



Full wwPDB EM Validation Report ⓘ

Mar 5, 2026 – 09:43 PM UTC

PDB ID : 4CSU / pdb_00004csu
EMDB ID : EMD-2605
Title : Cryo-EM structures of the 50S ribosome subunit bound with ObgE
Authors : Feng, B.; Mandava, C.S.; Guo, Q.; Wang, J.; Cao, W.; Li, N.; Zhang, Y.;
Zhang, Y.; Wang, Z.; Wu, J.; Sanyal, S.; Lei, J.; Gao, N.
Deposited on : 2014-03-10
Resolution : 5.50 Å(reported)
Based on initial model : 3OFC

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:

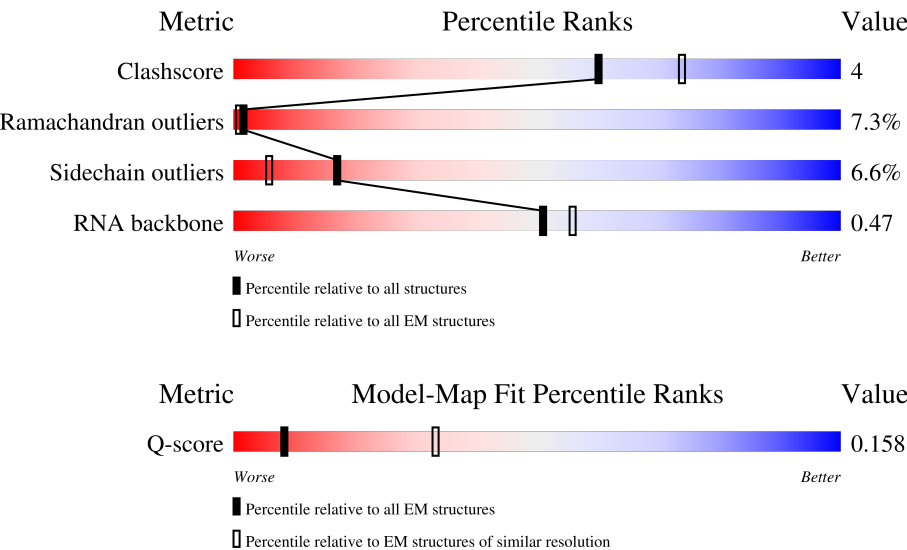
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & 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 5.50 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	520 (5.00 - 6.00)

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	0	77	40%47%10%.
2	1	63	41%51%8%
3	2	58	41%53%5%

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Mol	Chain	Length	Quality of chain
4	3	56	
5	4	54	
6	5	234	
7	6	46	
8	7	64	
9	8	38	
10	9	390	
11	A	118	
12	B	2903	
13	C	272	
14	D	209	
15	E	201	
16	F	178	
17	G	176	
18	H	149	
19	I	141	
20	J	142	
21	K	123	
22	L	143	
23	M	136	
24	N	127	
25	O	116	
26	P	114	
27	Q	117	
28	R	103	

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Mol	Chain	Length	Quality of chain
29	S	110	32%51%14%•
30	T	100	31%45%16%•6%
31	U	103	44%41%13%••
32	W	94	39%53%7%
33	Y	84	33%46%14%6%

2 Entry composition

There are 33 unique types of molecules in this entry. The entry contains 94625 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 50S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	0	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 2 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	1	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 3 is a protein called 50S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	2	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 4 is a protein called 50S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	3	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 5 is a protein called 50S RIBOSOMAL PROTEIN L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	4	51	Total	C	N	O	0	1
			410	263	76	71		

- Molecule 6 is a protein called 50S RIBOSOMAL PROTEIN L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	5	234	Total	C	N	O	S	0	0
			1733	1081	315	330	7		

- Molecule 7 is a protein called 50S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	6	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 8 is a protein called 50S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	7	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 9 is a protein called 50S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	8	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 10 is a protein called GTPASE OBGE/CGTA.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	9	334	Total	C	N	O	S	0	1
			2541	1596	448	485	12		

- Molecule 11 is a RNA chain called 5S RRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	A	115	Total	C	N	O	P	0	0
			2455	1097	451	795	112		

- Molecule 12 is a RNA chain called 23S RRNA.

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

- Molecule 13 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	C	272	Total	C	N	O	S	0	1
			2083	1288	424	364	7		

- Molecule 14 is a protein called 50S RIBOSOMAL PROTEIN L3.

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

- Molecule 15 is a protein called 50S RIBOSOMAL PROTEIN L4.

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

- Molecule 16 is a protein called 50S RIBOSOMAL PROTEIN L5.

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

- Molecule 17 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	G	176	Total	C	N	O	S	0	1
			1317	827	243	245	2		

- Molecule 18 is a protein called 50S RIBOSOMAL PROTEIN L9.

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

- Molecule 19 is a protein called 50S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	I	69	Total	C	N	O	S	0	0
			495	303	90	99	3		

- Molecule 20 is a protein called 50S RIBOSOMAL PROTEIN L13.

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

- Molecule 21 is a protein called 50S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	K	122	Total	C	N	O	S	0	1
			932	582	180	164	6		

- Molecule 22 is a protein called 50S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	L	143	Total	C	N	O	S	0	0
			1045	649	206	189	1		

- Molecule 23 is a protein called 50S RIBOSOMAL PROTEIN L16.

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

- Molecule 24 is a protein called 50S RIBOSOMAL PROTEIN L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	N	121	Total	C	N	O	S	0	1
			961	593	197	166	5		

- Molecule 25 is a protein called 50S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	O	116	Total	C	N	O	0	0
			892	552	178	162		

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L19.

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

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L20.

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

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L21.

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

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L22.

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

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	T	94	Total	C	N	O	S	0	1
			739	466	140	131	2		

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	U	102	Total	C	N	O		0	3
			758	479	143	136			

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L25.

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

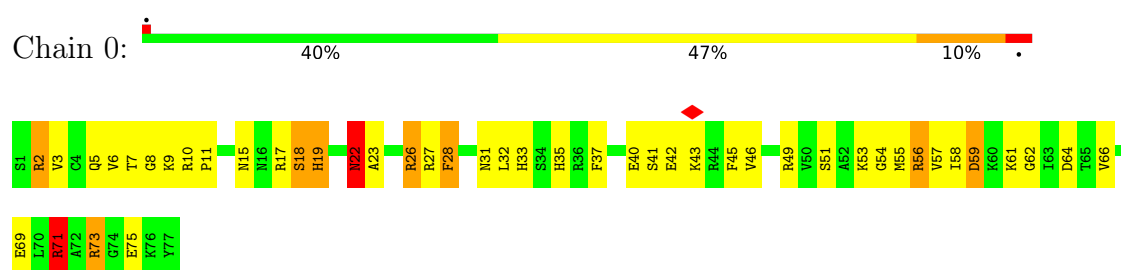
- Molecule 33 is a protein called 50S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Y	79	Total	C	N	O	S	0	0
			596	367	120	108	1		

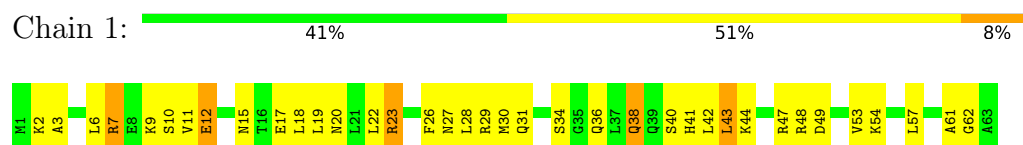
3 Residue-property plots [i](#)

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

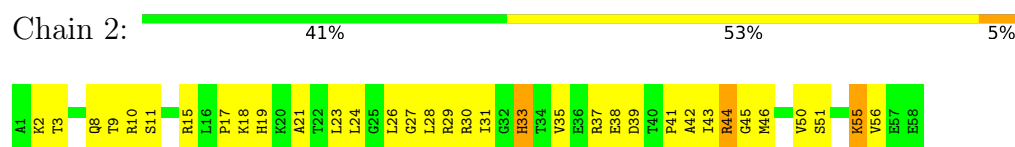
• Molecule 1: 50S RIBOSOMAL PROTEIN L28



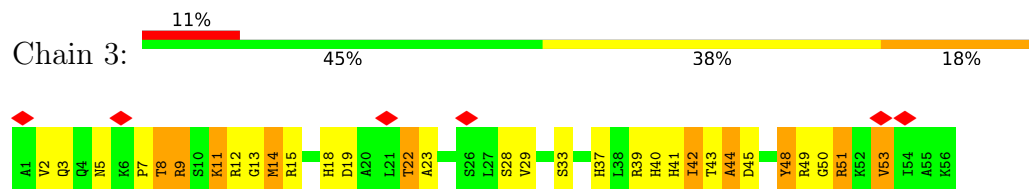
• Molecule 2: 50S RIBOSOMAL PROTEIN L29



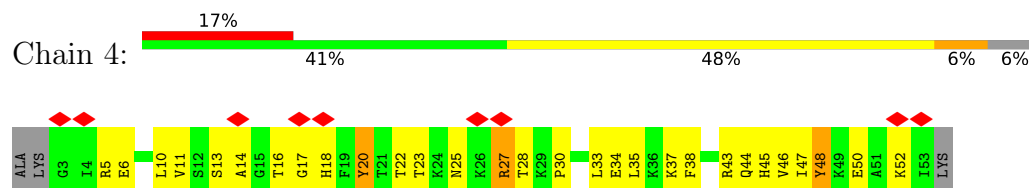
• Molecule 3: 50S RIBOSOMAL PROTEIN L30



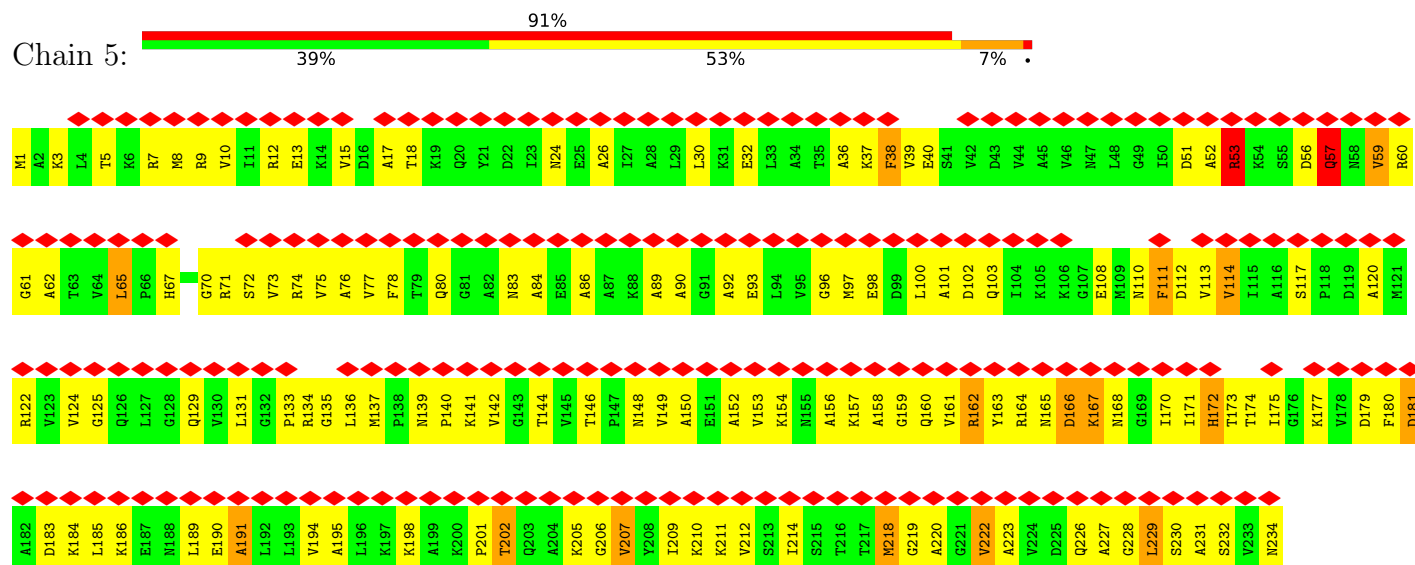
• Molecule 4: 50S RIBOSOMAL PROTEIN L32



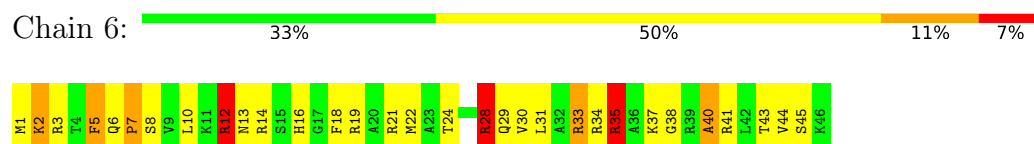
• Molecule 5: 50S RIBOSOMAL PROTEIN L33



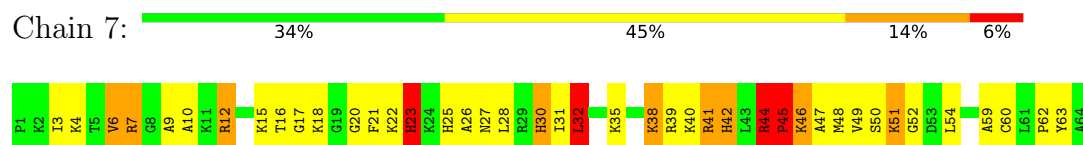
• Molecule 6: 50S RIBOSOMAL PROTEIN L1



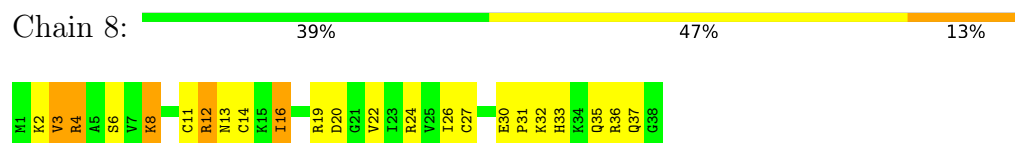
• Molecule 7: 50S RIBOSOMAL PROTEIN L34



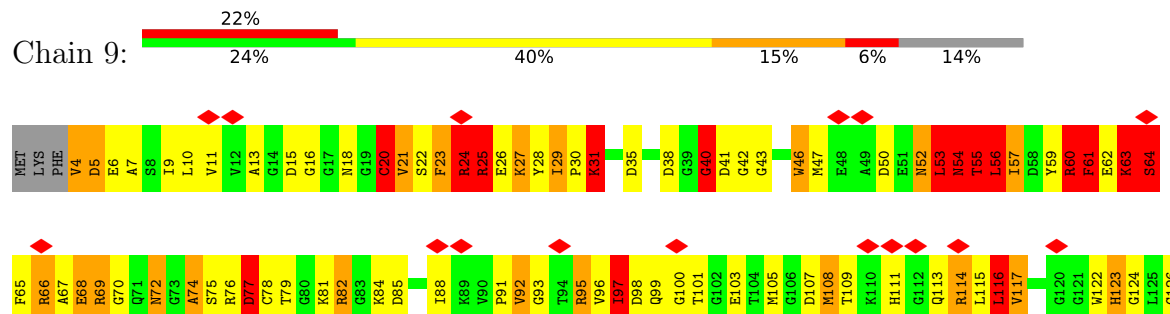
• Molecule 8: 50S RIBOSOMAL PROTEIN L35



• Molecule 9: 50S RIBOSOMAL PROTEIN L36

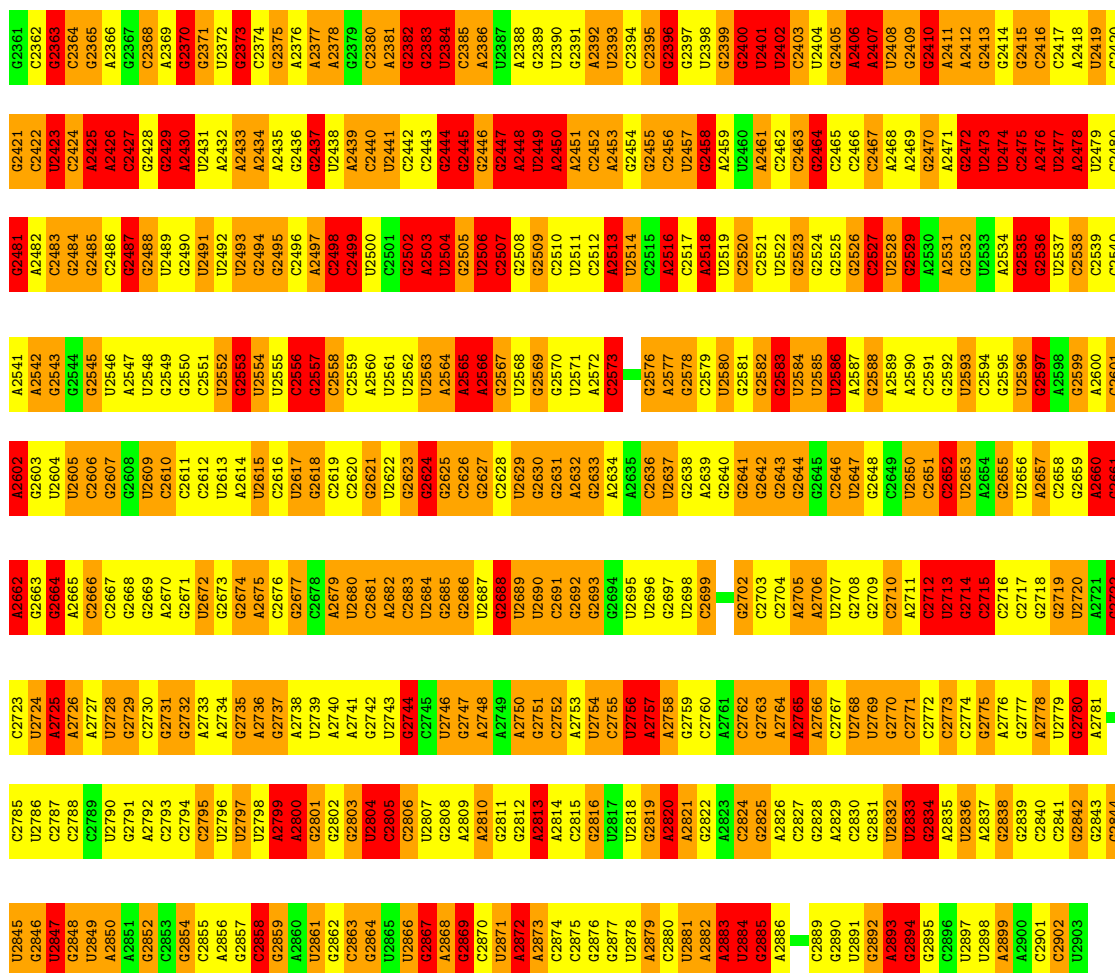


• Molecule 10: GTPASE OBGE/CGTA



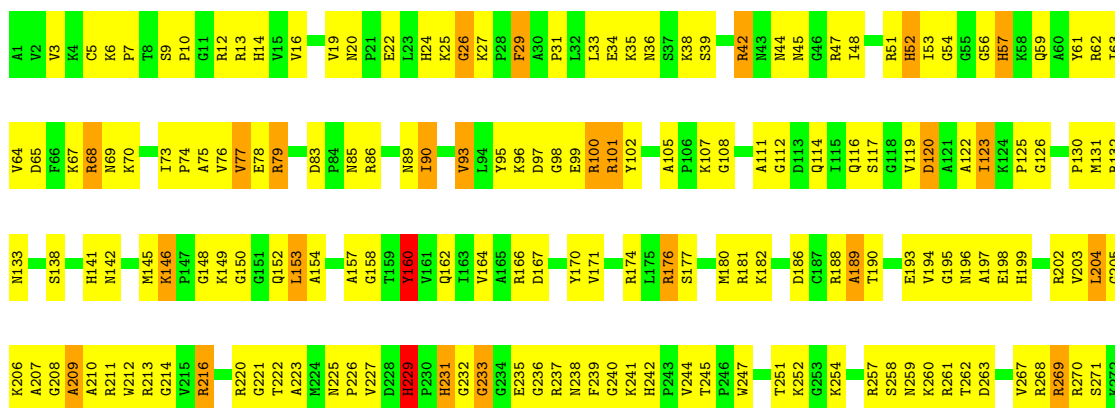
A1393	G1332	G1271	G1211	G1150	A1080	C1030	U970	A910	U860	U790	A730	G669	A609	G549	G459	A429
U1394	G1333	A1272	G1212	C1153	G1091	G1031	G971	A911	C861	C791	C731	A670	C610	C550	C490	A430
U1395	G1334	U1273	A1213	C1154	G1092	A1032	A972	C912	U862	A972	G732	C671	C611	G551	G491	U431
U1396	G1335	A1274	A1214	G1154	G1093	U1033	A973	U913	C863	A973	G733	C672	C612	U552	A492	A432
U1397	A1336	A1275	G1215	A1155	U1094	G1034	G974	G914	C864	A974	G734	C673	A613	G553	G493	C433
C1398	G1337	A1276	G1216	A1156	A1095	U1035	A975	C915	C865	A975	G735	C674	A614	U554	G494	U434
C1399	G1338	G1277	U1217	G1157	A1096	G1036	G976	G916	C866	C796	G736	C675	U615	G555	G495	C435
U1400	G1339		G1218	C1158	U1097	G1037	G977	A917	C867	G797	C737	A676	A616	A556	A496	G436
U1401	U1340	G1280	U1219	C1159	A1098	G1038	G978	A918	C868	G798	G738	A677	G617	C557	U437	U437
U1402	G1341	U1281	G1220	G1160	G1099	A1039	A979	U919	C869	G799	A739		G618	U558	G438	G438
A1403	A1342	U1282	C1221	C1161	C1100	A1040	A980	A920	U860	A800	G740		G619	U559	U439	A439
G1404	G1343	G1283	U1222	G1162	U1101	G1041	A981	C921	A861	G801	U741	C680	G620	C560	G500	C440
U1405	U1344	A1284	G1223	G1163	C1102	G1042	C982	C922	C862	A902	U742	G682	A621	G561	A501	U441
U1406	C1345	A1285	U1224	C1164	A1103	C1043	A983	G923	A863	U803	A743	U683	G622	U562	A502	G442
G1407	G1346	A1286	G1225	A1165	C1104	U1044	A984	G924	G864	A904	U744	G684	G623	A563	A503	A443
G1408	A1347	U1287	A1226	G1166	U1105	C1045	C985	A925	C865	G805	G745	A685	C624	C564	C444	C444
U1409	C1348	G1288	G1227	C1167	G1106	A1046	C986	G926	A866	C806	U746	U686	G625	C565	A505	G445
G1410	G1349	G1289	G1228	G1168	G1107	G1047	C987	A927	C867	U807	U747	C687	A626	U566	G506	G446
U1411	C1350	C1290	C1229	A1169	U1108	A1048	A988	A928	U868	G808	G748	U688	A627	U567	A507	U447
U1412	G1351	C1291	A1230	G1170	C1109	C1049	G989	U929	C869	G809	A749	A689	G628	U568	A508	U448
A1413	U1352	G1292	U1231	G1171	G1110	A1050	A990	G930	U870	U810	A750	G690	G629	U569	C509	A449
C1414	A1353	C1293	G1232	C1172	A1111	G1051	C991	U931	U871	U811	A751	C691	G630	U570	C510	G450
U1415	A1354	U1294	C1233	U1173	G1112	C1052	C992	U932	U872	C812	A752	C692	A631	U571	U511	U451
G1416	G1355	G1295	U1234	U1174	U1113	C1053	G993	A933	C873	U813	A753	A693	A632	A572	G512	G452
G1417	G1356	G1296	G1235	A1175	C1114	A1054	C994	U934	G874	C814	U754	U694	A633	U573	A513	A453
G1418	C1357	C1297	G1236	U1176	G1115	G1055	C995	C935	C875	C815	U755	C695	C634	A574	A514	A454
A1419	G1358	A1237	A1237	G1177	G1116	U1056	A996	A936	C876	C816	A756	G696	C635	A575	A515	G455
A1420	A1359	G1298	G1238	C1178	C1117	A1057	G997	C937	A877	C817	G757	G697	C636	U576	C516	C456
G1421	G1360	G1300	G1239	G1179	C1118	U1058	C998	G938	A878	C818	C758	C698	A637	G577	C517	A457
G1422	G1361	A1301	U1240	U1180	U1119	G1059	U999	G939	A879	A819	G759	A699	G638	G578	G518	G458
G1423	C1362	A1302	A1241	U1181	G1120	U1060	A1000	G940	C880	A820	G760	G700	U639	U579	U519	U459
G1424	C1363	G1303	U1242	G1182	C1121	U1061	A1001	A941	C881	A821	A761	G701	C640	U580	G520	A460
G1425	G1364	A1304	C1243	U1183	G1122	G1062	G1002	G942	C882	G822	U762	U702	U641	C581	U521	C461
G1426	A1365	C1305	A1244	U1184	C1123	G1063	C1003	A943	C883	C823	G763	U703	A642	A582	A522	G462
A1427	A1366	C1306	G1245	G1185	G1124	C1064	U1004	C944	U884	U824	A764	G704	A643	G583	C523	U463
G1428	A1367	A1307	A1246	G1186	G1125	U1065	C1005	A945	C885	A825	C765	A705	A644	C584	G524	U464
G1429	G1368	A1308	A1247	G1187	A1126	U1066	C1006	C946	A886	U826	U766	U706	C645	G585	U525	G465
G1430	G1369	G1309	G1248	U1188	A1127	A1067	C1007	A947	U887	U827	U767	G707	U646	A586	A526	A466
A1431	C1370	G1310	U1249	A1189	G1128	G1068	A1008	C948	C888	U828	G768	G708	G647	C587	C527	G467
A1432		G1311	G1250	G1190	A1129	A1069	A1009	G949	C889	A829	U769	U709	G648	U588	A528	G468
A1433	G1371	U1312	C1251	G1191	U1130	A1070	A1010	G950	C890	G830	G770	U710	C649	U589	A529	G469
A1434		U1313	G1252	G1192	G1131	G1071	G1011	C951	C891	G831	G771	G711	C650	A590	G530	A470
G1435	U1375	C1314	A1253	G1193	U1132	C1072	U1012	G952	A892	U832	C772	G712	G651	U591	C531	A471
G1436	C1376	U1315	U1254	A1194	A1133	A1073	G1013	G953	C893	A833	U773	G713	U652	A592	A532	A472
C1437	G1377	U1316	U1255	G1195	A1134	G1074	A1014	G954	U894	G834	G774	U714	G653	U593	G533	G473
U1438	A1378	G1317	G1256	C1196	C1135	C1075	U1015	U955	U895	C835	G775	A715	A654	U594	U534	G474
A1439	U1379	U1318	C1257	G1197	G1136	C1076	G1016	G956	A896	G836	G776	A716	A655	C595	G535	C475
G1380	G1380	C1319	U1258	U1198	G1137	A1077	G1017	C957	C897	C837	G777	C717	G656	U596	G536	G476
U1440	G1381	C1320	G1259	U1199	G1138	U1078	U1018	U958	C898	C838	G778	A718	U657	G537	G537	A477
G1441		A1321	A1260	C1200	G1139	C1079	U1019	U959	A899	U839	U779	C719	U658	U598	A538	A478
U1442	G1382	A1322	C1261	C1201	C1140	C1080	A1020	A960	A900	C840	G780	U720	G659	A599	G539	A479
U1443	A1383	C1323	A1262	U1201	U1141	U1081	A1021	C961	C901	G841	A781	A721	C660	A600	G540	A480
G1444	A1384	G1324	U1263	U1203	A1142	U1082	C1022	G962	C902	U842	A782	A722	A661	C601	A541	G481
G1445	C1446	U1325	A1264	U1204	A1143	U1083	U1023	U963	C903	G843	A783	G723	G662	A602	C542	A482
A1446	A1387	U1326	A1265	A1144	A1144	A1084	G1024	C964	G904	A844	G784	U724	G663	A603	G543	A483
G1447	G1388	A1327	G1266	G1205	C1145	A1085	G1025	C965	A905	A845	G785	G725	G664	G604	C544	G484
G1448		A1328	U1267	G1207	C1146	A1086	G1026	C966	U906	U846	C786	G726	U665	G605	U545	C485
G1449	G1389		A1268	U1208	A1147	G1087	A1027	U967	G907	U847	C787	A727	A666	U606	U546	G486
G1450	U1390	U1329	U1269	U1209	U1148	A1088	A1028	C968	C908	C848	A788	G728	U667	U607	A547	C487
C1451		C1330	C1270	G1210	G1149	A1089	A1029	G969	A909	A849	A789	G729	A668	A608	G548	G488





