606	C	N1-C1'-C2'	5.80	120.70	112.00
25	BB	2066	C	C2'-C3'-O3'	5.80	118.20	109.50
29	BF	112	LEU	CA-C-N	5.80	128.06	120.28
29	BF	112	LEU	C-N-CA	5.80	128.06	120.28
4	AB	76	SER	N-CA-C	5.80	118.35	111.33
14	AN	60	GLN	OE1-CD-NE2	-5.80	116.80	122.60
25	BB	48	G	C1'-O4'-C4'	-5.80	103.90	109.70
25	BB	836	G	C4'-C3'-C2'	-5.80	96.80	102.60
25	BB	955	U	C4'-C3'-O3'	-5.80	104.30	113.00
25	BB	2532	G	O4'-C4'-C3'	-5.80	98.20	104.00
41	BR	30	ARG	CD-NE-CZ	5.80	132.52	124.40
55	B6	54	ILE	CA-CB-CG1	5.80	120.26	110.40
1	AE	31	A	C3'-C2'-O2'	5.80	119.40	110.70
3	A1	957	U	C4'-C3'-C2'	-5.80	96.80	102.60
3	A1	996	A	P-O5'-C5'	5.80	129.59	120.90
3	A1	1382	C	N1-C1'-C2'	5.80	120.69	112.00
20	AU	69	ARG	NE-CZ-NH1	5.80	127.30	121.50
25	BB	191	A	O3'-P-O5'	5.80	112.70	104.00
25	BB	991	C	O5'-C5'-C4'	5.80	120.19	111.50
25	BB	1307	A	O4'-C4'-C3'	5.80	109.80	104.00
25	BB	2300	C	O4'-C1'-C2'	5.80	113.40	107.60
25	BB	2664	G	C1'-O4'-C4'	-5.80	104.10	109.90
20	AU	96	ASN	CA-C-N	5.79	128.32	120.38
20	AU	96	ASN	C-N-CA	5.79	128.32	120.38
25	BB	1533	C	O5'-C5'-C4'	5.79	120.19	111.50
3	A1	1089	G	C5'-C4'-C3'	-5.79	107.31	116.00
3	A1	1225	A	N1-C6-N6	-5.79	101.22	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1483	A	C3'-C2'-O2'	5.79	119.39	110.70
25	BB	115	C	O4'-C4'-C3'	5.79	109.79	104.00
25	BB	1205	A	O5'-C5'-C4'	5.79	120.39	111.70
39	BP	58	LEU	CA-C-N	5.79	128.84	120.38
39	BP	58	LEU	C-N-CA	5.79	128.84	120.38
3	A1	620	C	C5'-C4'-C3'	-5.79	107.31	116.00
14	AN	25	SER	CA-C-N	5.79	128.31	120.38
14	AN	25	SER	C-N-CA	5.79	128.31	120.38
25	BB	1626	A	C1'-O4'-C4'	-5.79	104.11	109.90
14	AN	17	ARG	CD-NE-CZ	5.79	132.51	124.40
4	AB	73	ARG	NE-CZ-NH1	5.79	127.29	121.50
25	BB	659	G	C2'-C3'-O3'	5.79	122.38	113.70
25	BB	2884	U	C1'-O4'-C4'	-5.79	104.11	109.90
32	BI	57	ALA	CA-C-N	5.79	132.60	121.54
32	BI	57	ALA	C-N-CA	5.79	132.60	121.54
48	BY	59	ARG	NE-CZ-NH1	5.79	127.29	121.50
25	BB	738	G	C4'-C3'-C2'	-5.79	96.81	102.60
3	A1	631	C	C4'-C3'-C2'	-5.79	96.81	102.60
3	A1	1347	G	O4'-C1'-N9	5.79	116.88	108.20
4	AB	218	ALA	CA-C-N	5.79	128.31	120.38
4	AB	218	ALA	C-N-CA	5.79	128.31	120.38
16	AQ	38	GLU	OE1-CD-OE2	-5.79	109.01	122.90
25	BB	54	G	O4'-C4'-C3'	5.79	109.79	104.00
25	BB	477	A	C5'-C4'-C3'	-5.79	107.32	116.00
25	BB	855	G	N9-C1'-C2'	-5.79	105.32	114.00
25	BB	2234	G	C2'-C3'-O3'	-5.79	105.02	113.70
3	A1	839	C	P-O5'-C5'	5.78	129.57	120.90
8	AG	40	ARG	NE-CZ-NH1	5.78	127.28	121.50
12	AK	70	THR	CA-C-N	5.78	132.59	121.54
12	AK	70	THR	C-N-CA	5.78	132.59	121.54
16	AQ	9	GLU	CA-C-N	5.78	127.07	119.84
16	AQ	9	GLU	C-N-CA	5.78	127.07	119.84
24	BA	51	G	C2'-C3'-O3'	5.78	118.17	109.50
25	BB	11	C	O3'-P-O5'	5.78	112.67	104.00
25	BB	750	A	O3'-P-O5'	5.78	112.68	104.00
25	BB	1322	A	O4'-C1'-C2'	-5.78	100.02	105.80
25	BB	1765	U	C3'-C2'-C1'	5.78	107.08	101.30
25	BB	2158	A	C5'-C4'-C3'	-5.78	107.32	116.00
38	BO	32	LYS	N-CA-C	5.78	119.96	113.02
3	A1	119	A	C1'-O4'-C4'	-5.78	103.92	109.70
25	BB	2164	C	C4'-C3'-C2'	-5.78	96.82	102.60
52	B3	47	ASN	N-CA-CB	-5.78	101.92	110.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	46	G	C4'-C3'-O3'	5.78	118.07	109.40
7	AF	97	ARG	CA-C-N	5.78	128.57	121.06
7	AF	97	ARG	C-N-CA	5.78	128.57	121.06
9	AH	63	ARG	NE-CZ-NH1	5.78	127.28	121.50
24	BA	76	G	O5'-C5'-C4'	-5.78	102.83	111.50
25	BB	1485	U	O3'-P-O5'	-5.78	95.33	104.00
25	BB	1952	A	C3'-C2'-C1'	5.78	107.28	101.50
31	BH	27	VAL	CA-C-N	5.78	132.38	121.97
31	BH	27	VAL	C-N-CA	5.78	132.38	121.97
3	A1	171	A	C2'-C3'-O3'	5.78	118.17	109.50
3	A1	1204	A	C5'-C4'-O4'	5.78	118.47	109.80
33	BJ	90	ASP	CA-C-N	5.78	129.93	120.63
33	BJ	90	ASP	C-N-CA	5.78	129.93	120.63
3	A1	304	U	C5'-C4'-C3'	-5.78	107.33	116.00
3	A1	308	C	O4'-C4'-C3'	5.78	109.78	104.00
23	AX	15	HIS	CB-CG-CD2	-5.78	123.69	131.20
25	BB	1094	U	C2'-C3'-O3'	5.78	122.37	113.70
25	BB	1817	G	O5'-C5'-C4'	-5.78	102.83	111.50
25	BB	1819	A	C2'-C3'-O3'	5.78	118.17	109.50
25	BB	1834	U	C3'-C2'-O2'	5.78	119.36	110.70
25	BB	2438	U	O4'-C1'-C2'	-5.78	100.02	105.80
27	BD	78	ARG	NE-CZ-NH1	5.78	127.28	121.50
48	BY	97	SER	CA-C-N	5.78	129.06	122.36
48	BY	97	SER	C-N-CA	5.78	129.06	122.36
1	AA	4	G	N9-C1'-C2'	-5.78	103.34	112.00
3	A1	50	A	C5'-C4'-O4'	5.78	117.76	109.10
25	BB	814	C	P-O3'-C3'	5.78	128.86	120.20
42	BS	66	ILE	CA-C-O	-5.78	114.82	118.69
15	AO	40	GLN	CA-C-N	5.77	127.95	120.44
15	AO	40	GLN	C-N-CA	5.77	127.95	120.44
25	BB	634	C	C4'-C3'-C2'	-5.77	96.83	102.60
25	BB	1184	U	C4'-C3'-C2'	-5.77	96.83	102.60
25	BB	2552	U	O4'-C1'-C2'	-5.77	100.03	105.80
38	BO	12	VAL	CB-CA-C	-5.77	103.64	111.15
3	A1	252	U	C3'-C2'-C1'	5.77	107.07	101.30
3	A1	1339	A	C2'-C3'-O3'	5.77	122.36	113.70
12	AK	46	THR	CA-CB-OG1	5.77	118.26	109.60
25	BB	484	C	C5'-C4'-C3'	-5.77	107.34	116.00
25	BB	842	U	O4'-C1'-C2'	-5.77	101.83	107.60
25	BB	2024	G	C4'-C3'-C2'	-5.77	96.83	102.60
3	A1	264	C	C5'-C4'-O4'	5.77	117.76	109.10
3	A1	717	U	N1-C1'-C2'	-5.77	105.34	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	16	G	C4'-C3'-C2'	-5.77	96.83	102.60
25	BB	1095	A	C4'-C3'-C2'	-5.77	96.83	102.60
33	BJ	8	ILE	CB-CA-C	5.77	116.14	111.06
3	A1	636	U	C1'-O4'-C4'	-5.77	104.13	109.90
3	A1	1448	C	C5'-C4'-O4'	5.77	118.45	109.80
4	AB	62	ARG	CB-CA-C	5.77	121.94	110.17
25	BB	965	C	O4'-C4'-C3'	5.77	111.87	106.10
25	BB	1259	G	C2'-C3'-O3'	5.77	118.15	109.50
49	BZ	77	LYS	CA-C-N	5.77	131.30	122.24
49	BZ	77	LYS	C-N-CA	5.77	131.30	122.24
3	A1	1020	G	C5'-C4'-C3'	-5.77	107.35	116.00
3	A1	1162	C	C5'-C4'-C3'	5.77	124.65	116.00
3	A1	1438	G	O4'-C4'-C3'	5.77	109.77	104.00
25	BB	341	C	C5'-C4'-C3'	-5.77	107.35	116.00
25	BB	493	G	O4'-C4'-C3'	5.77	109.77	104.00
25	BB	660	C	C1'-O4'-C4'	-5.77	104.13	109.90
25	BB	1532	A	C5'-C4'-C3'	-5.77	107.35	116.00
37	BN	132	ARG	NH1-CZ-NH2	-5.77	111.80	119.30
1	AP	44	A	C2'-C3'-O3'	-5.77	105.05	113.70
3	A1	204	G	C3'-C2'-O2'	5.77	119.35	110.70
3	A1	475	C	N1-C1'-C2'	-5.77	103.35	112.00
3	A1	759	A	O4'-C1'-N9	5.77	117.15	108.50
8	AG	4	SER	N-CA-C	5.77	116.53	108.00
30	BG	17	ARG	NE-CZ-NH1	5.77	127.27	121.50
50	B1	135	ALA	N-CA-C	5.77	119.13	111.75
3	A1	1277	C	C3'-C2'-O2'	5.76	119.35	110.70
25	BB	1103	A	C1'-C2'-O2'	5.76	117.05	108.40
25	BB	1156	A	O4'-C1'-N9	5.76	116.85	108.20
25	BB	2445	G	C4'-C3'-C2'	-5.76	96.83	102.60
31	BH	7	ARG	CA-CB-CG	5.76	125.63	114.10
3	A1	142	G	O4'-C1'-C2'	-5.76	100.04	105.80
3	A1	1159	U	C5'-C4'-O4'	5.76	117.74	109.10
30	BG	47	VAL	CB-CA-C	5.76	119.17	111.85
42	BS	61	ASN	N-CA-C	5.76	123.07	110.80
3	A1	960	U	C1'-C2'-O2'	5.76	120.44	111.80
3	A1	1352	C	O5'-C5'-C4'	-5.76	102.86	111.50
15	AO	73	GLY	CA-C-N	5.76	130.06	121.77
15	AO	73	GLY	C-N-CA	5.76	130.06	121.77
25	BB	1029	A	C4'-C3'-C2'	-5.76	96.84	102.60
25	BB	2278	A	C3'-C2'-C1'	-5.76	95.54	101.30
3	A1	1485	U	C5'-C4'-O4'	5.76	117.74	109.10
6	AD	16	ALA	N-CA-C	5.76	119.83	112.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	221	A	O4'-C1'-C2'	-5.76	100.04	105.80
25	BB	2496	C	C1'-O4'-C4'	-5.76	104.14	109.90
3	A1	664	G	C3'-C2'-C1'	5.76	107.06	101.30
3	A1	693	G	O5'-C5'-C4'	5.76	120.14	111.50
25	BB	2308	G	O4'-C1'-N9	5.76	116.83	108.20
36	BM	79	ASP	CA-CB-CG	5.76	118.36	112.60
52	B3	91	VAL	N-CA-C	5.76	120.10	112.04
3	A1	628	G	O4'-C1'-C2'	5.75	113.36	107.60
25	BB	128	C	C4'-C3'-C2'	-5.75	96.84	102.60
25	BB	229	C	C3'-C2'-O2'	5.75	119.33	110.70
25	BB	2199	A	C5'-C4'-C3'	-5.75	107.37	116.00
3	A1	1391	U	O4'-C1'-N1	5.75	116.83	108.20
5	AC	117	HIS	CA-C-N	5.75	129.45	120.82
5	AC	117	HIS	C-N-CA	5.75	129.45	120.82
25	BB	126	A	C1'-O4'-C4'	-5.75	104.15	109.90
25	BB	1266	G	C2'-C3'-O3'	5.75	122.33	113.70
25	BB	2841	C	O3'-P-O5'	-5.75	95.37	104.00
26	BC	78	GLN	OE1-CD-NE2	-5.75	116.85	122.60
48	BY	159	LYS	CA-C-N	5.75	132.53	121.54
48	BY	159	LYS	C-N-CA	5.75	132.53	121.54
1	AP	44	A	O3'-P-O5'	5.75	112.63	104.00
3	A1	307	C	C3'-C2'-C1'	5.75	107.05	101.30
19	AT	45	ARG	NH1-CZ-NH2	-5.75	111.82	119.30
24	BA	58	A	O4'-C4'-C3'	-5.75	98.25	104.00
30	BG	18	GLN	CA-C-N	5.75	132.53	121.54
30	BG	18	GLN	C-N-CA	5.75	132.53	121.54
31	BH	102	ARG	CA-C-N	5.75	128.61	121.71
31	BH	102	ARG	C-N-CA	5.75	128.61	121.71
3	A1	491	G	N9-C1'-C2'	5.75	120.63	112.00
3	A1	762	U	C4'-C3'-C2'	-5.75	96.85	102.60
3	A1	1148	U	C3'-C2'-C1'	5.75	107.05	101.30
3	A1	1210	C	C5'-C4'-O4'	5.75	118.42	109.80
20	AU	104	VAL	N-CA-C	5.75	116.40	110.36
25	BB	1060	U	O4'-C1'-C2'	-5.75	100.05	105.80
25	BB	2654	A	C3'-C2'-O2'	5.75	119.32	110.70
3	A1	150	U	C4'-C3'-O3'	-5.75	104.38	113.00
3	A1	627	G	O4'-C1'-C2'	-5.75	101.85	107.60
25	BB	167	A	C2'-C3'-O3'	-5.75	105.08	113.70
25	BB	2474	U	C3'-C2'-C1'	5.75	107.25	101.50
25	BB	2739	U	C2'-C3'-O3'	5.75	122.32	113.70
3	A1	466	A	O4'-C1'-N9	5.75	116.82	108.20
3	A1	1094	G	C1'-O4'-C4'	-5.75	103.95	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	30	G	C4'-C3'-C2'	-5.75	96.85	102.60
25	BB	2064	C	C2'-C3'-O3'	-5.75	105.08	113.70
25	BB	2554	U	C4'-C3'-O3'	5.75	118.02	109.40
38	BO	17	ASP	CA-C-N	5.75	132.52	121.54
38	BO	17	ASP	C-N-CA	5.75	132.52	121.54
38	BO	53	GLN	OE1-CD-NE2	-5.75	116.85	122.60
1	AE	51	G	C4'-C3'-C2'	-5.75	96.86	102.60
25	BB	1606	C	O3'-P-O5'	-5.75	95.38	104.00
25	BB	1906	G	O4'-C4'-C3'	5.75	109.75	104.00
25	BB	2750	A	O3'-P-O5'	5.75	112.62	104.00
1	AP	55	U	C4'-C3'-C2'	-5.74	96.86	102.60
9	AH	35	ILE	CA-C-N	5.74	128.55	120.28
9	AH	35	ILE	C-N-CA	5.74	128.55	120.28
11	AJ	12	VAL	N-CA-C	5.74	118.41	112.90
16	AQ	25	ALA	CA-C-N	5.74	127.58	120.34
16	AQ	25	ALA	C-N-CA	5.74	127.58	120.34
21	AV	46	GLU	N-CA-C	5.74	118.48	111.82
25	BB	91	A	C3'-C2'-C1'	5.74	107.04	101.30
25	BB	517	C	C4'-C3'-C2'	-5.74	96.86	102.60
25	BB	1307	A	C2'-C3'-O3'	-5.74	105.08	113.70
25	BB	1572	A	C1'-C2'-O2'	-5.74	99.78	108.40
25	BB	2820	A	C5'-C4'-C3'	-5.74	106.58	115.20
29	BF	56	ALA	N-CA-C	5.74	119.55	112.54
33	BJ	63	ARG	NE-CZ-NH1	5.74	127.24	121.50
42	BS	63	ARG	NE-CZ-NH2	5.74	124.37	119.20
47	BX	15	LYS	CA-C-N	5.74	130.06	120.64
47	BX	15	LYS	C-N-CA	5.74	130.06	120.64
25	BB	1869	G	O3'-P-O5'	5.74	112.61	104.00
25	BB	2193	G	C4'-C3'-C2'	-5.74	96.86	102.60
10	AI	70	ARG	CA-C-N	5.74	132.30	121.97
10	AI	70	ARG	C-N-CA	5.74	132.30	121.97
17	AR	115	GLN	OE1-CD-NE2	-5.74	116.86	122.60
24	BA	95	U	C5'-C4'-C3'	-5.74	107.39	116.00
25	BB	1134	A	C4'-C3'-O3'	-5.74	100.79	109.40
25	BB	1693	U	O4'-C1'-C2'	-5.74	101.86	107.60
50	B1	115	GLN	OE1-CD-NE2	-5.74	116.86	122.60
3	A1	361	G	C4'-C3'-C2'	-5.74	96.86	102.60
25	BB	1993	U	O4'-C4'-C3'	5.74	109.74	104.00
25	BB	2525	G	O5'-C5'-C4'	-5.74	102.89	111.50
3	A1	1220	G	C4'-C3'-O3'	-5.74	104.39	113.00
3	A1	1276	G	C3'-C2'-O2'	5.74	119.31	110.70
3	A1	1398	A	C1'-O4'-C4'	-5.74	103.96	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1162	G	C1'-O4'-C4'	-5.74	104.16	109.90
25	BB	1170	C	C5'-C4'-C3'	-5.74	107.39	116.00
25	BB	2484	G	O4'-C1'-C2'	-5.74	101.86	107.60
1	AE	44	A	O4'-C4'-C3'	5.74	109.73	104.00
3	A1	652	U	O3'-P-O5'	-5.74	95.40	104.00
6	AD	20	VAL	CA-CB-CG1	5.74	120.15	110.40
10	AI	13	LYS	CA-C-N	5.74	128.45	120.65
10	AI	13	LYS	C-N-CA	5.74	128.45	120.65
25	BB	2550	G	O4'-C1'-C2'	-5.74	101.86	107.60
46	BW	4	LYS	CA-C-N	5.74	130.87	121.58
46	BW	4	LYS	C-N-CA	5.74	130.87	121.58
49	BZ	40	ASP	CA-C-N	5.74	129.86	120.63
49	BZ	40	ASP	C-N-CA	5.74	129.86	120.63
53	B4	149	GLU	CA-CB-CG	5.74	125.57	114.10
3	A1	1434	A	C3'-C2'-O2'	5.73	119.30	110.70
25	BB	85	G	C4'-C3'-C2'	-5.73	96.87	102.60
25	BB	1497	U	C4'-C3'-C2'	-5.73	96.87	102.60
43	BT	18	HIS	CB-CG-CD2	-5.73	123.75	131.20
52	B3	110	HIS	CA-CB-CG	5.73	119.53	113.80
3	A1	1120	C	C4'-C3'-O3'	-5.73	104.40	113.00
3	A1	1254	A	O4'-C4'-C3'	5.73	109.73	104.00
3	A1	1255	G	C3'-C2'-O2'	5.73	119.30	110.70
3	A1	1373	G	O4'-C4'-C3'	5.73	109.73	104.00
6	AD	71	HIS	CE1-NE2-CD2	-5.73	103.27	109.00
24	BA	60	C	C4'-C3'-C2'	-5.73	96.87	102.60
25	BB	996	A	C5'-C4'-C3'	-5.73	107.40	116.00
25	BB	2045	C	C3'-C2'-C1'	5.73	107.03	101.30
31	BH	57	ALA	N-CA-C	5.73	118.27	111.33
48	BY	49	GLN	CA-C-N	5.73	130.83	122.69
48	BY	49	GLN	C-N-CA	5.73	130.83	122.69
25	BB	128	C	C4'-C3'-O3'	5.73	121.60	113.00
25	BB	2491	U	O3'-P-O5'	5.73	112.60	104.00
25	BB	2801	G	C4'-C3'-O3'	-5.73	104.40	113.00
3	A1	972	C	C5'-C4'-C3'	-5.73	107.41	116.00
25	BB	696	G	O4'-C1'-C2'	5.73	113.33	107.60
25	BB	2704	C	O4'-C4'-C3'	5.73	109.73	104.00
3	A1	170	U	C1'-O4'-C4'	-5.73	103.97	109.70
3	A1	173	U	C5'-C4'-C3'	5.73	123.79	115.20
3	A1	237	G	P-O3'-C3'	5.73	128.79	120.20
25	BB	224	U	C5'-C4'-C3'	-5.73	107.41	116.00
25	BB	1250	G	C4'-C3'-O3'	5.73	121.59	113.00
25	BB	2481	G	O4'-C4'-C3'	5.73	111.83	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AP	32	C	O4'-C1'-C2'	-5.73	101.87	107.60
3	A1	77	A	C5'-C4'-C3'	-5.73	107.41	116.00
25	BB	33	C	O4'-C1'-N1	5.73	116.79	108.20
25	BB	359	G	C4'-C3'-O3'	-5.73	104.41	113.00
25	BB	879	G	O5'-C5'-C4'	5.73	120.09	111.50
25	BB	2567	G	C3'-C2'-O2'	5.73	119.29	110.70
32	BI	35	SER	CB-CA-C	-5.73	101.65	110.81
48	BY	13	ARG	NE-CZ-NH1	5.73	127.23	121.50
1	AE	26	G	C2'-C3'-O3'	-5.72	105.11	113.70
1	AE	57	G	C4'-C3'-C2'	-5.72	96.88	102.60
3	A1	1008	U	C1'-O4'-C4'	-5.72	104.18	109.90
25	BB	85	G	C5'-C4'-O4'	5.72	118.39	109.80
25	BB	1092	C	C4'-C3'-C2'	-5.72	96.88	102.60
25	BB	2897	U	C5'-C4'-C3'	-5.72	107.41	116.00
1	AA	60	C	C2'-C3'-O3'	5.72	118.08	109.50
1	AP	55	U	O4'-C4'-C3'	5.72	109.72	104.00
1	AP	65	G	C3'-C2'-O2'	5.72	119.28	110.70
6	AD	62	VAL	CA-C-N	5.72	131.57	122.59
6	AD	62	VAL	C-N-CA	5.72	131.57	122.59
25	BB	532	A	O4'-C4'-C3'	5.72	109.72	104.00
25	BB	1474	U	C4'-C3'-C2'	-5.72	96.88	102.60
25	BB	1544	A	C5'-C4'-C3'	-5.72	107.42	116.00
25	BB	1927	A	C3'-C2'-O2'	5.72	119.28	110.70
25	BB	1939	U	C4'-C3'-C2'	-5.72	96.88	102.60
25	BB	2245	U	C4'-C3'-O3'	5.72	121.58	113.00
29	BF	109	PRO	CA-C-N	5.72	129.01	120.31
29	BF	109	PRO	C-N-CA	5.72	129.01	120.31
43	BT	16	ARG	NE-CZ-NH2	5.72	124.35	119.20
3	A1	11	G	C4'-C3'-C2'	-5.72	96.88	102.60
24	BA	82	U	C4'-C3'-C2'	-5.72	96.88	102.60
25	BB	748	G	O4'-C1'-N9	5.72	116.78	108.20
25	BB	1989	G	C3'-C2'-C1'	5.72	107.02	101.30
25	BB	2238	G	O4'-C1'-N9	5.72	116.78	108.20
48	BY	43	ASP	CA-C-N	5.72	129.49	123.08
48	BY	43	ASP	C-N-CA	5.72	129.49	123.08
1	AE	31	A	C5'-C4'-O4'	5.72	118.38	109.80
3	A1	569	C	O4'-C4'-C3'	-5.72	98.28	104.00
11	AJ	16	MET	CA-C-N	5.72	128.73	120.38
11	AJ	16	MET	C-N-CA	5.72	128.73	120.38
22	AW	109	GLN	OE1-CD-NE2	-5.72	116.88	122.60
25	BB	1620	G	C5'-C4'-O4'	5.72	118.38	109.80
3	A1	1173	U	O3'-P-O5'	-5.72	95.42	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1469	C	C2'-C3'-O3'	5.72	122.28	113.70
4	AB	206	ILE	CA-CB-CG1	5.72	120.12	110.40
25	BB	783	A	C3'-C2'-C1'	5.72	107.02	101.30
25	BB	796	C	O3'-P-O5'	5.72	112.58	104.00
25	BB	1205	A	C4'-C3'-C2'	-5.72	96.88	102.60
25	BB	1724	G	O4'-C4'-C3'	5.72	109.72	104.00
3	A1	513	C	O4'-C1'-N1	5.71	117.07	108.50
3	A1	1388	C	C4'-C3'-C2'	-5.71	96.89	102.60
3	A1	1404	C	O4'-C1'-C2'	-5.71	101.89	107.60
25	BB	349	U	C5'-C4'-C3'	-5.71	107.43	116.00
25	BB	906	U	O3'-P-O5'	-5.71	95.43	104.00
25	BB	2432	A	O3'-P-O5'	-5.71	95.43	104.00
34	BK	13	ARG	CA-C-N	5.71	132.26	121.97
34	BK	13	ARG	C-N-CA	5.71	132.26	121.97
3	A1	678	U	O5'-C5'-C4'	-5.71	102.93	111.50
24	BA	8	C	C4'-C3'-C2'	-5.71	96.89	102.60
25	BB	1049	C	C3'-C2'-O2'	5.71	119.27	110.70
25	BB	1083	U	O4'-C1'-N1	5.71	117.07	108.50
25	BB	2201	G	P-O5'-C5'	5.71	129.47	120.90
32	BI	108	ARG	CA-C-N	5.71	128.75	120.98
32	BI	108	ARG	C-N-CA	5.71	128.75	120.98
35	BL	108	SER	CA-C-N	5.71	131.46	122.21
35	BL	108	SER	C-N-CA	5.71	131.46	122.21
1	AA	52	U	O3'-P-O5'	5.71	112.57	104.00
3	A1	739	C	C4'-C3'-O3'	5.71	121.57	113.00
3	A1	785	G	C4'-C3'-C2'	-5.71	96.89	102.60
3	A1	1113	C	C3'-C2'-O2'	5.71	119.27	110.70
3	A1	1327	C	O4'-C4'-C3'	5.71	109.71	104.00
20	AU	91	ARG	NH1-CZ-NH2	-5.71	111.87	119.30
25	BB	1925	C	C3'-C2'-C1'	5.71	107.01	101.30
25	BB	1942	C	O5'-C5'-C4'	-5.71	103.13	111.70
29	BF	11	LYS	N-CA-C	5.71	122.97	110.80
44	BU	23	THR	CA-CB-CG2	5.71	120.21	110.50
2	AM	17	U	O4'-C1'-C2'	-5.71	101.89	107.60
3	A1	19	A	C4'-C3'-C2'	-5.71	96.89	102.60
53	B4	127	GLU	N-CA-C	5.71	118.29	110.24
3	A1	654	G	C5'-C4'-O4'	5.71	118.36	109.80
7	AF	88	LEU	CA-C-N	5.71	128.50	120.28
7	AF	88	LEU	C-N-CA	5.71	128.50	120.28
25	BB	468	G	O5'-C5'-C4'	5.71	120.06	111.50
25	BB	1288	G	O4'-C4'-C3'	5.71	109.71	104.00
25	BB	1962	C	C3'-C2'-O2'	5.71	123.16	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	B3	138	GLN	OE1-CD-NE2	-5.71	116.89	122.60
1	AA	69	U	C1'-O4'-C4'	-5.71	104.19	109.90
3	A1	390	U	C2'-C3'-O3'	5.71	118.06	109.50
3	A1	1068	G	C4'-C3'-C2'	-5.71	96.89	102.60
18	AS	145	ASN	OD1-CG-ND2	-5.71	116.89	122.60
22	AW	40	ARG	NE-CZ-NH1	5.71	127.21	121.50
25	BB	657	U	C1'-O4'-C4'	-5.71	103.99	109.70
35	BL	61	ASN	OD1-CG-ND2	-5.71	116.89	122.60
38	BO	66	VAL	CA-C-N	5.71	132.44	121.54
38	BO	66	VAL	C-N-CA	5.71	132.44	121.54
3	A1	902	G	C5'-C4'-C3'	-5.71	107.44	116.00
3	A1	1412	C	C5'-C4'-C3'	-5.71	107.44	116.00
25	BB	1431	A	C5'-C4'-C3'	-5.71	107.44	116.00
25	BB	1874	C	C5'-C4'-O4'	5.71	118.36	109.80
25	BB	2107	G	C3'-C2'-C1'	5.71	107.20	101.50
25	BB	2193	G	O4'-C1'-C2'	-5.71	101.89	107.60
25	BB	2529	G	C3'-C2'-C1'	5.71	107.00	101.30
1	AA	2	C	C2'-C3'-O3'	-5.70	105.15	113.70
4	AB	33	ALA	N-CA-C	5.70	117.64	109.14
12	AK	69	TYR	CA-C-N	5.70	132.44	121.54
12	AK	69	TYR	C-N-CA	5.70	132.44	121.54
25	BB	326	G	C3'-C2'-C1'	5.70	107.00	101.30
25	BB	2822	G	OP1-P-OP2	-5.70	102.49	119.60
25	BB	2860	A	O4'-C4'-C3'	5.70	109.70	104.00
38	BO	84	PHE	CB-CA-C	5.70	121.77	110.42
25	BB	514	A	C5'-C4'-O4'	5.70	118.35	109.80
25	BB	2348	U	C5'-C4'-C3'	5.70	124.55	116.00
2	AM	3	U	O3'-P-O5'	5.70	112.55	104.00
3	A1	175	C	C2'-C3'-O3'	5.70	118.05	109.50
3	A1	418	C	C4'-C3'-C2'	-5.70	96.90	102.60
3	A1	823	C	C4'-C3'-C2'	-5.70	96.90	102.60
3	A1	1398	A	O4'-C1'-N9	5.70	116.75	108.20
3	A1	1481	U	C3'-C2'-O2'	5.70	119.25	110.70
25	BB	608	A	C5'-C4'-O4'	5.70	118.35	109.80
25	BB	2350	C	C4'-C3'-C2'	-5.70	96.90	102.60
25	BB	2705	A	O4'-C4'-C3'	5.70	109.70	104.00
51	B2	77	LYS	N-CA-C	5.70	122.94	110.80
55	B6	77	HIS	CA-C-N	5.70	129.81	120.63
55	B6	77	HIS	C-N-CA	5.70	129.81	120.63
3	A1	1469	C	O5'-C5'-C4'	5.70	120.05	111.50
3	A1	1483	A	N9-C1'-C2'	5.70	120.55	112.00
3	A1	1533	C	C4'-C3'-C2'	-5.70	96.90	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	BN	114	GLN	CG-CD-NE2	5.70	124.95	116.40
48	BY	184	ARG	NH1-CZ-NH2	-5.70	111.89	119.30
3	A1	448	A	O4'-C4'-C3'	5.70	109.70	104.00
3	A1	752	G	O5'-C5'-C4'	-5.70	103.15	111.70
25	BB	2789	C	O4'-C1'-N1	5.70	117.05	108.50
53	B4	97	ARG	NH1-CZ-NH2	-5.70	111.89	119.30
15	AO	92	ASP	CA-C-O	5.70	126.80	120.82
18	AS	123	LEU	CA-C-N	5.70	132.42	121.54
18	AS	123	LEU	C-N-CA	5.70	132.42	121.54
25	BB	463	G	O4'-C4'-C3'	5.70	109.70	104.00
25	BB	918	A	C2'-C3'-O3'	5.70	122.24	113.70
25	BB	1910	G	O5'-C5'-C4'	5.70	120.04	111.50
25	BB	2120	G	O3'-P-O5'	-5.70	95.46	104.00
25	BB	2521	C	C2'-C3'-O3'	5.70	118.04	109.50
25	BB	2847	U	C5'-C4'-C3'	-5.70	106.66	115.20
17	AR	13	ARG	CD-NE-CZ	5.69	132.37	124.40
24	BA	114	C	C1'-O4'-C4'	-5.69	104.21	109.90
25	BB	237	C	O5'-C5'-C4'	5.69	120.04	111.50
3	A1	524	G	C4'-C3'-C2'	-5.69	96.91	102.60
25	BB	250	G	C3'-C2'-O2'	5.69	119.24	110.70
25	BB	304	U	O3'-P-O5'	-5.69	95.46	104.00
25	BB	381	G	C3'-C2'-C1'	5.69	106.99	101.30
25	BB	1349	C	O5'-C5'-C4'	-5.69	103.16	111.70
25	BB	2359	C	C2'-C3'-O3'	-5.69	105.16	113.70
3	A1	435	A	C3'-C2'-C1'	5.69	106.99	101.30
24	BA	9	G	C4'-C3'-C2'	-5.69	96.91	102.60
24	BA	16	G	C5'-C4'-C3'	-5.69	107.46	116.00
25	BB	47	C	C5'-C4'-C3'	-5.69	107.46	116.00
25	BB	110	G	O3'-P-O5'	5.69	112.53	104.00
25	BB	1939	U	N1-C1'-C2'	5.69	122.53	114.00
25	BB	2556	C	C3'-C2'-C1'	5.69	106.99	101.30
25	BB	2049	G	C5'-C4'-O4'	5.69	118.33	109.80
1	AE	68	U	O4'-C1'-N1	5.69	117.03	108.50
3	A1	223	A	C5'-C4'-C3'	-5.69	107.47	116.00
3	A1	1401	G	O4'-C1'-N9	5.69	116.73	108.20
11	AJ	19	SER	N-CA-C	5.69	117.75	108.76
25	BB	1396	U	C4'-C3'-O3'	5.69	117.93	109.40
25	BB	1833	C	C5'-C4'-O4'	5.69	118.33	109.80
25	BB	2106	U	C1'-C2'-O2'	-5.69	99.87	108.40
50	B1	189	THR	N-CA-C	5.69	122.91	110.80
3	A1	553	A	C4'-C3'-O3'	5.69	117.93	109.40
25	BB	514	A	P-O3'-C3'	5.69	128.73	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	989	G	O4'-C1'-C2'	5.69	111.49	105.80
25	BB	1823	G	O3'-P-O5'	5.69	112.53	104.00
3	A1	240	G	C3'-C2'-C1'	5.68	106.98	101.30
3	A1	1114	C	C1'-O4'-C4'	-5.68	104.22	109.90
3	A1	1240	U	O3'-P-O5'	5.68	112.53	104.00
25	BB	378	C	C1'-O4'-C4'	-5.68	104.22	109.90
25	BB	1212	G	O4'-C1'-C2'	5.68	111.48	105.80
3	A1	50	A	P-O3'-C3'	5.68	128.72	120.20
3	A1	884	U	O4'-C1'-N1	5.68	116.72	108.20
18	AS	140	ILE	N-CA-CB	5.68	116.82	110.51
25	BB	34	U	N1-C1'-C2'	5.68	120.53	112.00
25	BB	745	G	C5'-C4'-O4'	5.68	118.32	109.80
25	BB	1913	A	C4'-C3'-O3'	5.68	117.92	109.40
25	BB	2123	G	C1'-O4'-C4'	-5.68	104.22	109.90
37	BN	238	ASN	OD1-CG-ND2	-5.68	116.92	122.60
51	B2	151	LEU	CA-C-N	5.68	132.39	121.54
51	B2	151	LEU	C-N-CA	5.68	132.39	121.54
3	A1	722	G	O4'-C4'-C3'	5.68	109.68	104.00
12	AK	40	PRO	N-CA-CB	5.68	108.36	103.36
20	AU	65	LEU	CA-C-N	5.68	128.16	120.38
20	AU	65	LEU	C-N-CA	5.68	128.16	120.38
25	BB	501	A	O4'-C1'-N9	5.68	117.02	108.50
25	BB	2043	C	O4'-C1'-N1	5.68	117.02	108.50
25	BB	2806	C	O4'-C4'-C3'	5.68	109.68	104.00
3	A1	181	A	O4'-C1'-C2'	5.68	111.48	105.80
3	A1	915	A	C4'-C3'-O3'	-5.68	100.88	109.40
3	A1	1389	C	C5'-C4'-C3'	-5.68	107.48	116.00
24	BA	111	U	C1'-C2'-O2'	-5.68	99.88	108.40
25	BB	582	A	O4'-C4'-C3'	5.68	109.68	104.00
25	BB	2034	U	C2'-C3'-O3'	5.68	118.02	109.50
25	BB	2044	C	C5'-C4'-C3'	-5.68	107.48	116.00
25	BB	2054	A	C1'-C2'-O2'	-5.68	103.28	111.80
25	BB	2411	A	C2'-C3'-O3'	5.68	122.22	113.70
25	BB	269	C	N1-C1'-C2'	5.68	120.52	112.00
25	BB	323	C	C2'-C3'-O3'	5.68	118.02	109.50
25	BB	696	G	O4'-C4'-C3'	5.68	109.68	104.00
25	BB	1834	U	C1'-O4'-C4'	-5.68	104.22	109.90
48	BY	120	GLY	N-CA-C	5.68	121.25	112.45
25	BB	1006	C	C4'-C3'-C2'	-5.68	96.92	102.60
25	BB	1485	U	C4'-C3'-C2'	-5.68	96.92	102.60
25	BB	2072	C	C5'-C4'-O4'	5.68	118.32	109.80
46	BW	29	ARG	CA-C-N	5.68	131.92	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	BW	29	ARG	C-N-CA	5.68	131.92	121.70
3	A1	1347	G	C4'-C3'-O3'	5.67	117.91	109.40
30	BG	30	ARG	NE-CZ-NH1	5.67	127.17	121.50
39	BP	63	ASP	N-CA-C	5.67	116.68	107.32
25	BB	1436	G	C3'-C2'-O2'	5.67	119.21	110.70
3	A1	495	A	C3'-C2'-C1'	-5.67	95.83	101.50
3	A1	1160	G	C3'-C2'-O2'	5.67	119.21	110.70
3	A1	1237	C	O4'-C4'-C3'	5.67	109.67	104.00
25	BB	588	U	O4'-C1'-C2'	5.67	113.27	107.60
25	BB	1049	C	O4'-C4'-C3'	-5.67	98.33	104.00
25	BB	2174	C	C1'-O4'-C4'	5.67	115.57	109.90
3	A1	149	A	O4'-C4'-C3'	5.67	109.67	104.00
25	BB	1781	U	O4'-C1'-N1	5.67	117.00	108.50
1	AE	60	C	C3'-C2'-O2'	-5.67	106.10	114.60
3	A1	471	U	O5'-C5'-C4'	-5.67	103.00	111.50
3	A1	927	G	C4'-C3'-C2'	-5.67	96.93	102.60
3	A1	1187	G	C3'-C2'-O2'	5.67	119.20	110.70
3	A1	1371	G	C4'-C3'-C2'	-5.67	96.93	102.60
12	AK	72	ARG	NE-CZ-NH1	5.67	127.17	121.50
18	AS	77	ASN	CA-CB-CG	-5.67	106.93	112.60
25	BB	197	A	O3'-P-O5'	5.67	112.50	104.00
25	BB	419	U	C5'-C4'-C3'	-5.67	107.50	116.00
25	BB	929	U	O3'-P-O5'	-5.67	95.50	104.00
26	BC	60	VAL	N-CA-CB	-5.67	105.39	111.46
3	A1	1197	A	C4'-C3'-C2'	-5.67	96.93	102.60
7	AF	44	ILE	N-CA-C	5.67	121.13	109.34
24	BA	88	C	C1'-C2'-O2'	5.67	120.30	111.80
25	BB	163	C	O4'-C1'-C2'	-5.67	101.93	107.60
25	BB	200	U	N1-C1'-C2'	5.67	120.50	112.00
25	BB	819	A	C4'-C3'-C2'	-5.67	96.93	102.60
25	BB	1625	C	O4'-C1'-C2'	-5.67	100.13	105.80
37	BN	78	GLU	CA-C-N	5.67	131.16	121.87
37	BN	78	GLU	C-N-CA	5.67	131.16	121.87
1	AA	1	G	C1'-O4'-C4'	-5.67	104.23	109.90
3	A1	686	U	O3'-P-O5'	5.67	112.50	104.00
3	A1	703	G	C2'-C3'-O3'	5.67	118.00	109.50
25	BB	13	A	C2'-C3'-O3'	5.67	118.00	109.50
25	BB	911	A	O4'-C4'-C3'	5.67	109.67	104.00
3	A1	125	U	O4'-C1'-N1	5.66	117.00	108.50
3	A1	492	C	C4'-C3'-C2'	-5.66	96.94	102.60
3	A1	906	A	C5'-C4'-C3'	-5.66	106.70	115.20
3	A1	979	C	C4'-C3'-C2'	5.66	108.26	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	104	A	C5'-C4'-O4'	5.66	118.29	109.80
25	BB	1448	G	O3'-P-O5'	5.66	112.49	104.00
25	BB	1876	A	C4'-C3'-C2'	-5.66	96.94	102.60
3	A1	1320	C	O4'-C1'-C2'	-5.66	100.14	105.80
25	BB	318	C	O5'-C5'-C4'	-5.66	103.21	111.70
25	BB	973	A	C3'-C2'-C1'	5.66	106.96	101.30
25	BB	1522	A	O5'-C5'-C4'	5.66	120.19	111.70
25	BB	2492	U	O4'-C1'-N1	5.66	116.69	108.20
25	BB	2554	U	P-O3'-C3'	5.66	128.69	120.20
3	A1	1162	C	C1'-O4'-C4'	-5.66	104.24	109.90
3	A1	1357	A	C4'-C3'-C2'	-5.66	96.94	102.60
25	BB	544	C	O4'-C1'-N1	5.66	116.99	108.50
25	BB	1168	G	C4'-C3'-O3'	-5.66	104.51	113.00
25	BB	1659	G	O4'-C4'-C3'	-5.66	98.34	104.00
25	BB	1698	A	C2'-C3'-O3'	5.66	117.99	109.50
25	BB	2062	A	C1'-C2'-O2'	5.66	120.29	111.80
25	BB	2780	G	O5'-C5'-C4'	-5.66	103.21	111.70
25	BB	2801	G	C3'-C2'-O2'	5.66	119.19	110.70
1	AE	5	A	C3'-C2'-O2'	5.66	119.19	110.70
1	AE	16	U	O4'-C1'-C2'	5.66	111.46	105.80
8	AG	27	LYS	N-CA-C	5.66	118.22	111.71
25	BB	1852	U	C5'-C4'-C3'	-5.66	106.71	115.20
25	BB	2471	A	C3'-C2'-C1'	-5.66	95.84	101.50
25	BB	2697	G	C4'-C3'-C2'	-5.66	96.94	102.60
41	BR	43	ILE	CA-C-N	5.66	132.35	121.54
41	BR	43	ILE	C-N-CA	5.66	132.35	121.54
6	AD	2	THR	CA-CB-OG1	5.66	118.08	109.60
25	BB	513	A	C1'-O4'-C4'	-5.66	104.24	109.90
25	BB	1876	A	C1'-C2'-O2'	5.66	116.89	108.40
35	BL	42	LYS	CA-C-N	5.66	129.57	121.71
35	BL	42	LYS	C-N-CA	5.66	129.57	121.71
3	A1	237	G	C4'-C3'-O3'	5.66	121.48	113.00
3	A1	540	G	C3'-C2'-C1'	5.66	106.95	101.30
3	A1	855	U	C5'-C4'-C3'	-5.66	107.52	116.00
3	A1	1066	C	O4'-C1'-N1	5.66	116.68	108.20
3	A1	1345	U	O5'-C5'-C4'	5.66	119.98	111.50
3	A1	1368	A	C5'-C4'-O4'	5.66	118.28	109.80
3	A1	1507	A	C4'-C3'-C2'	-5.66	96.94	102.60
9	AH	41	HIS	CB-CG-CD2	-5.66	123.85	131.20
25	BB	149	A	C5'-C4'-O4'	5.66	118.28	109.80
42	BS	59	ARG	NE-CZ-NH1	5.66	127.16	121.50
3	A1	240	G	O4'-C4'-C3'	5.65	109.65	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	487	C	C2'-C3'-O3'	5.65	122.18	113.70
25	BB	1364	G	C3'-C2'-C1'	5.65	106.95	101.30
25	BB	1599	U	C3'-C2'-O2'	5.65	119.18	110.70
25	BB	1816	C	O3'-P-O5'	-5.65	95.52	104.00
3	A1	94	G	O5'-C5'-C4'	-5.65	103.22	111.70
3	A1	334	C	C5'-C4'-C3'	-5.65	107.52	116.00
3	A1	706	A	C5'-C4'-C3'	-5.65	107.52	116.00
25	BB	1031	G	C1'-O4'-C4'	5.65	115.55	109.90
25	BB	1445	G	O5'-C5'-C4'	5.65	119.98	111.50
25	BB	2237	G	O3'-P-O5'	5.65	112.48	104.00
25	BB	2629	U	C4'-C3'-O3'	5.65	117.88	109.40
34	BK	90	ARG	NH1-CZ-NH2	-5.65	111.95	119.30
3	A1	74	A	C4'-C3'-C2'	5.65	108.25	102.60
3	A1	472	U	O3'-P-O5'	-5.65	95.52	104.00
25	BB	685	A	O4'-C1'-C2'	-5.65	101.95	107.60
25	BB	920	A	C3'-C2'-C1'	5.65	106.95	101.30
25	BB	1463	C	C4'-C3'-C2'	-5.65	96.95	102.60
25	BB	1824	G	N9-C1'-C2'	5.65	120.48	112.00
25	BB	2236	U	P-O3'-C3'	5.65	128.68	120.20
3	A1	1022	A	C4'-C3'-C2'	-5.65	96.95	102.60
3	A1	1413	A	O4'-C4'-C3'	5.65	109.65	104.00
25	BB	1896	G	C3'-C2'-O2'	5.65	119.17	110.70
25	BB	2579	C	C4'-C3'-C2'	-5.65	96.95	102.60
1	AP	61	C	C4'-C3'-O3'	-5.65	104.53	113.00
3	A1	648	A	C4'-C3'-C2'	-5.65	96.95	102.60
25	BB	1460	U	C1'-C2'-O2'	5.65	120.27	111.80
29	BF	132	THR	CA-C-N	5.65	129.72	120.63
29	BF	132	THR	C-N-CA	5.65	129.72	120.63
7	AF	32	ILE	CA-C-N	5.65	128.12	120.38
7	AF	32	ILE	C-N-CA	5.65	128.12	120.38
25	BB	1110	G	C3'-C2'-O2'	5.65	119.17	110.70
25	BB	1907	G	C4'-C3'-O3'	-5.65	104.53	113.00
41	BR	44	ARG	NE-CZ-NH1	5.65	127.15	121.50
1	AP	37	G	C4'-C3'-C2'	-5.64	96.95	102.60
3	A1	1531	A	N9-C1'-C2'	-5.64	103.53	112.00
25	BB	164	C	C1'-C2'-O2'	5.64	116.87	108.40
25	BB	603	A	C4'-C3'-C2'	-5.64	96.96	102.60
25	BB	689	A	C4'-C3'-C2'	-5.64	96.95	102.60
25	BB	907	G	O4'-C4'-C3'	5.64	109.64	104.00
25	BB	1712	U	C4'-C3'-C2'	-5.64	96.95	102.60
25	BB	2165	C	C3'-C2'-O2'	5.64	119.17	110.70
25	BB	2758	A	C5'-C4'-C3'	-5.64	107.53	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	AF	2	ARG	NH1-CZ-NH2	-5.64	111.97	119.30
1	AP	9	A	O4'-C4'-C3'	5.64	111.74	106.10
3	A1	218	U	O4'-C1'-C2'	-5.64	101.96	107.60
4	AB	168	GLU	CA-C-N	5.64	132.31	121.54
4	AB	168	GLU	C-N-CA	5.64	132.31	121.54
25	BB	539	G	C3'-C2'-C1'	-5.64	95.86	101.50
42	BS	11	GLU	OE1-CD-OE2	-5.64	109.36	122.90
3	A1	69	G	C3'-C2'-C1'	-5.64	95.86	101.50
3	A1	263	A	C5'-C4'-C3'	-5.64	107.54	116.00
3	A1	413	G	C4'-C3'-C2'	-5.64	96.96	102.60
3	A1	1033	G	C3'-C2'-C1'	-5.64	95.66	101.30
25	BB	25	U	C3'-C2'-C1'	5.64	106.94	101.30
25	BB	357	C	O5'-C5'-C4'	-5.64	103.04	111.50
25	BB	1387	A	C3'-C2'-O2'	5.64	119.16	110.70
25	BB	1895	C	C4'-C3'-O3'	-5.64	104.54	113.00
25	BB	2249	U	C4'-C3'-O3'	5.64	121.46	113.00
17	AR	156	ALA	CA-C-N	5.64	129.35	120.89
17	AR	156	ALA	C-N-CA	5.64	129.35	120.89
24	BA	62	C	O5'-C5'-C4'	5.64	119.96	111.50
3	A1	1250	A	N9-C1'-C2'	5.64	120.45	112.00
3	A1	1358	U	C4'-C3'-C2'	-5.64	96.96	102.60
24	BA	64	G	O3'-P-O5'	-5.64	95.55	104.00
25	BB	674	G	C4'-C3'-C2'	-5.64	96.96	102.60
25	BB	797	G	OP1-P-OP2	-5.64	102.69	119.60
25	BB	1419	A	C5'-C4'-C3'	-5.64	106.75	115.20
25	BB	2638	G	C5'-C4'-C3'	-5.64	106.75	115.20
25	BB	869	G	C1'-O4'-C4'	-5.63	104.27	109.90
40	BQ	55	THR	N-CA-C	5.63	117.42	111.28
4	AB	129	THR	N-CA-CB	5.63	122.01	111.53
4	AB	156	LEU	N-CA-C	5.63	116.08	109.60
3	A1	358	U	O5'-C5'-C4'	-5.63	103.25	111.70
25	BB	264	C	O4'-C1'-C2'	-5.63	101.97	107.60
25	BB	1212	G	C4'-C3'-O3'	5.63	117.85	109.40
25	BB	2461	A	C5'-C4'-C3'	-5.63	107.55	116.00
25	BB	2619	C	C3'-C2'-C1'	5.63	107.13	101.50
25	BB	2843	G	O5'-C5'-C4'	-5.63	103.05	111.50
55	B6	137	PRO	N-CA-CB	5.63	108.05	103.32
25	BB	1066	U	C3'-C2'-O2'	5.63	119.14	110.70
48	BY	196	ALA	CA-C-N	5.63	131.83	121.70
48	BY	196	ALA	C-N-CA	5.63	131.83	121.70
1	AE	60	C	C1'-C2'-O2'	5.63	120.24	111.80
25	BB	618	G	P-O3'-C3'	5.63	128.64	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2342	C	C3'-C2'-O2'	5.63	119.14	110.70
47	BX	14	CYS	CA-CB-SG	-5.63	101.45	114.40
3	A1	142	G	C1'-O4'-C4'	-5.63	104.07	109.70
25	BB	1367	A	C2'-C3'-O3'	5.63	122.14	113.70
25	BB	1675	C	C4'-C3'-C2'	-5.63	96.97	102.60
25	BB	2255	G	O4'-C4'-C3'	5.63	109.63	104.00
25	BB	2664	G	O4'-C1'-C2'	5.63	113.23	107.60
3	A1	1114	C	C4'-C3'-C2'	-5.62	96.97	102.60
25	BB	1176	U	O4'-C4'-C3'	5.62	109.62	104.00
25	BB	1945	G	C5'-C4'-C3'	-5.62	107.56	116.00
34	BK	12	HIS	CA-CB-CG	5.62	119.42	113.80
3	A1	136	C	N1-C1'-C2'	5.62	120.44	112.00
3	A1	533	A	O3'-P-O5'	-5.62	95.56	104.00
3	A1	1253	G	P-O5'-C5'	5.62	129.33	120.90
17	AR	62	ARG	CD-NE-CZ	5.62	132.27	124.40
25	BB	636	G	O3'-P-O5'	5.62	112.44	104.00
25	BB	1804	C	C5'-C4'-C3'	-5.62	107.57	116.00
25	BB	2100	G	O5'-C5'-C4'	5.62	119.93	111.50
25	BB	2138	G	C5'-C4'-C3'	-5.62	107.57	116.00
25	BB	2413	G	O4'-C4'-C3'	5.62	109.62	104.00
32	BI	88	ARG	NE-CZ-NH2	5.62	124.26	119.20
37	BN	165	ALA	N-CA-C	5.62	119.75	111.04
3	A1	528	C	C3'-C2'-O2'	5.62	119.13	110.70
22	AW	11	ARG	CA-C-N	5.62	130.11	122.07
22	AW	11	ARG	C-N-CA	5.62	130.11	122.07
24	BA	30	C	C5'-C4'-C3'	-5.62	107.57	116.00
25	BB	735	A	C4'-C3'-C2'	-5.62	96.98	102.60
25	BB	1206	G	O4'-C1'-C2'	5.62	111.42	105.80
45	BV	40	ALA	N-CA-C	5.62	118.84	109.96
3	A1	248	C	O5'-C5'-C4'	5.62	119.93	111.50
6	AD	18	SER	N-CA-C	5.62	122.77	113.89
25	BB	1229	C	C3'-C2'-O2'	5.62	119.13	110.70
25	BB	1557	C	O3'-P-O5'	5.62	112.43	104.00
25	BB	2641	G	C5'-C4'-C3'	-5.62	107.57	116.00
54	B5	5	GLN	OE1-CD-NE2	-5.62	116.98	122.60
22	AW	117	LEU	CA-C-N	5.62	132.27	121.54
22	AW	117	LEU	C-N-CA	5.62	132.27	121.54
25	BB	2837	A	O3'-P-O5'	5.62	112.43	104.00
3	A1	73	C	O5'-C5'-C4'	-5.62	103.08	111.50
3	A1	990	C	O4'-C1'-N1	5.62	116.92	108.50
25	BB	796	C	O4'-C1'-C2'	-5.62	101.98	107.60
25	BB	1922	G	C3'-C2'-O2'	5.62	119.12	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2579	C	C4'-C3'-O3'	5.62	117.83	109.40
25	BB	2615	U	C4'-C3'-C2'	-5.62	96.98	102.60
37	BN	105	ALA	N-CA-C	5.62	118.15	110.01
1	AA	65	G	O4'-C4'-C3'	5.61	109.61	104.00
3	A1	394	G	C4'-C3'-O3'	-5.61	104.58	113.00
3	A1	652	U	O4'-C1'-N1	5.61	116.62	108.20
13	AL	11	ASP	CB-CA-C	5.61	119.20	110.67
23	AX	64	GLN	CA-C-N	5.61	132.38	122.67
23	AX	64	GLN	C-N-CA	5.61	132.38	122.67
24	BA	106	G	C5'-C4'-O4'	5.61	118.22	109.80
25	BB	200	U	C4'-C3'-C2'	-5.61	96.99	102.60
25	BB	413	C	C5'-C4'-O4'	5.61	118.22	109.80
25	BB	622	G	C5'-C4'-C3'	-5.61	107.58	116.00
25	BB	643	A	O3'-P-O5'	-5.61	95.58	104.00
25	BB	702	U	O4'-C4'-C3'	-5.61	98.39	104.00
25	BB	713	G	C4'-C3'-C2'	-5.61	96.99	102.60
25	BB	1189	A	O4'-C1'-C2'	-5.61	101.99	107.60
25	BB	1485	U	O4'-C1'-C2'	-5.61	101.99	107.60
25	BB	1687	G	N9-C1'-C2'	5.61	120.42	112.00
25	BB	1951	U	C5'-C4'-O4'	5.61	118.22	109.80
27	BD	18	ARG	CD-NE-CZ	5.61	132.26	124.40
27	BD	25	LEU	N-CA-C	5.61	116.61	107.23
3	A1	29	U	C2'-C3'-O3'	5.61	117.92	109.50
3	A1	944	G	C1'-O4'-C4'	-5.61	104.29	109.90
15	AO	45	GLU	CA-C-O	-5.61	114.93	120.82
25	BB	61	C	O4'-C1'-C2'	-5.61	100.19	105.80
25	BB	803	U	C3'-C2'-C1'	5.61	106.91	101.30
51	B2	95	MET	CA-C-N	5.61	128.26	120.29
51	B2	95	MET	C-N-CA	5.61	128.26	120.29
1	AE	18	G	O4'-C4'-C3'	-5.61	100.49	106.10
1	AE	50	U	O4'-C4'-C3'	5.61	109.61	104.00
3	A1	52	C	C5'-C4'-C3'	-5.61	107.58	116.00
6	AD	120	ARG	NH1-CZ-NH2	-5.61	112.01	119.30
25	BB	391	A	C4'-C3'-O3'	5.61	121.42	113.00
25	BB	479	A	C3'-C2'-O2'	-5.61	106.19	114.60
25	BB	983	A	O4'-C4'-C3'	5.61	109.61	104.00
25	BB	2131	U	C5'-C4'-O4'	5.61	118.22	109.80
25	BB	2313	C	O5'-C5'-C4'	-5.61	103.28	111.70
25	BB	2334	U	C5'-C4'-C3'	-5.61	107.59	116.00
29	BF	18	ARG	NE-CZ-NH2	5.61	124.25	119.20
42	BS	48	GLN	OE1-CD-NE2	-5.61	116.99	122.60
3	A1	544	G	C2'-C3'-O3'	5.61	122.11	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	923	A	O4'-C1'-C2'	-5.61	100.19	105.80
3	A1	1162	C	P-O5'-C5'	5.61	129.31	120.90
19	AT	27	ALA	CA-C-N	5.61	127.80	120.28
19	AT	27	ALA	C-N-CA	5.61	127.80	120.28
23	AX	5	ARG	NH1-CZ-NH2	-5.61	112.01	119.30
25	BB	1961	C	C4'-C3'-O3'	5.61	121.41	113.00
37	BN	111	ALA	CA-C-N	5.61	131.80	121.70
37	BN	111	ALA	C-N-CA	5.61	131.80	121.70
1	AA	31	A	O5'-C5'-C4'	-5.61	103.09	111.50
3	A1	72	A	C3'-C2'-C1'	5.61	106.91	101.30
3	A1	197	A	C4'-C3'-C2'	-5.61	96.99	102.60
3	A1	616	G	C3'-C2'-O2'	5.61	119.11	110.70
3	A1	643	C	C5'-C4'-C3'	-5.61	107.59	116.00
3	A1	1218	C	C4'-C3'-O3'	-5.61	104.59	113.00
25	BB	2413	G	C3'-C2'-C1'	5.61	106.91	101.30
42	BS	65	ASN	OD1-CG-ND2	-5.61	116.99	122.60
52	B3	156	TYR	CA-C-N	5.61	131.96	122.26
52	B3	156	TYR	C-N-CA	5.61	131.96	122.26
3	A1	1255	G	C4'-C3'-C2'	-5.61	97.00	102.60
17	AR	96	ARG	NE-CZ-NH1	5.61	127.11	121.50
25	BB	176	A	O4'-C1'-N9	5.61	116.91	108.50
33	BJ	52	ARG	NH1-CZ-NH2	-5.61	112.01	119.30
3	A1	1235	U	O5'-C5'-C4'	-5.60	103.09	111.50
10	AI	44	SER	CA-C-N	5.60	132.24	121.54
10	AI	44	SER	C-N-CA	5.60	132.24	121.54
25	BB	1572	A	C3'-C2'-O2'	5.60	119.11	110.70
2	AM	12	U	P-O5'-C5'	-5.60	112.50	120.90
6	AD	53	ARG	NE-CZ-NH2	5.60	124.24	119.20
24	BA	29	A	C4'-C3'-C2'	-5.60	97.00	102.60
25	BB	1419	A	C2'-C3'-O3'	5.60	117.90	109.50
3	A1	944	G	C3'-C2'-O2'	5.60	119.10	110.70
18	AS	87	VAL	N-CA-C	5.60	116.49	108.93
19	AT	51	ILE	N-CA-C	5.60	116.01	108.17
25	BB	1339	G	O4'-C4'-C3'	5.60	109.60	104.00
25	BB	1381	G	C1'-O4'-C4'	-5.60	104.30	109.90
43	BT	52	LYS	CA-C-O	-5.60	116.58	119.77
3	A1	1269	A	O4'-C1'-C2'	-5.60	102.00	107.60
9	AH	36	ASN	OD1-CG-ND2	-5.60	117.00	122.60
24	BA	86	G	O3'-P-O5'	5.60	112.40	104.00
24	BA	101	A	C4'-C3'-C2'	-5.60	97.00	102.60
25	BB	1453	A	C5'-C4'-C3'	-5.60	107.60	116.00
25	BB	2697	G	O4'-C1'-N9	5.60	116.90	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	805	C	C2'-C3'-O3'	5.60	117.90	109.50
3	A1	1459	G	C2'-C3'-O3'	5.60	122.09	113.70
25	BB	95	A	O4'-C1'-C2'	-5.60	102.00	107.60
25	BB	148	U	O4'-C1'-C2'	-5.60	100.20	105.80
25	BB	1314	C	C5'-C4'-O4'	5.60	118.20	109.80
25	BB	1590	A	C3'-C2'-C1'	5.60	106.90	101.30
25	BB	2708	G	O3'-P-O5'	5.60	112.40	104.00
38	BO	87	GLU	CB-CG-CD	5.60	122.11	112.60
40	BQ	4	LYS	CA-C-N	5.60	128.82	120.31
40	BQ	4	LYS	C-N-CA	5.60	128.82	120.31
46	BW	41	ARG	NH1-CZ-NH2	-5.60	112.02	119.30
25	BB	208	C	P-O5'-C5'	5.60	129.29	120.90
25	BB	2674	G	C5'-C4'-C3'	-5.60	107.61	116.00
29	BF	38	ARG	N-CA-CB	-5.60	101.03	110.49
3	A1	843	U	C1'-O4'-C4'	-5.59	104.31	109.90
20	AU	115	MET	N-CA-C	5.59	117.06	111.07
25	BB	193	U	C1'-O4'-C4'	-5.59	104.31	109.90
25	BB	2525	G	C1'-O4'-C4'	5.59	115.49	109.90
34	BK	41	ILE	CA-CB-CG1	5.59	119.91	110.40
36	BM	53	VAL	CA-C-N	5.59	128.71	120.82
36	BM	53	VAL	C-N-CA	5.59	128.71	120.82
1	AA	1	G	C5'-C4'-C3'	-5.59	107.61	116.00
24	BA	87	U	O5'-C5'-C4'	-5.59	103.11	111.50
25	BB	1321	A	P-O3'-C3'	5.59	128.59	120.20
12	AK	47	ARG	NE-CZ-NH2	5.59	124.23	119.20
25	BB	1289	C	P-O5'-C5'	5.59	129.29	120.90
25	BB	1368	G	O3'-P-O5'	-5.59	95.61	104.00
25	BB	1669	A	P-O3'-C3'	5.59	128.59	120.20
25	BB	1743	G	O4'-C4'-C3'	5.59	109.59	104.00
1	AP	43	G	C3'-C2'-C1'	-5.59	95.71	101.30
3	A1	358	U	C2'-C3'-O3'	5.59	117.88	109.50
25	BB	131	A	C4'-C3'-O3'	5.59	121.38	113.00
25	BB	142	A	C3'-C2'-O2'	5.59	119.08	110.70
32	BI	114	ASN	CA-CB-CG	5.59	118.19	112.60
41	BR	38	GLU	CA-C-O	5.59	128.35	121.87
21	AV	5	PRO	CA-C-N	5.59	131.76	121.70
21	AV	5	PRO	C-N-CA	5.59	131.76	121.70
25	BB	898	C	O4'-C1'-C2'	5.59	113.19	107.60
25	BB	1234	U	C5'-C4'-O4'	5.59	118.18	109.80
3	A1	188	C	C4'-C3'-C2'	-5.59	97.01	102.60
25	BB	201	C	C4'-C3'-C2'	-5.59	97.01	102.60
25	BB	400	G	O4'-C4'-C3'	5.59	109.59	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2339	C	O4'-C4'-C3'	5.59	111.69	106.10
38	BO	13	LEU	CB-CA-C	5.59	116.71	109.28
25	BB	159	G	O3'-P-O5'	-5.58	95.62	104.00
25	BB	2201	G	C2'-C3'-O3'	5.58	122.08	113.70
50	B1	13	THR	CA-CB-CG2	5.58	120.00	110.50
3	A1	181	A	C5'-C4'-C3'	-5.58	106.83	115.20
3	A1	1477	U	C3'-C2'-C1'	5.58	106.88	101.30
17	AR	22	SER	CB-CA-C	-5.58	101.36	110.85
25	BB	307	G	C5'-C4'-C3'	-5.58	107.62	116.00
25	BB	604	G	C5'-C4'-O4'	5.58	118.18	109.80
25	BB	1928	A	O3'-P-O5'	5.58	112.37	104.00
25	BB	2623	G	C5'-C4'-C3'	-5.58	107.63	116.00
27	BD	110	GLU	CA-C-N	5.58	129.53	120.60
27	BD	110	GLU	C-N-CA	5.58	129.53	120.60
3	A1	83	C	C1'-O4'-C4'	-5.58	104.12	109.70
23	AX	16	ARG	N-CA-C	5.58	117.81	111.11
25	BB	1949	G	C5'-C4'-O4'	5.58	118.17	109.80
25	BB	2077	A	C5'-C4'-O4'	5.58	118.17	109.80
25	BB	2790	U	C4'-C3'-C2'	-5.58	97.02	102.60
3	A1	975	A	O5'-C5'-C4'	-5.58	103.33	111.70
3	A1	1281	C	C4'-C3'-C2'	-5.58	97.02	102.60
55	B6	67	ASN	CA-CB-CG	5.58	118.18	112.60
2	AM	2	U	O4'-C1'-N1	5.58	116.87	108.50
3	A1	313	A	C1'-C2'-O2'	-5.58	100.03	108.40
25	BB	384	A	N9-C1'-C2'	5.58	120.37	112.00
25	BB	874	G	C5'-C4'-C3'	-5.58	107.63	116.00
25	BB	1425	G	P-O3'-C3'	5.58	128.57	120.20
25	BB	1438	U	C2'-C3'-O3'	5.58	117.87	109.50
25	BB	1851	U	C3'-C2'-C1'	5.58	106.88	101.30
25	BB	2057	G	C1'-O4'-C4'	-5.58	104.32	109.90
52	B3	174	LYS	CA-CB-CG	5.58	125.26	114.10
25	BB	444	C	C1'-O4'-C4'	-5.58	104.32	109.90
3	A1	540	G	C5'-C4'-C3'	-5.58	107.64	116.00
3	A1	1257	A	O4'-C1'-C2'	-5.58	100.22	105.80
25	BB	2569	G	O4'-C1'-C2'	-5.58	102.03	107.60
1	AA	7	U	C5'-C4'-O4'	5.57	117.46	109.10
1	AE	30	G	C1'-C2'-O2'	-5.57	100.04	108.40
3	A1	74	A	O3'-P-O5'	-5.57	95.64	104.00
3	A1	102	G	N9-C1'-C2'	5.57	120.36	112.00
3	A1	651	C	N1-C1'-C2'	5.57	122.36	114.00
20	AU	79	VAL	N-CA-C	5.57	120.94	109.34
23	AX	70	HIS	CB-CG-CD2	-5.57	123.95	131.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	276	U	C4'-C3'-C2'	-5.57	97.03	102.60
19	AT	14	GLN	CA-C-N	5.57	132.18	121.54
19	AT	14	GLN	C-N-CA	5.57	132.18	121.54
30	BG	8	ARG	NH1-CZ-NH2	-5.57	112.06	119.30
49	BZ	172	GLU	N-CA-C	5.57	122.67	110.80
3	A1	229	U	C3'-C2'-C1'	5.57	107.07	101.50
3	A1	784	A	C1'-O4'-C4'	-5.57	104.33	109.90
3	A1	881	G	C1'-C2'-O2'	-5.57	100.04	108.40
4	AB	23	ASN	CA-C-N	5.57	126.80	119.84
4	AB	23	ASN	C-N-CA	5.57	126.80	119.84
22	AW	108	ARG	N-CA-C	5.57	117.85	107.99
25	BB	100	U	O4'-C1'-N1	5.57	116.56	108.20
25	BB	229	C	C1'-O4'-C4'	-5.57	104.33	109.90
25	BB	756	A	C3'-C2'-C1'	5.57	106.87	101.30
25	BB	2297	A	C5'-C4'-C3'	-5.57	107.64	116.00
45	BV	14	ARG	NE-CZ-NH2	5.57	124.21	119.20
48	BY	79	LEU	N-CA-C	5.57	117.73	110.43
50	B1	124	PHE	N-CA-C	5.57	120.14	113.23
3	A1	457	G	C5'-C4'-O4'	5.57	118.15	109.80
3	A1	816	A	O4'-C4'-C3'	5.57	109.57	104.00
3	A1	1311	A	O3'-P-O5'	-5.57	95.65	104.00
20	AU	78	ARG	NH1-CZ-NH2	-5.57	112.06	119.30
25	BB	499	U	C3'-C2'-O2'	5.57	119.05	110.70
25	BB	2725	A	C4'-C3'-C2'	-5.57	97.03	102.60
25	BB	420	C	O4'-C1'-C2'	5.57	113.17	107.60
25	BB	555	G	C3'-C2'-C1'	5.57	106.87	101.30
25	BB	1632	A	N9-C1'-C2'	-5.57	105.65	114.00
25	BB	1673	G	C3'-C2'-O2'	5.57	119.05	110.70
25	BB	1732	C	O5'-C5'-C4'	5.57	120.05	111.70
25	BB	2148	G	C2'-C3'-O3'	-5.57	105.35	113.70
25	BB	2519	U	C4'-C3'-O3'	5.57	117.75	109.40
30	BG	34	ILE	CA-C-N	5.57	130.31	121.18
30	BG	34	ILE	C-N-CA	5.57	130.31	121.18
3	A1	718	A	O4'-C1'-C2'	-5.57	100.23	105.80
3	A1	862	C	O4'-C1'-N1	5.57	116.85	108.50
3	A1	1230	C	C4'-C3'-C2'	-5.57	97.03	102.60
3	A1	1411	C	O4'-C1'-C2'	-5.57	102.03	107.60
10	AI	29	ASN	CB-CA-C	5.57	120.04	111.02
25	BB	1697	G	O5'-C5'-C4'	5.57	119.85	111.50
25	BB	2382	G	C4'-C3'-C2'	-5.57	97.03	102.60
37	BN	208	GLY	O-C-N	-5.57	119.66	123.95
49	BZ	113	ASN	CA-C-O	-5.57	115.65	121.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1620	G	C1'-O4'-C4'	-5.56	104.34	109.90
1	AA	3	G	O3'-P-O5'	-5.56	95.66	104.00
3	A1	533	A	C1'-O4'-C4'	5.56	115.26	109.70
3	A1	1000	A	C3'-C2'-C1'	5.56	106.86	101.30
3	A1	1110	A	O4'-C1'-C2'	-5.56	100.24	105.80
15	AO	24	ASN	N-CA-C	5.56	117.09	110.19
18	AS	28	ARG	NE-CZ-NH1	5.56	127.06	121.50
25	BB	378	C	C4'-C3'-C2'	-5.56	97.04	102.60
25	BB	1884	G	C4'-C3'-O3'	5.56	117.74	109.40
25	BB	2604	U	C1'-C2'-O2'	-5.56	103.46	111.80
3	A1	1059	C	O4'-C1'-C2'	-5.56	102.04	107.60
25	BB	2345	G	C1'-C2'-O2'	5.56	120.14	111.80
25	BB	2733	A	C3'-C2'-C1'	5.56	106.86	101.30
1	AP	53	G	C3'-C2'-O2'	5.56	119.04	110.70
3	A1	918	A	C3'-C2'-C1'	5.56	106.86	101.30
17	AR	26	ALA	N-CA-C	5.56	117.34	111.28
19	AT	45	ARG	NE-CZ-NH1	5.56	127.06	121.50
25	BB	1176	U	N1-C1'-C2'	-5.56	103.66	112.00
25	BB	1386	C	P-O3'-C3'	5.56	128.54	120.20
25	BB	1911	U	O3'-P-O5'	5.56	112.34	104.00
25	BB	2377	A	O3'-P-O5'	5.56	112.34	104.00
1	AA	50	U	O4'-C1'-N1	5.56	116.84	108.50
3	A1	486	U	C3'-C2'-C1'	5.56	106.86	101.30
3	A1	776	G	C4'-C3'-O3'	-5.56	101.06	109.40
3	A1	996	A	C3'-C2'-C1'	5.56	106.86	101.30
3	A1	1376	U	C1'-O4'-C4'	-5.56	104.34	109.90
25	BB	1635	A	O4'-C1'-C2'	-5.56	102.04	107.60
25	BB	2470	G	C5'-C4'-C3'	-5.56	107.66	116.00
25	BB	2752	C	O4'-C4'-C3'	5.56	111.66	106.10
33	BJ	4	LYS	CA-C-N	5.56	132.15	121.54
33	BJ	4	LYS	C-N-CA	5.56	132.15	121.54
37	BN	261	ARG	CA-CB-CG	5.56	125.22	114.10
3	A1	97	G	C3'-C2'-O2'	5.56	119.03	110.70
3	A1	154	U	O4'-C1'-C2'	5.56	113.16	107.60
10	AI	53	ASP	CA-C-O	5.56	126.33	120.33
25	BB	163	C	O4'-C1'-N1	5.56	116.83	108.50
25	BB	2203	U	P-O3'-C3'	5.56	128.53	120.20
48	BY	167	ASN	CA-CB-CG	5.56	118.16	112.60
1	AE	52	U	C3'-C2'-O2'	5.55	119.03	110.70
3	A1	1028	C	O4'-C4'-C3'	5.55	109.55	104.00
3	A1	1280	A	O4'-C1'-N9	5.55	116.83	108.50
24	BA	22	U	C5'-C4'-C3'	-5.55	107.67	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	119	A	O4'-C1'-N9	5.55	116.53	108.20
25	BB	606	U	C1'-O4'-C4'	5.55	115.45	109.90
25	BB	720	U	O3'-P-O5'	-5.55	95.67	104.00
25	BB	1052	C	C4'-C3'-C2'	-5.55	97.05	102.60
25	BB	1491	G	C5'-C4'-C3'	-5.55	107.67	116.00
46	BW	49	VAL	N-CA-C	5.55	118.97	113.53
3	A1	816	A	O4'-C1'-N9	-5.55	100.17	108.50
3	A1	824	G	C5'-C4'-C3'	-5.55	107.67	116.00
25	BB	614	A	C3'-C2'-C1'	-5.55	95.95	101.50
3	A1	306	A	C2'-C3'-O3'	5.55	117.83	109.50
25	BB	1361	G	C3'-C2'-C1'	-5.55	95.75	101.30
25	BB	1713	A	O4'-C1'-C2'	5.55	111.35	105.80
25	BB	2335	A	C3'-C2'-O2'	5.55	119.03	110.70
25	BB	2845	U	C4'-C3'-C2'	-5.55	97.05	102.60
13	AL	77	ARG	NE-CZ-NH1	5.55	127.05	121.50
25	BB	2736	A	C3'-C2'-C1'	5.55	106.85	101.30
50	B1	21	ARG	CA-C-N	5.55	132.14	121.54
50	B1	21	ARG	C-N-CA	5.55	132.14	121.54
16	AQ	40	PRO	CA-N-CD	-5.55	104.23	112.00
37	BN	225	ASN	OD1-CG-ND2	-5.55	117.05	122.60
3	A1	629	A	O5'-C5'-C4'	-5.55	103.18	111.50
25	BB	80	G	O4'-C4'-C3'	5.55	109.55	104.00
25	BB	2066	C	C3'-C2'-C1'	5.55	107.05	101.50
25	BB	2896	C	O4'-C1'-N1	5.55	116.82	108.50
42	BS	36	VAL	N-CA-C	5.55	116.16	108.84
50	B1	199	MET	CA-C-N	5.55	127.98	120.38
50	B1	199	MET	C-N-CA	5.55	127.98	120.38
3	A1	867	G	C1'-C2'-O2'	-5.54	103.48	111.80
25	BB	1643	G	O4'-C1'-C2'	-5.54	102.06	107.60
25	BB	1791	A	C1'-O4'-C4'	-5.54	104.36	109.90
3	A1	1459	G	C3'-C2'-O2'	5.54	119.01	110.70
25	BB	837	C	C3'-C2'-O2'	-5.54	106.29	114.60
25	BB	1947	C	C3'-C2'-O2'	5.54	119.02	110.70
27	BD	71	ARG	N-CA-C	5.54	116.68	109.64
52	B3	76	ILE	CA-C-N	5.54	126.24	120.03
52	B3	76	ILE	C-N-CA	5.54	126.24	120.03
25	BB	277	G	O3'-P-O5'	-5.54	95.69	104.00
25	BB	645	C	C1'-O4'-C4'	-5.54	104.16	109.70
25	BB	1820	U	O4'-C1'-C2'	5.54	111.34	105.80
28	BE	54	GLN	OE1-CD-NE2	-5.54	117.06	122.60
31	BH	32	PRO	CA-C-N	5.54	130.25	121.44
31	BH	32	PRO	C-N-CA	5.54	130.25	121.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	BJ	43	GLN	OE1-CD-NE2	-5.54	117.06	122.60
34	BK	82	HIS	CB-CG-CD2	-5.54	124.00	131.20
3	A1	1235	U	O4'-C4'-C3'	5.54	109.54	104.00
25	BB	382	A	C5'-C4'-O4'	5.54	118.11	109.80
3	A1	220	G	C5'-C4'-C3'	-5.54	107.69	116.00
3	A1	606	G	O3'-P-O5'	5.54	112.31	104.00
3	A1	640	A	C3'-C2'-C1'	5.54	106.84	101.30
3	A1	1406	U	O4'-C1'-C2'	-5.54	100.26	105.80
3	A1	1449	C	C1'-O4'-C4'	-5.54	104.36	109.90
25	BB	706	A	C1'-C2'-O2'	-5.54	100.09	108.40
25	BB	769	U	N1-C1'-C2'	5.54	120.31	112.00
25	BB	1248	G	O4'-C1'-N9	5.54	116.51	108.20
25	BB	2467	C	C3'-C2'-C1'	-5.54	95.96	101.50
25	BB	2568	U	C4'-C3'-O3'	-5.54	104.69	113.00
49	BZ	158	LYS	N-CA-C	5.54	118.08	111.71
3	A1	524	G	O5'-C5'-C4'	5.54	119.81	111.50
25	BB	2527	C	O4'-C1'-C2'	5.54	113.14	107.60
1	AA	54	U	O4'-C4'-C3'	5.54	109.53	104.00
3	A1	106	C	C4'-C3'-C2'	-5.54	97.06	102.60
3	A1	954	G	O4'-C1'-N9	5.54	116.80	108.50
3	A1	1250	A	N1-C6-N6	-5.54	101.99	118.60
19	AT	38	ARG	NE-CZ-NH2	5.54	124.18	119.20
25	BB	613	A	O4'-C1'-C2'	5.54	111.34	105.80
25	BB	1359	A	C1'-C2'-O2'	-5.54	100.10	108.40
25	BB	1420	A	C3'-C2'-C1'	-5.54	95.97	101.50
3	A1	455	G	N9-C1'-C2'	5.53	120.30	112.00
3	A1	640	A	C1'-C2'-O2'	-5.53	100.10	108.40
3	A1	852	G	N9-C1'-C2'	-5.53	103.70	112.00
3	A1	1393	U	C1'-O4'-C4'	-5.53	104.17	109.70
3	A1	1446	A	C4'-C3'-C2'	-5.53	97.07	102.60
25	BB	1925	C	C1'-O4'-C4'	-5.53	104.37	109.90
25	BB	2099	U	C3'-C2'-C1'	5.53	106.83	101.30
25	BB	2710	C	O4'-C1'-N1	5.53	116.50	108.20
55	B6	93	ILE	N-CA-C	5.53	115.73	110.53
3	A1	1376	U	C2'-C3'-O3'	5.53	122.00	113.70
3	A1	1389	C	O3'-P-O5'	5.53	112.30	104.00
24	BA	65	U	C3'-C2'-O2'	5.53	122.90	114.60
25	BB	31	C	C3'-C2'-O2'	5.53	119.00	110.70
25	BB	412	A	C3'-C2'-C1'	5.53	106.83	101.30
25	BB	2882	A	C4'-C3'-O3'	5.53	121.30	113.00
52	B3	37	ASN	OD1-CG-ND2	-5.53	117.07	122.60
54	B5	102	ARG	NE-CZ-NH1	5.53	127.03	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	51	A	C5'-C4'-O4'	-5.53	101.50	109.80
3	A1	1483	A	O5'-C5'-C4'	5.53	119.80	111.50
8	AG	63	CYS	CA-C-N	5.53	132.10	121.54
8	AG	63	CYS	C-N-CA	5.53	132.10	121.54
25	BB	510	C	C3'-C2'-C1'	5.53	106.83	101.30
25	BB	948	C	O3'-P-O5'	5.53	112.30	104.00
25	BB	1913	A	O5'-C5'-C4'	5.53	120.00	111.70
25	BB	2192	U	C4'-C3'-C2'	-5.53	97.07	102.60
28	BE	4	ASN	OD1-CG-ND2	-5.53	117.07	122.60
32	BI	14	GLN	CA-C-N	5.53	131.91	123.23
32	BI	14	GLN	C-N-CA	5.53	131.91	123.23
44	BU	18	HIS	CB-CG-CD2	-5.53	124.01	131.20
6	AD	55	ARG	NH1-CZ-NH2	-5.53	112.11	119.30
11	AJ	50	ASN	CA-CB-CG	-5.53	107.07	112.60
25	BB	46	G	C4'-C3'-C2'	-5.53	97.07	102.60
25	BB	875	G	O4'-C4'-C3'	5.53	109.53	104.00
25	BB	910	A	C3'-C2'-O2'	5.53	118.99	110.70
31	BH	113	ALA	N-CA-CB	-5.53	102.40	110.53
4	AB	50	ASN	CA-C-N	5.53	127.69	120.28
4	AB	50	ASN	C-N-CA	5.53	127.69	120.28
13	AL	73	PHE	N-CA-C	5.53	118.40	109.83
21	AV	75	GLN	OE1-CD-NE2	-5.53	117.07	122.60
25	BB	2903	U	C2'-C3'-O3'	5.53	117.79	109.50
37	BN	77	VAL	CA-C-N	5.53	127.96	120.44
37	BN	77	VAL	C-N-CA	5.53	127.96	120.44
3	A1	111	G	P-O3'-C3'	5.53	128.49	120.20
3	A1	337	G	C5'-C4'-C3'	-5.53	107.71	116.00
3	A1	870	U	O5'-C5'-C4'	5.53	119.99	111.70
3	A1	1000	A	C1'-C2'-O2'	-5.53	100.11	108.40
3	A1	1104	G	O4'-C1'-C2'	-5.53	102.08	107.60
25	BB	490	C	C4'-C3'-C2'	-5.53	97.08	102.60
25	BB	984	A	C4'-C3'-C2'	5.53	108.13	102.60
25	BB	1451	C	O4'-C1'-C2'	5.53	111.33	105.80
25	BB	1958	C	O4'-C1'-C2'	-5.53	100.27	105.80
1	AA	2	C	O4'-C1'-C2'	-5.52	102.08	107.60
3	A1	1315	U	C3'-C2'-C1'	5.52	106.82	101.30
25	BB	1028	A	C2'-C3'-O3'	5.52	117.79	109.50
25	BB	1136	G	C4'-C3'-C2'	-5.52	97.08	102.60
43	BT	12	ARG	NH1-CZ-NH2	-5.52	112.12	119.30
50	B1	169	VAL	CA-C-N	5.52	132.09	121.54
50	B1	169	VAL	C-N-CA	5.52	132.09	121.54
3	A1	91	U	C4'-C3'-C2'	-5.52	97.08	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	99	C	C5'-C4'-C3'	-5.52	106.92	115.20
3	A1	300	A	O3'-P-O5'	-5.52	95.72	104.00
3	A1	744	C	C5'-C4'-O4'	5.52	117.39	109.10
3	A1	938	A	C3'-C2'-O2'	5.52	118.98	110.70
3	A1	1207	G	C4'-C3'-O3'	-5.52	104.72	113.00
18	AS	147	ASN	OD1-CG-ND2	-5.52	117.08	122.60
22	AW	122	ARG	CB-CA-C	5.52	117.74	110.06
23	AX	89	ARG	NH1-CZ-NH2	-5.52	112.12	119.30
24	BA	105	G	C5'-C4'-C3'	-5.52	107.72	116.00
25	BB	4	U	C4'-C3'-O3'	5.52	121.28	113.00
25	BB	1354	A	C3'-C2'-C1'	5.52	106.82	101.30
25	BB	1388	G	O5'-C5'-C4'	-5.52	103.22	111.50
25	BB	1994	C	C4'-C3'-O3'	5.52	121.28	113.00
25	BB	2151	U	C5'-C4'-O4'	5.52	118.08	109.80
25	BB	2570	G	P-O3'-C3'	5.52	128.48	120.20
3	A1	1393	U	C2'-C3'-O3'	5.52	117.78	109.50
4	AB	62	ARG	NH1-CZ-NH2	-5.52	112.12	119.30
25	BB	2050	C	C4'-C3'-O3'	5.52	117.68	109.40
30	BG	69	ARG	CD-NE-CZ	5.52	132.13	124.40
3	A1	919	A	C5'-C4'-O4'	-5.52	101.52	109.80
18	AS	28	ARG	NH1-CZ-NH2	-5.52	112.12	119.30
25	BB	33	C	N1-C1'-C2'	5.52	122.28	114.00
25	BB	810	U	C1'-O4'-C4'	-5.52	104.38	109.90
25	BB	2103	C	C3'-C2'-O2'	5.52	118.98	110.70
25	BB	2822	G	O4'-C4'-C3'	5.52	109.52	104.00
28	BE	75	ALA	CA-C-N	5.52	128.60	120.82
28	BE	75	ALA	C-N-CA	5.52	128.60	120.82
1	AE	4	G	C2'-C3'-O3'	-5.52	105.42	113.70
3	A1	38	G	O3'-P-O5'	5.52	112.28	104.00
25	BB	1093	G	O4'-C4'-C3'	5.52	109.52	104.00
25	BB	1584	U	O4'-C1'-N1	5.52	116.78	108.50
25	BB	2051	A	C4'-C3'-C2'	-5.52	97.08	102.60
25	BB	2484	G	N9-C1'-C2'	5.52	120.28	112.00
52	B3	128	THR	CA-CB-CG2	5.52	119.88	110.50
53	B4	119	ASN	CA-C-N	5.52	125.58	120.34
53	B4	119	ASN	C-N-CA	5.52	125.58	120.34
3	A1	592	G	C4'-C3'-C2'	-5.52	97.08	102.60
3	A1	1109	C	C1'-O4'-C4'	-5.52	104.18	109.70
3	A1	1465	A	N9-C1'-C2'	5.52	120.28	112.00
22	AW	29	ILE	CB-CA-C	5.52	116.80	111.23
25	BB	326	G	C1'-O4'-C4'	-5.52	104.38	109.90
25	BB	1706	C	P-O5'-C5'	5.52	129.17	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	125	U	C3'-C2'-C1'	5.51	106.81	101.30
3	A1	468	A	C5'-C4'-O4'	-5.51	101.53	109.80
3	A1	1449	C	O4'-C4'-C3'	5.51	109.52	104.00
25	BB	756	A	C4'-C3'-O3'	5.51	121.27	113.00
25	BB	883	G	C1'-O4'-C4'	-5.51	104.39	109.90
25	BB	1327	A	C3'-C2'-O2'	-5.51	102.43	110.70
25	BB	2071	A	C3'-C2'-C1'	-5.51	95.99	101.50
25	BB	2071	A	N9-C1'-C2'	5.51	122.27	114.00
25	BB	2558	C	C2'-C3'-O3'	5.51	117.77	109.50
25	BB	2803	G	N9-C1'-C2'	-5.51	103.73	112.00
27	BD	81	GLY	CA-C-N	5.51	128.59	120.82
27	BD	81	GLY	C-N-CA	5.51	128.59	120.82
28	BE	74	THR	CA-C-N	5.51	132.07	121.54
28	BE	74	THR	C-N-CA	5.51	132.07	121.54
36	BM	69	ARG	NH1-CZ-NH2	-5.51	112.13	119.30
3	A1	639	G	O4'-C4'-C3'	5.51	109.51	104.00
3	A1	1323	G	C4'-C3'-C2'	-5.51	97.09	102.60
25	BB	879	G	O3'-P-O5'	-5.51	95.73	104.00
25	BB	2901	C	O4'-C4'-C3'	5.51	109.51	104.00
26	BC	24	ASN	CA-CB-CG	5.51	118.11	112.60
1	AA	51	G	C4'-C3'-O3'	5.51	121.27	113.00
3	A1	156	C	O4'-C1'-N1	5.51	116.77	108.50
9	AH	85	GLY	CA-C-N	5.51	132.07	121.54
9	AH	85	GLY	C-N-CA	5.51	132.07	121.54
25	BB	1789	A	O4'-C4'-C3'	5.51	109.51	104.00
54	B5	79	LEU	CA-C-N	5.51	127.67	120.28
54	B5	79	LEU	C-N-CA	5.51	127.67	120.28
3	A1	10	A	C2'-C3'-O3'	-5.51	101.24	109.50
3	A1	751	U	C5'-C4'-C3'	-5.51	107.74	116.00
3	A1	880	C	C3'-C2'-C1'	5.51	106.81	101.30
1	AE	10	G	O4'-C1'-C2'	-5.51	102.09	107.60
3	A1	43	C	C4'-C3'-C2'	-5.51	97.09	102.60
46	BW	52	GLY	CA-C-N	5.51	128.42	120.38
46	BW	52	GLY	C-N-CA	5.51	128.42	120.38
1	AP	27	C	C5'-C4'-O4'	5.51	118.06	109.80
2	AM	10	U	N1-C1'-C2'	5.51	120.26	112.00
3	A1	179	A	C3'-C2'-O2'	5.51	118.96	110.70
3	A1	495	A	C2'-C3'-O3'	5.51	117.76	109.50
3	A1	1068	G	O4'-C4'-C3'	5.51	109.51	104.00
25	BB	1414	C	C5'-C4'-O4'	5.51	118.06	109.80
25	BB	1549	A	C1'-O4'-C4'	-5.51	104.39	109.90
25	BB	1924	C	O4'-C1'-C2'	-5.51	102.09	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1948	G	C3'-C2'-O2'	5.51	118.96	110.70
25	BB	2702	G	C4'-C3'-C2'	-5.51	97.09	102.60
25	BB	2858	C	O3'-P-O5'	5.51	112.26	104.00
29	BF	13	HIS	CA-C-N	5.51	132.06	121.54
29	BF	13	HIS	C-N-CA	5.51	132.06	121.54
54	B5	96	LYS	CA-C-N	5.51	131.88	121.97
54	B5	96	LYS	C-N-CA	5.51	131.88	121.97
3	A1	629	A	C4'-C3'-C2'	-5.50	97.09	102.60
25	BB	565	C	O3'-P-O5'	5.50	112.26	104.00
25	BB	1211	C	C5'-C4'-C3'	-5.50	106.94	115.20
3	A1	51	A	O4'-C4'-C3'	5.50	109.50	104.00
3	A1	677	U	C2'-C3'-O3'	5.50	121.95	113.70
5	AC	110	THR	CA-CB-CG2	5.50	119.86	110.50
7	AF	11	HIS	CB-CG-CD2	-5.50	124.05	131.20
7	AF	106	ARG	NH1-CZ-NH2	-5.50	112.14	119.30
22	AW	54	VAL	CA-CB-CG2	5.50	119.76	110.40
25	BB	159	G	C2'-C3'-O3'	5.50	121.96	113.70
25	BB	716	A	O3'-P-O5'	5.50	112.26	104.00
25	BB	798	G	O4'-C4'-C3'	-5.50	98.50	104.00
25	BB	2802	G	C4'-C3'-C2'	-5.50	97.10	102.60
28	BE	40	SER	CA-C-N	5.50	132.05	121.54
28	BE	40	SER	C-N-CA	5.50	132.05	121.54
3	A1	233	C	O4'-C4'-C3'	5.50	109.50	104.00
3	A1	317	U	C5'-C4'-O4'	5.50	118.05	109.80
3	A1	865	A	C1'-C2'-O2'	5.50	116.65	108.40
3	A1	1327	C	O3'-P-O5'	5.50	112.25	104.00
18	AS	91	SER	O-C-N	-5.50	115.06	122.43
25	BB	2569	G	C5'-C4'-O4'	5.50	118.05	109.80
17	AR	110	ARG	CD-NE-CZ	5.50	132.10	124.40
25	BB	1468	U	O4'-C1'-N1	5.50	116.45	108.20
25	BB	2498	C	C5'-C4'-O4'	5.50	117.35	109.10
32	BI	52	ARG	NH1-CZ-NH2	-5.50	112.15	119.30
23	AX	58	ASN	N-CA-C	5.50	117.01	110.19
24	BA	15	A	O3'-P-O5'	-5.50	95.75	104.00
25	BB	866	A	O4'-C1'-N9	5.50	116.75	108.50
25	BB	2363	G	C2'-C3'-O3'	-5.50	105.45	113.70
25	BB	2827	C	C1'-C2'-O2'	-5.50	103.55	111.80
43	BT	15	ARG	N-CA-C	5.50	122.51	110.80
50	B1	134	LEU	N-CA-C	5.50	117.35	111.36
1	AE	72	C	C5'-C4'-O4'	5.50	118.04	109.80
3	A1	181	A	C3'-C2'-C1'	5.50	107.00	101.50
3	A1	288	A	O4'-C4'-C3'	-5.50	98.50	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	315	A	O4'-C4'-C3'	5.50	111.60	106.10
25	BB	756	A	C4'-C3'-C2'	-5.50	97.10	102.60
25	BB	1026	G	O4'-C1'-C2'	-5.50	100.30	105.80
25	BB	2159	G	O3'-P-O5'	-5.50	95.75	104.00
29	BF	85	GLY	CA-C-N	5.50	127.96	120.54
29	BF	85	GLY	C-N-CA	5.50	127.96	120.54
48	BY	23	PRO	CA-C-N	5.50	130.41	123.10
48	BY	23	PRO	C-N-CA	5.50	130.41	123.10
3	A1	682	G	C3'-C2'-C1'	-5.50	96.00	101.50
25	BB	482	A	C4'-C3'-O3'	5.50	117.64	109.40
25	BB	1226	A	O4'-C1'-C2'	-5.50	102.11	107.60
21	AV	89	ASP	CA-C-O	5.49	124.94	118.90
23	AX	42	LEU	CA-C-N	5.49	126.71	119.84
23	AX	42	LEU	C-N-CA	5.49	126.71	119.84
25	BB	248	G	O4'-C1'-N9	5.49	116.74	108.50
25	BB	1732	C	P-O3'-C3'	5.49	128.44	120.20
25	BB	1746	A	O4'-C1'-C2'	-5.49	102.11	107.60
25	BB	2216	G	C3'-C2'-O2'	5.49	118.94	110.70
25	BB	2363	G	O4'-C4'-C3'	5.49	109.49	104.00
25	BB	2702	G	O4'-C4'-C3'	5.49	109.49	104.00
27	BD	39	ILE	CA-CB-CG1	5.49	119.74	110.40
3	A1	1525	G	C3'-C2'-O2'	5.49	118.94	110.70
8	AG	49	THR	N-CA-C	5.49	122.50	110.80
22	AW	41	GLU	CB-CG-CD	5.49	121.94	112.60
25	BB	759	G	C3'-C2'-O2'	5.49	122.84	114.60
25	BB	864	G	C3'-C2'-O2'	5.49	118.94	110.70
25	BB	949	G	C3'-C2'-O2'	5.49	118.94	110.70
25	BB	984	A	C5'-C4'-C3'	-5.49	107.76	116.00
25	BB	1474	U	P-O3'-C3'	5.49	128.44	120.20
48	BY	84	LEU	CA-C-N	5.49	132.03	121.54
48	BY	84	LEU	C-N-CA	5.49	132.03	121.54
1	AP	58	A	N9-C1'-C2'	5.49	122.23	114.00
20	AU	85	GLN	CA-C-N	5.49	131.58	121.70
20	AU	85	GLN	C-N-CA	5.49	131.58	121.70
25	BB	1105	U	C4'-C3'-C2'	-5.49	97.11	102.60
25	BB	2720	U	C1'-C2'-O2'	5.49	120.04	111.80
3	A1	1254	A	C3'-C2'-O2'	5.49	118.93	110.70
25	BB	719	C	C4'-C3'-C2'	-5.49	97.11	102.60
25	BB	853	C	C4'-C3'-C2'	-5.49	97.11	102.60
25	BB	2748	A	C5'-C4'-C3'	-5.49	107.77	116.00
8	AG	51	PRO	N-CD-CG	5.49	111.43	103.20
25	BB	954	G	C1'-O4'-C4'	-5.49	104.21	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1966	A	O4'-C4'-C3'	5.49	111.59	106.10
25	BB	2712	C	C4'-C3'-O3'	-5.49	104.77	113.00
39	BP	40	ARG	N-CA-C	5.49	117.32	109.14
48	BY	141	ARG	NE-CZ-NH2	5.49	124.14	119.20
1	AA	41	U	O4'-C1'-N1	5.49	116.73	108.50
1	AE	10	G	C3'-C2'-C1'	5.49	106.79	101.30
25	BB	30	G	O5'-C5'-C4'	-5.49	103.27	111.50
25	BB	819	A	C2'-C3'-O3'	5.49	121.93	113.70
25	BB	1623	G	C5'-C4'-C3'	-5.49	107.77	116.00
25	BB	2420	C	P-O3'-C3'	5.49	128.43	120.20
25	BB	2464	G	C5'-C4'-C3'	-5.49	107.77	116.00
25	BB	154	U	C1'-O4'-C4'	-5.48	104.42	109.90
49	BZ	159	THR	CA-C-N	5.48	130.99	122.49
49	BZ	159	THR	C-N-CA	5.48	130.99	122.49
3	A1	619	U	C3'-C2'-C1'	5.48	106.78	101.30
3	A1	812	G	C5'-C4'-C3'	-5.48	106.98	115.20
3	A1	1101	A	C3'-C2'-O2'	5.48	118.92	110.70
25	BB	1011	G	C3'-C2'-O2'	5.48	122.82	114.60
25	BB	1310	G	C1'-O4'-C4'	-5.48	104.42	109.90
25	BB	1904	G	O4'-C1'-C2'	-5.48	102.12	107.60
49	BZ	87	ARG	CA-C-O	5.48	126.55	120.63
3	A1	253	A	O4'-C4'-C3'	5.48	109.48	104.00
3	A1	535	A	N9-C1'-C2'	5.48	120.22	112.00
4	AB	51	GLU	N-CA-C	5.48	117.25	111.28
8	AG	31	SER	CA-C-N	5.48	130.94	120.97
8	AG	31	SER	C-N-CA	5.48	130.94	120.97
9	AH	74	VAL	CA-C-N	5.48	127.88	120.65
9	AH	74	VAL	C-N-CA	5.48	127.88	120.65
24	BA	95	U	C2'-C3'-O3'	5.48	121.92	113.70
25	BB	653	U	C2'-C3'-O3'	5.48	117.72	109.50
25	BB	1435	G	O3'-P-O5'	-5.48	95.78	104.00
25	BB	1954	G	C1'-O4'-C4'	-5.48	104.22	109.70
25	BB	2522	U	C3'-C2'-C1'	5.48	106.78	101.30
25	BB	2524	G	C5'-C4'-C3'	-5.48	107.78	116.00
25	BB	2845	U	C5'-C4'-C3'	-5.48	107.78	116.00
50	B1	142	ALA	N-CA-C	5.48	122.47	110.80
55	B6	120	ARG	NE-CZ-NH1	5.48	126.98	121.50
3	A1	37	U	C4'-C3'-C2'	-5.48	97.12	102.60
3	A1	420	U	C1'-C2'-O2'	-5.48	103.58	111.80
5	AC	92	ARG	CD-NE-CZ	5.48	132.07	124.40
25	BB	849	A	O4'-C4'-C3'	5.48	109.48	104.00
27	BD	99	ILE	CA-C-N	5.48	130.38	122.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BD	99	ILE	C-N-CA	5.48	130.38	122.16
31	BH	114	GLY	O-C-N	-5.48	117.33	122.75
48	BY	65	ALA	CA-C-O	5.48	124.55	118.52
54	B5	133	ARG	CA-C-O	-5.48	114.61	120.42
3	A1	876	C	C5'-C4'-C3'	-5.48	107.79	116.00
25	BB	1485	U	O4'-C1'-N1	5.48	116.72	108.50
3	A1	1272	G	O4'-C4'-C3'	5.47	109.47	104.00
3	A1	1526	G	O5'-C5'-C4'	5.47	119.71	111.50
17	AR	188	SER	CA-C-O	-5.47	115.26	120.90
25	BB	28	A	O5'-C5'-C4'	5.47	119.71	111.50
25	BB	549	G	C5'-C4'-O4'	5.47	117.31	109.10
25	BB	2020	A	C4'-C3'-C2'	-5.47	97.13	102.60
25	BB	2546	U	C3'-C2'-O2'	5.47	118.91	110.70
25	BB	2698	U	C4'-C3'-C2'	-5.47	97.13	102.60
3	A1	272	C	C5'-C4'-O4'	5.47	118.01	109.80
3	A1	345	C	O4'-C4'-C3'	5.47	111.57	106.10
3	A1	1304	G	O4'-C4'-C3'	5.47	109.47	104.00
3	A1	1328	C	C5'-C4'-C3'	-5.47	107.79	116.00
23	AX	92	LEU	N-CA-C	5.47	119.45	112.34
25	BB	151	C	C2'-C3'-O3'	5.47	121.91	113.70
25	BB	888	C	C5'-C4'-O4'	5.47	117.31	109.10
3	A1	299	G	C4'-C3'-O3'	5.47	117.61	109.40
3	A1	379	C	C1'-O4'-C4'	-5.47	104.43	109.90
3	A1	393	A	C3'-C2'-O2'	5.47	118.91	110.70
3	A1	774	G	O4'-C4'-C3'	-5.47	100.63	106.10
3	A1	1037	C	C2'-C3'-O3'	5.47	121.91	113.70
25	BB	1715	G	C2'-C3'-O3'	5.47	117.71	109.50
28	BE	89	VAL	CA-C-N	5.47	131.82	121.97
28	BE	89	VAL	C-N-CA	5.47	131.82	121.97
3	A1	595	A	O3'-P-O5'	-5.47	95.80	104.00
3	A1	808	C	N1-C1'-C2'	5.47	120.20	112.00
24	BA	65	U	O3'-P-O5'	5.47	112.20	104.00
25	BB	136	G	C3'-C2'-C1'	5.47	106.77	101.30
25	BB	1383	A	C1'-O4'-C4'	-5.47	104.23	109.70
25	BB	1816	C	C3'-C2'-O2'	5.47	118.90	110.70
25	BB	2309	A	C5'-C4'-O4'	5.47	118.00	109.80
25	BB	2335	A	C1'-O4'-C4'	-5.47	104.43	109.90
25	BB	2523	G	C4'-C3'-O3'	-5.47	104.80	113.00
3	A1	17	U	O4'-C1'-N1	5.47	116.70	108.50
3	A1	491	G	C1'-C2'-O2'	-5.47	100.20	108.40
3	A1	821	G	P-O3'-C3'	5.47	128.40	120.20
25	BB	229	C	O3'-P-O5'	-5.47	95.80	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2712	C	C5'-C4'-C3'	-5.47	107.80	116.00
53	B4	119	ASN	OD1-CG-ND2	-5.47	117.13	122.60
3	A1	365	U	O5'-C5'-C4'	5.47	119.70	111.50
4	AB	155	GLY	CA-C-N	5.47	128.44	120.51
4	AB	155	GLY	C-N-CA	5.47	128.44	120.51
25	BB	486	C	O3'-P-O5'	-5.47	95.80	104.00
25	BB	673	C	C4'-C3'-O3'	-5.47	104.80	113.00
25	BB	1177	G	O4'-C4'-C3'	5.47	109.47	104.00
25	BB	1541	C	O4'-C1'-C2'	-5.47	102.13	107.60
25	BB	2713	U	C5'-C4'-C3'	-5.47	107.00	115.20
7	AF	67	ASP	CA-CB-CG	5.46	118.06	112.60
8	AG	30	ILE	N-CA-C	5.46	116.85	110.62
24	BA	41	G	N9-C1'-C2'	-5.46	103.80	112.00
25	BB	2554	U	C2'-C3'-O3'	5.46	117.70	109.50
51	B2	147	ARG	NE-CZ-NH2	5.46	124.12	119.20
25	BB	1348	C	C1'-O4'-C4'	-5.46	104.44	109.90
3	A1	425	G	C5'-C4'-C3'	5.46	124.19	116.00
3	A1	973	G	C1'-O4'-C4'	-5.46	104.24	109.70
3	A1	1361	G	O4'-C4'-C3'	-5.46	100.64	106.10
3	A1	1488	G	C1'-O4'-C4'	-5.46	104.44	109.90
5	AC	13	LYS	CB-CA-C	5.46	116.54	109.28
25	BB	35	G	O4'-C1'-C2'	-5.46	102.14	107.60
25	BB	529	A	N9-C1'-C2'	5.46	122.19	114.00
25	BB	918	A	C4'-C3'-O3'	-5.46	104.81	113.00
25	BB	1450	G	P-O3'-C3'	5.46	128.39	120.20
55	B6	48	VAL	N-CA-C	5.46	116.53	108.45
6	AD	109	ARG	NH1-CZ-NH2	-5.46	112.20	119.30
3	A1	6	G	C3'-C2'-O2'	-5.46	106.41	114.60
3	A1	169	C	O4'-C4'-C3'	5.46	111.56	106.10
4	AB	224	ARG	N-CA-C	5.46	117.66	111.11
25	BB	292	U	C1'-O4'-C4'	-5.46	104.44	109.90
25	BB	836	G	O4'-C4'-C3'	5.46	111.56	106.10
25	BB	2086	U	C5'-C4'-O4'	5.46	117.99	109.80
25	BB	2830	C	O3'-P-O5'	5.46	112.19	104.00
33	BJ	47	ARG	NE-CZ-NH2	5.46	124.11	119.20
37	BN	206	LYS	O-C-N	-5.46	114.58	121.95
38	BO	93	ARG	CD-NE-CZ	5.46	132.04	124.40
3	A1	80	A	O4'-C4'-C3'	5.46	109.46	104.00
3	A1	199	A	O4'-C4'-C3'	5.46	109.46	104.00
3	A1	452	A	O5'-C5'-C4'	5.46	119.68	111.50
3	A1	1120	C	C3'-C2'-O2'	5.46	118.88	110.70
25	BB	230	G	C1'-C2'-O2'	-5.46	100.21	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	412	A	C4'-C3'-C2'	-5.46	97.14	102.60
25	BB	697	G	C3'-C2'-O2'	5.46	118.89	110.70
25	BB	2685	G	O3'-P-O5'	-5.46	95.81	104.00
25	BB	1847	A	O4'-C1'-N9	5.46	116.68	108.50
3	A1	215	C	C3'-C2'-O2'	5.45	118.88	110.70
3	A1	344	A	O4'-C4'-C3'	5.45	111.55	106.10
3	A1	985	C	N1-C1'-C2'	5.45	120.18	112.00
3	A1	1351	U	C3'-C2'-O2'	5.45	118.88	110.70
23	AX	15	HIS	CA-CB-CG	5.45	119.25	113.80
25	BB	98	G	C3'-C2'-O2'	5.45	118.88	110.70
25	BB	277	G	C4'-C3'-C2'	-5.45	97.15	102.60
25	BB	556	A	O4'-C1'-N9	5.45	116.68	108.50
25	BB	1109	C	C1'-O4'-C4'	-5.45	104.45	109.90
25	BB	1347	A	O5'-C5'-C4'	-5.45	103.32	111.50
35	BL	65	ASP	CA-CB-CG	5.45	118.05	112.60
37	BN	147	PRO	N-CA-C	5.45	123.70	112.47
3	A1	218	U	C5'-C4'-C3'	-5.45	107.82	116.00
6	AD	102	ASP	CA-C-N	5.45	132.21	121.58
6	AD	102	ASP	C-N-CA	5.45	132.21	121.58
25	BB	920	A	C3'-C2'-O2'	-5.45	102.52	110.70
25	BB	2054	A	C4'-C3'-O3'	5.45	117.58	109.40
28	BE	9	ALA	CA-C-N	5.45	131.95	121.54
28	BE	9	ALA	C-N-CA	5.45	131.95	121.54
51	B2	76	PHE	CA-C-N	5.45	131.95	121.54
51	B2	76	PHE	C-N-CA	5.45	131.95	121.54
1	AE	40	C	C5'-C4'-C3'	-5.45	107.82	116.00
3	A1	733	G	C1'-O4'-C4'	-5.45	104.25	109.70
3	A1	1150	A	C3'-C2'-O2'	5.45	118.88	110.70
3	A1	1204	A	C1'-C2'-O2'	5.45	116.57	108.40
10	AI	67	ILE	N-CA-C	5.45	115.84	107.77
23	AX	59	LYS	N-CA-C	5.45	118.25	110.24
24	BA	70	C	C1'-O4'-C4'	-5.45	104.45	109.90
25	BB	296	U	C3'-C2'-O2'	5.45	118.88	110.70
25	BB	911	A	C1'-O4'-C4'	-5.45	104.45	109.90
25	BB	1478	G	O5'-C5'-C4'	5.45	119.67	111.50
25	BB	2077	A	C1'-C2'-O2'	5.45	116.58	108.40
25	BB	2631	G	C3'-C2'-O2'	5.45	118.88	110.70
25	BB	2793	C	C5'-C4'-C3'	-5.45	107.82	116.00
27	BD	93	GLN	OE1-CD-NE2	-5.45	117.15	122.60
49	BZ	78	LYS	N-CA-C	5.45	121.34	114.31
24	BA	41	G	C5'-C4'-O4'	5.45	117.97	109.80
25	BB	1058	U	C5'-C4'-O4'	5.45	117.97	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	BN	117	SER	N-CA-C	5.45	115.48	108.34
3	A1	488	C	O3'-P-O5'	-5.45	95.83	104.00
3	A1	760	G	P-O3'-C3'	5.45	128.37	120.20
3	A1	1013	G	C5'-C4'-C3'	-5.45	107.83	116.00
9	AH	37	HIS	CA-C-O	-5.45	114.72	120.55
17	AR	32	LYS	N-CA-C	5.45	122.40	110.80
3	A1	992	U	O4'-C1'-C2'	-5.45	100.36	105.80
10	AI	71	VAL	CA-C-N	5.45	131.94	121.54
10	AI	71	VAL	C-N-CA	5.45	131.94	121.54
17	AR	72	ARG	NE-CZ-NH1	5.45	126.95	121.50
25	BB	962	G	C4'-C3'-C2'	-5.45	97.15	102.60
25	BB	1033	U	C5'-C4'-C3'	-5.45	107.83	116.00
25	BB	1343	G	C2'-C3'-O3'	5.45	117.67	109.50
25	BB	1501	G	O5'-C5'-C4'	5.45	119.67	111.50
25	BB	1317	G	C4'-C3'-C2'	-5.44	97.16	102.60
51	B2	159	ALA	CA-C-N	5.44	131.94	121.54
51	B2	159	ALA	C-N-CA	5.44	131.94	121.54
3	A1	155	A	O3'-P-O5'	5.44	112.17	104.00
3	A1	227	G	N9-C1'-C2'	5.44	120.16	112.00
3	A1	1489	G	O5'-C5'-C4'	5.44	119.66	111.50
25	BB	1411	U	O5'-C5'-C4'	-5.44	103.33	111.50
25	BB	2249	U	C4'-C3'-C2'	-5.44	97.16	102.60
25	BB	2665	A	C5'-C4'-C3'	-5.44	107.84	116.00
31	BH	16	ARG	CD-NE-CZ	5.44	132.02	124.40
3	A1	92	U	C1'-O4'-C4'	-5.44	104.26	109.70
25	BB	1448	G	O4'-C4'-C3'	5.44	109.44	104.00
25	BB	1723	G	O5'-C5'-C4'	5.44	119.66	111.50
25	BB	2451	A	O4'-C4'-C3'	5.44	109.44	104.00
25	BB	2684	U	O5'-C5'-C4'	5.44	119.66	111.50
3	A1	733	G	O4'-C1'-N9	5.44	116.36	108.20
25	BB	297	G	C5'-C4'-C3'	-5.44	107.84	116.00
25	BB	1198	U	C2'-C3'-O3'	-5.44	105.54	113.70
25	BB	2876	G	C3'-C2'-O2'	5.44	118.86	110.70
41	BR	29	ARG	NE-CZ-NH1	5.44	126.94	121.50
1	AA	45	G	C1'-O4'-C4'	5.44	115.34	109.90
3	A1	745	G	C3'-C2'-O2'	5.44	118.86	110.70
3	A1	1233	G	O4'-C4'-C3'	5.44	109.44	104.00
25	BB	801	G	O4'-C1'-C2'	5.44	111.24	105.80
34	BK	78	ARG	NE-CZ-NH2	5.44	124.09	119.20
23	AX	56	HIS	CB-CG-CD2	-5.44	124.13	131.20
1	AP	31	A	N9-C1'-C2'	5.43	123.27	112.40
3	A1	145	G	O4'-C4'-C3'	5.43	109.44	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	248	C	C3'-C2'-O2'	5.43	118.85	110.70
3	A1	1413	A	C3'-C2'-O2'	5.43	118.85	110.70
3	A1	1472	U	C2'-C3'-O3'	5.43	121.85	113.70
3	A1	1495	U	N1-C1'-C2'	-5.43	103.85	112.00
25	BB	212	G	C2'-C3'-O3'	5.43	117.65	109.50
25	BB	1865	U	O4'-C1'-C2'	-5.43	102.17	107.60
28	BE	38	GLN	OE1-CD-NE2	-5.43	117.17	122.60
34	BK	23	GLU	N-CA-C	5.43	118.92	112.72
49	BZ	157	VAL	N-CA-C	5.43	112.02	106.21
49	BZ	215	VAL	CA-C-N	5.43	131.92	121.54
49	BZ	215	VAL	C-N-CA	5.43	131.92	121.54
1	AA	37	G	C1'-O4'-C4'	5.43	115.33	109.90
3	A1	434	U	O4'-C1'-N1	5.43	116.65	108.50
4	AB	36	LYS	CA-C-N	5.43	129.33	121.18
4	AB	36	LYS	C-N-CA	5.43	129.33	121.18
15	AO	132	ALA	CA-C-N	5.43	128.02	120.63
15	AO	132	ALA	C-N-CA	5.43	128.02	120.63
3	A1	995	C	C2'-C3'-O3'	-5.43	105.55	113.70
17	AR	130	ASN	CA-C-N	5.43	131.75	121.97
17	AR	130	ASN	C-N-CA	5.43	131.75	121.97
25	BB	313	G	C3'-C2'-C1'	-5.43	95.87	101.30
25	BB	1703	G	C4'-C3'-C2'	-5.43	97.17	102.60
25	BB	2807	U	O4'-C1'-C2'	5.43	113.03	107.60
3	A1	1100	C	C3'-C2'-O2'	5.43	118.84	110.70
3	A1	1180	A	C5'-C4'-C3'	-5.43	107.86	116.00
5	AC	36	ARG	NE-CZ-NH2	5.43	124.09	119.20
25	BB	174	U	O4'-C1'-N1	5.43	116.65	108.50
25	BB	2106	U	C3'-C2'-C1'	5.43	106.73	101.30
25	BB	2360	G	C4'-C3'-C2'	-5.43	97.17	102.60
52	B3	44	HIS	N-CA-C	5.43	117.06	107.61
3	A1	85	U	C4'-C3'-O3'	5.43	117.54	109.40
25	BB	176	A	C1'-O4'-C4'	5.43	115.33	109.90
25	BB	217	A	O4'-C1'-N9	5.43	116.64	108.50
36	BM	55	VAL	CA-C-N	5.43	128.90	122.44
36	BM	55	VAL	C-N-CA	5.43	128.90	122.44
2	AM	16	U	C3'-C2'-O2'	5.43	118.84	110.70
3	A1	531	U	C4'-C3'-O3'	5.43	117.54	109.40
3	A1	1260	G	O4'-C1'-N9	-5.43	100.36	108.50
4	AB	57	ASN	OD1-CG-ND2	-5.43	117.17	122.60
7	AF	26	LYS	N-CA-CB	-5.43	102.14	110.12
25	BB	184	C	C5'-C4'-C3'	-5.43	107.86	116.00
25	BB	504	A	C4'-C3'-O3'	5.43	121.14	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1215	G	C5'-C4'-C3'	-5.43	107.86	116.00
48	BY	67	HIS	CE1-NE2-CD2	-5.43	103.57	109.00
2	AM	2	U	C4'-C3'-C2'	-5.42	97.18	102.60
19	AT	44	ARG	CA-C-N	5.42	128.79	120.82
19	AT	44	ARG	C-N-CA	5.42	128.79	120.82
25	BB	90	U	O4'-C1'-C2'	-5.42	100.38	105.80
25	BB	548	G	C1'-O4'-C4'	-5.42	104.48	109.90
25	BB	2000	C	C3'-C2'-O2'	5.42	118.84	110.70
25	BB	2405	G	C3'-C2'-O2'	5.42	118.84	110.70
44	BU	17	GLY	O-C-N	-5.42	115.65	122.70
47	BX	13	ASN	CA-C-N	5.42	131.90	121.54
47	BX	13	ASN	C-N-CA	5.42	131.90	121.54
25	BB	2116	G	O4'-C1'-N9	5.42	116.33	108.20
3	A1	64	G	C5'-C4'-C3'	-5.42	107.87	116.00
3	A1	171	A	C5'-C4'-C3'	-5.42	107.07	115.20
3	A1	1477	U	C5'-C4'-C3'	-5.42	107.87	116.00
6	AD	85	ARG	CD-NE-CZ	5.42	131.99	124.40
22	AW	90	ASP	O-C-N	-5.42	116.09	123.14
25	BB	2161	C	C1'-C2'-O2'	5.42	116.53	108.40
32	BI	6	GLN	OE1-CD-NE2	-5.42	117.18	122.60
41	BR	19	HIS	CB-CG-CD2	-5.42	124.15	131.20
43	BT	20	ALA	N-CA-C	5.42	117.32	110.33
53	B4	37	VAL	N-CA-C	5.42	120.59	108.88
3	A1	143	A	C3'-C2'-C1'	-5.42	95.88	101.30
25	BB	746	U	C2'-C3'-O3'	5.42	117.63	109.50
1	AP	36	A	C5'-C4'-C3'	5.42	124.13	116.00
3	A1	609	A	O5'-C5'-C4'	-5.42	103.37	111.50
3	A1	918	A	C4'-C3'-C2'	-5.42	97.18	102.60
21	AV	7	ALA	N-CA-C	5.42	117.89	111.33
25	BB	75	G	C2'-C3'-O3'	5.42	121.83	113.70
25	BB	383	C	O4'-C4'-C3'	-5.42	98.58	104.00
25	BB	775	G	O3'-P-O5'	-5.42	95.87	104.00
25	BB	1018	U	C2'-C3'-O3'	-5.42	105.57	113.70
25	BB	1580	A	C3'-C2'-O2'	5.42	118.83	110.70
25	BB	2240	U	C3'-C2'-C1'	5.42	106.72	101.30
25	BB	2372	U	O4'-C1'-N1	5.42	116.63	108.50
25	BB	2787	C	C3'-C2'-O2'	5.42	118.83	110.70
4	AB	196	ASP	CA-CB-CG	-5.42	107.18	112.60
25	BB	194	G	O4'-C1'-C2'	5.42	111.22	105.80
25	BB	1599	U	C4'-C3'-O3'	-5.42	104.88	113.00
25	BB	1739	A	C5'-C4'-O4'	5.42	117.92	109.80
53	B4	132	PHE	CA-CB-CG	5.42	119.22	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	B5	74	PRO	N-CA-CB	5.42	108.14	103.27
1	AP	31	A	O4'-C1'-N9	5.42	119.33	108.50
3	A1	554	A	C3'-C2'-C1'	5.42	106.72	101.30
3	A1	1172	C	O4'-C1'-N1	5.42	116.62	108.50
19	AT	52	ASN	CB-CA-C	5.42	120.06	111.51
25	BB	98	G	O4'-C1'-N9	5.42	116.62	108.50
25	BB	1237	A	N9-C1'-C2'	-5.42	105.88	114.00
45	BV	14	ARG	CD-NE-CZ	5.42	131.98	124.40
3	A1	255	G	C3'-C2'-O2'	5.41	118.82	110.70
3	A1	663	A	O4'-C1'-C2'	-5.41	102.19	107.60
23	AX	98	VAL	CA-C-N	5.41	131.88	121.54
23	AX	98	VAL	C-N-CA	5.41	131.88	121.54
25	BB	422	A	O3'-P-O5'	-5.41	95.88	104.00
25	BB	983	A	C5'-C4'-C3'	-5.41	107.88	116.00
25	BB	1008	A	C2'-C3'-O3'	-5.41	101.38	109.50
1	AA	57	G	O4'-C1'-N9	5.41	116.62	108.50
13	AL	21	ALA	N-CA-C	5.41	117.26	111.36
24	BA	99	A	C2'-C3'-O3'	5.41	121.82	113.70
3	A1	58	C	C5'-C4'-O4'	5.41	117.92	109.80
3	A1	103	U	O3'-P-O5'	-5.41	95.89	104.00
3	A1	512	U	C5'-C4'-O4'	5.41	117.92	109.80
3	A1	1506	U	C1'-C2'-O2'	-5.41	100.28	108.40
4	AB	94	ARG	NH1-CZ-NH2	-5.41	112.27	119.30
17	AR	141	VAL	N-CA-C	5.41	117.11	108.89
25	BB	1227	G	P-O5'-C5'	5.41	129.02	120.90
25	BB	2294	G	C5'-C4'-O4'	5.41	117.91	109.80
30	BG	41	ALA	CA-C-N	5.41	128.28	120.38
30	BG	41	ALA	C-N-CA	5.41	128.28	120.38
3	A1	733	G	C4'-C3'-C2'	-5.41	97.19	102.60
25	BB	217	A	C5'-C4'-C3'	-5.41	107.89	116.00
25	BB	1458	U	C1'-C2'-O2'	5.41	119.91	111.80
1	AE	76	A	O4'-C4'-C3'	5.41	109.41	104.00
3	A1	676	A	C3'-C2'-O2'	5.41	118.81	110.70
3	A1	1469	C	O4'-C1'-N1	5.41	116.61	108.50
3	A1	1485	U	N1-C1'-C2'	5.41	122.11	114.00
25	BB	341	C	C2'-C3'-O3'	5.41	121.81	113.70
25	BB	2258	C	C3'-C2'-O2'	5.41	118.81	110.70
25	BB	2607	G	O4'-C1'-N9	5.41	116.61	108.50
1	AE	76	A	C1'-O4'-C4'	-5.41	104.50	109.90
3	A1	639	G	C5'-C4'-C3'	-5.41	107.89	116.00
3	A1	1430	A	O4'-C1'-N9	5.41	116.61	108.50
25	BB	53	A	O3'-P-O5'	5.41	112.11	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	411	G	O3'-P-O5'	-5.41	95.89	104.00
25	BB	1550	C	C1'-C2'-O2'	-5.41	100.29	108.40
25	BB	1642	G	O4'-C1'-C2'	-5.41	102.19	107.60
25	BB	2103	C	C4'-C3'-C2'	-5.41	97.19	102.60
25	BB	2850	A	C1'-O4'-C4'	-5.41	104.49	109.90
31	BH	18	LEU	CB-CA-C	5.41	118.57	110.08
55	B6	95	ARG	NE-CZ-NH2	5.41	124.07	119.20
25	BB	970	U	C4'-C3'-C2'	-5.40	97.20	102.60
25	BB	1912	A	C4'-C3'-O3'	-5.40	101.30	109.40
1	AE	23	A	C4'-C3'-C2'	-5.40	97.20	102.60
3	A1	83	C	O3'-P-O5'	-5.40	95.89	104.00
3	A1	728	A	C1'-O4'-C4'	-5.40	104.50	109.90
3	A1	797	C	O3'-P-O5'	-5.40	95.90	104.00
3	A1	868	C	O5'-C5'-C4'	-5.40	103.40	111.50
3	A1	1037	C	C5'-C4'-C3'	-5.40	107.90	116.00
25	BB	478	A	C5'-C4'-C3'	-5.40	107.89	116.00
25	BB	1735	A	O4'-C4'-C3'	5.40	109.40	104.00
25	BB	2170	A	O4'-C4'-C3'	5.40	109.40	104.00
49	BZ	28	GLN	N-CA-C	5.40	118.73	110.36
3	A1	163	C	C1'-O4'-C4'	5.40	115.30	109.90
3	A1	518	C	O4'-C4'-C3'	-5.40	100.70	106.10
9	AH	52	ARG	N-CA-C	5.40	118.66	111.75
24	BA	22	U	C3'-C2'-O2'	5.40	118.80	110.70
24	BA	109	A	O3'-P-O5'	-5.40	95.90	104.00
25	BB	71	A	O4'-C1'-N9	5.40	116.30	108.20
25	BB	694	U	C4'-C3'-C2'	-5.40	97.20	102.60
25	BB	1311	G	C5'-C4'-C3'	-5.40	107.90	116.00
25	BB	2783	U	O4'-C4'-C3'	-5.40	98.60	104.00
43	BT	27	LEU	CA-C-N	5.40	127.52	120.28
43	BT	27	LEU	C-N-CA	5.40	127.52	120.28
3	A1	472	U	C5'-C4'-C3'	-5.40	107.90	116.00
3	A1	1227	A	O3'-P-O5'	-5.40	95.90	104.00
25	BB	728	G	O5'-C5'-C4'	-5.40	103.40	111.50
25	BB	1171	G	O4'-C4'-C3'	5.40	109.40	104.00
3	A1	1134	G	O5'-C5'-C4'	-5.40	103.40	111.50
3	A1	1320	C	C3'-C2'-C1'	5.40	106.90	101.50
4	AB	108	GLN	N-CA-C	5.40	117.59	111.11
25	BB	1824	G	C4'-C3'-C2'	-5.40	97.20	102.60
25	BB	1933	G	C3'-C2'-O2'	5.40	118.80	110.70
25	BB	2071	A	C4'-C3'-O3'	-5.40	101.30	109.40
36	BM	59	ASN	OD1-CG-ND2	-5.40	117.20	122.60
38	BO	58	VAL	CA-CB-CG2	5.40	119.58	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	BW	15	LYS	CA-C-N	5.40	129.55	121.72
46	BW	15	LYS	C-N-CA	5.40	129.55	121.72
53	B4	70	GLU	CA-C-N	5.40	130.34	122.08
53	B4	70	GLU	C-N-CA	5.40	130.34	122.08
8	AG	80	ARG	NE-CZ-NH2	5.40	124.06	119.20
15	AO	106	ARG	NH1-CZ-NH2	-5.40	112.29	119.30
23	AX	24	GLU	CA-C-N	5.40	127.47	120.56
23	AX	24	GLU	C-N-CA	5.40	127.47	120.56
25	BB	416	U	O4'-C4'-C3'	5.40	109.40	104.00
51	B2	53	ALA	CA-C-N	5.40	129.72	120.71
51	B2	53	ALA	C-N-CA	5.40	129.72	120.71
3	A1	1193	G	O3'-P-O5'	5.39	112.09	104.00
12	AK	48	ALA	CA-C-N	5.39	127.45	120.44
12	AK	48	ALA	C-N-CA	5.39	127.45	120.44
25	BB	547	A	C2'-C3'-O3'	5.39	121.79	113.70
25	BB	2047	C	O4'-C4'-C3'	5.39	111.50	106.10
25	BB	2097	A	C3'-C2'-C1'	5.39	106.69	101.30
25	BB	2327	A	O4'-C1'-N9	5.39	116.59	108.50
3	A1	124	C	C3'-C2'-C1'	-5.39	96.11	101.50
3	A1	432	A	C5'-C4'-O4'	5.39	117.89	109.80
25	BB	488	G	C4'-C3'-C2'	-5.39	97.21	102.60
25	BB	1203	U	O5'-C5'-C4'	-5.39	103.61	111.70
25	BB	1515	A	C4'-C3'-C2'	-5.39	97.21	102.60
25	BB	1915	U	O4'-C4'-C3'	-5.39	98.61	104.00
25	BB	2830	C	C4'-C3'-C2'	-5.39	97.21	102.60
32	BI	7	LEU	CA-C-O	-5.39	115.15	120.70
25	BB	888	C	O4'-C1'-C2'	-5.39	100.41	105.80
3	A1	286	C	O4'-C4'-C3'	5.39	109.39	104.00
3	A1	300	A	O4'-C1'-C2'	-5.39	100.41	105.80
3	A1	361	G	P-O5'-C5'	-5.39	112.81	120.90
3	A1	422	C	C3'-C2'-C1'	5.39	106.69	101.30
3	A1	797	C	C1'-O4'-C4'	-5.39	104.51	109.90
3	A1	1338	G	O4'-C4'-C3'	5.39	109.39	104.00
17	AR	87	GLU	CA-C-N	5.39	128.25	120.38
17	AR	87	GLU	C-N-CA	5.39	128.25	120.38
25	BB	158	U	O3'-P-O5'	5.39	112.08	104.00
25	BB	1602	U	O4'-C4'-C3'	5.39	109.39	104.00
25	BB	2551	C	C5'-C4'-C3'	-5.39	107.12	115.20
3	A1	861	G	C4'-C3'-O3'	5.39	121.08	113.00
25	BB	1744	A	C4'-C3'-C2'	-5.39	97.21	102.60
29	BF	110	GLU	CA-C-O	5.39	126.17	119.97
52	B3	146	ASP	CA-C-N	5.39	127.76	120.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	B3	146	ASP	C-N-CA	5.39	127.76	120.65
3	A1	374	A	O4'-C4'-C3'	5.39	109.39	104.00
3	A1	624	C	O4'-C1'-C2'	-5.39	102.21	107.60
3	A1	645	G	C4'-C3'-O3'	-5.39	104.92	113.00
3	A1	931	C	C3'-C2'-C1'	5.39	106.69	101.30
3	A1	1120	C	C1'-O4'-C4'	-5.39	104.51	109.90
25	BB	430	A	C4'-C3'-C2'	-5.39	97.21	102.60
25	BB	556	A	C3'-C2'-C1'	5.39	106.69	101.30
25	BB	589	U	O3'-P-O5'	-5.39	95.92	104.00
25	BB	606	U	C3'-C2'-C1'	5.39	106.69	101.30
25	BB	630	G	P-O5'-C5'	5.39	128.98	120.90
25	BB	745	G	OP1-P-OP2	-5.39	103.44	119.60
25	BB	1441	G	C2'-C3'-O3'	5.39	121.78	113.70
25	BB	1479	G	C1'-O4'-C4'	-5.39	104.51	109.90
25	BB	1481	U	N1-C1'-C2'	-5.39	103.92	112.00
25	BB	1739	A	C3'-C2'-C1'	5.39	106.69	101.30
25	BB	2314	A	O4'-C4'-C3'	5.39	109.39	104.00
48	BY	75	ALA	O-C-N	-5.39	117.61	123.26
49	BZ	98	ARG	CD-NE-CZ	5.39	131.94	124.40
51	B2	63	LYS	CA-C-N	5.39	126.57	119.84
51	B2	63	LYS	C-N-CA	5.39	126.57	119.84
3	A1	260	G	C4'-C3'-C2'	-5.38	97.22	102.60
14	AN	34	VAL	CA-C-N	5.38	128.90	120.82
14	AN	34	VAL	C-N-CA	5.38	128.90	120.82
24	BA	61	G	C3'-C2'-C1'	5.38	106.68	101.30
24	BA	106	G	C4'-C3'-O3'	-5.38	104.92	113.00
25	BB	2125	G	C3'-C2'-C1'	-5.38	96.11	101.50
28	BE	125	LEU	CA-C-N	5.38	131.17	122.29
28	BE	125	LEU	C-N-CA	5.38	131.17	122.29
29	BF	89	VAL	O-C-N	-5.38	117.81	123.03
52	B3	44	HIS	CA-CB-CG	5.38	119.19	113.80
25	BB	203	A	C1'-O4'-C4'	5.38	115.28	109.90
3	A1	9	G	C2'-C3'-O3'	5.38	117.57	109.50
3	A1	107	G	C1'-O4'-C4'	-5.38	104.52	109.90
7	AF	100	ARG	NE-CZ-NH2	5.38	124.04	119.20
9	AH	54	GLY	CA-C-N	5.38	127.75	120.38
9	AH	54	GLY	C-N-CA	5.38	127.75	120.38
21	AV	116	ARG	NH1-CZ-NH2	-5.38	112.30	119.30
24	BA	109	A	O5'-C5'-C4'	-5.38	103.43	111.50
25	BB	344	A	C4'-C3'-C2'	-5.38	97.22	102.60
25	BB	817	C	C2'-C3'-O3'	5.38	121.77	113.70
25	BB	1481	U	C2'-C3'-O3'	-5.38	105.63	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2167	U	C4'-C3'-C2'	-5.38	97.22	102.60
37	BN	86	ARG	NE-CZ-NH2	5.38	124.04	119.20
49	BZ	106	GLN	OE1-CD-NE2	-5.38	117.22	122.60
50	B1	28	VAL	CA-C-N	5.38	129.21	120.60
50	B1	28	VAL	C-N-CA	5.38	129.21	120.60
3	A1	1120	C	O3'-P-O5'	-5.38	95.93	104.00
3	A1	1431	A	C2'-C3'-O3'	-5.38	105.63	113.70
23	AX	68	ARG	CA-C-N	5.38	131.82	121.54
23	AX	68	ARG	C-N-CA	5.38	131.82	121.54
25	BB	373	U	C1'-O4'-C4'	-5.38	104.52	109.90
3	A1	278	G	C1'-O4'-C4'	-5.38	104.52	109.90
24	BA	83	G	O5'-C5'-C4'	-5.38	103.43	111.50
25	BB	767	U	O5'-C5'-C4'	-5.38	103.43	111.50
25	BB	2409	G	C3'-C2'-O2'	5.38	118.77	110.70
25	BB	2462	C	C2'-C3'-O3'	5.38	121.77	113.70
25	BB	2786	U	C4'-C3'-C2'	-5.38	97.22	102.60
25	BB	2842	G	C3'-C2'-C1'	5.38	106.68	101.30
33	BJ	34	ALA	N-CA-C	5.38	117.90	111.71
50	B1	87	ALA	CA-C-N	5.38	129.88	121.17
50	B1	87	ALA	C-N-CA	5.38	129.88	121.17
25	BB	478	A	C3'-C2'-C1'	5.38	106.68	101.30
25	BB	896	A	O3'-P-O5'	-5.38	95.94	104.00
25	BB	910	A	C5'-C4'-C3'	-5.38	107.94	116.00
25	BB	1540	G	C1'-O4'-C4'	-5.38	104.52	109.90
25	BB	1663	G	O4'-C1'-C2'	-5.38	102.22	107.60
25	BB	2394	C	C5'-C4'-O4'	5.38	117.86	109.80
25	BB	2633	G	C2'-C3'-O3'	5.38	121.76	113.70
27	BD	49	ARG	NH1-CZ-NH2	-5.38	112.31	119.30
3	A1	271	C	C3'-C2'-C1'	5.38	106.67	101.30
3	A1	700	G	C4'-C3'-C2'	-5.38	97.22	102.60
25	BB	771	G	O4'-C1'-N9	5.38	116.56	108.50
25	BB	914	G	C1'-O4'-C4'	-5.38	104.53	109.90
25	BB	1350	C	C3'-C2'-C1'	5.38	106.67	101.30
25	BB	1603	A	O4'-C4'-C3'	5.38	109.38	104.00
3	A1	634	C	O3'-P-O5'	5.37	112.06	104.00
3	A1	944	G	C5'-C4'-C3'	-5.37	107.94	116.00
4	AB	187	ASP	N-CA-C	5.37	117.43	109.69
21	AV	29	SER	N-CA-C	5.37	117.24	109.07
23	AX	11	LYS	N-CA-C	5.37	117.36	109.24
25	BB	2251	G	C2'-C3'-O3'	5.37	121.76	113.70
30	BG	31	HIS	CB-CG-ND1	5.37	130.76	122.70
37	BN	176	ARG	NH1-CZ-NH2	-5.37	112.31	119.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	BW	23	HIS	CA-CB-CG	5.37	119.17	113.80
3	A1	271	C	C4'-C3'-C2'	-5.37	97.23	102.60
3	A1	1312	G	C5'-C4'-C3'	-5.37	107.94	116.00
4	AB	118	THR	CA-CB-CG2	5.37	119.63	110.50
17	AR	73	ASN	OD1-CG-ND2	-5.37	117.23	122.60
25	BB	278	A	C5'-C4'-O4'	5.37	117.86	109.80
25	BB	804	A	C5'-C4'-C3'	-5.37	107.14	115.20
25	BB	1588	G	P-O3'-C3'	5.37	128.26	120.20
25	BB	1595	C	C4'-C3'-C2'	-5.37	97.23	102.60
25	BB	2791	G	O5'-C5'-C4'	5.37	119.56	111.50
50	B1	72	SER	N-CA-C	5.37	119.32	112.87
3	A1	890	G	O4'-C1'-N9	-5.37	100.44	108.50
3	A1	1418	A	C3'-C2'-C1'	-5.37	95.93	101.30
25	BB	1857	G	C1'-C2'-O2'	-5.37	100.34	108.40
25	BB	2182	U	C4'-C3'-C2'	-5.37	97.23	102.60
3	A1	331	G	C4'-C3'-C2'	-5.37	97.23	102.60
25	BB	265	A	O4'-C1'-N9	5.37	116.55	108.50
25	BB	932	U	C1'-O4'-C4'	-5.37	104.33	109.70
25	BB	1605	C	C5'-C4'-C3'	-5.37	107.95	116.00
25	BB	1811	G	C4'-C3'-O3'	5.37	117.45	109.40
25	BB	2221	G	O4'-C4'-C3'	5.37	109.37	104.00
25	BB	2498	C	O4'-C1'-N1	5.37	116.25	108.20
28	BE	11	GLY	CA-C-N	5.37	131.80	121.54
28	BE	11	GLY	C-N-CA	5.37	131.80	121.54
39	BP	39	GLN	OE1-CD-NE2	-5.37	117.23	122.60
50	B1	188	MET	CA-C-N	5.37	131.79	121.54
50	B1	188	MET	C-N-CA	5.37	131.79	121.54
24	BA	73	A	C4'-C3'-C2'	-5.37	97.23	102.60
25	BB	950	G	O4'-C4'-C3'	5.37	109.37	104.00
25	BB	1079	C	O5'-C5'-C4'	-5.37	103.45	111.50
25	BB	1973	G	C1'-O4'-C4'	-5.37	104.53	109.90
25	BB	2691	C	O4'-C4'-C3'	5.37	109.37	104.00
3	A1	932	C	C3'-C2'-C1'	5.37	106.67	101.30
3	A1	1210	C	O4'-C1'-C2'	-5.37	102.23	107.60
15	AO	111	ASP	N-CA-CB	-5.37	102.69	110.36
25	BB	380	G	O4'-C1'-C2'	5.37	112.97	107.60
51	B2	95	MET	N-CA-C	5.37	117.21	111.36
2	AM	10	U	C5'-C4'-C3'	-5.36	107.95	116.00
3	A1	71	A	O5'-C5'-C4'	5.36	119.74	111.70
3	A1	160	A	C4'-C3'-C2'	-5.36	97.24	102.60
23	AX	16	ARG	CA-C-N	5.36	127.73	120.44
23	AX	16	ARG	C-N-CA	5.36	127.73	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1875	G	C4'-C3'-C2'	-5.36	97.24	102.60
25	BB	1879	C	C3'-C2'-O2'	-5.36	102.66	110.70
25	BB	2246	G	C4'-C3'-O3'	-5.36	104.96	113.00
38	BO	35	VAL	CA-C-N	5.36	129.97	121.44
38	BO	35	VAL	C-N-CA	5.36	129.97	121.44
3	A1	1413	A	N9-C1'-C2'	5.36	120.04	112.00
14	AN	10	ALA	N-CA-C	5.36	119.69	113.20
22	AW	98	ARG	CA-C-N	5.36	128.21	120.38
22	AW	98	ARG	C-N-CA	5.36	128.21	120.38
25	BB	1419	A	C1'-O4'-C4'	-5.36	104.34	109.70
25	BB	1999	C	C3'-C2'-O2'	5.36	118.74	110.70
25	BB	2320	U	C3'-C2'-O2'	5.36	118.74	110.70
25	BB	2874	C	C4'-C3'-C2'	-5.36	97.24	102.60
3	A1	211	G	N9-C1'-C2'	5.36	120.04	112.00
3	A1	553	A	O4'-C4'-C3'	5.36	111.46	106.10
3	A1	1065	U	O5'-C5'-C4'	5.36	119.74	111.70
7	AF	28	ARG	CD-NE-CZ	5.36	131.90	124.40
25	BB	90	U	C1'-O4'-C4'	-5.36	104.34	109.70
25	BB	645	C	C5'-C4'-C3'	-5.36	107.16	115.20
25	BB	727	A	O5'-C5'-C4'	-5.36	103.66	111.70
25	BB	1617	C	O4'-C4'-C3'	-5.36	100.74	106.10
25	BB	2043	C	C3'-C2'-O2'	5.36	118.74	110.70
25	BB	2762	C	C1'-C2'-O2'	-5.36	100.36	108.40
27	BD	18	ARG	CA-C-N	5.36	129.14	121.96
27	BD	18	ARG	C-N-CA	5.36	129.14	121.96
28	BE	35	HIS	CA-CB-CG	5.36	119.16	113.80
31	BH	103	VAL	CB-CA-C	-5.36	105.40	110.65
37	BN	45	ASN	OD1-CG-ND2	-5.36	117.24	122.60
52	B3	95	ALA	CA-C-N	5.36	130.63	122.11
52	B3	95	ALA	C-N-CA	5.36	130.63	122.11
1	AP	58	A	C1'-C2'-O2'	5.36	119.84	111.80
3	A1	238	A	O4'-C4'-C3'	5.36	109.36	104.00
22	AW	95	SER	N-CA-C	5.36	117.54	111.11
25	BB	2291	U	C4'-C3'-C2'	-5.36	97.24	102.60
53	B4	27	ARG	N-CA-C	5.36	119.68	113.20
3	A1	532	A	C4'-C3'-O3'	5.36	117.44	109.40
22	AW	78	ILE	CA-C-N	5.36	127.72	120.65
22	AW	78	ILE	C-N-CA	5.36	127.72	120.65
25	BB	628	G	N9-C1'-C2'	-5.36	103.96	112.00
25	BB	788	A	C4'-C3'-O3'	5.36	117.44	109.40
25	BB	1610	A	N9-C1'-C2'	-5.36	103.96	112.00
28	BE	2	ARG	N-CA-C	5.36	118.35	109.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	B6	49	ASP	OD1-CG-OD2	-5.36	110.04	122.90
3	A1	973	G	C4'-C3'-O3'	5.36	117.44	109.40
3	A1	1286	U	C3'-C2'-C1'	-5.36	96.14	101.50
15	AO	10	ARG	NH1-CZ-NH2	-5.36	112.34	119.30
24	BA	39	A	O4'-C1'-C2'	-5.36	100.44	105.80
25	BB	1027	A	C2'-C3'-O3'	5.36	117.53	109.50
44	BU	45	HIS	CA-CB-CG	5.36	119.16	113.80
25	BB	1136	G	C3'-C2'-C1'	5.35	106.65	101.30
25	BB	1880	U	O5'-C5'-C4'	5.35	119.53	111.50
3	A1	1057	G	C3'-C2'-O2'	5.35	118.73	110.70
25	BB	448	U	C4'-C3'-C2'	-5.35	97.25	102.60
25	BB	1309	G	O3'-P-O5'	-5.35	95.97	104.00
1	AP	63	C	C3'-C2'-O2'	5.35	118.73	110.70
3	A1	316	C	C1'-O4'-C4'	-5.35	104.35	109.70
3	A1	878	A	C3'-C2'-O2'	5.35	118.73	110.70
3	A1	457	G	O5'-C5'-C4'	-5.35	103.48	111.50
3	A1	808	C	C3'-C2'-C1'	5.35	106.65	101.30
25	BB	801	G	C1'-O4'-C4'	-5.35	104.35	109.70
25	BB	1729	U	C1'-O4'-C4'	-5.35	104.35	109.70
25	BB	1896	G	C2'-C3'-O3'	5.35	121.72	113.70
25	BB	2794	C	C3'-C2'-C1'	5.35	106.65	101.30
1	AA	10	G	C4'-C3'-O3'	5.35	121.02	113.00
3	A1	941	G	O4'-C4'-C3'	5.35	109.35	104.00
3	A1	1361	G	O3'-P-O5'	-5.35	95.98	104.00
6	AD	87	LYS	CA-C-N	5.35	127.44	120.28
6	AD	87	LYS	C-N-CA	5.35	127.44	120.28
17	AR	148	ALA	CA-C-O	5.35	124.83	118.79
25	BB	151	C	C3'-C2'-C1'	-5.35	95.95	101.30
25	BB	178	G	C5'-C4'-C3'	-5.35	107.98	116.00
25	BB	710	U	C3'-C2'-O2'	5.35	118.72	110.70
25	BB	2751	G	O4'-C1'-C2'	-5.35	100.45	105.80
1	AP	25	C	P-O3'-C3'	5.35	128.22	120.20
3	A1	459	A	O4'-C4'-C3'	-5.35	98.65	104.00
21	AV	18	ALA	CA-C-N	5.35	131.75	121.54
21	AV	18	ALA	C-N-CA	5.35	131.75	121.54
25	BB	167	A	C4'-C3'-C2'	-5.35	97.25	102.60
25	BB	183	C	C4'-C3'-O3'	-5.35	104.98	113.00
25	BB	1304	A	O3'-P-O5'	-5.35	95.98	104.00
3	A1	36	C	C3'-C2'-C1'	5.34	106.64	101.30
19	AT	96	VAL	CA-C-N	5.34	131.75	121.54
19	AT	96	VAL	C-N-CA	5.34	131.75	121.54
25	BB	824	U	O4'-C4'-C3'	5.34	111.44	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	897	C	C1'-O4'-C4'	5.34	115.24	109.90
25	BB	1755	A	O3'-P-O5'	-5.34	95.98	104.00
26	BC	43	ASP	CA-C-N	5.34	129.69	121.19
26	BC	43	ASP	C-N-CA	5.34	129.69	121.19
25	BB	9	G	O4'-C1'-N9	5.34	116.22	108.20
25	BB	1534	U	O4'-C1'-N1	5.34	116.51	108.50
25	BB	1679	A	C4'-C3'-O3'	5.34	117.41	109.40
25	BB	1813	G	C2'-C3'-O3'	-5.34	105.69	113.70
25	BB	2103	C	C2'-C3'-O3'	5.34	121.72	113.70
25	BB	2635	A	O4'-C4'-C3'	5.34	109.34	104.00
48	BY	194	PRO	N-CA-C	5.34	119.61	111.11
2	AM	15	U	O4'-C4'-C3'	-5.34	98.66	104.00
3	A1	138	G	C5'-C4'-O4'	5.34	117.81	109.80
3	A1	445	G	O4'-C1'-N9	5.34	116.51	108.50
25	BB	255	A	C5'-C4'-C3'	-5.34	107.99	116.00
25	BB	1119	U	O3'-P-O5'	5.34	112.01	104.00
25	BB	1847	A	C3'-C2'-O2'	5.34	118.71	110.70
25	BB	2518	A	N9-C1'-C2'	-5.34	105.99	114.00
3	A1	77	A	C3'-C2'-C1'	5.34	106.64	101.30
3	A1	807	A	O4'-C4'-C3'	5.34	111.44	106.10
19	AT	53	LYS	O-C-N	-5.34	115.49	122.59
24	BA	5	U	C3'-C2'-C1'	-5.34	95.96	101.30
25	BB	1092	C	O5'-C5'-C4'	-5.34	103.49	111.50
25	BB	1458	U	P-O3'-C3'	5.34	128.21	120.20
25	BB	2133	G	O3'-P-O5'	-5.34	95.99	104.00
25	BB	2611	C	C2'-C3'-O3'	5.34	117.51	109.50
28	BE	48	ARG	NE-CZ-NH1	5.34	126.84	121.50
3	A1	1248	A	C3'-C2'-O2'	5.34	118.71	110.70
25	BB	77	G	C4'-C3'-C2'	5.34	107.94	102.60
25	BB	615	U	C1'-O4'-C4'	5.34	115.24	109.90
25	BB	1041	G	O4'-C1'-N9	-5.34	100.49	108.50
42	BS	43	PHE	N-CA-C	5.34	117.18	110.24
53	B4	97	ARG	NE-CZ-NH2	5.34	124.00	119.20
3	A1	348	G	C5'-C4'-C3'	-5.34	107.99	116.00
25	BB	322	A	C3'-C2'-C1'	5.34	106.64	101.30
25	BB	859	G	C3'-C2'-C1'	5.34	106.84	101.50