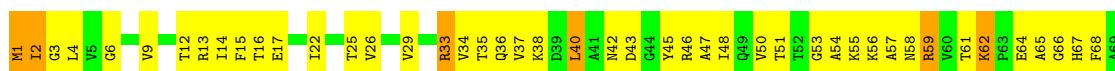
• Molecule 13: 50S RIBOSOMAL PROTEIN L2

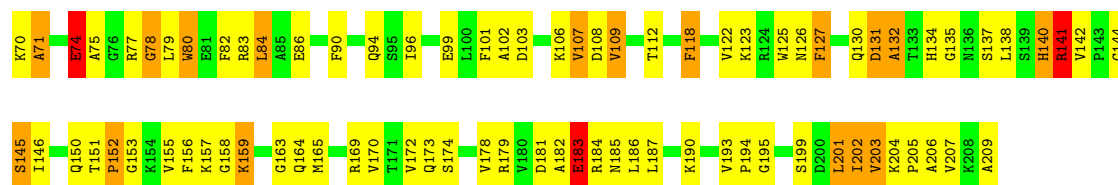
Chain C: 36% 54% 9%



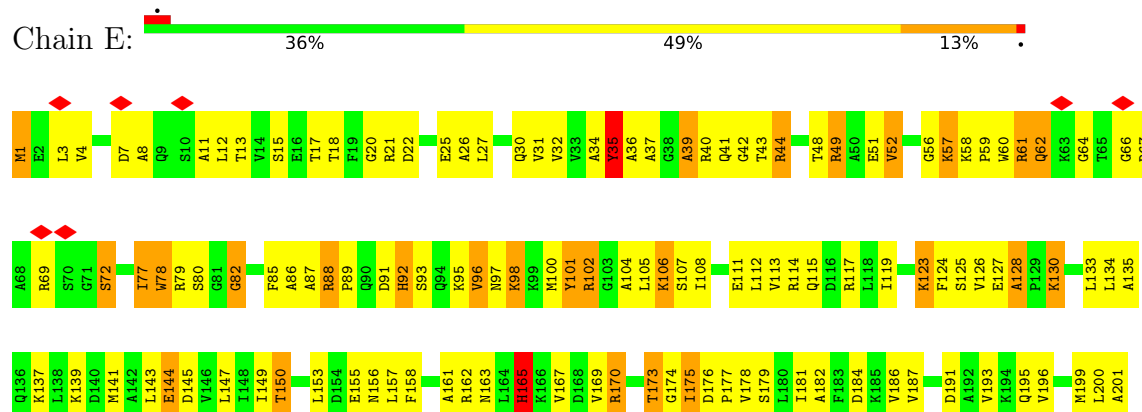
• Molecule 14: 50S RIBOSOMAL PROTEIN L3

Chain D: 39% 48% 11%





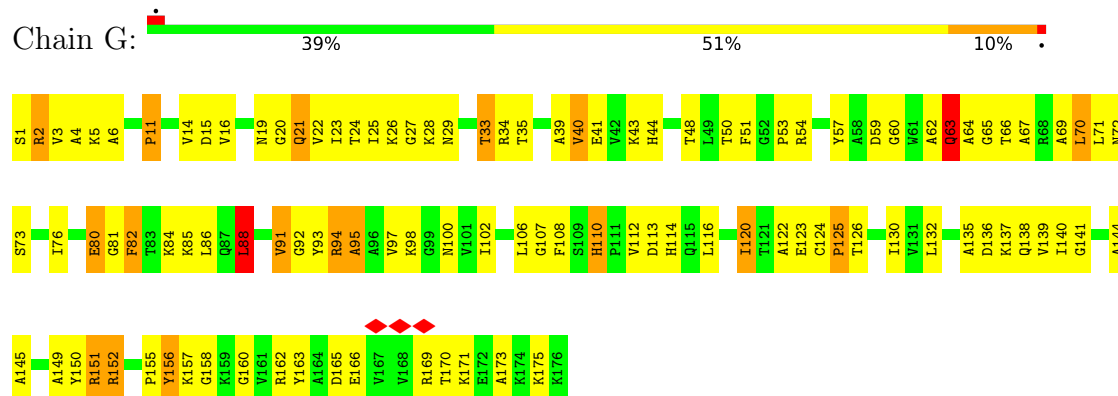
• Molecule 15: 50S RIBOSOMAL PROTEIN L4



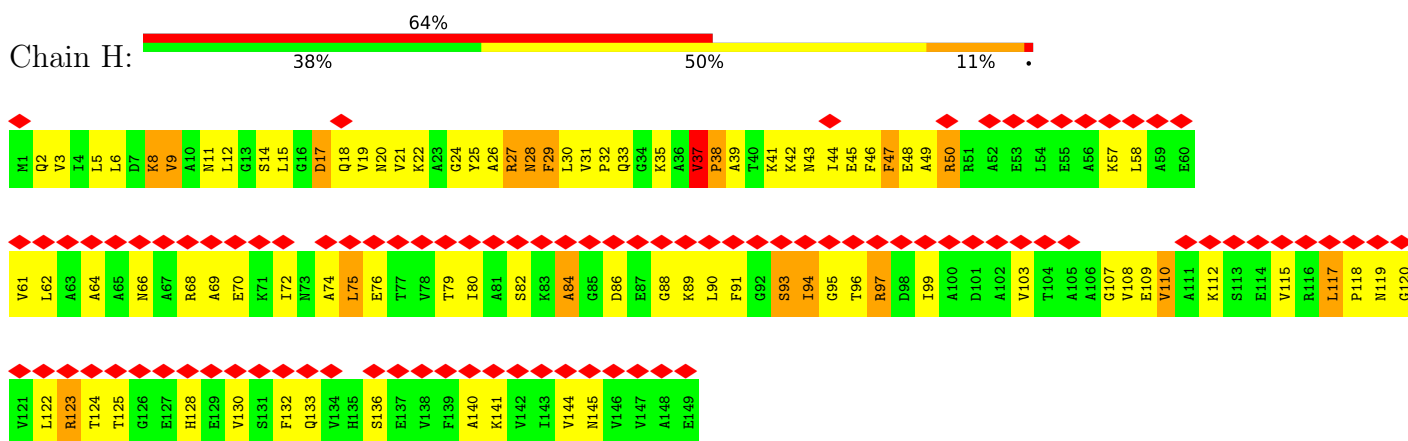
• Molecule 16: 50S RIBOSOMAL PROTEIN L5



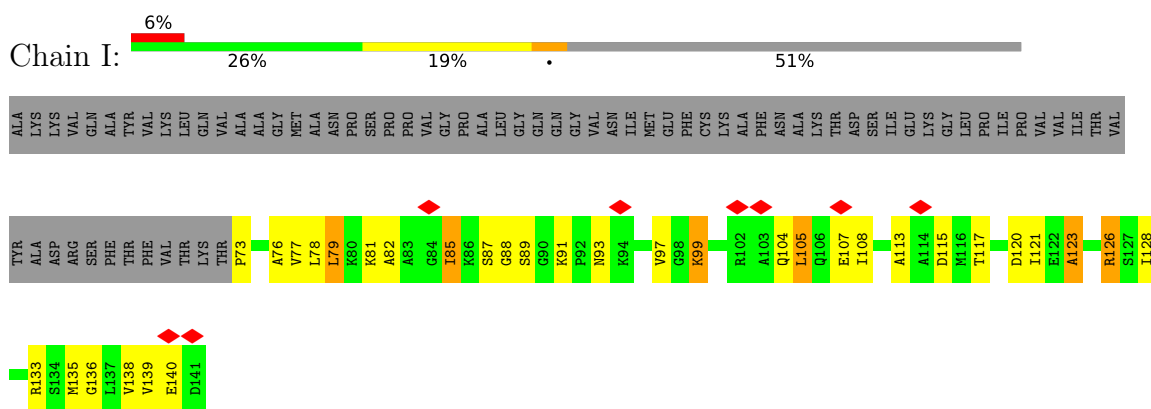
• Molecule 17: 50S RIBOSOMAL PROTEIN L6



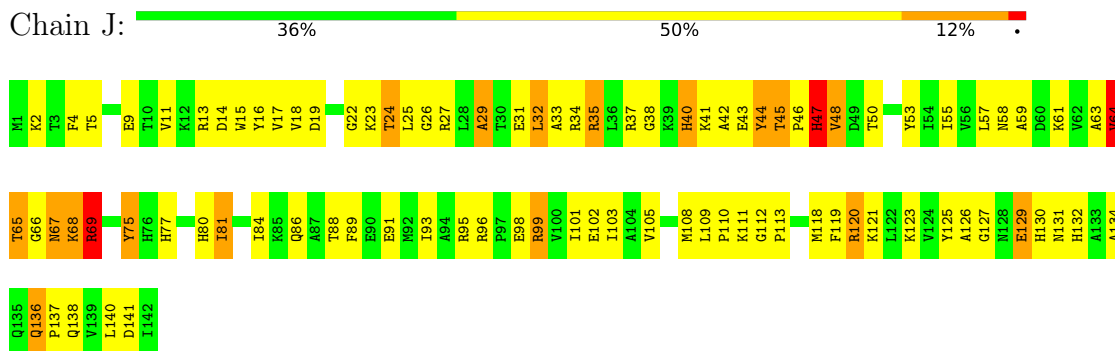
• Molecule 18: 50S RIBOSOMAL PROTEIN L9



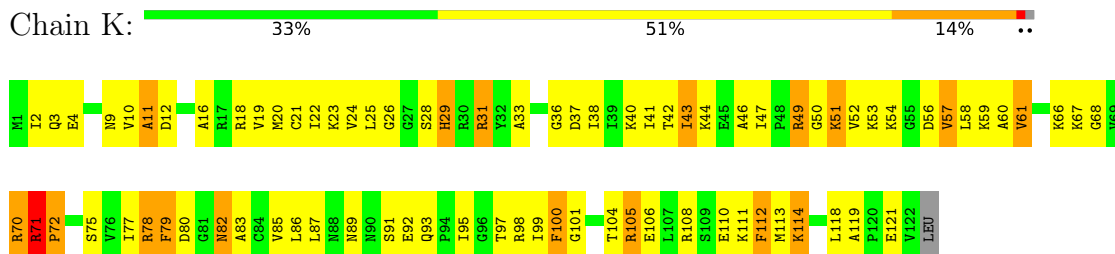
• Molecule 19: 50S RIBOSOMAL PROTEIN L11



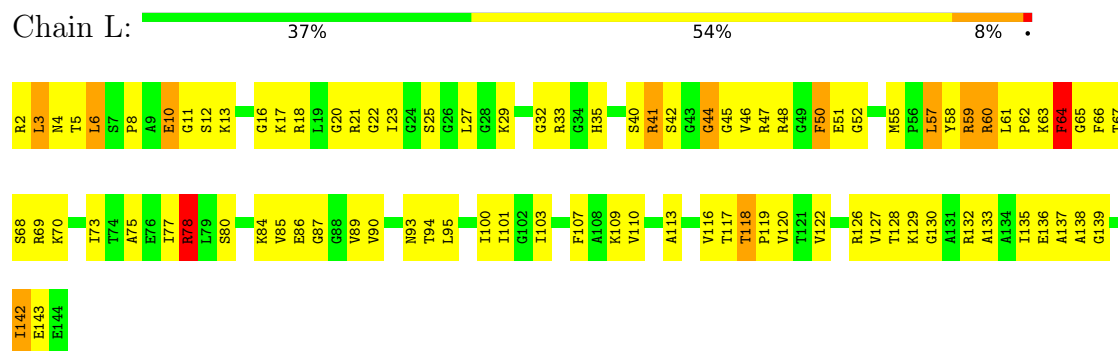
• Molecule 20: 50S RIBOSOMAL PROTEIN L13



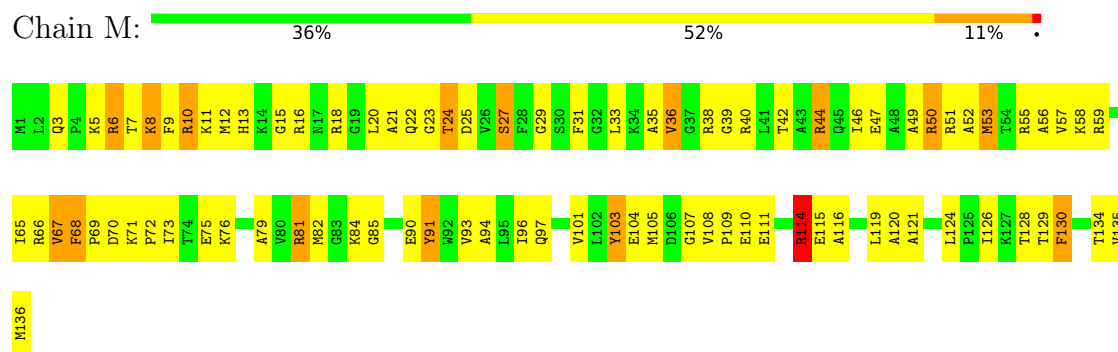
• Molecule 21: 50S RIBOSOMAL PROTEIN L14



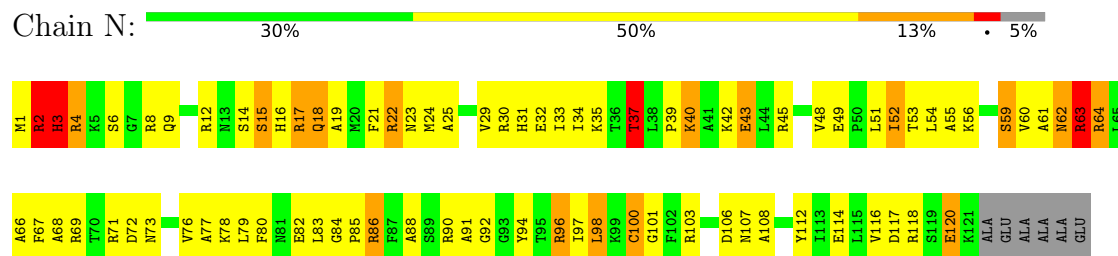
• Molecule 22: 50S RIBOSOMAL PROTEIN L15



• Molecule 23: 50S RIBOSOMAL PROTEIN L16



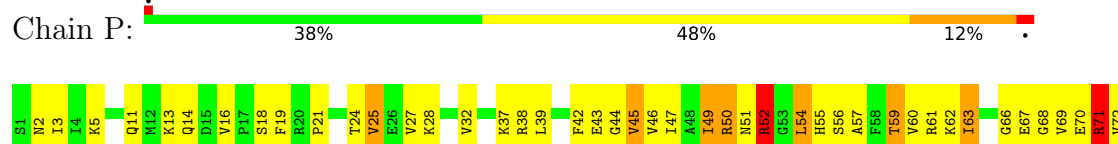
• Molecule 24: 50S RIBOSOMAL PROTEIN L17

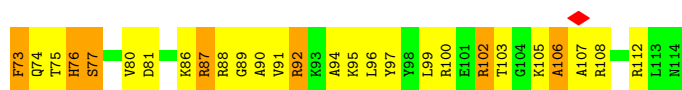


• Molecule 25: 50S RIBOSOMAL PROTEIN L18

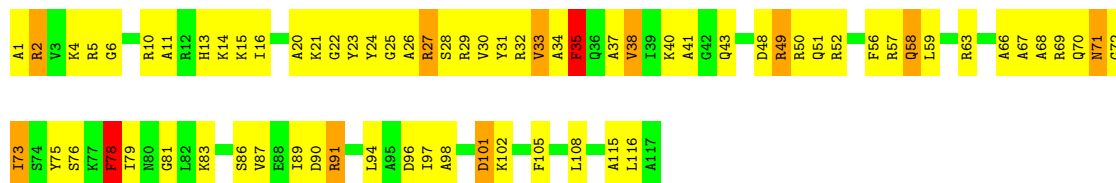
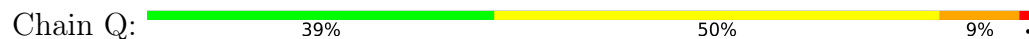


• Molecule 26: 50S RIBOSOMAL PROTEIN L19

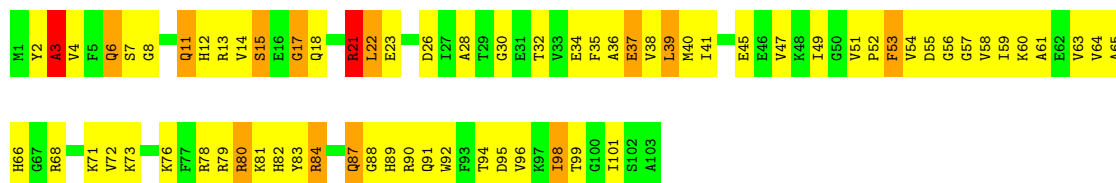
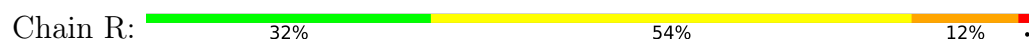




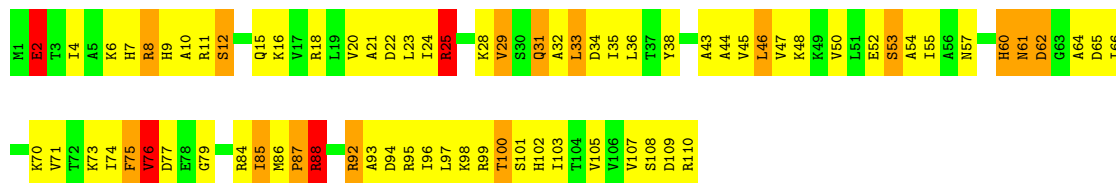
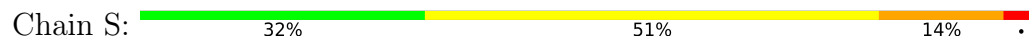
• Molecule 27: 50S RIBOSOMAL PROTEIN L20



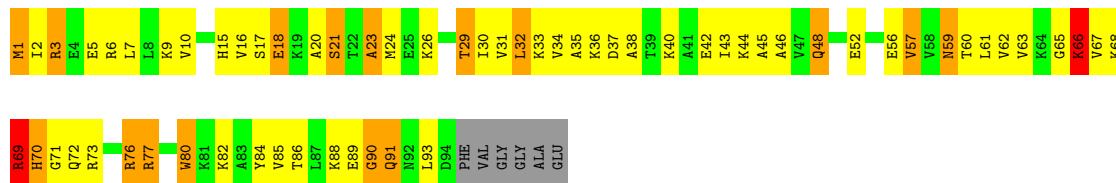
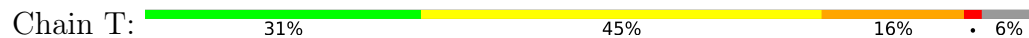
• Molecule 28: 50S RIBOSOMAL PROTEIN L21



• Molecule 29: 50S RIBOSOMAL PROTEIN L22

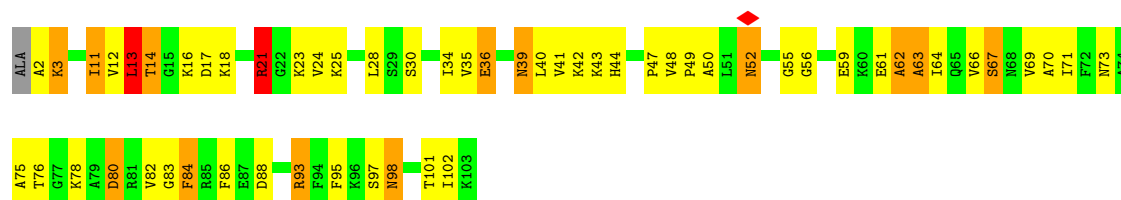


• Molecule 30: 50S RIBOSOMAL PROTEIN L23

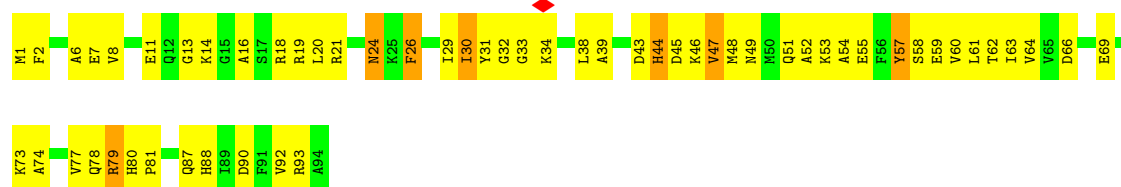


• Molecule 31: 50S RIBOSOMAL PROTEIN L24

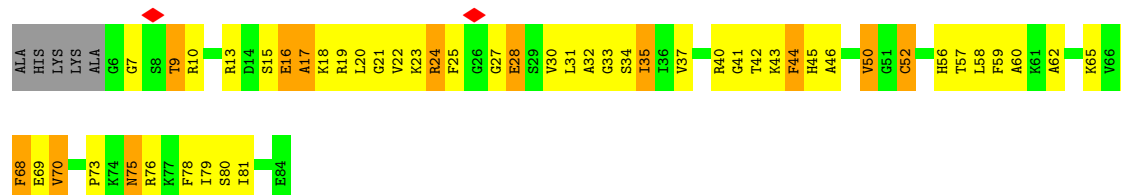




• Molecule 32: 50S RIBOSOMAL PROTEIN L25



• Molecule 33: 50S RIBOSOMAL PROTEIN L27



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	102814	Depositor
Resolution determination method	Not provided	
CTF correction method	INDIVIDUAL PARTICLES	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	59000	Depositor
Image detector	FEI EAGLE (4k x 4k)	Depositor
Maximum map value	0.191	Depositor
Minimum map value	-0.046	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.016	Depositor
Recommended contour level	0.045	Depositor
Map size ($\text{\AA}$)	384.0, 384.0, 384.0	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.5, 1.5, 1.5	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	0	2.48	37/635 (5.8%)	2.60	50/848 (5.9%)
2	1	2.33	21/510 (4.1%)	2.58	42/677 (6.2%)
3	2	2.53	24/453 (5.3%)	2.44	33/605 (5.5%)
4	3	2.46	20/450 (4.4%)	2.53	26/599 (4.3%)
5	4	2.26	20/417 (4.8%)	2.33	22/556 (4.0%)
6	5	2.32	74/1748 (4.2%)	2.48	126/2355 (5.4%)
7	6	2.41	18/380 (4.7%)	2.54	26/498 (5.2%)
8	7	2.43	29/513 (5.7%)	2.53	34/676 (5.0%)
9	8	2.43	17/303 (5.6%)	2.43	21/397 (5.3%)
10	9	2.38	127/2584 (4.9%)	2.68	238/3487 (6.8%)
11	A	2.02	60/2744 (2.2%)	1.93	113/4276 (2.6%)
12	B	2.00	1362/69796 (2.0%)	1.89	2603/108888 (2.4%)
13	C	2.37	92/2122 (4.3%)	2.53	148/2854 (5.2%)
14	D	2.33	77/1586 (4.9%)	2.50	103/2134 (4.8%)
15	E	2.31	58/1571 (3.7%)	2.54	128/2113 (6.1%)
16	F	2.29	54/1444 (3.7%)	2.49	94/1937 (4.9%)
17	G	2.31	51/1336 (3.8%)	2.42	89/1805 (4.9%)
18	H	2.39	57/1122 (5.1%)	2.56	80/1515 (5.3%)
19	I	2.23	17/497 (3.4%)	2.54	30/662 (4.5%)
20	J	2.37	59/1152 (5.1%)	2.46	88/1551 (5.7%)
21	K	2.37	46/941 (4.9%)	2.54	71/1260 (5.6%)
22	L	2.37	49/1054 (4.6%)	2.50	73/1403 (5.2%)
23	M	2.41	56/1093 (5.1%)	2.31	57/1460 (3.9%)
24	N	2.41	50/974 (5.1%)	2.54	83/1303 (6.4%)
25	O	2.38	42/902 (4.7%)	2.44	52/1209 (4.3%)
26	P	2.35	47/929 (5.1%)	2.41	53/1242 (4.3%)
27	Q	2.27	33/960 (3.4%)	2.61	83/1278 (6.5%)
28	R	2.44	42/829 (5.1%)	2.45	61/1107 (5.5%)
29	S	2.55	46/864 (5.3%)	2.58	71/1156 (6.1%)
30	T	2.30	29/745 (3.9%)	2.58	59/996 (5.9%)
31	U	2.34	35/764 (4.6%)	2.31	41/1019 (4.0%)
32	W	2.41	34/766 (4.4%)	2.40	49/1025 (4.8%)
33	Y	2.29	21/603 (3.5%)	2.44	36/797 (4.5%)
All	All	2.12	2804/102787 (2.7%)	2.07	4883/153688 (3.2%)

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	0	0	2
2	1	0	2
3	2	0	1
4	3	0	2
5	4	0	2
6	5	0	3
7	6	0	6
8	7	0	3
9	8	0	1
10	9	0	27
11	A	0	55
12	B	0	1482
13	C	0	9
14	D	0	4
15	E	0	5
16	F	0	6
17	G	0	4
18	H	0	2
20	J	0	6
21	K	0	7
22	L	0	2
23	M	0	7
24	N	0	7
25	O	0	5
26	P	0	3
27	Q	0	4
28	R	0	5
29	S	0	3
30	T	0	2
31	U	0	2
32	W	0	3
33	Y	0	3
All	All	0	1675