25	BB	877	A	C5'-C4'-C3'	-5.34	108.00	116.00
25	BB	1475	G	C2'-C3'-O3'	5.34	117.50	109.50
25	BB	1664	A	O5'-C5'-C4'	-5.34	103.49	111.50
25	BB	2011	U	C5'-C4'-C3'	-5.34	108.00	116.00
25	BB	2801	G	O3'-P-O5'	-5.34	96.00	104.00
38	BO	96	LYS	N-CA-C	5.34	116.95	108.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	B3	11	PRO	N-CA-C	5.34	118.69	111.22
25	BB	2442	C	O4'-C1'-N1	5.33	116.50	108.50
25	BB	2581	G	O5'-C5'-C4'	-5.33	103.70	111.70
1	AA	64	A	C2'-C3'-O3'	-5.33	105.70	113.70
2	AM	13	U	C5'-C4'-O4'	5.33	117.80	109.80
3	A1	22	G	O4'-C4'-C3'	5.33	109.33	104.00
3	A1	1468	A	C3'-C2'-O2'	5.33	118.70	110.70
15	AO	67	ILE	N-CA-C	5.33	115.20	106.72
25	BB	5	A	C5'-C4'-C3'	-5.33	108.00	116.00
25	BB	706	A	C4'-C3'-C2'	-5.33	97.27	102.60
25	BB	1354	A	C2'-C3'-O3'	-5.33	105.70	113.70
42	BS	49	ARG	NH1-CZ-NH2	-5.33	112.37	119.30
3	A1	770	C	C3'-C2'-O2'	5.33	118.70	110.70
3	A1	1121	U	C2'-C3'-O3'	-5.33	105.70	113.70
3	A1	1514	G	C4'-C3'-O3'	-5.33	105.00	113.00
7	AF	56	ARG	CD-NE-CZ	5.33	131.86	124.40
20	AU	64	ALA	CA-C-N	5.33	129.62	120.72
20	AU	64	ALA	C-N-CA	5.33	129.62	120.72
25	BB	185	G	C4'-C3'-O3'	-5.33	105.00	113.00
25	BB	342	A	O5'-C5'-C4'	-5.33	103.50	111.50
25	BB	1547	C	C3'-C2'-C1'	5.33	106.63	101.30
25	BB	1752	C	C3'-C2'-C1'	5.33	106.63	101.30
25	BB	2571	U	C1'-O4'-C4'	-5.33	104.37	109.70
51	B2	20	ASN	OD1-CG-ND2	-5.33	117.27	122.60
54	B5	85	ILE	CA-C-N	5.33	131.56	121.81
54	B5	85	ILE	C-N-CA	5.33	131.56	121.81
25	BB	1433	A	O4'-C1'-C2'	5.33	112.93	107.60
1	AE	7	U	C5'-C4'-C3'	-5.33	107.21	115.20
1	AE	52	U	C1'-C2'-O2'	-5.33	100.41	108.40
3	A1	1259	C	C4'-C3'-C2'	-5.33	97.27	102.60
3	A1	1368	A	O4'-C4'-C3'	5.33	109.33	104.00
3	A1	1531	A	C4'-C3'-C2'	-5.33	97.27	102.60
17	AR	175	GLY	CA-C-N	5.33	131.01	121.15
17	AR	175	GLY	C-N-CA	5.33	131.01	121.15
25	BB	369	U	O4'-C1'-N1	5.33	116.19	108.20
25	BB	898	C	C3'-C2'-C1'	-5.33	95.97	101.30
51	B2	114	ARG	NE-CZ-NH1	5.33	126.83	121.50
3	A1	235	C	O4'-C4'-C3'	5.33	109.33	104.00
3	A1	1195	C	O4'-C4'-C3'	5.33	109.33	104.00
30	BG	3	HIS	CB-CG-CD2	-5.33	124.28	131.20
50	B1	174	GLY	CA-C-N	5.33	131.56	121.97
50	B1	174	GLY	C-N-CA	5.33	131.56	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	B1	184	ASP	CA-CB-CG	5.33	117.93	112.60
3	A1	531	U	C5'-C4'-O4'	5.33	117.09	109.10
3	A1	616	G	C5'-C4'-C3'	-5.33	108.01	116.00
3	A1	1190	G	O4'-C1'-N9	5.33	116.19	108.20
3	A1	1302	C	C3'-C2'-C1'	5.33	106.62	101.30
3	A1	1483	A	OP1-P-OP2	-5.33	103.63	119.60
3	A1	1484	C	O4'-C1'-N1	5.33	116.19	108.20
24	BA	2	G	C3'-C2'-O2'	5.33	118.69	110.70
24	BA	36	C	C5'-C4'-C3'	-5.33	107.21	115.20
35	BL	85	ILE	CA-C-N	5.33	128.12	122.26
35	BL	85	ILE	C-N-CA	5.33	128.12	122.26
39	BP	76	ARG	NE-CZ-NH1	5.33	126.83	121.50
48	BY	153	GLY	CA-C-N	5.33	130.89	120.99
48	BY	153	GLY	C-N-CA	5.33	130.89	120.99
3	A1	610	U	O4'-C1'-N1	5.32	116.48	108.50
15	AO	130	ARG	NE-CZ-NH2	5.32	123.99	119.20
24	BA	98	G	C3'-C2'-O2'	5.32	118.69	110.70
25	BB	436	C	C4'-C3'-O3'	-5.32	101.42	109.40
25	BB	2607	G	C3'-C2'-C1'	-5.32	95.98	101.30
3	A1	501	C	C5'-C4'-C3'	-5.32	108.02	116.00
24	BA	91	C	C5'-C4'-O4'	5.32	117.78	109.80
25	BB	1354	A	C4'-C3'-C2'	-5.32	97.28	102.60
1	AP	15	G	C4'-C3'-C2'	-5.32	97.28	102.60
3	A1	647	C	C4'-C3'-O3'	5.32	120.98	113.00
3	A1	699	C	C3'-C2'-C1'	5.32	106.62	101.30
3	A1	859	G	O5'-C5'-C4'	-5.32	103.52	111.50
3	A1	1288	A	C4'-C3'-C2'	5.32	107.92	102.60
24	BA	81	G	C4'-C3'-C2'	-5.32	97.28	102.60
25	BB	997	G	N9-C1'-C2'	-5.32	104.02	112.00
25	BB	2859	G	N9-C1'-C2'	5.32	119.98	112.00
48	BY	38	LYS	CA-C-N	5.32	128.15	120.38
48	BY	38	LYS	C-N-CA	5.32	128.15	120.38
3	A1	295	C	P-O3'-C3'	5.32	128.18	120.20
15	AO	58	ARG	CA-C-N	5.32	125.64	119.47
15	AO	58	ARG	C-N-CA	5.32	125.64	119.47
25	BB	1088	A	O5'-C5'-C4'	5.32	119.48	111.50
25	BB	1412	U	C3'-C2'-O2'	5.32	118.68	110.70
25	BB	2238	G	OP1-P-OP2	-5.32	103.64	119.60
25	BB	2463	C	O3'-P-O5'	-5.32	96.02	104.00
31	BH	45	SER	CA-C-N	5.32	131.70	121.54
31	BH	45	SER	C-N-CA	5.32	131.70	121.54
3	A1	1286	U	C1'-O4'-C4'	-5.32	104.38	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1485	U	C5'-C4'-C3'	-5.32	107.22	115.20
5	AC	80	ASN	OD1-CG-ND2	-5.32	117.28	122.60
18	AS	58	ALA	CA-C-N	5.32	128.03	120.53
18	AS	58	ALA	C-N-CA	5.32	128.03	120.53
24	BA	117	G	O4'-C4'-C3'	5.32	109.32	104.00
25	BB	117	G	C3'-C2'-C1'	5.32	106.82	101.50
25	BB	832	U	O4'-C1'-C2'	-5.32	102.28	107.60
25	BB	1148	U	O4'-C1'-N1	5.32	116.48	108.50
33	BJ	69	ARG	NE-CZ-NH2	5.32	123.98	119.20
36	BM	96	VAL	CA-C-N	5.32	131.83	121.41
36	BM	96	VAL	C-N-CA	5.32	131.83	121.41
53	B4	85	GLY	N-CA-C	5.32	118.03	110.74
3	A1	659	U	C5'-C4'-O4'	5.32	117.77	109.80
3	A1	698	G	O4'-C1'-C2'	-5.32	102.28	107.60
3	A1	814	A	O4'-C4'-C3'	-5.32	98.68	104.00
3	A1	864	A	C3'-C2'-O2'	5.32	122.57	114.60
8	AG	80	ARG	CA-C-N	5.32	129.75	121.35
8	AG	80	ARG	C-N-CA	5.32	129.75	121.35
25	BB	674	G	N9-C1'-C2'	5.32	119.97	112.00
25	BB	1391	U	O4'-C4'-C3'	-5.32	98.69	104.00
25	BB	1452	G	C1'-C2'-O2'	5.32	116.37	108.40
25	BB	1995	U	O5'-C5'-C4'	5.32	119.47	111.50
25	BB	2137	U	O4'-C1'-C2'	5.32	111.11	105.80
27	BD	20	MET	N-CA-C	5.32	117.75	108.76
31	BH	74	VAL	CA-C-N	5.32	129.88	120.74
31	BH	74	VAL	C-N-CA	5.32	129.88	120.74
37	BN	268	ARG	NH1-CZ-NH2	-5.32	112.39	119.30
24	BA	20	G	C3'-C2'-O2'	5.31	118.67	110.70
25	BB	250	G	C2'-C3'-O3'	5.31	121.67	113.70
25	BB	1062	G	O4'-C1'-C2'	-5.31	102.29	107.60
25	BB	2094	A	C5'-C4'-C3'	-5.31	107.23	115.20
25	BB	2291	U	C5'-C4'-O4'	5.31	117.77	109.80
3	A1	446	G	C1'-O4'-C4'	5.31	115.21	109.90
3	A1	1360	A	O4'-C1'-C2'	5.31	111.11	105.80
24	BA	3	C	O4'-C4'-C3'	5.31	109.31	104.00
25	BB	180	G	C3'-C2'-C1'	5.31	106.61	101.30
25	BB	1039	A	C4'-C3'-C2'	-5.31	97.29	102.60
25	BB	1112	G	O4'-C1'-N9	5.31	116.47	108.50
25	BB	1217	U	C5'-C4'-O4'	-5.31	101.13	109.10
32	BI	83	ILE	CA-CB-CG1	5.31	119.43	110.40
3	A1	1251	A	C4'-C3'-C2'	-5.31	97.29	102.60
25	BB	354	A	C5'-C4'-C3'	-5.31	108.03	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	528	A	C2'-C3'-O3'	-5.31	105.73	113.70
25	BB	656	G	C3'-C2'-O2'	5.31	118.67	110.70
25	BB	1076	C	O3'-P-O5'	-5.31	96.03	104.00
25	BB	1407	G	C3'-C2'-O2'	5.31	118.67	110.70
25	BB	1724	G	O3'-P-O5'	-5.31	96.03	104.00
25	BB	1889	A	O4'-C1'-C2'	5.31	111.11	105.80
26	BC	40	ILE	N-CA-C	5.31	116.67	108.44
50	B1	161	ALA	N-CA-C	5.31	119.24	112.34
1	AA	1	G	C3'-C2'-C1'	5.31	106.61	101.30
3	A1	279	A	P-O3'-C3'	5.31	128.16	120.20
3	A1	432	A	C2'-C3'-O3'	5.31	121.67	113.70
24	BA	98	G	C2'-C3'-O3'	5.31	121.66	113.70
24	BA	99	A	C3'-C2'-O2'	5.31	118.66	110.70
24	BA	115	A	C4'-C3'-C2'	-5.31	97.29	102.60
25	BB	217	A	O4'-C4'-C3'	5.31	109.31	104.00
25	BB	389	G	C4'-C3'-O3'	5.31	117.36	109.40
25	BB	809	G	C1'-O4'-C4'	-5.31	104.59	109.90
25	BB	1137	G	C1'-C2'-O2'	-5.31	103.83	111.80
25	BB	2875	C	C1'-O4'-C4'	-5.31	104.59	109.90
29	BF	88	ASN	CA-CB-CG	5.31	117.91	112.60
42	BS	48	GLN	N-CA-C	5.31	120.93	113.02
51	B2	128	SER	N-CA-C	5.31	117.17	108.52
52	B3	153	PRO	N-CA-C	5.31	119.42	111.14
3	A1	76	G	C1'-C2'-O2'	5.31	116.36	108.40
3	A1	1250	A	O3'-P-O5'	5.31	111.96	104.00
3	A1	1409	C	O4'-C1'-N1	5.31	116.46	108.50
4	AB	207	ARG	NH1-CZ-NH2	-5.31	112.40	119.30
25	BB	590	A	O5'-C5'-C4'	-5.31	103.54	111.50
25	BB	1498	C	C3'-C2'-O2'	5.31	118.66	110.70
3	A1	1404	C	O3'-P-O5'	5.31	111.96	104.00
3	A1	1450	U	C1'-O4'-C4'	-5.31	104.59	109.90
25	BB	2069	G	O4'-C1'-C2'	-5.31	102.29	107.60
51	B2	73	VAL	CB-CA-C	-5.31	105.57	111.35
3	A1	518	C	C5'-C4'-O4'	5.30	117.06	109.10
3	A1	542	G	O3'-P-O5'	5.30	111.96	104.00
3	A1	1493	A	C1'-O4'-C4'	5.30	115.00	109.70
25	BB	1614	A	O4'-C1'-C2'	5.30	111.11	105.80
25	BB	1721	G	C2'-C3'-O3'	5.30	117.46	109.50
30	BG	103	ARG	NE-CZ-NH1	-5.30	116.19	121.50
38	BO	60	LYS	CA-C-N	5.30	131.67	121.54
38	BO	60	LYS	C-N-CA	5.30	131.67	121.54
48	BY	126	ASN	CA-C-N	5.30	131.67	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	BY	126	ASN	C-N-CA	5.30	131.67	121.54
6	AD	14	LYS	N-CA-CB	-5.30	101.75	110.40
25	BB	511	U	N1-C1'-C2'	5.30	119.95	112.00
25	BB	1816	C	C4'-C3'-C2'	-5.30	97.30	102.60
37	BN	211	ARG	NH1-CZ-NH2	-5.30	112.41	119.30
49	BZ	210	GLY	CA-C-N	5.30	128.63	121.05
49	BZ	210	GLY	C-N-CA	5.30	128.63	121.05
1	AA	17	U	C1'-C2'-O2'	5.30	116.35	108.40
3	A1	342	C	C3'-C2'-O2'	5.30	118.65	110.70
3	A1	827	U	O4'-C1'-N1	5.30	116.15	108.20
3	A1	1270	G	O4'-C1'-N9	5.30	116.45	108.50
3	A1	1408	A	C5'-C4'-C3'	-5.30	108.05	116.00
11	AJ	34	GLY	CA-C-N	5.30	132.25	122.92
11	AJ	34	GLY	C-N-CA	5.30	132.25	122.92
11	AJ	79	GLU	CA-C-N	5.30	128.87	121.02
11	AJ	79	GLU	C-N-CA	5.30	128.87	121.02
17	AR	152	SER	CA-C-N	5.30	127.70	120.54
17	AR	152	SER	C-N-CA	5.30	127.70	120.54
25	BB	361	G	C4'-C3'-C2'	-5.30	97.30	102.60
25	BB	2113	U	C3'-C2'-C1'	5.30	106.60	101.30
27	BD	106	GLU	N-CA-C	5.30	119.23	112.87
1	AP	49	C	C3'-C2'-O2'	5.30	118.65	110.70
3	A1	371	A	C3'-C2'-C1'	-5.30	96.00	101.30
3	A1	591	U	C4'-C3'-O3'	-5.30	105.05	113.00
3	A1	621	A	C4'-C3'-C2'	-5.30	97.30	102.60
18	AS	44	ARG	NH1-CZ-NH2	-5.30	112.41	119.30
23	AX	8	ILE	N-CA-CB	-5.30	106.18	111.90
25	BB	1258	U	O4'-C4'-C3'	5.30	109.30	104.00
25	BB	2171	A	C2'-C3'-O3'	5.30	117.45	109.50
25	BB	2639	A	O3'-P-O5'	5.30	111.95	104.00
48	BY	59	ARG	CA-CB-CG	5.30	124.70	114.10
3	A1	522	C	C2'-C3'-O3'	-5.30	105.75	113.70
3	A1	1214	C	C1'-O4'-C4'	-5.30	104.40	109.70
25	BB	2502	G	C2'-C3'-O3'	5.30	121.65	113.70
47	BX	7	VAL	CA-C-N	5.30	131.66	121.54
47	BX	7	VAL	C-N-CA	5.30	131.66	121.54
3	A1	91	U	C4'-C3'-O3'	5.30	120.95	113.00
3	A1	423	G	C4'-C3'-C2'	-5.30	97.30	102.60
10	AI	27	ALA	N-CA-C	5.30	118.12	110.28
25	BB	273	G	C5'-C4'-O4'	5.30	117.75	109.80
25	BB	718	A	O4'-C4'-C3'	5.30	109.30	104.00
25	BB	1000	A	O4'-C4'-C3'	5.30	109.30	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1144	A	C3'-C2'-O2'	5.30	118.64	110.70
49	BZ	107	ASN	OD1-CG-ND2	-5.30	117.30	122.60
3	A1	332	G	O3'-P-O5'	5.29	111.94	104.00
3	A1	387	U	O4'-C4'-C3'	5.29	109.30	104.00
25	BB	873	C	C1'-O4'-C4'	-5.29	104.61	109.90
25	BB	1210	G	C2'-C3'-O3'	5.29	117.44	109.50
3	A1	923	A	C2'-C3'-O3'	5.29	117.44	109.50
3	A1	972	C	O4'-C4'-C3'	5.29	109.29	104.00
3	A1	1045	C	C4'-C3'-C2'	5.29	107.89	102.60
5	AC	95	THR	CA-C-N	5.29	127.34	120.88
5	AC	95	THR	C-N-CA	5.29	127.34	120.88
25	BB	408	G	C5'-C4'-O4'	5.29	117.74	109.80
25	BB	486	C	C1'-O4'-C4'	-5.29	104.61	109.90
25	BB	1460	U	O4'-C1'-C2'	-5.29	100.51	105.80
25	BB	2252	G	O4'-C1'-N9	5.29	116.14	108.20
25	BB	2287	A	C4'-C3'-C2'	5.29	107.89	102.60
49	BZ	137	PRO	CA-C-N	5.29	127.85	120.65
49	BZ	137	PRO	C-N-CA	5.29	127.85	120.65
51	B2	112	ASP	CA-C-N	5.29	128.62	121.05
51	B2	112	ASP	C-N-CA	5.29	128.62	121.05
1	AE	19	G	C3'-C2'-C1'	-5.29	96.21	101.50
3	A1	122	G	C5'-C4'-O4'	-5.29	101.86	109.80
3	A1	131	A	C5'-C4'-O4'	-5.29	101.86	109.80
3	A1	1215	G	C4'-C3'-C2'	5.29	107.89	102.60
7	AF	58	GLU	N-CA-C	5.29	116.86	111.14
13	AL	29	PRO	CA-C-N	5.29	132.66	122.03
13	AL	29	PRO	C-N-CA	5.29	132.66	122.03
18	AS	154	ALA	CA-C-N	5.29	128.10	120.38
18	AS	154	ALA	C-N-CA	5.29	128.10	120.38
39	BP	68	PHE	CA-C-N	5.29	131.65	121.54
39	BP	68	PHE	C-N-CA	5.29	131.65	121.54
3	A1	306	A	O4'-C1'-N9	5.29	116.14	108.20
50	B1	9	GLN	OE1-CD-NE2	-5.29	117.31	122.60
3	A1	238	A	O3'-P-O5'	5.29	111.93	104.00
3	A1	463	U	C1'-C2'-O2'	5.29	116.33	108.40
3	A1	783	C	O4'-C1'-C2'	-5.29	102.31	107.60
3	A1	1108	G	C3'-C2'-O2'	5.29	118.63	110.70
3	A1	1194	U	P-O5'-C5'	5.29	128.83	120.90
3	A1	1200	C	C3'-C2'-C1'	-5.29	96.21	101.50
8	AG	67	GLY	CA-C-N	5.29	131.53	122.38
8	AG	67	GLY	C-N-CA	5.29	131.53	122.38
10	AI	12	LYS	CA-C-N	5.29	127.36	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	AI	12	LYS	C-N-CA	5.29	127.36	120.28
25	BB	1730	C	C4'-C3'-O3'	-5.29	105.07	113.00
25	BB	2449	U	C3'-C2'-C1'	5.29	106.79	101.50
42	BS	20	ASN	CB-CA-C	5.29	120.94	110.42
49	BZ	140	ASN	N-CA-C	5.29	119.36	113.01
52	B3	21	GLN	OE1-CD-NE2	-5.29	117.31	122.60
55	B6	48	VAL	CA-C-N	5.29	131.64	121.54
55	B6	48	VAL	C-N-CA	5.29	131.64	121.54
3	A1	1073	U	C5'-C4'-C3'	-5.29	108.07	116.00
3	A1	1291	U	O3'-P-O5'	5.29	111.93	104.00
25	BB	89	A	O4'-C1'-N9	5.29	116.13	108.20
25	BB	1194	A	C5'-C4'-O4'	-5.29	101.87	109.80
25	BB	1225	G	C3'-C2'-O2'	5.29	118.63	110.70
52	B3	170	THR	CA-CB-CG2	5.29	119.49	110.50
3	A1	149	A	C5'-C4'-C3'	-5.29	108.07	116.00
3	A1	1363	A	O4'-C1'-N9	5.29	116.43	108.50
9	AH	62	ARG	NE-CZ-NH2	-5.29	114.44	119.20
22	AW	9	GLY	N-CA-C	5.29	118.84	110.96
25	BB	369	U	C5'-C4'-O4'	5.29	117.03	109.10
25	BB	1269	A	C3'-C2'-O2'	5.29	118.63	110.70
25	BB	2196	C	C4'-C3'-C2'	-5.29	97.31	102.60
25	BB	2466	C	C5'-C4'-O4'	5.29	117.73	109.80
25	BB	2521	C	C1'-C2'-O2'	-5.29	103.87	111.80
44	BU	30	PRO	N-CA-CB	5.29	107.95	103.35
54	B5	123	ALA	CA-C-N	5.29	127.67	120.54
54	B5	123	ALA	C-N-CA	5.29	127.67	120.54
3	A1	666	G	C3'-C2'-O2'	5.28	122.53	114.60
3	A1	1268	G	C3'-C2'-O2'	5.28	118.63	110.70
25	BB	788	A	C4'-C3'-C2'	-5.28	97.32	102.60
25	BB	1463	C	C1'-C2'-O2'	5.28	116.33	108.40
25	BB	1880	U	C3'-C2'-C1'	-5.28	96.02	101.30
25	BB	2392	A	C3'-C2'-C1'	5.28	106.58	101.30
25	BB	2566	A	C1'-O4'-C4'	-5.28	104.42	109.70
52	B3	159	LYS	N-CA-C	5.28	116.91	110.41
3	A1	294	U	O4'-C4'-C3'	5.28	111.38	106.10
3	A1	598	U	C4'-C3'-C2'	-5.28	97.32	102.60
24	BA	79	G	N9-C1'-C2'	-5.28	106.08	114.00
31	BH	55	GLU	O-C-N	-5.28	115.56	122.59
36	BM	80	TRP	CA-C-N	5.28	131.63	121.54
36	BM	80	TRP	C-N-CA	5.28	131.63	121.54
51	B2	121	PHE	CA-C-N	5.28	131.63	121.54
51	B2	121	PHE	C-N-CA	5.28	131.63	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	901	A	C4'-C3'-O3'	5.28	120.92	113.00
3	A1	1147	C	C1'-C2'-O2'	-5.28	100.48	108.40
3	A1	1399	C	O4'-C1'-N1	5.28	116.12	108.20
3	A1	1403	C	C3'-C2'-C1'	5.28	106.58	101.30
3	A1	1522	U	C1'-O4'-C4'	-5.28	104.62	109.90
11	AJ	58	VAL	CA-C-N	5.28	129.23	120.94
11	AJ	58	VAL	C-N-CA	5.28	129.23	120.94
13	AL	34	SER	CA-C-N	5.28	129.13	120.63
13	AL	34	SER	C-N-CA	5.28	129.13	120.63
25	BB	1117	C	O3'-P-O5'	-5.28	96.08	104.00
25	BB	1300	G	O4'-C1'-N9	5.28	116.12	108.20
25	BB	1360	G	C2'-C3'-O3'	-5.28	105.78	113.70
25	BB	2121	G	C3'-C2'-O2'	5.28	118.62	110.70
36	BM	15	HIS	CB-CG-CD2	-5.28	124.33	131.20
36	BM	52	GLU	CB-CG-CD	-5.28	103.62	112.60
25	BB	2689	U	C4'-C3'-C2'	5.28	107.88	102.60
1	AP	58	A	C2'-C3'-O3'	5.28	117.42	109.50
3	A1	438	U	O4'-C1'-C2'	-5.28	100.52	105.80
3	A1	1035	A	O4'-C1'-C2'	-5.28	102.32	107.60
3	A1	1339	A	C3'-C2'-C1'	5.28	106.58	101.30
25	BB	158	U	O4'-C1'-N1	5.28	116.42	108.50
25	BB	937	C	C3'-C2'-C1'	5.28	106.58	101.30
25	BB	1461	C	C1'-C2'-O2'	5.28	119.72	111.80
25	BB	1821	A	C4'-C3'-C2'	5.28	107.88	102.60
25	BB	2125	G	N9-C1'-C2'	-5.28	106.08	114.00
25	BB	2155	U	C3'-C2'-O2'	5.28	118.62	110.70
25	BB	2264	C	C3'-C2'-C1'	-5.28	96.02	101.30
25	BB	2355	G	C1'-O4'-C4'	-5.28	104.62	109.90
45	BV	39	ARG	NE-CZ-NH1	5.28	126.78	121.50
48	BY	177	VAL	N-CA-CB	5.28	116.68	110.82
54	B5	44	LYS	CA-C-N	5.28	129.04	120.60
54	B5	44	LYS	C-N-CA	5.28	129.04	120.60
3	A1	23	C	O4'-C1'-N1	5.28	116.41	108.50
3	A1	270	A	C3'-C2'-O2'	5.28	118.61	110.70
3	A1	679	C	N1-C1'-C2'	5.28	119.91	112.00
3	A1	941	G	C4'-C3'-C2'	-5.28	97.33	102.60
23	AX	29	ALA	CA-C-N	5.28	131.63	121.18
23	AX	29	ALA	C-N-CA	5.28	131.63	121.18
25	BB	983	A	N9-C1'-C2'	5.28	119.91	112.00
25	BB	1095	A	C3'-C2'-C1'	5.28	106.58	101.30
25	BB	1136	G	O4'-C4'-C3'	5.28	109.28	104.00
25	BB	1226	A	O3'-P-O5'	5.28	111.91	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1272	A	O3'-P-O5'	5.28	111.91	104.00
25	BB	1555	G	O4'-C4'-C3'	-5.28	98.72	104.00
25	BB	1780	A	O4'-C1'-N9	5.28	116.41	108.50
25	BB	1925	C	O4'-C1'-N1	5.28	116.41	108.50
25	BB	2151	U	C4'-C3'-C2'	-5.28	97.32	102.60
25	BB	2893	A	O3'-P-O5'	5.28	111.91	104.00
27	BD	94	PRO	N-CA-C	5.28	119.52	111.34
36	BM	14	PRO	N-CA-CB	5.28	107.94	103.35
1	AP	57	G	C1'-O4'-C4'	-5.27	104.63	109.90
6	AD	18	SER	N-CA-CB	-5.27	103.36	110.95
11	AJ	70	LYS	CA-C-N	5.27	127.80	120.63
11	AJ	70	LYS	C-N-CA	5.27	127.80	120.63
25	BB	613	A	C3'-C2'-C1'	-5.27	96.23	101.50
3	A1	341	C	C5'-C4'-C3'	-5.27	108.09	116.00
3	A1	396	C	O3'-P-O5'	-5.27	96.09	104.00
3	A1	1133	G	C4'-C3'-O3'	-5.27	105.09	113.00
7	AF	36	ALA	CA-C-N	5.27	131.19	121.70
7	AF	36	ALA	C-N-CA	5.27	131.19	121.70
19	AT	52	ASN	CA-C-N	5.27	131.61	121.54
19	AT	52	ASN	C-N-CA	5.27	131.61	121.54
25	BB	1169	A	C2'-C3'-O3'	-5.27	105.79	113.70
25	BB	1330	C	O4'-C1'-N1	5.27	116.41	108.50
29	BF	18	ARG	NH1-CZ-NH2	-5.27	112.44	119.30
3	A1	21	G	C1'-O4'-C4'	-5.27	104.43	109.70
25	BB	2741	A	C1'-C2'-O2'	5.27	116.31	108.40
3	A1	1317	C	C4'-C3'-C2'	-5.27	97.33	102.60
19	AT	97	THR	CA-C-N	5.27	128.33	120.95
19	AT	97	THR	C-N-CA	5.27	128.33	120.95
24	BA	69	G	C3'-C2'-O2'	5.27	118.61	110.70
25	BB	138	U	C4'-C3'-O3'	-5.27	105.10	113.00
25	BB	151	C	C3'-C2'-O2'	5.27	118.61	110.70
25	BB	473	G	C3'-C2'-O2'	5.27	118.61	110.70
25	BB	1066	U	O4'-C4'-C3'	-5.27	98.73	104.00
25	BB	1342	A	C5'-C4'-C3'	-5.27	107.30	115.20
25	BB	1371	G	O4'-C4'-C3'	5.27	109.27	104.00
25	BB	1394	U	O4'-C1'-N1	5.27	116.10	108.20
33	BJ	49	ARG	NE-CZ-NH1	-5.27	116.23	121.50
38	BO	32	LYS	CA-C-N	5.27	131.46	121.97
38	BO	32	LYS	C-N-CA	5.27	131.46	121.97
51	B2	70	ARG	NE-CZ-NH2	5.27	123.94	119.20
1	AP	33	U	C1'-C2'-O2'	-5.27	100.50	108.40
3	A1	1395	C	P-O3'-C3'	5.27	128.10	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	AU	110	ARG	NE-CZ-NH1	5.27	126.77	121.50
24	BA	4	C	O3'-P-O5'	-5.27	96.10	104.00
25	BB	57	C	C5'-C4'-C3'	-5.27	108.10	116.00
25	BB	806	C	C5'-C4'-C3'	-5.27	107.30	115.20
25	BB	1145	C	C4'-C3'-C2'	-5.27	97.33	102.60
25	BB	1255	U	C3'-C2'-C1'	-5.27	96.23	101.50
25	BB	1498	C	C2'-C3'-O3'	5.27	121.60	113.70
25	BB	1586	A	O5'-C5'-C4'	-5.27	103.60	111.50
25	BB	2483	C	C4'-C3'-C2'	-5.27	97.33	102.60
32	BI	36	LYS	CA-C-N	5.27	131.60	121.54
32	BI	36	LYS	C-N-CA	5.27	131.60	121.54
46	BW	23	HIS	CB-CG-CD2	-5.27	124.35	131.20
3	A1	220	G	O5'-C5'-C4'	-5.27	103.60	111.50
3	A1	576	C	C3'-C2'-O2'	5.27	118.60	110.70
3	A1	586	C	C3'-C2'-O2'	5.27	118.60	110.70
3	A1	928	G	C5'-C4'-O4'	5.27	117.70	109.80
3	A1	1285	A	C3'-C2'-C1'	-5.27	96.23	101.50
5	AC	71	ASP	CA-CB-CG	5.27	117.87	112.60
20	AU	137	ARG	CA-C-N	5.27	127.59	120.38
20	AU	137	ARG	C-N-CA	5.27	127.59	120.38
25	BB	2535	G	O3'-P-O5'	5.27	111.90	104.00
3	A1	1146	A	C1'-C2'-O2'	5.26	116.30	108.40
3	A1	1306	A	C1'-O4'-C4'	-5.26	104.64	109.90
25	BB	1158	C	C3'-C2'-C1'	-5.26	96.24	101.50
25	BB	2444	G	O5'-C5'-C4'	-5.26	103.60	111.50
25	BB	792	A	O4'-C1'-C2'	-5.26	100.54	105.80
25	BB	1931	U	N1-C1'-C2'	5.26	119.89	112.00
25	BB	2637	U	C5'-C4'-O4'	5.26	117.69	109.80
38	BO	42	LYS	CA-C-N	5.26	131.59	121.54
38	BO	42	LYS	C-N-CA	5.26	131.59	121.54
3	A1	200	G	O4'-C1'-N9	5.26	116.39	108.50
3	A1	305	G	C1'-O4'-C4'	-5.26	104.44	109.70
25	BB	44	A	C1'-C2'-O2'	5.26	116.29	108.40
25	BB	1163	G	C5'-C4'-C3'	-5.26	108.11	116.00
25	BB	1524	G	C4'-C3'-C2'	-5.26	97.34	102.60
25	BB	2791	G	O3'-P-O5'	5.26	111.89	104.00
3	A1	1272	G	C1'-O4'-C4'	-5.26	104.64	109.90
22	AW	121	ARG	NE-CZ-NH1	5.26	126.76	121.50
25	BB	120	U	O5'-C5'-C4'	5.26	119.39	111.50
25	BB	432	A	C2'-C3'-O3'	5.26	117.39	109.50
25	BB	1087	G	C4'-C3'-O3'	5.26	117.29	109.40
25	BB	1345	C	C3'-C2'-C1'	5.26	106.56	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1652	A	C1'-O4'-C4'	-5.26	104.64	109.90
25	BB	2801	G	P-O3'-C3'	5.26	128.09	120.20
55	B6	13	ARG	NH1-CZ-NH2	-5.26	112.46	119.30
3	A1	28	A	C3'-C2'-O2'	5.26	118.59	110.70
3	A1	35	G	C4'-C3'-O3'	5.26	120.89	113.00
3	A1	259	G	C1'-O4'-C4'	-5.26	104.64	109.90
1	AP	24	G	C4'-C3'-O3'	5.26	120.89	113.00
1	AE	19	G	C5'-C4'-O4'	-5.26	101.22	109.10
1	AE	69	U	O4'-C1'-N1	5.26	116.38	108.50
3	A1	326	G	O4'-C1'-N9	5.26	116.38	108.50
3	A1	749	A	P-O5'-C5'	5.26	128.79	120.90
3	A1	795	C	C4'-C3'-O3'	5.26	117.28	109.40
17	AR	33	ILE	O-C-N	-5.26	116.00	122.57
22	AW	55	ASP	CA-C-O	5.26	128.03	120.51
24	BA	81	G	C5'-C4'-O4'	5.26	116.98	109.10
25	BB	96	C	O4'-C1'-N1	5.26	116.38	108.50
25	BB	214	G	C5'-C4'-C3'	-5.26	108.12	116.00
25	BB	286	U	C4'-C3'-C2'	-5.26	97.34	102.60
25	BB	858	G	C3'-C2'-C1'	5.26	106.56	101.30
25	BB	1542	U	O3'-P-O5'	5.26	111.89	104.00
25	BB	1867	G	O4'-C1'-C2'	-5.26	102.34	107.60
25	BB	2148	G	C3'-C2'-O2'	5.26	118.58	110.70
32	BI	25	VAL	CA-C-N	5.26	131.58	121.54
32	BI	25	VAL	C-N-CA	5.26	131.58	121.54
45	BV	41	ARG	NE-CZ-NH1	-5.26	116.24	121.50
55	B6	11	VAL	N-CA-C	5.26	120.28	109.34
3	A1	755	G	C3'-C2'-O2'	5.25	118.58	110.70
19	AT	94	HIS	CA-C-N	5.25	129.87	122.09
19	AT	94	HIS	C-N-CA	5.25	129.87	122.09
25	BB	1523	U	C1'-O4'-C4'	-5.25	104.64	109.90
25	BB	1638	C	O3'-P-O5'	5.25	111.88	104.00
25	BB	2092	U	C1'-O4'-C4'	-5.25	104.64	109.90
49	BZ	85	ILE	O-C-N	-5.25	117.01	123.00
50	B1	97	ASN	CA-CB-CG	5.25	117.86	112.60
3	A1	373	A	C3'-C2'-O2'	5.25	118.58	110.70
25	BB	602	A	O4'-C4'-C3'	5.25	109.25	104.00
25	BB	1175	A	C5'-C4'-C3'	-5.25	108.12	116.00
25	BB	1863	G	C4'-C3'-C2'	-5.25	97.35	102.60
25	BB	2135	A	P-O3'-C3'	5.25	128.08	120.20
25	BB	2386	A	C3'-C2'-C1'	-5.25	96.25	101.50
25	BB	2589	A	C2'-C3'-O3'	5.25	121.58	113.70
27	BD	71	ARG	NE-CZ-NH1	5.25	126.75	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	BF	59	ARG	NE-CZ-NH1	5.25	126.75	121.50
3	A1	401	C	C3'-C2'-O2'	5.25	118.58	110.70
3	A1	593	U	C4'-C3'-C2'	-5.25	97.35	102.60
3	A1	1344	C	C2'-C3'-O3'	5.25	121.58	113.70
25	BB	223	A	O4'-C1'-N9	5.25	116.38	108.50
25	BB	399	U	O3'-P-O5'	5.25	111.88	104.00
25	BB	2149	U	C5'-C4'-C3'	-5.25	108.12	116.00
25	BB	2232	C	C4'-C3'-C2'	-5.25	97.35	102.60
25	BB	2395	C	O4'-C4'-C3'	5.25	109.25	104.00
25	BB	1067	A	C4'-C3'-C2'	-5.25	97.35	102.60
25	BB	1853	A	C3'-C2'-O2'	5.25	118.58	110.70
33	BJ	39	ILE	CA-C-N	5.25	127.63	120.54
33	BJ	39	ILE	C-N-CA	5.25	127.63	120.54
3	A1	411	A	C4'-C3'-C2'	-5.25	97.35	102.60
3	A1	514	C	O4'-C4'-C3'	5.25	109.25	104.00
3	A1	1326	U	C3'-C2'-O2'	5.25	118.57	110.70
25	BB	778	G	O4'-C1'-C2'	-5.25	100.55	105.80
25	BB	1410	G	C3'-C2'-O2'	5.25	118.57	110.70
25	BB	1600	C	C3'-C2'-C1'	5.25	106.55	101.30
25	BB	2473	U	O3'-P-O5'	-5.25	96.13	104.00
25	BB	2795	C	P-O5'-C5'	5.25	128.77	120.90
3	A1	302	G	P-O3'-C3'	5.25	128.07	120.20
3	A1	1051	C	O4'-C4'-C3'	5.25	111.35	106.10
3	A1	1312	G	C5'-C4'-O4'	5.25	117.67	109.80
7	AF	103	THR	CA-CB-CG2	5.25	119.42	110.50
16	AQ	6	ARG	NE-CZ-NH2	5.25	123.92	119.20
22	AW	44	ARG	N-CA-C	5.25	118.78	112.38
25	BB	384	A	O4'-C4'-C3'	5.25	109.25	104.00
25	BB	982	C	O4'-C1'-N1	5.25	116.07	108.20
25	BB	2532	G	N9-C1'-C2'	5.25	119.87	112.00
36	BM	76	ARG	N-CA-C	5.25	115.21	108.34
25	BB	2044	C	C4'-C3'-C2'	-5.25	97.36	102.60
3	A1	493	A	N9-C1'-C2'	5.24	119.87	112.00
3	A1	598	U	C3'-C2'-O2'	5.24	118.57	110.70
3	A1	646	G	C3'-C2'-C1'	5.24	106.54	101.30
3	A1	1174	G	C5'-C4'-C3'	-5.24	108.14	116.00
3	A1	1356	G	C5'-C4'-C3'	-5.24	108.13	116.00
3	A1	1493	A	N9-C1'-C2'	5.24	121.87	114.00
25	BB	1578	U	C1'-O4'-C4'	5.24	115.14	109.90
25	BB	2485	G	C4'-C3'-C2'	-5.24	97.36	102.60
25	BB	2825	G	O4'-C4'-C3'	5.24	109.24	104.00
25	BB	2892	G	C5'-C4'-C3'	-5.24	107.34	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BL	105	VAL	N-CA-C	5.24	115.45	110.42
37	BN	257	ARG	CA-C-N	5.24	131.56	121.54
37	BN	257	ARG	C-N-CA	5.24	131.56	121.54
48	BY	126	ASN	CA-CB-CG	5.24	117.84	112.60
3	A1	112	G	C5'-C4'-C3'	-5.24	108.14	116.00
25	BB	609	A	O4'-C4'-C3'	5.24	109.24	104.00
25	BB	1260	A	C5'-C4'-O4'	5.24	117.66	109.80
25	BB	1930	G	C2'-C3'-O3'	-5.24	101.64	109.50
25	BB	1369	G	P-O3'-C3'	5.24	128.06	120.20
25	BB	1697	G	C3'-C2'-O2'	5.24	118.56	110.70
25	BB	1957	C	O4'-C1'-C2'	-5.24	102.36	107.60
30	BG	30	ARG	CA-C-O	-5.24	115.05	120.92
37	BN	7	PRO	CA-C-N	5.24	129.59	120.68
37	BN	7	PRO	C-N-CA	5.24	129.59	120.68
3	A1	13	U	C2'-C3'-O3'	-5.24	105.84	113.70
3	A1	471	U	C5'-C4'-C3'	-5.24	108.14	116.00
9	AH	49	HIS	CA-C-N	5.24	127.61	120.54
9	AH	49	HIS	C-N-CA	5.24	127.61	120.54
25	BB	28	A	C5'-C4'-C3'	-5.24	108.14	116.00
25	BB	973	A	C2'-C3'-O3'	5.24	121.56	113.70
25	BB	1043	C	O3'-P-O5'	5.24	111.86	104.00
25	BB	1426	G	O4'-C1'-C2'	5.24	112.84	107.60
25	BB	2143	C	C5'-C4'-C3'	-5.24	108.14	116.00
25	BB	2373	G	C5'-C4'-C3'	-5.24	107.34	115.20
25	BB	2473	U	C1'-O4'-C4'	-5.24	104.66	109.90
25	BB	2534	A	O5'-C5'-C4'	-5.24	103.64	111.50
3	A1	1047	G	O5'-C5'-C4'	5.24	119.36	111.50
25	BB	978	G	O3'-P-O5'	-5.24	96.14	104.00
3	A1	702	A	C2'-C3'-O3'	5.24	117.35	109.50
3	A1	996	A	C4'-C3'-C2'	-5.24	97.36	102.60
17	AR	81	LEU	N-CA-C	5.24	117.29	110.43
25	BB	405	U	C5'-C4'-O4'	5.24	116.95	109.10
25	BB	429	A	O4'-C4'-C3'	5.24	109.24	104.00
25	BB	696	G	C3'-C2'-O2'	5.24	118.55	110.70
25	BB	897	C	N1-C1'-C2'	5.24	119.85	112.00
25	BB	1110	G	C2'-C3'-O3'	5.24	121.55	113.70
25	BB	1588	G	O3'-P-O5'	5.24	111.85	104.00
25	BB	1904	G	C3'-C2'-O2'	5.24	118.55	110.70
25	BB	2299	U	C3'-C2'-O2'	5.24	118.55	110.70
28	BE	79	LEU	CA-C-N	5.24	131.54	121.54
28	BE	79	LEU	C-N-CA	5.24	131.54	121.54
30	BG	96	ARG	NE-CZ-NH2	5.24	123.91	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	305	G	C4'-C3'-O3'	5.23	117.25	109.40
25	BB	504	A	O4'-C4'-C3'	5.23	109.23	104.00
25	BB	2787	C	O4'-C1'-N1	5.23	116.35	108.50
3	A1	555	U	N1-C1'-C2'	5.23	119.85	112.00
4	AB	34	ARG	NE-CZ-NH2	5.23	123.91	119.20
5	AC	100	ASN	CA-C-N	5.23	128.06	120.79
5	AC	100	ASN	C-N-CA	5.23	128.06	120.79
17	AR	84	ASN	N-CA-CB	-5.23	102.88	110.36
25	BB	660	C	C4'-C3'-C2'	-5.23	97.37	102.60
25	BB	983	A	O3'-P-O5'	-5.23	96.15	104.00
25	BB	1339	G	C3'-C2'-O2'	5.23	118.55	110.70
25	BB	1561	C	C1'-O4'-C4'	-5.23	104.67	109.90
25	BB	2365	G	C1'-O4'-C4'	-5.23	104.67	109.90
25	BB	2715	C	C5'-C4'-O4'	5.23	117.65	109.80
3	A1	732	C	C5'-C4'-C3'	-5.23	107.35	115.20
3	A1	1325	C	N1-C1'-C2'	5.23	119.84	112.00
18	AS	120	HIS	CB-CG-CD2	-5.23	124.40	131.20
25	BB	117	G	C5'-C4'-C3'	-5.23	107.35	115.20
25	BB	1252	G	C1'-C2'-O2'	5.23	119.65	111.80
25	BB	1858	A	C4'-C3'-C2'	-5.23	97.37	102.60
25	BB	2400	G	O4'-C1'-C2'	-5.23	102.37	107.60
37	BN	146	LYS	CA-C-N	5.23	126.38	119.84
37	BN	146	LYS	C-N-CA	5.23	126.38	119.84
1	AA	44	A	C1'-C2'-O2'	5.23	116.24	108.40
7	AF	27	THR	CA-C-N	5.23	127.72	120.29
7	AF	27	THR	C-N-CA	5.23	127.72	120.29
24	BA	114	C	C4'-C3'-C2'	-5.23	97.37	102.60
25	BB	2277	G	P-O3'-C3'	5.23	128.04	120.20
25	BB	2356	U	C1'-C2'-O2'	5.23	116.24	108.40
25	BB	2798	U	P-O5'-C5'	-5.23	113.06	120.90
52	B3	51	PHE	N-CA-C	5.23	117.46	110.35
3	A1	611	C	O5'-C5'-C4'	-5.23	103.66	111.50
3	A1	1001	C	C5'-C4'-C3'	5.23	123.84	116.00
3	A1	1138	G	C4'-C3'-O3'	-5.23	105.16	113.00
3	A1	1248	A	O4'-C4'-C3'	5.23	109.23	104.00
25	BB	41	C	C4'-C3'-C2'	-5.23	97.37	102.60
25	BB	1157	G	C4'-C3'-O3'	5.23	120.84	113.00
25	BB	1632	A	O4'-C1'-N9	5.23	116.04	108.20
25	BB	1765	U	O3'-P-O5'	5.23	111.84	104.00
25	BB	2456	C	C1'-O4'-C4'	-5.23	104.67	109.90
25	BB	2474	U	O5'-C5'-C4'	-5.23	103.86	111.70
25	BB	2526	G	O4'-C4'-C3'	5.23	109.23	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2756	U	C4'-C3'-O3'	5.23	117.24	109.40
50	B1	61	ARG	CD-NE-CZ	5.23	131.72	124.40
3	A1	718	A	C4'-C3'-C2'	-5.23	97.37	102.60
3	A1	719	C	C4'-C3'-C2'	-5.23	97.37	102.60
3	A1	1440	U	C1'-O4'-C4'	-5.23	104.67	109.90
10	AI	32	PHE	CA-CB-CG	5.23	119.03	113.80
21	AV	122	GLY	N-CA-C	5.23	118.17	110.80
25	BB	1374	G	O4'-C1'-N9	5.23	116.34	108.50
25	BB	2581	G	C5'-C4'-C3'	5.23	123.04	115.20
37	BN	152	GLN	OE1-CD-NE2	-5.23	117.37	122.60
1	AA	12	U	C2'-C3'-O3'	-5.22	105.86	113.70
3	A1	812	G	O4'-C1'-C2'	-5.22	100.58	105.80
3	A1	959	A	C2'-C3'-O3'	5.22	121.54	113.70
25	BB	1052	C	C5'-C4'-O4'	5.22	117.64	109.80
25	BB	1841	U	O5'-C5'-C4'	-5.22	103.66	111.50
25	BB	1908	C	N1-C1'-C2'	5.22	121.83	114.00
25	BB	2146	C	C5'-C4'-C3'	-5.22	107.36	115.20
25	BB	2374	C	C1'-O4'-C4'	-5.22	104.67	109.90
25	BB	2519	U	C4'-C3'-C2'	-5.22	97.38	102.60
25	BB	2597	G	C5'-C4'-O4'	5.22	117.64	109.80
28	BE	137	ALA	CA-C-N	5.22	130.97	121.41
28	BE	137	ALA	C-N-CA	5.22	130.97	121.41
55	B6	80	HIS	CB-CG-CD2	-5.22	124.41	131.20
3	A1	539	A	C4'-C3'-C2'	-5.22	97.38	102.60
3	A1	1103	C	C1'-O4'-C4'	-5.22	104.48	109.70
3	A1	1317	C	C2'-C3'-O3'	5.22	121.53	113.70
37	BN	68	ARG	NH1-CZ-NH2	-5.22	112.51	119.30
52	B3	37	ASN	N-CA-CB	-5.22	102.79	110.26
3	A1	316	C	O4'-C4'-C3'	5.22	111.32	106.10
3	A1	663	A	C3'-C2'-C1'	5.22	106.52	101.30
3	A1	1119	C	C3'-C2'-C1'	5.22	106.52	101.30
3	A1	1480	A	C2'-C3'-O3'	5.22	117.33	109.50
15	AO	108	PRO	N-CA-C	5.22	123.23	112.47
1	AA	43	G	O4'-C4'-C3'	5.22	109.22	104.00
2	AM	18	U	O3'-P-O5'	-5.22	96.17	104.00
3	A1	553	A	P-O5'-C5'	5.22	128.73	120.90
3	A1	569	C	C3'-C2'-O2'	5.22	118.53	110.70
3	A1	646	G	C1'-C2'-O2'	-5.22	100.57	108.40
3	A1	899	C	P-O3'-C3'	5.22	128.03	120.20
3	A1	1323	G	O5'-C5'-C4'	-5.22	103.67	111.50
20	AU	114	SER	CA-C-N	5.22	127.22	120.44
20	AU	114	SER	C-N-CA	5.22	127.22	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	112	U	O5'-C5'-C4'	-5.22	103.87	111.70
25	BB	1594	U	O5'-C5'-C4'	-5.22	103.67	111.50
25	BB	1716	U	C5'-C4'-C3'	-5.22	108.17	116.00
25	BB	2526	G	O3'-P-O5'	5.22	111.83	104.00
48	BY	83	ARG	NE-CZ-NH2	5.22	123.90	119.20
52	B3	95	ALA	N-CA-CB	-5.22	101.75	110.83
3	A1	166	U	C1'-C2'-O2'	-5.22	100.57	108.40
3	A1	675	A	C5'-C4'-C3'	-5.22	108.17	116.00
3	A1	855	U	C3'-C2'-O2'	5.22	118.53	110.70
3	A1	899	C	O4'-C1'-N1	5.22	116.03	108.20
3	A1	1135	U	C4'-C3'-C2'	-5.22	97.38	102.60
25	BB	488	G	C1'-O4'-C4'	-5.22	104.68	109.90
25	BB	548	G	C5'-C4'-C3'	-5.22	108.17	116.00
25	BB	707	G	C5'-C4'-C3'	-5.22	108.17	116.00
25	BB	1480	C	C2'-C3'-O3'	-5.22	105.87	113.70
25	BB	2536	G	O4'-C4'-C3'	-5.22	98.78	104.00
35	BL	104	THR	CA-C-N	5.22	127.14	120.56
35	BL	104	THR	C-N-CA	5.22	127.14	120.56
53	B4	124	THR	CA-CB-CG2	5.22	119.37	110.50
1	AE	61	C	C3'-C2'-O2'	5.22	118.53	110.70
3	A1	1381	U	C1'-O4'-C4'	-5.22	104.68	109.90
9	AH	87	ARG	NE-CZ-NH2	5.22	123.90	119.20
25	BB	1539	U	C2'-C3'-O3'	5.22	117.32	109.50
25	BB	1687	G	C4'-C3'-C2'	5.22	107.82	102.60
25	BB	2375	G	O4'-C1'-N9	5.22	116.33	108.50
25	BB	2456	C	C2'-C3'-O3'	5.22	121.53	113.70
37	BN	213	ARG	NH1-CZ-NH2	-5.22	112.52	119.30
3	A1	422	C	C1'-C2'-O2'	-5.21	100.58	108.40
5	AC	109	ILE	CA-C-N	5.21	130.68	122.34
5	AC	109	ILE	C-N-CA	5.21	130.68	122.34
12	AK	39	VAL	CA-C-N	5.21	125.38	119.90
12	AK	39	VAL	C-N-CA	5.21	125.38	119.90
25	BB	1690	A	O3'-P-O5'	5.21	111.82	104.00
25	BB	2102	G	O4'-C1'-N9	5.21	116.32	108.50
25	BB	2196	C	O3'-P-O5'	5.21	111.82	104.00
25	BB	2737	G	O4'-C4'-C3'	5.21	109.21	104.00
1	AA	56	C	C5'-C4'-O4'	5.21	117.62	109.80
24	BA	23	G	C3'-C2'-C1'	5.21	106.51	101.30
25	BB	1046	A	C3'-C2'-C1'	5.21	106.71	101.50
25	BB	2120	G	C5'-C4'-C3'	-5.21	108.18	116.00
25	BB	2313	C	C3'-C2'-C1'	5.21	106.71	101.50
40	BQ	7	ARG	CD-NE-CZ	5.21	131.70	124.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	405	U	C3'-C2'-O2'	5.21	118.52	110.70
3	A1	667	G	C5'-C4'-C3'	-5.21	108.18	116.00
9	AH	59	VAL	CA-CB-CG1	5.21	119.26	110.40
17	AR	24	VAL	CA-C-N	5.21	131.50	121.54
17	AR	24	VAL	C-N-CA	5.21	131.50	121.54
25	BB	152	A	O4'-C1'-N9	5.21	116.32	108.50
25	BB	363	G	C3'-C2'-O2'	5.21	118.52	110.70
25	BB	2396	G	O5'-C5'-C4'	-5.21	103.68	111.50
50	B1	44	ARG	CA-C-N	5.21	128.93	120.23
50	B1	44	ARG	C-N-CA	5.21	128.93	120.23
3	A1	150	U	C4'-C3'-C2'	-5.21	97.39	102.60
32	BI	61	ARG	NH1-CZ-NH2	-5.21	112.53	119.30
3	A1	442	G	C3'-C2'-C1'	5.21	106.51	101.30
3	A1	519	C	O4'-C1'-N1	5.21	116.31	108.50
3	A1	883	C	C4'-C3'-C2'	-5.21	97.39	102.60
3	A1	1110	A	O3'-P-O5'	-5.21	96.19	104.00
3	A1	1365	G	C4'-C3'-C2'	5.21	107.81	102.60
12	AK	50	TYR	N-CA-C	5.21	116.96	111.28
25	BB	719	C	O4'-C4'-C3'	5.21	109.21	104.00
54	B5	54	ILE	CB-CA-C	5.21	114.43	109.33
3	A1	31	G	C5'-C4'-O4'	5.21	117.61	109.80
3	A1	1461	G	C5'-C4'-C3'	-5.21	107.39	115.20
8	AG	64	ARG	NH1-CZ-NH2	-5.21	112.53	119.30
19	AT	19	PRO	CA-C-N	5.21	126.90	120.34
19	AT	19	PRO	C-N-CA	5.21	126.90	120.34
25	BB	467	G	C5'-C4'-O4'	5.21	117.61	109.80
25	BB	1268	A	O4'-C4'-C3'	5.21	109.21	104.00
25	BB	1387	A	C1'-C2'-O2'	-5.21	100.59	108.40
25	BB	1677	A	O4'-C4'-C3'	5.21	109.21	104.00
25	BB	2891	U	O4'-C4'-C3'	-5.21	98.79	104.00
48	BY	169	ARG	NH1-CZ-NH2	-5.21	112.53	119.30
25	BB	2011	U	O4'-C1'-N1	5.21	116.31	108.50
25	BB	2430	A	C5'-C4'-C3'	-5.21	108.19	116.00
3	A1	476	U	O4'-C1'-C2'	-5.20	102.40	107.60
3	A1	837	U	C4'-C3'-O3'	-5.20	105.19	113.00
17	AR	102	TYR	CA-C-N	5.20	127.25	120.28
17	AR	102	TYR	C-N-CA	5.20	127.25	120.28
25	BB	114	U	C3'-C2'-O2'	5.20	118.51	110.70
25	BB	1063	G	C4'-C3'-C2'	-5.20	97.40	102.60
51	B2	172	PHE	CA-CB-CG	5.20	119.00	113.80
55	B6	136	GLN	OE1-CD-NE2	-5.20	117.40	122.60
1	AE	14	A	O3'-P-O5'	5.20	111.80	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	585	G	O4'-C4'-C3'	5.20	109.20	104.00
3	A1	1013	G	C5'-C4'-O4'	5.20	117.60	109.80
15	AO	47	ALA	CA-C-N	5.20	130.66	120.99
15	AO	47	ALA	C-N-CA	5.20	130.66	120.99
21	AV	25	THR	CA-CB-CG2	5.20	119.34	110.50
25	BB	47	C	C3'-C2'-O2'	5.20	118.50	110.70
25	BB	106	C	C1'-O4'-C4'	-5.20	104.50	109.70
25	BB	2093	G	C1'-C2'-O2'	-5.20	100.60	108.40
1	AP	38	A	C4'-C3'-C2'	5.20	107.80	102.60
3	A1	1147	C	C4'-C3'-C2'	-5.20	97.40	102.60
3	A1	1375	A	C3'-C2'-O2'	5.20	118.50	110.70
3	A1	1404	C	C2'-C3'-O3'	5.20	121.50	113.70
8	AG	13	VAL	N-CA-C	5.20	115.92	110.62
24	BA	56	G	C4'-C3'-O3'	5.20	117.20	109.40
25	BB	437	U	C3'-C2'-O2'	5.20	122.40	114.60
25	BB	1827	U	C2'-C3'-O3'	5.20	117.30	109.50
25	BB	2457	U	O3'-P-O5'	-5.20	96.20	104.00
25	BB	2721	A	O4'-C4'-C3'	5.20	109.20	104.00
32	BI	9	GLN	OE1-CD-NE2	-5.20	117.40	122.60
49	BZ	57	GLN	N-CA-C	5.20	115.97	109.57
3	A1	36	C	C1'-O4'-C4'	5.20	115.10	109.90
3	A1	736	C	O4'-C4'-C3'	5.20	109.20	104.00
3	A1	1386	G	C2'-C3'-O3'	5.20	121.50	113.70
20	AU	130	LYS	N-CA-CB	-5.20	101.76	110.39
25	BB	386	G	O4'-C1'-C2'	-5.20	100.60	105.80
25	BB	878	A	O3'-P-O5'	5.20	111.80	104.00
25	BB	952	G	N9-C1'-C2'	-5.20	106.20	114.00
25	BB	2079	U	C1'-O4'-C4'	-5.20	104.50	109.70
25	BB	2460	U	C5'-C4'-O4'	5.20	116.90	109.10
38	BO	42	LYS	N-CA-C	5.20	116.80	107.80
52	B3	94	ARG	NE-CZ-NH1	5.20	126.70	121.50
54	B5	88	GLY	CA-C-N	5.20	127.97	120.38
54	B5	88	GLY	C-N-CA	5.20	127.97	120.38
1	AA	8	U	P-O5'-C5'	5.20	128.69	120.90
3	A1	41	G	C4'-C3'-O3'	5.20	120.80	113.00
3	A1	350	G	P-O5'-C5'	5.20	128.70	120.90
3	A1	392	C	C4'-C3'-C2'	-5.20	97.40	102.60
25	BB	1615	C	C2'-C3'-O3'	5.20	117.30	109.50
25	BB	1896	G	O5'-C5'-C4'	-5.20	103.70	111.50
48	BY	32	ASN	OD1-CG-ND2	-5.20	117.40	122.60
1	AA	11	C	C5'-C4'-O4'	5.20	117.59	109.80
3	A1	548	G	C5'-C4'-O4'	5.20	117.59	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1049	U	O4'-C1'-N1	5.20	116.29	108.50
6	AD	120	ARG	CD-NE-CZ	5.20	131.68	124.40
9	AH	49	HIS	CA-CB-CG	5.20	119.00	113.80
25	BB	327	G	O4'-C1'-N9	-5.20	100.71	108.50
25	BB	499	U	O4'-C1'-N1	5.20	116.29	108.50
25	BB	722	A	O3'-P-O5'	5.20	111.80	104.00
25	BB	914	G	C3'-C2'-O2'	5.20	118.49	110.70
25	BB	1750	G	C3'-C2'-O2'	5.20	118.49	110.70
42	BS	32	LEU	CA-C-O	5.20	127.52	121.44
25	BB	2511	U	O4'-C1'-N1	5.19	116.29	108.50
27	BD	25	LEU	CA-C-N	5.19	131.59	121.41
27	BD	25	LEU	C-N-CA	5.19	131.59	121.41
3	A1	15	G	C4'-C3'-O3'	5.19	120.79	113.00
3	A1	481	G	C3'-C2'-C1'	5.19	106.49	101.30
3	A1	675	A	C4'-C3'-C2'	-5.19	97.41	102.60
10	AI	26	ASN	CA-C-N	5.19	128.24	120.87
10	AI	26	ASN	C-N-CA	5.19	128.24	120.87
15	AO	64	ARG	NE-CZ-NH2	5.19	123.87	119.20
24	BA	89	U	C3'-C2'-O2'	5.19	118.49	110.70
25	BB	768	G	O3'-P-O5'	5.19	111.79	104.00
25	BB	1868	C	C2'-C3'-O3'	5.19	121.49	113.70
25	BB	2292	U	C1'-O4'-C4'	-5.19	104.71	109.90
25	BB	2643	G	C3'-C2'-O2'	5.19	118.49	110.70
25	BB	2749	A	C2'-C3'-O3'	-5.19	105.91	113.70
35	BL	68	ASP	CA-CB-CG	5.19	117.79	112.60
37	BN	151	GLY	CA-C-N	5.19	127.50	120.38
37	BN	151	GLY	C-N-CA	5.19	127.50	120.38
1	AE	10	G	O4'-C4'-C3'	5.19	109.19	104.00
13	AL	76	THR	CA-C-N	5.19	131.29	121.69
13	AL	76	THR	C-N-CA	5.19	131.29	121.69
25	BB	246	C	O5'-C5'-C4'	5.19	119.28	111.50
25	BB	407	G	C2'-C3'-O3'	-5.19	101.71	109.50
25	BB	446	G	C3'-C2'-C1'	5.19	106.49	101.30
25	BB	2710	C	O5'-C5'-C4'	5.19	119.49	111.70
26	BC	3	THR	CB-CA-C	-5.19	102.15	110.14
29	BF	58	LYS	CA-C-N	5.19	131.45	121.54
29	BF	58	LYS	C-N-CA	5.19	131.45	121.54
35	BL	51	LEU	CA-C-N	5.19	127.50	120.65
35	BL	51	LEU	C-N-CA	5.19	127.50	120.65
44	BU	49	LYS	N-CA-C	5.19	121.86	110.80
48	BY	107	VAL	CA-CB-CG1	5.19	119.22	110.40
1	AE	19	G	C3'-C2'-O2'	-5.19	106.82	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	AG	23	ARG	CD-NE-CZ	5.19	131.66	124.40
25	BB	14	A	C1'-O4'-C4'	5.19	115.09	109.90
35	BL	102	HIS	CE1-NE2-CD2	-5.19	103.81	109.00
37	BN	25	LYS	CB-CG-CD	5.19	123.23	111.30
1	AP	48	C	P-O5'-C5'	5.19	128.68	120.90
3	A1	212	G	C4'-C3'-C2'	-5.19	97.41	102.60
3	A1	792	A	O4'-C4'-C3'	5.19	109.19	104.00
3	A1	938	A	O3'-P-O5'	-5.19	96.22	104.00
3	A1	1085	U	O4'-C1'-N1	5.19	115.98	108.20
3	A1	1221	G	C1'-O4'-C4'	5.19	115.09	109.90
25	BB	1983	G	O4'-C1'-C2'	5.19	112.79	107.60
25	BB	2036	C	O4'-C4'-C3'	-5.19	98.81	104.00
32	BI	69	VAL	CA-C-N	5.19	131.45	121.54
32	BI	69	VAL	C-N-CA	5.19	131.45	121.54
3	A1	937	A	C5'-C4'-C3'	-5.19	107.42	115.20
3	A1	1431	A	C5'-C4'-C3'	-5.19	108.22	116.00
21	AV	26	MET	N-CA-C	5.19	112.89	108.22
25	BB	83	A	O4'-C1'-C2'	-5.19	100.61	105.80
25	BB	150	U	C5'-C4'-C3'	-5.19	108.22	116.00
25	BB	208	C	C4'-C3'-C2'	-5.19	97.41	102.60
25	BB	312	G	O4'-C1'-C2'	-5.19	102.41	107.60
25	BB	519	U	O4'-C1'-C2'	5.19	112.79	107.60
25	BB	853	C	C3'-C2'-O2'	5.19	118.48	110.70
27	BD	119	ALA	CA-C-N	5.19	126.32	119.84
27	BD	119	ALA	C-N-CA	5.19	126.32	119.84
1	AA	27	C	C3'-C2'-O2'	5.18	118.48	110.70
3	A1	133	U	O4'-C1'-N1	5.18	116.28	108.50
3	A1	146	G	O3'-P-O5'	5.18	111.78	104.00
19	AT	17	GLN	OE1-CD-NE2	-5.18	117.42	122.60
19	AT	50	PRO	N-CA-CB	5.18	106.18	102.65
24	BA	49	C	C3'-C2'-C1'	5.18	106.48	101.30
25	BB	210	C	C5'-C4'-C3'	-5.18	108.22	116.00
25	BB	244	A	C3'-C2'-C1'	-5.18	96.12	101.30
25	BB	493	G	C5'-C4'-C3'	-5.18	108.22	116.00
25	BB	718	A	C2'-C3'-O3'	-5.18	105.92	113.70
25	BB	921	C	C3'-C2'-O2'	5.18	118.48	110.70
25	BB	1707	G	C5'-C4'-C3'	-5.18	108.22	116.00
39	BP	10	ARG	CA-C-N	5.18	131.44	121.54
39	BP	10	ARG	C-N-CA	5.18	131.44	121.54
48	BY	83	ARG	CD-NE-CZ	5.18	131.66	124.40
3	A1	7	A	C3'-C2'-O2'	-5.18	106.83	114.60
3	A1	149	A	C3'-C2'-C1'	5.18	106.48	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1313	U	O3'-P-O5'	-5.18	96.23	104.00
20	AU	55	LYS	CA-C-N	5.18	131.44	121.54
20	AU	55	LYS	C-N-CA	5.18	131.44	121.54
25	BB	751	A	C4'-C3'-O3'	5.18	117.17	109.40
25	BB	1219	U	C1'-C2'-O2'	-5.18	100.63	108.40
25	BB	1572	A	C5'-C4'-C3'	-5.18	108.23	116.00
25	BB	2565	A	C3'-C2'-C1'	5.18	106.68	101.50
51	B2	131	VAL	CA-C-N	5.18	131.44	121.54
51	B2	131	VAL	C-N-CA	5.18	131.44	121.54
25	BB	1995	U	P-O5'-C5'	5.18	128.67	120.90
25	BB	2050	C	O5'-C5'-C4'	5.18	119.47	111.70
25	BB	2143	C	O4'-C4'-C3'	5.18	109.18	104.00
31	BH	9	ARG	NE-CZ-NH1	5.18	126.68	121.50
3	A1	972	C	O3'-P-O5'	-5.18	96.23	104.00
3	A1	1087	G	O4'-C1'-N9	-5.18	100.73	108.50
4	AB	195	VAL	CA-C-N	5.18	127.22	120.28
4	AB	195	VAL	C-N-CA	5.18	127.22	120.28
9	AH	22	GLY	CA-C-N	5.18	128.57	120.75
9	AH	22	GLY	C-N-CA	5.18	128.57	120.75
25	BB	933	A	O4'-C4'-C3'	5.18	109.18	104.00
25	BB	1274	A	C4'-C3'-C2'	-5.18	97.42	102.60
25	BB	1973	G	O5'-C5'-C4'	5.18	119.27	111.50
25	BB	2472	G	N9-C1'-C2'	-5.18	104.23	112.00
34	BK	41	ILE	N-CA-C	5.18	117.56	111.09
52	B3	29	ASN	CA-C-N	5.18	127.97	122.63
52	B3	29	ASN	C-N-CA	5.18	127.97	122.63
3	A1	832	G	C1'-C2'-O2'	-5.18	100.63	108.40
3	A1	1508	A	O4'-C4'-C3'	-5.18	98.82	104.00
3	A1	1531	A	O4'-C4'-C3'	5.18	109.18	104.00
25	BB	989	G	C4'-C3'-O3'	5.18	117.17	109.40
25	BB	1197	G	C3'-C2'-O2'	5.18	118.47	110.70
25	BB	2440	C	C4'-C3'-O3'	5.18	120.77	113.00
29	BF	54	THR	OG1-CB-CG2	-5.18	98.94	109.30
1	AA	3	G	C5'-C4'-O4'	5.18	117.56	109.80
1	AP	15	G	C5'-C4'-O4'	5.18	117.56	109.80
3	A1	411	A	C2'-C3'-O3'	5.18	117.27	109.50
3	A1	939	G	C4'-C3'-O3'	-5.18	105.24	113.00
7	AF	28	ARG	NE-CZ-NH2	5.18	123.86	119.20
25	BB	524	G	C3'-C2'-O2'	5.18	118.47	110.70
25	BB	863	A	O4'-C4'-C3'	5.18	109.18	104.00
25	BB	867	C	C2'-C3'-O3'	5.18	121.46	113.70
25	BB	1947	C	N1-C1'-C2'	5.18	119.76	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	BN	245	THR	CB-CA-C	-5.18	101.29	109.42
3	A1	430	A	O4'-C1'-C2'	-5.17	102.42	107.60
3	A1	968	A	C3'-C2'-C1'	5.17	106.67	101.50
3	A1	1283	U	C1'-C2'-O2'	5.17	116.16	108.40
3	A1	1292	G	C2'-C3'-O3'	-5.17	105.94	113.70
6	AD	34	THR	OG1-CB-CG2	-5.17	98.95	109.30
25	BB	320	A	C1'-O4'-C4'	-5.17	104.53	109.70
25	BB	458	G	C3'-C2'-C1'	-5.17	96.33	101.50
44	BU	29	LYS	CA-C-N	5.17	125.11	119.78
44	BU	29	LYS	C-N-CA	5.17	125.11	119.78
48	BY	99	GLU	N-CA-C	5.17	121.82	110.80
3	A1	774	G	C2'-C3'-O3'	5.17	117.26	109.50
25	BB	1201	U	C2'-C3'-O3'	5.17	121.46	113.70
1	AP	15	G	C5'-C4'-C3'	-5.17	108.24	116.00
3	A1	453	G	C3'-C2'-C1'	5.17	106.47	101.30
3	A1	873	A	C4'-C3'-C2'	-5.17	97.43	102.60
3	A1	1224	U	C1'-C2'-O2'	5.17	116.16	108.40
21	AV	115	ALA	CA-C-N	5.17	127.47	120.38
21	AV	115	ALA	C-N-CA	5.17	127.47	120.38
25	BB	376	G	C5'-C4'-O4'	5.17	116.86	109.10
25	BB	1130	U	C3'-C2'-C1'	5.17	106.67	101.50
25	BB	1282	U	C5'-C4'-C3'	-5.17	108.24	116.00
25	BB	1717	A	P-O3'-C3'	5.17	127.96	120.20
25	BB	2356	U	C1'-O4'-C4'	-5.17	104.73	109.90
25	BB	2544	G	C3'-C2'-O2'	5.17	118.46	110.70
29	BF	9	PHE	CA-CB-CG	5.17	118.97	113.80
37	BN	63	ILE	CA-C-N	5.17	130.02	121.54
37	BN	63	ILE	C-N-CA	5.17	130.02	121.54
25	BB	392	U	C4'-C3'-C2'	-5.17	97.43	102.60
25	BB	1134	A	O4'-C1'-N9	5.17	115.95	108.20
25	BB	2538	C	O3'-P-O5'	-5.17	96.24	104.00
37	BN	202	ARG	NH1-CZ-NH2	-5.17	112.58	119.30
3	A1	11	G	O4'-C1'-C2'	-5.17	102.43	107.60
3	A1	278	G	C5'-C4'-O4'	5.17	117.55	109.80
3	A1	299	G	C3'-C2'-O2'	-5.17	106.85	114.60
6	AD	97	VAL	CB-CA-C	5.17	119.01	113.22
23	AX	59	LYS	CA-C-N	5.17	131.41	121.54
23	AX	59	LYS	C-N-CA	5.17	131.41	121.54
25	BB	52	A	O5'-C5'-C4'	5.17	119.25	111.50
25	BB	1404	C	P-O3'-C3'	5.17	127.95	120.20
25	BB	2446	G	O4'-C4'-C3'	5.17	109.17	104.00
25	BB	2728	U	O4'-C1'-N1	5.17	115.95	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	BF	41	LEU	N-CA-C	5.17	116.59	109.15
30	BG	60	VAL	CA-C-N	5.17	131.41	121.54
30	BG	60	VAL	C-N-CA	5.17	131.41	121.54
52	B3	32	LEU	CA-C-N	5.17	130.71	122.59
52	B3	32	LEU	C-N-CA	5.17	130.71	122.59
3	A1	53	A	O4'-C4'-C3'	-5.17	98.83	104.00
3	A1	208	U	O4'-C4'-C3'	5.17	109.17	104.00
3	A1	353	A	O5'-C5'-C4'	5.17	119.25	111.50
3	A1	1520	C	O4'-C4'-C3'	5.17	111.27	106.10
4	AB	28	PRO	N-CA-C	5.17	120.40	114.20
17	AR	174	ALA	N-CA-C	5.17	119.57	113.16
25	BB	939	G	O4'-C4'-C3'	5.17	109.17	104.00
25	BB	1010	A	O4'-C1'-N9	5.17	116.25	108.50
25	BB	1087	G	O5'-C5'-C4'	-5.17	103.95	111.70
25	BB	1496	A	C3'-C2'-O2'	5.17	118.45	110.70
25	BB	1723	G	O3'-P-O5'	-5.17	96.25	104.00
25	BB	2036	C	O5'-C5'-C4'	-5.17	103.75	111.50
25	BB	2723	C	C4'-C3'-C2'	-5.17	97.43	102.60
45	BV	21	ARG	CD-NE-CZ	5.17	131.63	124.40
1	AA	15	G	C3'-C2'-O2'	5.17	118.45	110.70
3	A1	451	A	C3'-C2'-O2'	-5.17	106.85	114.60
25	BB	1945	G	O4'-C4'-C3'	-5.17	98.83	104.00
1	AP	62	A	C2'-C3'-O3'	-5.16	105.95	113.70
1	AE	4	G	C3'-C2'-O2'	5.16	118.45	110.70
3	A1	890	G	N9-C1'-C2'	5.16	119.75	112.00
3	A1	968	A	O4'-C1'-C2'	-5.16	100.64	105.80
3	A1	1445	U	O4'-C4'-C3'	5.16	109.16	104.00
25	BB	80	G	O4'-C1'-C2'	-5.16	102.44	107.60
25	BB	1453	A	O4'-C1'-N9	5.16	116.25	108.50
25	BB	1492	G	C1'-C2'-O2'	5.16	116.14	108.40
39	BP	57	THR	CA-C-N	5.16	131.40	121.54
39	BP	57	THR	C-N-CA	5.16	131.40	121.54
43	BT	49	ARG	CD-NE-CZ	5.16	131.63	124.40
32	BI	70	GLU	CB-CG-CD	5.16	121.38	112.60
52	B3	97	VAL	CA-CB-CG1	5.16	119.18	110.40
3	A1	13	U	P-O3'-C3'	5.16	127.94	120.20
3	A1	872	A	C3'-C2'-O2'	5.16	122.34	114.60
25	BB	389	G	O4'-C4'-C3'	-5.16	100.94	106.10
25	BB	2388	A	C3'-C2'-O2'	5.16	118.44	110.70
25	BB	2759	G	C4'-C3'-C2'	-5.16	97.44	102.60
25	BB	2847	U	OP1-P-OP2	-5.16	104.12	119.60
26	BC	91	PHE	CA-C-N	5.16	128.08	120.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	BC	91	PHE	C-N-CA	5.16	128.08	120.91
34	BK	12	HIS	CB-CG-CD2	-5.16	124.49	131.20
43	BT	39	ARG	CB-CA-C	5.16	117.73	109.27
48	BY	29	VAL	N-CA-C	5.16	120.07	109.34
50	B1	83	VAL	CA-CB-CG1	5.16	119.17	110.40
3	A1	675	A	C3'-C2'-C1'	5.16	106.46	101.30
25	BB	198	C	O3'-P-O5'	5.16	111.74	104.00
25	BB	265	A	O3'-P-O5'	-5.16	96.26	104.00
25	BB	836	G	C5'-C4'-C3'	-5.16	107.46	115.20
25	BB	1158	C	C3'-C2'-O2'	5.16	122.34	114.60
25	BB	1782	U	O4'-C1'-N1	5.16	115.94	108.20
32	BI	10	GLU	CA-C-N	5.16	131.39	121.54
32	BI	10	GLU	C-N-CA	5.16	131.39	121.54
3	A1	300	A	C4'-C3'-C2'	-5.16	97.44	102.60
3	A1	1093	A	C3'-C2'-O2'	5.16	118.44	110.70
6	AD	107	LYS	CA-C-N	5.16	132.47	123.91
6	AD	107	LYS	C-N-CA	5.16	132.47	123.91
29	BF	81	ARG	CD-NE-CZ	5.16	131.62	124.40
3	A1	555	U	O3'-P-O5'	5.16	111.73	104.00
3	A1	978	A	C3'-C2'-O2'	5.16	118.43	110.70
13	AL	63	ASP	N-CA-C	5.16	122.47	114.64
19	AT	96	VAL	N-CA-CB	5.16	117.67	110.56
20	AU	121	ASN	CA-CB-CG	5.16	117.76	112.60
24	BA	116	G	P-O3'-C3'	5.16	127.93	120.20
25	BB	302	C	C1'-O4'-C4'	-5.16	104.75	109.90
25	BB	860	U	O4'-C4'-C3'	5.16	109.16	104.00
25	BB	1608	A	O4'-C1'-N9	5.16	115.93	108.20
25	BB	1635	A	O4'-C4'-C3'	5.16	109.16	104.00
25	BB	1754	A	N9-C1'-C2'	5.16	119.73	112.00
25	BB	2430	A	O4'-C4'-C3'	5.16	109.16	104.00
25	BB	2870	C	C3'-C2'-O2'	5.16	118.43	110.70
27	BD	56	ASP	CA-C-N	5.16	130.16	122.99
27	BD	56	ASP	C-N-CA	5.16	130.16	122.99
48	BY	113	SER	CA-C-N	5.16	127.14	120.44
48	BY	113	SER	C-N-CA	5.16	127.14	120.44
3	A1	944	G	O3'-P-O5'	5.15	111.73	104.00
25	BB	198	C	P-O3'-C3'	5.15	127.93	120.20
25	BB	1924	C	C3'-C2'-C1'	5.15	106.45	101.30
25	BB	1980	G	C5'-C4'-C3'	-5.15	107.47	115.20
27	BD	68	GLY	N-CA-C	5.15	120.86	112.61
1	AP	22	G	C5'-C4'-C3'	-5.15	108.27	116.00
3	A1	563	A	O3'-P-O5'	5.15	111.73	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	658	C	O4'-C1'-C2'	-5.15	102.45	107.60
3	A1	977	A	O4'-C4'-C3'	5.15	109.15	104.00
3	A1	1412	C	C4'-C3'-O3'	5.15	120.73	113.00
23	AX	31	ARG	CD-NE-CZ	5.15	131.61	124.40
23	AX	45	ARG	CA-C-N	5.15	131.38	121.54
23	AX	45	ARG	C-N-CA	5.15	131.38	121.54
25	BB	1774	C	O4'-C1'-N1	5.15	115.93	108.20
54	B5	20	SER	CA-C-O	-5.15	113.10	120.16
21	AV	12	ARG	NE-CZ-NH2	5.15	123.84	119.20
25	BB	846	U	O4'-C1'-N1	5.15	116.23	108.50
25	BB	1064	C	O4'-C1'-N1	5.15	116.23	108.50
25	BB	1616	A	C3'-C2'-C1'	5.15	106.65	101.50
25	BB	2737	G	C3'-C2'-C1'	5.15	106.45	101.30
25	BB	2825	G	O4'-C1'-N9	5.15	116.22	108.50
28	BE	108	ALA	CB-CA-C	5.15	117.22	110.06
36	BM	6	ARG	CD-NE-CZ	5.15	131.61	124.40
40	BQ	31	GLN	CA-C-N	5.15	131.38	121.54
40	BQ	31	GLN	C-N-CA	5.15	131.38	121.54
48	BY	40	LEU	CA-C-N	5.15	131.38	121.54
48	BY	40	LEU	C-N-CA	5.15	131.38	121.54
1	AA	4	G	C4'-C3'-C2'	-5.15	97.45	102.60
3	A1	827	U	C1'-O4'-C4'	-5.15	104.55	109.70
25	BB	2	G	C4'-C3'-C2'	-5.15	97.45	102.60
25	BB	1394	U	P-O3'-C3'	5.15	127.92	120.20
2	AM	14	U	P-O5'-C5'	5.15	128.62	120.90
3	A1	294	U	C4'-C3'-O3'	5.15	117.12	109.40
3	A1	589	U	C3'-C2'-C1'	-5.15	96.35	101.50
3	A1	965	U	P-O3'-C3'	5.15	127.92	120.20
4	AB	213	LEU	N-CA-C	5.15	116.89	111.28
6	AD	19	ASN	OD1-CG-ND2	-5.15	117.45	122.60
19	AT	37	HIS	CA-CB-CG	5.15	118.95	113.80
25	BB	403	U	C4'-C3'-C2'	-5.15	97.45	102.60
25	BB	421	C	C1'-O4'-C4'	-5.15	104.75	109.90
25	BB	652	U	C5'-C4'-C3'	-5.15	108.28	116.00
25	BB	675	A	C1'-O4'-C4'	-5.15	104.75	109.90
25	BB	1760	C	C3'-C2'-O2'	5.15	118.42	110.70
25	BB	1846	G	C2'-C3'-O3'	5.15	121.42	113.70
25	BB	2598	A	O5'-C5'-C4'	5.15	119.42	111.70
25	BB	2707	U	O4'-C1'-C2'	-5.15	100.65	105.80
28	BE	47	ARG	CA-CB-CG	5.15	124.39	114.10
29	BF	98	PRO	CA-C-N	5.15	130.96	121.70
29	BF	98	PRO	C-N-CA	5.15	130.96	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	B3	149	ALA	CA-C-N	5.15	127.44	120.44
52	B3	149	ALA	C-N-CA	5.15	127.44	120.44
54	B5	54	ILE	N-CA-C	5.15	113.41	109.19
55	B6	130	HIS	CB-CG-ND1	5.15	130.42	122.70
1	AP	11	C	C3'-C2'-O2'	5.15	118.42	110.70
25	BB	393	C	C5'-C4'-C3'	-5.15	108.28	116.00
25	BB	908	C	O4'-C4'-C3'	-5.15	100.95	106.10
25	BB	1928	A	C5'-C4'-C3'	-5.15	108.28	116.00
25	BB	2106	U	O3'-P-O5'	-5.15	96.28	104.00
48	BY	66	GLY	O-C-N	-5.15	116.01	122.70
3	A1	386	C	O5'-C5'-C4'	-5.14	103.98	111.70
3	A1	1006	G	O5'-C5'-C4'	-5.14	103.78	111.50
6	AD	111	GLN	OE1-CD-NE2	-5.14	117.46	122.60
25	BB	185	G	O5'-C5'-C4'	5.14	119.22	111.50
25	BB	449	A	P-O3'-C3'	5.14	127.92	120.20
25	BB	1179	G	C4'-C3'-C2'	-5.14	97.45	102.60
25	BB	1963	U	O4'-C1'-C2'	-5.14	102.45	107.60
25	BB	2488	G	O4'-C4'-C3'	5.14	109.14	104.00
25	BB	2859	G	O3'-P-O5'	-5.14	96.28	104.00
37	BN	53	ILE	N-CA-C	5.14	120.04	109.34
55	B6	128	ASN	OD1-CG-ND2	-5.14	117.46	122.60
3	A1	347	G	O3'-P-O5'	5.14	111.72	104.00
3	A1	1130	A	C4'-C3'-C2'	5.14	107.74	102.60
3	A1	1160	G	O4'-C4'-C3'	5.14	109.14	104.00
3	A1	1388	C	O4'-C4'-C3'	5.14	111.24	106.10
3	A1	1506	U	C5'-C4'-O4'	5.14	117.52	109.80
7	AF	100	ARG	CA-C-N	5.14	131.36	121.54
7	AF	100	ARG	C-N-CA	5.14	131.36	121.54
25	BB	1837	C	P-O5'-C5'	5.14	128.61	120.90
25	BB	2213	U	O4'-C4'-C3'	5.14	111.24	106.10
25	BB	2466	C	C3'-C2'-C1'	5.14	106.44	101.30
49	BZ	69	SER	CA-C-N	5.14	127.42	120.38
49	BZ	69	SER	C-N-CA	5.14	127.42	120.38
53	B4	145	ASN	CB-CA-C	5.14	119.87	111.23
54	B5	7	TYR	N-CA-C	5.14	117.94	108.58
1	AP	41	U	C5'-C4'-C3'	-5.14	108.29	116.00
2	AM	18	U	O4'-C4'-C3'	-5.14	98.86	104.00
3	A1	46	G	P-O3'-C3'	5.14	127.91	120.20
3	A1	1295	U	C1'-C2'-O2'	-5.14	100.69	108.40
25	BB	532	A	C3'-C2'-C1'	5.14	106.44	101.30
25	BB	1968	G	C4'-C3'-C2'	-5.14	97.46	102.60
3	A1	1373	G	C4'-C3'-C2'	-5.14	97.46	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1411	C	O4'-C4'-C3'	-5.14	98.86	104.00
3	A1	1471	U	C4'-C3'-C2'	-5.14	97.46	102.60
14	AN	74	HIS	CB-CG-CD2	-5.14	124.52	131.20
17	AR	11	SER	N-CA-C	5.14	116.88	111.28
24	BA	92	C	O3'-P-O5'	5.14	111.71	104.00
25	BB	398	C	C1'-O4'-C4'	-5.14	104.76	109.90
25	BB	804	A	N1-C6-N6	-5.14	103.18	118.60
25	BB	2105	U	O5'-C5'-C4'	5.14	119.21	111.50
33	BJ	5	ARG	NE-CZ-NH2	5.14	123.83	119.20
33	BJ	36	GLN	OE1-CD-NE2	-5.14	117.46	122.60
3	A1	352	C	N1-C1'-C2'	5.14	119.71	112.00
3	A1	559	A	C1'-O4'-C4'	-5.14	104.56	109.70
3	A1	781	A	O3'-P-O5'	-5.14	96.29	104.00
3	A1	1053	G	O4'-C1'-N9	5.14	115.91	108.20
5	AC	121	ARG	NH1-CZ-NH2	-5.14	112.62	119.30
25	BB	1299	G	C5'-C4'-O4'	-5.14	101.39	109.10
25	BB	2420	C	C3'-C2'-C1'	5.14	106.64	101.50
28	BE	75	ALA	N-CA-C	5.14	121.74	110.80
55	B6	34	ARG	NE-CZ-NH2	5.14	123.83	119.20
1	AE	16	U	C5'-C4'-C3'	-5.14	107.49	115.20
3	A1	342	C	O3'-P-O5'	5.14	111.70	104.00
3	A1	433	G	O3'-P-O5'	-5.14	96.30	104.00
16	AQ	40	PRO	N-CD-CG	5.14	110.91	103.20
25	BB	8	C	C4'-C3'-O3'	-5.14	105.29	113.00
25	BB	519	U	C5'-C4'-C3'	-5.14	108.30	116.00
25	BB	2542	A	C4'-C3'-O3'	5.14	117.11	109.40
47	BX	4	ARG	CD-NE-CZ	5.14	131.59	124.40
3	A1	349	A	C3'-C2'-O2'	5.13	118.40	110.70
3	A1	959	A	C4'-C3'-C2'	-5.13	97.47	102.60
25	BB	162	U	C2'-C3'-O3'	5.13	117.20	109.50
25	BB	434	U	C2'-C3'-O3'	5.13	117.20	109.50
25	BB	1284	A	P-O5'-C5'	-5.13	113.20	120.90
25	BB	1775	U	C4'-C3'-C2'	5.13	107.73	102.60
25	BB	2669	G	C1'-C2'-O2'	-5.13	100.70	108.40
31	BH	13	ARG	NE-CZ-NH2	5.13	123.82	119.20
38	BO	52	ASN	N-CA-C	5.13	119.39	113.18
46	BW	35	LYS	CA-C-N	5.13	131.35	121.54
46	BW	35	LYS	C-N-CA	5.13	131.35	121.54
53	B4	10	ALA	CA-C-N	5.13	130.80	122.53
53	B4	10	ALA	C-N-CA	5.13	130.80	122.53
3	A1	177	G	O4'-C4'-C3'	-5.13	98.87	104.00
4	AB	45	THR	CA-CB-CG2	5.13	119.23	110.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	AK	59	LYS	N-CA-C	5.13	116.56	111.07
25	BB	108	G	C5'-C4'-O4'	5.13	117.50	109.80
25	BB	1571	A	C2'-C3'-O3'	5.13	121.40	113.70
48	BY	92	VAL	CA-CB-CG1	5.13	119.13	110.40
1	AP	49	C	P-O5'-C5'	5.13	128.60	120.90
3	A1	189	A	C4'-C3'-C2'	-5.13	97.47	102.60
3	A1	411	A	C3'-C2'-C1'	5.13	106.63	101.50
3	A1	1016	A	C4'-C3'-O3'	5.13	120.70	113.00
3	A1	1389	C	C4'-C3'-O3'	-5.13	105.30	113.00
25	BB	654	A	O3'-P-O5'	-5.13	96.30	104.00
25	BB	1953	A	C3'-C2'-O2'	-5.13	103.00	110.70
25	BB	2400	G	C1'-O4'-C4'	5.13	115.03	109.90
38	BO	78	LYS	N-CA-C	5.13	116.61	108.96
50	B1	29	HIS	CA-C-N	5.13	128.59	120.89
50	B1	29	HIS	C-N-CA	5.13	128.59	120.89
1	AE	24	G	O3'-P-O5'	-5.13	96.31	104.00
18	AS	9	GLU	CA-C-N	5.13	128.36	120.82
18	AS	9	GLU	C-N-CA	5.13	128.36	120.82
25	BB	2012	G	C1'-C2'-O2'	-5.13	104.11	111.80
25	BB	2111	U	O4'-C1'-N1	5.13	115.89	108.20
39	BP	9	THR	CA-C-N	5.13	131.34	121.54
39	BP	9	THR	C-N-CA	5.13	131.34	121.54
48	BY	161	MET	N-CA-C	5.13	118.32	111.75
3	A1	490	C	C3'-C2'-C1'	5.13	106.43	101.30
3	A1	662	U	C2'-C3'-O3'	5.13	121.39	113.70
25	BB	436	C	P-O3'-C3'	5.13	127.89	120.20
25	BB	584	C	C4'-C3'-C2'	-5.13	97.47	102.60
25	BB	899	A	C5'-C4'-C3'	-5.13	107.51	115.20
25	BB	1362	C	C3'-C2'-O2'	5.13	118.39	110.70
25	BB	1937	A	C3'-C2'-O2'	5.13	118.39	110.70
25	BB	2377	A	C3'-C2'-C1'	-5.13	96.17	101.30
25	BB	2541	A	P-O3'-C3'	5.13	127.89	120.20
53	B4	38	PRO	N-CA-CB	5.13	107.81	103.19
3	A1	41	G	C3'-C2'-O2'	5.13	118.39	110.70
3	A1	1089	G	O4'-C1'-C2'	-5.13	102.47	107.60
3	A1	1200	C	O5'-C5'-C4'	5.13	119.39	111.70
3	A1	1240	U	O4'-C1'-C2'	5.13	110.93	105.80
3	A1	1444	U	C5'-C4'-C3'	-5.13	108.31	116.00
25	BB	806	C	O3'-P-O5'	-5.13	96.31	104.00
25	BB	1009	A	O4'-C4'-C3'	5.13	109.13	104.00
25	BB	1322	A	O3'-P-O5'	5.13	111.69	104.00
25	BB	2533	U	C2'-C3'-O3'	5.13	121.39	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	BN	37	SER	N-CA-C	5.13	115.30	108.38
48	BY	114	LYS	N-CA-C	5.13	116.56	111.07
15	AO	21	TRP	CG-CD2-CE3	-5.12	128.78	133.90
25	BB	628	G	O3'-P-O5'	5.12	111.69	104.00
25	BB	658	U	N1-C1'-C2'	5.12	119.69	112.00
25	BB	1520	U	C5'-C4'-C3'	-5.12	108.31	116.00
25	BB	1603	A	C4'-C3'-C2'	-5.12	97.47	102.60
3	A1	1346	A	C5'-C4'-O4'	5.12	116.78	109.10
33	BJ	68	ALA	CA-C-N	5.12	127.15	120.28
33	BJ	68	ALA	C-N-CA	5.12	127.15	120.28
37	BN	111	ALA	O-C-N	-5.12	115.78	122.59
38	BO	23	LYS	CA-C-N	5.12	131.19	121.97
38	BO	23	LYS	C-N-CA	5.12	131.19	121.97
41	BR	30	ARG	CB-CA-C	5.12	120.62	110.42
48	BY	49	GLN	OE1-CD-NE2	-5.12	117.48	122.60
55	B6	98	GLU	CA-C-N	5.12	131.32	121.54
55	B6	98	GLU	C-N-CA	5.12	131.32	121.54
3	A1	83	C	O4'-C1'-C2'	-5.12	100.68	105.80
3	A1	1262	C	C3'-C2'-O2'	5.12	118.38	110.70
4	AB	79	VAL	N-CA-C	5.12	115.34	110.42
25	BB	467	G	O4'-C4'-C3'	5.12	109.12	104.00
25	BB	1561	C	C1'-C2'-O2'	-5.12	100.72	108.40
25	BB	1673	G	C4'-C3'-O3'	5.12	120.68	113.00
39	BP	70	VAL	CB-CA-C	-5.12	106.84	112.68
3	A1	767	A	O3'-P-O5'	-5.12	96.32	104.00
3	A1	1024	G	C5'-C4'-O4'	5.12	117.48	109.80
3	A1	1421	G	C5'-C4'-C3'	-5.12	108.32	116.00
9	AH	31	LEU	CA-C-N	5.12	127.56	120.29
9	AH	31	LEU	C-N-CA	5.12	127.56	120.29
25	BB	1750	G	C3'-C2'-C1'	-5.12	96.18	101.30
25	BB	1929	G	C1'-O4'-C4'	-5.12	104.78	109.90
25	BB	2191	A	P-O5'-C5'	5.12	128.58	120.90
30	BG	13	ASN	OD1-CG-ND2	-5.12	117.48	122.60
38	BO	81	ARG	CA-C-O	-5.12	115.42	120.90
38	BO	100	GLU	CA-C-N	5.12	130.79	122.39
38	BO	100	GLU	C-N-CA	5.12	130.79	122.39
40	BQ	8	GLU	CA-C-N	5.12	128.12	120.95
40	BQ	8	GLU	C-N-CA	5.12	128.12	120.95
3	A1	1071	C	O3'-P-O5'	5.12	111.68	104.00
25	BB	358	U	C4'-C3'-C2'	-5.12	97.48	102.60
25	BB	985	C	C3'-C2'-C1'	5.12	106.42	101.30
25	BB	1826	G	C4'-C3'-C2'	-5.12	97.48	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2420	C	C4'-C3'-C2'	-5.12	97.48	102.60
1	AA	11	C	C2'-C3'-O3'	5.12	121.38	113.70
3	A1	91	U	C3'-C2'-C1'	5.12	106.42	101.30
14	AN	9	ARG	CA-C-N	5.12	132.17	121.94
14	AN	9	ARG	C-N-CA	5.12	132.17	121.94
20	AU	25	PHE	CA-CB-CG	5.12	118.92	113.80
25	BB	33	C	C1'-O4'-C4'	-5.12	104.58	109.70
25	BB	972	A	C5'-C4'-O4'	5.12	116.78	109.10
1	AP	33	U	C4'-C3'-C2'	-5.12	97.48	102.60
3	A1	64	G	C4'-C3'-C2'	5.12	107.72	102.60
3	A1	485	U	O4'-C1'-N1	5.12	116.17	108.50
3	A1	1056	U	C3'-C2'-C1'	-5.12	96.19	101.30
24	BA	34	A	O4'-C1'-C2'	-5.12	102.48	107.60
24	BA	49	C	O5'-C5'-C4'	-5.12	103.83	111.50
25	BB	461	C	C3'-C2'-C1'	5.12	106.42	101.30
25	BB	880	G	C5'-C4'-C3'	-5.12	108.33	116.00
25	BB	1159	U	C3'-C2'-O2'	5.12	118.37	110.70
25	BB	1205	A	C2'-C3'-O3'	5.12	117.17	109.50
50	B1	15	SER	CA-C-N	5.12	127.85	120.38
50	B1	15	SER	C-N-CA	5.12	127.85	120.38
20	AU	102	TRP	CA-C-N	5.11	127.09	120.70
20	AU	102	TRP	C-N-CA	5.11	127.09	120.70
25	BB	442	G	C5'-C4'-C3'	-5.11	107.53	115.20
25	BB	844	A	O4'-C1'-N9	5.11	116.17	108.50
25	BB	2148	G	C4'-C3'-O3'	5.11	120.67	113.00
25	BB	2467	C	O5'-C5'-C4'	5.11	119.37	111.70
25	BB	2898	U	O4'-C4'-C3'	5.11	109.11	104.00
52	B3	57	TYR	CA-C-N	5.11	128.49	120.82
52	B3	57	TYR	C-N-CA	5.11	128.49	120.82
3	A1	328	C	C4'-C3'-O3'	5.11	117.07	109.40
3	A1	957	U	O3'-P-O5'	-5.11	96.33	104.00
3	A1	1003	G	C4'-C3'-C2'	5.11	107.71	102.60
25	BB	219	A	C4'-C3'-C2'	5.11	107.71	102.60
25	BB	1375	U	C4'-C3'-C2'	-5.11	97.49	102.60
46	BW	33	THR	N-CA-C	5.11	119.27	113.19
3	A1	99	C	C4'-C3'-C2'	-5.11	97.49	102.60
3	A1	293	G	O4'-C4'-C3'	5.11	109.11	104.00
3	A1	484	G	C4'-C3'-O3'	-5.11	101.73	109.40
3	A1	1316	G	O4'-C4'-C3'	5.11	109.11	104.00
7	AF	108	ARG	NH1-CZ-NH2	-5.11	112.66	119.30
25	BB	1071	G	C2'-C3'-O3'	5.11	117.17	109.50
25	BB	1642	G	C3'-C2'-O2'	5.11	118.37	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1669	A	O5'-C5'-C4'	-5.11	103.83	111.50
25	BB	1798	U	O3'-P-O5'	5.11	111.67	104.00
25	BB	1902	C	C1'-O4'-C4'	-5.11	104.79	109.90
25	BB	2124	G	O4'-C4'-C3'	5.11	109.11	104.00
25	BB	2360	G	C1'-O4'-C4'	-5.11	104.79	109.90
25	BB	2622	U	C3'-C2'-O2'	5.11	118.37	110.70
28	BE	47	ARG	NE-CZ-NH2	5.11	123.80	119.20
28	BE	53	GLY	CA-C-N	5.11	131.30	121.54
28	BE	53	GLY	C-N-CA	5.11	131.30	121.54
36	BM	53	VAL	N-CA-C	5.11	115.21	107.80
48	BY	114	LYS	CA-C-O	-5.11	115.45	120.82
3	A1	495	A	C3'-C2'-O2'	-5.11	106.94	114.60
12	AK	42	ARG	CA-C-N	5.11	128.68	120.30
12	AK	42	ARG	C-N-CA	5.11	128.68	120.30
24	BA	28	C	C5'-C4'-C3'	-5.11	108.34	116.00
25	BB	212	G	O4'-C4'-C3'	5.11	111.21	106.10
25	BB	1002	G	O3'-P-O5'	-5.11	96.34	104.00
25	BB	1912	A	O3'-P-O5'	-5.11	96.34	104.00
35	BL	8	ARG	CA-C-N	5.11	130.90	121.70
35	BL	8	ARG	C-N-CA	5.11	130.90	121.70
46	BW	21	PHE	CA-C-N	5.11	129.77	122.21
46	BW	21	PHE	C-N-CA	5.11	129.77	122.21
6	AD	48	LEU	CA-C-N	5.11	131.30	121.54
6	AD	48	LEU	C-N-CA	5.11	131.30	121.54
25	BB	1339	G	C3'-C2'-C1'	5.11	106.41	101.30
25	BB	1790	C	C3'-C2'-C1'	-5.11	96.19	101.30
25	BB	1905	C	C3'-C2'-O2'	-5.11	106.94	114.60
25	BB	2234	G	N9-C1'-C2'	-5.11	104.34	112.00
25	BB	2404	U	C5'-C4'-C3'	-5.11	108.34	116.00
25	BB	2693	G	C4'-C3'-C2'	-5.11	97.49	102.60
3	A1	1500	A	O3'-P-O5'	5.11	111.66	104.00
25	BB	869	G	O4'-C4'-C3'	5.11	109.11	104.00
25	BB	2478	A	C3'-C2'-C1'	-5.11	96.19	101.30
37	BN	230	PRO	N-CA-C	5.11	122.99	112.47
49	BZ	188	ASN	OD1-CG-ND2	-5.11	117.50	122.60
3	A1	740	U	O3'-P-O5'	5.10	111.66	104.00
25	BB	1162	G	C4'-C3'-O3'	-5.10	105.34	113.00
25	BB	1894	C	C1'-O4'-C4'	-5.10	104.80	109.90
25	BB	2524	G	C4'-C3'-O3'	5.10	120.66	113.00
6	AD	71	HIS	CA-CB-CG	5.10	118.90	113.80
25	BB	205	G	C4'-C3'-C2'	-5.10	97.50	102.60
25	BB	448	U	O4'-C1'-N1	5.10	115.86	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	541	A	C1'-O4'-C4'	-5.10	104.80	109.90
25	BB	1505	A	O4'-C4'-C3'	5.10	109.10	104.00
25	BB	1841	U	C3'-C2'-C1'	5.10	106.40	101.30
25	BB	2163	A	P-O3'-C3'	5.10	127.85	120.20
25	BB	2175	C	C3'-C2'-C1'	5.10	106.40	101.30
25	BB	2267	A	C1'-O4'-C4'	-5.10	104.80	109.90
25	BB	2302	U	C5'-C4'-C3'	-5.10	108.35	116.00
34	BK	47	VAL	N-CA-C	5.10	116.20	108.96
37	BN	188	ARG	N-CA-C	5.10	117.28	109.07
37	BN	255	LYS	N-CA-C	5.10	117.87	109.76
52	B3	131	VAL	N-CA-C	5.10	115.20	107.80
1	AA	42	G	O3'-P-O5'	5.10	111.65	104.00
1	AE	50	U	C1'-C2'-O2'	5.10	116.05	108.40
3	A1	385	C	C3'-C2'-O2'	5.10	118.35	110.70
3	A1	1272	G	C4'-C3'-O3'	5.10	120.65	113.00
18	AS	79	THR	CA-C-N	5.10	131.08	122.87
18	AS	79	THR	C-N-CA	5.10	131.08	122.87
54	B5	42	ASN	CA-C-N	5.10	127.43	120.54
54	B5	42	ASN	C-N-CA	5.10	127.43	120.54
1	AE	34	G	C4'-C3'-C2'	-5.10	97.50	102.60
3	A1	223	A	C3'-C2'-O2'	5.10	118.35	110.70
3	A1	1284	C	O4'-C4'-C3'	5.10	109.10	104.00
6	AD	15	VAL	CA-CB-CG2	5.10	119.07	110.40
7	AF	86	ARG	NH1-CZ-NH2	-5.10	112.67	119.30
25	BB	625	G	C5'-C4'-O4'	5.10	117.45	109.80
25	BB	800	A	C4'-C3'-O3'	5.10	117.05	109.40
25	BB	1082	U	C2'-C3'-O3'	5.10	121.35	113.70
25	BB	1743	G	C4'-C3'-C2'	-5.10	97.50	102.60
27	BD	104	THR	CA-CB-CG2	5.10	119.17	110.50
37	BN	79	ARG	NH1-CZ-NH2	-5.10	112.67	119.30
3	A1	174	A	O4'-C1'-C2'	5.10	110.90	105.80
3	A1	1488	G	O4'-C1'-C2'	5.10	112.70	107.60
3	A1	1495	U	O3'-P-O5'	5.10	111.64	104.00
25	BB	766	U	C1'-O4'-C4'	-5.10	104.60	109.70
25	BB	1056	G	C3'-C2'-O2'	5.10	118.35	110.70
25	BB	1106	G	O4'-C4'-C3'	5.10	109.10	104.00
25	BB	1164	C	O4'-C1'-C2'	-5.10	102.50	107.60
25	BB	2513	A	O4'-C1'-C2'	-5.10	100.70	105.80
25	BB	2840	C	O4'-C1'-C2'	5.10	110.90	105.80
30	BG	90	ARG	CD-NE-CZ	5.10	131.54	124.40
2	AM	4	U	C3'-C2'-C1'	-5.10	96.20	101.30
3	A1	381	C	C4'-C3'-C2'	-5.10	97.50	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	1492	A	C3'-C2'-C1'	-5.10	96.40	101.50
25	BB	1013	C	O5'-C5'-C4'	-5.10	104.06	111.70
25	BB	2416	C	C3'-C2'-C1'	-5.10	96.20	101.30
1	AE	39	U	C3'-C2'-O2'	5.09	118.34	110.70
2	AM	16	U	O4'-C4'-C3'	5.09	109.09	104.00
3	A1	26	A	C4'-C3'-C2'	5.09	107.69	102.60
3	A1	854	U	O4'-C4'-C3'	5.09	109.09	104.00
3	A1	899	C	O4'-C1'-C2'	-5.09	100.70	105.80
15	AO	155	ARG	CA-C-N	5.09	131.27	121.54
15	AO	155	ARG	C-N-CA	5.09	131.27	121.54
25	BB	24	G	C5'-C4'-C3'	-5.09	108.36	116.00
25	BB	1049	C	C5'-C4'-O4'	5.09	117.44	109.80
25	BB	1539	U	C3'-C2'-C1'	-5.09	96.41	101.50
25	BB	1864	U	O4'-C1'-N1	5.09	116.14	108.50
25	BB	1972	G	C4'-C3'-O3'	-5.09	101.76	109.40
25	BB	2055	C	O3'-P-O5'	5.09	111.64	104.00
25	BB	2173	A	C4'-C3'-O3'	-5.09	105.36	113.00
33	BJ	83	LYS	CA-C-N	5.09	128.05	120.31
33	BJ	83	LYS	C-N-CA	5.09	128.05	120.31
49	BZ	87	ARG	NE-CZ-NH2	5.09	123.78	119.20
50	B1	122	GLU	CA-C-N	5.09	131.27	121.54
50	B1	122	GLU	C-N-CA	5.09	131.27	121.54
3	A1	904	U	C4'-C3'-O3'	-5.09	105.36	113.00
3	A1	1077	G	C5'-C4'-C3'	-5.09	108.36	116.00
25	BB	1304	A	O4'-C4'-C3'	5.09	109.09	104.00
1	AP	72	C	C4'-C3'-C2'	-5.09	97.51	102.60
1	AE	9	A	C4'-C3'-C2'	-5.09	97.51	102.60
25	BB	130	C	C3'-C2'-O2'	5.09	122.24	114.60
25	BB	502	A	C3'-C2'-C1'	5.09	106.39	101.30
25	BB	662	G	C3'-C2'-C1'	5.09	106.59	101.50
25	BB	731	C	C1'-O4'-C4'	-5.09	104.81	109.90
25	BB	1733	G	C4'-C3'-C2'	-5.09	97.51	102.60
25	BB	2071	A	OP1-P-OP2	-5.09	104.33	119.60
1	AA	53	G	O4'-C4'-C3'	5.09	109.09	104.00
3	A1	59	A	O3'-P-O5'	-5.09	96.36	104.00
3	A1	338	A	P-O5'-C5'	5.09	128.53	120.90
25	BB	39	G	C3'-C2'-O2'	5.09	118.33	110.70
25	BB	1219	U	C5'-C4'-C3'	-5.09	108.36	116.00
25	BB	1259	G	O3'-P-O5'	5.09	111.63	104.00
25	BB	2668	G	C3'-C2'-O2'	5.09	118.33	110.70
27	BD	12	ASP	N-CA-CB	-5.09	101.90	109.69
3	A1	783	C	C5'-C4'-C3'	-5.09	108.37	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1268	A	C4'-C3'-O3'	-5.09	105.37	113.00
27	BD	80	ASP	OD1-CG-OD2	-5.09	110.69	122.90
53	B4	98	ASP	CA-C-N	5.09	128.51	120.47
53	B4	98	ASP	C-N-CA	5.09	128.51	120.47
3	A1	124	C	C4'-C3'-C2'	5.09	107.69	102.60
3	A1	177	G	C4'-C3'-C2'	-5.09	97.51	102.60
3	A1	482	A	O4'-C4'-C3'	5.09	109.09	104.00
3	A1	1225	A	O3'-P-O5'	5.09	111.63	104.00
25	BB	271	G	C4'-C3'-C2'	-5.09	97.51	102.60
25	BB	432	A	N9-C1'-C2'	-5.09	106.37	114.00
25	BB	1426	G	C1'-O4'-C4'	-5.09	104.81	109.90
25	BB	1490	A	C5'-C4'-C3'	-5.09	107.57	115.20
25	BB	1566	A	C2'-C3'-O3'	5.09	117.13	109.50
25	BB	1694	C	C5'-C4'-O4'	5.09	116.73	109.10
25	BB	2163	A	C5'-C4'-C3'	-5.09	108.37	116.00
25	BB	2693	G	O3'-P-O5'	-5.09	96.37	104.00
46	BW	33	THR	CA-C-N	5.09	131.25	121.54
46	BW	33	THR	C-N-CA	5.09	131.25	121.54
25	BB	412	A	P-O3'-C3'	5.08	127.83	120.20
25	BB	1463	C	P-O5'-C5'	5.08	128.53	120.90
39	BP	56	HIS	CA-C-N	5.08	131.31	122.56
39	BP	56	HIS	C-N-CA	5.08	131.31	122.56
51	B2	104	THR	N-CA-C	5.08	121.97	114.09
1	AA	22	G	C2'-C3'-O3'	5.08	121.32	113.70
1	AA	65	G	C5'-C4'-C3'	5.08	123.62	116.00
1	AP	70	C	O4'-C4'-C3'	5.08	109.08	104.00
3	A1	293	G	C3'-C2'-O2'	5.08	118.33	110.70
3	A1	447	G	O3'-P-O5'	-5.08	96.37	104.00
3	A1	641	U	C3'-C2'-C1'	5.08	106.58	101.50
3	A1	854	U	C5'-C4'-C3'	-5.08	108.37	116.00
3	A1	1238	A	O4'-C1'-C2'	-5.08	100.72	105.80
3	A1	1284	C	C3'-C2'-C1'	5.08	106.38	101.30
21	AV	83	ARG	NH1-CZ-NH2	-5.08	112.69	119.30
25	BB	181	A	O4'-C4'-C3'	5.08	109.08	104.00
25	BB	458	G	O4'-C1'-N9	5.08	115.83	108.20
25	BB	2070	A	C3'-C2'-C1'	5.08	106.58	101.50
25	BB	2095	A	O4'-C1'-N9	5.08	116.13	108.50
1	AP	35	A	C4'-C3'-C2'	-5.08	97.52	102.60
3	A1	518	C	C3'-C2'-O2'	-5.08	106.98	114.60
3	A1	1249	C	C4'-C3'-C2'	5.08	107.68	102.60
3	A1	1396	A	C2'-C3'-O3'	5.08	117.12	109.50
9	AH	1	SER	CA-C-N	5.08	132.15	123.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	AH	1	SER	C-N-CA	5.08	132.15	123.05
25	BB	1002	G	C1'-C2'-O2'	5.08	116.02	108.40
25	BB	2117	A	C2'-C3'-O3'	5.08	121.32	113.70
35	BL	57	ASN	CA-C-N	5.08	129.27	121.19
35	BL	57	ASN	C-N-CA	5.08	129.27	121.19
48	BY	35	THR	CA-CB-CG2	5.08	119.14	110.50
3	A1	722	G	C4'-C3'-C2'	-5.08	97.52	102.60
3	A1	1400	C	O4'-C1'-C2'	-5.08	100.72	105.80
3	A1	1435	G	P-O3'-C3'	-5.08	112.58	120.20
24	BA	69	G	C4'-C3'-O3'	5.08	120.62	113.00
25	BB	1494	A	C5'-C4'-O4'	5.08	117.42	109.80
25	BB	1863	G	O4'-C4'-C3'	5.08	109.08	104.00
25	BB	2061	G	P-O5'-C5'	5.08	128.52	120.90
33	BJ	47	ARG	NH1-CZ-NH2	-5.08	112.70	119.30
3	A1	1208	C	C5'-C4'-C3'	-5.08	108.38	116.00
3	A1	1486	G	C1'-C2'-O2'	-5.08	100.78	108.40
25	BB	115	C	C3'-C2'-C1'	5.08	106.38	101.30
25	BB	197	A	O5'-C5'-C4'	5.08	119.12	111.50
25	BB	370	G	P-O3'-C3'	5.08	127.82	120.20
25	BB	387	U	O4'-C1'-N1	5.08	115.82	108.20
25	BB	404	A	C3'-C2'-C1'	5.08	106.58	101.50
25	BB	620	G	C3'-C2'-C1'	5.08	106.58	101.50
25	BB	678	C	O4'-C1'-C2'	-5.08	102.52	107.60
25	BB	742	A	C1'-O4'-C4'	-5.08	104.62	109.70
25	BB	2006	C	O5'-C5'-C4'	5.08	119.12	111.50
25	BB	2217	G	O3'-P-O5'	5.08	111.62	104.00
25	BB	2430	A	N9-C1'-C2'	5.08	119.62	112.00
25	BB	2864	G	C5'-C4'-C3'	-5.08	108.38	116.00
43	BT	13	GLY	CA-C-N	5.08	128.03	120.31
43	BT	13	GLY	C-N-CA	5.08	128.03	120.31
54	B5	20	SER	N-CA-C	5.08	121.03	109.81
3	A1	477	C	C2'-C3'-O3'	5.08	121.32	113.70
25	BB	1425	G	C5'-C4'-C3'	-5.08	107.58	115.20
25	BB	1561	C	P-O5'-C5'	5.08	128.52	120.90
25	BB	1922	G	C1'-O4'-C4'	-5.08	104.82	109.90
1	AA	16	U	C3'-C2'-C1'	5.08	106.38	101.30
3	A1	187	G	C4'-C3'-C2'	-5.08	97.53	102.60
3	A1	193	C	O3'-P-O5'	5.08	111.61	104.00
3	A1	397	A	C1'-O4'-C4'	-5.08	104.62	109.70
20	AU	139	ASP	N-CA-C	5.08	116.81	111.28
25	BB	274	C	O3'-P-O5'	5.08	111.61	104.00
25	BB	800	A	O3'-P-O5'	-5.08	96.39	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1572	A	O3'-P-O5'	-5.08	96.39	104.00
25	BB	1584	U	C4'-C3'-O3'	-5.08	105.39	113.00
25	BB	2008	C	O4'-C1'-C2'	-5.08	102.52	107.60
25	BB	2598	A	C5'-C4'-C3'	-5.08	107.59	115.20
50	B1	191	ASP	O-C-N	-5.08	115.09	121.74
3	A1	454	G	C5'-C4'-C3'	-5.07	108.39	116.00
3	A1	603	U	C4'-C3'-C2'	-5.07	97.53	102.60
3	A1	866	C	C1'-O4'-C4'	-5.07	104.83	109.90
6	AD	55	ARG	CA-C-N	5.07	129.07	121.72
6	AD	55	ARG	C-N-CA	5.07	129.07	121.72
25	BB	1291	C	O5'-C5'-C4'	-5.07	103.89	111.50
25	BB	2791	G	C5'-C4'-C3'	-5.07	108.39	116.00
25	BB	2820	A	C3'-C2'-C1'	5.07	106.57	101.50
34	BK	20	VAL	CA-C-N	5.07	132.04	123.01
34	BK	20	VAL	C-N-CA	5.07	132.04	123.01
34	BK	98	ILE	CA-C-N	5.07	131.23	121.54
34	BK	98	ILE	C-N-CA	5.07	131.23	121.54
53	B4	111	ALA	CA-C-N	5.07	127.08	120.28
53	B4	111	ALA	C-N-CA	5.07	127.08	120.28
54	B5	29	GLN	OE1-CD-NE2	-5.07	117.53	122.60
24	BA	106	G	C3'-C2'-O2'	5.07	118.31	110.70
25	BB	1170	C	N1-C1'-C2'	5.07	119.61	112.00
25	BB	1402	U	C4'-C3'-C2'	-5.07	97.53	102.60
25	BB	1766	G	O4'-C4'-C3'	5.07	111.17	106.10
55	B6	64	VAL	N-CA-C	5.07	119.89	109.34
1	AA	73	A	O3'-P-O5'	5.07	111.61	104.00
3	A1	1174	G	C5'-C4'-O4'	5.07	117.41	109.80
9	AH	88	ARG	NE-CZ-NH1	5.07	126.57	121.50
24	BA	77	U	C4'-C3'-O3'	-5.07	105.39	113.00
25	BB	98	G	C3'-C2'-C1'	5.07	106.37	101.30
25	BB	1363	C	O4'-C1'-C2'	-5.07	102.53	107.60
25	BB	1376	C	C3'-C2'-C1'	5.07	106.37	101.30
25	BB	2606	C	C4'-C3'-C2'	-5.07	97.53	102.60
45	BV	35	ARG	NE-CZ-NH2	5.07	123.76	119.20
3	A1	671	G	C5'-C4'-C3'	-5.07	108.40	116.00
3	A1	1523	G	C3'-C2'-O2'	5.07	118.30	110.70
25	BB	659	G	C3'-C2'-C1'	-5.07	96.23	101.30
1	AP	25	C	C1'-C2'-O2'	-5.07	100.80	108.40
1	AE	69	U	C1'-O4'-C4'	-5.07	104.83	109.90
3	A1	191	G	C5'-C4'-C3'	-5.07	108.40	116.00
3	A1	609	A	C4'-C3'-C2'	-5.07	97.53	102.60
25	BB	78	U	C4'-C3'-C2'	-5.07	97.53	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	125	A	O3'-P-O5'	-5.07	96.40	104.00
25	BB	2230	G	C4'-C3'-C2'	-5.07	97.53	102.60
25	BB	2433	A	C5'-C4'-C3'	-5.07	107.60	115.20
25	BB	2867	G	O4'-C1'-C2'	-5.07	100.73	105.80
3	A1	1397	C	P-O3'-C3'	5.07	127.80	120.20
22	AW	119	LYS	CB-CG-CD	5.07	122.95	111.30
24	BA	75	G	C4'-C3'-O3'	5.07	120.60	113.00
25	BB	39	G	C5'-C4'-O4'	5.07	117.40	109.80
25	BB	86	G	C4'-C3'-C2'	-5.07	97.53	102.60
25	BB	185	G	C3'-C2'-O2'	5.07	118.30	110.70
25	BB	322	A	O4'-C4'-C3'	5.07	109.06	104.00
25	BB	900	A	C2'-C3'-O3'	5.07	117.10	109.50
25	BB	1425	G	O4'-C1'-N9	5.07	115.80	108.20
25	BB	1705	A	O4'-C1'-C2'	-5.07	102.53	107.60
25	BB	1875	G	C1'-C2'-O2'	5.07	116.00	108.40
25	BB	2628	C	O3'-P-O5'	5.07	111.60	104.00
25	BB	2658	C	O4'-C4'-C3'	5.07	109.06	104.00
25	BB	2726	A	C5'-C4'-O4'	5.07	116.70	109.10
25	BB	2895	G	C4'-C3'-C2'	-5.07	97.53	102.60
50	B1	200	LEU	CA-C-N	5.07	130.82	121.70
50	B1	200	LEU	C-N-CA	5.07	130.82	121.70
10	AI	10	GLY	CA-C-N	5.06	130.81	121.70
10	AI	10	GLY	C-N-CA	5.06	130.81	121.70
25	BB	2249	U	C2'-C3'-O3'	-5.06	106.11	113.70
25	BB	2334	U	C4'-C3'-C2'	-5.06	97.54	102.60
25	BB	2463	C	P-O5'-C5'	5.06	128.50	120.90
25	BB	2475	C	C4'-C3'-O3'	-5.06	105.40	113.00
33	BJ	112	ALA	CA-C-N	5.06	131.21	121.54
33	BJ	112	ALA	C-N-CA	5.06	131.21	121.54
1	AE	71	G	C4'-C3'-C2'	-5.06	97.54	102.60
3	A1	762	U	O4'-C4'-C3'	5.06	109.06	104.00
3	A1	779	C	C5'-C4'-O4'	-5.06	102.21	109.80
3	A1	934	C	O3'-P-O5'	5.06	111.59	104.00
20	AU	52	ARG	NE-CZ-NH1	5.06	126.56	121.50
25	BB	405	U	C3'-C2'-C1'	-5.06	96.44	101.50
25	BB	1319	C	O4'-C4'-C3'	-5.06	98.94	104.00
25	BB	1729	U	O4'-C4'-C3'	5.06	111.16	106.10
25	BB	2746	U	C4'-C3'-C2'	-5.06	97.54	102.60
3	A1	394	G	C2'-C3'-O3'	5.06	121.29	113.70
3	A1	844	G	C1'-O4'-C4'	-5.06	104.84	109.90
3	A1	1454	G	C4'-C3'-C2'	5.06	107.66	102.60
5	AC	126	ARG	NE-CZ-NH2	5.06	123.75	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	AX	81	GLU	N-CA-C	5.06	117.45	111.33
25	BB	1149	G	P-O5'-C5'	5.06	128.49	120.90
1	AP	4	G	O4'-C1'-C2'	-5.06	102.54	107.60
3	A1	568	G	N9-C1'-C2'	-5.06	104.41	112.00
3	A1	810	C	N1-C1'-C2'	5.06	119.59	112.00
3	A1	1066	C	O4'-C1'-C2'	-5.06	100.74	105.80
3	A1	1300	G	C5'-C4'-C3'	-5.06	107.61	115.20
3	A1	1325	C	O4'-C1'-C2'	5.06	112.66	107.60
25	BB	979	A	C4'-C3'-C2'	-5.06	97.54	102.60
25	BB	1034	G	N9-C1'-C2'	5.06	119.59	112.00
25	BB	1421	G	O4'-C1'-C2'	-5.06	102.54	107.60
25	BB	2127	G	C3'-C2'-C1'	5.06	106.36	101.30
25	BB	2328	A	C3'-C2'-C1'	5.06	106.36	101.30
25	BB	2790	U	C2'-C3'-O3'	5.06	121.29	113.70
1	AP	34	G	O5'-C5'-C4'	5.06	119.09	111.50
3	A1	137	U	C1'-C2'-O2'	5.06	115.99	108.40
3	A1	198	G	C1'-C2'-O2'	-5.06	100.81	108.40
3	A1	272	C	O4'-C4'-C3'	5.06	109.06	104.00
3	A1	500	G	O4'-C1'-N9	5.06	116.08	108.50
8	AG	70	HIS	CB-CG-CD2	-5.06	124.62	131.20
16	AQ	19	LYS	N-CA-C	5.06	118.94	112.87
24	BA	40	U	O4'-C4'-C3'	5.06	111.16	106.10
25	BB	351	C	O4'-C1'-C2'	-5.06	102.54	107.60
25	BB	1148	U	C3'-C2'-O2'	5.06	118.29	110.70
25	BB	2420	C	O5'-C5'-C4'	5.06	119.29	111.70
38	BO	53	GLN	CA-C-N	5.06	126.16	119.84
38	BO	53	GLN	C-N-CA	5.06	126.16	119.84
49	BZ	58	PRO	O-C-N	-5.06	116.57	122.89
3	A1	23	C	O4'-C4'-C3'	5.06	109.06	104.00
3	A1	580	C	N1-C1'-C2'	5.06	119.58	112.00
13	AL	52	ASN	CA-C-N	5.06	130.80	121.70
13	AL	52	ASN	C-N-CA	5.06	130.80	121.70
25	BB	193	U	O4'-C1'-C2'	5.06	112.66	107.60
3	A1	52	C	P-O3'-C3'	5.05	127.78	120.20
3	A1	504	C	C5'-C4'-C3'	5.05	122.78	115.20
3	A1	1151	A	C3'-C2'-C1'	-5.05	96.45	101.50
3	A1	1315	U	C4'-C3'-C2'	-5.05	97.55	102.60
25	BB	147	C	C2'-C3'-O3'	5.05	117.08	109.50
25	BB	1226	A	O4'-C1'-N9	5.05	116.08	108.50
25	BB	2791	G	C1'-O4'-C4'	5.05	114.95	109.90
28	BE	48	ARG	N-CA-C	5.05	116.64	111.03
55	B6	34	ARG	NH1-CZ-NH2	-5.05	112.73	119.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	B6	134	ALA	CA-C-N	5.05	128.84	121.31
55	B6	134	ALA	C-N-CA	5.05	128.84	121.31
1	AA	62	A	C5'-C4'-O4'	5.05	117.38	109.80
4	AB	60	ALA	CA-C-O	-5.05	115.49	120.90
23	AX	31	ARG	NE-CZ-NH1	5.05	126.55	121.50
25	BB	1175	A	C1'-O4'-C4'	-5.05	104.85	109.90
25	BB	1543	G	C3'-C2'-C1'	5.05	106.35	101.30
25	BB	1580	A	C4'-C3'-C2'	-5.05	97.55	102.60
2	AM	1	U	O4'-C1'-N1	5.05	115.78	108.20
3	A1	64	G	C1'-C2'-O2'	5.05	115.98	108.40
3	A1	1046	A	C2'-C3'-O3'	5.05	121.28	113.70
3	A1	1063	C	O3'-P-O5'	5.05	111.58	104.00
3	A1	1370	G	O5'-C5'-C4'	-5.05	103.92	111.50
25	BB	1364	G	C1'-O4'-C4'	5.05	114.95	109.90
26	BC	19	ARG	NE-CZ-NH1	5.05	126.55	121.50
26	BC	35	GLU	CA-CB-CG	5.05	124.20	114.10
31	BH	25	ARG	NE-CZ-NH1	5.05	126.55	121.50
35	BL	86	MET	CA-C-N	5.05	126.16	119.84
35	BL	86	MET	C-N-CA	5.05	126.16	119.84
49	BZ	105	ARG	NE-CZ-NH1	5.05	126.55	121.50
3	A1	464	U	C4'-C3'-C2'	-5.05	97.55	102.60
3	A1	1431	A	C1'-O4'-C4'	-5.05	104.85	109.90
6	AD	13	ARG	CA-C-N	5.05	129.97	121.14
6	AD	13	ARG	C-N-CA	5.05	129.97	121.14
11	AJ	67	SER	CA-C-N	5.05	131.18	121.54
11	AJ	67	SER	C-N-CA	5.05	131.18	121.54
18	AS	142	GLY	CA-C-N	5.05	127.05	120.28
18	AS	142	GLY	C-N-CA	5.05	127.05	120.28
25	BB	2329	U	O4'-C1'-N1	5.05	116.08	108.50
25	BB	2826	A	C4'-C3'-O3'	-5.05	105.42	113.00
30	BG	43	GLU	N-CA-C	5.05	116.86	111.36
35	BL	18	ARG	NH1-CZ-NH2	-5.05	112.73	119.30
46	BW	30	HIS	CB-CG-CD2	-5.05	124.64	131.20
54	B5	4	VAL	CA-C-N	5.05	130.89	122.20
54	B5	4	VAL	C-N-CA	5.05	130.89	122.20
3	A1	413	G	C2'-C3'-O3'	-5.05	106.13	113.70
3	A1	676	A	C1'-O4'-C4'	-5.05	104.85	109.90
18	AS	13	LYS	N-CA-C	5.05	117.67	109.24
24	BA	103	U	O3'-P-O5'	5.05	111.57	104.00
25	BB	404	A	C5'-C4'-C3'	-5.05	107.63	115.20
25	BB	601	C	C3'-C2'-O2'	5.05	118.27	110.70
3	A1	326	G	C3'-C2'-O2'	5.05	118.27	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A1	511	C	P-O3'-C3'	5.05	127.77	120.20
3	A1	623	C	O4'-C4'-C3'	5.05	109.05	104.00
3	A1	781	A	N9-C1'-C2'	-5.05	104.43	112.00
3	A1	803	G	O4'-C4'-C3'	5.05	109.05	104.00
3	A1	1040	U	O3'-P-O5'	5.05	111.57	104.00
3	A1	1533	C	O5'-C5'-C4'	5.05	119.27	111.70
19	AT	2	ARG	N-CA-C	5.05	119.06	113.01
25	BB	71	A	O4'-C4'-C3'	5.05	111.15	106.10
25	BB	314	C	C3'-C2'-O2'	5.05	118.27	110.70
25	BB	1590	A	C5'-C4'-O4'	5.05	117.37	109.80
25	BB	1987	A	C3'-C2'-C1'	5.05	106.35	101.30
25	BB	2206	C	O4'-C4'-C3'	5.05	109.05	104.00
25	BB	2352	A	C4'-C3'-O3'	-5.05	105.43	113.00
3	A1	403	C	O4'-C4'-C3'	5.04	109.05	104.00
3	A1	1005	A	C2'-C3'-O3'	-5.04	106.13	113.70
25	BB	20	C	O5'-C5'-C4'	-5.04	103.93	111.50
25	BB	1548	A	C5'-C4'-C3'	-5.04	108.43	116.00
3	A1	11	G	C3'-C2'-C1'	5.04	106.34	101.30
3	A1	1118	U	C4'-C3'-C2'	-5.04	97.56	102.60
5	AC	68	ARG	NE-CZ-NH1	5.04	126.54	121.50
25	BB	248	G	C4'-C3'-O3'	5.04	120.56	113.00
25	BB	1046	A	C3'-C2'-O2'	5.04	122.17	114.60
25	BB	1422	G	O3'-P-O5'	-5.04	96.44	104.00
25	BB	2203	U	C1'-O4'-C4'	-5.04	104.86	109.90
25	BB	2231	U	O5'-C5'-C4'	-5.04	103.94	111.50
25	BB	2860	A	O4'-C1'-C2'	-5.04	102.56	107.60
4	AB	64	GLY	CA-C-N	5.04	131.15	123.23
4	AB	64	GLY	C-N-CA	5.04	131.15	123.23
25	BB	593	U	C5'-C4'-C3'	-5.04	108.44	116.00
25	BB	719	C	C3'-C2'-C1'	5.04	106.34	101.30
25	BB	762	U	O4'-C1'-N1	5.04	115.76	108.20
25	BB	1718	G	O4'-C4'-C3'	5.04	109.04	104.00
25	BB	1909	C	O3'-P-O5'	5.04	111.56	104.00
25	BB	2367	G	C4'-C3'-C2'	-5.04	97.56	102.60
25	BB	2604	U	C3'-C2'-C1'	5.04	106.54	101.50
25	BB	2855	C	C2'-C3'-O3'	5.04	121.26	113.70
37	BN	133	ASN	N-CA-C	5.04	118.69	112.54
52	B3	110	HIS	CA-C-N	5.04	125.19	119.90
52	B3	110	HIS	C-N-CA	5.04	125.19	119.90
52	B3	111	PRO	N-CA-C	5.04	118.41	110.80
52	B3	145	ALA	N-CA-C	5.04	118.20	111.75
25	BB	2262	U	C5'-C4'-C3'	-5.04	108.44	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	2407	A	C2'-C3'-O3'	-5.04	106.14	113.70
25	BB	2864	G	O4'-C1'-C2'	-5.04	102.56	107.60
3	A1	474	G	O4'-C4'-C3'	5.04	109.04	104.00
3	A1	816	A	O5'-C5'-C4'	-5.04	103.94	111.50
3	A1	1265	C	C1'-O4'-C4'	-5.04	104.86	109.90
25	BB	873	C	C4'-C3'-C2'	-5.04	97.56	102.60
25	BB	2479	U	C1'-O4'-C4'	-5.04	104.86	109.90
31	BH	24	THR	CA-C-N	5.04	132.78	122.55
31	BH	24	THR	C-N-CA	5.04	132.78	122.55
3	A1	703	G	C4'-C3'-C2'	-5.04	97.56	102.60
3	A1	1491	G	O4'-C1'-N9	5.04	115.75	108.20
25	BB	39	G	C4'-C3'-O3'	-5.04	105.44	113.00
25	BB	2013	A	C4'-C3'-O3'	-5.04	105.44	113.00
25	BB	2333	A	C5'-C4'-C3'	-5.04	107.64	115.20
27	BD	100	PHE	N-CA-CB	-5.04	103.77	110.57
49	BZ	145	SER	CA-C-O	-5.04	115.71	121.00
1	AA	55	U	C4'-C3'-O3'	5.04	120.55	113.00
1	AA	72	C	O4'-C1'-N1	5.04	116.05	108.50
3	A1	189	A	C3'-C2'-C1'	5.04	106.33	101.30
3	A1	827	U	O4'-C1'-C2'	-5.04	100.76	105.80
25	BB	1898	U	C1'-C2'-O2'	5.04	119.35	111.80
25	BB	2463	C	C4'-C3'-O3'	-5.04	105.44	113.00
25	BB	2675	A	C5'-C4'-C3'	-5.04	107.65	115.20
25	BB	2784	U	O4'-C4'-C3'	5.04	109.04	104.00
36	BM	51	PHE	CA-C-O	5.04	124.83	119.34
43	BT	16	ARG	CA-C-N	5.04	131.16	121.54
43	BT	16	ARG	C-N-CA	5.04	131.16	121.54
2	AM	17	U	N1-C1'-C2'	5.03	119.55	112.00
2	AM	18	U	C3'-C2'-C1'	-5.03	96.27	101.30
3	A1	379	C	O4'-C1'-N1	5.03	116.05	108.50
15	AO	99	GLN	OE1-CD-NE2	-5.03	117.57	122.60
17	AR	26	ALA	CA-C-O	-5.03	115.22	120.55
25	BB	539	G	C3'-C2'-O2'	5.03	122.15	114.60
25	BB	1883	U	C4'-C3'-C2'	-5.03	97.57	102.60
25	BB	2796	U	O4'-C1'-C2'	-5.03	100.77	105.80
42	BS	65	ASN	N-CA-CB	-5.03	103.04	110.49
25	BB	1287	A	O4'-C4'-C3'	-5.03	101.07	106.10
25	BB	1359	A	C3'-C2'-O2'	5.03	118.25	110.70
52	B3	55	ASP	N-CA-C	5.03	117.80	109.85
3	A1	22	G	N9-C1'-C2'	5.03	119.54	112.00
3	A1	493	A	C4'-C3'-O3'	5.03	120.55	113.00
23	AX	58	ASN	CA-CB-CG	5.03	117.63	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	118	A	O4'-C1'-N9	5.03	115.75	108.20
25	BB	570	G	C2'-C3'-O3'	5.03	117.04	109.50
25	BB	845	A	O3'-P-O5'	5.03	111.55	104.00
25	BB	968	C	O4'-C1'-N1	5.03	115.75	108.20
25	BB	1452	G	C5'-C4'-O4'	5.03	117.34	109.80
25	BB	1494	A	O4'-C4'-C3'	5.03	109.03	104.00
25	BB	1655	A	C5'-C4'-O4'	5.03	117.35	109.80
25	BB	2806	C	C5'-C4'-C3'	-5.03	108.46	116.00
43	BT	41	HIS	CB-CG-CD2	-5.03	124.66	131.20
3	A1	501	C	C3'-C2'-O2'	5.03	118.24	110.70
3	A1	824	G	O4'-C4'-C3'	5.03	109.03	104.00
3	A1	1116	U	O3'-P-O5'	-5.03	96.46	104.00
25	BB	1456	G	O4'-C4'-C3'	5.03	109.03	104.00
25	BB	2401	U	C4'-C3'-C2'	-5.03	97.57	102.60
25	BB	2404	U	C4'-C3'-C2'	-5.03	97.57	102.60
39	BP	69	GLU	CA-C-N	5.03	128.00	122.22
39	BP	69	GLU	C-N-CA	5.03	128.00	122.22
3	A1	1276	G	C3'-C2'-C1'	-5.03	96.27	101.30
3	A1	1427	C	C3'-C2'-C1'	5.03	106.33	101.30
15	AO	105	VAL	CA-C-N	5.03	131.14	121.54
15	AO	105	VAL	C-N-CA	5.03	131.14	121.54
17	AR	69	ARG	NE-CZ-NH1	5.03	126.53	121.50
21	AV	112	ASP	CA-C-N	5.03	127.28	120.65
21	AV	112	ASP	C-N-CA	5.03	127.28	120.65
24	BA	19	C	C1'-C2'-O2'	-5.03	100.86	108.40
25	BB	541	A	O4'-C1'-C2'	-5.03	102.57	107.60
25	BB	903	C	C3'-C2'-O2'	5.03	118.24	110.70
25	BB	1885	A	O4'-C1'-C2'	-5.03	102.57	107.60
25	BB	2068	U	C4'-C3'-C2'	-5.03	97.57	102.60
25	BB	2304	G	C3'-C2'-O2'	5.03	118.24	110.70
25	BB	2461	A	C1'-O4'-C4'	-5.03	104.87	109.90
25	BB	2569	G	N9-C1'-C2'	5.03	119.54	112.00
25	BB	2623	G	C4'-C3'-C2'	-5.03	97.57	102.60
25	BB	2803	G	C5'-C4'-C3'	-5.03	108.46	116.00
34	BK	86	GLN	CA-C-N	5.03	129.83	121.99
34	BK	86	GLN	C-N-CA	5.03	129.83	121.99
3	A1	194	C	O3'-P-O5'	-5.03	96.46	104.00
3	A1	513	C	O3'-P-O5'	-5.03	96.46	104.00
3	A1	1163	A	N9-C1'-C2'	-5.03	104.46	112.00
25	BB	263	G	C3'-C2'-O2'	5.03	118.24	110.70
25	BB	451	U	O5'-C5'-C4'	-5.03	103.96	111.50
25	BB	1254	A	O3'-P-O5'	5.03	111.54	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1655	A	N9-C1'-C2'	5.03	119.54	112.00
25	BB	2179	C	O5'-C5'-C4'	5.03	119.04	111.50
26	BC	45	ASP	CA-C-N	5.03	127.02	120.28
26	BC	45	ASP	C-N-CA	5.03	127.02	120.28
26	BC	71	LYS	CA-C-N	5.03	129.82	122.69
26	BC	71	LYS	C-N-CA	5.03	129.82	122.69
31	BH	34	HIS	CB-CG-CD2	-5.03	124.67	131.20
37	BN	60	ALA	N-CA-CB	-5.03	102.86	110.40
42	BS	68	GLY	CA-C-N	5.03	131.14	121.54
42	BS	68	GLY	C-N-CA	5.03	131.14	121.54
3	A1	118	U	C4'-C3'-O3'	-5.02	105.46	113.00
3	A1	724	G	O5'-C5'-C4'	5.02	119.04	111.50
4	AB	199	ILE	CA-C-N	5.02	126.12	119.84
4	AB	199	ILE	C-N-CA	5.02	126.12	119.84
18	AS	113	VAL	CA-C-N	5.02	131.00	122.36
18	AS	113	VAL	C-N-CA	5.02	131.00	122.36
34	BK	71	LYS	CA-C-N	5.02	131.01	121.97
34	BK	71	LYS	C-N-CA	5.02	131.01	121.97
47	BX	17	VAL	CA-C-N	5.02	130.33	120.99
47	BX	17	VAL	C-N-CA	5.02	130.33	120.99
52	B3	140	ILE	N-CA-CB	5.02	116.43	110.55
1	AA	60	C	C5'-C4'-C3'	-5.02	107.67	115.20
21	AV	84	ILE	CA-C-N	5.02	129.37	122.84
21	AV	84	ILE	C-N-CA	5.02	129.37	122.84
25	BB	507	A	O3'-P-O5'	5.02	111.53	104.00
25	BB	624	C	C3'-C2'-O2'	5.02	118.23	110.70
25	BB	717	C	C1'-C2'-O2'	-5.02	100.87	108.40
25	BB	1585	C	C1'-O4'-C4'	-5.02	104.88	109.90
25	BB	1680	U	O4'-C4'-C3'	5.02	111.12	106.10
25	BB	1908	C	C2'-C3'-O3'	5.02	117.03	109.50
25	BB	1935	G	C3'-C2'-O2'	5.02	122.13	114.60
25	BB	2463	C	C5'-C4'-C3'	-5.02	108.47	116.00
25	BB	2508	G	C4'-C3'-O3'	-5.02	101.87	109.40
51	B2	165	GLY	CA-C-N	5.02	130.35	122.11
51	B2	165	GLY	C-N-CA	5.02	130.35	122.11
3	A1	595	A	O5'-C5'-C4'	5.02	119.23	111.70
24	BA	6	G	O3'-P-O5'	5.02	111.53	104.00
24	BA	37	C	O3'-P-O5'	-5.02	96.47	104.00
25	BB	325	G	C3'-C2'-C1'	-5.02	96.28	101.30
25	BB	648	G	C4'-C3'-C2'	5.02	107.62	102.60
25	BB	1177	G	C2'-C3'-O3'	5.02	121.23	113.70
25	BB	1585	C	C3'-C2'-C1'	-5.02	96.28	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	1918	A	O4'-C1'-C2'	5.02	110.82	105.80
25	BB	1952	A	P-O5'-C5'	5.02	128.43	120.90
25	BB	2541	A	C4'-C3'-C2'	-5.02	97.58	102.60
25	BB	2655	G	O5'-C5'-C4'	5.02	119.23	111.70
50	B1	157	LEU	N-CA-C	5.02	119.27	113.20
54	B5	42	ASN	OD1-CG-ND2	-5.02	117.58	122.60
3	A1	43	C	O4'-C4'-C3'	5.02	109.02	104.00
3	A1	174	A	N9-C1'-C2'	-5.02	106.47	114.00
3	A1	308	C	N1-C1'-C2'	5.02	119.53	112.00
3	A1	774	G	O5'-C5'-C4'	-5.02	104.17	111.70
3	A1	811	C	N1-C1'-C2'	-5.02	106.47	114.00
3	A1	1271	A	N9-C1'-C2'	5.02	119.53	112.00
25	BB	1400	U	O4'-C1'-N1	5.02	116.03	108.50
25	BB	2182	U	C2'-C3'-O3'	5.02	121.23	113.70
25	BB	2240	U	C4'-C3'-C2'	-5.02	97.58	102.60
25	BB	2812	G	C4'-C3'-C2'	-5.02	97.58	102.60
37	BN	247	TRP	CA-C-N	5.02	129.95	121.57
37	BN	247	TRP	C-N-CA	5.02	129.95	121.57
50	B1	160	ALA	CA-C-N	5.02	128.71	120.63
50	B1	160	ALA	C-N-CA	5.02	128.71	120.63
3	A1	816	A	C5'-C4'-C3'	-5.02	108.48	116.00
19	AT	28	ALA	CA-C-N	5.02	126.98	120.56
19	AT	28	ALA	C-N-CA	5.02	126.98	120.56
25	BB	601	C	C5'-C4'-C3'	-5.02	108.47	116.00
25	BB	2006	C	C4'-C3'-C2'	-5.02	97.58	102.60
25	BB	2491	U	N1-C1'-C2'	5.02	119.52	112.00
30	BG	56	LYS	N-CA-C	5.02	118.89	112.87
3	A1	667	G	O4'-C1'-C2'	-5.01	102.59	107.60
3	A1	1049	U	O4'-C1'-C2'	-5.01	102.58	107.60
25	BB	483	A	C5'-C4'-C3'	-5.01	108.48	116.00
25	BB	1674	G	O4'-C4'-C3'	5.01	109.01	104.00
25	BB	1827	U	O4'-C1'-N1	5.01	115.72	108.20
25	BB	1994	C	C3'-C2'-O2'	5.01	118.22	110.70
25	BB	2041	U	O3'-P-O5'	-5.01	96.48	104.00
25	BB	2675	A	C1'-O4'-C4'	-5.01	104.69	109.70
38	BO	95	PHE	CA-CB-CG	5.01	118.81	113.80
41	BR	44	ARG	CA-C-N	5.01	125.64	120.03
41	BR	44	ARG	C-N-CA	5.01	125.64	120.03
53	B4	76	GLU	CA-C-N	5.01	131.12	121.54
53	B4	76	GLU	C-N-CA	5.01	131.12	121.54
3	A1	163	C	O4'-C1'-C2'	-5.01	102.59	107.60
3	A1	370	C	O4'-C1'-N1	5.01	116.02	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	927	A	O5'-C5'-C4'	-5.01	103.98	111.50
32	BI	112	ARG	CD-NE-CZ	5.01	131.42	124.40
1	AA	60	C	O4'-C1'-C2'	-5.01	100.79	105.80
1	AP	4	G	C1'-C2'-O2'	-5.01	100.88	108.40
10	AI	14	ARG	NE-CZ-NH2	5.01	123.71	119.20
25	BB	672	C	O4'-C1'-N1	5.01	115.72	108.20
25	BB	1298	C	O4'-C4'-C3'	-5.01	98.99	104.00
25	BB	1614	A	C4'-C3'-O3'	-5.01	101.88	109.40
25	BB	1984	G	C4'-C3'-O3'	-5.01	105.48	113.00
25	BB	2053	G	C4'-C3'-O3'	5.01	120.52	113.00
25	BB	2741	A	O4'-C1'-C2'	-5.01	102.59	107.60
1	AE	6	U	O3'-P-O5'	5.01	111.51	104.00
3	A1	368	U	C5'-C4'-O4'	5.01	117.31	109.80
3	A1	370	C	C4'-C3'-O3'	-5.01	105.49	113.00
3	A1	562	U	C4'-C3'-C2'	5.01	107.61	102.60
3	A1	978	A	C5'-C4'-C3'	-5.01	108.49	116.00
3	A1	1089	G	C5'-C4'-O4'	5.01	117.31	109.80
3	A1	1134	G	C3'-C2'-O2'	5.01	118.21	110.70
25	BB	656	G	O5'-C5'-C4'	5.01	119.02	111.50
25	BB	664	G	C2'-C3'-O3'	5.01	121.21	113.70
25	BB	1037	G	N9-C1'-C2'	-5.01	104.48	112.00
25	BB	1077	A	C4'-C3'-O3'	-5.01	105.49	113.00
25	BB	1079	C	C4'-C3'-C2'	-5.01	97.59	102.60
25	BB	1759	A	O4'-C4'-C3'	5.01	109.01	104.00
25	BB	2401	U	O4'-C1'-N1	5.01	115.71	108.20
25	BB	2686	G	C5'-C4'-C3'	-5.01	108.49	116.00
31	BH	98	GLN	OE1-CD-NE2	-5.01	117.59	122.60
48	BY	67	HIS	CA-C-N	5.01	129.91	121.14
48	BY	67	HIS	C-N-CA	5.01	129.91	121.14
3	A1	512	U	C1'-C2'-O2'	5.01	115.91	108.40
25	BB	882	G	C4'-C3'-C2'	-5.01	97.59	102.60
25	BB	993	G	C3'-C2'-O2'	5.01	118.21	110.70
25	BB	2856	A	C3'-C2'-O2'	5.01	118.21	110.70
3	A1	502	A	C4'-C3'-O3'	-5.01	105.49	113.00
3	A1	1466	C	O4'-C1'-N1	5.01	116.01	108.50
13	AL	76	THR	CA-CB-CG2	5.01	119.01	110.50
24	BA	39	A	O3'-P-O5'	-5.01	96.49	104.00
25	BB	474	G	C5'-C4'-C3'	-5.01	108.49	116.00
25	BB	2411	A	O3'-P-O5'	-5.01	96.49	104.00
28	BE	126	ARG	NE-CZ-NH2	5.01	123.70	119.20
32	BI	89	GLY	N-CA-C	5.01	117.35	110.69
42	BS	16	CYS	N-CA-C	5.01	117.23	108.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AM	3	U	C3'-C2'-C1'	-5.00	96.50	101.50
3	A1	914	A	N9-C1'-C2'	5.00	121.51	114.00
25	BB	2899	A	C1'-C2'-O2'	5.00	115.91	108.40
3	A1	854	U	C1'-O4'-C4'	-5.00	104.90	109.90
3	A1	940	C	C5'-C4'-O4'	5.00	117.31	109.80
4	AB	34	ARG	NH1-CZ-NH2	-5.00	112.80	119.30
24	BA	23	G	C4'-C3'-C2'	-5.00	97.60	102.60
25	BB	570	G	O4'-C1'-N9	5.00	115.70	108.20
25	BB	1280	G	C5'-C4'-C3'	-5.00	108.50	116.00
29	BF	30	SER	CA-C-N	5.00	127.44	120.63
29	BF	30	SER	C-N-CA	5.00	127.44	120.63
38	BO	82	VAL	N-CA-C	5.00	119.75	109.34
53	B4	98	ASP	N-CA-C	5.00	118.16	111.75
3	A1	1264	U	C3'-C2'-C1'	-5.00	96.30	101.30
15	AO	191	THR	N-CA-C	5.00	119.23	113.38
25	BB	130	C	O5'-C5'-C4'	-5.00	104.20	111.70
25	BB	564	C	O4'-C1'-C2'	-5.00	100.80	105.80
25	BB	848	C	C4'-C3'-C2'	-5.00	97.60	102.60
25	BB	2299	U	O3'-P-O5'	5.00	111.50	104.00

All (10) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AP	31	A	C1',C2'
3	A1	13	U	C1',C2'
3	A1	1198	G	C4'
3	A1	1483	A	C2'
14	AN	13	SER	CA
25	BB	1687	G	C1'
25	BB	1959	G	C1',C2'

All (3101) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	A1	100	G	Sidechain
3	A1	1000	A	Sidechain
3	A1	1001	C	Sidechain
3	A1	1002	G	Sidechain
3	A1	1003	G	Sidechain
3	A1	1005	A	Sidechain
3	A1	1006	G	Sidechain
3	A1	1009	U	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	1010	U	Sidechain
3	A1	1013	G	Sidechain
3	A1	1014	A	Sidechain
3	A1	1015	G	Sidechain
3	A1	1016	A	Sidechain
3	A1	1017	U	Sidechain
3	A1	1018	G	Sidechain
3	A1	102	G	Sidechain
3	A1	1021	A	Sidechain
3	A1	1022	A	Sidechain
3	A1	1023	U	Sidechain
3	A1	1024	G	Sidechain
3	A1	1025	U	Sidechain
3	A1	1026	G	Sidechain
3	A1	1028	C	Sidechain
3	A1	1029	U	Sidechain
3	A1	1034	G	Sidechain
3	A1	1039	G	Sidechain
3	A1	104	G	Sidechain
3	A1	1040	U	Sidechain
3	A1	1043	G	Sidechain
3	A1	1044	A	Sidechain
3	A1	1047	G	Sidechain
3	A1	1048	G	Sidechain
3	A1	1049	U	Sidechain
3	A1	105	G	Sidechain
3	A1	1051	C	Sidechain
3	A1	1052	U	Sidechain
3	A1	1053	G	Sidechain
3	A1	1056	U	Sidechain
3	A1	1058	G	Sidechain
3	A1	106	C	Sidechain
3	A1	1061	G	Sidechain
3	A1	1062	U	Sidechain
3	A1	1064	G	Sidechain
3	A1	1065	U	Sidechain
3	A1	1066	C	Sidechain
3	A1	1068	G	Sidechain
3	A1	107	G	Sidechain
3	A1	1070	U	Sidechain
3	A1	1071	C	Sidechain
3	A1	1073	U	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	1074	G	Sidechain
3	A1	1075	U	Sidechain
3	A1	1077	G	Sidechain
3	A1	1078	U	Sidechain
3	A1	1079	G	Sidechain
3	A1	108	G	Sidechain
3	A1	1080	A	Sidechain
3	A1	1081	A	Sidechain
3	A1	1082	A	Sidechain
3	A1	1083	U	Sidechain
3	A1	1084	G	Sidechain
3	A1	1087	G	Sidechain
3	A1	1088	G	Sidechain
3	A1	1089	G	Sidechain
3	A1	109	A	Sidechain
3	A1	1091	U	Sidechain
3	A1	1092	A	Sidechain
3	A1	1093	A	Sidechain
3	A1	1097	C	Sidechain
3	A1	1098	C	Sidechain
3	A1	1099	G	Sidechain
3	A1	11	G	Sidechain
3	A1	110	C	Sidechain
3	A1	1100	C	Sidechain
3	A1	1101	A	Sidechain
3	A1	1104	G	Sidechain
3	A1	1105	A	Sidechain
3	A1	1108	G	Sidechain
3	A1	1109	C	Sidechain
3	A1	111	G	Sidechain
3	A1	1110	A	Sidechain
3	A1	1114	C	Sidechain
3	A1	1115	U	Sidechain
3	A1	1116	U	Sidechain
3	A1	1117	A	Sidechain
3	A1	1118	U	Sidechain
3	A1	1119	C	Sidechain
3	A1	112	G	Sidechain
3	A1	1120	C	Sidechain
3	A1	1121	U	Sidechain
3	A1	1122	U	Sidechain
3	A1	1127	G	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	1129	C	Sidechain
3	A1	113	G	Sidechain
3	A1	1130	A	Sidechain
3	A1	1132	C	Sidechain
3	A1	1133	G	Sidechain
3	A1	1136	C	Sidechain
3	A1	1137	C	Sidechain
3	A1	1138	G	Sidechain
3	A1	1139	G	Sidechain
3	A1	114	U	Sidechain
3	A1	1141	C	Sidechain
3	A1	1143	G	Sidechain
3	A1	1144	G	Sidechain
3	A1	1145	A	Sidechain
3	A1	1149	C	Sidechain
3	A1	115	G	Sidechain
3	A1	1150	A	Sidechain
3	A1	1151	A	Sidechain
3	A1	1152	A	Sidechain
3	A1	1153	G	Sidechain
3	A1	1154	G	Sidechain
3	A1	1155	A	Sidechain
3	A1	1158	C	Sidechain
3	A1	1160	G	Sidechain
3	A1	1163	A	Sidechain
3	A1	1164	G	Sidechain
3	A1	1166	G	Sidechain
3	A1	1168	U	Sidechain
3	A1	1170	A	Sidechain
3	A1	1173	U	Sidechain
3	A1	1174	G	Sidechain
3	A1	1175	G	Sidechain
3	A1	1177	G	Sidechain
3	A1	1178	G	Sidechain
3	A1	1179	A	Sidechain
3	A1	118	U	Sidechain
3	A1	1180	A	Sidechain
3	A1	1181	G	Sidechain
3	A1	1182	G	Sidechain
3	A1	1184	G	Sidechain
3	A1	1189	U	Sidechain
3	A1	119	A	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	1190	G	Sidechain
3	A1	1192	C	Sidechain
3	A1	1193	G	Sidechain
3	A1	1194	U	Sidechain
3	A1	1196	A	Sidechain
3	A1	1197	A	Sidechain
3	A1	1198	G	Sidechain
3	A1	12	U	Sidechain
3	A1	120	A	Sidechain
3	A1	1201	A	Sidechain
3	A1	1203	C	Sidechain
3	A1	1204	A	Sidechain
3	A1	1205	U	Sidechain
3	A1	1206	G	Sidechain
3	A1	1207	G	Sidechain
3	A1	1209	C	Sidechain
3	A1	121	U	Sidechain
3	A1	1211	U	Sidechain
3	A1	1213	A	Sidechain
3	A1	1218	C	Sidechain
3	A1	122	G	Sidechain
3	A1	1220	G	Sidechain
3	A1	1223	C	Sidechain
3	A1	1224	U	Sidechain
3	A1	1225	A	Sidechain
3	A1	1229	A	Sidechain
3	A1	1233	G	Sidechain
3	A1	1234	C	Sidechain
3	A1	1236	A	Sidechain
3	A1	1237	C	Sidechain
3	A1	1239	A	Sidechain
3	A1	1240	U	Sidechain
3	A1	1241	G	Sidechain
3	A1	1242	G	Sidechain
3	A1	1244	G	Sidechain
3	A1	1245	C	Sidechain
3	A1	1248	A	Sidechain
3	A1	1249	C	Sidechain
3	A1	1251	A	Sidechain
3	A1	1253	G	Sidechain
3	A1	1254	A	Sidechain
3	A1	1255	G	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	1256	A	Sidechain
3	A1	1257	A	Sidechain
3	A1	1258	G	Sidechain
3	A1	126	G	Sidechain
3	A1	1261	A	Sidechain
3	A1	1264	U	Sidechain
3	A1	1266	G	Sidechain
3	A1	1267	C	Sidechain
3	A1	1268	G	Sidechain
3	A1	1272	G	Sidechain
3	A1	1276	G	Sidechain
3	A1	1277	C	Sidechain
3	A1	1278	G	Sidechain
3	A1	1279	G	Sidechain
3	A1	128	G	Sidechain
3	A1	1281	C	Sidechain
3	A1	1286	U	Sidechain
3	A1	1287	A	Sidechain
3	A1	1289	A	Sidechain
3	A1	1292	G	Sidechain
3	A1	1293	C	Sidechain
3	A1	1294	G	Sidechain
3	A1	1297	G	Sidechain
3	A1	130	A	Sidechain
3	A1	1300	G	Sidechain
3	A1	1301	U	Sidechain
3	A1	1305	G	Sidechain
3	A1	1307	U	Sidechain
3	A1	1311	A	Sidechain
3	A1	1312	G	Sidechain
3	A1	1315	U	Sidechain
3	A1	1316	G	Sidechain
3	A1	1317	C	Sidechain
3	A1	1319	A	Sidechain
3	A1	132	C	Sidechain
3	A1	1321	U	Sidechain
3	A1	1322	C	Sidechain
3	A1	1323	G	Sidechain
3	A1	1324	A	Sidechain
3	A1	1325	C	Sidechain
3	A1	1326	U	Sidechain
3	A1	1327	C	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	133	U	Sidechain
3	A1	1331	G	Sidechain
3	A1	1335	U	Sidechain
3	A1	1338	G	Sidechain
3	A1	134	G	Sidechain
3	A1	1345	U	Sidechain
3	A1	1347	G	Sidechain
3	A1	1348	U	Sidechain
3	A1	1349	A	Sidechain
3	A1	135	C	Sidechain
3	A1	1350	A	Sidechain
3	A1	1352	C	Sidechain
3	A1	1353	G	Sidechain
3	A1	1354	U	Sidechain
3	A1	1358	U	Sidechain
3	A1	1359	C	Sidechain
3	A1	1362	A	Sidechain
3	A1	1364	U	Sidechain
3	A1	1365	G	Sidechain
3	A1	1366	C	Sidechain
3	A1	1368	A	Sidechain
3	A1	1369	C	Sidechain
3	A1	137	U	Sidechain
3	A1	1371	G	Sidechain
3	A1	1373	G	Sidechain
3	A1	1374	A	Sidechain
3	A1	1375	A	Sidechain
3	A1	1376	U	Sidechain
3	A1	1377	A	Sidechain
3	A1	1378	C	Sidechain
3	A1	1379	G	Sidechain
3	A1	138	G	Sidechain
3	A1	1380	U	Sidechain
3	A1	1382	C	Sidechain
3	A1	1384	C	Sidechain
3	A1	1386	G	Sidechain
3	A1	1387	G	Sidechain
3	A1	1388	C	Sidechain
3	A1	1390	U	Sidechain
3	A1	1393	U	Sidechain
3	A1	1395	C	Sidechain
3	A1	1396	A	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	1397	C	Sidechain
3	A1	1398	A	Sidechain
3	A1	14	U	Sidechain
3	A1	140	U	Sidechain
3	A1	1400	C	Sidechain
3	A1	1401	G	Sidechain
3	A1	1403	C	Sidechain
3	A1	1404	C	Sidechain
3	A1	1405	G	Sidechain
3	A1	1406	U	Sidechain
3	A1	1408	A	Sidechain
3	A1	1409	C	Sidechain
3	A1	141	G	Sidechain
3	A1	1410	A	Sidechain
3	A1	1412	C	Sidechain
3	A1	1414	U	Sidechain
3	A1	1415	G	Sidechain
3	A1	1416	G	Sidechain
3	A1	1418	A	Sidechain
3	A1	1419	G	Sidechain
3	A1	1420	U	Sidechain
3	A1	1421	G	Sidechain
3	A1	1422	G	Sidechain
3	A1	1423	G	Sidechain
3	A1	1424	U	Sidechain
3	A1	1426	G	Sidechain
3	A1	1428	A	Sidechain
3	A1	1430	A	Sidechain
3	A1	1432	G	Sidechain
3	A1	1433	A	Sidechain
3	A1	1435	G	Sidechain
3	A1	1438	G	Sidechain
3	A1	1439	G	Sidechain
3	A1	144	G	Sidechain
3	A1	1440	U	Sidechain
3	A1	1442	G	Sidechain
3	A1	1443	C	Sidechain
3	A1	1446	A	Sidechain
3	A1	1447	A	Sidechain
3	A1	1448	C	Sidechain
3	A1	145	G	Sidechain
3	A1	1450	U	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	1454	G	Sidechain
3	A1	1455	G	Sidechain
3	A1	1457	G	Sidechain
3	A1	1459	G	Sidechain
3	A1	1460	C	Sidechain
3	A1	1461	G	Sidechain
3	A1	1464	U	Sidechain
3	A1	1468	A	Sidechain
3	A1	1469	C	Sidechain
3	A1	1472	U	Sidechain
3	A1	1473	G	Sidechain
3	A1	1475	G	Sidechain
3	A1	1476	A	Sidechain
3	A1	1477	U	Sidechain
3	A1	1478	U	Sidechain
3	A1	148	G	Sidechain
3	A1	1480	A	Sidechain
3	A1	1481	U	Sidechain
3	A1	1482	G	Sidechain
3	A1	1483	A	Sidechain
3	A1	1485	U	Sidechain
3	A1	1487	G	Sidechain
3	A1	1488	G	Sidechain
3	A1	1489	G	Sidechain
3	A1	149	A	Sidechain
3	A1	1490	U	Sidechain
3	A1	1491	G	Sidechain
3	A1	1492	A	Sidechain
3	A1	1493	A	Sidechain
3	A1	1495	U	Sidechain
3	A1	15	G	Sidechain
3	A1	150	U	Sidechain
3	A1	1504	G	Sidechain
3	A1	1505	G	Sidechain
3	A1	1507	A	Sidechain
3	A1	151	A	Sidechain
3	A1	1510	C	Sidechain
3	A1	1511	G	Sidechain
3	A1	1513	A	Sidechain
3	A1	1514	G	Sidechain
3	A1	1515	G	Sidechain
3	A1	1518	A	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	1519	A	Sidechain
3	A1	152	A	Sidechain
3	A1	1520	C	Sidechain
3	A1	1521	C	Sidechain
3	A1	1522	U	Sidechain
3	A1	1526	G	Sidechain
3	A1	1527	U	Sidechain
3	A1	1529	G	Sidechain
3	A1	153	C	Sidechain
3	A1	1530	G	Sidechain
3	A1	1531	A	Sidechain
3	A1	1532	U	Sidechain
3	A1	156	C	Sidechain
3	A1	158	G	Sidechain
3	A1	159	G	Sidechain
3	A1	16	A	Sidechain
3	A1	160	A	Sidechain
3	A1	161	A	Sidechain
3	A1	162	A	Sidechain
3	A1	163	C	Sidechain
3	A1	164	G	Sidechain
3	A1	165	G	Sidechain
3	A1	166	U	Sidechain
3	A1	167	A	Sidechain
3	A1	168	G	Sidechain
3	A1	172	A	Sidechain
3	A1	173	U	Sidechain
3	A1	174	A	Sidechain
3	A1	178	C	Sidechain
3	A1	179	A	Sidechain
3	A1	182	A	Sidechain
3	A1	183	C	Sidechain
3	A1	184	G	Sidechain
3	A1	185	U	Sidechain
3	A1	186	C	Sidechain
3	A1	187	G	Sidechain
3	A1	188	C	Sidechain
3	A1	189	A	Sidechain
3	A1	190	A	Sidechain
3	A1	191	G	Sidechain
3	A1	192	A	Sidechain
3	A1	198	G	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	199	A	Sidechain
3	A1	200	G	Sidechain
3	A1	202	G	Sidechain
3	A1	203	G	Sidechain
3	A1	204	G	Sidechain
3	A1	205	A	Sidechain
3	A1	208	U	Sidechain
3	A1	209	U	Sidechain
3	A1	210	C	Sidechain
3	A1	213	G	Sidechain
3	A1	214	C	Sidechain
3	A1	215	C	Sidechain
3	A1	217	C	Sidechain
3	A1	218	U	Sidechain
3	A1	219	U	Sidechain
3	A1	22	G	Sidechain
3	A1	220	G	Sidechain
3	A1	222	C	Sidechain
3	A1	225	C	Sidechain
3	A1	226	G	Sidechain
3	A1	227	G	Sidechain
3	A1	228	A	Sidechain
3	A1	229	U	Sidechain
3	A1	23	C	Sidechain
3	A1	230	G	Sidechain
3	A1	231	U	Sidechain
3	A1	233	C	Sidechain
3	A1	237	G	Sidechain
3	A1	238	A	Sidechain
3	A1	24	U	Sidechain
3	A1	240	G	Sidechain
3	A1	241	G	Sidechain
3	A1	244	U	Sidechain
3	A1	249	U	Sidechain
3	A1	25	C	Sidechain
3	A1	250	A	Sidechain
3	A1	253	A	Sidechain
3	A1	254	G	Sidechain
3	A1	255	G	Sidechain
3	A1	257	G	Sidechain
3	A1	258	G	Sidechain
3	A1	259	G	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	26	A	Sidechain
3	A1	260	G	Sidechain
3	A1	261	U	Sidechain
3	A1	262	A	Sidechain
3	A1	264	C	Sidechain
3	A1	265	G	Sidechain
3	A1	266	G	Sidechain
3	A1	267	C	Sidechain
3	A1	269	C	Sidechain
3	A1	27	G	Sidechain
3	A1	271	C	Sidechain
3	A1	275	G	Sidechain
3	A1	277	C	Sidechain
3	A1	279	A	Sidechain
3	A1	284	C	Sidechain
3	A1	285	C	Sidechain
3	A1	286	C	Sidechain
3	A1	288	A	Sidechain
3	A1	289	G	Sidechain
3	A1	291	U	Sidechain
3	A1	292	G	Sidechain
3	A1	294	U	Sidechain
3	A1	295	C	Sidechain
3	A1	297	G	Sidechain
3	A1	300	A	Sidechain
3	A1	301	G	Sidechain
3	A1	302	G	Sidechain
3	A1	303	A	Sidechain
3	A1	305	G	Sidechain
3	A1	307	C	Sidechain
3	A1	308	C	Sidechain
3	A1	309	A	Sidechain
3	A1	31	G	Sidechain
3	A1	310	G	Sidechain
3	A1	311	C	Sidechain
3	A1	312	C	Sidechain
3	A1	313	A	Sidechain
3	A1	317	U	Sidechain
3	A1	318	G	Sidechain
3	A1	319	G	Sidechain
3	A1	320	A	Sidechain
3	A1	321	A	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	322	C	Sidechain
3	A1	323	U	Sidechain
3	A1	324	G	Sidechain
3	A1	326	G	Sidechain
3	A1	327	A	Sidechain
3	A1	330	C	Sidechain
3	A1	331	G	Sidechain
3	A1	332	G	Sidechain
3	A1	333	U	Sidechain
3	A1	334	C	Sidechain
3	A1	336	A	Sidechain
3	A1	337	G	Sidechain
3	A1	340	U	Sidechain
3	A1	341	C	Sidechain
3	A1	343	U	Sidechain
3	A1	346	G	Sidechain
3	A1	348	G	Sidechain
3	A1	35	G	Sidechain
3	A1	350	G	Sidechain
3	A1	351	G	Sidechain
3	A1	352	C	Sidechain
3	A1	353	A	Sidechain
3	A1	354	G	Sidechain
3	A1	356	A	Sidechain
3	A1	357	G	Sidechain
3	A1	358	U	Sidechain
3	A1	359	G	Sidechain
3	A1	360	G	Sidechain
3	A1	361	G	Sidechain
3	A1	362	G	Sidechain
3	A1	363	A	Sidechain
3	A1	367	U	Sidechain
3	A1	368	U	Sidechain
3	A1	369	G	Sidechain
3	A1	37	U	Sidechain
3	A1	371	A	Sidechain
3	A1	372	C	Sidechain
3	A1	375	U	Sidechain
3	A1	376	G	Sidechain
3	A1	377	G	Sidechain
3	A1	378	G	Sidechain
3	A1	38	G	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	381	C	Sidechain
3	A1	382	A	Sidechain
3	A1	384	G	Sidechain
3	A1	388	G	Sidechain
3	A1	389	A	Sidechain
3	A1	39	G	Sidechain
3	A1	390	U	Sidechain
3	A1	391	G	Sidechain
3	A1	392	C	Sidechain
3	A1	395	C	Sidechain
3	A1	396	C	Sidechain
3	A1	398	U	Sidechain
3	A1	399	G	Sidechain
3	A1	40	C	Sidechain
3	A1	400	C	Sidechain
3	A1	401	C	Sidechain
3	A1	404	G	Sidechain
3	A1	406	G	Sidechain
3	A1	409	U	Sidechain
3	A1	41	G	Sidechain
3	A1	410	G	Sidechain
3	A1	411	A	Sidechain
3	A1	412	A	Sidechain
3	A1	413	G	Sidechain
3	A1	414	A	Sidechain
3	A1	415	A	Sidechain
3	A1	416	G	Sidechain
3	A1	417	G	Sidechain
3	A1	419	C	Sidechain
3	A1	42	G	Sidechain
3	A1	420	U	Sidechain
3	A1	421	U	Sidechain
3	A1	422	C	Sidechain
3	A1	423	G	Sidechain
3	A1	424	G	Sidechain
3	A1	425	G	Sidechain
3	A1	427	U	Sidechain
3	A1	428	G	Sidechain
3	A1	429	U	Sidechain
3	A1	432	A	Sidechain
3	A1	433	G	Sidechain
3	A1	434	U	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	435	A	Sidechain
3	A1	436	C	Sidechain
3	A1	437	U	Sidechain
3	A1	438	U	Sidechain
3	A1	44	A	Sidechain
3	A1	440	C	Sidechain
3	A1	442	G	Sidechain
3	A1	443	C	Sidechain
3	A1	445	G	Sidechain
3	A1	446	G	Sidechain
3	A1	447	G	Sidechain
3	A1	449	G	Sidechain
3	A1	45	G	Sidechain
3	A1	450	G	Sidechain
3	A1	452	A	Sidechain
3	A1	453	G	Sidechain
3	A1	454	G	Sidechain
3	A1	456	A	Sidechain
3	A1	457	G	Sidechain
3	A1	458	U	Sidechain
3	A1	459	A	Sidechain
3	A1	461	A	Sidechain
3	A1	463	U	Sidechain
3	A1	465	A	Sidechain
3	A1	467	U	Sidechain
3	A1	470	C	Sidechain
3	A1	473	U	Sidechain
3	A1	474	G	Sidechain
3	A1	475	C	Sidechain
3	A1	476	U	Sidechain
3	A1	478	A	Sidechain
3	A1	480	U	Sidechain
3	A1	483	C	Sidechain
3	A1	485	U	Sidechain
3	A1	486	U	Sidechain
3	A1	487	A	Sidechain
3	A1	489	C	Sidechain
3	A1	491	G	Sidechain
3	A1	493	A	Sidechain
3	A1	494	G	Sidechain
3	A1	497	G	Sidechain
3	A1	499	A	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	50	A	Sidechain
3	A1	501	C	Sidechain
3	A1	504	C	Sidechain
3	A1	505	G	Sidechain
3	A1	506	G	Sidechain
3	A1	508	U	Sidechain
3	A1	511	C	Sidechain
3	A1	512	U	Sidechain
3	A1	514	C	Sidechain
3	A1	515	G	Sidechain
3	A1	517	G	Sidechain
3	A1	518	C	Sidechain
3	A1	519	C	Sidechain
3	A1	52	C	Sidechain
3	A1	521	G	Sidechain
3	A1	522	C	Sidechain
3	A1	523	A	Sidechain
3	A1	524	G	Sidechain
3	A1	525	C	Sidechain
3	A1	528	C	Sidechain
3	A1	529	G	Sidechain
3	A1	530	G	Sidechain
3	A1	531	U	Sidechain
3	A1	532	A	Sidechain
3	A1	533	A	Sidechain
3	A1	534	U	Sidechain
3	A1	535	A	Sidechain
3	A1	536	C	Sidechain
3	A1	537	G	Sidechain
3	A1	538	G	Sidechain
3	A1	539	A	Sidechain
3	A1	540	G	Sidechain
3	A1	541	G	Sidechain
3	A1	542	G	Sidechain
3	A1	547	A	Sidechain
3	A1	548	G	Sidechain
3	A1	549	C	Sidechain
3	A1	55	A	Sidechain
3	A1	550	G	Sidechain
3	A1	553	A	Sidechain
3	A1	554	A	Sidechain
3	A1	555	U	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	556	C	Sidechain
3	A1	558	G	Sidechain
3	A1	559	A	Sidechain
3	A1	560	A	Sidechain
3	A1	561	U	Sidechain
3	A1	562	U	Sidechain
3	A1	563	A	Sidechain
3	A1	565	U	Sidechain
3	A1	566	G	Sidechain
3	A1	567	G	Sidechain
3	A1	568	G	Sidechain
3	A1	569	C	Sidechain
3	A1	57	G	Sidechain
3	A1	570	G	Sidechain
3	A1	572	A	Sidechain
3	A1	573	A	Sidechain
3	A1	574	A	Sidechain
3	A1	575	G	Sidechain
3	A1	576	C	Sidechain
3	A1	577	G	Sidechain
3	A1	578	C	Sidechain
3	A1	581	G	Sidechain
3	A1	585	G	Sidechain
3	A1	586	C	Sidechain
3	A1	587	G	Sidechain
3	A1	59	A	Sidechain
3	A1	590	U	Sidechain
3	A1	591	U	Sidechain
3	A1	592	G	Sidechain
3	A1	593	U	Sidechain
3	A1	594	U	Sidechain
3	A1	595	A	Sidechain
3	A1	596	A	Sidechain
3	A1	597	G	Sidechain
3	A1	598	U	Sidechain
3	A1	6	G	Sidechain
3	A1	602	A	Sidechain
3	A1	603	U	Sidechain
3	A1	606	G	Sidechain
3	A1	607	A	Sidechain
3	A1	608	A	Sidechain
3	A1	610	U	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	611	C	Sidechain
3	A1	612	C	Sidechain
3	A1	613	C	Sidechain
3	A1	614	C	Sidechain
3	A1	617	G	Sidechain
3	A1	621	A	Sidechain
3	A1	625	U	Sidechain
3	A1	626	G	Sidechain
3	A1	627	G	Sidechain
3	A1	628	G	Sidechain
3	A1	63	C	Sidechain
3	A1	632	U	Sidechain
3	A1	633	G	Sidechain
3	A1	634	C	Sidechain
3	A1	635	A	Sidechain
3	A1	636	U	Sidechain
3	A1	637	C	Sidechain
3	A1	638	U	Sidechain
3	A1	639	G	Sidechain
3	A1	640	A	Sidechain
3	A1	641	U	Sidechain
3	A1	642	A	Sidechain
3	A1	647	C	Sidechain
3	A1	648	A	Sidechain
3	A1	649	A	Sidechain
3	A1	650	G	Sidechain
3	A1	652	U	Sidechain
3	A1	653	U	Sidechain
3	A1	654	G	Sidechain
3	A1	656	G	Sidechain
3	A1	657	U	Sidechain
3	A1	660	C	Sidechain
3	A1	661	G	Sidechain
3	A1	662	U	Sidechain
3	A1	664	G	Sidechain
3	A1	666	G	Sidechain
3	A1	669	G	Sidechain
3	A1	670	G	Sidechain
3	A1	672	U	Sidechain
3	A1	674	G	Sidechain
3	A1	676	A	Sidechain
3	A1	678	U	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	68	G	Sidechain
3	A1	681	A	Sidechain
3	A1	682	G	Sidechain
3	A1	686	U	Sidechain
3	A1	688	G	Sidechain
3	A1	690	G	Sidechain
3	A1	691	G	Sidechain
3	A1	694	A	Sidechain
3	A1	695	A	Sidechain
3	A1	697	U	Sidechain
3	A1	698	G	Sidechain
3	A1	70	U	Sidechain
3	A1	700	G	Sidechain
3	A1	701	U	Sidechain
3	A1	702	A	Sidechain
3	A1	703	G	Sidechain
3	A1	706	A	Sidechain
3	A1	707	U	Sidechain
3	A1	708	C	Sidechain
3	A1	709	U	Sidechain
3	A1	71	A	Sidechain
3	A1	710	G	Sidechain
3	A1	711	G	Sidechain
3	A1	712	A	Sidechain
3	A1	715	A	Sidechain
3	A1	716	A	Sidechain
3	A1	717	U	Sidechain
3	A1	718	A	Sidechain
3	A1	719	C	Sidechain
3	A1	720	C	Sidechain
3	A1	721	G	Sidechain
3	A1	722	G	Sidechain
3	A1	724	G	Sidechain
3	A1	725	G	Sidechain
3	A1	727	G	Sidechain
3	A1	728	A	Sidechain
3	A1	729	A	Sidechain
3	A1	73	C	Sidechain
3	A1	732	C	Sidechain
3	A1	734	G	Sidechain
3	A1	736	C	Sidechain
3	A1	737	C	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	738	C	Sidechain
3	A1	74	A	Sidechain
3	A1	741	G	Sidechain
3	A1	742	G	Sidechain
3	A1	743	A	Sidechain
3	A1	747	A	Sidechain
3	A1	748	G	Sidechain
3	A1	749	A	Sidechain
3	A1	75	G	Sidechain
3	A1	752	G	Sidechain
3	A1	754	C	Sidechain
3	A1	755	G	Sidechain
3	A1	756	C	Sidechain
3	A1	757	U	Sidechain
3	A1	759	A	Sidechain
3	A1	76	G	Sidechain
3	A1	760	G	Sidechain
3	A1	762	U	Sidechain
3	A1	764	C	Sidechain
3	A1	766	A	Sidechain
3	A1	769	G	Sidechain
3	A1	770	C	Sidechain
3	A1	771	G	Sidechain
3	A1	775	G	Sidechain
3	A1	776	G	Sidechain
3	A1	778	G	Sidechain
3	A1	781	A	Sidechain
3	A1	785	G	Sidechain
3	A1	788	U	Sidechain
3	A1	789	U	Sidechain
3	A1	79	G	Sidechain
3	A1	791	G	Sidechain
3	A1	792	A	Sidechain
3	A1	794	A	Sidechain
3	A1	795	C	Sidechain
3	A1	796	C	Sidechain
3	A1	797	C	Sidechain
3	A1	798	U	Sidechain
3	A1	8	A	Sidechain
3	A1	800	G	Sidechain
3	A1	801	U	Sidechain
3	A1	802	A	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	803	G	Sidechain
3	A1	809	G	Sidechain
3	A1	81	A	Sidechain
3	A1	810	C	Sidechain
3	A1	811	C	Sidechain
3	A1	812	G	Sidechain
3	A1	814	A	Sidechain
3	A1	816	A	Sidechain
3	A1	817	C	Sidechain
3	A1	818	G	Sidechain
3	A1	82	G	Sidechain
3	A1	820	U	Sidechain
3	A1	821	G	Sidechain
3	A1	822	U	Sidechain
3	A1	824	G	Sidechain
3	A1	826	C	Sidechain
3	A1	827	U	Sidechain
3	A1	828	U	Sidechain
3	A1	829	G	Sidechain
3	A1	830	G	Sidechain
3	A1	832	G	Sidechain
3	A1	833	G	Sidechain
3	A1	834	U	Sidechain
3	A1	836	G	Sidechain
3	A1	838	G	Sidechain
3	A1	843	U	Sidechain
3	A1	845	A	Sidechain
3	A1	847	G	Sidechain
3	A1	849	G	Sidechain
3	A1	852	G	Sidechain
3	A1	853	C	Sidechain
3	A1	855	U	Sidechain
3	A1	858	G	Sidechain
3	A1	859	G	Sidechain
3	A1	862	C	Sidechain
3	A1	863	U	Sidechain
3	A1	865	A	Sidechain
3	A1	867	G	Sidechain
3	A1	868	C	Sidechain
3	A1	869	G	Sidechain
3	A1	87	C	Sidechain
3	A1	871	U	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	872	A	Sidechain
3	A1	874	G	Sidechain
3	A1	875	U	Sidechain
3	A1	877	G	Sidechain
3	A1	878	A	Sidechain
3	A1	880	C	Sidechain
3	A1	881	G	Sidechain
3	A1	883	C	Sidechain
3	A1	884	U	Sidechain
3	A1	885	G	Sidechain
3	A1	886	G	Sidechain
3	A1	89	U	Sidechain
3	A1	890	G	Sidechain
3	A1	891	U	Sidechain
3	A1	892	A	Sidechain
3	A1	893	C	Sidechain
3	A1	894	G	Sidechain
3	A1	895	G	Sidechain
3	A1	897	C	Sidechain
3	A1	9	G	Sidechain
3	A1	90	C	Sidechain
3	A1	901	A	Sidechain
3	A1	903	G	Sidechain
3	A1	905	U	Sidechain
3	A1	906	A	Sidechain
3	A1	908	A	Sidechain
3	A1	91	U	Sidechain
3	A1	910	C	Sidechain
3	A1	911	U	Sidechain
3	A1	913	A	Sidechain
3	A1	917	G	Sidechain
3	A1	919	A	Sidechain
3	A1	92	U	Sidechain
3	A1	920	U	Sidechain
3	A1	923	A	Sidechain
3	A1	924	C	Sidechain
3	A1	925	G	Sidechain
3	A1	926	G	Sidechain
3	A1	927	G	Sidechain
3	A1	929	G	Sidechain
3	A1	93	U	Sidechain
3	A1	931	C	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	932	C	Sidechain
3	A1	933	G	Sidechain
3	A1	935	A	Sidechain
3	A1	937	A	Sidechain
3	A1	938	A	Sidechain
3	A1	939	G	Sidechain
3	A1	94	G	Sidechain
3	A1	940	C	Sidechain
3	A1	941	G	Sidechain
3	A1	942	G	Sidechain
3	A1	944	G	Sidechain
3	A1	945	G	Sidechain
3	A1	95	C	Sidechain
3	A1	950	U	Sidechain
3	A1	951	G	Sidechain
3	A1	952	U	Sidechain
3	A1	953	G	Sidechain
3	A1	954	G	Sidechain
3	A1	955	U	Sidechain
3	A1	956	U	Sidechain
3	A1	958	A	Sidechain
3	A1	959	A	Sidechain
3	A1	960	U	Sidechain
3	A1	961	U	Sidechain
3	A1	962	C	Sidechain
3	A1	963	G	Sidechain
3	A1	964	A	Sidechain
3	A1	965	U	Sidechain
3	A1	967	C	Sidechain
3	A1	968	A	Sidechain
3	A1	969	A	Sidechain
3	A1	97	G	Sidechain
3	A1	970	C	Sidechain
3	A1	971	G	Sidechain
3	A1	973	G	Sidechain
3	A1	974	A	Sidechain
3	A1	975	A	Sidechain
3	A1	976	G	Sidechain
3	A1	977	A	Sidechain
3	A1	978	A	Sidechain
3	A1	979	C	Sidechain
3	A1	98	A	Sidechain