All (2804) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	2	15	ARG	CD-NE	11.30	1.62	1.46
20	J	80	HIS	ND1-CE1	10.95	1.43	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	W	69	GLU	CA-C	-10.74	1.39	1.52
22	L	35	HIS	ND1-CE1	10.49	1.43	1.32
29	S	85	ILE	C-N	10.37	1.44	1.33
12	B	1980	G	C1'-N9	10.25	1.62	1.47
6	5	150	ALA	N-CA	-9.81	1.34	1.46
6	5	202	THR	C-N	9.70	1.41	1.33
28	R	52	PRO	CA-C	-9.65	1.41	1.52
31	U	24	VAL	CA-CB	-9.62	1.42	1.53
4	3	50	GLY	CA-C	-9.60	1.42	1.52
22	L	44	GLY	C-N	9.56	1.42	1.32
12	B	1254	A	O3'-P	-9.56	1.46	1.61
33	Y	10	ARG	CD-NE	9.56	1.59	1.46
12	B	2055	C	C2'-C1'	-9.54	1.39	1.53
28	R	3	ALA	CA-C	-9.50	1.40	1.52
16	F	4	HIS	ND1-CE1	9.49	1.42	1.32
28	R	55	ASP	N-CA	-9.43	1.34	1.46
7	6	34	ARG	CD-NE	9.40	1.59	1.46
12	B	390	U	C1'-N1	9.37	1.61	1.47
8	7	41	ARG	NE-CZ	9.34	1.43	1.33
14	D	159	LYS	CA-C	-9.34	1.40	1.52
32	W	79	ARG	CD-NE	9.23	1.59	1.46
18	H	93	SER	CA-C	-9.20	1.40	1.52
14	D	33	ARG	C-N	9.13	1.43	1.33
32	W	16	ALA	N-CA	-9.13	1.35	1.46
28	R	89	HIS	ND1-CE1	9.10	1.41	1.32
23	M	59	ARG	CD-NE	9.09	1.58	1.46
25	O	15	ARG	CD-NE	9.09	1.58	1.46
17	G	57	TYR	N-CA	-9.08	1.34	1.45
28	R	35	PHE	CA-C	-9.08	1.41	1.52
31	U	14	THR	C-N	9.07	1.41	1.33
12	B	1391	U	O4'-C1'	-9.07	1.28	1.41
12	B	2018	G	C4'-C3'	-9.07	1.39	1.52
28	R	88	GLY	CA-C	-8.98	1.46	1.52
10	9	190	PRO	CA-C	-8.93	1.45	1.53
29	S	9	HIS	ND1-CE1	8.90	1.41	1.32
29	S	12	SER	C-N	8.90	1.45	1.33
12	B	2067	G	C5'-C4'	8.86	1.64	1.51
29	S	18	ARG	NE-CZ	8.82	1.42	1.33
19	I	87	SER	CA-C	-8.79	1.42	1.52
19	I	126	ARG	CD-NE	8.76	1.58	1.46
23	M	36	VAL	N-CA	-8.75	1.36	1.46
25	O	100	HIS	ND1-CE1	8.73	1.41	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	1648	U	O3'-P	-8.71	1.48	1.61
12	B	1679	A	P-O5'	-8.70	1.46	1.59
3	2	21	ALA	CA-C	-8.69	1.40	1.52
5	4	43	ARG	CA-C	-8.62	1.41	1.52
8	7	21	PHE	CA-C	-8.60	1.42	1.52
10	9	309	LYS	CA-C	-8.60	1.48	1.53
12	B	1490	A	C1'-N9	8.58	1.60	1.48
12	B	1976	U	C1'-N1	8.58	1.61	1.48
25	O	25	ARG	CD-NE	8.58	1.58	1.46
17	G	114	HIS	ND1-CE1	8.56	1.41	1.32
16	F	132	ARG	CD-NE	8.55	1.58	1.46
12	B	1553	A	C2'-C1'	-8.55	1.40	1.53
30	T	82	LYS	CA-C	-8.55	1.42	1.52
14	D	4	LEU	C-N	8.54	1.42	1.33
6	5	113	VAL	CA-C	-8.52	1.43	1.52
12	B	1924	C	C4'-O4'	8.48	1.58	1.45
25	O	58	ILE	CA-C	-8.47	1.42	1.52
23	M	91	TYR	CA-C	-8.47	1.42	1.52
24	N	3	HIS	ND1-CE1	8.46	1.41	1.32
33	Y	56	HIS	ND1-CE1	8.46	1.41	1.32
10	9	10	LEU	CA-C	-8.45	1.42	1.52
12	B	576	U	C2'-C1'	-8.45	1.40	1.53
16	F	89	THR	C-N	8.42	1.44	1.33
12	B	2885	G	C5'-C4'	8.41	1.63	1.51
19	I	88	GLY	CA-C	-8.41	1.42	1.51
23	M	40	ARG	CD-NE	8.39	1.58	1.46
29	S	29	VAL	CA-CB	-8.38	1.43	1.54
23	M	66	ARG	NE-CZ	8.37	1.42	1.33
26	P	54	LEU	CA-C	-8.36	1.42	1.52
12	B	1644	C	C1'-N1	8.35	1.60	1.48
10	9	25	ARG	CD-NE	8.33	1.57	1.46
21	K	108	ARG	NE-CZ	8.33	1.42	1.33
15	E	155	GLU	N-CA	-8.32	1.34	1.46
21	K	25	LEU	CA-C	-8.31	1.42	1.52
27	Q	70	GLN	CA-C	-8.29	1.42	1.52
12	B	40	U	C5'-C4'	8.27	1.63	1.51
12	B	2284	A	O3'-P	-8.27	1.48	1.61
30	T	34	VAL	CA-C	-8.27	1.43	1.52
12	B	552	U	C2'-C1'	-8.27	1.41	1.53
23	M	109	PRO	CA-C	-8.27	1.42	1.52
16	F	109	ARG	CD-NE	8.26	1.57	1.46
10	9	243	HIS	CE1-NE2	-8.25	1.24	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	Q	10	ARG	NE-CZ	8.25	1.42	1.33
12	B	550	C	C1'-N1	8.25	1.60	1.48
6	5	97	MET	CA-C	-8.24	1.42	1.52
12	B	450	G	C4'-C3'	8.24	1.65	1.52
23	M	126	ILE	CA-C	-8.21	1.44	1.52
22	L	120	VAL	CA-CB	-8.19	1.43	1.55
29	S	84	ARG	NE-CZ	8.19	1.42	1.33
24	N	2	ARG	NE-CZ	8.17	1.42	1.33
23	M	111	GLU	CA-C	-8.16	1.42	1.52
14	D	206	ALA	C-N	8.15	1.43	1.33
15	E	174	GLY	CA-C	-8.15	1.40	1.51
12	B	733	G	P-O5'	-8.14	1.47	1.59
12	B	2479	U	O4'-C1'	8.14	1.53	1.41
17	G	170	THR	C-N	8.11	1.42	1.33
12	B	1677	A	C2'-C1'	-8.10	1.41	1.53
6	5	232	SER	CA-C	-8.10	1.42	1.52
10	9	130	PHE	CA-CB	8.09	1.66	1.53
32	W	7	GLU	CA-C	-8.07	1.42	1.52
18	H	123	ARG	NE-CZ	8.06	1.42	1.33
9	8	3	VAL	C-N	8.04	1.44	1.33
12	B	811	U	C4'-O4'	-8.03	1.33	1.45
18	H	64	ALA	CA-C	-8.03	1.42	1.52
22	L	60	ARG	CA-C	-8.03	1.44	1.52
4	3	41	HIS	CE1-NE2	8.02	1.40	1.32
12	B	339	U	P-O5'	-8.02	1.47	1.59
12	B	2225	A	O3'-P	-8.02	1.49	1.61
12	B	1977	A	C2'-C1'	-8.01	1.41	1.53
13	C	212	TRP	NE1-CE2	-8.01	1.28	1.37
12	B	1242	U	O3'-P	-8.00	1.49	1.61
14	D	25	THR	C-N	8.00	1.42	1.33
3	2	37	ARG	CA-C	-7.99	1.42	1.52
22	L	78	ARG	NE-CZ	7.99	1.41	1.33
22	L	8	PRO	C-N	7.99	1.44	1.33
10	9	114	ARG	CA-C	-7.97	1.43	1.52
31	U	82	VAL	C-N	7.97	1.42	1.33
11	A	59	A	C2'-C1'	-7.96	1.41	1.53
29	S	45	VAL	CA-CB	-7.96	1.43	1.54
22	L	139	GLY	CA-C	-7.96	1.44	1.52
12	B	2223	G	C1'-N9	7.96	1.59	1.48
12	B	2156	G	C5'-C4'	7.95	1.63	1.51
15	E	89	PRO	N-CA	-7.94	1.37	1.47
12	B	1818	U	C1'-N1	7.93	1.60	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	M	134	THR	CA-C	-7.93	1.46	1.53
25	O	39	VAL	CA-C	-7.93	1.44	1.52
12	B	2467	C	P-O5'	-7.93	1.47	1.59
10	9	152	LEU	CA-C	-7.92	1.42	1.52
26	P	112	ARG	CD-NE	7.92	1.57	1.46
13	C	153	LEU	N-CA	-7.91	1.35	1.45
12	B	2074	U	C2'-C1'	-7.91	1.41	1.53
17	G	34	ARG	NE-CZ	7.89	1.41	1.33
30	T	24	MET	N-CA	-7.89	1.36	1.46
12	B	1611	C	C4'-O4'	-7.88	1.33	1.45
11	A	112	G	O3'-P	-7.88	1.49	1.61
13	C	232	GLY	CA-C	-7.88	1.43	1.52
3	2	19	HIS	CA-C	-7.88	1.42	1.52
8	7	62	PRO	CA-CB	7.87	1.65	1.53
12	B	918	A	C2'-C1'	-7.86	1.41	1.53
12	B	116	C	O5'-C5'	7.84	1.54	1.42
12	B	2510	C	P-O5'	-7.84	1.48	1.59
21	K	61	VAL	N-CA	-7.83	1.37	1.46
18	H	50	ARG	NE-CZ	7.83	1.41	1.33
12	B	1903	G	C5'-C4'	7.80	1.62	1.51
10	9	177	ARG	NE-CZ	7.80	1.41	1.33
12	B	76	C	C2'-C1'	-7.80	1.41	1.53
12	B	778	G	C5'-C4'	7.79	1.62	1.51
12	B	2296	U	C1'-N1	7.79	1.59	1.47
18	H	123	ARG	CD-NE	7.78	1.57	1.46
3	2	28	LEU	C-N	7.78	1.44	1.33
12	B	2015	A	C5'-C4'	7.78	1.62	1.51
12	B	1145	C	C1'-N1	7.78	1.60	1.48
12	B	2855	C	C1'-N1	7.78	1.60	1.48
12	B	1277	G	C2'-C1'	-7.76	1.41	1.53
26	P	62	LYS	CA-C	-7.76	1.47	1.52
10	9	250	ILE	CA-C	-7.76	1.43	1.52
12	B	1140	C	C2'-C1'	-7.75	1.41	1.53
27	Q	75	TYR	CA-CB	7.75	1.65	1.53
13	C	12	ARG	NE-CZ	7.75	1.41	1.33
12	B	2650	U	P-O5'	-7.74	1.48	1.59
12	B	149	A	O3'-P	-7.73	1.49	1.61
21	K	42	THR	CA-C	-7.72	1.43	1.52
13	C	182	LYS	C-N	7.72	1.40	1.33
12	B	256	A	C2'-C1'	-7.72	1.41	1.53
15	E	40	ARG	CA-CB	7.71	1.64	1.53
15	E	143	LEU	CA-C	-7.71	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	G	130	ILE	CA-CB	7.71	1.66	1.54
12	B	1717	A	P-O5'	-7.69	1.48	1.59
29	S	8	ARG	CA-C	-7.68	1.42	1.52
4	3	49	ARG	CD-NE	7.68	1.56	1.46
10	9	35	ASP	CA-C	-7.66	1.43	1.52
10	9	11	VAL	CA-CB	-7.65	1.44	1.54
32	W	18	ARG	NE-CZ	7.65	1.41	1.33
13	C	24	HIS	C-N	7.64	1.45	1.33
25	O	30	ARG	C-N	7.64	1.41	1.33
13	C	68	ARG	CA-C	-7.64	1.43	1.53
13	C	79	ARG	N-CA	-7.63	1.36	1.46
17	G	165	ASP	CA-C	-7.63	1.42	1.53
12	B	310	A	C5'-C4'	7.62	1.62	1.51
14	D	83	ARG	NE-CZ	7.62	1.41	1.33
12	B	273	G	C4'-O4'	-7.62	1.34	1.45
16	F	33	ILE	CA-C	-7.62	1.44	1.52
5	4	20	TYR	CA-C	-7.61	1.43	1.52
7	6	22	MET	CA-CB	7.61	1.65	1.53
29	S	57	ASN	CA-C	-7.61	1.42	1.52
11	A	113	C	C1'-N1	7.60	1.59	1.48
21	K	60	ALA	C-N	7.60	1.43	1.33
3	2	33	HIS	CA-CB	7.59	1.66	1.53
8	7	30	HIS	ND1-CE1	7.58	1.40	1.32
12	B	1637	A	P-O5'	-7.58	1.48	1.59
12	B	2382	G	C2'-C1'	-7.58	1.41	1.53
21	K	78	ARG	CD-NE	7.58	1.56	1.46
12	B	829	A	O5'-C5'	7.57	1.53	1.42
12	B	2764	A	C2'-C1'	-7.56	1.42	1.53
18	H	31	VAL	N-CA	-7.56	1.39	1.46
25	O	33	ARG	NE-CZ	7.55	1.41	1.33
12	B	2337	G	P-O5'	7.55	1.71	1.59
18	H	144	VAL	CA-C	-7.55	1.43	1.52
12	B	2546	U	P-O5'	-7.55	1.48	1.59
2	1	53	VAL	CA-CB	-7.55	1.45	1.54
12	B	820	A	C5'-C4'	7.54	1.62	1.51
12	B	1820	U	C1'-N1	7.54	1.58	1.47
10	9	291	VAL	CA-C	-7.53	1.43	1.52
12	B	288	U	C1'-N1	7.52	1.59	1.48
12	B	2406	A	C2'-C1'	-7.52	1.42	1.53
10	9	7	ALA	C-N	7.51	1.43	1.33
12	B	12	U	C1'-N1	7.51	1.59	1.48
12	B	2880	C	P-O5'	-7.49	1.48	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	686	U	C3'-O3'	-7.49	1.31	1.43
12	B	396	G	C2'-C1'	-7.49	1.42	1.53
12	B	800	A	C3'-C2'	7.49	1.64	1.52
27	Q	2	ARG	N-CA	-7.49	1.36	1.46
25	O	102	ARG	NE-CZ	7.48	1.41	1.33
12	B	442	G	C2'-C1'	-7.47	1.41	1.53
12	B	979	A	C2'-C1'	-7.46	1.42	1.53
10	9	41	ASP	CA-CB	7.46	1.61	1.54
28	R	76	LYS	CA-C	-7.46	1.43	1.52
6	5	148	ASN	N-CA	-7.45	1.36	1.46
11	A	71	C	P-O5'	-7.45	1.48	1.59
12	B	2828	G	C2'-C1'	-7.44	1.42	1.53
14	D	65	ALA	C-N	7.44	1.43	1.33
12	B	1178	C	C5'-C4'	7.44	1.62	1.51
4	3	2	VAL	CA-C	-7.44	1.45	1.52
12	B	2641	G	C4'-O4'	7.43	1.56	1.45
10	9	287	LEU	C-N	7.43	1.43	1.33
24	N	31	HIS	ND1-CE1	7.43	1.40	1.32
18	H	145	ASN	CA-CB	7.42	1.64	1.53
10	9	18	ASN	CA-C	7.40	1.60	1.53
12	B	1443	U	C2'-C1'	-7.39	1.42	1.53
12	B	1458	U	C5'-C4'	7.38	1.62	1.51
29	S	73	LYS	CA-C	-7.38	1.43	1.52
12	B	1666	G	C2'-C1'	-7.36	1.42	1.53
13	C	237	ARG	CA-C	-7.35	1.43	1.52
23	M	114	ARG	NE-CZ	7.35	1.41	1.33
10	9	7	ALA	N-CA	-7.35	1.36	1.45
10	9	74	ALA	CA-C	-7.35	1.43	1.52
12	B	556	A	O3'-P	-7.35	1.50	1.61
12	B	389	G	C2'-C1'	-7.34	1.42	1.53
12	B	1668	A	C3'-O3'	-7.34	1.32	1.43
15	E	67	ARG	CZ-NH1	7.34	1.43	1.32
15	E	186	VAL	CA-C	-7.34	1.43	1.52
10	9	228	GLY	CA-C	-7.33	1.42	1.51
13	C	93	VAL	CA-CB	-7.33	1.45	1.54
10	9	186	VAL	CA-C	-7.33	1.43	1.52
25	O	74	VAL	CA-CB	-7.33	1.46	1.54
27	Q	101	ASP	CA-CB	7.32	1.65	1.53
12	B	291	G	C1'-N9	-7.32	1.36	1.48
31	U	76	THR	CA-C	-7.32	1.44	1.52
28	R	40	MET	CA-C	-7.32	1.44	1.52
12	B	2822	G	P-O5'	-7.31	1.48	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	G	33	THR	CA-C	-7.30	1.43	1.52
18	H	140	ALA	CA-C	-7.30	1.46	1.53
16	F	166	ARG	N-CA	7.30	1.55	1.46
23	M	7	THR	N-CA	-7.30	1.37	1.46
12	B	2660	A	C4'-C3'	7.29	1.63	1.52
12	B	1927	A	C1'-N9	7.29	1.58	1.48
10	9	246	ASP	C-N	7.29	1.43	1.33
32	W	88	HIS	ND1-CE1	7.29	1.39	1.32
12	B	1634	A	O3'-P	-7.29	1.50	1.61
12	B	2312	U	O4'-C1'	7.28	1.52	1.41
28	R	66	HIS	ND1-CE1	7.28	1.39	1.32
12	B	2778	A	C1'-N9	7.28	1.57	1.47
12	B	745	G	C4'-O4'	7.28	1.56	1.45
20	J	108	MET	C-N	7.28	1.41	1.33
10	9	126	GLY	CA-C	-7.27	1.40	1.52
12	B	1676	A	C5'-C4'	7.27	1.62	1.51
4	3	37	HIS	CA-C	-7.27	1.44	1.52
12	B	2192	U	C1'-N1	7.26	1.59	1.48
12	B	1206	G	C4'-C3'	7.25	1.63	1.52
28	R	13	ARG	CZ-NH2	7.25	1.42	1.33
32	W	90	ASP	CA-C	-7.23	1.43	1.52
12	B	1344	U	C2'-C1'	-7.23	1.42	1.53
14	D	179	ARG	CD-NE	7.23	1.56	1.46
12	B	1488	C	C4'-C3'	7.23	1.63	1.52
25	O	18	LEU	CA-C	-7.22	1.43	1.52
12	B	1910	G	O4'-C1'	7.22	1.52	1.41
26	P	69	VAL	CA-C	-7.22	1.43	1.52
28	R	91	GLN	CA-C	-7.22	1.43	1.52
12	B	85	G	P-O5'	-7.21	1.49	1.59
12	B	1550	C	C3'-O3'	7.21	1.52	1.42
12	B	2813	A	C2'-C1'	-7.21	1.42	1.53
23	M	97	GLN	CA-C	-7.21	1.43	1.52
12	B	2741	A	C5'-C4'	7.21	1.62	1.51
13	C	268	ARG	NE-CZ	7.21	1.41	1.33
10	9	21	VAL	N-CA	-7.20	1.38	1.46
12	B	1676	A	O3'-P	-7.20	1.50	1.61
13	C	86	ARG	N-CA	-7.20	1.37	1.46
21	K	87	LEU	CA-CB	7.20	1.66	1.53
22	L	22	GLY	N-CA	-7.20	1.34	1.45
12	B	2819	G	C5'-C4'	7.20	1.62	1.51
26	P	14	GLN	CA-C	-7.20	1.43	1.52
16	F	95	MET	CA-C	-7.19	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	D	90	PHE	CA-CB	7.19	1.65	1.53
12	B	2652	C	C3'-O3'	7.19	1.52	1.42
23	M	94	ALA	N-CA	-7.18	1.38	1.46
10	9	290	LYS	CA-C	-7.17	1.45	1.53
12	B	2211	A	O4'-C1'	-7.16	1.30	1.41
20	J	40	HIS	ND1-CE1	7.16	1.39	1.32
24	N	85	PRO	N-CA	-7.16	1.42	1.47
12	B	92	U	C1'-N1	7.15	1.59	1.48
32	W	79	ARG	NE-CZ	7.15	1.41	1.33
17	G	158	GLY	C-N	7.14	1.42	1.33
12	B	801	G	O3'-P	-7.14	1.50	1.61
23	M	6	ARG	CA-C	-7.14	1.44	1.52
13	C	227	VAL	CA-C	-7.13	1.43	1.52
31	U	93	ARG	CD-NE	7.13	1.56	1.46
3	2	29	ARG	NE-CZ	7.12	1.40	1.33
12	B	32	C	C1'-N1	7.12	1.59	1.48
7	6	30	VAL	C-N	7.12	1.43	1.33
4	3	29	VAL	CA-C	-7.12	1.45	1.53
22	L	3	LEU	CA-C	-7.12	1.43	1.52
29	S	95	ARG	CD-NE	7.12	1.56	1.46
13	C	75	ALA	CA-C	-7.11	1.43	1.53
6	5	61	GLY	C-N	7.11	1.42	1.33
29	S	43	ALA	C-N	7.11	1.42	1.33
12	B	2844	G	O3'-P	-7.11	1.50	1.61
4	3	53	VAL	C-N	7.10	1.42	1.33
20	J	134	ALA	CA-C	-7.09	1.44	1.52
12	B	598	U	O5'-C5'	-7.09	1.31	1.42
11	A	116	G	C2'-C1'	-7.09	1.42	1.53
13	C	119	VAL	C-N	7.09	1.43	1.33
14	D	46	ARG	NE-CZ	7.08	1.40	1.33
32	W	78	GLN	C-N	7.08	1.43	1.33
30	T	77	ARG	NE-CZ	7.08	1.40	1.33
12	B	146	A	C2'-C1'	-7.08	1.42	1.53
11	A	63	C	P-O5'	-7.07	1.49	1.59
12	B	2340	A	C1'-N9	7.07	1.58	1.48
12	B	2766	A	O3'-P	-7.07	1.50	1.61
12	B	1381	G	C2'-C1'	-7.06	1.42	1.53
4	3	18	HIS	ND1-CE1	7.06	1.39	1.32
16	F	73	VAL	CA-CB	-7.06	1.47	1.54
12	B	1863	G	C2'-C1'	-7.06	1.42	1.53
17	G	97	VAL	C-N	7.06	1.44	1.33
12	B	522	A	C2'-C1'	-7.06	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	J	99	ARG	CA-C	-7.06	1.43	1.52
26	P	91	VAL	CA-CB	-7.05	1.47	1.54
30	T	77	ARG	CA-CB	7.05	1.63	1.53
10	9	332	ILE	N-CA	7.05	1.54	1.46
12	B	812	C	C1'-N1	7.05	1.59	1.48
12	B	2080	A	O3'-P	-7.05	1.50	1.61
30	T	84	TYR	CA-CB	7.05	1.61	1.53
6	5	60	ARG	NE-CZ	7.04	1.40	1.33
12	B	2624	G	C4'-C3'	7.04	1.63	1.52
12	B	842	U	C4'-C3'	-7.03	1.42	1.52
14	D	62	LYS	N-CA	-7.03	1.39	1.46
12	B	523	C	C2'-C1'	-7.03	1.42	1.53
12	B	482	A	C2'-C1'	-7.03	1.42	1.53
12	B	877	A	O4'-C1'	7.03	1.52	1.41
12	B	86	G	O5'-C5'	7.02	1.52	1.42
20	J	34	ARG	CZ-NH2	7.02	1.42	1.33
26	P	63	ILE	CA-C	-7.02	1.43	1.52
18	H	128	HIS	CB-CG	-7.01	1.40	1.50
12	B	1439	A	O4'-C1'	7.01	1.52	1.41
2	1	49	ASP	CA-C	-7.01	1.43	1.52
19	I	139	VAL	N-CA	-7.00	1.37	1.46
26	P	61	ARG	CA-C	-7.00	1.43	1.52
18	H	70	GLU	C-N	7.00	1.43	1.33
23	M	66	ARG	CD-NE	7.00	1.56	1.46
12	B	97	C	P-O5'	-7.00	1.49	1.59
12	B	1461	C	O3'-P	-7.00	1.50	1.61
23	M	114	ARG	CA-C	-7.00	1.43	1.52
12	B	1415	U	C5'-C4'	7.00	1.61	1.51
24	N	48	VAL	C-O	-6.99	1.15	1.24
12	B	1022	G	C5'-C4'	6.99	1.61	1.51
18	H	3	VAL	N-CA	-6.99	1.38	1.46
7	6	12	ARG	CZ-NH1	6.99	1.42	1.32
25	O	103	VAL	CA-CB	-6.99	1.46	1.54
12	B	2425	A	O4'-C1'	6.98	1.52	1.42
12	B	2182	U	C5'-C4'	6.97	1.61	1.51
24	N	116	VAL	CA-C	6.97	1.59	1.52
12	B	2666	C	O3'-P	-6.97	1.50	1.61
10	9	154	LEU	N-CA	-6.96	1.37	1.46
25	O	25	ARG	NE-CZ	6.96	1.40	1.33
15	E	167	VAL	CA-CB	-6.95	1.46	1.54
23	M	50	ARG	C-N	6.95	1.42	1.33
12	B	137	U	O4'-C1'	6.95	1.52	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	L	2	ARG	NE-CZ	6.95	1.40	1.33
12	B	908	C	O4'-C1'	6.94	1.52	1.41
12	B	1171	G	P-O5'	-6.94	1.49	1.59
14	D	181	ASP	CA-C	-6.94	1.44	1.53
15	E	21	ARG	NE-CZ	6.94	1.40	1.33
12	B	2420	C	C2'-C1'	-6.93	1.43	1.53
7	6	7	PRO	N-CA	-6.93	1.38	1.47
12	B	2461	A	P-O5'	-6.93	1.49	1.59
3	2	46	MET	N-CA	-6.93	1.38	1.46
6	5	74	ARG	CD-NE	6.92	1.55	1.46
12	B	674	G	C1'-N9	6.92	1.58	1.48
12	B	1133	A	C4'-C3'	6.92	1.63	1.53
12	B	1835	G	O4'-C1'	6.92	1.52	1.41
6	5	112	ASP	CA-CB	6.92	1.65	1.53
10	9	69	ARG	N-CA	-6.92	1.37	1.45
12	B	1817	G	O3'-P	-6.92	1.50	1.61
14	D	184	ARG	N-CA	-6.91	1.38	1.46
1	0	19	HIS	CG-CD2	6.91	1.43	1.35
10	9	249	PRO	N-CA	-6.91	1.38	1.47
12	B	794	A	C4'-C3'	6.91	1.62	1.52
12	B	2440	C	C1'-N1	6.91	1.58	1.48
1	0	18	SER	N-CA	-6.91	1.36	1.46
12	B	1036	G	C1'-N9	-6.91	1.37	1.48
31	U	24	VAL	N-CA	-6.91	1.38	1.46
12	B	1160	G	O3'-P	-6.90	1.50	1.61
12	B	1504	A	C2'-C1'	-6.90	1.43	1.53
12	B	1654	A	C3'-O3'	6.90	1.52	1.42
8	7	28	LEU	N-CA	6.90	1.53	1.47
23	M	55	ARG	CD-NE	6.90	1.55	1.46
10	9	136	ARG	NE-CZ	6.89	1.40	1.33
12	B	1272	A	C5'-C4'	6.89	1.61	1.51
18	H	124	THR	C-N	6.89	1.42	1.33
12	B	908	C	C4'-C3'	6.88	1.62	1.52
12	B	2329	U	C1'-N1	6.88	1.58	1.48
12	B	2450	A	C2'-C1'	-6.88	1.43	1.53