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Mol	Chain	Res	Type	Group
3	A1	981	U	Sidechain
3	A1	984	C	Sidechain
3	A1	985	C	Sidechain
3	A1	987	G	Sidechain
3	A1	988	G	Sidechain
3	A1	99	C	Sidechain
3	A1	990	C	Sidechain
3	A1	992	U	Sidechain
3	A1	993	G	Sidechain
3	A1	994	A	Sidechain
3	A1	996	A	Sidechain
3	A1	998	C	Sidechain
3	A1	999	C	Sidechain
1	AA	1	G	Sidechain
1	AA	10	G	Sidechain
1	AA	11	C	Sidechain
1	AA	12	U	Sidechain
1	AA	14	A	Sidechain
1	AA	15	G	Sidechain
1	AA	16	U	Sidechain
1	AA	17	U	Sidechain
1	AA	18	G	Sidechain
1	AA	19	G	Sidechain
1	AA	22	G	Sidechain
1	AA	23	A	Sidechain
1	AA	28	C	Sidechain
1	AA	29	A	Sidechain
1	AA	3	G	Sidechain
1	AA	31	A	Sidechain
1	AA	32	C	Sidechain
1	AA	33	U	Sidechain
1	AA	34	G	Sidechain
1	AA	35	A	Sidechain
1	AA	36	A	Sidechain
1	AA	37	G	Sidechain
1	AA	38	A	Sidechain
1	AA	4	G	Sidechain
1	AA	41	U	Sidechain
1	AA	42	G	Sidechain
1	AA	43	G	Sidechain
1	AA	44	A	Sidechain
1	AA	45	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	46	G	Sidechain
1	AA	47	U	Sidechain
1	AA	49	C	Sidechain
1	AA	5	A	Sidechain
1	AA	50	U	Sidechain
1	AA	51	G	Sidechain
1	AA	53	G	Sidechain
1	AA	54	U	Sidechain
1	AA	55	U	Sidechain
1	AA	57	G	Sidechain
1	AA	58	A	Sidechain
1	AA	6	U	Sidechain
1	AA	60	C	Sidechain
1	AA	61	C	Sidechain
1	AA	63	C	Sidechain
1	AA	64	A	Sidechain
1	AA	65	G	Sidechain
1	AA	67	A	Sidechain
1	AA	68	U	Sidechain
1	AA	69	U	Sidechain
1	AA	7	U	Sidechain
1	AA	71	G	Sidechain
1	AA	73	A	Sidechain
1	AA	75	C	Sidechain
1	AA	8	U	Sidechain
1	AA	9	A	Sidechain
4	AB	21	TYR	Sidechain
4	AB	34	ARG	Sidechain
4	AB	49	PHE	Peptide
5	AC	36	ARG	Sidechain
5	AC	51	PHE	Sidechain
5	AC	97	ARG	Sidechain
6	AD	13	ARG	Sidechain
6	AD	2	THR	Peptide
6	AD	49	ARG	Sidechain
6	AD	82	ARG	Sidechain
6	AD	9	LYS	Peptide
6	AD	94	TYR	Sidechain
6	AD	97	VAL	Peptide
1	AE	10	G	Sidechain
1	AE	11	C	Sidechain
1	AE	12	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AE	13	C	Sidechain
1	AE	14	A	Sidechain
1	AE	15	G	Sidechain
1	AE	16	U	Sidechain
1	AE	17	U	Sidechain
1	AE	18	G	Sidechain
1	AE	2	C	Sidechain
1	AE	20	G	Sidechain
1	AE	21	A	Sidechain
1	AE	23	A	Sidechain
1	AE	24	G	Sidechain
1	AE	26	G	Sidechain
1	AE	27	C	Sidechain
1	AE	29	A	Sidechain
1	AE	30	G	Sidechain
1	AE	31	A	Sidechain
1	AE	32	C	Sidechain
1	AE	33	U	Sidechain
1	AE	34	G	Sidechain
1	AE	35	A	Sidechain
1	AE	37	G	Sidechain
1	AE	38	A	Sidechain
1	AE	39	U	Sidechain
1	AE	4	G	Sidechain
1	AE	42	G	Sidechain
1	AE	46	G	Sidechain
1	AE	48	C	Sidechain
1	AE	5	A	Sidechain
1	AE	50	U	Sidechain
1	AE	52	U	Sidechain
1	AE	53	G	Sidechain
1	AE	54	U	Sidechain
1	AE	55	U	Sidechain
1	AE	57	G	Sidechain
1	AE	58	A	Sidechain
1	AE	59	U	Sidechain
1	AE	6	U	Sidechain
1	AE	62	A	Sidechain
1	AE	67	A	Sidechain
1	AE	70	C	Sidechain
1	AE	71	G	Sidechain
1	AE	72	C	Sidechain