29	S	74	ILE	N-CA	-6.88	1.38	1.46
33	Y	10	ARG	NE-CZ	6.87	1.40	1.33
6	5	17	ALA	CA-C	-6.87	1.46	1.52
24	N	2	ARG	CD-NE	6.87	1.55	1.46
14	D	80	TRP	NE1-CE2	6.86	1.45	1.37
23	M	81	ARG	NE-CZ	6.86	1.40	1.33
12	B	1315	C	C2'-C1'	-6.86	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	U	28	LEU	C-N	6.86	1.42	1.33
14	D	80	TRP	CA-C	-6.86	1.44	1.52
13	C	117	SER	CA-C	-6.85	1.44	1.52
1	0	55	MET	C-N	6.85	1.43	1.33
4	3	18	HIS	CA-C	-6.85	1.44	1.52
14	D	107	VAL	CA-C	6.85	1.61	1.52
10	9	11	VAL	N-CA	-6.85	1.38	1.46
12	B	2244	U	C5'-C4'	6.85	1.61	1.51
23	M	70	ASP	C-N	6.85	1.41	1.33
25	O	53	THR	C-N	6.85	1.41	1.34
24	N	23	ASN	CA-C	-6.84	1.44	1.52
12	B	717	C	C1'-N1	6.84	1.58	1.48
6	5	149	VAL	CA-C	-6.83	1.45	1.52
12	B	1196	C	C2'-C1'	-6.83	1.43	1.53
10	9	278	ARG	NE-CZ	6.83	1.40	1.33
14	D	106	LYS	CA-C	-6.82	1.43	1.52
12	B	2702	G	O3'-P	-6.82	1.50	1.61
29	S	66	ILE	CA-C	-6.81	1.44	1.52
2	1	15	ASN	CA-C	-6.80	1.43	1.52
25	O	10	ARG	NE-CZ	6.80	1.40	1.33
27	Q	26	ALA	CA-C	-6.80	1.44	1.52
13	C	64	VAL	CA-C	-6.80	1.44	1.52
12	B	1211	C	O3'-P	-6.80	1.50	1.61
12	B	1498	C	O3'-P	-6.80	1.50	1.61
12	B	2055	C	C1'-N1	6.80	1.58	1.48
10	9	129	ARG	CD-NE	6.80	1.55	1.46
12	B	1166	G	C2'-C1'	-6.79	1.43	1.53
28	R	78	ARG	CZ-NH1	6.79	1.42	1.32
14	D	38	LYS	CA-C	-6.79	1.44	1.52
30	T	17	SER	CA-C	-6.79	1.44	1.52
6	5	209	ILE	CA-CB	-6.79	1.46	1.54
12	B	635	C	O3'-P	-6.78	1.50	1.61
27	Q	108	LEU	C-O	-6.78	1.16	1.24
12	B	1945	G	C3'-C2'	-6.78	1.42	1.52
20	J	35	ARG	C-N	6.78	1.42	1.33
12	B	2090	A	C3'-C2'	-6.78	1.42	1.52
12	B	1890	A	C3'-C2'	-6.76	1.42	1.52
12	B	2072	C	C4'-C3'	6.76	1.62	1.52
12	B	1115	G	C2'-C1'	-6.76	1.43	1.53
12	B	1257	C	C3'-O3'	6.76	1.52	1.42
12	B	809	G	C4'-C3'	6.75	1.62	1.52
15	E	32	VAL	C-N	6.75	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	G	80	GLU	N-CA	-6.75	1.37	1.46
12	B	1556	C	C4'-C3'	6.75	1.62	1.52
12	B	2794	C	C3'-O3'	6.75	1.52	1.42
1	0	9	LYS	C-O	-6.74	1.15	1.23
15	E	31	VAL	CA-CB	-6.74	1.45	1.54
13	C	20	ASN	CA-CB	6.74	1.62	1.53
12	B	1707	G	C2'-C1'	6.74	1.63	1.53
12	B	2629	U	C5'-C4'	6.74	1.61	1.51
3	2	8	GLN	CA-CB	6.74	1.64	1.53
12	B	997	G	C1'-N9	6.73	1.58	1.48
12	B	2032	G	C2'-C1'	-6.72	1.43	1.53
12	B	668	A	O3'-P	-6.72	1.51	1.61
21	K	44	LYS	C-N	6.72	1.41	1.33
22	L	60	ARG	CD-NE	6.72	1.55	1.46
12	B	2043	C	O3'-P	-6.71	1.51	1.61
29	S	99	ARG	CA-C	-6.71	1.44	1.52
6	5	65	LEU	CA-C	6.71	1.58	1.52
12	B	571	U	C1'-N1	6.71	1.57	1.47
12	B	2617	U	O3'-P	-6.71	1.51	1.61
31	U	44	HIS	ND1-CE1	6.71	1.39	1.32
10	9	69	ARG	CA-C	-6.71	1.44	1.52
12	B	716	A	O5'-C5'	6.71	1.52	1.42
8	7	22	LYS	N-CA	6.70	1.54	1.46
12	B	963	U	P-O5'	-6.70	1.49	1.59
10	9	47	MET	N-CA	-6.70	1.37	1.46
12	B	589	U	C2'-C1'	-6.70	1.43	1.53
12	B	2895	G	P-O5'	-6.70	1.49	1.59
12	B	1613	G	P-O5'	-6.69	1.49	1.59
12	B	2469	A	C2'-O2'	-6.69	1.32	1.42
12	B	1875	G	O3'-P	-6.69	1.51	1.61
12	B	2313	C	C4'-C3'	6.69	1.62	1.52
16	F	37	MET	N-CA	-6.69	1.38	1.46
17	G	124	CYS	N-CA	-6.69	1.40	1.46
12	B	1117	C	P-O5'	-6.68	1.49	1.59
12	B	1852	U	P-O5'	-6.68	1.49	1.59
12	B	280	U	N3-C4	6.68	1.51	1.38
15	E	37	ALA	CA-C	-6.68	1.43	1.52
23	M	120	ALA	CA-C	-6.68	1.43	1.52
12	B	2446	G	C1'-N9	6.67	1.57	1.48
12	B	2105	U	C2-N3	6.67	1.51	1.37
29	S	96	ILE	N-CA	-6.67	1.38	1.46
12	B	1018	U	C5'-C4'	6.67	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	K	56	ASP	CA-CB	6.67	1.64	1.53
23	M	9	PHE	CA-C	-6.67	1.44	1.52
32	W	29	ILE	CA-C	-6.67	1.44	1.52
12	B	857	G	O4'-C1'	-6.67	1.31	1.41
12	B	1658	C	C2'-C1'	-6.67	1.43	1.53
16	F	142	TYR	N-CA	-6.66	1.37	1.45
12	B	225	C	C4'-C3'	6.66	1.62	1.52
12	B	331	C	C1'-N1	6.66	1.57	1.47
12	B	970	U	C1'-N1	6.66	1.58	1.48
12	B	2088	A	C2'-C1'	-6.66	1.43	1.53
12	B	2299	U	O4'-C1'	6.65	1.51	1.41
6	5	65	LEU	N-CA	6.65	1.51	1.45
6	5	180	PHE	CA-C	-6.65	1.44	1.52
10	9	165	LEU	CA-C	-6.65	1.45	1.53
16	F	13	LYS	CA-C	-6.64	1.44	1.52
1	0	10	ARG	CZ-NH1	6.64	1.42	1.32
16	F	70	ARG	NE-CZ	6.64	1.40	1.33
31	U	78	LYS	C-O	-6.64	1.16	1.23
12	B	1899	A	C2'-C1'	-6.63	1.43	1.53
12	B	1192	G	C2'-C1'	-6.63	1.43	1.53
12	B	2263	C	C1'-N1	-6.63	1.38	1.48
12	B	2283	C	C2'-C1'	-6.63	1.43	1.53
25	O	38	GLN	CA-C	-6.63	1.44	1.52
31	U	18	LYS	CA-C	-6.63	1.43	1.52
13	C	211	ARG	NE-CZ	6.63	1.40	1.33
12	B	769	U	C4'-O4'	6.63	1.55	1.45
13	C	204	LEU	N-CA	-6.63	1.37	1.46
24	N	9	GLN	CA-CB	6.63	1.64	1.53
1	0	71	ARG	C-N	6.62	1.43	1.33
12	B	504	A	C4'-O4'	-6.62	1.35	1.45
12	B	1845	G	P-O5'	-6.62	1.49	1.59
13	C	242	HIS	CA-C	-6.62	1.46	1.53
11	A	68	C	C1'-N1	6.62	1.58	1.48
10	9	239	ARG	NE-CZ	6.62	1.40	1.33
12	B	186	G	C4'-C3'	6.61	1.62	1.52
12	B	1285	A	C2'-C1'	-6.61	1.43	1.53
12	B	2134	A	C5'-C4'	6.61	1.61	1.51
12	B	2139	U	C4'-O4'	-6.61	1.35	1.45
6	5	124	VAL	C-O	-6.60	1.16	1.24
12	B	1775	U	O4'-C1'	6.60	1.51	1.41
12	B	2304	G	O4'-C1'	6.60	1.51	1.41
20	J	64	VAL	C-N	6.60	1.43	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	5	10	VAL	N-CA	-6.60	1.38	1.46
28	R	58	VAL	N-CA	-6.60	1.38	1.46
9	8	12	ARG	NE-CZ	6.60	1.40	1.33
26	P	50	ARG	N-CA	-6.60	1.38	1.46
12	B	2684	U	P-O5'	-6.59	1.49	1.59
14	D	77	ARG	NE-CZ	6.59	1.40	1.33
25	O	6	ALA	C-N	6.59	1.42	1.33
10	9	268	LYS	CA-C	-6.59	1.44	1.52
12	B	48	G	C2'-C1'	6.59	1.63	1.53
12	B	2863	C	C1'-N1	6.59	1.58	1.48
27	Q	56	PHE	CA-C	-6.58	1.44	1.52
26	P	89	GLY	CA-C	6.58	1.59	1.52
12	B	2610	C	C2'-C1'	-6.58	1.43	1.53
16	F	175	PRO	CA-C	6.58	1.59	1.52
31	U	70	ALA	C-N	6.58	1.39	1.33
33	Y	81	ILE	N-CA	-6.58	1.39	1.46
8	7	38	LYS	CA-C	-6.58	1.43	1.52
12	B	1934	C	C1'-N1	6.58	1.58	1.48
2	1	62	GLY	CA-C	-6.58	1.42	1.51
12	B	2487	G	C4'-O4'	6.57	1.55	1.45
12	B	2698	U	C3'-C2'	-6.57	1.42	1.52
16	F	127	TYR	C-N	6.57	1.42	1.33
23	M	11	LYS	C-N	6.57	1.42	1.33
14	D	13	ARG	CA-C	-6.56	1.44	1.52
12	B	2854	G	C1'-N9	6.56	1.57	1.48
12	B	2197	U	C4'-O4'	6.56	1.55	1.45
2	1	12	GLU	N-CA	6.56	1.54	1.46
12	B	303	G	O5'-C5'	6.56	1.52	1.42
22	L	33	ARG	CZ-NH2	6.56	1.42	1.33
24	N	98	LEU	C-N	6.56	1.42	1.33
23	M	29	GLY	CA-C	-6.55	1.45	1.52
10	9	193	THR	C-N	6.55	1.42	1.33
12	B	51	G	C3'-O3'	6.55	1.52	1.43
13	C	12	ARG	CZ-NH1	6.55	1.42	1.32
13	C	130	PRO	CA-C	-6.55	1.45	1.52
18	H	93	SER	CA-CB	6.55	1.64	1.53
10	9	328	VAL	CA-C	-6.55	1.44	1.52
12	B	574	A	C2'-C1'	-6.54	1.43	1.53
12	B	744	U	C1'-N1	6.54	1.58	1.48
12	B	1633	G	C5'-C4'	6.54	1.61	1.51
12	B	2615	U	P-O5'	-6.54	1.50	1.59
13	C	271	SER	C-N	-6.54	1.24	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	42	GLU	C-N	6.54	1.43	1.33
12	B	2643	G	C3'-O3'	6.54	1.51	1.42
12	B	1028	A	C5'-C4'	6.54	1.61	1.51
12	B	2571	U	C1'-N1	6.54	1.58	1.48
15	E	133	LEU	CA-CB	6.54	1.64	1.53
20	J	127	GLY	CA-C	-6.54	1.44	1.51
12	B	543	G	P-O5'	-6.53	1.50	1.59
27	Q	63	ARG	NE-CZ	6.53	1.40	1.33
21	K	119	ALA	CA-CB	6.53	1.62	1.53
10	9	95	ARG	CA-C	-6.53	1.44	1.52
26	P	88	ARG	CA-C	-6.53	1.44	1.52
12	B	2070	A	C4'-O4'	-6.53	1.35	1.45
12	B	2893	A	C1'-N9	-6.53	1.37	1.47
17	G	112	VAL	N-CA	-6.53	1.38	1.46
17	G	151	ARG	NE-CZ	6.53	1.40	1.33
11	A	84	G	C1'-N9	6.52	1.57	1.48
12	B	398	C	C2'-C1'	-6.52	1.43	1.53
12	B	654	A	C1'-N9	6.52	1.56	1.47
12	B	1674	G	C2'-C1'	-6.52	1.43	1.53
12	B	1689	A	C1'-N9	6.52	1.57	1.48
10	9	237	ARG	NE-CZ	6.52	1.40	1.33
12	B	1580	A	C3'-O3'	6.52	1.51	1.42
18	H	22	LYS	CA-C	-6.51	1.44	1.53
12	B	1695	G	C2-N2	6.51	1.47	1.34
1	0	51	SER	CA-C	-6.51	1.44	1.53
12	B	1438	U	O3'-P	-6.51	1.51	1.61
19	I	105	LEU	C-O	-6.51	1.16	1.24
19	I	113	ALA	C-O	-6.51	1.16	1.24
12	B	167	A	O3'-P	-6.50	1.51	1.61
10	9	132	SER	N-CA	-6.50	1.39	1.46
22	L	41	ARG	CD-NE	6.50	1.55	1.46
12	B	1080	A	O4'-C1'	6.50	1.51	1.41
11	A	42	C	C2'-C1'	-6.50	1.43	1.53
12	B	1211	C	C4'-O4'	-6.50	1.35	1.45
14	D	84	LEU	CA-C	-6.50	1.44	1.52
6	5	37	LYS	CA-C	-6.50	1.44	1.52
12	B	2583	G	C2'-C1'	-6.50	1.43	1.53
9	8	22	VAL	CA-CB	-6.50	1.46	1.54
12	B	2349	G	O3'-P	-6.49	1.51	1.61
15	E	67	ARG	CA-CB	6.49	1.62	1.53
20	J	34	ARG	NE-CZ	6.49	1.40	1.33
12	B	1304	A	C2'-C1'	-6.49	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	5	195	ALA	N-CA	-6.49	1.38	1.46
13	C	244	VAL	C-N	6.49	1.42	1.33
11	A	96	G	C4'-O4'	6.49	1.55	1.45
12	B	1791	A	C4'-O4'	-6.49	1.35	1.45
13	C	245	THR	N-CA	-6.49	1.36	1.45
12	B	2802	G	C1'-N9	6.48	1.57	1.48
12	B	608	A	C4'-O4'	-6.48	1.35	1.45
31	U	98	ASN	C-N	6.48	1.42	1.33
6	5	8	MET	C-N	6.48	1.42	1.33
12	B	1493	C	C3'-O3'	6.48	1.51	1.42
15	E	143	LEU	N-CA	-6.48	1.38	1.46
18	H	28	ASN	N-CA	6.48	1.54	1.46
24	N	98	LEU	CB-CG	6.48	1.66	1.53
13	C	181	ARG	CD-NE	6.48	1.55	1.46
4	3	37	HIS	ND1-CE1	6.47	1.39	1.32
15	E	40	ARG	CZ-NH1	6.47	1.41	1.32
12	B	971	G	C2'-C1'	-6.47	1.43	1.53
10	9	60	ARG	N-CA	-6.47	1.37	1.46
6	5	164	ARG	CD-NE	6.47	1.55	1.46
12	B	739	A	C5'-C4'	6.47	1.61	1.51
12	B	457	A	O3'-P	-6.46	1.51	1.61
12	B	1116	G	C4'-O4'	6.46	1.55	1.45
13	C	100	ARG	CZ-NH2	6.46	1.41	1.33
23	M	38	ARG	CZ-NH2	6.46	1.41	1.33
18	H	27	ARG	CZ-NH1	6.46	1.41	1.32
12	B	1009	A	C5'-C4'	6.46	1.60	1.51
12	B	1490	A	C2'-C1'	-6.46	1.43	1.53
12	B	2602	A	O4'-C1'	-6.46	1.31	1.41
15	E	163	ASN	N-CA	-6.46	1.38	1.46
12	B	2464	G	O3'-P	-6.46	1.51	1.61
12	B	983	A	O4'-C1'	6.45	1.51	1.41
6	5	114	VAL	N-CA	-6.45	1.38	1.46
10	9	124	GLY	N-CA	-6.45	1.36	1.45
12	B	1708	C	C1'-N1	6.45	1.58	1.48
12	B	1098	A	O3'-P	-6.45	1.51	1.61
12	B	1427	A	C2'-C1'	-6.45	1.43	1.53
12	B	2746	U	C5'-C4'	6.45	1.60	1.51
12	B	466	A	O3'-P	-6.44	1.51	1.61
12	B	1032	A	C2'-C1'	-6.44	1.43	1.53
20	J	37	ARG	NE-CZ	6.44	1.40	1.33
12	B	850	U	C3'-O3'	6.44	1.51	1.42
12	B	1784	A	O3'-P	6.44	1.70	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	D	55	LYS	CA-C	-6.44	1.44	1.52
12	B	1122	G	C1'-N9	6.44	1.57	1.48
7	6	43	THR	C-N	6.44	1.42	1.33
12	B	509	C	C2'-C1'	-6.44	1.43	1.53
12	B	1102	C	C4'-O4'	6.44	1.55	1.45
12	B	933	A	O3'-P	-6.43	1.51	1.61
12	B	1073	A	C5'-C4'	6.43	1.60	1.51
12	B	2171	A	C4'-C3'	6.43	1.62	1.53
20	J	67	ASN	CA-CB	6.43	1.61	1.52
9	8	33	HIS	CA-C	-6.42	1.44	1.52
15	E	196	VAL	C-N	6.42	1.42	1.33
12	B	1116	G	C5'-C4'	6.42	1.60	1.51
12	B	2108	A	C5'-C4'	6.42	1.60	1.51
12	B	1221	C	O4'-C1'	6.42	1.51	1.41
12	B	2204	G	C2'-C1'	-6.41	1.43	1.53
10	9	139	ARG	CD-NE	6.41	1.55	1.46
12	B	1667	G	C2'-C1'	-6.41	1.43	1.53
12	B	118	A	P-O5'	-6.41	1.50	1.59
12	B	1064	C	C4'-C3'	6.41	1.62	1.52
33	Y	13	ARG	CZ-NH1	6.41	1.41	1.32
10	9	202	ARG	CA-C	-6.40	1.44	1.52
10	9	122	TRP	N-CA	-6.40	1.38	1.46
12	B	2815	C	C1'-N1	6.40	1.58	1.48
13	C	229	HIS	ND1-CE1	6.40	1.39	1.32
10	9	79	THR	CA-C	-6.39	1.44	1.52
12	B	797	G	C2'-C1'	-6.39	1.43	1.53
12	B	1010	A	P-O5'	-6.39	1.50	1.59
12	B	2063	C	O3'-P	-6.39	1.51	1.61
22	L	61	LEU	CA-C	-6.39	1.44	1.52
12	B	1546	G	C2'-C1'	-6.39	1.43	1.53
12	B	2795	C	O3'-P	-6.39	1.51	1.61
15	E	18	THR	CA-C	-6.39	1.44	1.52
5	4	43	ARG	CD-NE	6.38	1.55	1.46
29	S	44	ALA	N-CA	-6.38	1.39	1.46
12	B	485	C	C1'-N1	6.38	1.58	1.48
26	P	71	ARG	CD-NE	6.38	1.55	1.46
11	A	24	G	P-O5'	-6.38	1.50	1.59
13	C	181	ARG	NE-CZ	6.38	1.40	1.33
12	B	1787	A	C5'-C4'	6.38	1.60	1.51
20	J	95	ARG	CD-NE	6.38	1.55	1.46
12	B	1339	G	C4'-C3'	6.37	1.62	1.52
16	F	70	ARG	CA-C	-6.37	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	L	66	PHE	CA-CB	6.37	1.64	1.53
24	N	6	SER	C-N	6.37	1.44	1.33
26	P	59	THR	CA-C	-6.37	1.44	1.52
12	B	2573	C	C1'-N1	6.37	1.58	1.48
1	0	35	HIS	CA-C	-6.37	1.45	1.52
11	A	50	A	O5'-C5'	6.37	1.52	1.42
12	B	614	A	C5'-C4'	6.37	1.60	1.51
12	B	2621	G	C2'-C1'	-6.37	1.43	1.53
16	F	131	VAL	N-CA	-6.37	1.37	1.46
18	H	15	LEU	CA-C	-6.37	1.46	1.53
10	9	260	ARG	N-CA	-6.36	1.38	1.46
30	T	67	VAL	N-CA	-6.36	1.38	1.46
12	B	1685	C	C4'-O4'	6.36	1.55	1.45
18	H	144	VAL	N-CA	-6.36	1.39	1.46
18	H	38	PRO	N-CA	-6.36	1.39	1.47
8	7	42	HIS	ND1-CE1	6.36	1.39	1.32
12	B	1118	C	P-O5'	-6.36	1.50	1.59
12	B	1756	G	C5'-C4'	6.36	1.60	1.51
32	W	1	MET	C-N	6.36	1.41	1.33
12	B	290	U	C1'-N1	6.36	1.57	1.48
12	B	1464	G	C5'-C4'	6.36	1.60	1.51
12	B	1725	U	C5'-C4'	6.36	1.60	1.51
12	B	1784	A	C5'-C4'	6.36	1.60	1.51
12	B	2148	G	C5'-C4'	6.36	1.60	1.51
26	P	102	ARG	CA-C	-6.35	1.45	1.52
1	0	56	ARG	NE-CZ	6.35	1.40	1.33
3	2	35	VAL	CA-C	-6.35	1.44	1.52
8	7	46	LYS	CA-C	-6.35	1.45	1.52
12	B	1455	G	O4'-C1'	6.35	1.51	1.41
24	N	52	ILE	CA-CB	-6.35	1.46	1.54
3	2	24	LEU	N-CA	-6.35	1.38	1.46
12	B	293	U	O3'-P	-6.34	1.51	1.61
20	J	140	LEU	CA-CB	6.34	1.62	1.53
12	B	2884	U	C2'-C1'	6.34	1.62	1.53
13	C	262	THR	CA-C	6.34	1.61	1.52
14	D	170	VAL	C-O	6.34	1.31	1.24
17	G	43	LYS	C-N	6.34	1.42	1.33
12	B	2570	G	C1'-N9	6.34	1.57	1.48
10	9	260	ARG	NE-CZ	6.34	1.40	1.33
17	G	125	PRO	CA-C	-6.34	1.43	1.52
17	G	27	GLY	C-N	6.33	1.41	1.33
23	M	59	ARG	C-N	6.33	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2542	A	C1'-N9	6.33	1.56	1.47
15	E	157	LEU	N-CA	-6.33	1.38	1.46
23	M	103	TYR	N-CA	-6.33	1.36	1.46
12	B	580	U	C2'-C1'	-6.33	1.43	1.53
13	C	26	GLY	N-CA	-6.33	1.36	1.45
10	9	301	ALA	N-CA	-6.33	1.38	1.46
12	B	194	G	C2'-C1'	-6.33	1.43	1.53
12	B	1797	G	C2'-O2'	-6.33	1.32	1.42
12	B	309	A	C4'-C3'	6.32	1.62	1.52
32	W	18	ARG	CA-C	-6.32	1.44	1.52
4	3	28	SER	N-CA	-6.32	1.38	1.46
12	B	1595	C	C2'-C1'	-6.32	1.43	1.53
26	P	16	VAL	CA-C	-6.32	1.46	1.52
12	B	768	G	C4'-C3'	-6.32	1.43	1.52
12	B	898	C	C3'-C2'	-6.32	1.43	1.52
12	B	1860	G	C3'-C2'	-6.32	1.43	1.52
20	J	91	GLU	N-CA	-6.32	1.38	1.46
13	C	131	MET	CA-C	-6.31	1.45	1.53
12	B	953	G	O5'-C5'	6.31	1.51	1.42
17	G	54	ARG	CA-CB	6.31	1.63	1.53
33	Y	69	GLU	CA-C	-6.31	1.44	1.52
12	B	1008	A	O4'-C1'	-6.30	1.32	1.42
14	D	152	PRO	CA-CB	-6.30	1.44	1.53
30	T	38	ALA	CA-C	-6.30	1.45	1.53
21	K	47	ILE	CA-CB	6.30	1.62	1.54
4	3	11	LYS	N-CA	6.30	1.54	1.46
17	G	91	VAL	N-CA	-6.30	1.38	1.46
12	B	1184	U	C2'-C1'	-6.29	1.44	1.53
12	B	729	G	O3'-P	-6.29	1.51	1.61
12	B	2462	C	C3'-O3'	6.29	1.51	1.42
12	B	1075	C	O3'-P	-6.29	1.51	1.61
28	R	14	VAL	CA-C	-6.29	1.44	1.52
6	5	146	THR	CA-C	-6.29	1.46	1.52
12	B	979	A	C5'-C4'	6.29	1.60	1.51
14	D	40	LEU	CA-CB	6.28	1.64	1.53
11	A	70	C	C5'-C4'	6.28	1.60	1.51
13	C	252	LYS	CA-C	-6.28	1.44	1.52
18	H	90	LEU	CA-C	-6.28	1.45	1.52
12	B	1678	A	P-O5'	-6.28	1.50	1.59
11	A	17	C	C3'-C2'	-6.28	1.43	1.52
11	A	31	C	C1'-N1	6.28	1.57	1.48
14	D	182	ALA	CA-CB	6.28	1.63	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	J	109	LEU	N-CA	-6.28	1.40	1.45
21	K	54	LYS	C-N	6.28	1.42	1.33
16	F	155	ILE	CA-C	-6.28	1.45	1.53
2	1	17	GLU	N-CA	-6.27	1.38	1.46
12	B	443	A	C1'-N9	-6.27	1.38	1.48
12	B	2426	A	C2'-C1'	-6.27	1.43	1.53
5	4	52	LYS	C-N	-6.27	1.24	1.33
12	B	51	G	C1'-N9	-6.27	1.37	1.47
17	G	162	ARG	CZ-NH1	6.27	1.41	1.32
12	B	1493	C	O3'-P	-6.27	1.51	1.61
17	G	169	ARG	N-CA	-6.26	1.38	1.46
28	R	101	ILE	C-N	6.26	1.41	1.33
12	B	982	C	C2'-C1'	6.26	1.62	1.53
12	B	2762	C	C3'-C2'	-6.26	1.43	1.52
9	8	24	ARG	C-N	6.26	1.42	1.33
23	M	59	ARG	CZ-NH1	6.26	1.41	1.32
12	B	2401	U	C4'-C3'	-6.26	1.43	1.53
12	B	2805	C	O4'-C1'	-6.26	1.32	1.41
6	5	164	ARG	NE-CZ	6.25	1.40	1.33
12	B	276	U	O3'-P	-6.25	1.51	1.61
20	J	131	ASN	CA-C	-6.25	1.46	1.53
22	L	33	ARG	CD-NE	6.25	1.54	1.46
11	A	101	A	O3'-P	-6.25	1.51	1.61
12	B	1120	G	C5'-C4'	6.24	1.60	1.51
12	B	1128	G	C2'-C1'	-6.24	1.43	1.53
12	B	2100	G	P-O5'	-6.24	1.50	1.59
12	B	500	G	C5'-C4'	6.24	1.60	1.51
12	B	1945	G	C1'-N9	6.24	1.57	1.48
14	D	178	VAL	CA-C	-6.24	1.46	1.52
6	5	142	VAL	CA-C	6.24	1.61	1.52