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Mol	Chain	Res	Type	Group
1	AE	73	A	Sidechain
1	AE	74	C	Sidechain
1	AE	76	A	Sidechain
1	AE	9	A	Sidechain
7	AF	104	ASN	Peptide
7	AF	106	ARG	Sidechain
7	AF	112	ARG	Sidechain
7	AF	79	LEU	Peptide
7	AF	94	LEU	Peptide
8	AG	20	PHE	Peptide
8	AG	60	ARG	Sidechain
8	AG	68	ARG	Sidechain
8	AG	84	ARG	Sidechain
9	AH	41	HIS	Sidechain
9	AH	45	HIS	Sidechain
9	AH	52	ARG	Sidechain
9	AH	57	ARG	Sidechain
9	AH	62	ARG	Sidechain
10	AI	40	ASN	Peptide
10	AI	5	ARG	Sidechain
10	AI	56	ARG	Sidechain
11	AJ	33	TYR	Sidechain
11	AJ	54	ILE	Peptide
11	AJ	64	ARG	Sidechain
11	AJ	80	LYS	Peptide
13	AL	2	ARG	Sidechain
13	AL	31	ARG	Sidechain
13	AL	35	ARG	Peptide
13	AL	37	SER	Peptide
13	AL	4	LEU	Peptide
13	AL	51	HIS	Peptide
13	AL	66	VAL	Peptide
13	AL	77	ARG	Sidechain
2	AM	10	U	Sidechain
2	AM	12	U	Sidechain
2	AM	13	U	Sidechain
2	AM	15	U	Sidechain
2	AM	17	U	Sidechain
2	AM	19	U	Sidechain
2	AM	20	U	Sidechain
2	AM	3	U	Sidechain
2	AM	4	U	Sidechain

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Mol	Chain	Res	Type	Group
14	AN	9	ARG	Sidechain
15	AO	39	ARG	Sidechain
15	AO	41	TYR	Sidechain
15	AO	62	SER	Peptide
1	AP	10	G	Sidechain
1	AP	11	C	Sidechain
1	AP	13	C	Sidechain
1	AP	15	G	Sidechain
1	AP	16	U	Sidechain
1	AP	17	U	Sidechain
1	AP	18	G	Sidechain
1	AP	19	G	Sidechain
1	AP	20	G	Sidechain
1	AP	21	A	Sidechain
1	AP	22	G	Sidechain
1	AP	24	G	Sidechain
1	AP	25	C	Sidechain
1	AP	26	G	Sidechain
1	AP	27	C	Sidechain
1	AP	28	C	Sidechain
1	AP	29	A	Sidechain
1	AP	3	G	Sidechain
1	AP	30	G	Sidechain
1	AP	31	A	Sidechain
1	AP	32	C	Sidechain
1	AP	33	U	Sidechain
1	AP	34	G	Sidechain
1	AP	35	A	Sidechain
1	AP	37	G	Sidechain
1	AP	4	G	Sidechain
1	AP	41	U	Sidechain
1	AP	42	G	Sidechain
1	AP	43	G	Sidechain
1	AP	44	A	Sidechain
1	AP	45	G	Sidechain
1	AP	47	U	Sidechain
1	AP	48	C	Sidechain
1	AP	5	A	Sidechain
1	AP	50	U	Sidechain
1	AP	53	G	Sidechain
1	AP	56	C	Sidechain
1	AP	58	A	Sidechain

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Mol	Chain	Res	Type	Group
1	AP	6	U	Sidechain
1	AP	60	C	Sidechain
1	AP	61	C	Sidechain
1	AP	62	A	Sidechain
1	AP	64	A	Sidechain
1	AP	66	A	Sidechain
1	AP	69	U	Sidechain
1	AP	71	G	Sidechain
1	AP	72	C	Sidechain
1	AP	73	A	Sidechain
1	AP	8	U	Sidechain
1	AP	9	A	Sidechain
16	AQ	34	ARG	Sidechain
16	AQ	44	ARG	Sidechain
16	AQ	6	ARG	Peptide
16	AQ	9	GLU	Peptide
17	AR	102	TYR	Sidechain
17	AR	103	ARG	Sidechain
17	AR	140	ASP	Peptide
17	AR	22	SER	Mainchain,Peptide
17	AR	56	GLU	Peptide
17	AR	69	ARG	Sidechain
18	AS	156	ARG	Sidechain
18	AS	25	LYS	Peptide
18	AS	26	GLY	Peptide
19	AT	49	TYR	Sidechain
19	AT	72	ASP	Sidechain
19	AT	8	PHE	Sidechain
19	AT	91	ARG	Sidechain
20	AU	118	ARG	Sidechain
20	AU	17	PHE	Sidechain
20	AU	73	GLU	Sidechain
20	AU	9	ARG	Peptide
21	AV	50	VAL	Peptide
21	AV	79	ARG	Sidechain
22	AW	118	ARG	Sidechain
22	AW	126	PHE	Peptide
22	AW	17	ARG	Sidechain
22	AW	24	ASN	Peptide
23	AX	62	ARG	Sidechain
23	AX	68	ARG	Sidechain
23	AX	73	LEU	Peptide

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Mol	Chain	Res	Type	Group
23	AX	9	ARG	Sidechain
50	B1	101	TYR	Sidechain
50	B1	102	ARG	Sidechain
50	B1	115	GLN	Peptide
50	B1	191	ASP	Peptide
50	B1	40	ARG	Sidechain
50	B1	45	ALA	Peptide
50	B1	49	ARG	Sidechain
50	B1	69	ARG	Sidechain
50	B1	78	TRP	Peptide
51	B2	111	ARG	Sidechain
51	B2	147	ARG	Sidechain
51	B2	149	ARG	Sidechain
51	B2	19	PHE	Sidechain
51	B2	74	ALA	Peptide
51	B2	94	ARG	Sidechain
52	B3	108	PHE	Peptide
52	B3	148	ARG	Sidechain
52	B3	151	ARG	Sidechain
52	B3	68	ARG	Sidechain
52	B3	93	TYR	Sidechain
53	B4	116	ARG	Sidechain
53	B4	16	GLY	Peptide
53	B4	31	VAL	Peptide
53	B4	91	PHE	Sidechain
54	B5	133	ARG	Sidechain
54	B5	51	GLY	Peptide
54	B5	66	PHE	Peptide
55	B6	109	LEU	Peptide
55	B6	124	VAL	Peptide
55	B6	31	GLU	Sidechain
55	B6	34	ARG	Sidechain
55	B6	49	ASP	Sidechain
55	B6	69	ARG	Sidechain
55	B6	75	TYR	Sidechain
55	B6	98	GLU	Sidechain
24	BA	10	G	Sidechain
24	BA	100	G	Sidechain
24	BA	101	A	Sidechain
24	BA	103	U	Sidechain
24	BA	104	A	Sidechain
24	BA	105	G	Sidechain

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Mol	Chain	Res	Type	Group
24	BA	106	G	Sidechain
24	BA	107	G	Sidechain
24	BA	108	A	Sidechain
24	BA	109	A	Sidechain
24	BA	112	G	Sidechain
24	BA	113	C	Sidechain
24	BA	114	C	Sidechain
24	BA	116	G	Sidechain
24	BA	118	C	Sidechain
24	BA	12	C	Sidechain
24	BA	13	G	Sidechain
24	BA	15	A	Sidechain
24	BA	16	G	Sidechain
24	BA	18	G	Sidechain
24	BA	2	G	Sidechain
24	BA	22	U	Sidechain
24	BA	23	G	Sidechain
24	BA	25	U	Sidechain
24	BA	26	C	Sidechain
24	BA	29	A	Sidechain
24	BA	31	C	Sidechain
24	BA	32	U	Sidechain
24	BA	33	G	Sidechain
24	BA	36	C	Sidechain
24	BA	37	C	Sidechain
24	BA	38	C	Sidechain
24	BA	41	G	Sidechain
24	BA	43	C	Sidechain
24	BA	44	G	Sidechain
24	BA	47	C	Sidechain
24	BA	48	U	Sidechain
24	BA	5	U	Sidechain
24	BA	50	A	Sidechain
24	BA	51	G	Sidechain
24	BA	53	A	Sidechain
24	BA	54	G	Sidechain
24	BA	55	U	Sidechain
24	BA	57	A	Sidechain
24	BA	60	C	Sidechain
24	BA	61	G	Sidechain
24	BA	64	G	Sidechain
24	BA	65	U	Sidechain

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Mol	Chain	Res	Type	Group
24	BA	66	A	Sidechain
24	BA	69	G	Sidechain
24	BA	7	G	Sidechain
24	BA	72	G	Sidechain
24	BA	73	A	Sidechain
24	BA	74	U	Sidechain
24	BA	75	G	Sidechain
24	BA	76	G	Sidechain
24	BA	77	U	Sidechain
24	BA	78	A	Sidechain
24	BA	80	U	Sidechain
24	BA	81	G	Sidechain
24	BA	83	G	Sidechain
24	BA	87	U	Sidechain
24	BA	93	C	Sidechain
24	BA	94	A	Sidechain
24	BA	95	U	Sidechain
24	BA	98	G	Sidechain
25	BB	1	G	Sidechain
25	BB	1000	A	Sidechain
25	BB	1001	A	Sidechain
25	BB	1003	G	Sidechain
25	BB	1007	C	Sidechain
25	BB	1008	A	Sidechain
25	BB	1009	A	Sidechain
25	BB	1010	A	Sidechain
25	BB	1011	G	Sidechain
25	BB	1012	U	Sidechain
25	BB	1013	C	Sidechain
25	BB	1016	G	Sidechain
25	BB	1017	G	Sidechain
25	BB	1019	U	Sidechain
25	BB	102	U	Sidechain
25	BB	1020	A	Sidechain
25	BB	1021	A	Sidechain
25	BB	1022	G	Sidechain
25	BB	1023	U	Sidechain
25	BB	1024	G	Sidechain
25	BB	1025	G	Sidechain
25	BB	1026	G	Sidechain
25	BB	1027	A	Sidechain
25	BB	1028	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1031	G	Sidechain
25	BB	1033	U	Sidechain
25	BB	1035	U	Sidechain
25	BB	1036	G	Sidechain
25	BB	1041	G	Sidechain
25	BB	1044	C	Sidechain
25	BB	1045	C	Sidechain
25	BB	1046	A	Sidechain
25	BB	1047	G	Sidechain
25	BB	1049	C	Sidechain
25	BB	105	C	Sidechain
25	BB	1050	A	Sidechain
25	BB	1051	G	Sidechain
25	BB	1052	C	Sidechain
25	BB	1054	A	Sidechain
25	BB	1057	A	Sidechain
25	BB	1059	G	Sidechain
25	BB	1060	U	Sidechain
25	BB	1061	U	Sidechain
25	BB	1064	C	Sidechain
25	BB	1065	U	Sidechain
25	BB	1066	U	Sidechain
25	BB	1069	A	Sidechain
25	BB	1070	A	Sidechain
25	BB	1073	A	Sidechain
25	BB	1074	G	Sidechain
25	BB	1078	U	Sidechain
25	BB	1079	C	Sidechain
25	BB	108	G	Sidechain
25	BB	1080	A	Sidechain
25	BB	1081	U	Sidechain
25	BB	1082	U	Sidechain
25	BB	1083	U	Sidechain
25	BB	1089	A	Sidechain
25	BB	1093	G	Sidechain
25	BB	1095	A	Sidechain
25	BB	1098	A	Sidechain
25	BB	1099	G	Sidechain
25	BB	11	C	Sidechain
25	BB	110	G	Sidechain
25	BB	1100	C	Sidechain
25	BB	1102	C	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1104	C	Sidechain
25	BB	1107	G	Sidechain
25	BB	1108	U	Sidechain
25	BB	1109	C	Sidechain
25	BB	111	A	Sidechain
25	BB	1110	G	Sidechain
25	BB	1111	A	Sidechain
25	BB	1113	U	Sidechain
25	BB	1115	G	Sidechain
25	BB	1116	G	Sidechain
25	BB	1118	C	Sidechain
25	BB	1119	U	Sidechain
25	BB	112	U	Sidechain
25	BB	1120	G	Sidechain
25	BB	1121	C	Sidechain
25	BB	1122	G	Sidechain
25	BB	1124	G	Sidechain
25	BB	1125	G	Sidechain
25	BB	1128	G	Sidechain
25	BB	1129	A	Sidechain
25	BB	113	U	Sidechain
25	BB	1132	U	Sidechain
25	BB	1134	A	Sidechain
25	BB	1137	G	Sidechain
25	BB	1139	G	Sidechain
25	BB	114	U	Sidechain
25	BB	1145	C	Sidechain
25	BB	1148	U	Sidechain
25	BB	115	C	Sidechain
25	BB	1150	C	Sidechain
25	BB	1151	A	Sidechain
25	BB	1152	C	Sidechain
25	BB	1154	G	Sidechain
25	BB	1156	A	Sidechain
25	BB	1157	G	Sidechain
25	BB	116	C	Sidechain
25	BB	1160	G	Sidechain
25	BB	1162	G	Sidechain
25	BB	1163	G	Sidechain
25	BB	1165	A	Sidechain
25	BB	1168	G	Sidechain
25	BB	117	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1170	C	Sidechain
25	BB	1172	C	Sidechain
25	BB	1174	U	Sidechain
25	BB	1175	A	Sidechain
25	BB	1176	U	Sidechain
25	BB	1178	C	Sidechain
25	BB	1179	G	Sidechain
25	BB	118	A	Sidechain
25	BB	1180	U	Sidechain
25	BB	1181	U	Sidechain
25	BB	1186	G	Sidechain
25	BB	1189	A	Sidechain
25	BB	1190	G	Sidechain
25	BB	1192	G	Sidechain
25	BB	1193	G	Sidechain
25	BB	1194	A	Sidechain
25	BB	1197	G	Sidechain
25	BB	1199	U	Sidechain
25	BB	12	U	Sidechain
25	BB	120	U	Sidechain
25	BB	1201	U	Sidechain
25	BB	1203	U	Sidechain
25	BB	1206	G	Sidechain
25	BB	1208	C	Sidechain
25	BB	1209	U	Sidechain
25	BB	121	G	Sidechain
25	BB	1210	G	Sidechain
25	BB	1213	A	Sidechain
25	BB	1214	A	Sidechain
25	BB	1216	G	Sidechain
25	BB	1217	U	Sidechain
25	BB	1218	G	Sidechain
25	BB	1219	U	Sidechain
25	BB	122	G	Sidechain
25	BB	1220	G	Sidechain
25	BB	1221	C	Sidechain
25	BB	1222	U	Sidechain
25	BB	1223	G	Sidechain
25	BB	1224	U	Sidechain
25	BB	1225	G	Sidechain
25	BB	1227	G	Sidechain
25	BB	1228	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1229	C	Sidechain
25	BB	1230	A	Sidechain
25	BB	1232	G	Sidechain
25	BB	1233	C	Sidechain
25	BB	1234	U	Sidechain
25	BB	1235	G	Sidechain
25	BB	1236	G	Sidechain
25	BB	1237	A	Sidechain
25	BB	1238	G	Sidechain
25	BB	1239	G	Sidechain
25	BB	1241	A	Sidechain
25	BB	1242	U	Sidechain
25	BB	1243	C	Sidechain
25	BB	1245	G	Sidechain
25	BB	1250	G	Sidechain
25	BB	1251	C	Sidechain
25	BB	1252	G	Sidechain
25	BB	1253	A	Sidechain
25	BB	1257	C	Sidechain
25	BB	1260	A	Sidechain
25	BB	1262	A	Sidechain
25	BB	1263	U	Sidechain
25	BB	1265	A	Sidechain
25	BB	1268	A	Sidechain
25	BB	1273	U	Sidechain
25	BB	1274	A	Sidechain
25	BB	1277	G	Sidechain
25	BB	1278	C	Sidechain
25	BB	1279	G	Sidechain
25	BB	128	C	Sidechain
25	BB	1281	G	Sidechain
25	BB	1282	U	Sidechain
25	BB	1283	G	Sidechain
25	BB	1286	A	Sidechain
25	BB	1288	G	Sidechain
25	BB	1290	C	Sidechain
25	BB	1291	C	Sidechain
25	BB	1292	G	Sidechain
25	BB	1293	C	Sidechain
25	BB	1297	C	Sidechain
25	BB	1299	G	Sidechain
25	BB	130	C	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1300	G	Sidechain
25	BB	1302	A	Sidechain
25	BB	1305	C	Sidechain
25	BB	1307	A	Sidechain
25	BB	1308	A	Sidechain
25	BB	1309	G	Sidechain
25	BB	131	A	Sidechain
25	BB	1310	G	Sidechain
25	BB	1311	G	Sidechain
25	BB	1315	C	Sidechain
25	BB	1317	G	Sidechain
25	BB	1318	U	Sidechain
25	BB	1319	C	Sidechain
25	BB	132	G	Sidechain
25	BB	1320	C	Sidechain
25	BB	1321	A	Sidechain
25	BB	1323	C	Sidechain
25	BB	1324	G	Sidechain
25	BB	1326	U	Sidechain
25	BB	1327	A	Sidechain
25	BB	1328	A	Sidechain
25	BB	1329	U	Sidechain
25	BB	1330	C	Sidechain
25	BB	1332	G	Sidechain
25	BB	1334	G	Sidechain
25	BB	1335	C	Sidechain
25	BB	1337	G	Sidechain
25	BB	1338	G	Sidechain
25	BB	1339	G	Sidechain
25	BB	134	G	Sidechain
25	BB	1342	A	Sidechain
25	BB	1343	G	Sidechain
25	BB	1345	C	Sidechain
25	BB	1346	G	Sidechain
25	BB	1348	C	Sidechain
25	BB	135	U	Sidechain
25	BB	1350	C	Sidechain
25	BB	1351	C	Sidechain
25	BB	1352	U	Sidechain
25	BB	1353	A	Sidechain
25	BB	1355	G	Sidechain
25	BB	1357	C	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1358	G	Sidechain
25	BB	1364	G	Sidechain
25	BB	1365	A	Sidechain
25	BB	1366	A	Sidechain
25	BB	1367	A	Sidechain
25	BB	1369	G	Sidechain
25	BB	137	U	Sidechain
25	BB	1371	G	Sidechain
25	BB	1379	U	Sidechain
25	BB	138	U	Sidechain
25	BB	1380	G	Sidechain
25	BB	1381	G	Sidechain
25	BB	1382	G	Sidechain
25	BB	1383	A	Sidechain
25	BB	1387	A	Sidechain
25	BB	1388	G	Sidechain
25	BB	1389	G	Sidechain
25	BB	139	U	Sidechain
25	BB	1391	U	Sidechain
25	BB	1392	A	Sidechain
25	BB	1393	A	Sidechain
25	BB	1394	U	Sidechain
25	BB	1396	U	Sidechain
25	BB	14	A	Sidechain
25	BB	140	C	Sidechain
25	BB	1400	U	Sidechain
25	BB	1403	A	Sidechain
25	BB	1404	C	Sidechain
25	BB	1405	U	Sidechain
25	BB	1407	G	Sidechain
25	BB	1408	G	Sidechain
25	BB	141	G	Sidechain
25	BB	1412	U	Sidechain
25	BB	1413	A	Sidechain
25	BB	1416	G	Sidechain
25	BB	1420	A	Sidechain
25	BB	1421	G	Sidechain
25	BB	1422	G	Sidechain
25	BB	1424	G	Sidechain
25	BB	1425	G	Sidechain
25	BB	1426	G	Sidechain
25	BB	143	C	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1432	G	Sidechain
25	BB	1433	A	Sidechain
25	BB	1434	A	Sidechain
25	BB	1435	G	Sidechain
25	BB	144	A	Sidechain
25	BB	1440	U	Sidechain
25	BB	1442	U	Sidechain
25	BB	1443	U	Sidechain
25	BB	1444	G	Sidechain
25	BB	1445	G	Sidechain
25	BB	1446	C	Sidechain
25	BB	1450	G	Sidechain
25	BB	1451	C	Sidechain
25	BB	1452	G	Sidechain
25	BB	1455	G	Sidechain
25	BB	1458	U	Sidechain
25	BB	1459	G	Sidechain
25	BB	146	A	Sidechain
25	BB	1462	C	Sidechain
25	BB	1464	G	Sidechain
25	BB	1467	U	Sidechain
25	BB	1468	U	Sidechain
25	BB	1469	A	Sidechain
25	BB	1471	G	Sidechain
25	BB	1473	G	Sidechain
25	BB	1474	U	Sidechain
25	BB	1476	U	Sidechain
25	BB	1477	A	Sidechain
25	BB	1478	G	Sidechain
25	BB	1479	G	Sidechain
25	BB	1480	C	Sidechain
25	BB	1482	G	Sidechain
25	BB	1483	G	Sidechain
25	BB	1485	U	Sidechain
25	BB	1486	U	Sidechain
25	BB	1487	U	Sidechain
25	BB	1488	C	Sidechain
25	BB	1489	C	Sidechain
25	BB	1490	A	Sidechain
25	BB	1492	G	Sidechain
25	BB	1493	C	Sidechain
25	BB	1495	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1496	A	Sidechain
25	BB	1497	U	Sidechain
25	BB	1499	C	Sidechain
25	BB	15	G	Sidechain
25	BB	1500	G	Sidechain
25	BB	1501	G	Sidechain
25	BB	1503	A	Sidechain
25	BB	1507	C	Sidechain
25	BB	1509	A	Sidechain
25	BB	151	C	Sidechain
25	BB	1511	G	Sidechain
25	BB	1514	G	Sidechain
25	BB	1515	A	Sidechain
25	BB	1516	G	Sidechain
25	BB	1517	G	Sidechain
25	BB	1519	G	Sidechain
25	BB	1521	G	Sidechain
25	BB	1522	A	Sidechain
25	BB	1524	G	Sidechain
25	BB	1525	A	Sidechain
25	BB	1529	G	Sidechain
25	BB	1532	A	Sidechain
25	BB	1533	C	Sidechain
25	BB	1535	A	Sidechain
25	BB	1536	C	Sidechain
25	BB	1537	G	Sidechain
25	BB	1538	G	Sidechain
25	BB	154	U	Sidechain
25	BB	1541	C	Sidechain
25	BB	1546	G	Sidechain
25	BB	1547	C	Sidechain
25	BB	1549	A	Sidechain
25	BB	1551	A	Sidechain
25	BB	1552	A	Sidechain
25	BB	1553	A	Sidechain
25	BB	1554	U	Sidechain
25	BB	1555	G	Sidechain
25	BB	1556	C	Sidechain
25	BB	1557	C	Sidechain
25	BB	1558	C	Sidechain
25	BB	1560	G	Sidechain
25	BB	1561	C	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1562	U	Sidechain
25	BB	1563	U	Sidechain
25	BB	1565	C	Sidechain
25	BB	157	C	Sidechain
25	BB	1570	A	Sidechain
25	BB	1574	C	Sidechain
25	BB	1576	U	Sidechain
25	BB	1579	A	Sidechain
25	BB	158	U	Sidechain
25	BB	1581	G	Sidechain
25	BB	1582	C	Sidechain
25	BB	1583	A	Sidechain
25	BB	1586	A	Sidechain
25	BB	1587	G	Sidechain
25	BB	1588	G	Sidechain
25	BB	1589	U	Sidechain
25	BB	1590	A	Sidechain
25	BB	1593	A	Sidechain
25	BB	1594	U	Sidechain
25	BB	1597	A	Sidechain
25	BB	1598	A	Sidechain
25	BB	1599	U	Sidechain
25	BB	16	C	Sidechain
25	BB	1600	C	Sidechain
25	BB	1602	U	Sidechain
25	BB	1605	C	Sidechain
25	BB	1607	C	Sidechain
25	BB	1608	A	Sidechain
25	BB	161	A	Sidechain
25	BB	1610	A	Sidechain
25	BB	1613	G	Sidechain
25	BB	1615	C	Sidechain
25	BB	1616	A	Sidechain
25	BB	1617	C	Sidechain
25	BB	1618	A	Sidechain
25	BB	162	U	Sidechain
25	BB	1620	G	Sidechain
25	BB	1622	G	Sidechain
25	BB	1623	G	Sidechain
25	BB	1625	C	Sidechain
25	BB	1626	A	Sidechain
25	BB	1627	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1628	G	Sidechain
25	BB	1630	A	Sidechain
25	BB	1631	G	Sidechain
25	BB	1639	C	Sidechain
25	BB	164	C	Sidechain
25	BB	1640	A	Sidechain
25	BB	1641	A	Sidechain
25	BB	1642	G	Sidechain
25	BB	1645	G	Sidechain
25	BB	1648	U	Sidechain
25	BB	165	A	Sidechain
25	BB	1650	A	Sidechain
25	BB	1651	G	Sidechain
25	BB	1653	G	Sidechain
25	BB	1654	A	Sidechain
25	BB	1657	U	Sidechain
25	BB	1658	C	Sidechain
25	BB	1659	G	Sidechain
25	BB	166	U	Sidechain
25	BB	1660	G	Sidechain
25	BB	1661	G	Sidechain
25	BB	1662	U	Sidechain
25	BB	1667	G	Sidechain
25	BB	1669	A	Sidechain
25	BB	1671	U	Sidechain
25	BB	1672	A	Sidechain
25	BB	1673	G	Sidechain
25	BB	1678	A	Sidechain
25	BB	1681	G	Sidechain
25	BB	1682	G	Sidechain
25	BB	1683	U	Sidechain
25	BB	1684	G	Sidechain
25	BB	1685	C	Sidechain
25	BB	1687	G	Sidechain
25	BB	1690	A	Sidechain
25	BB	1692	U	Sidechain
25	BB	1695	G	Sidechain
25	BB	1696	G	Sidechain
25	BB	1698	A	Sidechain
25	BB	1699	G	Sidechain
25	BB	1700	A	Sidechain
25	BB	1701	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1702	G	Sidechain
25	BB	1703	G	Sidechain
25	BB	1705	A	Sidechain
25	BB	1707	G	Sidechain
25	BB	1708	C	Sidechain
25	BB	1709	U	Sidechain
25	BB	171	U	Sidechain
25	BB	1710	G	Sidechain
25	BB	1711	A	Sidechain
25	BB	1715	G	Sidechain
25	BB	1716	U	Sidechain
25	BB	1718	G	Sidechain
25	BB	1719	G	Sidechain
25	BB	172	A	Sidechain
25	BB	1720	U	Sidechain
25	BB	1721	G	Sidechain
25	BB	1722	A	Sidechain
25	BB	1723	G	Sidechain
25	BB	1724	G	Sidechain
25	BB	1726	C	Sidechain
25	BB	1729	U	Sidechain
25	BB	173	A	Sidechain
25	BB	1730	C	Sidechain
25	BB	1731	G	Sidechain
25	BB	1733	G	Sidechain
25	BB	1734	G	Sidechain
25	BB	1736	U	Sidechain
25	BB	1737	G	Sidechain
25	BB	1738	G	Sidechain
25	BB	1739	A	Sidechain
25	BB	174	U	Sidechain
25	BB	1742	U	Sidechain
25	BB	1745	A	Sidechain
25	BB	175	G	Sidechain
25	BB	1752	C	Sidechain
25	BB	1755	A	Sidechain
25	BB	1756	G	Sidechain
25	BB	1759	A	Sidechain
25	BB	1760	C	Sidechain
25	BB	1761	C	Sidechain
25	BB	1762	A	Sidechain
25	BB	1763	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1765	U	Sidechain
25	BB	1767	G	Sidechain
25	BB	1768	C	Sidechain
25	BB	1769	U	Sidechain
25	BB	177	G	Sidechain
25	BB	1771	C	Sidechain
25	BB	1772	A	Sidechain
25	BB	1774	C	Sidechain
25	BB	1775	U	Sidechain
25	BB	1776	G	Sidechain
25	BB	178	G	Sidechain
25	BB	1780	A	Sidechain
25	BB	1781	U	Sidechain
25	BB	1782	U	Sidechain
25	BB	1783	A	Sidechain
25	BB	1785	A	Sidechain
25	BB	1786	A	Sidechain
25	BB	1788	C	Sidechain
25	BB	179	C	Sidechain
25	BB	1791	A	Sidechain
25	BB	1792	G	Sidechain
25	BB	1795	C	Sidechain
25	BB	1798	U	Sidechain
25	BB	1799	G	Sidechain
25	BB	18	U	Sidechain
25	BB	1802	A	Sidechain
25	BB	1806	C	Sidechain
25	BB	1807	G	Sidechain
25	BB	1808	A	Sidechain
25	BB	1809	A	Sidechain
25	BB	181	A	Sidechain
25	BB	1811	G	Sidechain
25	BB	1814	G	Sidechain
25	BB	1815	A	Sidechain
25	BB	1816	C	Sidechain
25	BB	182	A	Sidechain
25	BB	1820	U	Sidechain
25	BB	1821	A	Sidechain
25	BB	1822	C	Sidechain
25	BB	1823	G	Sidechain
25	BB	1825	U	Sidechain
25	BB	1826	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1827	U	Sidechain
25	BB	1828	G	Sidechain
25	BB	183	C	Sidechain
25	BB	1830	C	Sidechain
25	BB	1833	C	Sidechain
25	BB	1835	G	Sidechain
25	BB	1836	C	Sidechain
25	BB	1837	C	Sidechain
25	BB	1838	C	Sidechain
25	BB	1839	G	Sidechain
25	BB	184	C	Sidechain
25	BB	1840	G	Sidechain
25	BB	1841	U	Sidechain
25	BB	1842	G	Sidechain
25	BB	1846	G	Sidechain
25	BB	1847	A	Sidechain
25	BB	1849	G	Sidechain
25	BB	185	G	Sidechain
25	BB	1851	U	Sidechain
25	BB	1853	A	Sidechain
25	BB	1855	U	Sidechain
25	BB	1857	G	Sidechain
25	BB	1858	A	Sidechain
25	BB	1859	U	Sidechain
25	BB	1860	G	Sidechain
25	BB	1862	G	Sidechain
25	BB	1864	U	Sidechain
25	BB	1865	U	Sidechain
25	BB	1867	G	Sidechain
25	BB	1869	G	Sidechain
25	BB	187	G	Sidechain
25	BB	1870	C	Sidechain
25	BB	1871	A	Sidechain
25	BB	1875	G	Sidechain
25	BB	1878	G	Sidechain
25	BB	1879	C	Sidechain
25	BB	188	G	Sidechain
25	BB	1880	U	Sidechain
25	BB	1882	U	Sidechain
25	BB	1883	U	Sidechain
25	BB	1884	G	Sidechain
25	BB	1885	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1886	U	Sidechain
25	BB	1888	G	Sidechain
25	BB	1889	A	Sidechain
25	BB	189	G	Sidechain
25	BB	1890	A	Sidechain
25	BB	1891	G	Sidechain
25	BB	1892	C	Sidechain
25	BB	1893	C	Sidechain
25	BB	1894	C	Sidechain
25	BB	1896	G	Sidechain
25	BB	1898	U	Sidechain
25	BB	1899	A	Sidechain
25	BB	19	A	Sidechain
25	BB	190	A	Sidechain
25	BB	1901	A	Sidechain
25	BB	1904	G	Sidechain
25	BB	1905	C	Sidechain
25	BB	1907	G	Sidechain
25	BB	1909	C	Sidechain
25	BB	1910	G	Sidechain
25	BB	1912	A	Sidechain
25	BB	1915	U	Sidechain
25	BB	1916	A	Sidechain
25	BB	1917	U	Sidechain
25	BB	192	C	Sidechain
25	BB	1920	C	Sidechain
25	BB	1921	G	Sidechain
25	BB	1922	G	Sidechain
25	BB	1924	C	Sidechain
25	BB	1925	C	Sidechain
25	BB	1928	A	Sidechain
25	BB	1929	G	Sidechain
25	BB	1930	G	Sidechain
25	BB	1931	U	Sidechain
25	BB	1932	A	Sidechain
25	BB	1933	G	Sidechain
25	BB	1935	G	Sidechain
25	BB	1938	A	Sidechain
25	BB	1939	U	Sidechain
25	BB	1940	U	Sidechain
25	BB	1942	C	Sidechain
25	BB	1943	U	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	1944	U	Sidechain
25	BB	1945	G	Sidechain
25	BB	1946	U	Sidechain
25	BB	1948	G	Sidechain
25	BB	1949	G	Sidechain
25	BB	1950	G	Sidechain
25	BB	1951	U	Sidechain
25	BB	1952	A	Sidechain
25	BB	1953	A	Sidechain
25	BB	1955	U	Sidechain
25	BB	1956	U	Sidechain
25	BB	1959	G	Sidechain
25	BB	196	A	Sidechain
25	BB	1961	C	Sidechain
25	BB	1962	C	Sidechain
25	BB	1963	U	Sidechain
25	BB	1964	G	Sidechain
25	BB	1965	C	Sidechain
25	BB	1967	C	Sidechain
25	BB	1968	G	Sidechain
25	BB	1969	A	Sidechain
25	BB	1971	U	Sidechain
25	BB	1972	G	Sidechain
25	BB	1973	G	Sidechain
25	BB	1975	G	Sidechain
25	BB	1976	U	Sidechain
25	BB	1977	A	Sidechain
25	BB	198	C	Sidechain
25	BB	1980	G	Sidechain
25	BB	1981	A	Sidechain
25	BB	1983	G	Sidechain
25	BB	1984	G	Sidechain
25	BB	1989	G	Sidechain
25	BB	199	A	Sidechain
25	BB	1990	C	Sidechain
25	BB	1992	G	Sidechain
25	BB	1994	C	Sidechain
25	BB	1996	C	Sidechain
25	BB	2	G	Sidechain
25	BB	20	C	Sidechain
25	BB	200	U	Sidechain
25	BB	2000	C	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2001	C	Sidechain
25	BB	2002	G	Sidechain
25	BB	2004	G	Sidechain
25	BB	201	C	Sidechain
25	BB	2010	G	Sidechain
25	BB	2011	U	Sidechain
25	BB	2012	G	Sidechain
25	BB	2013	A	Sidechain
25	BB	2017	U	Sidechain
25	BB	2018	G	Sidechain
25	BB	2020	A	Sidechain
25	BB	2021	C	Sidechain
25	BB	2022	U	Sidechain
25	BB	2024	G	Sidechain
25	BB	2028	U	Sidechain
25	BB	203	A	Sidechain
25	BB	2031	A	Sidechain
25	BB	2032	G	Sidechain
25	BB	2033	A	Sidechain
25	BB	2035	G	Sidechain
25	BB	2038	G	Sidechain
25	BB	2039	U	Sidechain
25	BB	2040	G	Sidechain
25	BB	2044	C	Sidechain
25	BB	2048	G	Sidechain
25	BB	205	G	Sidechain
25	BB	2050	C	Sidechain
25	BB	2051	A	Sidechain
25	BB	2053	G	Sidechain
25	BB	2056	G	Sidechain
25	BB	2057	G	Sidechain
25	BB	2059	A	Sidechain
25	BB	206	U	Sidechain
25	BB	2060	A	Sidechain
25	BB	2061	G	Sidechain
25	BB	2062	A	Sidechain
25	BB	2068	U	Sidechain
25	BB	2069	G	Sidechain
25	BB	2071	A	Sidechain
25	BB	2073	C	Sidechain
25	BB	2075	U	Sidechain
25	BB	2076	U	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2077	A	Sidechain
25	BB	208	C	Sidechain
25	BB	2083	G	Sidechain
25	BB	2087	G	Sidechain
25	BB	2088	A	Sidechain
25	BB	2089	C	Sidechain
25	BB	209	C	Sidechain
25	BB	2090	A	Sidechain
25	BB	2093	G	Sidechain
25	BB	2095	A	Sidechain
25	BB	2096	C	Sidechain
25	BB	2097	A	Sidechain
25	BB	2098	U	Sidechain
25	BB	2099	U	Sidechain
25	BB	21	A	Sidechain
25	BB	2100	G	Sidechain
25	BB	2101	A	Sidechain
25	BB	2102	G	Sidechain
25	BB	2103	C	Sidechain
25	BB	2104	C	Sidechain
25	BB	2105	U	Sidechain
25	BB	2106	U	Sidechain
25	BB	2107	G	Sidechain
25	BB	2109	U	Sidechain
25	BB	2110	G	Sidechain
25	BB	2111	U	Sidechain
25	BB	2112	G	Sidechain
25	BB	2113	U	Sidechain
25	BB	2115	G	Sidechain
25	BB	2116	G	Sidechain
25	BB	2117	A	Sidechain
25	BB	2118	U	Sidechain
25	BB	2122	U	Sidechain
25	BB	2125	G	Sidechain
25	BB	2126	A	Sidechain
25	BB	2127	G	Sidechain
25	BB	2128	G	Sidechain
25	BB	213	A	Sidechain
25	BB	2130	U	Sidechain
25	BB	2131	U	Sidechain
25	BB	2133	G	Sidechain
25	BB	2136	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2138	G	Sidechain
25	BB	2140	G	Sidechain
25	BB	2141	G	Sidechain
25	BB	2144	G	Sidechain
25	BB	2145	C	Sidechain
25	BB	2147	A	Sidechain
25	BB	2148	G	Sidechain
25	BB	2149	U	Sidechain
25	BB	2151	U	Sidechain
25	BB	2152	G	Sidechain
25	BB	2154	A	Sidechain
25	BB	2155	U	Sidechain
25	BB	2156	G	Sidechain
25	BB	2157	G	Sidechain
25	BB	2160	C	Sidechain
25	BB	2161	C	Sidechain
25	BB	2162	G	Sidechain
25	BB	2164	C	Sidechain
25	BB	2165	C	Sidechain
25	BB	2166	U	Sidechain
25	BB	2168	G	Sidechain
25	BB	2169	A	Sidechain
25	BB	2170	A	Sidechain
25	BB	2172	U	Sidechain
25	BB	2173	A	Sidechain
25	BB	2175	C	Sidechain
25	BB	2177	C	Sidechain
25	BB	2179	C	Sidechain
25	BB	2180	U	Sidechain
25	BB	2183	A	Sidechain
25	BB	2184	A	Sidechain
25	BB	2185	U	Sidechain
25	BB	2186	G	Sidechain
25	BB	2188	U	Sidechain
25	BB	2191	A	Sidechain
25	BB	2192	U	Sidechain
25	BB	2193	G	Sidechain
25	BB	2195	U	Sidechain
25	BB	2199	A	Sidechain
25	BB	220	G	Sidechain
25	BB	2200	C	Sidechain
25	BB	2201	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2202	U	Sidechain
25	BB	2204	G	Sidechain
25	BB	2205	A	Sidechain
25	BB	2206	C	Sidechain
25	BB	2209	G	Sidechain
25	BB	221	A	Sidechain
25	BB	2210	U	Sidechain
25	BB	2213	U	Sidechain
25	BB	2214	C	Sidechain
25	BB	2215	C	Sidechain
25	BB	2216	G	Sidechain
25	BB	2217	G	Sidechain
25	BB	2218	G	Sidechain
25	BB	2219	U	Sidechain
25	BB	2220	U	Sidechain
25	BB	2221	G	Sidechain
25	BB	2223	G	Sidechain
25	BB	2224	G	Sidechain
25	BB	2225	A	Sidechain
25	BB	2227	A	Sidechain
25	BB	2228	G	Sidechain
25	BB	2229	U	Sidechain
25	BB	2231	U	Sidechain
25	BB	2234	G	Sidechain
25	BB	2235	G	Sidechain
25	BB	2236	U	Sidechain
25	BB	2240	U	Sidechain
25	BB	2241	A	Sidechain
25	BB	2243	U	Sidechain
25	BB	2244	U	Sidechain
25	BB	2245	U	Sidechain
25	BB	2246	G	Sidechain
25	BB	2249	U	Sidechain
25	BB	2251	G	Sidechain
25	BB	2252	G	Sidechain
25	BB	2256	G	Sidechain
25	BB	2257	U	Sidechain
25	BB	2259	U	Sidechain
25	BB	2262	U	Sidechain
25	BB	2265	U	Sidechain
25	BB	2269	G	Sidechain
25	BB	2271	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2273	A	Sidechain
25	BB	2274	A	Sidechain
25	BB	2275	C	Sidechain
25	BB	2276	G	Sidechain
25	BB	2277	G	Sidechain
25	BB	2279	G	Sidechain
25	BB	2284	A	Sidechain
25	BB	2285	C	Sidechain
25	BB	2286	G	Sidechain
25	BB	2288	A	Sidechain
25	BB	2289	G	Sidechain
25	BB	2291	U	Sidechain
25	BB	2292	U	Sidechain
25	BB	2294	G	Sidechain
25	BB	2297	A	Sidechain
25	BB	2298	A	Sidechain
25	BB	23	G	Sidechain
25	BB	230	G	Sidechain
25	BB	2302	U	Sidechain
25	BB	2303	G	Sidechain
25	BB	2304	G	Sidechain
25	BB	2307	G	Sidechain
25	BB	2310	C	Sidechain
25	BB	2311	A	Sidechain
25	BB	2312	U	Sidechain
25	BB	2316	G	Sidechain
25	BB	2318	G	Sidechain
25	BB	232	G	Sidechain
25	BB	2322	A	Sidechain
25	BB	2323	G	Sidechain
25	BB	2324	U	Sidechain
25	BB	2326	C	Sidechain
25	BB	2327	A	Sidechain
25	BB	2328	A	Sidechain
25	BB	233	A	Sidechain
25	BB	2330	G	Sidechain
25	BB	2334	U	Sidechain
25	BB	2336	A	Sidechain
25	BB	2337	G	Sidechain
25	BB	2339	C	Sidechain
25	BB	234	U	Sidechain
25	BB	2340	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2341	G	Sidechain
25	BB	2343	U	Sidechain
25	BB	2344	U	Sidechain
25	BB	2345	G	Sidechain
25	BB	2347	C	Sidechain
25	BB	2348	U	Sidechain
25	BB	2349	G	Sidechain
25	BB	2350	C	Sidechain
25	BB	2351	G	Sidechain
25	BB	2352	A	Sidechain
25	BB	2353	G	Sidechain
25	BB	2355	G	Sidechain
25	BB	2357	G	Sidechain
25	BB	2358	A	Sidechain
25	BB	2359	C	Sidechain
25	BB	2360	G	Sidechain
25	BB	2361	G	Sidechain
25	BB	2364	C	Sidechain
25	BB	2365	G	Sidechain
25	BB	2367	G	Sidechain
25	BB	2368	C	Sidechain
25	BB	2371	G	Sidechain
25	BB	2373	G	Sidechain
25	BB	2374	C	Sidechain
25	BB	2375	G	Sidechain
25	BB	2376	A	Sidechain
25	BB	238	C	Sidechain
25	BB	2380	C	Sidechain
25	BB	2381	A	Sidechain
25	BB	2382	G	Sidechain
25	BB	2385	C	Sidechain
25	BB	2387	U	Sidechain
25	BB	2388	A	Sidechain
25	BB	239	C	Sidechain
25	BB	2390	U	Sidechain
25	BB	2391	G	Sidechain
25	BB	2393	U	Sidechain
25	BB	2396	G	Sidechain
25	BB	2399	G	Sidechain
25	BB	24	G	Sidechain
25	BB	240	C	Sidechain
25	BB	2400	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2401	U	Sidechain
25	BB	2404	U	Sidechain
25	BB	2406	A	Sidechain
25	BB	2407	A	Sidechain
25	BB	2409	G	Sidechain
25	BB	2410	G	Sidechain
25	BB	2411	A	Sidechain
25	BB	2412	A	Sidechain
25	BB	2413	G	Sidechain
25	BB	2415	G	Sidechain
25	BB	2416	C	Sidechain
25	BB	2418	A	Sidechain
25	BB	2419	U	Sidechain
25	BB	242	G	Sidechain
25	BB	2424	C	Sidechain
25	BB	2425	A	Sidechain
25	BB	2426	A	Sidechain
25	BB	2428	G	Sidechain
25	BB	2429	G	Sidechain
25	BB	243	U	Sidechain
25	BB	2430	A	Sidechain
25	BB	2432	A	Sidechain
25	BB	2435	A	Sidechain
25	BB	2436	G	Sidechain
25	BB	2437	G	Sidechain
25	BB	2441	U	Sidechain
25	BB	2443	C	Sidechain
25	BB	2446	G	Sidechain
25	BB	2447	G	Sidechain
25	BB	2449	U	Sidechain
25	BB	245	G	Sidechain
25	BB	2452	C	Sidechain
25	BB	2453	A	Sidechain
25	BB	2454	G	Sidechain
25	BB	2457	U	Sidechain
25	BB	2458	G	Sidechain
25	BB	2460	U	Sidechain
25	BB	2462	C	Sidechain
25	BB	2464	G	Sidechain
25	BB	2467	C	Sidechain
25	BB	2469	A	Sidechain
25	BB	247	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2470	G	Sidechain
25	BB	2471	A	Sidechain
25	BB	2472	G	Sidechain
25	BB	2473	U	Sidechain
25	BB	2476	A	Sidechain
25	BB	2477	U	Sidechain
25	BB	2479	U	Sidechain
25	BB	248	G	Sidechain
25	BB	2480	C	Sidechain
25	BB	2481	G	Sidechain
25	BB	2482	A	Sidechain
25	BB	2483	C	Sidechain
25	BB	2484	G	Sidechain
25	BB	2488	G	Sidechain
25	BB	2489	U	Sidechain
25	BB	2492	U	Sidechain
25	BB	2493	U	Sidechain
25	BB	2494	G	Sidechain
25	BB	2496	C	Sidechain
25	BB	2497	A	Sidechain
25	BB	2499	C	Sidechain
25	BB	250	G	Sidechain
25	BB	2502	G	Sidechain
25	BB	2503	A	Sidechain
25	BB	2504	U	Sidechain
25	BB	2505	G	Sidechain
25	BB	2506	U	Sidechain
25	BB	2507	C	Sidechain
25	BB	2508	G	Sidechain
25	BB	2509	G	Sidechain
25	BB	2510	C	Sidechain
25	BB	2511	U	Sidechain
25	BB	2516	A	Sidechain
25	BB	2518	A	Sidechain
25	BB	2519	U	Sidechain
25	BB	2520	C	Sidechain
25	BB	2521	C	Sidechain
25	BB	2522	U	Sidechain
25	BB	2523	G	Sidechain
25	BB	2524	G	Sidechain
25	BB	2525	G	Sidechain
25	BB	2526	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2527	C	Sidechain
25	BB	2528	U	Sidechain
25	BB	2529	G	Sidechain
25	BB	253	C	Sidechain
25	BB	2530	A	Sidechain
25	BB	2531	A	Sidechain
25	BB	2532	G	Sidechain
25	BB	2536	G	Sidechain
25	BB	2538	C	Sidechain
25	BB	2539	C	Sidechain
25	BB	254	G	Sidechain
25	BB	2540	C	Sidechain
25	BB	2541	A	Sidechain
25	BB	2543	G	Sidechain
25	BB	2544	G	Sidechain
25	BB	2545	G	Sidechain
25	BB	2548	U	Sidechain
25	BB	2549	G	Sidechain
25	BB	255	A	Sidechain
25	BB	2550	G	Sidechain
25	BB	2551	C	Sidechain
25	BB	2552	U	Sidechain
25	BB	2553	G	Sidechain
25	BB	2556	C	Sidechain
25	BB	2557	G	Sidechain
25	BB	2559	C	Sidechain
25	BB	256	A	Sidechain
25	BB	2560	A	Sidechain
25	BB	2562	U	Sidechain
25	BB	2563	U	Sidechain
25	BB	2564	A	Sidechain
25	BB	2566	A	Sidechain
25	BB	2567	G	Sidechain
25	BB	2569	G	Sidechain
25	BB	257	C	Sidechain
25	BB	2570	G	Sidechain
25	BB	2571	U	Sidechain
25	BB	2573	C	Sidechain
25	BB	2575	C	Sidechain
25	BB	2576	G	Sidechain
25	BB	2577	A	Sidechain
25	BB	2578	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2579	C	Sidechain
25	BB	258	G	Sidechain
25	BB	2581	G	Sidechain
25	BB	2585	U	Sidechain
25	BB	2586	U	Sidechain
25	BB	2588	G	Sidechain
25	BB	259	G	Sidechain
25	BB	2591	C	Sidechain
25	BB	2592	G	Sidechain
25	BB	2593	U	Sidechain
25	BB	2594	C	Sidechain
25	BB	2595	G	Sidechain
25	BB	2596	U	Sidechain
25	BB	2597	G	Sidechain
25	BB	2599	G	Sidechain
25	BB	26	G	Sidechain
25	BB	2600	A	Sidechain
25	BB	2601	C	Sidechain
25	BB	2602	A	Sidechain
25	BB	2603	G	Sidechain
25	BB	2605	U	Sidechain
25	BB	2607	G	Sidechain
25	BB	2609	U	Sidechain
25	BB	261	G	Sidechain
25	BB	2611	C	Sidechain
25	BB	2612	C	Sidechain
25	BB	2613	U	Sidechain
25	BB	2614	A	Sidechain
25	BB	2615	U	Sidechain
25	BB	2616	C	Sidechain
25	BB	2617	U	Sidechain
25	BB	262	A	Sidechain
25	BB	2621	G	Sidechain
25	BB	2622	U	Sidechain
25	BB	2623	G	Sidechain
25	BB	2624	G	Sidechain
25	BB	2625	G	Sidechain
25	BB	2626	C	Sidechain
25	BB	2627	G	Sidechain
25	BB	2629	U	Sidechain
25	BB	263	G	Sidechain
25	BB	2632	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2634	A	Sidechain
25	BB	2635	A	Sidechain
25	BB	2636	C	Sidechain
25	BB	264	C	Sidechain
25	BB	2643	G	Sidechain
25	BB	2645	G	Sidechain
25	BB	2646	C	Sidechain
25	BB	2649	C	Sidechain
25	BB	265	A	Sidechain
25	BB	2650	U	Sidechain
25	BB	2652	C	Sidechain
25	BB	2653	U	Sidechain
25	BB	2654	A	Sidechain
25	BB	2655	G	Sidechain
25	BB	2657	A	Sidechain
25	BB	2658	C	Sidechain
25	BB	2659	G	Sidechain
25	BB	266	G	Sidechain
25	BB	2661	G	Sidechain
25	BB	2662	A	Sidechain
25	BB	2663	G	Sidechain
25	BB	2664	G	Sidechain
25	BB	2668	G	Sidechain
25	BB	267	C	Sidechain
25	BB	2670	A	Sidechain
25	BB	2671	G	Sidechain
25	BB	2673	G	Sidechain
25	BB	2674	G	Sidechain
25	BB	2675	A	Sidechain
25	BB	2676	C	Sidechain
25	BB	2677	G	Sidechain
25	BB	2680	U	Sidechain
25	BB	2682	A	Sidechain
25	BB	2688	G	Sidechain
25	BB	2692	G	Sidechain
25	BB	2693	G	Sidechain
25	BB	2694	G	Sidechain
25	BB	2699	C	Sidechain
25	BB	27	G	Sidechain
25	BB	270	A	Sidechain
25	BB	2701	U	Sidechain
25	BB	2702	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2703	C	Sidechain
25	BB	2709	G	Sidechain
25	BB	2710	C	Sidechain
25	BB	2713	U	Sidechain
25	BB	2714	G	Sidechain
25	BB	2715	C	Sidechain
25	BB	2718	G	Sidechain
25	BB	272	A	Sidechain
25	BB	2721	A	Sidechain
25	BB	2722	G	Sidechain
25	BB	2724	U	Sidechain
25	BB	2726	A	Sidechain
25	BB	2727	A	Sidechain
25	BB	2728	U	Sidechain
25	BB	2729	G	Sidechain
25	BB	273	G	Sidechain
25	BB	2730	C	Sidechain
25	BB	2731	G	Sidechain
25	BB	2732	G	Sidechain
25	BB	2733	A	Sidechain
25	BB	2736	A	Sidechain
25	BB	2739	U	Sidechain
25	BB	274	C	Sidechain
25	BB	2742	G	Sidechain
25	BB	2744	G	Sidechain
25	BB	2745	C	Sidechain
25	BB	2746	U	Sidechain
25	BB	2747	G	Sidechain
25	BB	2748	A	Sidechain
25	BB	2751	G	Sidechain
25	BB	2752	C	Sidechain
25	BB	2753	A	Sidechain
25	BB	2754	U	Sidechain
25	BB	2755	C	Sidechain
25	BB	2756	U	Sidechain
25	BB	2757	A	Sidechain
25	BB	2759	G	Sidechain
25	BB	276	U	Sidechain
25	BB	2760	C	Sidechain
25	BB	2761	A	Sidechain
25	BB	2763	G	Sidechain
25	BB	2765	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2766	A	Sidechain
25	BB	2767	C	Sidechain
25	BB	2771	C	Sidechain
25	BB	2772	C	Sidechain
25	BB	2774	C	Sidechain
25	BB	2775	G	Sidechain
25	BB	2777	G	Sidechain
25	BB	2778	A	Sidechain
25	BB	2779	U	Sidechain
25	BB	278	A	Sidechain
25	BB	2780	G	Sidechain
25	BB	2781	A	Sidechain
25	BB	2782	G	Sidechain
25	BB	2784	U	Sidechain
25	BB	2785	C	Sidechain
25	BB	2786	U	Sidechain
25	BB	2788	C	Sidechain
25	BB	2789	C	Sidechain
25	BB	279	A	Sidechain
25	BB	2791	G	Sidechain
25	BB	2793	C	Sidechain
25	BB	2794	C	Sidechain
25	BB	2795	C	Sidechain
25	BB	2796	U	Sidechain
25	BB	2798	U	Sidechain
25	BB	2799	A	Sidechain
25	BB	280	U	Sidechain
25	BB	2801	G	Sidechain
25	BB	2802	G	Sidechain
25	BB	2803	G	Sidechain
25	BB	2805	C	Sidechain
25	BB	2806	C	Sidechain
25	BB	2808	G	Sidechain
25	BB	2811	G	Sidechain
25	BB	2812	G	Sidechain
25	BB	2813	A	Sidechain
25	BB	2819	G	Sidechain
25	BB	282	A	Sidechain
25	BB	2820	A	Sidechain
25	BB	2825	G	Sidechain
25	BB	2828	G	Sidechain
25	BB	2829	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	283	G	Sidechain
25	BB	2831	G	Sidechain
25	BB	2832	U	Sidechain
25	BB	2834	G	Sidechain
25	BB	2836	U	Sidechain
25	BB	2838	G	Sidechain
25	BB	2842	G	Sidechain
25	BB	2843	G	Sidechain
25	BB	2844	G	Sidechain
25	BB	2846	G	Sidechain
25	BB	2847	U	Sidechain
25	BB	2848	G	Sidechain
25	BB	2849	U	Sidechain
25	BB	2850	A	Sidechain
25	BB	2851	A	Sidechain
25	BB	2852	G	Sidechain
25	BB	2854	G	Sidechain
25	BB	2855	C	Sidechain
25	BB	2856	A	Sidechain
25	BB	2857	G	Sidechain
25	BB	2858	C	Sidechain
25	BB	2859	G	Sidechain
25	BB	286	U	Sidechain
25	BB	2864	G	Sidechain
25	BB	2866	U	Sidechain
25	BB	2867	G	Sidechain
25	BB	287	G	Sidechain
25	BB	2871	U	Sidechain
25	BB	2873	A	Sidechain
25	BB	2876	G	Sidechain
25	BB	2879	A	Sidechain
25	BB	288	U	Sidechain
25	BB	2881	U	Sidechain
25	BB	2884	U	Sidechain
25	BB	2885	G	Sidechain
25	BB	2886	A	Sidechain
25	BB	2887	A	Sidechain
25	BB	2890	G	Sidechain
25	BB	2892	G	Sidechain
25	BB	2894	G	Sidechain
25	BB	2896	C	Sidechain
25	BB	2897	U	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	2899	A	Sidechain
25	BB	290	U	Sidechain
25	BB	2901	C	Sidechain
25	BB	293	U	Sidechain
25	BB	294	A	Sidechain
25	BB	295	G	Sidechain
25	BB	297	G	Sidechain
25	BB	299	A	Sidechain
25	BB	3	U	Sidechain
25	BB	30	G	Sidechain
25	BB	305	C	Sidechain
25	BB	306	U	Sidechain
25	BB	307	G	Sidechain
25	BB	308	G	Sidechain
25	BB	31	C	Sidechain
25	BB	311	A	Sidechain
25	BB	313	G	Sidechain
25	BB	315	G	Sidechain
25	BB	316	C	Sidechain
25	BB	317	G	Sidechain
25	BB	319	G	Sidechain
25	BB	32	C	Sidechain
25	BB	320	A	Sidechain
25	BB	321	U	Sidechain
25	BB	322	A	Sidechain
25	BB	323	C	Sidechain
25	BB	325	G	Sidechain
25	BB	326	G	Sidechain
25	BB	327	G	Sidechain
25	BB	329	G	Sidechain
25	BB	33	C	Sidechain
25	BB	336	C	Sidechain
25	BB	338	G	Sidechain
25	BB	339	U	Sidechain
25	BB	340	A	Sidechain
25	BB	341	C	Sidechain
25	BB	342	A	Sidechain
25	BB	343	C	Sidechain
25	BB	345	A	Sidechain
25	BB	347	A	Sidechain
25	BB	348	A	Sidechain
25	BB	349	U	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	35	G	Sidechain
25	BB	350	G	Sidechain
25	BB	351	C	Sidechain
25	BB	352	A	Sidechain
25	BB	354	A	Sidechain
25	BB	355	U	Sidechain
25	BB	356	G	Sidechain
25	BB	357	C	Sidechain
25	BB	358	U	Sidechain
25	BB	361	G	Sidechain
25	BB	362	A	Sidechain
25	BB	364	C	Sidechain
25	BB	365	U	Sidechain
25	BB	370	G	Sidechain
25	BB	371	A	Sidechain
25	BB	372	G	Sidechain
25	BB	374	A	Sidechain
25	BB	376	G	Sidechain
25	BB	381	G	Sidechain
25	BB	384	A	Sidechain
25	BB	385	C	Sidechain
25	BB	386	G	Sidechain
25	BB	387	U	Sidechain
25	BB	389	G	Sidechain
25	BB	39	G	Sidechain
25	BB	390	U	Sidechain
25	BB	394	C	Sidechain
25	BB	396	G	Sidechain
25	BB	397	U	Sidechain
25	BB	399	U	Sidechain
25	BB	4	U	Sidechain
25	BB	401	A	Sidechain
25	BB	402	A	Sidechain
25	BB	403	U	Sidechain
25	BB	405	U	Sidechain
25	BB	406	G	Sidechain
25	BB	407	G	Sidechain
25	BB	409	G	Sidechain
25	BB	41	C	Sidechain
25	BB	410	G	Sidechain
25	BB	415	A	Sidechain
25	BB	416	U	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	419	U	Sidechain
25	BB	420	C	Sidechain
25	BB	423	A	Sidechain
25	BB	424	G	Sidechain
25	BB	427	U	Sidechain
25	BB	431	U	Sidechain
25	BB	433	C	Sidechain
25	BB	436	C	Sidechain
25	BB	437	U	Sidechain
25	BB	438	G	Sidechain
25	BB	439	A	Sidechain
25	BB	44	A	Sidechain
25	BB	440	C	Sidechain
25	BB	441	U	Sidechain
25	BB	442	G	Sidechain
25	BB	443	A	Sidechain
25	BB	446	G	Sidechain
25	BB	449	A	Sidechain
25	BB	450	G	Sidechain
25	BB	453	A	Sidechain
25	BB	456	C	Sidechain
25	BB	46	G	Sidechain
25	BB	461	C	Sidechain
25	BB	462	C	Sidechain
25	BB	463	G	Sidechain
25	BB	464	U	Sidechain
25	BB	465	G	Sidechain
25	BB	466	A	Sidechain
25	BB	467	G	Sidechain
25	BB	468	G	Sidechain
25	BB	470	A	Sidechain
25	BB	471	A	Sidechain
25	BB	473	G	Sidechain
25	BB	474	G	Sidechain
25	BB	475	C	Sidechain
25	BB	476	G	Sidechain
25	BB	477	A	Sidechain
25	BB	478	A	Sidechain
25	BB	48	G	Sidechain
25	BB	480	A	Sidechain
25	BB	481	G	Sidechain
25	BB	482	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	483	A	Sidechain
25	BB	484	C	Sidechain
25	BB	485	C	Sidechain
25	BB	487	C	Sidechain
25	BB	488	G	Sidechain
25	BB	489	G	Sidechain
25	BB	49	A	Sidechain
25	BB	490	C	Sidechain
25	BB	492	A	Sidechain
25	BB	496	G	Sidechain
25	BB	498	G	Sidechain
25	BB	499	U	Sidechain
25	BB	50	U	Sidechain
25	BB	501	A	Sidechain
25	BB	502	A	Sidechain
25	BB	505	A	Sidechain
25	BB	507	A	Sidechain
25	BB	509	C	Sidechain
25	BB	51	G	Sidechain
25	BB	510	C	Sidechain
25	BB	513	A	Sidechain
25	BB	515	A	Sidechain
25	BB	518	G	Sidechain
25	BB	522	A	Sidechain
25	BB	524	G	Sidechain
25	BB	526	A	Sidechain
25	BB	527	C	Sidechain
25	BB	529	A	Sidechain
25	BB	530	G	Sidechain
25	BB	532	A	Sidechain
25	BB	535	G	Sidechain
25	BB	536	G	Sidechain
25	BB	537	G	Sidechain
25	BB	541	A	Sidechain
25	BB	542	C	Sidechain
25	BB	543	G	Sidechain
25	BB	544	C	Sidechain
25	BB	545	U	Sidechain
25	BB	547	A	Sidechain
25	BB	548	G	Sidechain
25	BB	55	G	Sidechain
25	BB	551	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	553	G	Sidechain
25	BB	554	U	Sidechain
25	BB	555	G	Sidechain
25	BB	556	A	Sidechain
25	BB	558	U	Sidechain
25	BB	559	G	Sidechain
25	BB	56	A	Sidechain
25	BB	561	G	Sidechain
25	BB	565	C	Sidechain
25	BB	566	U	Sidechain
25	BB	567	U	Sidechain
25	BB	568	U	Sidechain
25	BB	57	C	Sidechain
25	BB	570	G	Sidechain
25	BB	573	U	Sidechain
25	BB	576	U	Sidechain
25	BB	577	G	Sidechain
25	BB	580	U	Sidechain
25	BB	581	C	Sidechain
25	BB	582	A	Sidechain
25	BB	583	G	Sidechain
25	BB	584	C	Sidechain
25	BB	585	G	Sidechain
25	BB	587	C	Sidechain
25	BB	588	U	Sidechain
25	BB	589	U	Sidechain
25	BB	59	U	Sidechain
25	BB	590	A	Sidechain
25	BB	592	A	Sidechain
25	BB	593	U	Sidechain
25	BB	594	U	Sidechain
25	BB	596	U	Sidechain
25	BB	597	G	Sidechain
25	BB	598	U	Sidechain
25	BB	6	A	Sidechain
25	BB	60	G	Sidechain
25	BB	602	A	Sidechain
25	BB	604	G	Sidechain
25	BB	606	U	Sidechain
25	BB	608	A	Sidechain
25	BB	61	C	Sidechain
25	BB	610	C	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	612	G	Sidechain
25	BB	615	U	Sidechain
25	BB	617	G	Sidechain
25	BB	618	G	Sidechain
25	BB	619	G	Sidechain
25	BB	620	G	Sidechain
25	BB	623	C	Sidechain
25	BB	624	C	Sidechain
25	BB	625	G	Sidechain
25	BB	626	A	Sidechain
25	BB	629	G	Sidechain
25	BB	630	G	Sidechain
25	BB	631	A	Sidechain
25	BB	632	A	Sidechain
25	BB	633	A	Sidechain
25	BB	636	G	Sidechain
25	BB	639	U	Sidechain
25	BB	640	C	Sidechain
25	BB	642	U	Sidechain
25	BB	644	A	Sidechain
25	BB	645	C	Sidechain
25	BB	646	U	Sidechain
25	BB	647	G	Sidechain
25	BB	649	G	Sidechain
25	BB	65	U	Sidechain
25	BB	654	A	Sidechain
25	BB	655	A	Sidechain
25	BB	656	G	Sidechain
25	BB	658	U	Sidechain
25	BB	66	C	Sidechain
25	BB	664	G	Sidechain
25	BB	665	U	Sidechain
25	BB	666	A	Sidechain
25	BB	669	G	Sidechain
25	BB	67	U	Sidechain
25	BB	672	C	Sidechain
25	BB	673	C	Sidechain
25	BB	675	A	Sidechain
25	BB	676	A	Sidechain
25	BB	677	A	Sidechain
25	BB	678	C	Sidechain
25	BB	679	C	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	68	G	Sidechain
25	BB	681	G	Sidechain
25	BB	682	G	Sidechain
25	BB	683	U	Sidechain
25	BB	686	U	Sidechain
25	BB	687	C	Sidechain
25	BB	688	U	Sidechain
25	BB	689	A	Sidechain
25	BB	690	G	Sidechain
25	BB	691	C	Sidechain
25	BB	693	A	Sidechain
25	BB	694	U	Sidechain
25	BB	695	G	Sidechain
25	BB	696	G	Sidechain
25	BB	698	C	Sidechain
25	BB	699	A	Sidechain
25	BB	7	G	Sidechain
25	BB	700	G	Sidechain
25	BB	701	G	Sidechain
25	BB	704	G	Sidechain
25	BB	707	G	Sidechain
25	BB	708	G	Sidechain
25	BB	709	U	Sidechain
25	BB	711	G	Sidechain
25	BB	712	G	Sidechain
25	BB	713	G	Sidechain
25	BB	716	A	Sidechain
25	BB	717	C	Sidechain
25	BB	719	C	Sidechain
25	BB	72	U	Sidechain
25	BB	721	A	Sidechain
25	BB	722	A	Sidechain
25	BB	725	G	Sidechain
25	BB	727	A	Sidechain
25	BB	728	G	Sidechain
25	BB	729	G	Sidechain
25	BB	73	A	Sidechain
25	BB	731	C	Sidechain
25	BB	732	C	Sidechain
25	BB	733	G	Sidechain
25	BB	734	A	Sidechain
25	BB	735	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	736	C	Sidechain
25	BB	738	G	Sidechain
25	BB	739	A	Sidechain
25	BB	740	C	Sidechain
25	BB	742	A	Sidechain
25	BB	743	A	Sidechain
25	BB	744	U	Sidechain
25	BB	745	G	Sidechain
25	BB	746	U	Sidechain
25	BB	747	U	Sidechain
25	BB	748	G	Sidechain
25	BB	749	A	Sidechain
25	BB	75	G	Sidechain
25	BB	752	A	Sidechain
25	BB	753	A	Sidechain
25	BB	754	U	Sidechain
25	BB	757	G	Sidechain
25	BB	758	C	Sidechain
25	BB	759	G	Sidechain
25	BB	76	C	Sidechain
25	BB	760	G	Sidechain
25	BB	761	A	Sidechain
25	BB	762	U	Sidechain
25	BB	763	G	Sidechain
25	BB	765	C	Sidechain
25	BB	766	U	Sidechain
25	BB	767	U	Sidechain
25	BB	768	G	Sidechain
25	BB	77	G	Sidechain
25	BB	770	G	Sidechain
25	BB	771	G	Sidechain
25	BB	774	G	Sidechain
25	BB	776	G	Sidechain
25	BB	777	G	Sidechain
25	BB	779	U	Sidechain
25	BB	78	U	Sidechain
25	BB	780	G	Sidechain
25	BB	781	A	Sidechain
25	BB	782	A	Sidechain
25	BB	783	A	Sidechain
25	BB	786	C	Sidechain
25	BB	788	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	79	C	Sidechain
25	BB	790	U	Sidechain
25	BB	791	C	Sidechain
25	BB	794	A	Sidechain
25	BB	795	C	Sidechain
25	BB	796	C	Sidechain
25	BB	799	G	Sidechain
25	BB	8	C	Sidechain
25	BB	800	A	Sidechain
25	BB	801	G	Sidechain
25	BB	803	U	Sidechain
25	BB	804	A	Sidechain
25	BB	808	G	Sidechain
25	BB	809	G	Sidechain
25	BB	811	U	Sidechain
25	BB	812	C	Sidechain
25	BB	813	U	Sidechain
25	BB	814	C	Sidechain
25	BB	816	C	Sidechain
25	BB	818	G	Sidechain
25	BB	820	A	Sidechain
25	BB	825	A	Sidechain
25	BB	829	A	Sidechain
25	BB	83	A	Sidechain
25	BB	830	G	Sidechain
25	BB	831	G	Sidechain
25	BB	832	U	Sidechain
25	BB	834	G	Sidechain
25	BB	836	G	Sidechain
25	BB	837	C	Sidechain
25	BB	838	C	Sidechain
25	BB	842	U	Sidechain
25	BB	843	G	Sidechain
25	BB	844	A	Sidechain
25	BB	847	U	Sidechain
25	BB	848	C	Sidechain
25	BB	849	A	Sidechain
25	BB	851	C	Sidechain
25	BB	852	U	Sidechain
25	BB	854	C	Sidechain
25	BB	858	G	Sidechain
25	BB	859	G	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	86	G	Sidechain
25	BB	860	U	Sidechain
25	BB	861	A	Sidechain
25	BB	862	G	Sidechain
25	BB	863	A	Sidechain
25	BB	864	G	Sidechain
25	BB	865	C	Sidechain
25	BB	867	C	Sidechain
25	BB	870	U	Sidechain
25	BB	871	U	Sidechain
25	BB	873	C	Sidechain
25	BB	874	G	Sidechain
25	BB	875	G	Sidechain
25	BB	876	C	Sidechain
25	BB	879	G	Sidechain
25	BB	88	G	Sidechain
25	BB	880	G	Sidechain
25	BB	882	G	Sidechain
25	BB	883	G	Sidechain
25	BB	885	C	Sidechain
25	BB	887	U	Sidechain
25	BB	889	C	Sidechain
25	BB	89	A	Sidechain
25	BB	891	G	Sidechain
25	BB	892	A	Sidechain
25	BB	893	C	Sidechain
25	BB	894	U	Sidechain
25	BB	896	A	Sidechain
25	BB	898	C	Sidechain
25	BB	901	C	Sidechain
25	BB	902	C	Sidechain
25	BB	904	G	Sidechain
25	BB	905	A	Sidechain
25	BB	906	U	Sidechain
25	BB	907	G	Sidechain
25	BB	909	A	Sidechain
25	BB	91	A	Sidechain
25	BB	911	A	Sidechain
25	BB	916	G	Sidechain
25	BB	918	A	Sidechain
25	BB	92	U	Sidechain
25	BB	922	C	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	923	G	Sidechain
25	BB	924	G	Sidechain
25	BB	925	A	Sidechain
25	BB	929	U	Sidechain
25	BB	93	G	Sidechain
25	BB	930	G	Sidechain
25	BB	931	U	Sidechain
25	BB	932	U	Sidechain
25	BB	934	U	Sidechain
25	BB	936	A	Sidechain
25	BB	937	C	Sidechain
25	BB	939	G	Sidechain
25	BB	94	A	Sidechain
25	BB	940	G	Sidechain
25	BB	942	G	Sidechain
25	BB	943	A	Sidechain
25	BB	947	A	Sidechain
25	BB	948	C	Sidechain
25	BB	949	G	Sidechain
25	BB	950	G	Sidechain
25	BB	952	G	Sidechain
25	BB	953	G	Sidechain
25	BB	954	G	Sidechain
25	BB	955	U	Sidechain
25	BB	96	C	Sidechain
25	BB	960	A	Sidechain
25	BB	961	C	Sidechain
25	BB	963	U	Sidechain
25	BB	964	C	Sidechain
25	BB	965	C	Sidechain
25	BB	966	G	Sidechain
25	BB	967	U	Sidechain
25	BB	969	G	Sidechain
25	BB	970	U	Sidechain
25	BB	971	G	Sidechain
25	BB	974	G	Sidechain
25	BB	976	G	Sidechain
25	BB	977	G	Sidechain
25	BB	978	G	Sidechain
25	BB	979	A	Sidechain
25	BB	98	G	Sidechain
25	BB	980	A	Sidechain

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Mol	Chain	Res	Type	Group
25	BB	981	A	Sidechain
25	BB	983	A	Sidechain
25	BB	984	A	Sidechain
25	BB	985	C	Sidechain
25	BB	986	C	Sidechain
25	BB	989	G	Sidechain
25	BB	99	U	Sidechain
25	BB	991	C	Sidechain
25	BB	994	C	Sidechain
25	BB	996	A	Sidechain
25	BB	997	G	Sidechain
25	BB	998	C	Sidechain
25	BB	999	U	Sidechain
26	BC	22	ALA	Peptide
26	BC	57	TYR	Sidechain
26	BC	93	ARG	Sidechain
27	BD	105	ARG	Sidechain
27	BD	11	ALA	Peptide
27	BD	121	GLU	Sidechain
27	BD	30	ARG	Peptide
27	BD	33	ALA	Peptide
27	BD	40	LYS	Peptide
28	BE	117	THR	Peptide
28	BE	41	ARG	Sidechain
28	BE	47	ARG	Peptide
28	BE	54	GLN	Peptide
28	BE	78	ARG	Sidechain
28	BE	80	SER	Peptide
29	BF	110	GLU	Peptide
29	BF	51	ARG	Sidechain
29	BF	59	ARG	Sidechain
29	BF	66	ARG	Sidechain
30	BG	17	ARG	Sidechain
30	BG	30	ARG	Sidechain
30	BG	6	SER	Peptide
30	BG	63	ARG	Sidechain
31	BH	111	ARG	Sidechain
32	BI	102	ARG	Sidechain
32	BI	63	ILE	Peptide
32	BI	97	TYR	Sidechain
32	BI	98	TYR	Sidechain
33	BJ	23	TYR	Sidechain

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Mol	Chain	Res	Type	Group
33	BJ	24	TYR	Sidechain
33	BJ	46	TYR	Sidechain
33	BJ	47	ARG	Sidechain
34	BK	23	GLU	Sidechain
34	BK	75	VAL	Peptide
34	BK	79	ARG	Sidechain
34	BK	81	LYS	Peptide
34	BK	84	ARG	Sidechain
35	BL	25	ARG	Sidechain
35	BL	78	GLU	Peptide
35	BL	8	ARG	Sidechain
35	BL	84	ARG	Sidechain
35	BL	95	ARG	Sidechain
36	BM	38	ALA	Peptide
37	BN	125	PRO	Peptide
37	BN	145	MET	Peptide
37	BN	155	ARG	Sidechain
37	BN	19	VAL	Peptide
37	BN	192	GLY	Peptide
37	BN	207	ALA	Peptide
37	BN	246	PRO	Peptide
37	BN	257	ARG	Sidechain
37	BN	51	ARG	Sidechain
37	BN	65	ASP	Peptide
37	BN	79	ARG	Peptide
37	BN	95	TYR	Sidechain
38	BO	4	ILE	Peptide
38	BO	71	ILE	Peptide
38	BO	75	ALA	Peptide
38	BO	81	ARG	Sidechain
39	BP	31	LEU	Peptide
39	BP	67	LYS	Peptide
39	BP	81	ILE	Peptide
40	BQ	39	GLN	Peptide
40	BQ	48	ARG	Sidechain
40	BQ	52	ARG	Sidechain
41	BR	10	ARG	Sidechain
41	BR	15	ARG	Sidechain
41	BR	37	ARG	Peptide
42	BS	49	ARG	Sidechain
42	BS	6	HIS	Peptide
42	BS	69	SER	Peptide

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Mol	Chain	Res	Type	Group
43	BT	39	ARG	Sidechain
43	BT	47	TYR	Sidechain
44	BU	20	TYR	Sidechain
44	BU	24	LYS	Peptide
44	BU	32	LYS	Peptide
44	BU	34	GLU	Peptide
44	BU	51	ALA	Peptide
45	BV	12	ARG	Sidechain
45	BV	35	ARG	Sidechain
46	BW	26	ALA	Peptide
46	BW	32	LEU	Peptide
46	BW	39	ARG	Sidechain
46	BW	63	TYR	Sidechain
47	BX	12	ARG	Sidechain
47	BX	36	ARG	Sidechain
48	BY	118	PHE	Sidechain
48	BY	119	ALA	Peptide
48	BY	129	THR	Peptide
48	BY	134	HIS	Peptide
48	BY	147	GLY	Peptide
48	BY	176	ASP	Peptide
48	BY	46	ARG	Peptide
48	BY	59	ARG	Sidechain
48	BY	7	LYS	Peptide
49	BZ	20	TYR	Sidechain
49	BZ	217	ARG	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	1600	0	760	11	0
1	AE	1622	0	769	7	0
1	AP	1600	0	755	42	0
2	AM	397	0	202	6	0
3	A1	32828	0	15511	162	0
4	AB	1704	0	1732	9	0
5	AC	876	0	887	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	AD	954	0	1019	4	0
7	AF	883	0	944	1	0
8	AG	773	0	825	2	0
9	AH	715	0	742	2	0
10	AI	648	0	666	6	0
11	AJ	648	0	691	3	0
12	AK	455	0	478	0	0
13	AL	637	0	665	0	0
14	AN	664	0	714	4	0
15	AO	1624	0	1699	5	0
16	AQ	425	0	449	2	0
17	AR	1642	0	1710	9	0
18	AS	1105	0	1148	4	0
19	AT	817	0	808	2	0
20	AU	1174	0	1230	3	0
21	AV	978	0	1034	0	0
22	AW	1021	0	1070	1	0
23	AX	786	0	828	4	0
24	BA	2504	0	1208	11	0
25	BB	62317	0	29633	225	0
26	BC	752	0	780	4	0
27	BD	930	0	1000	5	0
28	BE	1052	0	1129	10	0
29	BF	1073	0	1157	8	0
30	BG	1007	0	1045	4	0
31	BH	899	0	935	2	0
32	BI	916	0	965	6	0
33	BJ	946	0	1022	8	0
34	BK	815	0	839	4	0
35	BL	856	0	922	0	0
36	BM	777	0	840	2	0
37	BN	2053	0	2122	9	0
38	BO	779	0	834	2	0
39	BP	633	0	656	1	0
40	BQ	508	0	543	3	0
41	BR	448	0	491	2	0
42	BS	548	0	552	2	0
43	BT	443	0	461	2	0
44	BU	440	0	485	2	0
45	BV	376	0	418	2	0
46	BW	503	0	574	7	0
47	BX	301	0	343	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	BY	1564	0	1616	7	0
49	BZ	1687	0	1814	4	0
50	B1	1551	0	1619	7	0
51	B2	1419	0	1460	8	0
52	B3	1322	0	1374	3	0
53	B4	1110	0	1148	2	0
54	B5	1031	0	1088	4	0
55	B6	1112	0	1147	2	0
All	All	149248	0	97556	537	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 (537) 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)
25:BB:1687:G:C2'	25:BB:1687:G:C3'	1.91	1.47
25:BB:1687:G:C2'	25:BB:1687:G:C1'	1.93	1.45
1:AP:31:A:C2'	3:A1:1340:A:H3'	1.45	1.44
25:BB:1687:G:C3'	25:BB:1687:G:C4'	1.96	1.43
1:AP:31:A:C2'	1:AP:31:A:C3'	2.01	1.39
1:AP:31:A:C2'	1:AP:31:A:C1'	2.02	1.36
1:AP:31:A:C3'	1:AP:31:A:C4'	2.11	1.26
25:BB:1687:G:C1'	25:BB:1687:G:O4'	1.87	1.21
25:BB:1687:G:C4'	25:BB:1687:G:O4'	1.87	1.21
1:AP:31:A:C4'	3:A1:1340:A:C3'	2.30	1.10
1:AP:31:A:C1'	1:AP:31:A:O4'	1.99	1.09
1:AP:31:A:C1'	3:A1:1340:A:C3'	2.31	1.08
1:AP:31:A:C4'	1:AP:31:A:O4'	2.03	1.06
1:AP:31:A:C3'	3:A1:1340:A:C3'	2.33	1.05
3:A1:1418:A:C4	25:BB:1960:A:P	2.49	1.05
3:A1:1418:A:C6	25:BB:1960:A:P	2.50	1.05
1:AP:31:A:C2'	3:A1:1340:A:C3'	2.35	1.04
3:A1:1418:A:C2	25:BB:1960:A:P	2.50	1.04
3:A1:1418:A:C5	25:BB:1960:A:P	2.52	1.02
3:A1:1429:A:P	25:BB:1687:G:C1'	2.48	1.01
3:A1:1429:A:P	25:BB:1687:G:C4'	2.49	1.01
3:A1:1429:A:P	25:BB:1687:G:C3'	2.55	0.95
1:AP:31:A:C4'	3:A1:1340:A:O3'	2.16	0.93
3:A1:1429:A:P	25:BB:1687:G:C2'	2.56	0.93
3:A1:1418:A:C6	25:BB:1959:G:O3'	2.21	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AP:31:A:C1'	3:A1:1340:A:H3'	1.99	0.93
3:A1:1418:A:C5	25:BB:1959:G:O3'	2.21	0.92
3:A1:1418:A:C2	25:BB:1959:G:O3'	2.22	0.92
1:AP:31:A:C3'	3:A1:1340:A:O3'	2.18	0.91
3:A1:1418:A:C4	25:BB:1959:G:O3'	2.22	0.91
1:AP:31:A:C1'	3:A1:1340:A:O3'	2.20	0.90
3:A1:1429:A:O5'	25:BB:1687:G:C4'	2.20	0.90
1:AP:31:A:H2'	3:A1:1340:A:H3'	1.52	0.90
1:AP:31:A:C2'	3:A1:1340:A:O3'	2.20	0.90
1:AP:31:A:C3'	3:A1:1340:A:H3'	2.02	0.90
1:AP:31:A:O4'	3:A1:1340:A:C3'	2.21	0.89
3:A1:1429:A:O5'	25:BB:1687:G:C1'	2.22	0.88
3:A1:1429:A:O5'	25:BB:1687:G:C3'	2.24	0.86
3:A1:1429:A:O5'	25:BB:1687:G:C2'	2.23	0.86
1:AP:75:C:C5	25:BB:2253:G:O6	2.22	0.84
3:A1:1418:A:N3	25:BB:1960:A:P	2.52	0.82
3:A1:1418:A:N1	25:BB:1960:A:P	2.53	0.81
3:A1:1429:A:P	25:BB:1687:G:O4'	2.40	0.80
1:AP:31:A:O4'	3:A1:1340:A:O3'	2.08	0.70
3:A1:1418:A:N1	25:BB:1959:G:O3'	2.23	0.70
3:A1:129:A:H61	3:A1:232:G:H1	1.39	0.69
3:A1:1429:A:O5'	25:BB:1687:G:O4'	2.12	0.67
17:AR:131:ILE:HD12	17:AR:131:ILE:H	1.61	0.65
3:A1:1429:A:HO5'	25:BB:1687:G:C2'	2.10	0.64
42:BS:5:ILE:HD12	42:BS:5:ILE:H	1.62	0.64
25:BB:1251:C:H1'	25:BB:1252:G:H3'	1.80	0.63
17:AR:27:ILE:HD12	17:AR:27:ILE:H	1.65	0.62
3:A1:1429:A:C5'	25:BB:1687:G:C4'	2.78	0.61
3:A1:1418:A:C4	25:BB:1959:G:C3'	2.83	0.61
15:AO:86:LEU:O	15:AO:90:VAL:HG22	2.01	0.60
32:BI:29:VAL:HG13	32:BI:31:VAL:HG23	1.82	0.60
1:AA:61:C:H2'	1:AA:62:A:C8	2.36	0.60
51:B2:2:LYS:HE3	51:B2:2:LYS:HA	1.81	0.60
3:A1:772:U:H3	3:A1:807:A:H61	1.47	0.60
26:BC:2:PHE:CE1	26:BC:50:MET:SD	2.95	0.60
4:AB:53:LEU:HD22	4:AB:53:LEU:H	1.67	0.60
24:BA:81:G:C5	24:BA:82:U:C5	2.90	0.60
3:A1:589:U:H3	3:A1:650:G:N2	2.00	0.59
1:AA:48:C:C5	1:AA:59:U:C4	2.91	0.59
28:BE:77:ILE:HG13	28:BE:78:ARG:H	1.67	0.59
25:BB:633:A:C5	25:BB:634:C:H1'	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:131:ILE:H	17:AR:131:ILE:CD1	2.15	0.59
1:AA:48:C:H2'	1:AA:59:U:H1'	1.84	0.58
3:A1:1229:A:H2'	3:A1:1230:C:H2'	1.85	0.58
25:BB:18:U:H1'	33:BJ:20:ALA:HB1	1.84	0.58
51:B2:103:ILE:HG22	51:B2:175:PRO:HD3	1.85	0.58
54:B5:36:GLU:HA	54:B5:39:LYS:HE2	1.86	0.58
3:A1:1429:A:P	25:BB:1687:G:H1'	2.42	0.58
1:AP:31:A:C4'	3:A1:1340:A:C2'	2.82	0.57
25:BB:2886:A:H2'	25:BB:2886:A:N3	2.20	0.57
24:BA:75:G:H21	26:BC:88:HIS:CD2	2.21	0.57
55:B6:122:LEU:HD23	55:B6:122:LEU:H	1.69	0.57
3:A1:335:C:H2'	3:A1:336:A:C8	2.40	0.56
15:AO:156:LEU:HD23	15:AO:156:LEU:H	1.70	0.56
1:AP:31:A:C1'	3:A1:1340:A:H4'	2.35	0.56
3:A1:321:A:N6	3:A1:332:G:H1	2.03	0.56
3:A1:1016:A:C6	3:A1:1017:U:H1'	2.41	0.56
25:BB:827:U:C6	25:BB:2426:A:H2'	2.40	0.56
48:BY:172:VAL:HG13	48:BY:173:GLN:H	1.70	0.56
1:AP:31:A:C1'	3:A1:1341:U:P	2.94	0.56
3:A1:954:G:H1	3:A1:1226:C:N4	2.04	0.56
18:AS:10:LEU:HD12	18:AS:10:LEU:H	1.70	0.56
22:AW:14:SER:HA	22:AW:15:ALA:HB3	1.87	0.56
54:B5:79:LEU:HD21	54:B5:128:ILE:HG22	1.88	0.55
3:A1:411:A:N6	3:A1:428:G:H1'	2.22	0.55
25:BB:978:G:H1	25:BB:986:C:N4	2.04	0.55
3:A1:1256:A:H4'	3:A1:1258:G:H1'	1.88	0.55
1:AP:74:C:O2'	1:AP:75:C:H5''	2.05	0.55
14:AN:38:ILE:HD13	14:AN:82:ILE:HG22	1.89	0.55
25:BB:2821:A:H3'	25:BB:2822:G:H5''	1.89	0.55
25:BB:1065:U:C6	25:BB:1066:U:H1'	2.42	0.55
25:BB:1981:A:H4'	25:BB:1981:A:OP2	2.06	0.54
25:BB:703:U:H2'	25:BB:704:G:C2	2.42	0.54
37:BN:249:VAL:HG13	37:BN:250:GLN:H	1.72	0.54
3:A1:25:C:N4	3:A1:26:A:H62	2.05	0.54
3:A1:1016:A:C5	3:A1:1017:U:H1'	2.43	0.54
3:A1:1317:C:C5	3:A1:1318:A:H1'	2.42	0.54
3:A1:730:G:H2'	3:A1:731:G:H5'	1.90	0.53
39:BP:27:GLY:HA2	39:BP:61:LYS:HE2	1.89	0.53
3:A1:1429:A:P	25:BB:1687:G:H3'	2.48	0.53
25:BB:771:G:H2'	25:BB:772:C:H5''	1.89	0.53
14:AN:3:ILE:CD1	14:AN:3:ILE:H	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BB:2425:A:H1'	25:BB:2427:C:N4	2.24	0.53
3:A1:797:C:H2'	3:A1:798:U:H5''	1.90	0.53
3:A1:411:A:H61	3:A1:428:G:H1'	1.73	0.53
17:AR:131:ILE:HD12	17:AR:131:ILE:N	2.23	0.53
25:BB:646:U:C5	25:BB:647:G:C6	2.97	0.53
25:BB:2286:G:OP1	44:BU:29:LYS:HE3	2.09	0.53
34:BK:47:VAL:HG13	34:BK:49:ILE:H	1.73	0.53
25:BB:2061:G:H21	25:BB:2062:A:N6	2.07	0.52
25:BB:451:U:H3'	25:BB:452:G:H5'	1.91	0.52
1:AP:31:A:C1'	3:A1:1340:A:C4'	2.87	0.52
3:A1:1307:U:H2'	3:A1:1308:U:C6	2.44	0.52
3:A1:1429:A:OP1	25:BB:1687:G:H2'	2.10	0.52
25:BB:782:A:H4'	25:BB:783:A:H5''	1.91	0.52
25:BB:1349:C:H3'	25:BB:1350:C:H5''	1.90	0.52
52:B3:36:LEU:HD11	52:B3:42:VAL:HG13	1.92	0.52
3:A1:1418:A:C5	25:BB:1960:A:OP2	2.62	0.52
25:BB:447:A:H61	25:BB:455:C:N4	2.08	0.52
29:BF:46:ILE:HD12	29:BF:46:ILE:N	2.24	0.52
1:AP:31:A:O4'	3:A1:1340:A:C4'	2.58	0.51
25:BB:1937:A:H3'	25:BB:1938:A:H5''	1.93	0.51
2:AM:14:U:H3'	2:AM:15:U:C4'	2.40	0.51
14:AN:3:ILE:H	14:AN:3:ILE:HD13	1.75	0.51
48:BY:118:PHE:CE2	48:BY:120:GLY:HA3	2.46	0.51
53:B4:95:GLY:HA3	53:B4:121:VAL:HG21	1.93	0.51
25:BB:1140:C:H1'	25:BB:1143:A:N7	2.24	0.51
40:BQ:14:LEU:H	40:BQ:14:LEU:HD22	1.75	0.51
54:B5:77:VAL:HA	54:B5:80:LYS:HE2	1.92	0.51
3:A1:47:C:C6	3:A1:365:U:H3'	2.45	0.51
18:AS:37:VAL:HG11	18:AS:113:VAL:HG12	1.93	0.51
24:BA:29:A:H4'	24:BA:29:A:OP1	2.11	0.51
25:BB:730:A:OP1	25:BB:1775:U:H1'	2.10	0.51
25:BB:28:A:H3'	25:BB:29:U:H5''	1.93	0.51
33:BJ:16:ILE:HD13	33:BJ:16:ILE:H	1.76	0.51
4:AB:29:PHE:CE1	4:AB:44:LYS:HE2	2.45	0.51
18:AS:80:LEU:H	18:AS:80:LEU:HD23	1.76	0.51
48:BY:46:ARG:HD3	48:BY:80:TRP:CZ3	2.46	0.50
3:A1:1101:A:H1'	4:AB:97:GLY:HA2	1.93	0.50
3:A1:1428:A:O3'	25:BB:1687:G:H3'	2.11	0.50
11:AJ:32:ILE:HG12	11:AJ:33:TYR:H	1.74	0.50
32:BI:35:SER:HB3	32:BI:40:GLN:HA	1.93	0.50
37:BN:198:GLU:H	37:BN:198:GLU:CD	2.17	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BW:46:LYS:HE3	46:BW:48:MET:SD	2.51	0.50
25:BB:331:C:H41	25:BB:1210:G:H2'	1.75	0.50
3:A1:982:U:H2'	3:A1:982:U:O2	2.10	0.50
25:BB:2254:C:H2'	25:BB:2255:G:C5	2.47	0.50
1:AE:32:C:C5	1:AE:33:U:C5	2.99	0.50
3:A1:975:A:H4'	3:A1:976:G:H5''	1.93	0.50
3:A1:1429:A:H5''	25:BB:1687:G:H4'	1.93	0.50
25:BB:2525:G:C6	25:BB:2526:G:C6	3.00	0.50
25:BB:2680:U:H3	25:BB:2727:A:N6	2.09	0.50
24:BA:104:A:C5	24:BA:105:G:H1'	2.47	0.50
25:BB:295:G:H2'	25:BB:296:U:H5'	1.94	0.49
30:BG:119:SER:OG	30:BG:121:LYS:HE2	2.12	0.49
1:AP:31:A:O4'	3:A1:1340:A:H4'	2.11	0.49
3:A1:137:U:H1'	3:A1:227:G:N2	2.26	0.49
25:BB:1746:A:H2'	25:BB:1747:U:C6	2.47	0.49
25:BB:207:A:C2	25:BB:208:C:H1'	2.48	0.49
25:BB:2124:G:H3'	25:BB:2125:G:H5''	1.93	0.49
47:BX:23:ILE:HD13	47:BX:23:ILE:H	1.77	0.49
3:A1:13:U:H3	6:AD:12:ALA:HB2	1.76	0.49
3:A1:1305:G:H1'	3:A1:1307:U:C4	2.47	0.49
1:AP:31:A:H1'	3:A1:1341:U:P	2.52	0.49
23:AX:38:GLY:H	23:AX:39:PRO:CD	2.26	0.49
25:BB:1191:G:OP2	28:BE:36:LYS:HE3	2.12	0.49
3:A1:1418:A:N3	25:BB:1959:G:O3'	2.27	0.48
3:A1:1497:G:H3'	3:A1:1498:U:C6	2.48	0.48
25:BB:2472:G:H1'	25:BB:2479:U:O4	2.13	0.48
34:BK:47:VAL:HG22	34:BK:48:LYS:H	1.78	0.48
3:A1:1275:A:C5	3:A1:1276:G:H1'	2.47	0.48
5:AC:115:ILE:HD12	5:AC:115:ILE:H	1.78	0.48
25:BB:1199:U:H3	33:BJ:1:ALA:H2	1.60	0.48
3:A1:496:A:H61	3:A1:498:A:N6	2.12	0.48
3:A1:625:U:H2'	3:A1:626:G:C8	2.48	0.48
4:AB:128:LEU:HD13	4:AB:128:LEU:C	2.39	0.48
10:AI:9:HIS:CG	10:AI:10:GLY:H	2.31	0.48
28:BE:106:GLU:H	28:BE:106:GLU:CD	2.21	0.48
1:AP:31:A:H4'	3:A1:1340:A:C2'	2.42	0.48
3:A1:158:G:H3'	3:A1:159:G:H5''	1.96	0.48
25:BB:1798:U:C5	25:BB:1819:A:C2	3.01	0.48
1:AP:31:A:C3'	3:A1:1340:A:C2'	2.92	0.48
25:BB:641:U:H1'	46:BW:43:LEU:HD12	1.94	0.48
25:BB:1943:U:H3'	25:BB:1944:U:H5''	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BB:1470:A:N6	25:BB:1521:G:H1'	2.28	0.48
3:A1:207:C:H2'	3:A1:208:U:O4'	2.14	0.48
3:A1:1256:A:H4'	3:A1:1258:G:C1'	2.43	0.48
25:BB:1232:G:H3'	25:BB:1233:C:H5''	1.95	0.48
27:BD:32:TYR:CE2	27:BD:67:LYS:HE2	2.49	0.48
25:BB:1245:G:H5'	50:B1:33:VAL:HG22	1.94	0.48
3:A1:1219:A:C2	3:A1:1220:G:H1'	2.49	0.48
6:AD:9:LYS:H	6:AD:10:PRO:HD3	1.79	0.48
25:BB:1800:C:H42	25:BB:1817:G:N2	2.11	0.48
25:BB:1846:G:N2	25:BB:1848:A:H62	2.12	0.48
3:A1:1429:A:C5'	25:BB:1687:G:O4'	2.62	0.47
25:BB:138:U:C5	25:BB:140:C:C2	3.02	0.47
25:BB:2138:G:C6	25:BB:2139:U:C4	3.02	0.47
33:BJ:30:VAL:HG23	33:BJ:31:TYR:H	1.79	0.47
1:AE:63:C:H2'	1:AE:64:A:C8	2.49	0.47
25:BB:1999:C:H1'	25:BB:2687:U:H1'	1.95	0.47
1:AP:56:C:C5	1:AP:57:G:C6	3.03	0.47
25:BB:1639:C:H3'	25:BB:1640:A:H5''	1.95	0.47
25:BB:2639:A:H1'	25:BB:2778:A:N1	2.30	0.47
1:AA:42:G:C2	1:AA:43:G:C4	3.02	0.47
3:A1:184:G:C6	3:A1:185:U:C4	3.02	0.47
3:A1:397:A:C5	3:A1:547:A:H2'	2.50	0.47
3:A1:1225:A:H3'	3:A1:1226:C:H5''	1.97	0.47
3:A1:1300:G:C6	3:A1:1334:G:H2'	2.50	0.47
3:A1:1402:C:C5	3:A1:1403:C:C6	3.03	0.47
25:BB:1175:A:H2'	25:BB:1176:U:H5'	1.97	0.47
34:BK:80:ARG:CD	34:BK:81:LYS:H	2.28	0.47
46:BW:28:LEU:CD1	46:BW:35:LYS:HE2	2.44	0.47
3:A1:1429:A:HO5'	25:BB:1687:G:C3'	2.24	0.47
25:BB:308:G:C2	25:BB:501:A:C8	3.02	0.47
37:BN:110:LYS:O	37:BN:111:ALA:HB2	2.15	0.47
18:AS:24:VAL:HG22	18:AS:25:LYS:H	1.80	0.47
25:BB:2314:A:H1'	51:B2:154:THR:HG21	1.96	0.47
25:BB:2817:U:H3'	25:BB:2818:U:H5''	1.97	0.47
25:BB:2273:A:C2	25:BB:2274:A:C5	3.03	0.47
25:BB:2790:U:H5'	25:BB:2892:G:H1'	1.97	0.47
28:BE:95:LEU:N	28:BE:95:LEU:HD22	2.31	0.47
32:BI:71:ARG:HH22	32:BI:101:GLU:CD	2.22	0.47
3:A1:54:C:C5	3:A1:352:C:C5	3.03	0.46
25:BB:2443:C:OP2	50:B1:63:LYS:HE2	2.16	0.46
3:A1:376:G:P	10:AI:5:ARG:HH21	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BB:1532:A:C2	25:BB:1540:G:C5	3.04	0.46
29:BF:97:GLN:H	29:BF:98:PRO:HD3	1.80	0.46
51:B2:60:SER:HB2	51:B2:88:VAL:HG11	1.98	0.46
25:BB:842:U:H3'	25:BB:843:G:H5''	1.98	0.46
25:BB:1273:U:H3'	25:BB:1274:A:H5''	1.97	0.46
25:BB:1912:A:C2	25:BB:1919:A:C6	3.04	0.46
31:BH:34:HIS:CD2	31:BH:35:ILE:H	2.33	0.46
3:A1:1441:A:H3'	3:A1:1442:G:H5''	1.96	0.46
3:A1:1446:A:C4	3:A1:1447:A:N7	2.84	0.46
51:B2:103:ILE:HG22	51:B2:175:PRO:CD	2.45	0.46
1:AP:30:G:O2'	3:A1:1339:A:C8	2.69	0.46
1:AP:37:G:C6	1:AP:38:A:C5	3.04	0.46
3:A1:5:U:H4'	3:A1:6:G:H5''	1.98	0.46
3:A1:1057:G:H21	23:AX:57:VAL:HG21	1.81	0.46
3:A1:502:A:H2'	3:A1:503:C:H4'	1.98	0.46
3:A1:978:A:N6	3:A1:1319:A:C6	2.83	0.46
3:A1:1418:A:C4	25:BB:1959:G:H3'	2.51	0.46
3:A1:1429:A:H5''	25:BB:1687:G:C4'	2.45	0.46
7:AF:92:ARG:HD2	7:AF:94:LEU:HD11	1.98	0.46
25:BB:771:G:H2'	25:BB:772:C:C5'	2.46	0.46
25:BB:2043:C:N4	25:BB:2625:G:H1	2.13	0.46
25:BB:2601:C:H2'	25:BB:2602:A:H5'	1.97	0.46
30:BG:108:ALA:HB1	30:BG:109:PRO:HD2	1.97	0.46
1:AA:19:G:N2	1:AA:57:G:H1'	2.31	0.46
3:A1:500:G:H4'	3:A1:501:C:OP1	2.16	0.46
23:AX:102:LEU:C	23:AX:102:LEU:HD23	2.41	0.46
24:BA:24:G:H1'	24:BA:56:G:O6	2.16	0.46
24:BA:30:C:H3'	24:BA:31:C:C6	2.51	0.46
25:BB:1528:A:C8	25:BB:1544:A:C8	3.04	0.46
3:A1:26:A:N3	3:A1:26:A:H2'	2.30	0.46
3:A1:172:A:H2'	3:A1:174:A:C5	2.51	0.46
1:AA:73:A:H2'	1:AA:74:C:H5'	1.98	0.45
2:AM:14:U:H4'	2:AM:15:U:OP2	2.16	0.45
3:A1:1194:U:H4'	3:A1:1195:C:OP2	2.14	0.45
25:BB:714:U:H1'	25:BB:718:A:N1	2.31	0.45
25:BB:2720:U:C2	25:BB:2846:G:H4'	2.51	0.45
37:BN:111:ALA:H	37:BN:112:GLY:HA2	1.82	0.45
20:AU:125:ASP:HB3	20:AU:131:GLY:HA2	1.98	0.45
25:BB:278:A:N3	25:BB:362:A:H1'	2.31	0.45
25:BB:990:A:H2'	25:BB:1186:G:N2	2.30	0.45
32:BI:13:LYS:HE3	32:BI:15:ASP:OD2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:11:C:H2'	1:AA:12:U:C6	2.51	0.45
6:AD:86:VAL:HG12	6:AD:87:LYS:HD2	1.96	0.45
25:BB:712:G:H1	25:BB:719:C:N4	2.15	0.45
1:AA:23:A:H2'	1:AA:24:G:C8	2.52	0.45
3:A1:1127:G:H5''	3:A1:1128:C:C6	2.52	0.45
3:A1:1130:A:H3'	3:A1:1131:G:C8	2.52	0.45
24:BA:78:A:C6	24:BA:79:G:C2	3.04	0.45
20:AU:50:ALA:HA	20:AU:57:GLU:HB2	1.99	0.45
25:BB:356:G:H2'	25:BB:357:C:C6	2.51	0.45
25:BB:2358:A:H5''	46:BW:49:VAL:HG23	1.98	0.45
34:BK:67:GLY:HA2	34:BK:99:THR:HG22	1.98	0.45
1:AA:39:U:H2'	1:AA:40:C:H5'	1.98	0.45
31:BH:106:LEU:N	31:BH:106:LEU:HD22	2.32	0.45
3:A1:952:U:H1'	3:A1:964:A:N6	2.32	0.45
3:A1:1500:A:H2'	3:A1:1501:C:H5''	1.98	0.45
25:BB:1070:A:C2	54:B5:9:LYS:HE2	2.52	0.45
25:BB:2126:A:C2	25:BB:2173:A:C6	3.05	0.45
37:BN:175:LEU:HD13	37:BN:175:LEU:H	1.82	0.45
3:A1:383:A:C5	3:A1:384:G:H1'	2.51	0.45
25:BB:570:G:P	25:BB:972:A:H4'	2.57	0.45
41:BR:30:ARG:HG3	41:BR:31:ILE:H	1.82	0.45
3:A1:810:C:O2'	3:A1:898:G:H4'	2.17	0.45
3:A1:1098:C:H2'	3:A1:1099:G:O4'	2.17	0.45
3:A1:1441:A:H3'	3:A1:1442:G:C5'	2.47	0.44
8:AG:12:ARG:HD3	8:AG:54:SER:HA	1.98	0.44
1:AP:31:A:H5'	3:A1:1341:U:C6	2.52	0.44
2:AM:14:U:H3'	2:AM:15:U:H4'	1.99	0.44
25:BB:720:U:H2'	25:BB:721:A:C8	2.52	0.44
25:BB:733:G:N2	25:BB:734:A:C8	2.85	0.44
40:BQ:2:LYS:O	40:BQ:3:ALA:HB3	2.17	0.44
3:A1:283:U:H2'	3:A1:284:C:H5'	2.00	0.44
11:AJ:32:ILE:CG1	11:AJ:33:TYR:H	2.31	0.44
25:BB:2561:U:H2'	25:BB:2562:U:C4'	2.48	0.44
25:BB:2731:G:H4'	25:BB:2732:G:OP1	2.17	0.44
3:A1:887:G:C2	3:A1:888:G:H1'	2.53	0.44
25:BB:1471:G:C8	25:BB:1472:C:C5	3.05	0.44
29:BF:97:GLN:H	29:BF:98:PRO:CD	2.30	0.44
50:B1:108:ILE:HD12	50:B1:108:ILE:H	1.83	0.44
51:B2:159:ALA:HB1	51:B2:165:GLY:HA3	2.00	0.44
1:AE:25:C:C4	1:AE:26:G:C5	3.06	0.44
2:AM:12:U:H4'	2:AM:13:U:OP1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A1:468:A:C8	3:A1:468:A:H5''	2.53	0.44
25:BB:1252:G:H1	33:BJ:36:GLN:NE2	2.16	0.44
10:AI:44:SER:C	10:AI:46:LYS:H	2.26	0.44
25:BB:143:C:H1'	36:BM:2:ILE:HG21	2.00	0.44
25:BB:1777:U:C4	25:BB:1981:A:C8	3.06	0.44
25:BB:2055:C:H4'	25:BB:2056:G:H5'	2.00	0.44
3:A1:1429:A:H5'	25:BB:1687:G:C8	2.53	0.44
3:A1:1492:A:H3'	25:BB:1913:A:N7	2.33	0.44
24:BA:52:A:H4'	24:BA:52:A:OP1	2.17	0.44
25:BB:1273:U:O2	25:BB:2003:A:H1'	2.17	0.44
25:BB:2722:G:H1'	30:BG:1:MET:H3	1.83	0.44
3:A1:1073:U:H3	3:A1:1103:C:N4	2.16	0.44
3:A1:1515:G:H3'	3:A1:1516:G:O4'	2.18	0.44
25:BB:54:G:H5''	45:BV:35:ARG:CZ	2.47	0.44
25:BB:804:A:C2	28:BE:46:VAL:HG11	2.53	0.44
25:BB:1916:A:C8	25:BB:1917:U:C5	3.05	0.44
25:BB:2273:A:C2	25:BB:2274:A:C6	3.06	0.44
1:AP:28:C:H2'	1:AP:29:A:C8	2.53	0.44
15:AO:51:VAL:HG13	15:AO:51:VAL:O	2.17	0.44
24:BA:62:C:H2'	24:BA:63:C:C5	2.52	0.44
25:BB:2790:U:C6	25:BB:2893:A:C5	3.06	0.44
3:A1:408:A:OP1	17:AR:21:LYS:HE2	2.18	0.43
3:A1:439:U:H1'	17:AR:118:SER:O	2.18	0.43
24:BA:81:G:C4	24:BA:82:U:C6	3.05	0.43
25:BB:674:G:H2'	25:BB:675:A:H1'	1.99	0.43
28:BE:117:THR:O	28:BE:120:VAL:HG23	2.18	0.43
46:BW:28:LEU:HD11	46:BW:35:LYS:HE2	1.99	0.43
25:BB:2860:A:C5	25:BB:2861:U:H1'	2.53	0.43
27:BD:11:ALA:CB	27:BD:63:VAL:HG11	2.48	0.43
6:AD:110:LYS:HD3	6:AD:110:LYS:H	1.83	0.43
25:BB:499:U:O2'	38:BO:42:LYS:HE3	2.18	0.43
3:A1:129:A:N6	3:A1:232:G:H1	2.12	0.43
25:BB:671:C:H2'	25:BB:672:C:C2	2.54	0.43
25:BB:1311:G:H22	25:BB:1602:U:P	2.42	0.43
25:BB:1502:A:OP1	37:BN:96:LYS:HE2	2.18	0.43
44:BU:8:ILE:CD1	44:BU:10:LEU:HD11	2.47	0.43
3:A1:977:A:H1'	3:A1:983:A:N1	2.34	0.43
10:AI:75:ILE:HA	10:AI:78:VAL:HG12	1.99	0.43
23:AX:38:GLY:H	23:AX:39:PRO:HD2	1.82	0.43
25:BB:402:A:H61	25:BB:423:A:H61	1.65	0.43
3:A1:242:G:H4'	3:A1:242:G:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A1:579:A:H1'	3:A1:580:C:C5	2.54	0.43
29:BF:114:ARG:HG3	29:BF:114:ARG:HH11	1.83	0.43
3:A1:1429:A:OP1	25:BB:1687:G:C2'	2.64	0.43
25:BB:1189:A:OP2	25:BB:1189:A:C8	2.72	0.43
25:BB:2339:C:H1'	25:BB:2340:A:C8	2.54	0.43
3:A1:26:A:H5'	3:A1:27:G:OP2	2.19	0.43
3:A1:44:A:P	10:AI:12:LYS:HE2	2.59	0.43
3:A1:430:A:H2'	3:A1:431:A:H5'	2.00	0.43
4:AB:70:GLY:HA3	4:AB:79:VAL:HG21	2.00	0.43
25:BB:53:A:H62	25:BB:54:G:N2	2.15	0.43
25:BB:2194:U:H2'	25:BB:2195:U:H4'	2.01	0.43
49:BZ:20:TYR:HA	49:BZ:211:LYS:HB2	2.00	0.43
4:AB:66:ILE:HD12	4:AB:66:ILE:H	1.84	0.43
4:AB:86:CYS:SG	4:AB:221:ARG:HD3	2.59	0.43
4:AB:95:TRP:CZ3	4:AB:100:LEU:HD13	2.53	0.43
25:BB:2136:G:O6	25:BB:2156:G:H1'	2.19	0.43
25:BB:2467:C:H4'	29:BF:117:PHE:CZ	2.54	0.43
38:BO:84:PHE:HB2	38:BO:94:PHE:CD1	2.54	0.43
1:AE:71:G:C2	1:AE:72:C:H1'	2.53	0.43
3:A1:138:G:C5	3:A1:226:G:C2	3.07	0.43
3:A1:283:U:C2'	3:A1:284:C:H5'	2.49	0.43
9:AH:38:LEU:HD23	9:AH:41:HIS:CE1	2.53	0.43
25:BB:1710:G:C6	25:BB:1711:A:C6	3.07	0.43
25:BB:1773:A:H5''	25:BB:1790:C:H41	1.84	0.43
25:BB:1850:G:N2	25:BB:1851:U:H1'	2.34	0.43
25:BB:1854:A:H5''	25:BB:1855:U:C5	2.54	0.43
25:BB:2064:C:H1'	25:BB:2065:C:C4	2.53	0.43
25:BB:2748:A:H2'	25:BB:2749:A:C8	2.53	0.43
1:AA:12:U:C4	1:AA:13:C:C4	3.06	0.42
3:A1:864:A:H2'	3:A1:865:A:C8	2.54	0.42
25:BB:658:U:C4	25:BB:659:G:C4	3.07	0.42
1:AP:31:A:N9	3:A1:1340:A:H4'	2.34	0.42
3:A1:766:A:N1	3:A1:1511:G:H1'	2.34	0.42
5:AC:22:ILE:CD1	5:AC:22:ILE:H	2.31	0.42
25:BB:352:A:H2'	25:BB:353:C:O4'	2.18	0.42
36:BM:7:LEU:HD23	36:BM:46:ALA:HA	2.00	0.42
1:AP:29:A:C2	1:AP:42:G:C2	3.06	0.42
17:AR:94:GLU:HG3	17:AR:190:LEU:HD11	2.02	0.42
25:BB:538:A:O2'	55:B6:7:LYS:HE3	2.19	0.42
25:BB:1155:A:C8	25:BB:1157:G:C8	3.08	0.42
25:BB:1199:U:H3	33:BJ:1:ALA:N	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BT:53:VAL:HG23	43:BT:54:ILE:H	1.85	0.42
1:AP:74:C:H2'	1:AP:75:C:H5'	1.34	0.42
3:A1:515:G:H2'	3:A1:516:U:C6	2.55	0.42
20:AU:73:GLU:OE2	20:AU:75:LYS:HE2	2.19	0.42
25:BB:308:G:H1'	25:BB:501:A:H5'	2.01	0.42
25:BB:2391:G:H2'	46:BW:31:ILE:HG21	2.02	0.42
26:BC:21:ARG:CZ	26:BC:87:GLN:HG3	2.50	0.42
48:BY:14:ILE:HD12	48:BY:14:ILE:HA	1.97	0.42
2:AM:14:U:H3'	2:AM:15:U:O4'	2.20	0.42
19:AT:67:PRO:O	19:AT:70:VAL:HG22	2.20	0.42
25:BB:208:C:H2'	25:BB:209:C:C6	2.54	0.42
25:BB:1142:A:C2	25:BB:1144:A:H1'	2.55	0.42
25:BB:1528:A:C6	25:BB:1529:G:H1'	2.54	0.42
25:BB:2005:A:H3'	25:BB:2006:C:H5''	2.00	0.42
25:BB:2256:G:N3	25:BB:2275:C:H5'	2.34	0.42
16:AQ:7:GLU:CD	16:AQ:16:ARG:HH21	2.28	0.42
19:AT:55:HIS:CD2	19:AT:56:LYS:HE2	2.54	0.42
1:AP:14:A:H2'	1:AP:15:G:H5'	2.00	0.42
1:AE:25:C:H2'	1:AE:26:G:C8	2.55	0.42
25:BB:866:A:H2'	25:BB:867:C:C6	2.54	0.42
25:BB:1076:C:H2'	25:BB:1077:A:O4'	2.19	0.42
25:BB:2327:A:C2	25:BB:2328:A:N7	2.88	0.42
28:BE:82:LEU:HD13	28:BE:82:LEU:C	2.44	0.42
37:BN:252:LYS:HE2	37:BN:253:GLY:O	2.20	0.42
48:BY:172:VAL:HG13	48:BY:173:GLN:N	2.33	0.42
49:BZ:73:LEU:C	49:BZ:73:LEU:HD23	2.44	0.42
1:AE:70:C:H2'	1:AE:71:G:C8	2.55	0.42
3:A1:1409:C:H2'	3:A1:1410:A:C8	2.55	0.42
25:BB:1901:A:C8	25:BB:1902:C:C5	3.08	0.42
25:BB:2027:G:H2'	25:BB:2028:U:C5	2.54	0.42
25:BB:2177:C:H5'	49:BZ:212:ALA:HB3	2.02	0.42
53:B4:6:LEU:HD23	53:B4:15:LEU:HA	2.02	0.42
1:AP:26:G:H2'	1:AP:27:C:O4'	2.20	0.42
3:A1:690:G:N2	3:A1:696:A:H62	2.17	0.42
3:A1:973:G:H2'	3:A1:974:A:C2	2.55	0.42
25:BB:45:G:H2'	25:BB:215:G:H2'	2.02	0.42
25:BB:230:G:H4'	25:BB:230:G:OP1	2.18	0.42
25:BB:1285:A:C8	25:BB:1328:A:H5''	2.53	0.42
25:BB:1697:G:H3'	25:BB:1698:A:H5''	2.02	0.42
43:BT:41:HIS:CD2	43:BT:48:TYR:HA	2.55	0.42
51:B2:103:ILE:HG22	51:B2:175:PRO:CG	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A1:548:G:C8	3:A1:548:G:H5''	2.55	0.41
25:BB:1324:G:N2	25:BB:1330:C:H1'	2.34	0.41
25:BB:1923:U:H2'	25:BB:1924:C:C6	2.54	0.41
25:BB:2360:G:OP2	46:BW:46:LYS:HE2	2.20	0.41
3:A1:70:U:C5	3:A1:94:G:C5	3.08	0.41
24:BA:97:C:C2	26:BC:14:LYS:HD2	2.55	0.41
25:BB:2140:G:C6	25:BB:2141:G:C5	3.08	0.41
25:BB:2512:C:H5'	25:BB:2513:A:OP2	2.20	0.41
25:BB:2848:G:H2'	32:BI:94:ALA:O	2.20	0.41
11:AJ:16:MET:CB	11:AJ:19:SER:HB2	2.50	0.41
15:AO:156:LEU:H	15:AO:156:LEU:CD2	2.32	0.41
25:BB:1295:C:H2'	25:BB:1296:G:O5'	2.20	0.41
50:B1:108:ILE:HD12	50:B1:108:ILE:N	2.35	0.41
1:AP:40:C:H2'	1:AP:41:U:C6	2.56	0.41
3:A1:120:A:N3	3:A1:122:G:H1'	2.35	0.41
17:AR:46:ARG:HG2	17:AR:47:LEU:H	1.86	0.41
25:BB:61:C:H1'	40:BQ:41:HIS:CE1	2.55	0.41
25:BB:71:A:O5'	25:BB:72:U:H2'	2.20	0.41
25:BB:873:C:H4'	29:BF:64:TRP:CZ2	2.56	0.41
25:BB:1009:A:N6	33:BJ:54:ARG:HE	2.18	0.41
25:BB:1890:A:C4	25:BB:2234:G:H1'	2.55	0.41
25:BB:2156:G:H4'	25:BB:2158:A:C5	2.55	0.41
25:BB:2690:U:C5	30:BG:1:MET:HG3	2.55	0.41
28:BE:95:LEU:HD22	28:BE:95:LEU:H	1.85	0.41
33:BJ:63:ARG:H	33:BJ:63:ARG:HD3	1.85	0.41
3:A1:172:A:H2'	3:A1:174:A:C6	2.56	0.41
5:AC:41:LEU:HD21	5:AC:76:TYR:HB2	2.02	0.41
25:BB:406:G:C2	25:BB:407:G:C6	3.08	0.41
52:B3:6:ALA:H	52:B3:7:PRO:HD2	1.85	0.41
1:AA:68:U:H2'	1:AA:69:U:H5'	2.01	0.41
15:AO:90:VAL:HG23	15:AO:98:ALA:HB3	2.02	0.41
25:BB:1091:G:H2'	25:BB:1092:C:O4'	2.21	0.41
49:BZ:204:TYR:HA	49:BZ:215:VAL:HG23	2.02	0.41
1:AP:14:A:N1	1:AP:22:G:H1'	2.35	0.41
3:A1:1395:C:H1'	3:A1:1396:A:OP1	2.20	0.41
17:AR:53:GLN:HB2	17:AR:202:LEU:HD13	2.02	0.41
25:BB:584:C:H42	50:B1:79:ARG:HG2	1.85	0.41
25:BB:607:U:OP1	50:B1:95:LYS:HE2	2.20	0.41
25:BB:1854:A:H2'	25:BB:1855:U:H5'	2.02	0.41
25:BB:2138:G:C5	25:BB:2139:U:C5	3.09	0.41
25:BB:2199:A:H1'	25:BB:2225:A:N1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BR:15:ARG:HG2	41:BR:16:LEU:H	1.86	0.41
2:AM:4:U:C6	3:A1:1506:U:C6	3.09	0.41
3:A1:1418:A:C4	25:BB:1960:A:OP2	2.72	0.41
25:BB:1254:A:H2'	50:B1:69:ARG:HH21	1.86	0.41
27:BD:24:VAL:HG12	27:BD:25:LEU:N	2.36	0.41
42:BS:5:ILE:H	42:BS:5:ILE:CD1	2.29	0.41
51:B2:19:PHE:CE2	51:B2:164:GLU:HB3	2.56	0.41
3:A1:342:C:H2'	3:A1:343:U:H5'	2.03	0.41
3:A1:1034:G:O2'	3:A1:1035:A:H5'	2.21	0.41
3:A1:1418:A:N1	25:BB:1960:A:OP1	2.53	0.41
3:A1:1428:A:O3'	25:BB:1687:G:C3'	2.68	0.41
4:AB:31:PHE:CD1	4:AB:41:ASN:HA	2.55	0.41
14:AN:3:ILE:HD13	14:AN:3:ILE:N	2.36	0.41
16:AQ:34:ARG:HH11	16:AQ:36:PHE:HA	1.85	0.41
25:BB:707:G:O5'	37:BN:25:LYS:HE2	2.21	0.41
25:BB:1036:G:C5	25:BB:1120:G:C6	3.09	0.41
25:BB:2654:A:H4'	25:BB:2655:G:H4'	2.02	0.41
37:BN:231:HIS:CD2	37:BN:242:HIS:CD2	3.08	0.41
48:BY:115:GLY:HA2	48:BY:165:MET:SD	2.61	0.41
48:BY:143:PRO:HA	48:BY:144:GLY:HA2	1.96	0.41
25:BB:1198:U:H5'	25:BB:1198:U:C6	2.56	0.41
25:BB:1946:U:OP1	25:BB:1946:U:H4'	2.21	0.41
25:BB:2366:A:H2'	25:BB:2366:A:N3	2.36	0.41
25:BB:2758:A:C6	25:BB:2759:G:H1'	2.56	0.41
29:BF:15:GLY:HA2	29:BF:74:THR:HG21	2.03	0.41
52:B3:126:THR:HG23	52:B3:128:THR:H	1.86	0.41
1:AE:72:C:H4'	25:BB:1884:G:H3'	2.03	0.40
3:A1:1188:A:H2'	3:A1:1189:U:C6	2.56	0.40
3:A1:1269:A:H3'	3:A1:1270:G:C5'	2.51	0.40
25:BB:602:A:C2	25:BB:656:G:C6	3.09	0.40
25:BB:2728:U:C2	25:BB:2729:G:C8	3.09	0.40
25:BB:2862:G:C6	25:BB:2863:C:N4	2.89	0.40
3:A1:6:G:N3	3:A1:6:G:H2'	2.36	0.40
3:A1:197:A:H4'	3:A1:198:G:OP1	2.22	0.40
3:A1:758:C:O2'	3:A1:880:C:H1'	2.21	0.40
8:AG:9:GLU:HB3	8:AG:59:GLN:HE22	1.86	0.40
25:BB:84:A:N3	25:BB:85:G:H1'	2.36	0.40
25:BB:598:U:H4'	28:BE:20:GLY:HA3	2.03	0.40
25:BB:1000:A:C5	25:BB:1001:A:C6	3.09	0.40
25:BB:1356:G:C8	25:BB:1356:G:H5''	2.56	0.40
25:BB:1414:C:C5	25:BB:1415:U:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:35:VAL:N	27:BD:36:GLY:HA2	2.37	0.40
29:BF:103:TYR:CZ	29:BF:105:MET:HB2	2.56	0.40
32:BI:92:ARG:HB2	32:BI:110:LYS:HG2	2.03	0.40
3:A1:1189:U:C5	3:A1:1190:G:C5	3.09	0.40
10:AI:9:HIS:CG	10:AI:10:GLY:N	2.89	0.40
25:BB:860:U:O2	25:BB:860:U:H2'	2.21	0.40
25:BB:1757:A:OP1	25:BB:1757:A:H3'	2.21	0.40
27:BD:19:VAL:HG23	27:BD:43:ILE:HD13	2.01	0.40
3:A1:972:C:C5	3:A1:973:G:N2	2.89	0.40
3:A1:1390:U:H2'	3:A1:1391:U:H5'	2.04	0.40
9:AH:2:LEU:HD23	9:AH:2:LEU:H	1.86	0.40
25:BB:873:C:C2	25:BB:905:A:N6	2.89	0.40
25:BB:1611:C:C2'	45:BV:6:GLN:HE21	2.35	0.40
25:BB:1810:A:H5''	25:BB:1811:G:C2	2.57	0.40
25:BB:2173:A:C5	25:BB:2174:C:C5	3.09	0.40
25:BB:2520:C:C2	25:BB:2521:C:O2	2.74	0.40
25:BB:630:G:H1	28:BE:69:ARG:NH2	2.19	0.40
25:BB:1516:G:H1	25:BB:1732:C:H42	1.69	0.40
25:BB:2468:A:N6	25:BB:2481:G:C2	2.90	0.40
25:BB:2851:A:H2'	25:BB:2852:G:H5'	2.02	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	
4	AB	216/241 (90%)	178 (82%)	33 (15%)	5 (2%)	5	28
5	AC	115/129 (89%)	91 (79%)	17 (15%)	7 (6%)	1	13
6	AD	121/124 (98%)	78 (64%)	28 (23%)	15 (12%)	0	4
7	AF	112/118 (95%)	80 (71%)	24 (21%)	8 (7%)	1	11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	AG	94/101 (93%)	69 (73%)	20 (21%)	5 (5%)	1	15
9	AH	86/89 (97%)	73 (85%)	11 (13%)	2 (2%)	5	28
10	AI	80/82 (98%)	55 (69%)	15 (19%)	10 (12%)	0	4
11	AJ	78/84 (93%)	52 (67%)	18 (23%)	8 (10%)	0	6
12	AK	53/75 (71%)	44 (83%)	7 (13%)	2 (4%)	2	19
13	AL	77/92 (84%)	51 (66%)	19 (25%)	7 (9%)	0	8
14	AN	83/87 (95%)	66 (80%)	13 (16%)	4 (5%)	2	16
15	AO	204/233 (88%)	151 (74%)	38 (19%)	15 (7%)	1	10
16	AQ	49/71 (69%)	35 (71%)	8 (16%)	6 (12%)	0	4
17	AR	203/206 (98%)	161 (79%)	29 (14%)	13 (6%)	1	12
18	AS	148/159 (93%)	114 (77%)	20 (14%)	14 (10%)	0	8
19	AT	98/135 (73%)	80 (82%)	13 (13%)	5 (5%)	1	15
20	AU	148/179 (83%)	118 (80%)	19 (13%)	11 (7%)	1	10
21	AV	127/130 (98%)	103 (81%)	19 (15%)	5 (4%)	2	19
22	AW	125/130 (96%)	95 (76%)	23 (18%)	7 (6%)	1	14
23	AX	96/103 (93%)	78 (81%)	9 (9%)	9 (9%)	0	8
26	BC	92/94 (98%)	74 (80%)	14 (15%)	4 (4%)	2	17
27	BD	119/123 (97%)	90 (76%)	16 (13%)	13 (11%)	0	6
28	BE	142/144 (99%)	91 (64%)	30 (21%)	21 (15%)	0	3
29	BF	134/136 (98%)	73 (54%)	40 (30%)	21 (16%)	0	3
30	BG	125/127 (98%)	84 (67%)	32 (26%)	9 (7%)	1	11
31	BH	115/117 (98%)	72 (63%)	32 (28%)	11 (10%)	0	7
32	BI	112/115 (97%)	63 (56%)	32 (29%)	17 (15%)	0	3
33	BJ	115/118 (98%)	77 (67%)	27 (24%)	11 (10%)	0	7
34	BK	101/103 (98%)	59 (58%)	33 (33%)	9 (9%)	0	8
35	BL	108/110 (98%)	72 (67%)	27 (25%)	9 (8%)	0	9
36	BM	97/99 (98%)	69 (71%)	18 (19%)	10 (10%)	0	6
37	BN	265/270 (98%)	165 (62%)	61 (23%)	39 (15%)	0	3
38	BO	100/103 (97%)	60 (60%)	22 (22%)	18 (18%)	0	2
39	BP	82/85 (96%)	44 (54%)	21 (26%)	17 (21%)	0	2
40	BQ	61/63 (97%)	42 (69%)	14 (23%)	5 (8%)	0	9