11	A	34	A	O3'-P	6.24	1.70	1.61
12	B	1708	C	P-O5'	-6.24	1.50	1.59
6	5	173	THR	C-N	6.24	1.42	1.33
12	B	729	G	C2'-C1'	-6.24	1.44	1.53
12	B	1573	G	O5'-C5'	6.24	1.51	1.42
26	P	38	ARG	CD-NE	6.24	1.54	1.46
6	5	71	ARG	CZ-NH1	6.23	1.41	1.32
9	8	19	ARG	CD-NE	6.23	1.54	1.46
16	F	173	ASP	N-CA	-6.23	1.38	1.46
13	C	216	ARG	CZ-NH1	6.23	1.41	1.32
11	A	97	C	O5'-C5'	6.23	1.51	1.42
6	5	210	LYS	N-CA	-6.22	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2863	C	C3'-O3'	6.22	1.51	1.42
14	D	51	THR	N-CA	6.22	1.53	1.46
8	7	45	PRO	C-N	6.22	1.42	1.33
12	B	2136	G	P-O5'	-6.22	1.50	1.59
12	B	2356	U	O4'-C1'	6.22	1.50	1.41
12	B	2211	A	C5'-C4'	6.22	1.60	1.51
17	G	113	ASP	CA-C	-6.22	1.45	1.52
24	N	85	PRO	CA-C	-6.21	1.46	1.52
11	A	23	G	C1'-N9	6.21	1.57	1.48
14	D	54	ALA	CA-C	-6.21	1.45	1.52
1	0	40	GLU	CA-C	-6.21	1.44	1.52
2	1	53	VAL	CA-C	6.21	1.60	1.52
29	S	4	ILE	CA-C	-6.21	1.45	1.52
15	E	181	ILE	CA-CB	-6.21	1.46	1.54
14	D	33	ARG	CD-NE	6.20	1.54	1.46
28	R	96	VAL	CA-C	-6.20	1.45	1.52
12	B	512	G	C2'-C1'	-6.20	1.44	1.53
12	B	2570	G	C2'-C1'	-6.20	1.44	1.53
21	K	3	GLN	CA-C	-6.20	1.45	1.52
24	N	23	ASN	CA-CB	6.20	1.63	1.53
24	N	77	ALA	C-N	6.20	1.42	1.33
3	2	51	SER	CA-CB	6.20	1.63	1.53
12	B	636	G	C2-N3	6.20	1.45	1.32
12	B	1549	A	C2'-C1'	-6.20	1.44	1.53
12	B	2819	G	C2'-C1'	-6.20	1.44	1.53
12	B	333	G	O4'-C1'	6.19	1.50	1.41
12	B	1733	G	P-O5'	-6.19	1.50	1.59
12	B	1798	U	C4'-C3'	6.19	1.61	1.52
17	G	54	ARG	C-N	6.19	1.42	1.33
12	B	1694	C	C4'-C3'	6.19	1.62	1.53
12	B	560	C	O3'-P	-6.19	1.51	1.61
28	R	78	ARG	N-CA	6.19	1.53	1.46
12	B	122	G	P-O5'	-6.19	1.50	1.59
12	B	2321	U	C1'-N1	6.19	1.57	1.48
12	B	31	C	C1'-N1	6.18	1.57	1.48
12	B	1670	C	C4'-C3'	6.18	1.61	1.52
17	G	22	VAL	CA-CB	-6.18	1.46	1.54
12	B	210	C	C2'-O2'	-6.18	1.33	1.42
12	B	1267	U	P-O5'	-6.18	1.50	1.59
12	B	1735	A	C1'-N9	6.18	1.57	1.48
12	B	2473	U	C2'-C1'	-6.18	1.44	1.53
12	B	409	G	C5'-C4'	6.18	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	687	C	C2'-C1'	-6.18	1.44	1.53
12	B	1740	G	O5'-C5'	6.18	1.51	1.42
12	B	1958	C	O3'-P	-6.18	1.51	1.61
12	B	649	G	C4'-C3'	6.17	1.61	1.52
12	B	1422	G	C4'-C3'	6.17	1.61	1.52
12	B	2401	U	C2'-C1'	-6.17	1.43	1.53
12	B	2722	G	C2'-C1'	-6.17	1.44	1.53
12	B	1501	G	C6-N1	6.17	1.51	1.39
12	B	2833	U	C5'-C4'	6.17	1.60	1.51
12	B	1417	C	O4'-C1'	-6.17	1.32	1.41
12	B	1685	C	O4'-C1'	6.17	1.50	1.41
12	B	2111	U	O4'-C1'	-6.17	1.32	1.41
12	B	2565	A	C1'-N9	-6.17	1.38	1.48
12	B	69	C	C5'-C4'	6.17	1.60	1.51
3	2	30	ARG	CZ-NH1	6.17	1.41	1.32
12	B	2704	C	C1'-N1	6.17	1.57	1.48
6	5	142	VAL	CA-CB	-6.17	1.45	1.54
14	D	183	GLU	CA-C	-6.17	1.44	1.52
15	E	175	ILE	CA-CB	-6.17	1.46	1.54
12	B	917	A	C5'-C4'	6.16	1.60	1.51
12	B	1337	G	C3'-O3'	6.16	1.51	1.42
12	B	669	G	C5'-C4'	6.16	1.60	1.51
12	B	1256	G	C3'-O3'	6.16	1.51	1.42
12	B	1867	G	C4'-O4'	6.16	1.54	1.45
12	B	2225	A	N7-C5	-6.16	1.26	1.39
12	B	1095	A	C5'-C4'	6.16	1.60	1.51
12	B	860	U	C5'-C4'	6.15	1.60	1.51
15	E	56	GLY	C-N	6.15	1.41	1.33
16	F	136	ILE	CA-CB	-6.15	1.46	1.54
10	9	244	LEU	C-N	-6.15	1.25	1.33
24	N	22	ARG	CD-NE	6.15	1.54	1.46
27	Q	101	ASP	CA-C	-6.15	1.44	1.52
29	S	24	ILE	C-N	6.15	1.42	1.33
12	B	1880	U	O5'-C5'	6.15	1.51	1.42
33	Y	75	ASN	C-N	6.14	1.42	1.33
12	B	2769	U	O3'-P	-6.14	1.51	1.61
12	B	616	A	C3'-C2'	-6.14	1.43	1.52
12	B	310	A	O3'-P	-6.14	1.51	1.61
12	B	2334	U	C2'-C1'	-6.14	1.43	1.53
12	B	933	A	C4'-O4'	-6.14	1.36	1.45
14	D	172	VAL	CA-CB	6.14	1.62	1.54
12	B	687	C	O4'-C1'	6.13	1.50	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	F	147	ARG	CZ-NH1	6.13	1.41	1.32
12	B	133	U	C1'-N1	6.13	1.57	1.48
4	3	39	ARG	C-N	6.13	1.42	1.33
10	9	284	LYS	N-CA	-6.13	1.38	1.46
12	B	1358	G	O3'-P	-6.13	1.51	1.61
21	K	91	SER	CA-C	6.13	1.60	1.52
12	B	128	C	O3'-P	-6.13	1.51	1.61
12	B	1097	U	C5'-C4'	6.13	1.60	1.51
21	K	18	ARG	CZ-NH2	6.13	1.41	1.33
12	B	1095	A	C2'-C1'	-6.12	1.44	1.53
12	B	1311	G	C2'-C1'	-6.12	1.43	1.53
25	O	34	HIS	ND1-CE1	6.12	1.38	1.32
12	B	2743	U	O3'-P	-6.12	1.51	1.61
12	B	2096	C	P-O5'	-6.12	1.50	1.59
12	B	1742	U	C2'-C1'	-6.11	1.44	1.53
12	B	2220	U	C4'-O4'	6.11	1.54	1.45
5	4	18	HIS	ND1-CE1	6.11	1.38	1.32
10	9	27	LYS	CA-CB	6.11	1.62	1.53
12	B	1972	G	P-O5'	-6.11	1.50	1.59
12	B	2186	G	C5'-C4'	6.11	1.60	1.51
25	O	100	HIS	CB-CG	6.11	1.58	1.50
24	N	22	ARG	CA-CB	-6.11	1.43	1.53
12	B	2034	U	C3'-C2'	-6.11	1.43	1.52
12	B	1028	A	C2'-C1'	-6.10	1.44	1.53
14	D	74	GLU	C-N	6.10	1.42	1.33
14	D	118	PHE	C-N	6.10	1.41	1.33
27	Q	56	PHE	CA-CB	6.10	1.63	1.53
12	B	2615	U	C4'-C3'	-6.10	1.43	1.52
12	B	354	A	C4'-O4'	6.10	1.54	1.45
13	C	210	ALA	N-CA	-6.10	1.38	1.46
15	E	35	TYR	CZ-OH	6.10	1.50	1.38
12	B	361	G	C3'-O3'	6.10	1.51	1.42
12	B	368	A	C2'-C1'	-6.10	1.44	1.53
12	B	203	A	C4'-O4'	6.09	1.54	1.45
12	B	2427	C	C5'-C4'	6.09	1.60	1.51
6	5	77	VAL	C-N	6.09	1.42	1.33
17	G	6	ALA	N-CA	-6.09	1.40	1.46
26	P	3	ILE	CA-C	-6.09	1.45	1.53
8	7	32	LEU	CA-CB	6.09	1.63	1.53
12	B	530	G	P-O5'	-6.09	1.50	1.59
12	B	2483	C	C5'-C4'	6.09	1.60	1.51
2	1	12	GLU	C-N	6.09	1.42	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	1008	A	C3'-C2'	-6.09	1.43	1.52
12	B	2486	C	C5'-C4'	6.09	1.60	1.51
15	E	181	ILE	C-N	6.09	1.41	1.33
12	B	2690	U	C5'-C4'	6.09	1.60	1.51
12	B	2485	G	C5'-C4'	6.08	1.60	1.51
12	B	157	C	C1'-N1	6.08	1.57	1.48
12	B	891	G	N9-C4	-6.08	1.25	1.38
12	B	1388	G	C4'-C3'	-6.08	1.43	1.52
12	B	2868	A	O3'-P	-6.08	1.52	1.61
13	C	259	ASN	CA-CB	6.08	1.63	1.53
20	J	80	HIS	CB-CG	6.08	1.58	1.50
12	B	1772	A	O3'-P	-6.08	1.52	1.61
10	9	7	ALA	CA-C	-6.08	1.45	1.52
13	C	189	ALA	C-N	6.08	1.42	1.33
25	O	16	ARG	NE-CZ	6.08	1.39	1.33
12	B	40	U	C1'-N1	6.08	1.57	1.48
12	B	713	G	C4'-C3'	-6.08	1.43	1.52
12	B	2031	A	C5'-C4'	6.08	1.60	1.51
12	B	2808	G	C2'-C1'	-6.08	1.44	1.53
20	J	77	HIS	CE1-NE2	6.08	1.38	1.32
17	G	23	ILE	N-CA	-6.07	1.38	1.46
26	P	49	ILE	CA-C	-6.07	1.44	1.52
6	5	168	ASN	N-CA	-6.07	1.39	1.46
2	1	23	ARG	NE-CZ	6.07	1.39	1.33
12	B	808	G	O3'-P	-6.07	1.52	1.61
13	C	269	ARG	CD-NE	6.07	1.54	1.46
17	G	152	ARG	CZ-NH1	6.07	1.41	1.32
11	A	38	C	C3'-O3'	6.07	1.51	1.42
12	B	1953	A	C3'-O3'	6.07	1.51	1.42
17	G	171	LYS	CA-C	-6.07	1.47	1.53
27	Q	57	ARG	NE-CZ	6.07	1.39	1.33
12	B	1160	G	O5'-C5'	6.07	1.51	1.42
10	9	267	GLU	C-N	6.06	1.41	1.33
12	B	1167	C	C5'-C4'	6.06	1.60	1.51
12	B	2449	U	C1'-N1	6.06	1.56	1.47
12	B	835	C	C3'-C2'	-6.06	1.43	1.52
12	B	1044	C	O3'-P	-6.06	1.52	1.61
15	E	130	LYS	N-CA	-6.06	1.38	1.46
12	B	147	C	C4'-O4'	-6.06	1.36	1.45
28	R	64	VAL	C-N	6.06	1.42	1.33
32	W	24	ASN	CA-C	-6.05	1.44	1.52
24	N	71	ARG	NE-CZ	6.05	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	A	41	G	O5'-C5'	6.05	1.51	1.42
8	7	12	ARG	NE-CZ	6.05	1.39	1.33
12	B	25	U	C2'-C1'	-6.05	1.44	1.53
6	5	231	ALA	N-CA	-6.05	1.38	1.46
12	B	27	G	C5'-C4'	6.05	1.60	1.51
12	B	748	G	C1'-N9	-6.05	1.38	1.48
12	B	912	C	C4'-O4'	-6.04	1.36	1.45
30	T	93	LEU	C-N	-6.04	1.24	1.33
12	B	2752	C	O5'-C5'	6.04	1.51	1.42
16	F	136	ILE	CA-C	-6.04	1.45	1.52
12	B	1790	C	O3'-P	-6.04	1.52	1.61
14	D	141	ARG	NE-CZ	6.04	1.39	1.33
10	9	76	ARG	CZ-NH1	6.04	1.41	1.32
12	B	639	U	P-O5'	-6.04	1.50	1.59
12	B	1870	C	O3'-P	-6.04	1.52	1.61
12	B	2305	U	O3'-P	-6.04	1.52	1.61
18	H	18	GLN	CA-CB	6.04	1.60	1.53
22	L	65	GLY	C-N	6.04	1.40	1.33
12	B	651	G	C2'-O2'	-6.04	1.33	1.42
15	E	69	ARG	NE-CZ	6.04	1.39	1.33
12	B	2155	U	C5'-C4'	6.03	1.60	1.51
33	Y	60	ALA	C-N	6.03	1.44	1.33
12	B	2389	G	C2'-C1'	-6.03	1.44	1.53
12	B	2901	C	C4'-C3'	6.03	1.61	1.52
13	C	52	HIS	C-N	6.03	1.41	1.33
24	N	34	ILE	N-CA	6.03	1.53	1.46
12	B	1527	G	C5'-C4'	6.03	1.60	1.51
3	2	46	MET	C-N	6.03	1.41	1.33
12	B	991	C	O3'-P	-6.03	1.52	1.61
12	B	1180	U	P-O5'	-6.03	1.50	1.59
12	B	2877	G	C3'-O3'	-6.03	1.33	1.42
16	F	134	GLN	CA-C	-6.03	1.44	1.52
12	B	574	A	O4'-C1'	6.02	1.50	1.42
12	B	817	C	C4'-O4'	6.02	1.54	1.45
12	B	1348	C	C2'-C1'	-6.02	1.44	1.53
20	J	2	LYS	CA-C	-6.02	1.45	1.52
17	G	120	ILE	CA-CB	-6.02	1.46	1.54
12	B	890	C	C2'-C1'	-6.02	1.44	1.53
12	B	632	A	C3'-C2'	-6.01	1.43	1.52
12	B	463	G	P-O5'	-6.01	1.50	1.59
12	B	1257	C	P-O5'	-6.01	1.50	1.59
12	B	2513	A	C5'-C4'	6.01	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	9	155	GLU	N-CA	-6.01	1.38	1.46
12	B	174	U	O3'-P	-6.01	1.52	1.61
12	B	2532	G	P-O5'	-6.01	1.50	1.59
14	D	1	MET	CA-CB	6.01	1.65	1.53
6	5	161	VAL	CA-CB	-6.01	1.46	1.54
12	B	895	U	C2-N3	6.01	1.49	1.37
10	9	40	GLY	C-N	6.00	1.38	1.33
10	9	122	TRP	CZ2-CH2	6.00	1.48	1.37
12	B	149	A	C5'-C4'	6.00	1.60	1.51
12	B	1737	G	C4'-O4'	-6.00	1.36	1.45
12	B	2291	U	C2-N3	6.00	1.49	1.37
12	B	2401	U	C1'-N1	6.00	1.56	1.47
29	S	9	HIS	C-N	6.00	1.41	1.33
25	O	5	SER	N-CA	-6.00	1.39	1.46
28	R	39	LEU	CA-CB	6.00	1.63	1.53
12	B	836	G	C4'-C3'	6.00	1.61	1.52
12	B	1086	A	C2'-C1'	-6.00	1.44	1.53
12	B	724	U	O3'-P	-6.00	1.52	1.61
19	I	78	LEU	N-CA	-6.00	1.39	1.46
20	J	16	TYR	N-CA	-6.00	1.38	1.45
22	L	47	ARG	CA-C	-6.00	1.45	1.52
24	N	30	ARG	C-N	6.00	1.42	1.33
10	9	259	ALA	C-N	5.99	1.42	1.33
12	B	2373	G	C2'-C1'	-5.99	1.44	1.53
12	B	2494	G	C3'-O3'	5.99	1.51	1.42
18	H	110	VAL	CA-CB	-5.99	1.48	1.54
12	B	2018	G	C4'-O4'	5.99	1.54	1.45
20	J	77	HIS	CA-C	-5.99	1.46	1.52
12	B	1048	A	O4'-C1'	5.99	1.50	1.41
13	C	62	ARG	CZ-NH1	5.99	1.41	1.32
14	D	56	LYS	CA-C	-5.99	1.45	1.52
14	D	134	HIS	ND1-CE1	5.99	1.38	1.32
16	F	149	ARG	CD-NE	5.99	1.54	1.46
12	B	720	U	O3'-P	-5.99	1.52	1.61
10	9	134	VAL	C-O	-5.98	1.17	1.24
12	B	1013	C	C2'-C1'	-5.98	1.44	1.53
12	B	1028	A	O4'-C1'	5.98	1.50	1.41
12	B	2177	C	O5'-C5'	5.98	1.51	1.42
22	L	35	HIS	CA-C	-5.98	1.45	1.52
12	B	1647	U	C5'-C4'	5.98	1.60	1.51
12	B	1763	G	C5'-C4'	5.98	1.60	1.51
31	U	25	LYS	CA-C	-5.98	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	1	7	ARG	CA-C	-5.98	1.44	1.52
12	B	2527	C	C5'-C4'	5.98	1.60	1.51
17	G	11	PRO	CA-C	-5.98	1.44	1.52
20	J	120	ARG	CD-NE	5.98	1.54	1.46
12	B	322	A	C5'-C4'	5.97	1.60	1.51
12	B	764	A	C1'-N9	5.97	1.55	1.47
12	B	1671	U	C5'-C4'	5.97	1.60	1.51
22	L	93	ASN	CA-C	-5.97	1.44	1.52
30	T	3	ARG	NE-CZ	5.97	1.39	1.33
12	B	1896	G	C3'-C2'	-5.97	1.43	1.52
19	I	78	LEU	CB-CG	5.97	1.65	1.53
21	K	18	ARG	CD-NE	5.97	1.54	1.46
22	L	73	ILE	CA-CB	-5.97	1.46	1.54
1	0	46	VAL	CA-CB	5.96	1.62	1.54
12	B	1794	A	C2'-C1'	-5.96	1.44	1.53
18	H	8	LYS	N-CA	-5.96	1.39	1.46
21	K	98	ARG	CZ-NH2	5.96	1.41	1.33
12	B	86	G	C4'-O4'	-5.96	1.36	1.45
10	9	259	ALA	N-CA	-5.96	1.39	1.46
12	B	1350	C	C4'-C3'	5.96	1.61	1.52
12	B	1426	G	C2'-C1'	-5.95	1.44	1.53
12	B	1570	A	O5'-C5'	5.95	1.51	1.42
12	B	2288	A	C6-N6	5.95	1.45	1.33
24	N	69	ARG	N-CA	-5.95	1.38	1.46
9	8	6	SER	C-O	-5.95	1.17	1.23
31	U	24	VAL	C-N	5.95	1.41	1.33
4	3	15	ARG	NE-CZ	5.95	1.39	1.33
12	B	1941	C	O3'-P	-5.95	1.52	1.61
12	B	2584	U	O5'-C5'	-5.95	1.33	1.42
33	Y	28	GLU	C-N	5.95	1.42	1.33
10	9	113	GLN	CA-C	-5.95	1.45	1.52
12	B	2818	U	C4'-C3'	5.95	1.61	1.52
24	N	103	ARG	NE-CZ	5.95	1.39	1.33
10	9	162	VAL	CA-C	-5.94	1.45	1.52
12	B	1090	A	C5'-C4'	5.94	1.60	1.51
13	C	39	SER	CA-C	-5.94	1.47	1.52
10	9	176	ILE	C-O	-5.94	1.17	1.24
12	B	1911	U	C5'-C4'	5.94	1.60	1.51
18	H	103	VAL	C-O	-5.94	1.17	1.23
3	2	33	HIS	ND1-CE1	5.94	1.38	1.32
12	B	893	C	C2'-C1'	-5.94	1.44	1.53
12	B	1651	G	C4'-O4'	-5.94	1.36	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2335	A	C5'-C4'	5.94	1.60	1.51
12	B	500	G	C4'-C3'	5.94	1.61	1.52
12	B	722	A	C4'-C3'	-5.94	1.43	1.52
12	B	2258	C	C1'-N1	5.94	1.56	1.47
16	F	68	LYS	C-N	5.94	1.41	1.33
24	N	83	LEU	CA-C	5.94	1.59	1.52
31	U	42	LYS	N-CA	-5.93	1.39	1.46
12	B	328	U	C2'-C1'	-5.93	1.44	1.53
12	B	539	G	C4'-C3'	5.93	1.61	1.52
18	H	97	ARG	N-CA	-5.93	1.38	1.46
11	A	19	C	C4'-C3'	5.93	1.61	1.52
12	B	587	C	C2'-C1'	-5.93	1.44	1.53
32	W	62	THR	C-N	5.93	1.40	1.33
10	9	311	TYR	CA-C	-5.93	1.45	1.52
7	6	29	GLN	C-N	5.93	1.41	1.33
5	4	28	THR	CB-OG1	-5.92	1.34	1.43
12	B	1538	G	C2-N3	5.92	1.44	1.32
12	B	2778	A	O3'-P	-5.92	1.52	1.61
13	C	5	CYS	CA-C	-5.92	1.45	1.53
18	H	28	ASN	CG-ND2	5.92	1.45	1.33
10	9	50	ASP	C-N	5.92	1.41	1.33
12	B	926	G	C4'-C3'	5.92	1.61	1.52
12	B	1344	U	C1'-N1	5.92	1.56	1.47
26	P	50	ARG	CD-NE	5.92	1.54	1.46
12	B	1841	U	C5'-C4'	5.92	1.60	1.51
12	B	2133	G	C5'-C4'	5.92	1.60	1.51
10	9	260	ARG	CA-C	-5.92	1.45	1.52
15	E	13	THR	N-CA	-5.91	1.38	1.46
32	W	78	GLN	CA-C	-5.91	1.45	1.53
12	B	1293	C	C1'-N1	5.91	1.57	1.48
12	B	1935	G	O4'-C1'	-5.91	1.32	1.41
6	5	84	ALA	N-CA	-5.91	1.39	1.46
12	B	365	U	C3'-C2'	5.91	1.61	1.52
12	B	747	U	P-O5'	-5.91	1.50	1.59
12	B	2859	G	P-O5'	-5.91	1.50	1.59
1	0	35	HIS	C-N	5.91	1.42	1.33
6	5	226	GLN	C-N	5.91	1.41	1.33
11	A	36	C	O5'-C5'	5.91	1.51	1.42
12	B	929	U	C2'-C1'	-5.91	1.44	1.53
12	B	2027	G	O3'-P	-5.91	1.52	1.61
12	B	2859	G	C3'-C2'	5.91	1.61	1.52
17	G	29	ASN	C-N	5.90	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	1615	C	C4'-O4'	5.90	1.54	1.45
6	5	80	GLN	N-CA	5.90	1.53	1.46
12	B	476	G	C5'-C4'	5.90	1.60	1.51
27	Q	5	ARG	CD-NE	5.90	1.54	1.46
12	B	1213	A	C4'-C3'	5.90	1.61	1.52
23	M	111	GLU	C-N	5.90	1.41	1.33
12	B	592	A	O3'-P	-5.90	1.52	1.61
12	B	1528	A	C3'-O3'	5.90	1.50	1.42
12	B	433	C	C4'-O4'	-5.89	1.36	1.45
12	B	1054	A	C4'-C3'	-5.89	1.43	1.52
12	B	2174	C	C4-N4	5.89	1.45	1.33
15	E	107	SER	CA-CB	5.89	1.62	1.53
26	P	61	ARG	NE-CZ	5.89	1.39	1.33
12	B	1297	C	C5'-C4'	5.89	1.60	1.51
12	B	2199	A	C2'-C1'	-5.89	1.44	1.53
12	B	332	A	O3'-P	-5.89	1.52	1.61
12	B	206	U	O4'-C1'	5.89	1.50	1.41
12	B	455	C	C1'-N1	5.89	1.56	1.47
29	S	52	GLU	N-CA	-5.89	1.39	1.46
20	J	93	ILE	CA-CB	-5.89	1.46	1.54
33	Y	58	LEU	CA-C	-5.89	1.44	1.52
12	B	240	C	C5'-C4'	5.88	1.60	1.51
12	B	779	U	C1'-N1	5.88	1.57	1.48
12	B	1522	A	C2'-C1'	-5.88	1.44	1.53
12	B	2697	G	C2'-C1'	-5.88	1.44	1.53
12	B	2894	G	C2'-C1'	5.88	1.61	1.53
12	B	2231	U	P-O5'	-5.88	1.50	1.59
12	B	1390	U	C2'-C1'	-5.88	1.44	1.53
14	D	36	GLN	CD-NE2	5.88	1.45	1.33
4	3	13	GLY	CA-C	-5.88	1.44	1.52
7	6	35	ARG	CZ-NH1	5.88	1.41	1.32
24	N	15	SER	CA-C	-5.88	1.45	1.52
13	C	145	MET	C-N	5.87	1.40	1.33
14	D	132	ALA	N-CA	-5.87	1.38	1.46
16	F	68	LYS	N-CA	-5.87	1.38	1.45
18	H	24	GLY	CA-C	-5.87	1.43	1.51
24	N	107	ASN	CA-CB	5.87	1.60	1.53
12	B	824	U	O3'-P	-5.87	1.52	1.61
12	B	57	C	C2'-C1'	-5.87	1.44	1.53
12	B	47	C	C2'-C1'	-5.87	1.44	1.53
12	B	610	C	C1'-N1	5.87	1.57	1.48
13	C	14	HIS	CD2-NE2	5.87	1.44	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
13	C	242	HIS	ND1-CE1	5.87	1.38	1.32
8	7	48	MET	CA-C	-5.87	1.45	1.53
13	C	202	ARG	CZ-NH1	5.87	1.41	1.32
12	B	1482	G	C3'-C2'	-5.86	1.44	1.52
12	B	1803	A	O3'-P	-5.86	1.52	1.61
2	1	18	LEU	CA-C	-5.86	1.44	1.52
12	B	2049	G	N1-C2	5.86	1.49	1.37
33	Y	62	ALA	CA-C	-5.86	1.45	1.52
11	A	12	C	C2'-C1'	-5.86	1.44	1.53
12	B	25	U	C4'-C3'	5.86	1.61	1.52
12	B	2594	C	C1'-N1	5.86	1.57	1.48
15	E	162	ARG	CZ-NH1	5.86	1.41	1.32
12	B	632	A	O3'-P	-5.86	1.52	1.61
12	B	2253	G	C2'-C1'	-5.86	1.44	1.53
12	B	2661	G	C2'-C1'	-5.86	1.44	1.53
12	B	529	A	C1'-N9	5.85	1.55	1.47
12	B	1913	A	O5'-C5'	5.85	1.51	1.42
13	C	67	LYS	C-N	5.85	1.42	1.33
29	S	9	HIS	CA-CB	-5.85	1.44	1.53
7	6	12	ARG	CD-NE	5.85	1.54	1.46
12	B	2230	G	C2'-C1'	-5.85	1.44	1.53
23	M	13	HIS	CA-C	-5.85	1.45	1.53
12	B	2295	C	O4'-C1'	5.85	1.50	1.41
12	B	2406	A	C5'-C4'	5.85	1.60	1.51
19	I	133	ARG	CA-CB	5.85	1.62	1.53
12	B	2265	U	C1'-N1	5.85	1.57	1.48
13	C	157	ALA	C-N	5.84	1.40	1.33
12	B	2266	A	C2'-C1'	-5.84	1.44	1.53
12	B	699	A	C2'-O2'	-5.84	1.33	1.42
12	B	1225	G	C3'-C2'	-5.84	1.44	1.52
12	B	945	A	C5'-C4'	5.84	1.60	1.51
29	S	102	HIS	N-CA	-5.84	1.39	1.46
1	0	73	ARG	CD-NE	5.84	1.54	1.46
22	L	110	VAL	CA-CB	-5.84	1.47	1.54
28	R	68	ARG	NE-CZ	5.84	1.39	1.33
11	A	68	C	C2'-C1'	-5.83	1.44	1.53
12	B	1095	A	P-O5'	5.83	1.68	1.59
12	B	2885	G	C1'-N9	-5.83	1.39	1.48
12	B	1669	A	P-O5'	-5.83	1.51	1.59
28	R	84	ARG	CZ-NH2	5.83	1.41	1.33
30	T	52	GLU	N-CA	-5.83	1.38	1.46
11	A	16	G	C3'-O3'	5.83	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2153	C	C2'-C1'	-5.83	1.44	1.53
12	B	2305	U	O5'-C5'	5.83	1.51	1.42
10	9	40	GLY	N-CA	-5.82	1.36	1.45
12	B	65	U	C1'-N1	5.82	1.57	1.48
12	B	2313	C	O3'-P	-5.82	1.52	1.61
12	B	190	A	C2'-C1'	-5.82	1.44	1.53
6	5	172	HIS	N-CA	-5.82	1.38	1.46
18	H	132	PHE	C-N	5.82	1.41	1.33
12	B	595	C	O5'-C5'	5.82	1.51	1.42
12	B	854	C	C3'-O3'	5.82	1.50	1.42
24	N	30	ARG	NE-CZ	5.82	1.39	1.33
12	B	2214	C	C5'-C4'	5.82	1.59	1.51
32	W	32	GLY	CA-C	-5.82	1.43	1.51
5	4	43	ARG	CA-CB	5.82	1.63	1.53
12	B	900	A	P-O5'	-5.82	1.51	1.59
12	B	2467	C	O3'-P	-5.82	1.52	1.61
28	R	22	LEU	C-N	5.82	1.41	1.33
12	B	22	C	C5'-C4'	5.81	1.59	1.51
23	M	33	LEU	C-N	5.81	1.41	1.33
12	B	2481	G	C3'-O3'	5.81	1.50	1.42
12	B	632	A	C4'-C3'	5.81	1.61	1.52
12	B	764	A	O5'-C5'	5.81	1.51	1.42
12	B	30	G	C2-N3	5.81	1.44	1.32
12	B	1107	G	C5'-C4'	-5.81	1.42	1.51
12	B	2556	C	P-O5'	-5.81	1.51	1.59
18	H	86	ASP	CA-C	5.81	1.60	1.52
12	B	1168	G	C4'-C3'	-5.81	1.43	1.52
13	C	213	ARG	CZ-NH2	5.81	1.41	1.33
29	S	95	ARG	NE-CZ	5.81	1.39	1.33
20	J	45	THR	C-O	-5.81	1.16	1.24
11	A	73	A	C3'-C2'	-5.80	1.44	1.52
1	0	62	GLY	CA-C	-5.80	1.43	1.51
12	B	1324	G	O4'-C1'	5.80	1.50	1.42
33	Y	9	THR	C-N	5.80	1.41	1.33
12	B	1201	U	C4'-C3'	5.80	1.61	1.52
14	D	3	GLY	C-N	5.80	1.41	1.33
17	G	139	VAL	CA-C	-5.80	1.46	1.52
12	B	1597	A	O4'-C1'	-5.79	1.32	1.41
12	B	1982	U	C3'-C2'	-5.79	1.44	1.52
11	A	31	C	O3'-P	-5.79	1.52	1.61
22	L	138	ALA	N-CA	-5.79	1.39	1.46
29	S	107	VAL	C-N	5.79	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	3	VAL	C-N	5.79	1.42	1.33
6	5	57	GLN	CA-C	-5.79	1.45	1.52
11	A	78	A	P-O5'	-5.79	1.51	1.59
12	B	715	A	C1'-N9	5.79	1.56	1.48
12	B	715	A	C5'-C4'	5.79	1.59	1.51
13	C	69	ASN	C-N	5.79	1.41	1.33
19	I	82	ALA	CA-C	5.79	1.60	1.52
5	4	27	ARG	NE-CZ	5.79	1.39	1.33
11	A	32	U	P-O5'	-5.79	1.51	1.59
12	B	204	A	P-O5'	-5.79	1.51	1.59
12	B	370	G	O3'-P	-5.78	1.52	1.61
12	B	1995	U	C1'-N1	5.78	1.57	1.48
26	P	69	VAL	N-CA	-5.78	1.39	1.46
1	0	46	VAL	N-CA	-5.78	1.39	1.46
5	4	47	ILE	C-N	5.78	1.41	1.33
32	W	39	ALA	CA-C	-5.78	1.45	1.52
12	B	387	U	O3'-P	-5.78	1.52	1.61
12	B	2861	U	P-O5'	-5.78	1.51	1.59
14	D	135	GLY	CA-C	-5.78	1.44	1.52
24	N	79	LEU	CA-C	5.78	1.60	1.52
12	B	1582	C	C5'-C4'	-5.78	1.42	1.51
13	C	176	ARG	CZ-NH2	5.78	1.41	1.33
10	9	231	PHE	CA-C	-5.78	1.45	1.52
12	B	172	A	C2'-C1'	-5.78	1.44	1.53
12	B	581	C	O3'-P	-5.78	1.52	1.61
12	B	2722	G	P-O5'	-5.78	1.51	1.59
21	K	50	GLY	C-N	5.78	1.41	1.33
23	M	49	ALA	C-N	5.78	1.41	1.33
25	O	94	ARG	CA-CB	5.78	1.62	1.53
6	5	205	LYS	C-N	5.78	1.41	1.33
7	6	45	SER	CA-CB	5.78	1.60	1.53
10	9	42	GLY	CA-C	-5.78	1.43	1.51
16	F	54	ALA	C-N	5.78	1.41	1.33
17	G	21	GLN	C-N	5.78	1.41	1.33
12	B	1241	A	P-O5'	-5.77	1.51	1.59
1	0	41	SER	C-N	5.77	1.41	1.33
22	L	94	THR	CA-CB	-5.77	1.43	1.53
20	J	35	ARG	NE-CZ	5.77	1.39	1.33
25	O	5	SER	C-N	5.77	1.41	1.33
12	B	1060	U	O3'-P	-5.77	1.52	1.61
14	D	68	PHE	N-CA	-5.77	1.39	1.46
12	B	348	A	O4'-C1'	-5.77	1.33	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	1962	C	C1'-N1	5.77	1.56	1.47
28	R	92	TRP	CA-C	-5.77	1.45	1.52
12	B	1270	C	O3'-P	-5.76	1.52	1.61
12	B	1678	A	C6-N6	5.76	1.45	1.33
13	C	39	SER	N-CA	-5.76	1.41	1.46
12	B	1665	A	P-O5'	-5.76	1.51	1.59
1	0	33	HIS	CG-CD2	5.76	1.42	1.35
12	B	484	C	C1'-N1	5.76	1.57	1.48
12	B	968	C	C2'-C1'	-5.76	1.44	1.53
12	B	2662	A	C3'-C2'	5.76	1.61	1.52
18	H	88	GLY	CA-C	-5.76	1.43	1.51
12	B	493	G	C3'-C2'	-5.76	1.44	1.52
12	B	2245	U	C5'-C4'	5.76	1.59	1.51
12	B	134	G	O5'-C5'	5.76	1.51	1.42
25	O	60	GLU	CA-CB	5.76	1.63	1.53
12	B	193	U	C4'-C3'	5.76	1.61	1.52
12	B	1354	A	O3'-P	-5.76	1.52	1.61
12	B	2165	C	C5'-C4'	5.75	1.59	1.51
12	B	42	A	O4'-C1'	5.75	1.50	1.41
12	B	1211	C	C2'-O2'	5.75	1.51	1.42
12	B	1686	C	C5'-C4'	5.75	1.59	1.51
12	B	2120	G	C5'-C4'	5.75	1.59	1.51
16	F	14	LYS	C-N	5.75	1.41	1.33
28	R	49	ILE	N-CA	-5.75	1.39	1.46
3	2	56	VAL	CA-C	-5.75	1.45	1.52
12	B	1656	C	C2'-C1'	-5.75	1.44	1.53
16	F	177	ARG	CA-C	-5.75	1.45	1.52
10	9	315	ALA	C-N	5.75	1.41	1.33
12	B	905	A	C4'-O4'	-5.75	1.36	1.45
12	B	2693	G	P-O5'	-5.75	1.51	1.59
1	0	71	ARG	NE-CZ	5.75	1.39	1.33
6	5	183	ASP	N-CA	-5.75	1.39	1.46
9	8	4	ARG	CZ-NH1	5.75	1.40	1.32
10	9	209	PHE	CA-C	-5.75	1.45	1.52
12	B	129	C	C4'-O4'	5.75	1.54	1.45
12	B	1015	U	O5'-C5'	-5.75	1.33	1.42
22	L	59	ARG	CA-CB	5.75	1.60	1.52
28	R	90	ARG	NE-CZ	5.75	1.39	1.33
30	T	6	ARG	NE-CZ	5.75	1.39	1.33
30	T	42	GLU	C-N	5.75	1.41	1.33
12	B	1064	C	O3'-P	-5.75	1.52	1.61
1	0	9	LYS	C-N	5.75	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	E	62	GLN	CA-CB	5.75	1.63	1.53
24	N	112	TYR	CA-C	-5.75	1.45	1.52
1	O	49	ARG	NE-CZ	5.74	1.39	1.33
15	E	187	VAL	C-N	5.74	1.40	1.33
22	L	4	ASN	N-CA	-5.74	1.40	1.46
12	B	1833	C	C2'-C1'	-5.74	1.44	1.53
12	B	2310	C	O3'-P	-5.74	1.52	1.61
16	F	98	PHE	CA-CB	5.74	1.63	1.53
29	S	10	ALA	N-CA	-5.74	1.38	1.46
10	9	176	ILE	N-CA	5.74	1.53	1.46
12	B	1952	A	C4'-O4'	-5.74	1.36	1.45
11	A	61	G	C2'-C1'	-5.74	1.44	1.53
12	B	1425	G	C1'-N9	-5.74	1.39	1.48
28	R	68	ARG	CD-NE	5.74	1.54	1.46
12	B	1962	C	C5'-C4'	5.73	1.59	1.51
12	B	2885	G	C3'-O3'	5.73	1.50	1.42
6	5	15	VAL	N-CA	-5.73	1.38	1.46
12	B	1666	G	P-O5'	-5.73	1.51	1.59
29	S	8	ARG	CZ-NH1	5.73	1.40	1.32
12	B	350	G	O4'-C1'	5.73	1.50	1.41
31	U	62	ALA	CA-C	-5.73	1.45	1.52
28	R	39	LEU	N-CA	-5.73	1.38	1.46
12	B	830	G	C5'-C4'	5.73	1.59	1.51
12	B	1532	A	C2'-C1'	-5.73	1.44	1.53
12	B	2227	A	O3'-P	-5.73	1.52	1.61
17	G	106	LEU	N-CA	-5.73	1.41	1.46
29	S	79	GLY	CA-C	-5.73	1.43	1.51
8	7	49	VAL	CA-C	-5.72	1.47	1.53
12	B	408	G	C3'-O3'	5.72	1.50	1.42
5	4	16	THR	CA-C	-5.72	1.45	1.52
12	B	1503	A	C4'-O4'	-5.72	1.36	1.45
25	O	35	ILE	N-CA	-5.72	1.38	1.46
12	B	942	G	C2'-C1'	-5.72	1.44	1.53
20	J	123	LYS	N-CA	-5.72	1.38	1.45
23	M	35	ALA	CA-C	-5.72	1.45	1.52
17	G	116	LEU	CA-C	-5.72	1.46	1.52
11	A	24	G	O3'-P	-5.71	1.52	1.61
12	B	10	A	C1'-N9	5.71	1.56	1.48
12	B	1618	A	O3'-P	-5.71	1.52	1.61
12	B	1927	A	C2'-C1'	-5.71	1.44	1.53
20	J	84	ILE	CA-C	-5.71	1.45	1.52
12	B	1636	U	O3'-P	-5.71	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	M	6	ARG	CZ-NH1	5.71	1.40	1.32
12	B	1829	A	C2'-C1'	-5.71	1.44	1.53
16	F	63	LYS	CA-C	5.71	1.60	1.52
31	U	70	ALA	CA-C	-5.71	1.45	1.52
12	B	2729	G	C4'-C3'	5.71	1.61	1.52
14	D	186	LEU	CA-C	-5.71	1.45	1.52
12	B	269	C	O3'-P	-5.71	1.52	1.61
12	B	2262	U	C2'-C1'	-5.71	1.44	1.53
3	2	37	ARG	CZ-NH2	5.71	1.40	1.33
12	B	292	U	P-O5'	-5.71	1.51	1.59
13	C	180	MET	CA-C	-5.71	1.45	1.52
20	J	18	VAL	C-O	-5.71	1.17	1.24
11	A	60	C	C3'-O3'	5.70	1.50	1.42
12	B	2417	C	C2'-C1'	-5.70	1.44	1.53
12	B	2871	U	C3'-O3'	-5.70	1.33	1.42
14	D	137	SER	C-N	5.70	1.42	1.33
9	8	19	ARG	CA-C	-5.70	1.47	1.53
12	B	2442	C	O3'-P	-5.70	1.52	1.61
12	B	2616	C	C3'-O3'	5.70	1.50	1.42
30	T	76	ARG	NE-CZ	5.70	1.39	1.33
26	P	39	LEU	CA-C	-5.70	1.45	1.52
12	B	25	U	C1'-N1	5.70	1.56	1.48
12	B	665	U	N3-C4	5.70	1.49	1.38
12	B	1432	G	C5'-C4'	5.69	1.59	1.51
12	B	468	G	O5'-C5'	-5.69	1.33	1.42
12	B	680	C	C2'-C1'	-5.69	1.44	1.53
12	B	1536	C	C3'-O3'	5.69	1.51	1.43
12	B	1564	C	P-O5'	-5.69	1.51	1.59
12	B	1635	A	C3'-C2'	5.69	1.61	1.52
23	M	51	ARG	N-CA	-5.69	1.39	1.46
10	9	123	HIS	ND1-CE1	5.69	1.38	1.32
12	B	1037	G	O4'-C1'	-5.69	1.33	1.41
12	B	725	G	O3'-P	-5.69	1.52	1.61
4	3	19	ASP	CA-CB	5.69	1.60	1.53
12	B	836	G	C3'-O3'	5.69	1.50	1.42
12	B	1082	U	O3'-P	-5.69	1.52	1.61
12	B	2076	U	C2'-C1'	-5.69	1.44	1.53
12	B	2093	G	P-O5'	-5.69	1.51	1.59
14	D	170	VAL	CA-CB	5.69	1.62	1.54
10	9	197	SER	CA-C	-5.68	1.45	1.52
12	B	685	A	C3'-C2'	5.68	1.61	1.52
12	B	2731	G	N9-C4	-5.68	1.26	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	T	56	GLU	CA-CB	5.68	1.62	1.53
26	P	52	ARG	CZ-NH1	5.68	1.40	1.32
14	D	59	ARG	N-CA	-5.68	1.39	1.46
27	Q	5	ARG	NE-CZ	5.68	1.39	1.33
12	B	498	G	C5'-C4'	5.68	1.59	1.51
27	Q	14	LYS	CA-C	-5.68	1.45	1.52
12	B	413	C	C2'-C1'	-5.68	1.44	1.53
12	B	503	A	O4'-C1'	-5.68	1.33	1.42
12	B	656	G	O5'-C5'	5.68	1.50	1.42
12	B	1334	G	C2'-C1'	-5.68	1.44	1.53
12	B	2321	U	C4'-C3'	-5.68	1.44	1.52
11	A	111	U	C2'-C1'	-5.67	1.44	1.53
18	H	84	ALA	N-CA	-5.67	1.38	1.46
18	H	91	PHE	CA-C	-5.67	1.45	1.52
11	A	26	C	C1'-N1	5.67	1.56	1.48
14	D	172	VAL	CA-C	-5.67	1.45	1.52
28	R	28	ALA	N-CA	-5.67	1.38	1.45
12	B	927	A	P-O5'	-5.67	1.51	1.59
12	B	929	U	C1'-N1	5.67	1.56	1.48
12	B	1081	U	O3'-P	-5.67	1.52	1.61
12	B	1369	G	C2'-C1'	-5.67	1.44	1.53
12	B	2359	C	P-O5'	-5.67	1.51	1.59
12	B	2835	A	O3'-P	-5.67	1.52	1.61
12	B	1127	A	C2'-C1'	-5.67	1.44	1.53
12	B	2324	U	C3'-C2'	5.67	1.61	1.52
12	B	619	G	C3'-O3'	5.67	1.50	1.42
7	6	8	SER	CA-C	-5.67	1.46	1.53
7	6	41	ARG	NE-CZ	5.67	1.39	1.33
22	L	109	LYS	C-N	5.67	1.40	1.33
27	Q	89	ILE	CA-C	-5.67	1.45	1.52
12	B	938	G	C1'-N9	5.66	1.56	1.48
12	B	506	G	P-O5'	-5.66	1.51	1.59
22	L	69	ARG	CA-CB	5.66	1.62	1.53
10	9	253	THR	N-CA	-5.66	1.39	1.46
12	B	238	C	P-O5'	-5.66	1.51	1.59
12	B	830	G	C3'-C2'	5.66	1.61	1.52
12	B	1997	C	O5'-C5'	5.66	1.50	1.42
13	C	31	PRO	CA-C	-5.66	1.44	1.52
27	Q	50	ARG	NE-CZ	5.66	1.39	1.33
31	U	41	VAL	CA-C	-5.66	1.46	1.52
12	B	1427	A	O3'-P	-5.66	1.52	1.61
12	B	2110	G	C4'-C3'	5.66	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2257	U	C4'-O4'	-5.65	1.37	1.45
12	B	1525	A	O3'-P	-5.65	1.52	1.61
12	B	1885	A	O3'-P	-5.65	1.52	1.61
11	A	108	A	C4'-C3'	5.65	1.61	1.53
12	B	993	G	C5'-C4'	5.65	1.59	1.51
12	B	2197	U	O3'-P	-5.65	1.52	1.61
24	N	49	GLU	CA-C	5.65	1.59	1.52
32	W	6	ALA	CA-C	-5.65	1.45	1.52
32	W	14	LYS	CA-C	-5.65	1.44	1.52
12	B	812	C	C2'-C1'	-5.64	1.44	1.53
12	B	1638	C	P-O5'	-5.64	1.51	1.59
15	E	44	ARG	NE-CZ	5.64	1.39	1.33
15	E	127	GLU	CA-C	-5.64	1.46	1.52
22	L	45	GLY	N-CA	5.64	1.50	1.45
12	B	139	U	C4'-O4'	5.64	1.54	1.45
12	B	2117	A	O3'-P	-5.64	1.52	1.61
18	H	9	VAL	C-N	5.64	1.39	1.33
12	B	2593	U	C2'-O2'	-5.64	1.33	1.42
14	D	37	VAL	N-CA	-5.64	1.39	1.46
13	C	176	ARG	CZ-NH1	5.64	1.40	1.32
24	N	8	ARG	CA-CB	5.64	1.63	1.53
26	P	71	ARG	N-CA	-5.64	1.39	1.46
20	J	44	TYR	C-O	-5.64	1.17	1.24
12	B	2271	G	O3'-P	-5.64	1.52	1.61
28	R	72	VAL	CA-C	-5.64	1.46	1.52
32	W	11	GLU	CA-C	5.64	1.59	1.52
6	5	206	GLY	C-N	5.63	1.41	1.33
8	7	23	HIS	ND1-CE1	5.63	1.38	1.32
12	B	101	A	C4'-C3'	5.63	1.61	1.52
24	N	103	ARG	N-CA	-5.63	1.38	1.45
9	8	35	GLN	C-N	5.63	1.41	1.34
12	B	2871	U	C4'-O4'	5.63	1.53	1.45
12	B	2029	G	C2-N2	5.63	1.45	1.34
7	6	6	GLN	C-N	5.63	1.41	1.33
2	1	47	ARG	NE-CZ	5.62	1.39	1.33
12	B	526	A	O4'-C1'	-5.62	1.33	1.41
6	5	230	SER	C-N	5.62	1.41	1.33
12	B	913	U	C5'-C4'	5.62	1.59	1.51
24	N	116	VAL	N-CA	-5.62	1.41	1.46
12	B	166	U	C4'-O4'	-5.62	1.37	1.45
12	B	2049	G	C4'-O4'	5.62	1.53	1.45
12	B	2599	G	C5'-C4'	5.62	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	F	132	ARG	CZ-NH2	5.62	1.40	1.33
25	O	21	LEU	C-N	5.62	1.41	1.33
6	5	78	PHE	CA-CB	5.62	1.60	1.53
12	B	830	G	O3'-P	-5.62	1.52	1.61
12	B	995	C	C1'-N1	-5.62	1.40	1.48
12	B	1510	G	C1'-N9	5.62	1.56	1.48
21	K	20	MET	CA-C	-5.62	1.45	1.52
27	Q	29	ARG	CZ-NH1	5.62	1.40	1.32
30	T	70	HIS	CE1-NE2	5.62	1.38	1.32
10	9	219	GLU	CA-C	-5.62	1.45	1.52
12	B	2580	U	O5'-C5'	5.62	1.50	1.42
26	P	95	LYS	N-CA	-5.62	1.39	1.46
2	1	29	ARG	CD-NE	5.62	1.54	1.46
5	4	10	LEU	CA-CB	-5.62	1.45	1.53
12	B	363	G	C4'-C3'	5.62	1.60	1.52
12	B	2251	G	O4'-C1'	5.62	1.50	1.41
12	B	2685	G	C2'-C1'	-5.62	1.45	1.53
12	B	2832	U	C4'-O4'	-5.62	1.37	1.45
3	2	55	LYS	CA-C	-5.61	1.45	1.52
10	9	162	VAL	C-O	5.61	1.29	1.24
12	B	1826	G	C4'-C3'	-5.61	1.44	1.52
14	D	2	ILE	C-N	5.61	1.40	1.33
6	5	56	ASP	CA-CB	5.61	1.62	1.53
11	A	12	C	O3'-P	-5.61	1.52	1.61
12	B	2642	G	C3'-O3'	5.61	1.50	1.42
16	F	101	ARG	CZ-NH1	5.61	1.40	1.32
12	B	2891	U	C5'-C4'	5.61	1.59	1.51
12	B	2775	G	O4'-C1'	-5.61	1.33	1.41
15	E	97	ASN	CA-CB	5.61	1.62	1.53
11	A	67	G	C3'-O3'	5.61	1.50	1.42
26	P	56	SER	N-CA	-5.61	1.39	1.46
31	U	63	ALA	CA-C	5.61	1.60	1.52
2	1	36	GLN	CA-C	-5.60	1.45	1.52
11	A	118	C	C4'-C3'	5.60	1.60	1.52
31	U	86	PHE	CA-C	-5.60	1.45	1.52
15	E	58	LYS	CA-C	-5.60	1.45	1.52
16	F	58	ALA	N-CA	5.60	1.53	1.46
20	J	47	HIS	CB-CG	5.60	1.57	1.50
10	9	280	LEU	CA-C	-5.60	1.45	1.52
12	B	170	U	P-O5'	-5.60	1.51	1.59
12	B	1085	A	C1'-N9	-5.60	1.39	1.48
12	B	2344	U	O3'-P	-5.60	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	Q	23	TYR	CA-C	-5.60	1.45	1.52
12	B	644	A	C5'-C4'	5.60	1.59	1.51
12	B	2232	C	C5'-C4'	5.60	1.59	1.51
12	B	613	A	C2'-C1'	-5.59	1.45	1.53
12	B	658	U	P-O5'	-5.59	1.51	1.59
12	B	1707	G	C5-C6	-5.59	1.31	1.42
21	K	112	PHE	N-CA	-5.59	1.39	1.46
22	L	127	VAL	CA-C	-5.59	1.45	1.52
25	O	13	ARG	CD-NE	5.59	1.54	1.46
12	B	442	G	C2-N3	5.59	1.44	1.32
28	R	38	VAL	CA-CB	-5.59	1.47	1.54
12	B	1895	C	O3'-P	-5.59	1.52	1.61
12	B	2821	A	O3'-P	-5.59	1.52	1.61
11	A	108	A	C3'-O3'	-5.59	1.34	1.43
12	B	2631	G	C4'-O4'	5.59	1.53	1.45
12	B	2704	C	C2'-C1'	-5.59	1.45	1.53
17	G	5	LYS	C-N	5.59	1.40	1.33
2	1	47	ARG	CD-NE	5.58	1.54	1.46
12	B	2570	G	O5'-C5'	5.58	1.50	1.42
16	F	176	PHE	CA-CB	5.58	1.62	1.53
18	H	112	LYS	CA-C	-5.58	1.45	1.52
12	B	1512	C	C4'-C3'	5.58	1.60	1.52
18	H	124	THR	CA-C	-5.58	1.45	1.52
28	R	6	GLN	CA-C	-5.58	1.44	1.52
6	5	111	PHE	CA-C	-5.58	1.46	1.52
12	B	1465	G	C6-N1	5.58	1.50	1.39
13	C	47	ARG	NE-CZ	5.58	1.39	1.33
25	O	59	ALA	N-CA	-5.58	1.39	1.46
26	P	19	PHE	CA-CB	5.58	1.62	1.54
8	7	25	HIS	CA-C	-5.58	1.45	1.52
14	D	15	PHE	N-CA	-5.58	1.39	1.46
12	B	663	G	P-O5'	-5.58	1.51	1.59
12	B	2466	C	P-O5'	-5.58	1.51	1.59
12	B	1988	G	C3'-O3'	-5.58	1.33	1.42
13	C	126	GLY	C-N	5.58	1.41	1.33
12	B	2529	G	C1'-N9	-5.58	1.39	1.48
18	H	97	ARG	CZ-NH1	5.57	1.40	1.32
14	D	134	HIS	CA-C	5.57	1.59	1.53
23	M	55	ARG	NE-CZ	5.57	1.39	1.33
30	T	76	ARG	CD-NE	5.57	1.54	1.46
11	A	68	C	C4'-C3'	5.57	1.60	1.52
15	E	144	GLU	CA-CB	5.57	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	H	50	ARG	CZ-NH1	5.57	1.40	1.32
12	B	1016	G	O3'-P	5.57	1.69	1.61
12	B	1251	C	C1'-N1	5.57	1.55	1.47
12	B	2230	G	C3'-C2'	-5.57	1.44	1.52
7	6	40	ALA	C-N	5.56	1.41	1.33
10	9	100	GLY	N-CA	-5.56	1.38	1.45
23	M	68	PHE	N-CA	5.56	1.53	1.45
24	N	86	ARG	NE-CZ	5.56	1.39	1.33
2	1	9	LYS	CA-C	-5.56	1.45	1.52
12	B	987	C	C5'-C4'	5.56	1.59	1.51
12	B	2404	U	O3'-P	-5.56	1.52	1.61
12	B	2706	A	C4'-O4'	5.56	1.53	1.45
13	C	38	LYS	CA-C	-5.56	1.45	1.52
20	J	138	GLN	N-CA	-5.56	1.39	1.46
12	B	474	G	P-O5'	5.56	1.68	1.59
12	B	593	U	C3'-O3'	5.56	1.50	1.42
10	9	267	GLU	CA-C	-5.56	1.45	1.52
12	B	885	C	C4'-C3'	5.56	1.60	1.52
12	B	2704	C	C5'-C4'	5.56	1.59	1.51
21	K	2	ILE	CA-C	-5.56	1.47	1.53
21	K	105	ARG	CZ-NH2	5.56	1.40	1.33
26	P	46	VAL	CA-C	-5.56	1.46	1.52
12	B	761	A	C3'-C2'	-5.56	1.44	1.52