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
41	BR	56/59 (95%)	38 (68%)	13 (23%)	5 (9%)	0	8
42	BS	68/70 (97%)	38 (56%)	22 (32%)	8 (12%)	0	4
43	BT	54/57 (95%)	32 (59%)	11 (20%)	11 (20%)	0	2
44	BU	52/54 (96%)	33 (64%)	14 (27%)	5 (10%)	0	7
45	BV	44/46 (96%)	33 (75%)	6 (14%)	5 (11%)	0	5
46	BW	62/64 (97%)	35 (56%)	20 (32%)	7 (11%)	0	5
47	BX	36/38 (95%)	23 (64%)	8 (22%)	5 (14%)	0	3
48	BY	207/209 (99%)	113 (55%)	54 (26%)	40 (19%)	0	2
49	BZ	211/213 (99%)	163 (77%)	33 (16%)	15 (7%)	1	11
50	B1	199/201 (99%)	111 (56%)	53 (27%)	35 (18%)	0	2
51	B2	176/178 (99%)	123 (70%)	26 (15%)	27 (15%)	0	3
52	B3	174/177 (98%)	149 (86%)	20 (12%)	5 (3%)	3	23
53	B4	147/149 (99%)	103 (70%)	33 (22%)	11 (8%)	1	10
54	B5	139/142 (98%)	113 (81%)	17 (12%)	9 (6%)	1	12
55	B6	138/140 (99%)	79 (57%)	41 (30%)	18 (13%)	0	4
All	All	5844/6172 (95%)	4093 (70%)	1173 (20%)	578 (10%)	1	7

All (578) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	AB	36	LYS
4	AB	97	GLY
4	AB	169	HIS
6	AD	9	LYS
6	AD	15	VAL
6	AD	19	ASN
6	AD	34	THR
6	AD	49	ARG
6	AD	113	ARG
7	AF	44	ILE
7	AF	65	GLU
7	AF	101	THR
8	AG	64	ARG
9	AH	86	LEU
10	AI	72	ALA
11	AJ	68	LYS
12	AK	70	THR

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Mol	Chain	Res	Type
12	AK	71	ASP
13	AL	25	GLY
13	AL	36	ARG
13	AL	37	SER
14	AN	3	ILE
15	AO	14	VAL
15	AO	25	THR
15	AO	50	SER
15	AO	159	ALA
16	AQ	9	GLU
16	AQ	16	ARG
16	AQ	39	LYS
17	AR	32	LYS
17	AR	36	ALA
17	AR	131	ILE
17	AR	151	GLN
17	AR	152	SER
18	AS	20	VAL
18	AS	25	LYS
18	AS	100	GLU
18	AS	124	ALA
19	AT	55	HIS
20	AU	31	VAL
20	AU	34	LYS
20	AU	35	LYS
20	AU	56	SER
20	AU	88	VAL
21	AV	106	SER
23	AX	80	THR
27	BD	17	ARG
27	BD	30	ARG
27	BD	32	TYR
27	BD	95	ILE
28	BE	13	LYS
28	BE	77	ILE
28	BE	128	THR
28	BE	143	GLU
29	BF	5	LYS
29	BF	11	LYS
29	BF	30	SER
29	BF	59	ARG
29	BF	74	THR

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Mol	Chain	Res	Type
30	BG	28	LEU
30	BG	61	ALA
31	BH	9	ARG
31	BH	16	ARG
31	BH	28	VAL
31	BH	46	GLU
31	BH	54	VAL
32	BI	94	ALA
33	BJ	5	ARG
34	BK	24	LYS
35	BL	20	VAL
35	BL	93	ALA
36	BM	73	ARG
36	BM	88	LYS
36	BM	92	ASN
37	BN	53	ILE
37	BN	58	LYS
37	BN	111	ALA
37	BN	159	THR
37	BN	217	PRO
37	BN	235	GLU
38	BO	3	LYS
38	BO	6	ARG
38	BO	18	LYS
38	BO	43	LYS
38	BO	61	GLU
38	BO	67	SER
38	BO	73	ASN
38	BO	100	GLU
39	BP	9	THR
39	BP	11	ASN
39	BP	28	GLU
39	BP	35	ILE
39	BP	56	HIS
39	BP	77	LYS
40	BQ	2	LYS
40	BQ	3	ALA
40	BQ	42	LEU
41	BR	51	SER
42	BS	20	ASN
42	BS	45	THR
42	BS	50	ASP

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Mol	Chain	Res	Type
43	BT	6	LYS
43	BT	10	SER
43	BT	29	VAL
44	BU	42	VAL
44	BU	50	GLU
45	BV	3	ARG
46	BW	20	GLY
47	BX	5	ALA
47	BX	34	LYS
48	BY	14	ILE
48	BY	29	VAL
48	BY	47	ALA
48	BY	155	VAL
48	BY	191	GLY
49	BZ	24	ARG
49	BZ	94	GLN
49	BZ	161	ASP
49	BZ	172	GLU
50	B1	17	THR
50	B1	78	TRP
50	B1	90	GLN
50	B1	105	LEU
50	B1	142	ALA
50	B1	144	GLU
50	B1	165	HIS
50	B1	189	THR
51	B2	42	ALA
51	B2	77	LYS
51	B2	116	LEU
51	B2	122	ASP
51	B2	145	VAL
51	B2	159	ALA
51	B2	177	ARG
52	B3	170	THR
53	B4	3	VAL
53	B4	77	THR
54	B5	17	ALA
54	B5	93	ASN
55	B6	39	LYS
55	B6	49	ASP
55	B6	64	VAL
6	AD	40	THR

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Mol	Chain	Res	Type
6	AD	50	LYS
6	AD	109	ARG
7	AF	25	GLY
7	AF	112	ARG
8	AG	89	ARG
9	AH	19	ASN
10	AI	8	ARG
10	AI	31	ARG
10	AI	51	ARG
11	AJ	6	THR
11	AJ	37	ILE
11	AJ	53	GLY
13	AL	78	THR
14	AN	13	SER
15	AO	4	VAL
15	AO	78	LYS
15	AO	106	ARG
16	AQ	34	ARG
17	AR	17	ASP
17	AR	129	VAL
18	AS	70	MET
18	AS	72	ASN
18	AS	107	GLY
18	AS	126	ALA
19	AT	4	TYR
19	AT	92	THR
21	AV	19	ALA
22	AW	39	GLY
22	AW	54	VAL
22	AW	69	GLY
22	AW	118	ARG
23	AX	63	ASP
23	AX	99	GLN
26	BC	37	PRO
27	BD	77	ILE
28	BE	22	GLY
28	BE	75	ALA
28	BE	80	SER
28	BE	100	ILE
28	BE	140	GLY
29	BF	6	ARG
29	BF	9	PHE

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Mol	Chain	Res	Type
29	BF	38	ARG
29	BF	52	ALA
29	BF	64	TRP
29	BF	70	ASP
29	BF	83	GLY
29	BF	127	LYS
30	BG	18	GLN
30	BG	19	ALA
30	BG	99	LYS
31	BH	3	LYS
31	BH	36	TYR
31	BH	52	SER
31	BH	55	GLU
32	BI	33	GLU
32	BI	40	GLN
32	BI	58	PHE
32	BI	60	VAL
32	BI	67	GLU
32	BI	79	VAL
33	BJ	3	VAL
33	BJ	15	LYS
33	BJ	25	GLY
34	BK	7	SER
34	BK	99	THR
34	BK	101	ILE
35	BL	7	HIS
35	BL	19	LEU
35	BL	64	ALA
35	BL	74	ILE
35	BL	106	VAL
36	BM	81	LYS
36	BM	87	LEU
37	BN	4	LYS
37	BN	32	LEU
37	BN	143	VAL
37	BN	162	GLN
37	BN	170	TYR
37	BN	176	ARG
37	BN	219	VAL
37	BN	221	GLY
37	BN	227	VAL
37	BN	230	PRO

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Mol	Chain	Res	Type
37	BN	238	ASN
37	BN	249	VAL
37	BN	252	LYS
37	BN	260	LYS
37	BN	266	ILE
38	BO	57	ILE
38	BO	64	ILE
38	BO	82	VAL
39	BP	10	ARG
39	BP	33	GLY
39	BP	55	ASP
39	BP	65	LYS
39	BP	69	GLU
39	BP	74	LYS
40	BQ	32	ALA
41	BR	14	GLY
42	BS	12	ILE
42	BS	27	THR
43	BT	8	THR
43	BT	15	ARG
43	BT	17	SER
43	BT	38	LEU
44	BU	17	GLY
45	BV	2	LYS
45	BV	43	THR
46	BW	2	LYS
46	BW	4	LYS
46	BW	41	ARG
46	BW	63	TYR
47	BX	3	VAL
47	BX	8	LYS
47	BX	14	CYS
48	BY	33	ARG
48	BY	97	SER
48	BY	131	ASP
48	BY	135	GLY
48	BY	146	ILE
48	BY	147	GLY
48	BY	159	LYS
48	BY	160	LYS
48	BY	171	THR
48	BY	172	VAL

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Mol	Chain	Res	Type
49	BZ	50	GLU
49	BZ	116	SER
49	BZ	195	LYS
50	B1	4	VAL
50	B1	22	ASP
50	B1	57	LYS
50	B1	73	ILE
50	B1	75	SER
50	B1	77	ILE
50	B1	118	LEU
50	B1	146	VAL
50	B1	170	ARG
50	B1	171	ASP
50	B1	172	ALA
50	B1	175	ILE
50	B1	186	VAL
50	B1	193	VAL
51	B2	30	VAL
51	B2	38	GLY
51	B2	65	LEU
51	B2	76	PHE
51	B2	80	GLN
51	B2	106	ALA
51	B2	108	PRO
51	B2	132	ARG
51	B2	144	LYS
51	B2	152	ASP
52	B3	99	GLY
52	B3	118	ALA
53	B4	12	LEU
54	B5	59	THR
55	B6	11	VAL
55	B6	41	LYS
55	B6	63	ALA
55	B6	95	ARG
4	AB	21	TYR
5	AC	23	HIS
5	AC	52	ARG
5	AC	112	VAL
6	AD	22	ALA
6	AD	25	ALA
6	AD	78	VAL

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Mol	Chain	Res	Type
6	AD	104	SER
7	AF	23	GLY
7	AF	49	GLU
8	AG	41	TRP
10	AI	59	HIS
11	AJ	43	LEU
13	AL	4	LEU
13	AL	71	GLY
14	AN	64	GLY
15	AO	79	LYS
15	AO	176	THR
16	AQ	10	PRO
17	AR	28	ASP
17	AR	34	GLU
17	AR	125	ASN
17	AR	190	LEU
18	AS	24	VAL
19	AT	44	ARG
19	AT	94	HIS
20	AU	30	MET
20	AU	76	SER
20	AU	110	ARG
22	AW	128	LYS
23	AX	38	GLY
23	AX	46	LYS
23	AX	60	ASP
23	AX	69	THR
26	BC	66	ASP
27	BD	3	GLN
27	BD	46	ALA
27	BD	51	LYS
28	BE	5	THR
28	BE	39	LYS
28	BE	98	ALA
28	BE	125	LEU
29	BF	77	PRO
29	BF	94	ALA
29	BF	97	GLN
30	BG	11	ASN
30	BG	98	LEU
30	BG	123	GLU
31	BH	26	LEU

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Mol	Chain	Res	Type
32	BI	41	ALA
32	BI	56	SER
32	BI	86	LYS
32	BI	96	LEU
33	BJ	7	VAL
33	BJ	31	TYR
34	BK	31	GLU
35	BL	80	PRO
36	BM	16	VAL
36	BM	46	ALA
36	BM	78	SER
37	BN	98	GLY
37	BN	160	TYR
37	BN	169	ALA
37	BN	182	LYS
37	BN	225	ASN
38	BO	33	VAL
38	BO	59	GLU
38	BO	71	ILE
39	BP	61	LYS
39	BP	78	PHE
40	BQ	16	THR
41	BR	13	ILE
42	BS	4	ASP
42	BS	7	PRO
42	BS	34	LEU
43	BT	49	ARG
44	BU	2	LYS
44	BU	5	ARG
45	BV	4	THR
46	BW	26	ALA
48	BY	4	LEU
48	BY	10	GLY
48	BY	31	ALA
48	BY	38	LYS
48	BY	46	ARG
48	BY	56	LYS
48	BY	89	GLU
48	BY	99	GLU
48	BY	127	PHE
48	BY	136	ASN
48	BY	139	SER

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Mol	Chain	Res	Type
48	BY	145	SER
48	BY	169	ARG
48	BY	183	GLU
49	BZ	197	GLU
49	BZ	214	LYS
50	B1	11	ALA
50	B1	83	VAL
51	B2	3	LEU
51	B2	19	PHE
51	B2	64	PRO
53	B4	14	SER
53	B4	131	SER
53	B4	141	LYS
54	B5	4	VAL
54	B5	51	GLY
54	B5	92	PRO
55	B6	14	ASP
55	B6	99	ARG
55	B6	104	ALA
5	AC	54	SER
5	AC	87	GLY
5	AC	88	PRO
5	AC	102	ALA
7	AF	64	VAL
8	AG	5	MET
11	AJ	27	PHE
14	AN	15	LYS
15	AO	105	VAL
15	AO	157	GLY
16	AQ	11	PHE
18	AS	83	PRO
18	AS	101	GLY
18	AS	127	TYR
20	AU	6	ILE
23	AX	40	ILE
23	AX	43	PRO
26	BC	43	ASP
27	BD	26	GLY
27	BD	55	GLY
28	BE	9	ALA
29	BF	40	ARG
32	BI	106	ALA

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Mol	Chain	Res	Type
33	BJ	24	TYR
34	BK	34	GLU
34	BK	69	GLY
35	BL	70	LYS
36	BM	72	GLN
37	BN	57	HIS
37	BN	127	ASN
37	BN	141	HIS
37	BN	181	ARG
38	BO	53	GLN
38	BO	54	PRO
38	BO	84	PHE
39	BP	34	SER
41	BR	18	LYS
43	BT	4	GLN
46	BW	14	LYS
48	BY	84	LEU
48	BY	86	GLU
48	BY	115	GLY
48	BY	123	LYS
48	BY	126	ASN
48	BY	186	LEU
49	BZ	37	LYS
50	B1	71	GLY
50	B1	123	LYS
50	B1	166	LYS
50	B1	176	ASP
51	B2	71	LYS
51	B2	125	GLY
53	B4	63	ALA
53	B4	88	GLY
54	B5	18	ASN
54	B5	79	LEU
55	B6	9	GLU
55	B6	47	HIS
55	B6	65	THR
4	AB	128	LEU
6	AD	121	PRO
10	AI	11	ALA
10	AI	45	GLU
11	AJ	34	GLY
15	AO	107	LYS

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Mol	Chain	Res	Type
15	AO	126	ARG
18	AS	105	ILE
21	AV	64	TYR
22	AW	106	ASP
27	BD	6	THR
28	BE	12	SER
28	BE	52	GLY
29	BF	121	ALA
30	BG	74	GLU
31	BH	62	LEU
32	BI	4	ILE
32	BI	11	GLN
32	BI	21	PRO
32	BI	31	VAL
33	BJ	22	GLY
33	BJ	73	ILE
33	BJ	106	THR
37	BN	54	GLY
37	BN	107	LYS
37	BN	191	LEU
39	BP	4	LYS
41	BR	32	GLY
43	BT	34	GLY
43	BT	35	GLU
45	BV	44	VAL
49	BZ	77	LYS
49	BZ	129	GLY
50	B1	55	SER
51	B2	49	LEU
51	B2	160	LYS
53	B4	15	LEU
53	B4	35	LYS
54	B5	15	GLY
8	AG	55	SER
15	AO	156	LEU
15	AO	173	PRO
17	AR	128	VAL
22	AW	30	ASN
27	BD	76	VAL
28	BE	10	GLU
28	BE	42	SER
28	BE	59	ARG

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Mol	Chain	Res	Type
29	BF	17	ASN
29	BF	55	ARG
29	BF	78	LEU
37	BN	27	LYS
38	BO	35	VAL
48	BY	87	GLY
48	BY	142	VAL
48	BY	198	GLY
49	BZ	38	GLY
49	BZ	169	ILE
50	B1	113	VAL
50	B1	129	PRO
52	B3	6	ALA
53	B4	116	ARG
55	B6	124	VAL
55	B6	127	GLY
11	AJ	11	VAL
18	AS	90	GLY
20	AU	87	PRO
28	BE	16	GLY
33	BJ	30	VAL
36	BM	65	GLY
37	BN	140	VAL
39	BP	47	GLY
48	BY	104	VAL
48	BY	205	PRO
50	B1	120	VAL
55	B6	81	ILE
10	AI	2	VAL
32	BI	83	ILE
34	BK	27	ILE
34	BK	72	VAL
50	B1	196	VAL
51	B2	39	VAL
51	B2	75	GLY
6	AD	27	PRO
10	AI	64	GLY
13	AL	66	VAL
26	BC	32	GLY
28	BE	46	VAL
37	BN	9	SER
37	BN	41	GLY

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Mol	Chain	Res	Type
10	AI	15	PRO
20	AU	7	GLY
21	AV	81	GLY
27	BD	63	VAL
37	BN	151	GLY
49	BZ	137	PRO
50	B1	89	PRO
55	B6	100	VAL
21	AV	71	VAL
37	BN	178	GLY
50	B1	128	ALA
51	B2	136	ILE
52	B3	155	PRO
55	B6	73	VAL
17	AR	6	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	
4	AB	180/199 (90%)	165 (92%)	15 (8%)	10	30
5	AC	90/99 (91%)	82 (91%)	8 (9%)	9	28
6	AD	103/104 (99%)	86 (84%)	17 (16%)	2	10
7	AF	92/96 (96%)	84 (91%)	8 (9%)	9	29
8	AG	79/84 (94%)	77 (98%)	2 (2%)	42	63
9	AH	76/77 (99%)	72 (95%)	4 (5%)	20	41
10	AI	65/65 (100%)	62 (95%)	3 (5%)	24	45
11	AJ	74/78 (95%)	70 (95%)	4 (5%)	20	41
12	AK	48/66 (73%)	45 (94%)	3 (6%)	16	37
13	AL	70/79 (89%)	60 (86%)	10 (14%)	3	13
14	AN	65/66 (98%)	58 (89%)	7 (11%)	6	21
15	AO	170/190 (90%)	157 (92%)	13 (8%)	12	33

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	AQ	44/61 (72%)	42 (96%)	2 (4%)	24	46
17	AR	172/173 (99%)	157 (91%)	15 (9%)	9	29
18	AS	113/119 (95%)	95 (84%)	18 (16%)	2	11
19	AT	87/116 (75%)	78 (90%)	9 (10%)	7	23
20	AU	123/147 (84%)	110 (89%)	13 (11%)	6	21
21	AV	104/105 (99%)	97 (93%)	7 (7%)	15	36
22	AW	105/107 (98%)	97 (92%)	8 (8%)	12	33
23	AX	86/90 (96%)	80 (93%)	6 (7%)	14	35
26	BC	78/78 (100%)	74 (95%)	4 (5%)	21	42
27	BD	102/104 (98%)	95 (93%)	7 (7%)	14	36
28	BE	103/103 (100%)	88 (85%)	15 (15%)	3	13
29	BF	109/109 (100%)	96 (88%)	13 (12%)	5	18
30	BG	103/103 (100%)	91 (88%)	12 (12%)	5	18
31	BH	87/87 (100%)	82 (94%)	5 (6%)	18	40
32	BI	99/100 (99%)	95 (96%)	4 (4%)	28	49
33	BJ	89/90 (99%)	79 (89%)	10 (11%)	6	19
34	BK	84/84 (100%)	73 (87%)	11 (13%)	4	15
35	BL	93/93 (100%)	83 (89%)	10 (11%)	6	21
36	BM	83/83 (100%)	71 (86%)	12 (14%)	3	13
37	BN	213/215 (99%)	187 (88%)	26 (12%)	5	17
38	BO	83/84 (99%)	77 (93%)	6 (7%)	13	35
39	BP	62/63 (98%)	57 (92%)	5 (8%)	11	31
40	BQ	55/55 (100%)	45 (82%)	10 (18%)	2	9
41	BR	48/49 (98%)	45 (94%)	3 (6%)	16	37
42	BS	62/62 (100%)	57 (92%)	5 (8%)	11	31
43	BT	47/48 (98%)	37 (79%)	10 (21%)	1	6
44	BU	48/48 (100%)	46 (96%)	2 (4%)	26	48
45	BV	38/38 (100%)	34 (90%)	4 (10%)	6	21
46	BW	51/51 (100%)	44 (86%)	7 (14%)	3	14
47	BX	34/34 (100%)	31 (91%)	3 (9%)	9	28
48	BY	164/164 (100%)	146 (89%)	18 (11%)	6	20

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
49	BZ	187/187 (100%)	174 (93%)	13 (7%)	14	35
50	B1	165/165 (100%)	146 (88%)	19 (12%)	5	18
51	B2	149/149 (100%)	132 (89%)	17 (11%)	5	18
52	B3	137/138 (99%)	124 (90%)	13 (10%)	8	25
53	B4	114/114 (100%)	105 (92%)	9 (8%)	11	32
54	B5	109/110 (99%)	102 (94%)	7 (6%)	16	37
55	B6	114/114 (100%)	105 (92%)	9 (8%)	11	32
All	All	4856/5043 (96%)	4395 (90%)	461 (10%)	10	25

All (461) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	AB	14	HIS
4	AB	31	PHE
4	AB	38	HIS
4	AB	59	ILE
4	AB	84	LEU
4	AB	87	ASP
4	AB	94	ARG
4	AB	101	THR
4	AB	115	ASP
4	AB	185	ILE
4	AB	187	ASP
4	AB	188	THR
4	AB	202	ASN
4	AB	203	ASP
4	AB	206	ILE
5	AC	22	ILE
5	AC	25	SER
5	AC	30	ILE
5	AC	68	ARG
5	AC	78	ILE
5	AC	100	ASN
5	AC	106	ILE
5	AC	123	PRO
6	AD	11	ARG
6	AD	13	ARG
6	AD	20	VAL
6	AD	23	LEU
6	AD	24	GLU

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Mol	Chain	Res	Type
6	AD	38	THR
6	AD	50	LYS
6	AD	64	SER
6	AD	66	ILE
6	AD	79	ILE
6	AD	87	LYS
6	AD	94	TYR
6	AD	98	ARG
6	AD	110	LYS
6	AD	111	GLN
6	AD	119	LYS
6	AD	121	PRO
7	AF	7	ASN
7	AF	8	ILE
7	AF	28	ARG
7	AF	41	ASP
7	AF	55	LEU
7	AF	59	VAL
7	AF	77	LYS
7	AF	82	LEU
8	AG	45	LEU
8	AG	50	LEU
9	AH	27	GLN
9	AH	57	ARG
9	AH	72	LYS
9	AH	86	LEU
10	AI	42	ILE
10	AI	63	GLN
10	AI	78	VAL
11	AJ	10	ARG
11	AJ	17	GLU
11	AJ	25	GLU
11	AJ	76	ARG
12	AK	25	ILE
12	AK	34	GLU
12	AK	49	LYS
13	AL	6	LYS
13	AL	11	ASP
13	AL	12	LEU
13	AL	14	LEU
13	AL	19	GLU
13	AL	39	ILE

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Mol	Chain	Res	Type
13	AL	50	VAL
13	AL	51	HIS
13	AL	56	HIS
13	AL	72	GLU
14	AN	3	ILE
14	AN	9	ARG
14	AN	18	LYS
14	AN	69	ASN
14	AN	73	ARG
14	AN	78	LEU
14	AN	85	LEU
15	AO	14	VAL
15	AO	17	TRP
15	AO	84	GLU
15	AO	86	LEU
15	AO	102	ILE
15	AO	106	ARG
15	AO	108	PRO
15	AO	127	VAL
15	AO	163	ARG
15	AO	174	LEU
15	AO	187	GLU
15	AO	198	LYS
15	AO	201	ILE
16	AQ	3	ILE
16	AQ	34	ARG
17	AR	13	ARG
17	AR	14	GLU
17	AR	27	ILE
17	AR	47	LEU
17	AR	48	SER
17	AR	80	ARG
17	AR	89	LEU
17	AR	109	THR
17	AR	112	GLU
17	AR	119	HIS
17	AR	131	ILE
17	AR	147	LYS
17	AR	163	GLN
17	AR	189	ASP
17	AR	196	GLU
18	AS	14	LEU

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Mol	Chain	Res	Type
18	AS	35	LEU
18	AS	42	ASN
18	AS	47	PHE
18	AS	53	ARG
18	AS	61	LYS
18	AS	65	LYS
18	AS	72	ASN
18	AS	81	GLN
18	AS	87	VAL
18	AS	88	HIS
18	AS	89	THR
18	AS	105	ILE
18	AS	113	VAL
18	AS	141	ASP
18	AS	144	GLU
18	AS	145	ASN
18	AS	156	ARG
19	AT	1	MET
19	AT	11	HIS
19	AT	15	SER
19	AT	33	GLU
19	AT	36	ILE
19	AT	46	GLN
19	AT	72	ASP
19	AT	86	ARG
19	AT	93	LYS
20	AU	4	ARG
20	AU	12	LEU
20	AU	14	ASP
20	AU	58	LEU
20	AU	74	VAL
20	AU	75	LYS
20	AU	79	VAL
20	AU	86	VAL
20	AU	88	VAL
20	AU	95	ARG
20	AU	98	LEU
20	AU	101	ARG
20	AU	132	THR
21	AV	6	ILE
21	AV	20	ASN
21	AV	24	VAL

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Mol	Chain	Res	Type
21	AV	72	GLU
21	AV	75	GLN
21	AV	76	ARG
21	AV	79	ARG
22	AW	8	THR
22	AW	40	ARG
22	AW	47	VAL
22	AW	71	ILE
22	AW	83	THR
22	AW	118	ARG
22	AW	125	GLN
22	AW	128	LYS
23	AX	19	ASP
23	AX	53	ILE
23	AX	71	LEU
23	AX	89	ARG
23	AX	92	LEU
23	AX	100	ILE
26	BC	7	GLU
26	BC	35	GLU
26	BC	42	LEU
26	BC	92	VAL
27	BD	9	ASN
27	BD	20	MET
27	BD	31	ARG
27	BD	52	VAL
27	BD	69	VAL
27	BD	90	ASN
27	BD	121	GLU
28	BE	6	LEU
28	BE	19	LEU
28	BE	47	ARG
28	BE	54	GLN
28	BE	63	LYS
28	BE	73	ILE
28	BE	92	LEU
28	BE	93	ASN
28	BE	101	ILE
28	BE	104	GLN
28	BE	106	GLU
28	BE	109	LYS
28	BE	112	LEU

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Mol	Chain	Res	Type
28	BE	125	LEU
28	BE	126	ARG
29	BF	6	ARG
29	BF	22	GLN
29	BF	36	VAL
29	BF	51	ARG
29	BF	82	MET
29	BF	84	LYS
29	BF	95	LEU
29	BF	104	GLU
29	BF	108	VAL
29	BF	109	PRO
29	BF	115	GLU
29	BF	127	LYS
29	BF	136	MET
30	BG	4	ARG
30	BG	10	LEU
30	BG	18	GLN
30	BG	32	GLU
30	BG	52	ILE
30	BG	63	ARG
30	BG	73	ASN
30	BG	83	LEU
30	BG	89	SER
30	BG	113	ILE
30	BG	115	LEU
30	BG	121	LYS
31	BH	9	ARG
31	BH	20	GLU
31	BH	31	THR
31	BH	65	THR
31	BH	84	GLU
32	BI	83	ILE
32	BI	92	ARG
32	BI	99	LEU
32	BI	109	ILE
33	BJ	7	VAL
33	BJ	16	ILE
33	BJ	21	LYS
33	BJ	31	TYR
33	BJ	40	LYS
33	BJ	53	LYS

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Mol	Chain	Res	Type
33	BJ	63	ARG
33	BJ	73	ILE
33	BJ	90	ASP
33	BJ	109	VAL
34	BK	27	ILE
34	BK	33	VAL
34	BK	39	LEU
34	BK	41	ILE
34	BK	47	VAL
34	BK	59	ILE
34	BK	80	ARG
34	BK	81	LYS
34	BK	84	ARG
34	BK	87	GLN
34	BK	98	ILE
35	BL	4	ILE
35	BL	24	ILE
35	BL	38	TYR
35	BL	46	LEU
35	BL	59	GLU
35	BL	67	ASP
35	BL	85	ILE
35	BL	90	LYS
35	BL	98	LYS
35	BL	100	THR
36	BM	1	MET
36	BM	2	ILE
36	BM	5	GLU
36	BM	6	ARG
36	BM	10	VAL
36	BM	15	HIS
36	BM	42	GLU
36	BM	68	LYS
36	BM	73	ARG
36	BM	80	TRP
36	BM	87	LEU
36	BM	89	GLU
37	BN	3	VAL
37	BN	4	LYS
37	BN	13	ARG
37	BN	24	HIS
37	BN	25	LYS

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Mol	Chain	Res	Type
37	BN	29	PHE
37	BN	42	ARG
37	BN	49	THR
37	BN	61	TYR
37	BN	64	VAL
37	BN	65	ASP
37	BN	66	PHE
37	BN	82	TYR
37	BN	104	LEU
37	BN	107	LYS
37	BN	113	ASP
37	BN	123	ILE
37	BN	155	ARG
37	BN	175	LEU
37	BN	179	GLU
37	BN	181	ARG
37	BN	215	VAL
37	BN	230	PRO
37	BN	231	HIS
37	BN	239	PHE
37	BN	269	ARG
38	BO	24	VAL
38	BO	25	LYS
38	BO	34	ILE
38	BO	38	ILE
38	BO	73	ASN
38	BO	76	THR
39	BP	2	HIS
39	BP	10	ARG
39	BP	36	ILE
39	BP	50	VAL
39	BP	79	ILE
40	BQ	25	GLN
40	BQ	27	ASN
40	BQ	31	GLN
40	BQ	36	GLN
40	BQ	38	GLN
40	BQ	39	GLN
40	BQ	43	LEU
40	BQ	46	VAL
40	BQ	47	ARG
40	BQ	50	VAL

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Mol	Chain	Res	Type
41	BR	17	PRO
41	BR	31	ILE
41	BR	50	VAL
42	BS	30	HIS
42	BS	36	VAL
42	BS	47	LYS
42	BS	53	THR
42	BS	70	LYS
43	BT	3	GLN
43	BT	4	GLN
43	BT	8	THR
43	BT	12	ARG
43	BT	16	ARG
43	BT	17	SER
43	BT	36	LYS
43	BT	37	HIS
43	BT	42	ILE
43	BT	51	ARG
44	BU	42	VAL
44	BU	53	ILE
45	BV	2	LYS
45	BV	4	THR
45	BV	25	LYS
45	BV	35	ARG
46	BW	4	LYS
46	BW	6	VAL
46	BW	12	ARG
46	BW	23	HIS
46	BW	28	LEU
46	BW	29	ARG
46	BW	43	LEU
47	BX	23	ILE
47	BX	24	ARG
47	BX	32	LYS
48	BY	14	ILE
48	BY	20	VAL
48	BY	22	ILE
48	BY	26	VAL
48	BY	36	GLN
48	BY	38	LYS
48	BY	62	LYS
48	BY	67	HIS

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Mol	Chain	Res	Type
48	BY	70	LYS
48	BY	77	ARG
48	BY	84	LEU
48	BY	107	VAL
48	BY	110	THR
48	BY	126	ASN
48	BY	131	ASP
48	BY	177	VAL
48	BY	184	ARG
48	BY	201	LEU
49	BZ	34	LEU
49	BZ	35	THR
49	BZ	39	ILE
49	BZ	62	LYS
49	BZ	87	ARG
49	BZ	106	GLN
49	BZ	123	ILE
49	BZ	131	ARG
49	BZ	133	LYS
49	BZ	167	VAL
49	BZ	191	GLU
49	BZ	196	VAL
49	BZ	208	THR
50	B1	4	VAL
50	B1	13	THR
50	B1	23	PHE
50	B1	51	GLU
50	B1	57	LYS
50	B1	69	ARG
50	B1	74	LYS
50	B1	105	LEU
50	B1	109	LEU
50	B1	117	ARG
50	B1	120	VAL
50	B1	130	LYS
50	B1	138	LEU
50	B1	149	ILE
50	B1	152	GLU
50	B1	154	ASP
50	B1	189	THR
50	B1	191	ASP
50	B1	194	LYS

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Mol	Chain	Res	Type
51	B2	2	LYS
51	B2	4	HIS
51	B2	11	VAL
51	B2	19	PHE
51	B2	49	LEU
51	B2	56	LEU
51	B2	63	LYS
51	B2	65	LEU
51	B2	77	LYS
51	B2	84	ILE
51	B2	99	PHE
51	B2	131	VAL
51	B2	136	ILE
51	B2	146	ASP
51	B2	154	THR
51	B2	160	LYS
51	B2	177	ARG
52	B3	23	ILE
52	B3	32	LEU
52	B3	34	ARG
52	B3	42	VAL
52	B3	47	ASN
52	B3	59	ASP
52	B3	86	LEU
52	B3	88	LEU
52	B3	100	ASN
52	B3	120	ILE
52	B3	130	ILE
52	B3	146	ASP
52	B3	161	VAL
53	B4	5	LEU
53	B4	12	LEU
53	B4	17	ASP
53	B4	25	TYR
53	B4	43	ASN
53	B4	44	ILE
53	B4	60	GLU
53	B4	79	THR
53	B4	133	GLN
54	B5	46	ASP
54	B5	49	GLU
54	B5	54	ILE

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Mol	Chain	Res	Type
54	B5	64	ARG
54	B5	85	ILE
54	B5	92	PRO
54	B5	121	ILE
55	B6	12	LYS
55	B6	39	LYS
55	B6	50	THR
55	B6	54	ILE
55	B6	75	TYR
55	B6	81	ILE
55	B6	102	GLU
55	B6	108	MET
55	B6	124	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (89) such sidechains are listed below:

Mol	Chain	Res	Type
4	AB	50	ASN
4	AB	176	ASN
5	AC	21	HIS
5	AC	80	ASN
5	AC	108	ASN
5	AC	118	ASN
6	AD	58	ASN
6	AD	111	GLN
8	AG	70	HIS
9	AH	34	GLN
9	AH	37	HIS
9	AH	41	HIS
10	AI	26	ASN
11	AJ	49	ASN
11	AJ	50	ASN
12	AK	53	GLN
13	AL	13	HIS
13	AL	56	HIS
14	AN	54	GLN
14	AN	60	GLN
14	AN	77	ASN
15	AO	122	GLN
15	AO	175	HIS
15	AO	189	HIS
17	AR	70	GLN

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Mol	Chain	Res	Type
17	AR	88	ASN
17	AR	130	ASN
17	AR	163	GLN
18	AS	60	GLN
18	AS	69	ASN
18	AS	76	ASN
19	AT	52	ASN
20	AU	51	GLN
20	AU	141	HIS
21	AV	15	ASN
21	AV	66	GLN
22	AW	3	ASN
22	AW	4	GLN
22	AW	31	GLN
23	AX	35	GLN
23	AX	56	HIS
26	BC	87	GLN
27	BD	13	ASN
28	BE	4	ASN
29	BF	3	GLN
29	BF	88	ASN
31	BH	19	GLN
31	BH	34	HIS
32	BI	74	GLN
33	BJ	55	GLN
33	BJ	65	ASN
33	BJ	71	ASN
34	BK	11	GLN
34	BK	91	GLN
36	BM	28	ASN
36	BM	59	ASN
37	BN	14	HIS
37	BN	36	ASN
37	BN	85	ASN
37	BN	133	ASN
37	BN	259	ASN
40	BQ	41	HIS
41	BR	19	HIS
41	BR	33	HIS
43	BT	4	GLN
43	BT	37	HIS
44	BU	45	HIS

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Mol	Chain	Res	Type
45	BV	6	GLN
45	BV	26	ASN
46	BW	30	HIS
48	BY	32	ASN
48	BY	36	GLN
48	BY	94	GLN
48	BY	148	GLN
48	BY	149	ASN
48	BY	185	ASN
49	BZ	149	ASN
49	BZ	188	ASN
49	BZ	202	ASN
50	B1	94	GLN
51	B2	80	GLN
52	B3	29	ASN
52	B3	138	GLN
53	B4	66	ASN
53	B4	145	ASN
55	B6	67	ASN
55	B6	76	HIS
55	B6	80	HIS
55	B6	131	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	75/76 (98%)	24 (32%)	8 (10%)
1	AE	75/76 (98%)	11 (14%)	1 (1%)
1	AP	74/76 (97%)	17 (22%)	6 (8%)
2	AM	20/20 (100%)	9 (45%)	7 (35%)
24	BA	116/117 (99%)	44 (37%)	11 (9%)
25	BB	2902/2903 (99%)	1565 (53%)	511 (17%)
3	A1	1529/1530 (99%)	772 (50%)	280 (18%)
All	All	4791/4798 (99%)	2442 (50%)	824 (17%)

All (2442) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	2	C
1	AA	3	G
1	AA	10	G

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Mol	Chain	Res	Type
1	AA	13	C
1	AA	17	U
1	AA	18	G
1	AA	19	G
1	AA	20	G
1	AA	22	G
1	AA	23	A
1	AA	27	C
1	AA	28	C
1	AA	33	U
1	AA	42	G
1	AA	43	G
1	AA	44	A
1	AA	46	G
1	AA	47	U
1	AA	48	C
1	AA	52	U
1	AA	55	U
1	AA	56	C
1	AA	59	U
1	AA	75	C
1	AP	8	U
1	AP	9	A
1	AP	10	G
1	AP	13	C
1	AP	16	U
1	AP	17	U
1	AP	18	G
1	AP	19	G
1	AP	21	A
1	AP	31	A
1	AP	32	C
1	AP	40	C
1	AP	49	C
1	AP	58	A
1	AP	59	U
1	AP	68	U
1	AP	75	C
1	AE	9	A
1	AE	13	C
1	AE	14	A
1	AE	15	G

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Mol	Chain	Res	Type
1	AE	17	U
1	AE	18	G
1	AE	19	G
1	AE	21	A
1	AE	36	A
1	AE	46	G
1	AE	76	A
2	AM	2	U
2	AM	3	U
2	AM	5	U
2	AM	6	U
2	AM	7	U
2	AM	10	U
2	AM	13	U
2	AM	14	U
2	AM	15	U
3	A1	6	G
3	A1	7	A
3	A1	8	A
3	A1	9	G
3	A1	10	A
3	A1	12	U
3	A1	14	U
3	A1	15	G
3	A1	16	A
3	A1	20	U
3	A1	21	G
3	A1	22	G
3	A1	25	C
3	A1	26	A
3	A1	27	G
3	A1	28	A
3	A1	29	U
3	A1	30	U
3	A1	31	G
3	A1	32	A
3	A1	36	C
3	A1	39	G
3	A1	42	G
3	A1	46	G
3	A1	47	C
3	A1	48	C

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Mol	Chain	Res	Type
3	A1	49	U
3	A1	50	A
3	A1	51	A
3	A1	52	C
3	A1	60	A
3	A1	61	G
3	A1	65	A
3	A1	66	A
3	A1	67	C
3	A1	69	G
3	A1	70	U
3	A1	76	G
3	A1	83	C
3	A1	84	U
3	A1	85	U
3	A1	86	G
3	A1	87	C
3	A1	89	U
3	A1	93	U
3	A1	94	G
3	A1	95	C
3	A1	96	U
3	A1	100	G
3	A1	103	U
3	A1	105	G
3	A1	106	C
3	A1	107	G
3	A1	108	G
3	A1	109	A
3	A1	112	G
3	A1	114	U
3	A1	118	U
3	A1	119	A
3	A1	120	A
3	A1	121	U
3	A1	122	G
3	A1	123	U
3	A1	124	C
3	A1	125	U
3	A1	129	A
3	A1	130	A
3	A1	131	A

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Mol	Chain	Res	Type
3	A1	142	G
3	A1	143	A
3	A1	149	A
3	A1	150	U
3	A1	153	C
3	A1	159	G
3	A1	163	C
3	A1	169	C
3	A1	170	U
3	A1	171	A
3	A1	172	A
3	A1	175	C
3	A1	176	C
3	A1	182	A
3	A1	184	G
3	A1	186	C
3	A1	188	C
3	A1	189	A
3	A1	191	G
3	A1	198	G
3	A1	201	G
3	A1	209	U
3	A1	210	C
3	A1	212	G
3	A1	214	C
3	A1	217	C
3	A1	218	U
3	A1	219	U
3	A1	220	G
3	A1	224	U
3	A1	225	C
3	A1	226	G
3	A1	227	G
3	A1	229	U
3	A1	230	G
3	A1	234	C
3	A1	238	A
3	A1	239	U
3	A1	240	G
3	A1	241	G
3	A1	242	G
3	A1	244	U

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Mol	Chain	Res	Type
3	A1	245	U
3	A1	246	A
3	A1	250	A
3	A1	251	G
3	A1	252	U
3	A1	254	G
3	A1	256	U
3	A1	257	G
3	A1	261	U
3	A1	264	C
3	A1	265	G
3	A1	266	G
3	A1	267	C
3	A1	268	U
3	A1	274	A
3	A1	277	C
3	A1	280	C
3	A1	281	G
3	A1	287	U
3	A1	289	G
3	A1	290	C
3	A1	291	U
3	A1	293	G
3	A1	294	U
3	A1	295	C
3	A1	296	U
3	A1	297	G
3	A1	298	A
3	A1	299	G
3	A1	300	A
3	A1	301	G
3	A1	305	G
3	A1	306	A
3	A1	307	C
3	A1	309	A
3	A1	311	C
3	A1	312	C
3	A1	313	A
3	A1	316	C
3	A1	317	U
3	A1	318	G
3	A1	319	G

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Mol	Chain	Res	Type
3	A1	320	A
3	A1	325	A
3	A1	326	G
3	A1	327	A
3	A1	328	C
3	A1	329	A
3	A1	330	C
3	A1	331	G
3	A1	332	G
3	A1	338	A
3	A1	339	C
3	A1	344	A
3	A1	345	C
3	A1	352	C
3	A1	353	A
3	A1	354	G
3	A1	356	A
3	A1	357	G
3	A1	358	U
3	A1	359	G
3	A1	363	A
3	A1	364	A
3	A1	365	U
3	A1	366	A
3	A1	367	U
3	A1	368	U
3	A1	369	G
3	A1	370	C
3	A1	371	A
3	A1	372	C
3	A1	373	A
3	A1	374	A
3	A1	376	G
3	A1	377	G
3	A1	379	C
3	A1	381	C
3	A1	382	A
3	A1	391	G
3	A1	396	C
3	A1	397	A
3	A1	398	U
3	A1	400	C

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Mol	Chain	Res	Type
3	A1	401	C
3	A1	406	G
3	A1	412	A
3	A1	414	A
3	A1	415	A
3	A1	421	U
3	A1	422	C
3	A1	423	G
3	A1	424	G
3	A1	425	G
3	A1	426	U
3	A1	427	U
3	A1	428	G
3	A1	429	U
3	A1	432	A
3	A1	433	G
3	A1	435	A
3	A1	438	U
3	A1	439	U
3	A1	441	A
3	A1	442	G
3	A1	445	G
3	A1	446	G
3	A1	449	G
3	A1	451	A
3	A1	454	G
3	A1	462	G
3	A1	463	U
3	A1	465	A
3	A1	467	U
3	A1	468	A
3	A1	469	C
3	A1	470	C
3	A1	471	U
3	A1	476	U
3	A1	479	U
3	A1	483	C
3	A1	485	U
3	A1	486	U
3	A1	487	A
3	A1	493	A
3	A1	498	A

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Mol	Chain	Res	Type
3	A1	499	A
3	A1	500	G
3	A1	501	C
3	A1	503	C
3	A1	504	C
3	A1	505	G
3	A1	506	G
3	A1	508	U
3	A1	512	U
3	A1	516	U
3	A1	518	C
3	A1	519	C
3	A1	521	G
3	A1	522	C
3	A1	523	A
3	A1	524	G
3	A1	528	C
3	A1	529	G
3	A1	530	G
3	A1	531	U
3	A1	532	A
3	A1	535	A
3	A1	536	C
3	A1	543	U
3	A1	547	A
3	A1	550	G
3	A1	551	U
3	A1	553	A
3	A1	554	A
3	A1	555	U
3	A1	560	A
3	A1	561	U
3	A1	564	C
3	A1	565	U
3	A1	567	G
3	A1	568	G
3	A1	570	G
3	A1	571	U
3	A1	572	A
3	A1	573	A
3	A1	574	A
3	A1	578	C

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Mol	Chain	Res	Type
3	A1	580	C
3	A1	581	G
3	A1	582	C
3	A1	586	C
3	A1	587	G
3	A1	588	G
3	A1	591	U
3	A1	598	U
3	A1	601	G
3	A1	602	A
3	A1	607	A
3	A1	608	A
3	A1	610	U
3	A1	619	U
3	A1	622	A
3	A1	623	C
3	A1	625	U
3	A1	630	A
3	A1	631	C
3	A1	639	G
3	A1	642	A
3	A1	649	A
3	A1	650	G
3	A1	651	C
3	A1	652	U
3	A1	653	U
3	A1	654	G
3	A1	655	A
3	A1	665	A
3	A1	666	G
3	A1	667	G
3	A1	670	G
3	A1	671	G
3	A1	673	A
3	A1	681	A
3	A1	682	G
3	A1	683	G
3	A1	684	U
3	A1	685	G
3	A1	687	A
3	A1	688	G
3	A1	695	A

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Mol	Chain	Res	Type
3	A1	697	U
3	A1	699	C
3	A1	701	U
3	A1	702	A
3	A1	703	G
3	A1	705	G
3	A1	706	A
3	A1	715	A
3	A1	716	A
3	A1	718	A
3	A1	719	C
3	A1	720	C
3	A1	721	G
3	A1	723	U
3	A1	724	G
3	A1	726	C
3	A1	727	G
3	A1	731	G
3	A1	732	C
3	A1	733	G
3	A1	735	C
3	A1	736	C
3	A1	741	G
3	A1	742	G
3	A1	743	A
3	A1	744	C
3	A1	745	G
3	A1	747	A
3	A1	748	G
3	A1	753	A
3	A1	755	G
3	A1	756	C
3	A1	763	G
3	A1	764	C
3	A1	771	G
3	A1	774	G
3	A1	776	G
3	A1	777	A
3	A1	781	A
3	A1	783	C
3	A1	784	A
3	A1	785	G

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Mol	Chain	Res	Type
3	A1	789	U
3	A1	790	A
3	A1	791	G
3	A1	792	A
3	A1	793	U
3	A1	796	C
3	A1	797	C
3	A1	798	U
3	A1	801	U
3	A1	805	C
3	A1	808	C
3	A1	811	C
3	A1	812	G
3	A1	813	U
3	A1	814	A
3	A1	815	A
3	A1	817	C
3	A1	818	G
3	A1	819	A
3	A1	820	U
3	A1	821	G
3	A1	822	U
3	A1	823	C
3	A1	826	C
3	A1	827	U
3	A1	828	U
3	A1	829	G
3	A1	830	G
3	A1	841	C
3	A1	843	U
3	A1	844	G
3	A1	846	G
3	A1	847	G
3	A1	849	G
3	A1	855	U
3	A1	856	C
3	A1	857	C
3	A1	858	G
3	A1	861	G
3	A1	862	C
3	A1	863	U
3	A1	865	A

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Mol	Chain	Res	Type
3	A1	867	G
3	A1	868	C
3	A1	869	G
3	A1	870	U
3	A1	871	U
3	A1	872	A
3	A1	873	A
3	A1	874	G
3	A1	876	C
3	A1	877	G
3	A1	880	C
3	A1	881	G
3	A1	882	C
3	A1	883	C
3	A1	884	U
3	A1	885	G
3	A1	886	G
3	A1	887	G
3	A1	889	A
3	A1	890	G
3	A1	891	U
3	A1	892	A
3	A1	893	C
3	A1	894	G
3	A1	899	C
3	A1	900	A
3	A1	901	A
3	A1	902	G
3	A1	906	A
3	A1	907	A
3	A1	910	C
3	A1	911	U
3	A1	914	A
3	A1	915	A
3	A1	916	U
3	A1	918	A
3	A1	919	A
3	A1	920	U
3	A1	921	U
3	A1	922	G
3	A1	923	A
3	A1	924	C

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Mol	Chain	Res	Type
3	A1	925	G
3	A1	926	G
3	A1	927	G
3	A1	931	C
3	A1	934	C
3	A1	935	A
3	A1	936	C
3	A1	938	A
3	A1	939	G
3	A1	943	U
3	A1	944	G
3	A1	945	G
3	A1	953	G
3	A1	956	U
3	A1	957	U
3	A1	961	U
3	A1	962	C
3	A1	963	G
3	A1	964	A
3	A1	965	U
3	A1	966	G
3	A1	967	C
3	A1	968	A
3	A1	969	A
3	A1	970	C
3	A1	971	G
3	A1	972	C
3	A1	973	G
3	A1	974	A
3	A1	975	A
3	A1	976	G
3	A1	977	A
3	A1	978	A
3	A1	979	C
3	A1	980	C
3	A1	981	U
3	A1	982	U
3	A1	984	C
3	A1	986	U
3	A1	991	U
3	A1	992	U
3	A1	993	G

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Mol	Chain	Res	Type
3	A1	994	A
3	A1	997	U
3	A1	998	C
3	A1	999	C
3	A1	1000	A
3	A1	1002	G
3	A1	1004	A
3	A1	1017	U
3	A1	1025	U
3	A1	1026	G
3	A1	1029	U
3	A1	1030	U
3	A1	1031	C
3	A1	1037	C
3	A1	1045	C
3	A1	1049	U
3	A1	1050	G
3	A1	1051	C
3	A1	1052	U
3	A1	1053	G
3	A1	1054	C
3	A1	1055	A
3	A1	1057	G
3	A1	1058	G
3	A1	1062	U
3	A1	1063	C
3	A1	1064	G
3	A1	1065	U
3	A1	1066	C
3	A1	1067	A
3	A1	1068	G
3	A1	1069	C
3	A1	1071	C
3	A1	1072	G
3	A1	1077	G
3	A1	1078	U
3	A1	1081	A
3	A1	1082	A
3	A1	1083	U
3	A1	1084	G
3	A1	1085	U
3	A1	1089	G

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Mol	Chain	Res	Type
3	A1	1094	G
3	A1	1097	C
3	A1	1101	A
3	A1	1103	C
3	A1	1104	G
3	A1	1106	G
3	A1	1109	C
3	A1	1110	A
3	A1	1111	A
3	A1	1116	U
3	A1	1117	A
3	A1	1123	U
3	A1	1124	G
3	A1	1125	U
3	A1	1126	U
3	A1	1127	G
3	A1	1128	C
3	A1	1129	C
3	A1	1130	A
3	A1	1131	G
3	A1	1133	G
3	A1	1135	U
3	A1	1137	C
3	A1	1139	G
3	A1	1140	C
3	A1	1141	C
3	A1	1142	G
3	A1	1143	G
3	A1	1146	A
3	A1	1148	U
3	A1	1149	C
3	A1	1152	A
3	A1	1154	G
3	A1	1158	C
3	A1	1159	U
3	A1	1162	C
3	A1	1167	A
3	A1	1168	U
3	A1	1169	A
3	A1	1170	A
3	A1	1171	A
3	A1	1177	G

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Mol	Chain	Res	Type
3	A1	1178	G
3	A1	1180	A
3	A1	1182	G
3	A1	1183	U
3	A1	1189	U
3	A1	1191	A
3	A1	1193	G
3	A1	1195	C
3	A1	1196	A
3	A1	1198	G
3	A1	1199	U
3	A1	1200	C
3	A1	1201	A
3	A1	1202	U
3	A1	1203	C
3	A1	1209	C
3	A1	1210	C
3	A1	1212	U
3	A1	1216	A
3	A1	1217	C
3	A1	1218	C
3	A1	1220	G
3	A1	1221	G
3	A1	1223	C
3	A1	1224	U
3	A1	1225	A
3	A1	1226	C
3	A1	1227	A
3	A1	1229	A
3	A1	1230	C
3	A1	1231	G
3	A1	1233	G
3	A1	1235	U
3	A1	1237	C
3	A1	1238	A
3	A1	1239	A
3	A1	1240	U
3	A1	1241	G
3	A1	1242	G
3	A1	1250	A
3	A1	1251	A
3	A1	1253	G

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Mol	Chain	Res	Type
3	A1	1256	A
3	A1	1257	A
3	A1	1258	G
3	A1	1262	C
3	A1	1263	C
3	A1	1266	G
3	A1	1268	G
3	A1	1270	G
3	A1	1276	G
3	A1	1278	G
3	A1	1279	G
3	A1	1280	A
3	A1	1281	C
3	A1	1283	U
3	A1	1287	A
3	A1	1290	G
3	A1	1292	G
3	A1	1296	C
3	A1	1297	G
3	A1	1298	U
3	A1	1299	A
3	A1	1300	G
3	A1	1301	U
3	A1	1302	C
3	A1	1309	G
3	A1	1310	G
3	A1	1318	A
3	A1	1319	A
3	A1	1320	C
3	A1	1322	C
3	A1	1323	G
3	A1	1326	U
3	A1	1330	U
3	A1	1334	G
3	A1	1336	C
3	A1	1337	G
3	A1	1338	G
3	A1	1339	A
3	A1	1340	A
3	A1	1341	U
3	A1	1343	G
3	A1	1344	C

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Mol	Chain	Res	Type
3	A1	1345	U
3	A1	1346	A
3	A1	1347	G
3	A1	1350	A
3	A1	1351	U
3	A1	1352	C
3	A1	1357	A
3	A1	1359	C
3	A1	1361	G
3	A1	1362	A
3	A1	1363	A
3	A1	1364	U
3	A1	1365	G
3	A1	1366	C
3	A1	1367	C
3	A1	1370	G
3	A1	1371	G
3	A1	1374	A
3	A1	1377	A
3	A1	1378	C
3	A1	1379	G
3	A1	1380	U
3	A1	1381	U
3	A1	1384	C
3	A1	1388	C
3	A1	1392	G
3	A1	1393	U
3	A1	1395	C
3	A1	1396	A
3	A1	1397	C
3	A1	1398	A
3	A1	1399	C
3	A1	1400	C
3	A1	1401	G
3	A1	1402	C
3	A1	1404	C
3	A1	1405	G
3	A1	1406	U
3	A1	1409	C
3	A1	1410	A
3	A1	1411	C
3	A1	1412	C

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Mol	Chain	Res	Type
3	A1	1414	U
3	A1	1415	G
3	A1	1416	G
3	A1	1417	G
3	A1	1418	A
3	A1	1419	G
3	A1	1421	G
3	A1	1426	G
3	A1	1427	C
3	A1	1428	A
3	A1	1429	A
3	A1	1432	G
3	A1	1434	A
3	A1	1442	G
3	A1	1444	U
3	A1	1445	U
3	A1	1446	A
3	A1	1447	A
3	A1	1450	U
3	A1	1451	U
3	A1	1452	C
3	A1	1456	A
3	A1	1460	C
3	A1	1461	G
3	A1	1469	C
3	A1	1470	U
3	A1	1471	U
3	A1	1473	G
3	A1	1474	U
3	A1	1475	G
3	A1	1476	A
3	A1	1477	U
3	A1	1479	C
3	A1	1480	A
3	A1	1481	U
3	A1	1482	G
3	A1	1483	A
3	A1	1484	C
3	A1	1485	U
3	A1	1486	G
3	A1	1488	G
3	A1	1490	U

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Mol	Chain	Res	Type
3	A1	1491	G
3	A1	1492	A
3	A1	1493	A
3	A1	1494	G
3	A1	1495	U
3	A1	1496	C
3	A1	1497	G
3	A1	1498	U
3	A1	1499	A
3	A1	1501	C
3	A1	1502	A
3	A1	1504	G
3	A1	1505	G
3	A1	1506	U
3	A1	1507	A
3	A1	1508	A
3	A1	1510	C
3	A1	1516	G
3	A1	1517	G
3	A1	1519	A
3	A1	1520	C
3	A1	1521	C
3	A1	1522	U
3	A1	1523	G
3	A1	1525	G
3	A1	1526	G
3	A1	1527	U
3	A1	1528	U
3	A1	1529	G
3	A1	1530	G
3	A1	1531	A
3	A1	1534	A
24	BA	11	C
24	BA	13	G
24	BA	14	U
24	BA	15	A
24	BA	16	G
24	BA	23	G
24	BA	25	U
24	BA	26	C
24	BA	27	C
24	BA	29	A

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Mol	Chain	Res	Type
24	BA	30	C
24	BA	31	C
24	BA	33	G
24	BA	34	A
24	BA	35	C
24	BA	40	U
24	BA	41	G
24	BA	42	C
24	BA	44	G
24	BA	45	A
24	BA	46	A
24	BA	51	G
24	BA	52	A
24	BA	54	G
24	BA	57	A
24	BA	58	A
24	BA	65	U
24	BA	66	A
24	BA	67	G
24	BA	70	C
24	BA	72	G
24	BA	75	G
24	BA	80	U
24	BA	82	U
24	BA	88	C
24	BA	98	G
24	BA	99	A
24	BA	100	G
24	BA	102	G
24	BA	103	U
24	BA	105	G
24	BA	108	A
24	BA	109	A
24	BA	118	C
25	BB	3	U
25	BB	4	U
25	BB	6	A
25	BB	7	G
25	BB	9	G
25	BB	10	A
25	BB	11	C
25	BB	12	U

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Mol	Chain	Res	Type
25	BB	13	A
25	BB	14	A
25	BB	15	G
25	BB	16	C
25	BB	17	G
25	BB	18	U
25	BB	20	C
25	BB	23	G
25	BB	24	G
25	BB	25	U
25	BB	26	G
25	BB	27	G
25	BB	29	U
25	BB	31	C
25	BB	33	C
25	BB	34	U
25	BB	35	G
25	BB	36	G
25	BB	40	U
25	BB	45	G
25	BB	48	G
25	BB	49	A
25	BB	50	U
25	BB	52	A
25	BB	55	G
25	BB	57	C
25	BB	59	U
25	BB	61	C
25	BB	62	U
25	BB	63	A
25	BB	64	A
25	BB	65	U
25	BB	67	U
25	BB	68	G
25	BB	69	C
25	BB	70	G
25	BB	71	A
25	BB	72	U
25	BB	73	A
25	BB	74	A
25	BB	75	G
25	BB	76	C

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Mol	Chain	Res	Type
25	BB	81	G
25	BB	84	A
25	BB	85	G
25	BB	88	G
25	BB	89	A
25	BB	90	U
25	BB	91	A
25	BB	92	U
25	BB	96	C
25	BB	100	U
25	BB	101	A
25	BB	102	U
25	BB	103	A
25	BB	104	A
25	BB	105	C
25	BB	106	C
25	BB	107	G
25	BB	112	U
25	BB	113	U
25	BB	114	U
25	BB	117	G
25	BB	118	A
25	BB	119	A
25	BB	120	U
25	BB	122	G
25	BB	124	G
25	BB	125	A
25	BB	126	A
25	BB	128	C
25	BB	129	C
25	BB	130	C
25	BB	131	A
25	BB	142	A
25	BB	144	A
25	BB	149	A
25	BB	150	U
25	BB	152	A
25	BB	162	U
25	BB	164	C
25	BB	165	A
25	BB	170	U
25	BB	178	G

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Mol	Chain	Res	Type
25	BB	186	G
25	BB	187	G
25	BB	188	G
25	BB	189	G
25	BB	190	A
25	BB	192	C
25	BB	194	G
25	BB	195	A
25	BB	196	A
25	BB	197	A
25	BB	200	U
25	BB	204	A
25	BB	205	G
25	BB	207	A
25	BB	208	C
25	BB	212	G
25	BB	213	A
25	BB	216	A
25	BB	221	A
25	BB	222	A
25	BB	223	A
25	BB	224	U
25	BB	227	A
25	BB	228	C
25	BB	230	G
25	BB	232	G
25	BB	233	A
25	BB	235	U
25	BB	239	C
25	BB	243	U
25	BB	246	C
25	BB	247	G
25	BB	248	G
25	BB	249	C
25	BB	250	G
25	BB	251	A
25	BB	254	G
25	BB	256	A
25	BB	257	C
25	BB	264	C
25	BB	265	A
25	BB	270	A

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Mol	Chain	Res	Type
25	BB	275	C
25	BB	277	G
25	BB	278	A
25	BB	281	C
25	BB	294	A
25	BB	297	G
25	BB	301	G
25	BB	302	C
25	BB	308	G
25	BB	310	A
25	BB	311	A
25	BB	312	G
25	BB	316	C
25	BB	317	G
25	BB	318	C
25	BB	319	G
25	BB	321	U
25	BB	322	A
25	BB	323	C
25	BB	324	A
25	BB	325	G
25	BB	327	G
25	BB	328	U
25	BB	329	G
25	BB	330	A
25	BB	331	C
25	BB	333	G
25	BB	334	C
25	BB	335	C
25	BB	336	C
25	BB	339	U
25	BB	340	A
25	BB	347	A
25	BB	351	C
25	BB	361	G
25	BB	362	A
25	BB	370	G
25	BB	371	A
25	BB	372	G
25	BB	376	G
25	BB	377	G
25	BB	379	G

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Mol	Chain	Res	Type
25	BB	380	G
25	BB	381	G
25	BB	382	A
25	BB	384	A
25	BB	385	C
25	BB	386	G
25	BB	387	U
25	BB	389	G
25	BB	391	A
25	BB	392	U
25	BB	393	C
25	BB	394	C
25	BB	398	C
25	BB	403	U
25	BB	404	A
25	BB	405	U
25	BB	406	G
25	BB	409	G
25	BB	410	G
25	BB	411	G
25	BB	413	C
25	BB	422	A
25	BB	423	A
25	BB	424	G
25	BB	425	G
25	BB	426	C
25	BB	427	U
25	BB	431	U
25	BB	433	C
25	BB	434	U
25	BB	435	C
25	BB	437	U
25	BB	438	G
25	BB	441	U
25	BB	443	A
25	BB	444	C
25	BB	446	G
25	BB	447	A
25	BB	448	U
25	BB	449	A
25	BB	450	G
25	BB	451	U

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Mol	Chain	Res	Type
25	BB	452	G
25	BB	453	A
25	BB	454	A
25	BB	455	C
25	BB	456	C
25	BB	457	A
25	BB	459	U
25	BB	462	C
25	BB	463	G
25	BB	464	U
25	BB	465	G
25	BB	467	G
25	BB	469	G
25	BB	470	A
25	BB	474	G
25	BB	475	C
25	BB	476	G
25	BB	477	A
25	BB	478	A
25	BB	479	A
25	BB	481	G
25	BB	482	A
25	BB	484	C
25	BB	491	G
25	BB	495	G
25	BB	498	G
25	BB	500	G
25	BB	501	A
25	BB	502	A
25	BB	503	A
25	BB	504	A
25	BB	505	A
25	BB	508	A
25	BB	509	C
25	BB	510	C
25	BB	511	U
25	BB	512	G
25	BB	513	A
25	BB	515	A
25	BB	520	G
25	BB	522	A
25	BB	525	U

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Mol	Chain	Res	Type
25	BB	526	A
25	BB	527	C
25	BB	528	A
25	BB	529	A
25	BB	530	G
25	BB	531	C
25	BB	532	A
25	BB	533	G
25	BB	534	U
25	BB	535	G
25	BB	536	G
25	BB	537	G
25	BB	540	C
25	BB	543	G
25	BB	544	C
25	BB	547	A
25	BB	548	G
25	BB	550	C
25	BB	551	G
25	BB	552	U
25	BB	553	G
25	BB	554	U
25	BB	555	G
25	BB	556	A
25	BB	559	G
25	BB	562	U
25	BB	564	C
25	BB	565	C
25	BB	566	U
25	BB	567	U
25	BB	568	U
25	BB	569	U
25	BB	570	G
25	BB	571	U
25	BB	572	A
25	BB	573	U
25	BB	574	A
25	BB	575	A
25	BB	576	U
25	BB	577	G
25	BB	580	U
25	BB	581	C

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Mol	Chain	Res	Type
25	BB	582	A
25	BB	583	G
25	BB	584	C
25	BB	585	G
25	BB	586	A
25	BB	587	C
25	BB	588	U
25	BB	589	U
25	BB	590	A
25	BB	591	U
25	BB	592	A
25	BB	593	U
25	BB	594	U
25	BB	598	U
25	BB	600	G
25	BB	603	A
25	BB	607	U
25	BB	610	C
25	BB	613	A
25	BB	614	A
25	BB	615	U
25	BB	616	A
25	BB	619	G
25	BB	620	G
25	BB	623	C
25	BB	627	A
25	BB	628	G
25	BB	629	G
25	BB	634	C
25	BB	637	A
25	BB	638	G
25	BB	641	U
25	BB	642	U
25	BB	643	A
25	BB	644	A
25	BB	645	C
25	BB	646	U
25	BB	653	U
25	BB	654	A
25	BB	655	A
25	BB	658	U
25	BB	660	C

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Mol	Chain	Res	Type
25	BB	661	A
25	BB	664	G
25	BB	665	U
25	BB	668	A
25	BB	669	G
25	BB	670	A
25	BB	671	C
25	BB	672	C
25	BB	673	C
25	BB	675	A
25	BB	676	A
25	BB	677	A
25	BB	678	C
25	BB	679	C
25	BB	683	U
25	BB	684	G
25	BB	685	A
25	BB	686	U
25	BB	687	C
25	BB	688	U
25	BB	690	G
25	BB	691	C
25	BB	692	C
25	BB	696	G
25	BB	697	G
25	BB	698	C
25	BB	699	A
25	BB	700	G
25	BB	701	G
25	BB	702	U
25	BB	703	U
25	BB	704	G
25	BB	705	A
25	BB	707	G
25	BB	708	G
25	BB	715	A
25	BB	716	A
25	BB	718	A
25	BB	719	C
25	BB	721	A
25	BB	722	A
25	BB	727	A

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Mol	Chain	Res	Type
25	BB	728	G
25	BB	729	G
25	BB	730	A
25	BB	732	C
25	BB	733	G
25	BB	734	A
25	BB	736	C
25	BB	740	C
25	BB	742	A
25	BB	743	A
25	BB	744	U
25	BB	745	G
25	BB	747	U
25	BB	748	G
25	BB	749	A
25	BB	750	A
25	BB	756	A
25	BB	757	G
25	BB	759	G
25	BB	760	G
25	BB	762	U
25	BB	763	G
25	BB	764	A
25	BB	765	C
25	BB	766	U
25	BB	767	U
25	BB	768	G
25	BB	769	U
25	BB	770	G
25	BB	772	C
25	BB	773	U
25	BB	774	G
25	BB	775	G
25	BB	776	G
25	BB	777	G
25	BB	779	U
25	BB	780	G
25	BB	783	A
25	BB	784	G
25	BB	786	C
25	BB	788	A
25	BB	789	A

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Mol	Chain	Res	Type
25	BB	790	U
25	BB	791	C
25	BB	792	A
25	BB	793	A
25	BB	794	A
25	BB	796	C
25	BB	797	G
25	BB	799	G
25	BB	802	A
25	BB	803	U
25	BB	804	A
25	BB	806	C
25	BB	808	G
25	BB	809	G
25	BB	810	U
25	BB	811	U
25	BB	812	C
25	BB	815	C
25	BB	818	G
25	BB	820	A
25	BB	821	A
25	BB	823	C
25	BB	825	A
25	BB	826	U
25	BB	827	U
25	BB	830	G
25	BB	831	G
25	BB	832	U
25	BB	834	G
25	BB	835	C
25	BB	836	G
25	BB	837	C
25	BB	838	C
25	BB	839	U
25	BB	843	G
25	BB	846	U
25	BB	847	U
25	BB	856	G
25	BB	860	U
25	BB	861	A
25	BB	862	G
25	BB	865	C

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Mol	Chain	Res	Type
25	BB	868	U
25	BB	869	G
25	BB	872	U
25	BB	878	A
25	BB	887	U
25	BB	888	C
25	BB	889	C
25	BB	897	C
25	BB	899	A
25	BB	900	A
25	BB	901	C
25	BB	902	C
25	BB	906	U
25	BB	908	C
25	BB	909	A
25	BB	910	A
25	BB	911	A
25	BB	912	C
25	BB	914	G
25	BB	915	C
25	BB	919	U
25	BB	920	A
25	BB	921	C
25	BB	922	C
25	BB	932	U
25	BB	933	A
25	BB	934	U
25	BB	936	A
25	BB	937	C
25	BB	941	A
25	BB	942	G
25	BB	943	A
25	BB	944	C
25	BB	945	A
25	BB	947	A
25	BB	948	C
25	BB	951	C
25	BB	952	G
25	BB	953	G
25	BB	954	G
25	BB	955	U
25	BB	956	G

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Mol	Chain	Res	Type
25	BB	957	C
25	BB	958	U
25	BB	959	A
25	BB	960	A
25	BB	961	C
25	BB	964	C
25	BB	965	C
25	BB	966	G
25	BB	967	U
25	BB	968	C
25	BB	969	G
25	BB	971	G
25	BB	972	A
25	BB	974	G
25	BB	975	A
25	BB	976	G
25	BB	977	G
25	BB	978	G
25	BB	980	A
25	BB	983	A
25	BB	984	A
25	BB	985	C
25	BB	988	A
25	BB	991	C
25	BB	992	C
25	BB	993	G
25	BB	994	C
25	BB	996	A
25	BB	998	C
25	BB	1003	G
25	BB	1004	U
25	BB	1006	C
25	BB	1007	C
25	BB	1008	A
25	BB	1009	A
25	BB	1010	A
25	BB	1011	G
25	BB	1012	U
25	BB	1013	C
25	BB	1014	A
25	BB	1015	U
25	BB	1016	G

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Mol	Chain	Res	Type
25	BB	1022	G
25	BB	1023	U
25	BB	1024	G
25	BB	1026	G
25	BB	1027	A
25	BB	1028	A
25	BB	1029	A
25	BB	1031	G
25	BB	1033	U
25	BB	1034	G
25	BB	1035	U
25	BB	1036	G
25	BB	1046	A
25	BB	1047	G
25	BB	1049	C
25	BB	1050	A
25	BB	1058	U
25	BB	1059	G
25	BB	1060	U
25	BB	1061	U
25	BB	1062	G
25	BB	1069	A
25	BB	1070	A
25	BB	1072	C
25	BB	1074	G
25	BB	1075	C
25	BB	1079	C
25	BB	1082	U
25	BB	1083	U
25	BB	1087	G
25	BB	1088	A
25	BB	1090	A
25	BB	1091	G
25	BB	1092	C
25	BB	1098	A
25	BB	1104	C
25	BB	1110	G
25	BB	1111	A
25	BB	1112	G
25	BB	1124	G
25	BB	1126	A
25	BB	1127	A

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Mol	Chain	Res	Type
25	BB	1128	G
25	BB	1129	A
25	BB	1130	U
25	BB	1131	G
25	BB	1132	U
25	BB	1133	A
25	BB	1134	A
25	BB	1135	C
25	BB	1136	G
25	BB	1138	G
25	BB	1139	G
25	BB	1140	C
25	BB	1141	U
25	BB	1142	A
25	BB	1143	A
25	BB	1144	A
25	BB	1145	C
25	BB	1153	C
25	BB	1155	A
25	BB	1156	A
25	BB	1158	C
25	BB	1159	U
25	BB	1161	C
25	BB	1162	G
25	BB	1172	C
25	BB	1175	A
25	BB	1176	U
25	BB	1177	G
25	BB	1185	G
25	BB	1186	G
25	BB	1188	U
25	BB	1189	A
25	BB	1190	G
25	BB	1192	G
25	BB	1198	U
25	BB	1200	C
25	BB	1201	U
25	BB	1203	U
25	BB	1204	A
25	BB	1205	A
25	BB	1207	C
25	BB	1208	C

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Mol	Chain	Res	Type
25	BB	1210	G
25	BB	1211	C
25	BB	1212	G
25	BB	1213	A
25	BB	1214	A
25	BB	1216	G
25	BB	1217	U
25	BB	1218	G
25	BB	1219	U
25	BB	1220	G
25	BB	1221	C
25	BB	1224	U
25	BB	1225	G
25	BB	1226	A
25	BB	1227	G
25	BB	1230	A
25	BB	1233	C
25	BB	1234	U
25	BB	1235	G
25	BB	1236	G
25	BB	1237	A
25	BB	1238	G
25	BB	1239	G
25	BB	1240	U
25	BB	1241	A
25	BB	1242	U
25	BB	1243	C
25	BB	1244	A
25	BB	1246	A
25	BB	1248	G
25	BB	1249	U
25	BB	1251	C
25	BB	1252	G
25	BB	1253	A
25	BB	1254	A
25	BB	1256	G
25	BB	1257	C
25	BB	1258	U
25	BB	1260	A
25	BB	1261	C
25	BB	1262	A
25	BB	1264	A

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Mol	Chain	Res	Type
25	BB	1265	A
25	BB	1266	G
25	BB	1268	A
25	BB	1269	A
25	BB	1270	C
25	BB	1272	A
25	BB	1274	A
25	BB	1275	A
25	BB	1276	A
25	BB	1282	U
25	BB	1284	A
25	BB	1285	A
25	BB	1286	A
25	BB	1287	A
25	BB	1288	G
25	BB	1300	G
25	BB	1301	A
25	BB	1302	A
25	BB	1303	G
25	BB	1305	C
25	BB	1306	C
25	BB	1308	A
25	BB	1309	G
25	BB	1310	G
25	BB	1311	G
25	BB	1313	U
25	BB	1314	C
25	BB	1315	C
25	BB	1316	U
25	BB	1321	A
25	BB	1323	C
25	BB	1324	G
25	BB	1325	U
25	BB	1326	U
25	BB	1327	A
25	BB	1330	C
25	BB	1331	G
25	BB	1332	G
25	BB	1333	G
25	BB	1334	G
25	BB	1338	G
25	BB	1339	G

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Mol	Chain	Res	Type
25	BB	1341	G
25	BB	1342	A
25	BB	1343	G
25	BB	1344	U
25	BB	1345	C
25	BB	1346	G
25	BB	1347	A
25	BB	1348	C
25	BB	1349	C
25	BB	1350	C
25	BB	1351	C
25	BB	1352	U
25	BB	1353	A
25	BB	1356	G
25	BB	1357	C
25	BB	1360	G
25	BB	1362	C
25	BB	1363	C
25	BB	1364	G
25	BB	1365	A
25	BB	1368	G
25	BB	1371	G
25	BB	1372	U
25	BB	1374	G
25	BB	1375	U
25	BB	1378	A
25	BB	1379	U
25	BB	1380	G
25	BB	1384	A
25	BB	1385	A
25	BB	1390	U
25	BB	1391	U
25	BB	1392	A
25	BB	1393	A
25	BB	1394	U
25	BB	1395	A
25	BB	1396	U
25	BB	1399	C
25	BB	1400	U
25	BB	1403	A
25	BB	1404	C
25	BB	1405	U

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Mol	Chain	Res	Type
25	BB	1413	A
25	BB	1416	G
25	BB	1417	C
25	BB	1419	A
25	BB	1420	A
25	BB	1421	G
25	BB	1425	G
25	BB	1426	G
25	BB	1428	C
25	BB	1430	G
25	BB	1432	G
25	BB	1438	U
25	BB	1439	A
25	BB	1442	U
25	BB	1444	G
25	BB	1446	C
25	BB	1450	G
25	BB	1451	C
25	BB	1454	C
25	BB	1455	G
25	BB	1457	U
25	BB	1458	U
25	BB	1459	G
25	BB	1460	U
25	BB	1461	C
25	BB	1462	C
25	BB	1467	U
25	BB	1469	A
25	BB	1471	G
25	BB	1472	C
25	BB	1473	G
25	BB	1474	U
25	BB	1475	G
25	BB	1476	U
25	BB	1478	G
25	BB	1479	G
25	BB	1482	G
25	BB	1490	A
25	BB	1491	G
25	BB	1497	U
25	BB	1498	C
25	BB	1508	A

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Mol	Chain	Res	Type
25	BB	1509	A
25	BB	1510	G
25	BB	1514	G
25	BB	1524	G
25	BB	1530	G
25	BB	1532	A
25	BB	1540	G
25	BB	1544	A
25	BB	1554	U
25	BB	1558	C
25	BB	1559	U
25	BB	1560	G
25	BB	1561	C
25	BB	1566	A
25	BB	1567	G
25	BB	1568	G
25	BB	1569	A
25	BB	1572	A
25	BB	1574	C
25	BB	1578	U
25	BB	1581	G
25	BB	1585	C
25	BB	1589	U
25	BB	1590	A
25	BB	1597	A
25	BB	1598	A
25	BB	1599	U
25	BB	1600	C
25	BB	1601	G
25	BB	1604	C
25	BB	1605	C
25	BB	1607	C
25	BB	1608	A
25	BB	1609	A
25	BB	1610	A
25	BB	1614	A
25	BB	1615	C
25	BB	1616	A
25	BB	1617	C
25	BB	1618	A
25	BB	1619	G
25	BB	1620	G

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Mol	Chain	Res	Type
25	BB	1621	U
25	BB	1626	A
25	BB	1627	G
25	BB	1631	G
25	BB	1634	A
25	BB	1635	A
25	BB	1636	U
25	BB	1639	C
25	BB	1640	A
25	BB	1642	G
25	BB	1644	C
25	BB	1646	C
25	BB	1648	U
25	BB	1649	G
25	BB	1651	G
25	BB	1654	A
25	BB	1655	A
25	BB	1656	C
25	BB	1657	U
25	BB	1658	C
25	BB	1661	G
25	BB	1662	U
25	BB	1663	G
25	BB	1665	A
25	BB	1666	G
25	BB	1668	A
25	BB	1669	A
25	BB	1670	C
25	BB	1672	A
25	BB	1674	G
25	BB	1675	C
25	BB	1677	A
25	BB	1678	A
25	BB	1679	A
25	BB	1680	U
25	BB	1681	G
25	BB	1682	G
25	BB	1686	C
25	BB	1687	G
25	BB	1689	A
25	BB	1691	C
25	BB	1693	U

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Mol	Chain	Res	Type
25	BB	1694	C
25	BB	1695	G
25	BB	1698	A
25	BB	1699	G
25	BB	1700	A
25	BB	1701	A
25	BB	1702	G
25	BB	1703	G
25	BB	1704	C
25	BB	1706	C
25	BB	1715	G
25	BB	1716	U
25	BB	1718	G
25	BB	1722	A
25	BB	1723	G
25	BB	1730	C
25	BB	1731	G
25	BB	1732	C
25	BB	1738	G
25	BB	1739	A
25	BB	1745	A
25	BB	1749	A
25	BB	1750	G
25	BB	1752	C
25	BB	1754	A
25	BB	1755	A
25	BB	1756	G
25	BB	1757	A
25	BB	1758	U
25	BB	1759	A
25	BB	1762	A
25	BB	1763	G
25	BB	1764	C
25	BB	1766	G
25	BB	1767	G
25	BB	1768	C
25	BB	1769	U
25	BB	1770	G
25	BB	1773	A
25	BB	1774	C
25	BB	1775	U
25	BB	1776	G

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Mol	Chain	Res	Type
25	BB	1777	U
25	BB	1778	U
25	BB	1779	U
25	BB	1780	A
25	BB	1781	U
25	BB	1782	U
25	BB	1783	A
25	BB	1784	A
25	BB	1785	A
25	BB	1789	A
25	BB	1790	C
25	BB	1791	A
25	BB	1793	C
25	BB	1800	C
25	BB	1802	A
25	BB	1803	A
25	BB	1805	A
25	BB	1806	C
25	BB	1807	G
25	BB	1809	A
25	BB	1810	A
25	BB	1811	G
25	BB	1812	U
25	BB	1813	G
25	BB	1814	G
25	BB	1816	C
25	BB	1817	G
25	BB	1819	A
25	BB	1820	U
25	BB	1821	A
25	BB	1822	C
25	BB	1824	G
25	BB	1825	U
25	BB	1826	G
25	BB	1827	U
25	BB	1828	G
25	BB	1829	A
25	BB	1830	C
25	BB	1835	G
25	BB	1836	C
25	BB	1837	C
25	BB	1838	C

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Mol	Chain	Res	Type
25	BB	1844	C
25	BB	1847	A
25	BB	1849	G
25	BB	1852	U
25	BB	1855	U
25	BB	1858	A
25	BB	1859	U
25	BB	1869	G
25	BB	1870	C
25	BB	1873	G
25	BB	1875	G
25	BB	1883	U
25	BB	1885	A
25	BB	1888	G
25	BB	1889	A
25	BB	1890	A
25	BB	1891	G
25	BB	1892	C
25	BB	1894	C
25	BB	1895	C
25	BB	1896	G
25	BB	1897	G
25	BB	1899	A
25	BB	1900	A
25	BB	1901	A
25	BB	1903	G
25	BB	1906	G
25	BB	1907	G
25	BB	1909	C
25	BB	1912	A
25	BB	1913	A
25	BB	1914	C
25	BB	1915	U
25	BB	1916	A
25	BB	1918	A
25	BB	1919	A
25	BB	1920	C
25	BB	1926	U
25	BB	1928	A
25	BB	1929	G
25	BB	1930	G
25	BB	1931	U

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Mol	Chain	Res	Type
25	BB	1932	A
25	BB	1933	G
25	BB	1934	C
25	BB	1935	G
25	BB	1936	A
25	BB	1937	A
25	BB	1938	A
25	BB	1939	U
25	BB	1940	U
25	BB	1942	C
25	BB	1943	U
25	BB	1944	U
25	BB	1945	G
25	BB	1946	U
25	BB	1947	C
25	BB	1948	G
25	BB	1952	A
25	BB	1953	A
25	BB	1954	G
25	BB	1955	U
25	BB	1956	U
25	BB	1957	C
25	BB	1958	C
25	BB	1959	G
25	BB	1960	A
25	BB	1961	C
25	BB	1962	C
25	BB	1963	U
25	BB	1964	G
25	BB	1965	C
25	BB	1967	C
25	BB	1968	G
25	BB	1969	A
25	BB	1971	U
25	BB	1972	G
25	BB	1973	G
25	BB	1977	A
25	BB	1978	A
25	BB	1979	U
25	BB	1980	G
25	BB	1981	A
25	BB	1982	U

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Mol	Chain	Res	Type
25	BB	1983	G
25	BB	1984	G
25	BB	1986	C
25	BB	1989	G
25	BB	1990	C
25	BB	1992	G
25	BB	1995	U
25	BB	1997	C
25	BB	1999	C
25	BB	2001	C
25	BB	2002	G
25	BB	2003	A
25	BB	2004	G
25	BB	2006	C
25	BB	2007	U
25	BB	2010	G
25	BB	2011	U
25	BB	2012	G
25	BB	2013	A
25	BB	2015	A
25	BB	2018	G
25	BB	2020	A
25	BB	2021	C
25	BB	2022	U
25	BB	2023	C
25	BB	2025	C
25	BB	2026	U
25	BB	2027	G
25	BB	2028	U
25	BB	2030	A
25	BB	2031	A
25	BB	2032	G
25	BB	2033	A
25	BB	2034	U
25	BB	2035	G
25	BB	2036	C
25	BB	2037	A
25	BB	2043	C
25	BB	2044	C
25	BB	2046	G
25	BB	2047	C
25	BB	2049	G

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Mol	Chain	Res	Type
25	BB	2050	C
25	BB	2051	A
25	BB	2052	A
25	BB	2054	A
25	BB	2055	C
25	BB	2056	G
25	BB	2057	G
25	BB	2060	A
25	BB	2061	G
25	BB	2062	A
25	BB	2063	C
25	BB	2064	C
25	BB	2066	C
25	BB	2067	G
25	BB	2068	U
25	BB	2069	G
25	BB	2071	A
25	BB	2072	C
25	BB	2073	C
25	BB	2075	U
25	BB	2076	U
25	BB	2077	A
25	BB	2079	U
25	BB	2080	A
25	BB	2086	U
25	BB	2090	A
25	BB	2091	C
25	BB	2092	U
25	BB	2093	G
25	BB	2095	A
25	BB	2099	U
25	BB	2103	C
25	BB	2104	C
25	BB	2105	U
25	BB	2106	U
25	BB	2109	U
25	BB	2113	U
25	BB	2114	A
25	BB	2116	G
25	BB	2118	U
25	BB	2121	G
25	BB	2123	G

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Mol	Chain	Res	Type
25	BB	2125	G
25	BB	2126	A
25	BB	2127	G
25	BB	2132	U
25	BB	2136	G
25	BB	2138	G
25	BB	2144	G
25	BB	2145	C
25	BB	2146	C
25	BB	2147	A
25	BB	2148	G
25	BB	2149	U
25	BB	2154	A
25	BB	2158	A
25	BB	2159	G
25	BB	2163	A
25	BB	2164	C
25	BB	2172	U
25	BB	2174	C
25	BB	2176	A
25	BB	2178	C
25	BB	2179	C
25	BB	2182	U
25	BB	2192	U
25	BB	2195	U
25	BB	2196	C
25	BB	2197	U
25	BB	2198	A
25	BB	2199	A
25	BB	2203	U
25	BB	2204	G
25	BB	2211	A
25	BB	2212	A
25	BB	2213	U
25	BB	2214	C
25	BB	2215	C
25	BB	2223	G
25	BB	2228	G
25	BB	2229	U
25	BB	2235	G
25	BB	2239	G
25	BB	2240	U

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Mol	Chain	Res	Type
25	BB	2242	G
25	BB	2243	U
25	BB	2244	U
25	BB	2245	U
25	BB	2246	G
25	BB	2247	A
25	BB	2249	U
25	BB	2250	G
25	BB	2251	G
25	BB	2252	G
25	BB	2254	C
25	BB	2255	G
25	BB	2256	G
25	BB	2257	U
25	BB	2258	C
25	BB	2259	U
25	BB	2261	C
25	BB	2266	A
25	BB	2267	A
25	BB	2269	G
25	BB	2270	A
25	BB	2271	G
25	BB	2272	U
25	BB	2273	A
25	BB	2274	A
25	BB	2275	C
25	BB	2276	G
25	BB	2277	G
25	BB	2278	A
25	BB	2279	G
25	BB	2282	G
25	BB	2283	C
25	BB	2286	G
25	BB	2289	G
25	BB	2290	G
25	BB	2292	U
25	BB	2293	G
25	BB	2295	C
25	BB	2297	A
25	BB	2305	U
25	BB	2307	G
25	BB	2308	G

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Mol	Chain	Res	Type
25	BB	2310	C
25	BB	2312	U
25	BB	2313	C
25	BB	2314	A
25	BB	2317	A
25	BB	2318	G
25	BB	2320	U
25	BB	2321	U
25	BB	2322	A
25	BB	2323	G
25	BB	2325	G
25	BB	2326	C
25	BB	2327	A
25	BB	2331	G
25	BB	2332	C
25	BB	2333	A
25	BB	2334	U
25	BB	2335	A
25	BB	2336	A
25	BB	2337	G
25	BB	2338	C
25	BB	2343	U
25	BB	2345	G
25	BB	2346	A
25	BB	2347	C
25	BB	2349	G
25	BB	2353	G
25	BB	2354	C
25	BB	2356	U
25	BB	2358	A
25	BB	2360	G
25	BB	2361	G
25	BB	2364	C
25	BB	2366	A
25	BB	2367	G
25	BB	2370	G
25	BB	2371	G
25	BB	2374	C
25	BB	2376	A
25	BB	2379	G
25	BB	2382	G
25	BB	2383	G

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Mol	Chain	Res	Type
25	BB	2384	U
25	BB	2385	C
25	BB	2387	U
25	BB	2388	A
25	BB	2390	U
25	BB	2391	G
25	BB	2392	A
25	BB	2393	U
25	BB	2394	C
25	BB	2397	G
25	BB	2398	U
25	BB	2402	U
25	BB	2403	C
25	BB	2406	A
25	BB	2407	A
25	BB	2408	U
25	BB	2409	G
25	BB	2417	C
25	BB	2418	A
25	BB	2420	C
25	BB	2421	G
25	BB	2422	C
25	BB	2423	U
25	BB	2424	C
25	BB	2425	A
25	BB	2426	A
25	BB	2428	G
25	BB	2430	A
25	BB	2431	U
25	BB	2432	A
25	BB	2433	A
25	BB	2434	A
25	BB	2435	A
25	BB	2436	G
25	BB	2437	G
25	BB	2439	A
25	BB	2440	C
25	BB	2442	C
25	BB	2444	G
25	BB	2446	G
25	BB	2447	G
25	BB	2448	A

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Mol	Chain	Res	Type
25	BB	2449	U
25	BB	2451	A
25	BB	2453	A
25	BB	2454	G
25	BB	2455	G
25	BB	2456	C
25	BB	2457	U
25	BB	2458	G
25	BB	2459	A
25	BB	2460	U
25	BB	2461	A
25	BB	2465	C
25	BB	2467	C
25	BB	2468	A
25	BB	2472	G
25	BB	2473	U
25	BB	2474	U
25	BB	2475	C
25	BB	2476	A
25	BB	2478	A
25	BB	2480	C
25	BB	2482	A
25	BB	2484	G
25	BB	2486	C
25	BB	2488	G
25	BB	2489	U
25	BB	2490	G
25	BB	2491	U
25	BB	2492	U
25	BB	2495	G
25	BB	2496	C
25	BB	2497	A
25	BB	2498	C
25	BB	2499	C
25	BB	2500	U
25	BB	2501	C
25	BB	2502	G
25	BB	2503	A
25	BB	2504	U
25	BB	2505	G
25	BB	2507	C
25	BB	2508	G

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Mol	Chain	Res	Type
25	BB	2509	G
25	BB	2510	C
25	BB	2511	U
25	BB	2512	C
25	BB	2513	A
25	BB	2514	U
25	BB	2516	A
25	BB	2517	C
25	BB	2518	A
25	BB	2519	U
25	BB	2520	C
25	BB	2521	C
25	BB	2522	U
25	BB	2523	G
25	BB	2529	G
25	BB	2530	A
25	BB	2531	A
25	BB	2532	G
25	BB	2534	A
25	BB	2536	G
25	BB	2538	C
25	BB	2539	C
25	BB	2540	C
25	BB	2542	A
25	BB	2543	G
25	BB	2544	G
25	BB	2545	G
25	BB	2546	U
25	BB	2547	A
25	BB	2548	U
25	BB	2549	G
25	BB	2551	C
25	BB	2552	U
25	BB	2553	G
25	BB	2554	U
25	BB	2555	U
25	BB	2556	C
25	BB	2557	G
25	BB	2558	C
25	BB	2559	C
25	BB	2562	U
25	BB	2563	U

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Mol	Chain	Res	Type
25	BB	2566	A
25	BB	2567	G
25	BB	2570	G
25	BB	2571	U
25	BB	2572	A
25	BB	2573	C
25	BB	2574	G
25	BB	2575	C
25	BB	2576	G
25	BB	2577	A
25	BB	2578	G
25	BB	2579	C
25	BB	2580	U
25	BB	2581	G
25	BB	2582	G
25	BB	2584	U
25	BB	2586	U
25	BB	2587	A
25	BB	2588	G
25	BB	2590	A
25	BB	2591	C
25	BB	2594	C
25	BB	2595	G
25	BB	2598	A
25	BB	2599	G
25	BB	2601	C
25	BB	2602	A
25	BB	2604	U
25	BB	2609	U
25	BB	2610	C
25	BB	2611	C
25	BB	2612	C
25	BB	2613	U
25	BB	2614	A
25	BB	2615	U
25	BB	2616	C
25	BB	2617	U
25	BB	2620	C
25	BB	2621	G
25	BB	2622	U
25	BB	2623	G
25	BB	2627	G

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Mol	Chain	Res	Type
25	BB	2629	U
25	BB	2630	G
25	BB	2637	U
25	BB	2638	G
25	BB	2639	A
25	BB	2640	G
25	BB	2641	G
25	BB	2642	G
25	BB	2644	G
25	BB	2646	C
25	BB	2647	U
25	BB	2649	C
25	BB	2653	U
25	BB	2654	A
25	BB	2655	G
25	BB	2661	G
25	BB	2663	G
25	BB	2666	C
25	BB	2675	A
25	BB	2676	C
25	BB	2677	G
25	BB	2678	C
25	BB	2681	C
25	BB	2682	A
25	BB	2683	C
25	BB	2684	U
25	BB	2689	U
25	BB	2690	U
25	BB	2691	C
25	BB	2694	G
25	BB	2695	U
25	BB	2696	U
25	BB	2699	C
25	BB	2700	A
25	BB	2701	U
25	BB	2709	G
25	BB	2710	C
25	BB	2711	A
25	BB	2712	C
25	BB	2714	G
25	BB	2715	C
25	BB	2716	C

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Mol	Chain	Res	Type
25	BB	2718	G
25	BB	2719	G
25	BB	2720	U
25	BB	2721	A
25	BB	2722	G
25	BB	2725	A
25	BB	2726	A
25	BB	2727	A
25	BB	2728	U
25	BB	2729	G
25	BB	2731	G
25	BB	2732	G
25	BB	2733	A
25	BB	2735	G
25	BB	2745	C
25	BB	2750	A
25	BB	2751	G
25	BB	2752	C
25	BB	2753	A
25	BB	2755	C
25	BB	2756	U
25	BB	2757	A
25	BB	2758	A
25	BB	2759	G
25	BB	2764	A
25	BB	2765	A
25	BB	2766	A
25	BB	2767	C
25	BB	2769	U
25	BB	2770	G
25	BB	2771	C
25	BB	2775	G
25	BB	2776	A
25	BB	2777	G
25	BB	2779	U
25	BB	2780	G
25	BB	2781	A
25	BB	2784	U
25	BB	2785	C
25	BB	2791	G
25	BB	2796	U
25	BB	2797	U

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Mol	Chain	Res	Type
25	BB	2799	A
25	BB	2801	G
25	BB	2807	U
25	BB	2808	G
25	BB	2811	G
25	BB	2815	C
25	BB	2816	G
25	BB	2818	U
25	BB	2819	G
25	BB	2820	A
25	BB	2821	A
25	BB	2822	G
25	BB	2827	C
25	BB	2828	G
25	BB	2829	A
25	BB	2836	U
25	BB	2839	G
25	BB	2841	C
25	BB	2844	G
25	BB	2847	U
25	BB	2848	G
25	BB	2849	U
25	BB	2850	A
25	BB	2857	G
25	BB	2858	C
25	BB	2859	G
25	BB	2864	G
25	BB	2865	U
25	BB	2870	C
25	BB	2871	U
25	BB	2872	A
25	BB	2873	A
25	BB	2875	C
25	BB	2880	C
25	BB	2881	U
25	BB	2882	A
25	BB	2883	A
25	BB	2884	U
25	BB	2886	A
25	BB	2887	A
25	BB	2890	G
25	BB	2891	U

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Mol	Chain	Res	Type
25	BB	2894	G
25	BB	2895	G
25	BB	2903	U

All (824) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	1	G
1	AA	19	G
1	AA	22	G
1	AA	27	C
1	AA	32	C
1	AA	42	G
1	AA	44	A
1	AA	55	U
1	AP	9	A
1	AP	18	G
1	AP	58	A
1	AP	63	C
1	AP	65	G
1	AP	74	C
1	AE	16	U
2	AM	1	U
2	AM	4	U
2	AM	5	U
2	AM	9	U
2	AM	11	U
2	AM	12	U
2	AM	14	U
3	A1	6	G
3	A1	12	U
3	A1	15	G
3	A1	21	G
3	A1	25	C
3	A1	26	A
3	A1	29	U
3	A1	31	G
3	A1	46	G
3	A1	48	C
3	A1	50	A
3	A1	60	A
3	A1	65	A

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Mol	Chain	Res	Type
3	A1	70	U
3	A1	83	C
3	A1	86	G
3	A1	87	C
3	A1	93	U
3	A1	115	G
3	A1	118	U
3	A1	119	A
3	A1	121	U
3	A1	122	G
3	A1	124	C
3	A1	142	G
3	A1	149	A
3	A1	159	G
3	A1	170	U
3	A1	174	A
3	A1	190	A
3	A1	197	A
3	A1	209	U
3	A1	214	C
3	A1	218	U
3	A1	224	U
3	A1	225	C
3	A1	226	G
3	A1	237	G
3	A1	240	G
3	A1	244	U
3	A1	264	C
3	A1	278	G
3	A1	293	G
3	A1	303	A
3	A1	306	A
3	A1	316	C
3	A1	317	U
3	A1	328	C
3	A1	355	C
3	A1	357	G
3	A1	363	A
3	A1	366	A
3	A1	368	U
3	A1	370	C
3	A1	372	C

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Mol	Chain	Res	Type
3	A1	376	G
3	A1	381	C
3	A1	390	U
3	A1	397	A
3	A1	399	G
3	A1	400	C
3	A1	421	U
3	A1	422	C
3	A1	427	U
3	A1	432	A
3	A1	438	U
3	A1	441	A
3	A1	445	G
3	A1	468	A
3	A1	470	C
3	A1	484	G
3	A1	486	U
3	A1	500	G
3	A1	503	C
3	A1	504	C
3	A1	505	G
3	A1	509	A
3	A1	510	A
3	A1	523	A
3	A1	530	G
3	A1	545	C
3	A1	559	A
3	A1	572	A
3	A1	573	A
3	A1	580	C
3	A1	583	A
3	A1	587	G
3	A1	589	U
3	A1	597	G
3	A1	607	A
3	A1	625	U
3	A1	629	A
3	A1	632	U
3	A1	649	A
3	A1	651	C
3	A1	652	U
3	A1	654	G

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Mol	Chain	Res	Type
3	A1	665	A
3	A1	670	G
3	A1	672	U
3	A1	680	C
3	A1	682	G
3	A1	684	U
3	A1	688	G
3	A1	706	A
3	A1	709	U
3	A1	715	A
3	A1	720	C
3	A1	723	U
3	A1	727	G
3	A1	731	G
3	A1	743	A
3	A1	744	C
3	A1	755	G
3	A1	773	G
3	A1	774	G
3	A1	777	A
3	A1	783	C
3	A1	785	G
3	A1	794	A
3	A1	795	C
3	A1	798	U
3	A1	805	C
3	A1	807	A
3	A1	811	C
3	A1	813	U
3	A1	821	G
3	A1	823	C
3	A1	825	A
3	A1	826	C
3	A1	827	U
3	A1	830	G
3	A1	846	G
3	A1	850	U
3	A1	864	A
3	A1	867	G
3	A1	869	G
3	A1	870	U
3	A1	872	A

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Mol	Chain	Res	Type
3	A1	875	U
3	A1	881	G
3	A1	884	U
3	A1	886	G
3	A1	887	G
3	A1	888	G
3	A1	891	U
3	A1	893	C
3	A1	906	A
3	A1	910	C
3	A1	914	A
3	A1	919	A
3	A1	920	U
3	A1	921	U
3	A1	924	C
3	A1	925	G
3	A1	934	C
3	A1	937	A
3	A1	938	A
3	A1	952	U
3	A1	956	U
3	A1	957	U
3	A1	962	C
3	A1	963	G
3	A1	964	A
3	A1	965	U
3	A1	968	A
3	A1	971	G
3	A1	972	C
3	A1	973	G
3	A1	975	A
3	A1	976	G
3	A1	979	C
3	A1	980	C
3	A1	981	U
3	A1	992	U
3	A1	993	G
3	A1	997	U
3	A1	1000	A
3	A1	1004	A
3	A1	1009	U
3	A1	1016	A

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Mol	Chain	Res	Type
3	A1	1025	U
3	A1	1028	C
3	A1	1036	A
3	A1	1040	U
3	A1	1049	U
3	A1	1052	U
3	A1	1054	C
3	A1	1056	U
3	A1	1062	U
3	A1	1067	A
3	A1	1081	A
3	A1	1083	U
3	A1	1109	C
3	A1	1125	U
3	A1	1130	A
3	A1	1136	C
3	A1	1140	C
3	A1	1141	C
3	A1	1148	U
3	A1	1151	A
3	A1	1152	A
3	A1	1158	C
3	A1	1159	U
3	A1	1162	C
3	A1	1167	A
3	A1	1173	U
3	A1	1188	A
3	A1	1194	U
3	A1	1197	A
3	A1	1198	G
3	A1	1199	U
3	A1	1202	U
3	A1	1204	A
3	A1	1209	C
3	A1	1214	C
3	A1	1216	A
3	A1	1217	C
3	A1	1220	G
3	A1	1225	A
3	A1	1242	G
3	A1	1250	A
3	A1	1255	G

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Mol	Chain	Res	Type
3	A1	1262	C
3	A1	1267	C
3	A1	1270	G
3	A1	1278	G
3	A1	1279	G
3	A1	1281	C
3	A1	1286	U
3	A1	1289	A
3	A1	1296	C
3	A1	1298	U
3	A1	1300	G
3	A1	1337	G
3	A1	1340	A
3	A1	1343	G
3	A1	1344	C
3	A1	1346	A
3	A1	1350	A
3	A1	1351	U
3	A1	1363	A
3	A1	1365	G
3	A1	1366	C
3	A1	1367	C
3	A1	1378	C
3	A1	1381	U
3	A1	1382	C
3	A1	1386	G
3	A1	1391	U
3	A1	1395	C
3	A1	1397	C
3	A1	1398	A
3	A1	1399	C
3	A1	1400	C
3	A1	1401	G
3	A1	1410	A
3	A1	1414	U
3	A1	1420	U
3	A1	1426	G
3	A1	1452	C
3	A1	1459	G
3	A1	1469	C
3	A1	1472	U
3	A1	1475	G

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Mol	Chain	Res	Type
3	A1	1476	A
3	A1	1479	C
3	A1	1482	G
3	A1	1483	A
3	A1	1485	U
3	A1	1494	G
3	A1	1497	G
3	A1	1503	A
3	A1	1504	G
3	A1	1516	G
3	A1	1518	A
3	A1	1519	A
3	A1	1520	C
3	A1	1526	G
3	A1	1530	G
24	BA	25	U
24	BA	26	C
24	BA	29	A
24	BA	33	G
24	BA	34	A
24	BA	50	A
24	BA	51	G
24	BA	65	U
24	BA	98	G
24	BA	102	G
24	BA	105	G
25	BB	6	A
25	BB	13	A
25	BB	16	C
25	BB	17	G
25	BB	19	A
25	BB	33	C
25	BB	35	G
25	BB	48	G
25	BB	61	C
25	BB	64	A
25	BB	69	C
25	BB	70	G
25	BB	73	A
25	BB	75	G
25	BB	83	A
25	BB	90	U

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Mol	Chain	Res	Type
25	BB	91	A
25	BB	95	A
25	BB	100	U
25	BB	101	A
25	BB	102	U
25	BB	106	C
25	BB	112	U
25	BB	117	G
25	BB	120	U
25	BB	125	A
25	BB	147	C
25	BB	149	A
25	BB	151	C
25	BB	185	G
25	BB	190	A
25	BB	194	G
25	BB	196	A
25	BB	207	A
25	BB	221	A
25	BB	226	A
25	BB	232	G
25	BB	242	G
25	BB	247	G
25	BB	250	G
25	BB	256	A
25	BB	280	U
25	BB	281	C
25	BB	301	G
25	BB	313	G
25	BB	320	A
25	BB	321	U
25	BB	322	A
25	BB	332	A
25	BB	333	G
25	BB	339	U
25	BB	376	G
25	BB	379	G
25	BB	381	G
25	BB	384	A
25	BB	391	A
25	BB	409	G
25	BB	410	G

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Mol	Chain	Res	Type
25	BB	425	G
25	BB	444	C
25	BB	446	G
25	BB	448	U
25	BB	449	A
25	BB	453	A
25	BB	454	A
25	BB	456	C
25	BB	463	G
25	BB	464	U
25	BB	469	G
25	BB	473	G
25	BB	475	C
25	BB	476	G
25	BB	478	A
25	BB	486	C
25	BB	497	A
25	BB	501	A
25	BB	503	A
25	BB	514	A
25	BB	528	A
25	BB	529	A
25	BB	532	A
25	BB	533	G
25	BB	535	G
25	BB	536	G
25	BB	546	U
25	BB	547	A
25	BB	552	U
25	BB	555	G
25	BB	564	C
25	BB	565	C
25	BB	568	U
25	BB	570	G
25	BB	574	A
25	BB	575	A
25	BB	589	U
25	BB	593	U
25	BB	613	A
25	BB	619	G
25	BB	633	A
25	BB	637	A

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Mol	Chain	Res	Type
25	BB	641	U
25	BB	645	C
25	BB	653	U
25	BB	664	G
25	BB	672	C
25	BB	683	U
25	BB	685	A
25	BB	691	C
25	BB	694	U
25	BB	696	G
25	BB	698	C
25	BB	700	G
25	BB	701	G
25	BB	704	G
25	BB	718	A
25	BB	721	A
25	BB	727	A
25	BB	729	G
25	BB	732	C
25	BB	734	A
25	BB	739	A
25	BB	742	A
25	BB	748	G
25	BB	760	G
25	BB	763	G
25	BB	764	A
25	BB	768	G
25	BB	769	U
25	BB	772	C
25	BB	774	G
25	BB	776	G
25	BB	781	A
25	BB	782	A
25	BB	783	A
25	BB	784	G
25	BB	792	A
25	BB	796	C
25	BB	808	G
25	BB	810	U
25	BB	811	U
25	BB	814	C
25	BB	819	A

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Mol	Chain	Res	Type
25	BB	824	U
25	BB	825	A
25	BB	855	G
25	BB	861	A
25	BB	864	G
25	BB	867	C
25	BB	899	A
25	BB	908	C
25	BB	914	G
25	BB	918	A
25	BB	921	C
25	BB	932	U
25	BB	936	A
25	BB	954	G
25	BB	957	C
25	BB	958	U
25	BB	960	A
25	BB	967	U
25	BB	968	C
25	BB	971	G
25	BB	973	A
25	BB	974	G
25	BB	975	A
25	BB	976	G
25	BB	979	A
25	BB	982	C
25	BB	983	A
25	BB	996	A
25	BB	1008	A
25	BB	1010	A
25	BB	1015	U
25	BB	1022	G
25	BB	1030	C
25	BB	1038	G
25	BB	1046	A
25	BB	1058	U
25	BB	1061	U
25	BB	1062	G
25	BB	1070	A
25	BB	1074	G
25	BB	1087	G
25	BB	1090	A

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Mol	Chain	Res	Type
25	BB	1094	U
25	BB	1111	A
25	BB	1139	G
25	BB	1143	A
25	BB	1144	A
25	BB	1157	G
25	BB	1175	A
25	BB	1185	G
25	BB	1188	U
25	BB	1193	G
25	BB	1198	U
25	BB	1200	C
25	BB	1201	U
25	BB	1203	U
25	BB	1204	A
25	BB	1206	G
25	BB	1209	U
25	BB	1210	G
25	BB	1212	G
25	BB	1216	G
25	BB	1219	U
25	BB	1226	A
25	BB	1235	G
25	BB	1250	G
25	BB	1251	C
25	BB	1252	G
25	BB	1253	A
25	BB	1256	G
25	BB	1257	C
25	BB	1259	G
25	BB	1270	C
25	BB	1284	A
25	BB	1286	A
25	BB	1287	A
25	BB	1305	C
25	BB	1308	A
25	BB	1313	U
25	BB	1314	C
25	BB	1323	C
25	BB	1324	G
25	BB	1326	U
25	BB	1330	C

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Mol	Chain	Res	Type
25	BB	1333	G
25	BB	1338	G
25	BB	1341	G
25	BB	1343	G
25	BB	1351	C
25	BB	1352	U
25	BB	1356	G
25	BB	1361	G
25	BB	1367	A
25	BB	1371	G
25	BB	1379	U
25	BB	1383	A
25	BB	1390	U
25	BB	1393	A
25	BB	1399	C
25	BB	1403	A
25	BB	1419	A
25	BB	1425	G
25	BB	1437	C
25	BB	1441	G
25	BB	1450	G
25	BB	1451	C
25	BB	1454	C
25	BB	1457	U
25	BB	1461	C
25	BB	1462	C
25	BB	1466	U
25	BB	1468	U
25	BB	1473	G
25	BB	1474	U
25	BB	1477	A
25	BB	1485	U
25	BB	1555	G
25	BB	1558	C
25	BB	1567	G
25	BB	1568	G
25	BB	1575	C
25	BB	1580	A
25	BB	1588	G
25	BB	1597	A
25	BB	1599	U
25	BB	1608	A

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Mol	Chain	Res	Type
25	BB	1614	A
25	BB	1615	C
25	BB	1616	A
25	BB	1617	C
25	BB	1618	A
25	BB	1641	A
25	BB	1643	G
25	BB	1647	U
25	BB	1654	A
25	BB	1655	A
25	BB	1656	C
25	BB	1657	U
25	BB	1662	U
25	BB	1668	A
25	BB	1669	A
25	BB	1678	A
25	BB	1680	U
25	BB	1681	G
25	BB	1693	U
25	BB	1698	A
25	BB	1699	G
25	BB	1702	G
25	BB	1717	A
25	BB	1721	G
25	BB	1722	A
25	BB	1744	A
25	BB	1754	A
25	BB	1756	G
25	BB	1757	A
25	BB	1758	U
25	BB	1766	G
25	BB	1767	G
25	BB	1774	C
25	BB	1775	U
25	BB	1776	G
25	BB	1777	U
25	BB	1778	U
25	BB	1780	A
25	BB	1789	A
25	BB	1800	C
25	BB	1805	A
25	BB	1806	C

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Mol	Chain	Res	Type
25	BB	1807	G
25	BB	1810	A
25	BB	1813	G
25	BB	1816	C
25	BB	1821	A
25	BB	1825	U
25	BB	1833	C
25	BB	1837	C
25	BB	1846	G
25	BB	1849	G
25	BB	1854	A
25	BB	1874	C
25	BB	1876	A
25	BB	1889	A
25	BB	1890	A
25	BB	1895	C
25	BB	1896	G
25	BB	1906	G
25	BB	1913	A
25	BB	1917	U
25	BB	1919	A
25	BB	1930	G
25	BB	1934	C
25	BB	1935	G
25	BB	1937	A
25	BB	1939	U
25	BB	1942	C
25	BB	1947	C
25	BB	1952	A
25	BB	1954	G
25	BB	1958	C
25	BB	1961	C
25	BB	1962	C
25	BB	1967	C
25	BB	1970	A
25	BB	1972	G
25	BB	1977	A
25	BB	1981	A
25	BB	1982	U
25	BB	1983	G
25	BB	1994	C
25	BB	2003	A

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Mol	Chain	Res	Type
25	BB	2010	G
25	BB	2012	G
25	BB	2020	A
25	BB	2022	U
25	BB	2030	A
25	BB	2032	G
25	BB	2034	U
25	BB	2035	G
25	BB	2036	C
25	BB	2043	C
25	BB	2045	C
25	BB	2046	G
25	BB	2052	A
25	BB	2053	G
25	BB	2054	A
25	BB	2061	G
25	BB	2066	C
25	BB	2070	A
25	BB	2072	C
25	BB	2079	U
25	BB	2107	G
25	BB	2117	A
25	BB	2125	G
25	BB	2126	A
25	BB	2147	A
25	BB	2148	G
25	BB	2149	U
25	BB	2173	A
25	BB	2178	C
25	BB	2194	U
25	BB	2195	U
25	BB	2198	A
25	BB	2203	U
25	BB	2227	A
25	BB	2228	G
25	BB	2232	C
25	BB	2238	G
25	BB	2239	G
25	BB	2242	G
25	BB	2244	U
25	BB	2249	U
25	BB	2251	G

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Mol	Chain	Res	Type
25	BB	2259	U
25	BB	2266	A
25	BB	2270	A
25	BB	2272	U
25	BB	2274	A
25	BB	2275	C
25	BB	2277	G
25	BB	2278	A
25	BB	2282	G
25	BB	2290	G
25	BB	2293	G
25	BB	2311	A
25	BB	2313	C
25	BB	2322	A
25	BB	2330	G
25	BB	2333	A
25	BB	2334	U
25	BB	2335	A
25	BB	2336	A
25	BB	2346	A
25	BB	2356	U
25	BB	2366	A
25	BB	2382	G
25	BB	2385	C
25	BB	2399	G
25	BB	2420	C
25	BB	2423	U
25	BB	2431	U
25	BB	2432	A
25	BB	2436	G
25	BB	2443	C
25	BB	2445	G
25	BB	2446	G
25	BB	2448	A
25	BB	2455	G
25	BB	2456	C
25	BB	2458	G
25	BB	2460	U
25	BB	2472	G
25	BB	2474	U
25	BB	2479	U
25	BB	2481	G

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Mol	Chain	Res	Type
25	BB	2485	G
25	BB	2488	G
25	BB	2489	U
25	BB	2491	U
25	BB	2492	U
25	BB	2495	G
25	BB	2496	C
25	BB	2497	A
25	BB	2498	C
25	BB	2502	G
25	BB	2506	U
25	BB	2509	G
25	BB	2521	C
25	BB	2529	G
25	BB	2530	A
25	BB	2533	U
25	BB	2536	G
25	BB	2541	A
25	BB	2543	G
25	BB	2546	U
25	BB	2548	U
25	BB	2554	U
25	BB	2556	C
25	BB	2564	A
25	BB	2566	A
25	BB	2570	G
25	BB	2571	U
25	BB	2573	C
25	BB	2575	C
25	BB	2577	A
25	BB	2578	G
25	BB	2579	C
25	BB	2580	U
25	BB	2589	A
25	BB	2590	A
25	BB	2593	U
25	BB	2594	C
25	BB	2601	C
25	BB	2610	C
25	BB	2615	U
25	BB	2620	C
25	BB	2638	G

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Mol	Chain	Res	Type
25	BB	2646	C
25	BB	2675	A
25	BB	2677	G
25	BB	2681	C
25	BB	2689	U
25	BB	2690	U
25	BB	2694	G
25	BB	2700	A
25	BB	2711	A
25	BB	2725	A
25	BB	2726	A
25	BB	2730	C
25	BB	2731	G
25	BB	2752	C
25	BB	2754	U
25	BB	2756	U
25	BB	2758	A
25	BB	2760	C
25	BB	2766	A
25	BB	2776	A
25	BB	2819	G
25	BB	2823	A
25	BB	2827	C
25	BB	2849	U
25	BB	2858	C
25	BB	2870	C
25	BB	2872	A
25	BB	2875	C
25	BB	2880	C
25	BB	2889	C
25	BB	2890	G
25	BB	2891	U
25	BB	2894	G

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

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](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
25	BB	1
1	AP	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	BB	1959:G	O3'	1960:A	P	3.50
1	AP	74:C	O3'	75:C	P	1.08

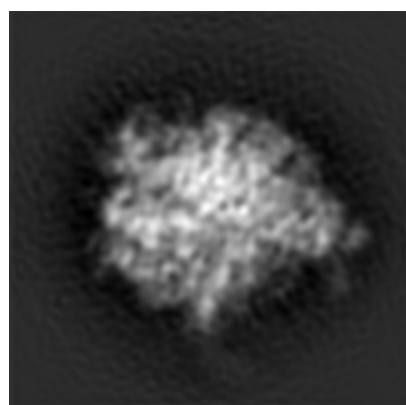
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-1055. These allow visual inspection of the internal detail of the map and identification of artifacts.

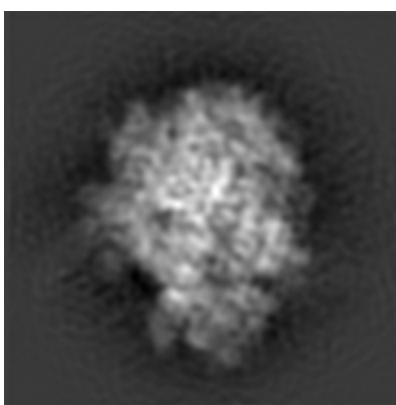
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

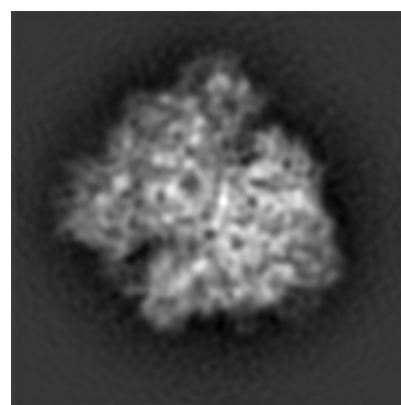
6.1.1 Primary map



X



Y

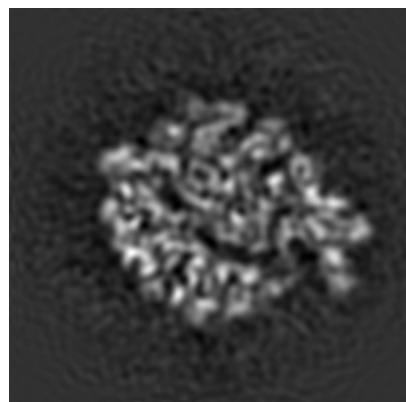


Z

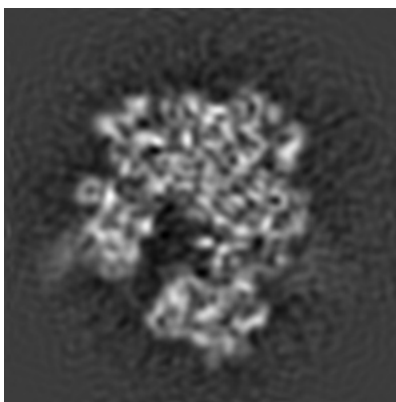
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

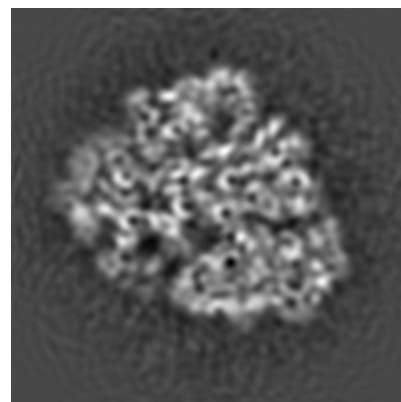
6.2.1 Primary map



X Index: 65



Y Index: 65

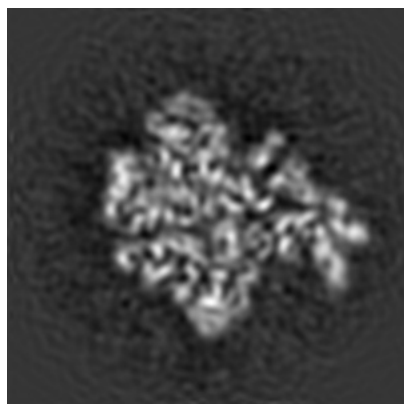


Z Index: 65

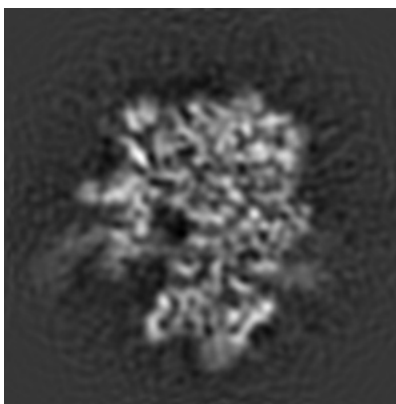
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

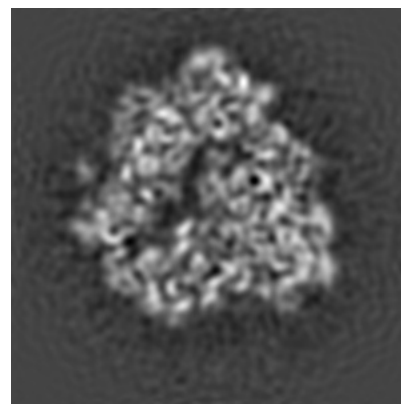
6.3.1 Primary map



X Index: 68



Y Index: 68

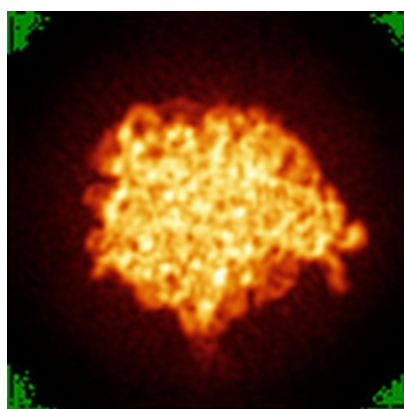


Z Index: 59

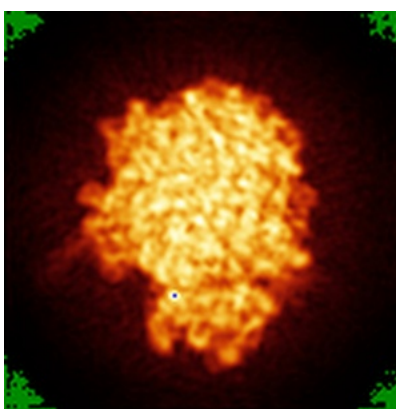
The images above show the largest variance slices of the map in three orthogonal directions.

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

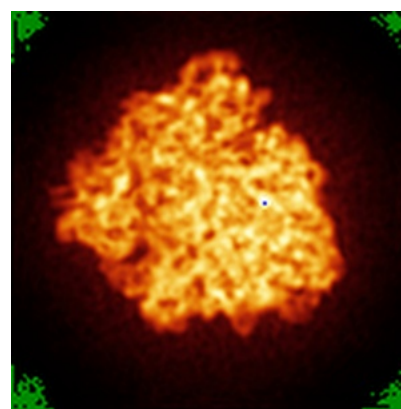
6.4.1 Primary map



X



Y

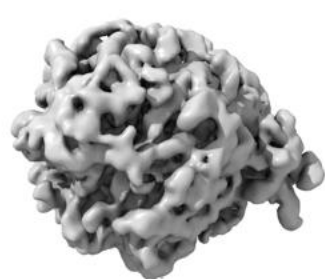


Z

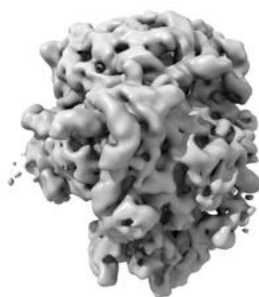
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

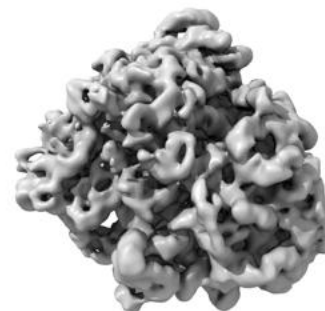
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 57.2. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

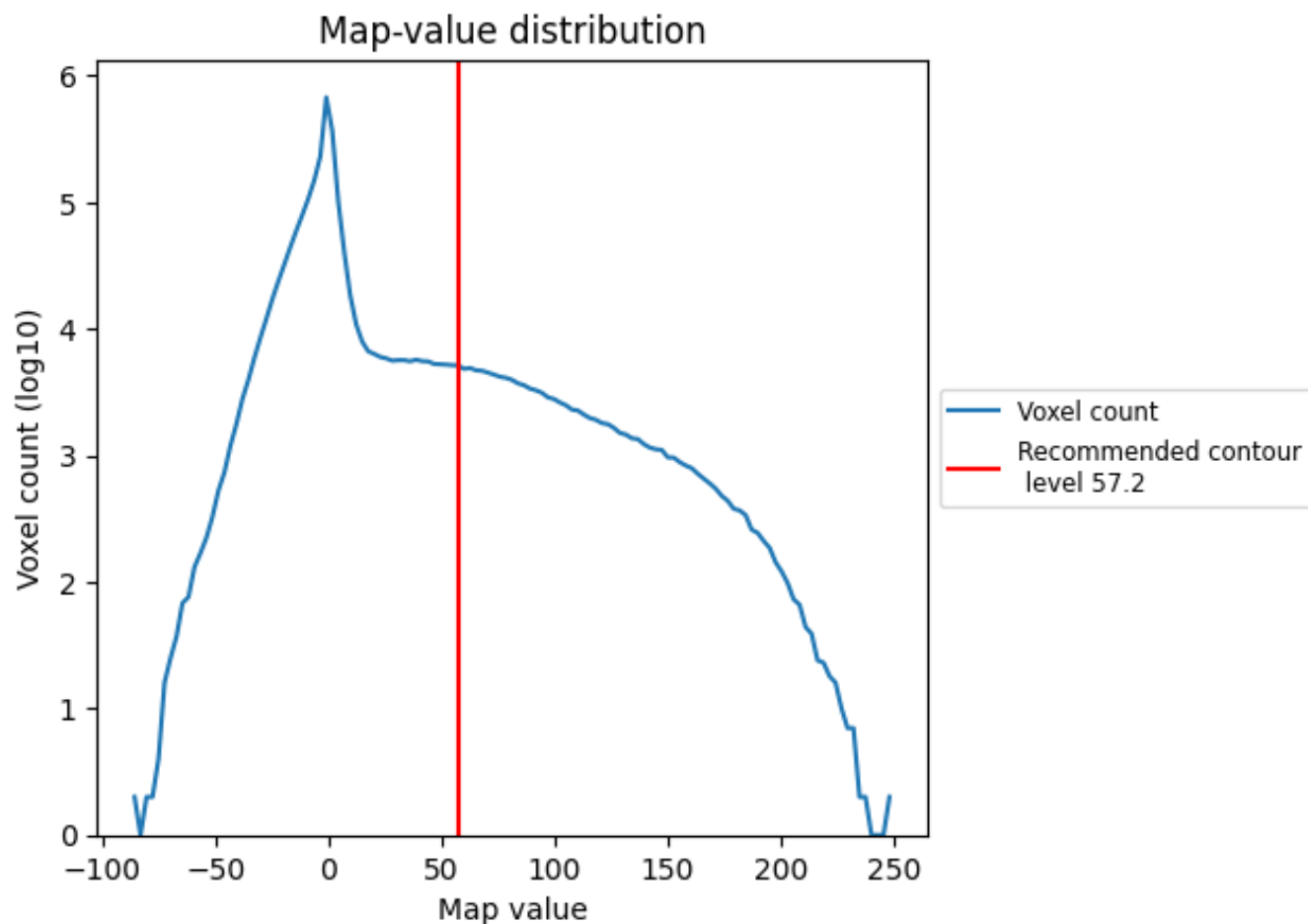
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

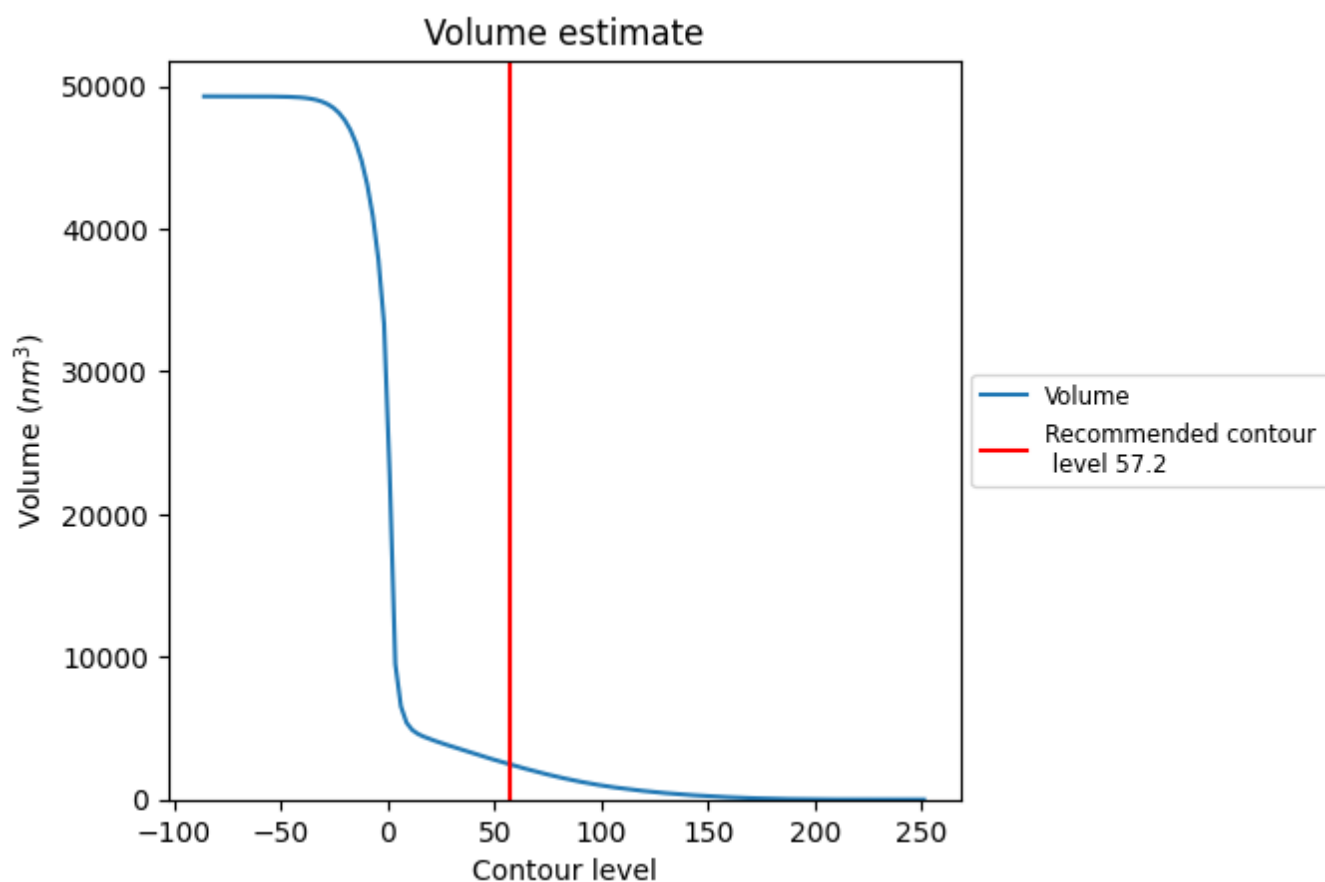
This section contains the results of statistical analysis of the map.

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.

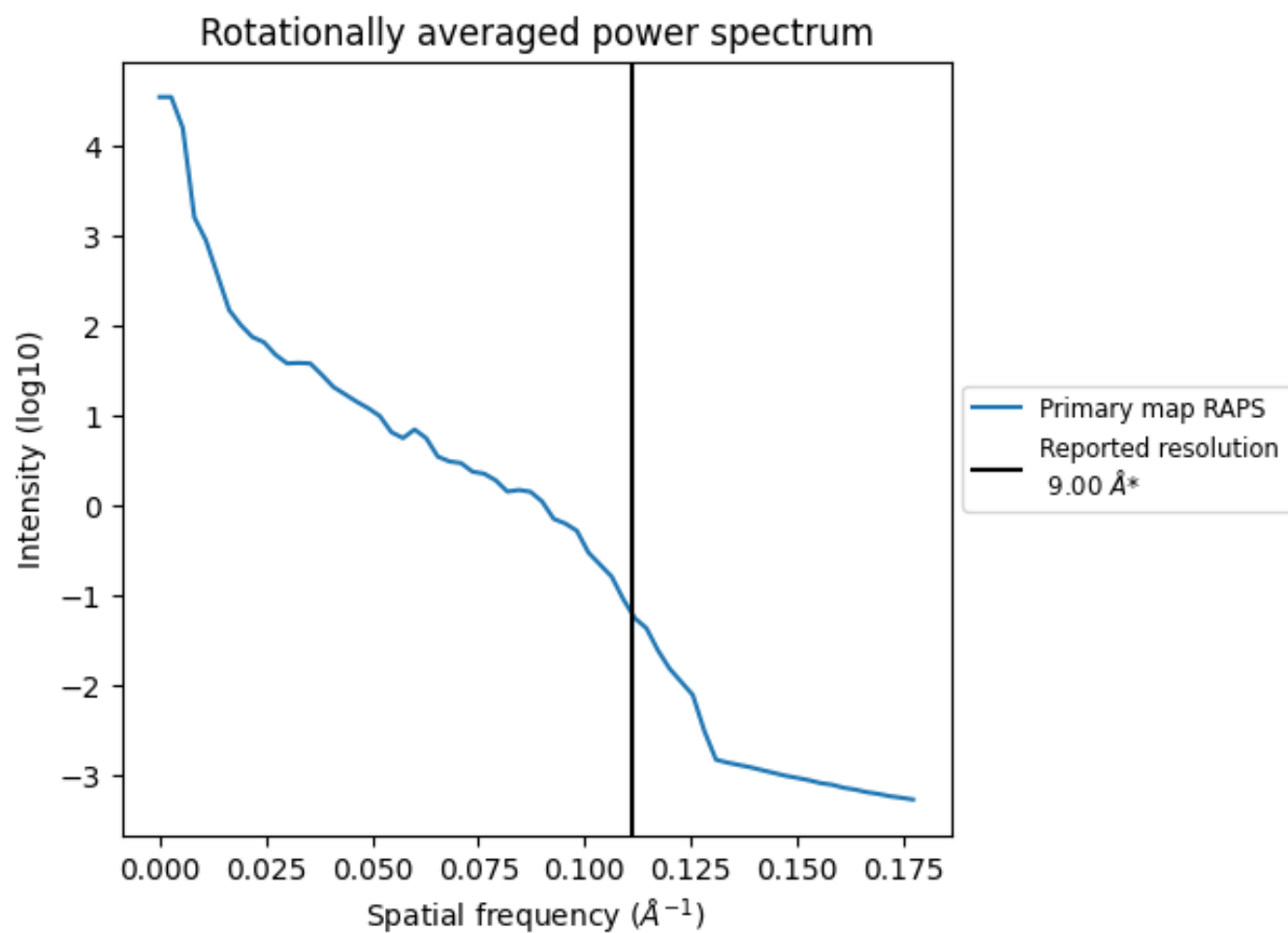
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2467 nm³; this corresponds to an approximate mass of 2228 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 ⓘ



*Reported resolution corresponds to spatial frequency of 0.111 Å⁻¹

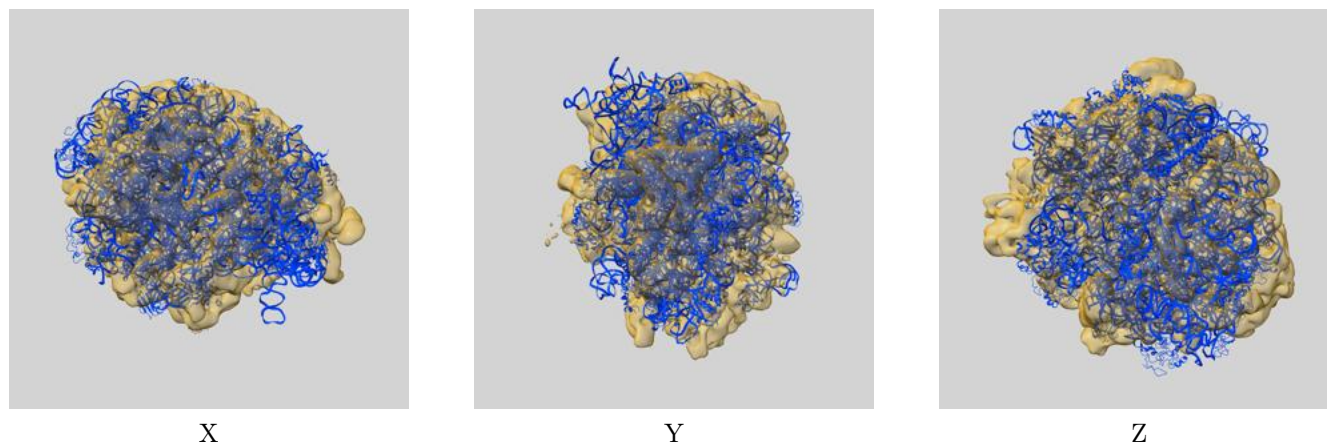
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

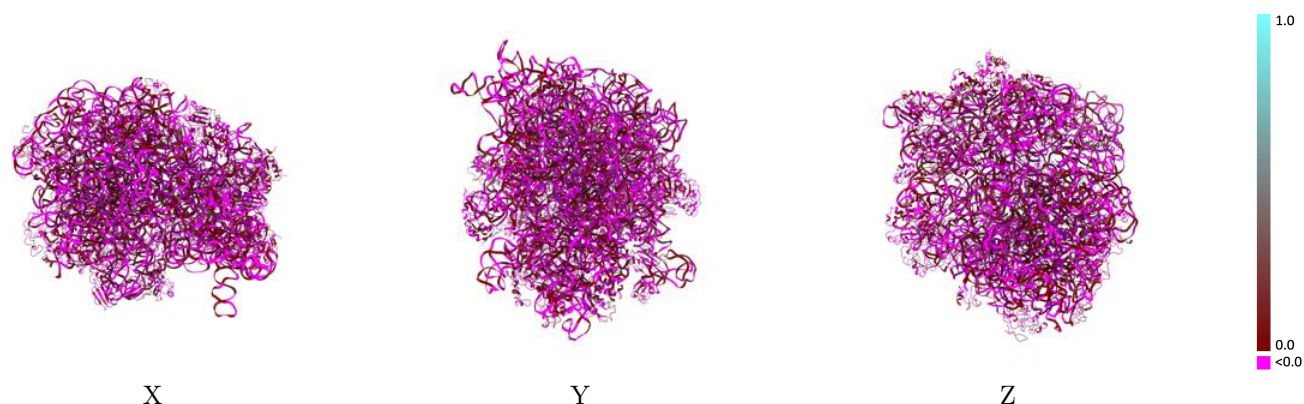
This section contains information regarding the fit between EMDB map EMD-1055 and PDB model 4V65. Per-residue inclusion information can be found in [section 3](#) on [page 14](#).

9.1 Map-model overlay [i](#)



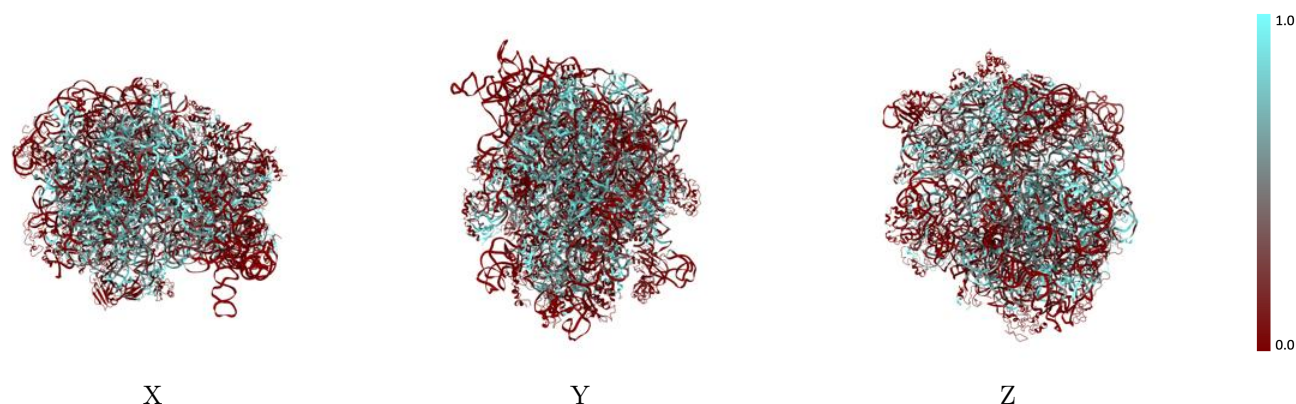
The images above show the 3D surface view of the map at the recommended contour level 57.2 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



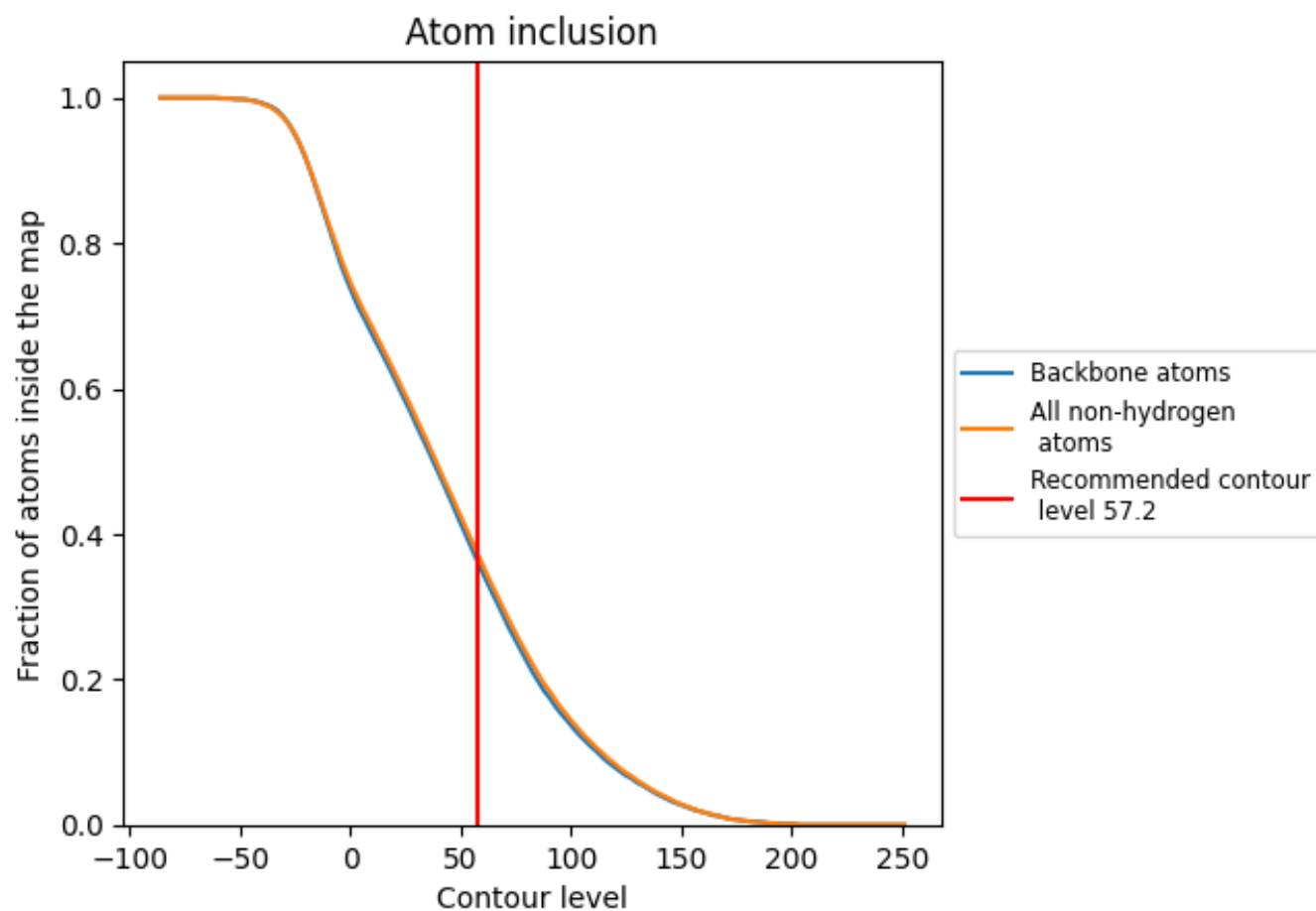
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (57.2).

9.4 Atom inclusion [i](#)



At the recommended contour level, 37% of all backbone atoms, 38% 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 (57.2) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.3760	 -0.0070
A1	 0.3220	 -0.0130
AA	 0.3780	 -0.0130
AB	 0.2190	 -0.0010
AC	 0.4260	 -0.0050
AD	 0.2170	 -0.0200
AE	 0.4110	 -0.0070
AF	 0.4210	 -0.0010
AG	 0.0860	 -0.0290
AH	 0.1550	 -0.0100
AI	 0.0000	 -0.0440
AJ	 0.2480	 -0.0170
AK	 0.5960	 0.0120
AL	 0.0340	 -0.0240
AM	 0.6420	 0.0200
AN	 0.4280	 0.0120
AO	 0.6140	 0.0210
AP	 0.4060	 -0.0080
AQ	 0.3970	 -0.0520
AR	 0.3640	 -0.0030
AS	 0.5510	 -0.0110
AT	 0.2370	 -0.0150
AU	 0.5410	 0.0030
AV	 0.4380	 0.0190
AW	 0.1440	 0.0260
AX	 0.2300	 0.0050
B1	 0.2650	 0.0020
B2	 0.6520	 0.0280
B3	 0.1800	 -0.0280
B4	 0.0720	 -0.0250
B5	 0.4570	 -0.0390
B6	 0.5180	 0.0080
BA	 0.2920	 -0.0240
BB	 0.4270	 -0.0050
BC	 0.2500	 -0.0150



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Chain	Atom inclusion	Q-score
BD	 0.4830	 0.0040
BE	 0.3080	 -0.0030
BF	 0.3510	 -0.0060
BG	 0.5990	 -0.0100
BH	 0.3760	 -0.0030
BI	 0.4390	 -0.0430
BJ	 0.1550	 -0.0360
BK	 0.0730	 -0.0250
BL	 0.5110	 0.0130
BM	 0.2860	 -0.0330
BN	 0.4240	 -0.0100
BO	 0.0000	 -0.0070
BP	 0.6370	 0.0410
BQ	 0.4540	 0.0330
BR	 0.4200	 -0.0110
BS	 0.3110	 -0.0130
BT	 0.4940	 -0.0230
BU	 0.1760	 -0.0250
BV	 0.5110	 0.0300
BW	 0.2590	 -0.0140
BX	 0.3060	 -0.0010
BY	 0.5940	 0.0050
BZ	 0.0400	 0.0080