12	B	795	C	C2'-C1'	-5.56	1.45	1.53
12	B	2100	G	C2'-C1'	-5.56	1.45	1.53
12	B	630	G	O3'-P	-5.56	1.52	1.61
5	4	14	ALA	N-CA	-5.55	1.39	1.46
12	B	2677	G	O3'-P	5.55	1.69	1.61
21	K	99	ILE	CA-CB	-5.55	1.47	1.54
22	L	101	ILE	N-CA	-5.55	1.39	1.46
12	B	1488	C	C2'-C1'	-5.55	1.45	1.53
12	B	2243	U	P-O5'	5.55	1.68	1.59
21	K	85	VAL	C-N	5.55	1.41	1.33
22	L	51	GLU	CA-CB	5.55	1.61	1.53
12	B	2424	C	C2'-O2'	-5.55	1.34	1.42
13	C	13	ARG	CD-NE	5.55	1.54	1.46
14	D	164	GLN	C-N	5.55	1.40	1.33
17	G	2	ARG	CD-NE	5.55	1.54	1.46
25	O	109	ALA	N-CA	-5.55	1.40	1.46
26	P	92	ARG	CA-C	-5.55	1.45	1.52
5	4	35	LEU	CA-C	-5.54	1.45	1.52
12	B	1389	G	C4'-C3'	5.54	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	O	70	ALA	CA-C	-5.54	1.46	1.52
30	T	67	VAL	CA-CB	-5.54	1.47	1.54
6	5	167	LYS	N-CA	-5.54	1.39	1.46
23	M	13	HIS	CG-ND1	5.54	1.44	1.38
6	5	71	ARG	NE-CZ	5.54	1.39	1.33
12	B	745	G	C5'-C4'	5.54	1.59	1.51
15	E	114	ARG	CA-C	-5.54	1.45	1.52
12	B	1361	G	O5'-C5'	5.54	1.50	1.42
18	H	125	THR	N-CA	-5.54	1.39	1.46
12	B	912	C	C4-N4	5.54	1.45	1.33
31	U	93	ARG	CZ-NH2	5.54	1.40	1.33
33	Y	60	ALA	N-CA	-5.54	1.39	1.46
6	5	152	ALA	CA-CB	5.54	1.61	1.53
12	B	302	C	C3'-C2'	-5.54	1.44	1.52
10	9	232	LEU	CA-C	-5.53	1.45	1.52
12	B	1482	G	C4'-C3'	5.53	1.60	1.52
12	B	1878	G	C2-N3	5.53	1.43	1.32
12	B	2340	A	C5'-C4'	5.53	1.59	1.51
16	F	91	ARG	CZ-NH1	5.53	1.40	1.32
12	B	397	U	P-O5'	-5.53	1.51	1.59
12	B	1236	G	C1'-N9	5.53	1.55	1.47
11	A	53	A	O4'-C1'	5.53	1.50	1.41
12	B	2535	G	C5'-C4'	5.53	1.59	1.51
30	T	31	VAL	C-N	5.53	1.40	1.33
12	B	920	A	O5'-C5'	-5.53	1.34	1.42
10	9	115	LEU	N-CA	-5.53	1.39	1.46
12	B	1197	G	C4'-O4'	-5.53	1.37	1.45
20	J	119	PHE	C-N	5.53	1.41	1.34
26	P	14	GLN	N-CA	-5.53	1.39	1.46
31	U	63	ALA	CA-CB	5.53	1.62	1.53
12	B	393	C	P-O5'	-5.53	1.51	1.59
12	B	2317	A	C1'-N9	5.53	1.56	1.48
12	B	2848	G	P-O5'	-5.52	1.51	1.59
12	B	741	U	C2'-C1'	-5.52	1.45	1.53
12	B	1354	A	P-O5'	-5.52	1.51	1.59
12	B	2260	C	C5'-C4'	5.52	1.59	1.51
12	B	849	A	C5'-C4'	-5.52	1.43	1.51
12	B	1746	A	C5'-C4'	5.52	1.59	1.51
12	B	1934	C	O4'-C1'	-5.52	1.33	1.41
21	K	67	LYS	C-N	5.52	1.40	1.33
28	R	30	GLY	CA-C	-5.52	1.44	1.51
12	B	435	C	C3'-O3'	5.52	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	G	16	VAL	N-CA	-5.52	1.39	1.46
21	K	95	ILE	N-CA	-5.52	1.39	1.46
32	W	58	SER	CA-C	-5.52	1.45	1.52
12	B	2842	G	C3'-C2'	5.52	1.61	1.52
16	F	85	GLY	CA-C	-5.52	1.46	1.52
20	J	69	ARG	NE-CZ	5.52	1.39	1.33
12	B	424	G	C5'-C4'	5.52	1.59	1.51
12	B	1807	G	C4'-O4'	5.52	1.53	1.45
12	B	1928	A	C4'-C3'	5.52	1.60	1.52
12	B	493	G	C2'-C1'	-5.51	1.45	1.53
12	B	1941	C	C1'-N1	5.51	1.56	1.48
31	U	49	PRO	N-CA	-5.51	1.40	1.47
12	B	2085	U	O3'-P	-5.51	1.52	1.61
12	B	2559	C	C3'-C2'	-5.51	1.44	1.52
31	U	52	ASN	CA-CB	5.51	1.62	1.53
6	5	174	THR	CA-C	-5.51	1.45	1.52
8	7	21	PHE	C-N	5.51	1.42	1.33
12	B	2090	A	C1'-N9	-5.51	1.39	1.48
12	B	728	G	O3'-P	-5.51	1.52	1.61
12	B	2429	G	C2-N3	5.51	1.43	1.32
10	9	59	TYR	CA-C	-5.51	1.45	1.52
2	1	48	ARG	N-CA	-5.51	1.39	1.46
13	C	34	GLU	CA-C	-5.51	1.45	1.52
25	O	34	HIS	CG-CD2	5.51	1.42	1.35
16	F	16	MET	CA-CB	5.50	1.62	1.53
26	P	112	ARG	NE-CZ	5.50	1.39	1.33
29	S	53	SER	CA-C	-5.50	1.45	1.52
12	B	1562	U	C5'-C4'	5.50	1.59	1.51
21	K	98	ARG	CA-C	5.50	1.58	1.52
24	N	96	ARG	CA-C	-5.50	1.45	1.53
12	B	1054	A	C2'-C1'	-5.50	1.45	1.53
1	0	18	SER	CA-CB	5.50	1.61	1.53
4	3	23	ALA	C-N	5.50	1.39	1.33
12	B	2753	A	O3'-P	5.50	1.69	1.61
12	B	852	U	C2'-C1'	-5.50	1.45	1.53
13	C	57	HIS	CG-ND1	5.50	1.44	1.38
13	C	223	ALA	C-N	5.50	1.40	1.33
12	B	669	G	C3'-O3'	5.50	1.50	1.42
6	5	165	ASN	N-CA	5.49	1.52	1.45
10	9	65	PHE	CA-CB	5.49	1.60	1.53
10	9	77	ASP	CA-CB	5.49	1.62	1.53
10	9	157	MET	CA-C	-5.49	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2136	G	C1'-N9	5.49	1.56	1.48
24	N	120	GLU	C-N	-5.49	1.25	1.33
33	Y	45	HIS	CE1-NE2	-5.49	1.27	1.32
12	B	1913	A	O3'-P	-5.49	1.52	1.61
10	9	60	ARG	CZ-NH2	5.49	1.40	1.33
12	B	1551	A	O3'-P	-5.49	1.52	1.61
15	E	107	SER	N-CA	-5.49	1.39	1.46
23	M	135	VAL	C-N	5.49	1.41	1.33
12	B	1753	G	O4'-C1'	5.49	1.49	1.41
12	B	2759	G	C5'-C4'	5.49	1.59	1.51
25	O	38	GLN	C-N	5.49	1.40	1.33
12	B	432	A	O3'-P	-5.49	1.52	1.61
12	B	886	A	C2'-C1'	-5.49	1.45	1.53
12	B	1879	C	C1'-N1	5.49	1.56	1.48
12	B	2130	U	C1'-N1	5.49	1.56	1.48
16	F	101	ARG	NE-CZ	5.49	1.39	1.33
12	B	2214	C	C2'-C1'	5.48	1.61	1.53
33	Y	37	VAL	CA-C	-5.48	1.46	1.52
12	B	1964	G	O3'-P	5.48	1.69	1.61
12	B	2138	G	C2'-C1'	-5.48	1.45	1.53
12	B	2724	U	C2'-C1'	-5.48	1.45	1.53
13	C	101	ARG	CZ-NH1	5.48	1.40	1.32
15	E	44	ARG	CD-NE	5.48	1.53	1.46
12	B	26	G	C2'-C1'	-5.48	1.45	1.53
12	B	479	A	C4'-O4'	-5.48	1.37	1.45
12	B	662	G	P-O5'	-5.48	1.51	1.59
12	B	2098	U	O4'-C1'	-5.48	1.33	1.41
12	B	2308	G	C3'-O3'	5.48	1.50	1.42
15	E	179	SER	CA-CB	5.48	1.61	1.53
20	J	77	HIS	ND1-CE1	5.48	1.38	1.32
24	N	12	ARG	CA-C	-5.48	1.46	1.52
28	R	80	ARG	CZ-NH1	5.48	1.40	1.32
12	B	385	C	P-O5'	-5.48	1.51	1.59
26	P	55	HIS	CA-C	-5.48	1.45	1.52
12	B	1764	C	C2'-C1'	-5.48	1.45	1.53
20	J	11	VAL	CA-C	-5.48	1.46	1.52
25	O	77	ALA	CA-C	-5.48	1.45	1.52
12	B	1743	G	C2-N3	5.48	1.43	1.32
12	B	2692	G	C2'-C1'	-5.48	1.45	1.53
26	P	27	VAL	CA-C	-5.48	1.46	1.52
10	9	98	ASP	N-CA	-5.47	1.39	1.46
12	B	1251	C	O3'-P	-5.47	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	1853	A	N7-C5	-5.47	1.28	1.39
12	B	2528	U	P-O5'	-5.47	1.51	1.59
12	B	984	A	C4'-C3'	-5.47	1.44	1.52
12	B	1399	C	C2'-O2'	-5.47	1.34	1.42
12	B	1838	C	C2'-O2'	5.47	1.49	1.41
12	B	2277	G	C3'-O3'	5.47	1.50	1.42
17	G	72	ASN	N-CA	-5.47	1.39	1.46
21	K	100	PHE	CA-C	-5.47	1.45	1.52
12	B	378	C	P-O5'	-5.47	1.51	1.59
12	B	549	G	C5'-C4'	5.47	1.59	1.51
10	9	138	PRO	CA-C	-5.47	1.44	1.52
12	B	889	C	C4'-C3'	5.47	1.61	1.53
12	B	1111	A	C1'-N9	5.47	1.55	1.47
20	J	34	ARG	C-N	5.47	1.41	1.33
20	J	96	ARG	CD-NE	5.47	1.53	1.46
21	K	101	GLY	C-N	5.47	1.40	1.33
29	S	105	VAL	N-CA	-5.47	1.39	1.46
12	B	551	G	C2'-C1'	-5.47	1.45	1.53
12	B	859	G	C2'-C1'	-5.47	1.44	1.53
12	B	2689	U	C1'-N1	5.47	1.55	1.47
25	O	2	ASP	CA-CB	5.47	1.64	1.53
12	B	2716	C	O5'-C5'	5.46	1.50	1.42
18	H	3	VAL	C-N	5.46	1.40	1.33
18	H	133	GLN	CA-CB	5.46	1.62	1.53
1	0	2	ARG	CD-NE	5.46	1.53	1.46
4	3	14	MET	C-N	5.46	1.41	1.33
20	J	68	LYS	CA-C	5.46	1.60	1.52
27	Q	116	LEU	C-N	5.46	1.41	1.33
12	B	337	C	C1'-N1	-5.46	1.40	1.48
12	B	671	C	O3'-P	-5.46	1.52	1.61
12	B	1968	G	C5'-C4'	5.46	1.59	1.51
12	B	1948	G	N1-C2	5.46	1.48	1.37
13	C	56	GLY	CA-C	-5.46	1.46	1.52
7	6	34	ARG	N-CA	-5.46	1.40	1.46
22	L	11	GLY	C-N	5.46	1.41	1.33
12	B	565	C	O3'-P	-5.46	1.52	1.61
12	B	135	U	P-O5'	-5.45	1.51	1.59
12	B	2655	G	C1'-N9	5.45	1.55	1.47
12	B	2776	A	C5'-C4'	5.45	1.59	1.51
12	B	1528	A	C2'-C1'	-5.45	1.45	1.53
12	B	477	A	C5'-C4'	5.45	1.59	1.51
12	B	2402	U	C1'-N1	5.45	1.55	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2768	U	C4'-O4'	5.45	1.53	1.45
12	B	2800	A	C6-N6	5.45	1.44	1.33
10	9	331	PHE	CA-C	-5.45	1.45	1.52
12	B	680	C	P-O5'	-5.45	1.51	1.59
15	E	200	LEU	CA-CB	5.45	1.62	1.53
6	5	26	ALA	CA-C	-5.45	1.45	1.52
12	B	414	C	C4'-O4'	-5.45	1.37	1.45
12	B	1600	C	C5'-C4'	5.45	1.59	1.51
12	B	1736	U	C2'-C1'	-5.45	1.45	1.53
12	B	417	C	C2'-C1'	-5.44	1.45	1.53
12	B	449	A	O3'-P	-5.44	1.52	1.61
33	Y	67	LYS	N-CA	-5.44	1.40	1.46
13	C	61	TYR	N-CA	5.44	1.52	1.45
32	W	38	LEU	C-N	5.44	1.41	1.33
8	7	20	GLY	CA-C	-5.44	1.44	1.51
12	B	2278	A	C5'-C4'	5.44	1.59	1.51
12	B	2380	C	C4'-O4'	5.44	1.53	1.45
12	B	2492	U	P-O5'	-5.44	1.51	1.59
18	H	123	ARG	CZ-NH1	5.44	1.40	1.32
7	6	28	ARG	CA-C	-5.44	1.45	1.52
12	B	425	G	C2'-C1'	-5.44	1.45	1.53
12	B	160	A	C1'-N9	-5.44	1.39	1.48
12	B	786	C	C4'-C3'	5.44	1.60	1.52
12	B	2276	G	O5'-C5'	-5.44	1.34	1.42
12	B	2285	C	C3'-C2'	-5.44	1.44	1.52
12	B	2303	G	C2'-C1'	-5.44	1.45	1.53
12	B	2407	A	C4'-O4'	5.44	1.53	1.45
16	F	151	LEU	CA-C	-5.44	1.46	1.52
12	B	934	U	O5'-C5'	5.43	1.50	1.42
14	D	204	LYS	N-CA	-5.43	1.41	1.45
12	B	1365	A	C3'-O3'	5.43	1.50	1.42
12	B	1957	C	C2'-C1'	-5.43	1.45	1.53
12	B	2416	C	P-O5'	-5.43	1.51	1.59
13	C	101	ARG	NE-CZ	5.43	1.39	1.33
7	6	18	PHE	C-O	-5.43	1.17	1.24
12	B	1158	C	P-O5'	-5.43	1.51	1.59
12	B	1602	U	O5'-C5'	5.43	1.50	1.42
12	B	1789	A	C4'-O4'	-5.43	1.37	1.45
12	B	1856	U	C1'-N1	-5.43	1.40	1.48
12	B	685	A	C1'-N9	5.43	1.55	1.47
12	B	742	A	P-O5'	-5.43	1.51	1.59
12	B	1727	C	C4'-C3'	5.43	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	K	58	LEU	C-N	5.43	1.40	1.33
12	B	2457	U	C4'-O4'	-5.42	1.37	1.45
14	D	101	PHE	N-CA	-5.42	1.40	1.46
10	9	175	PHE	C-N	5.42	1.40	1.33
12	B	550	C	C2'-C1'	-5.42	1.45	1.53
12	B	746	U	C2'-C1'	-5.42	1.45	1.53
10	9	201	VAL	N-CA	-5.42	1.39	1.46
12	B	2713	U	C1'-N1	5.42	1.55	1.47
4	3	51	ARG	CD-NE	5.42	1.53	1.46
12	B	2330	G	C1'-N9	5.42	1.56	1.48
12	B	2331	G	C5'-C4'	5.42	1.59	1.51
13	C	209	ALA	N-CA	-5.42	1.39	1.46
25	O	103	VAL	CA-C	-5.42	1.46	1.52
10	9	108	MET	CA-C	-5.42	1.46	1.52
12	B	964	C	C2'-C1'	-5.42	1.45	1.53
6	5	172	HIS	CB-CG	5.42	1.57	1.50
12	B	1999	C	C4'-C3'	5.42	1.60	1.52
27	Q	52	ARG	NE-CZ	5.42	1.39	1.33
12	B	141	G	C1'-N9	5.41	1.56	1.48
12	B	701	G	C4'-C3'	5.41	1.60	1.52
12	B	2304	G	C4'-O4'	5.41	1.53	1.45
13	C	162	GLN	C-N	5.41	1.39	1.33
14	D	202	ILE	C-O	-5.41	1.17	1.24
21	K	58	LEU	CA-C	5.41	1.60	1.52
22	L	132	ARG	CZ-NH1	5.41	1.40	1.32
31	U	21	ARG	CA-C	-5.41	1.46	1.52
12	B	367	G	C1'-N9	5.41	1.56	1.48
12	B	1101	U	C2'-C1'	-5.41	1.45	1.53
1	0	6	VAL	CA-C	-5.41	1.46	1.52
12	B	714	U	P-O5'	-5.41	1.51	1.59
12	B	847	U	C5'-C4'	5.41	1.59	1.51
12	B	2135	A	O3'-P	-5.41	1.53	1.61
12	B	154	U	P-O5'	-5.41	1.51	1.59
12	B	2031	A	O5'-C5'	5.41	1.50	1.42
30	T	60	THR	N-CA	-5.41	1.39	1.46
24	N	22	ARG	NE-CZ	5.41	1.39	1.33
10	9	239	ARG	CD-NE	5.41	1.53	1.46
12	B	2239	G	C2'-C1'	-5.40	1.45	1.53
12	B	208	C	C3'-O3'	-5.40	1.34	1.42
12	B	585	G	C2'-C1'	-5.40	1.45	1.53
12	B	991	C	C1'-N1	5.40	1.56	1.48
12	B	2439	A	O5'-C5'	-5.40	1.34	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2504	U	C5'-C4'	5.40	1.59	1.51
12	B	2556	C	O5'-C5'	-5.40	1.34	1.42
23	M	24	THR	C-O	-5.40	1.17	1.24
23	M	115	GLU	N-CA	-5.40	1.39	1.46
9	8	12	ARG	CD-NE	5.40	1.53	1.46
12	B	1076	C	C2'-C1'	-5.40	1.45	1.53
12	B	1119	U	C3'-O3'	5.40	1.50	1.42
12	B	2621	G	O3'-P	-5.40	1.53	1.61
12	B	2686	G	O4'-C1'	-5.40	1.33	1.41
12	B	1377	G	C1'-N9	-5.40	1.39	1.48
22	L	46	VAL	CA-CB	-5.40	1.47	1.54
28	R	8	GLY	C-N	5.40	1.41	1.34
5	4	28	THR	CA-C	-5.40	1.45	1.52
12	B	514	A	C3'-O3'	5.40	1.50	1.42
16	F	166	ARG	NE-CZ	5.40	1.39	1.33
27	Q	27	ARG	CD-NE	5.40	1.53	1.46
12	B	394	C	C3'-C2'	-5.40	1.44	1.52
12	B	1265	A	C2'-C1'	-5.40	1.45	1.53
12	B	2246	G	C2'-C1'	-5.40	1.45	1.53
6	5	1	MET	C-N	5.39	1.41	1.33
12	B	131	A	C3'-O3'	-5.39	1.34	1.42
12	B	261	G	C3'-O3'	5.39	1.50	1.42
12	B	410	G	C2-N3	5.39	1.43	1.32
12	B	609	A	O3'-P	-5.39	1.53	1.61
12	B	1200	C	P-O5'	-5.39	1.51	1.59
12	B	1879	C	O3'-P	-5.39	1.53	1.61
12	B	2426	A	O3'-P	-5.39	1.53	1.61
15	E	1	MET	C-N	5.39	1.41	1.33
22	L	8	PRO	CA-CB	5.39	1.61	1.53
12	B	1643	G	C1'-N9	-5.39	1.39	1.48
12	B	1825	U	C5'-C4'	5.39	1.59	1.51
12	B	2277	G	O5'-C5'	5.39	1.50	1.42
6	5	162	ARG	NE-CZ	5.39	1.39	1.33
12	B	803	U	O4'-C1'	-5.39	1.33	1.41
12	B	1188	U	O4'-C1'	5.39	1.49	1.41
13	C	216	ARG	CZ-NH2	5.39	1.40	1.33
30	T	45	ALA	C-N	5.39	1.41	1.33
32	W	92	VAL	CA-C	-5.39	1.45	1.52
5	4	17	GLY	C-N	5.39	1.40	1.33
12	B	166	U	C3'-O3'	5.39	1.50	1.42
12	B	610	C	P-O5'	-5.39	1.51	1.59
12	B	2465	C	C3'-O3'	5.39	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2531	A	C2'-C1'	-5.39	1.45	1.53
29	S	84	ARG	CA-C	-5.39	1.46	1.52
11	A	44	G	O3'-P	-5.38	1.53	1.61
12	B	380	G	O3'-P	-5.38	1.53	1.61
12	B	558	U	C1'-N1	5.38	1.56	1.48
12	B	1714	U	O3'-P	-5.38	1.53	1.61
31	U	71	ILE	CA-C	-5.38	1.48	1.52
12	B	1488	C	C3'-C2'	5.38	1.60	1.52
20	J	55	ILE	CA-C	-5.38	1.46	1.52
8	7	7	ARG	C-O	-5.38	1.17	1.24
12	B	1488	C	C3'-O3'	5.38	1.50	1.42
12	B	2279	G	C5'-C4'	5.38	1.59	1.51
14	D	75	ALA	C-N	5.38	1.39	1.32
21	K	10	VAL	CA-C	-5.38	1.46	1.52
21	K	78	ARG	CZ-NH2	5.38	1.40	1.33
5	4	25	ASN	CA-C	-5.38	1.46	1.52
12	B	1710	G	C4'-C3'	-5.38	1.44	1.52
12	B	1891	G	O3'-P	-5.38	1.53	1.61
12	B	2773	C	C4'-C3'	5.38	1.60	1.52
14	D	185	ASN	C-N	5.38	1.41	1.33
10	9	334	GLU	CA-C	-5.38	1.45	1.52
13	C	260	LYS	CA-C	-5.38	1.45	1.53
12	B	465	G	O4'-C1'	5.38	1.49	1.41
12	B	2570	G	P-O5'	-5.38	1.51	1.59
14	D	55	LYS	N-CA	-5.38	1.39	1.46
10	9	70	GLY	C-N	5.37	1.41	1.33
12	B	793	A	P-O5'	5.37	1.67	1.59
12	B	1327	A	O5'-C5'	5.37	1.50	1.42
12	B	2880	C	C2'-C1'	-5.37	1.45	1.53
5	4	11	VAL	C-N	5.37	1.40	1.33
12	B	1821	A	C4'-O4'	5.37	1.53	1.45
27	Q	69	ARG	CZ-NH1	5.37	1.40	1.32
10	9	217	LEU	CA-CB	5.37	1.62	1.53
12	B	146	A	C5'-C4'	5.37	1.59	1.51
12	B	1431	A	C2'-C1'	-5.37	1.45	1.53
26	P	37	LYS	N-CA	-5.37	1.39	1.46
21	K	23	LYS	N-CA	-5.37	1.39	1.46
12	B	401	A	O4'-C1'	-5.37	1.33	1.41
12	B	1027	A	C1'-N9	5.37	1.55	1.48
12	B	2740	A	C3'-O3'	5.37	1.50	1.42
12	B	2882	A	C4'-C3'	-5.37	1.44	1.52
12	B	1502	A	C4'-O4'	-5.36	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2448	A	C5'-C4'	5.36	1.59	1.51
14	D	50	VAL	CA-C	5.36	1.59	1.52
21	K	26	GLY	C-N	5.36	1.38	1.33
12	B	693	A	C5'-C4'	5.36	1.59	1.51
13	C	13	ARG	N-CA	-5.36	1.40	1.46
16	F	114	ARG	CZ-NH1	5.36	1.40	1.32
12	B	91	A	O3'-P	-5.36	1.53	1.61
15	E	165	HIS	CG-ND1	5.36	1.44	1.38
22	L	142	ILE	CA-C	-5.36	1.46	1.52
1	0	27	ARG	CD-NE	5.36	1.53	1.46
11	A	110	C	C4'-C3'	5.36	1.60	1.52
12	B	993	G	C3'-O3'	5.36	1.50	1.42
12	B	880	G	C5'-C4'	5.36	1.59	1.51
12	B	1890	A	C4'-C3'	5.36	1.60	1.52
12	B	2154	A	C5'-C4'	5.36	1.59	1.51
20	J	29	ALA	N-CA	-5.36	1.39	1.46
29	S	97	LEU	CA-CB	5.36	1.61	1.53
11	A	73	A	C2'-C1'	-5.35	1.45	1.53
12	B	299	A	O3'-P	-5.35	1.53	1.61
12	B	1433	A	C5'-C4'	5.35	1.59	1.51
12	B	1098	A	O5'-C5'	5.35	1.50	1.42
12	B	1347	A	C1'-N9	5.35	1.55	1.48
12	B	1441	G	C3'-O3'	5.35	1.50	1.42
12	B	1962	C	O4'-C1'	5.35	1.50	1.42
14	D	145	SER	CA-C	-5.35	1.45	1.52
15	E	105	LEU	CA-C	-5.35	1.47	1.53
12	B	38	A	C3'-O3'	-5.35	1.34	1.42
12	B	500	G	C3'-C2'	-5.35	1.44	1.52
12	B	1291	C	C4'-O4'	5.35	1.53	1.45
23	M	104	GLU	C-O	-5.35	1.17	1.24
32	W	30	ILE	N-CA	-5.35	1.39	1.46
2	1	61	ALA	CA-CB	5.35	1.62	1.53
20	J	140	LEU	CA-C	-5.35	1.47	1.53
28	R	34	GLU	CA-C	-5.35	1.46	1.52
29	S	88	ARG	CZ-NH1	5.35	1.40	1.32
32	W	54	ALA	C-N	5.35	1.41	1.34
12	B	512	G	C3'-C2'	5.34	1.60	1.52
12	B	561	G	C4'-C3'	5.34	1.60	1.52
12	B	1199	U	P-O5'	-5.34	1.51	1.59
12	B	741	U	O3'-P	-5.34	1.53	1.61
12	B	1667	G	C3'-C2'	-5.34	1.45	1.52
12	B	2060	A	C4'-O4'	-5.34	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	8	C	P-O5'	-5.34	1.51	1.59
12	B	2081	U	O4'-C1'	-5.34	1.33	1.41
12	B	2547	A	O4'-C1'	5.34	1.49	1.41
12	B	2582	G	C4'-O4'	-5.34	1.37	1.45
19	I	120	ASP	C-N	5.34	1.40	1.33
12	B	279	A	C4'-C3'	5.34	1.60	1.52
17	G	108	PHE	CA-C	-5.34	1.46	1.52
29	S	48	LYS	CA-C	-5.34	1.46	1.52
11	A	15	A	C2'-C1'	-5.34	1.45	1.53
12	B	471	A	C2'-C1'	-5.34	1.45	1.53
12	B	1777	U	P-O5'	-5.34	1.51	1.59
12	B	2413	G	C2'-C1'	-5.34	1.45	1.53
12	B	2523	G	C4'-C3'	5.34	1.60	1.52
23	M	18	ARG	CZ-NH2	5.34	1.40	1.33
20	J	25	LEU	CA-CB	5.33	1.62	1.53
12	B	1935	G	C4'-C3'	5.33	1.60	1.52
12	B	2224	G	C4'-C3'	5.33	1.60	1.52
28	R	60	LYS	C-N	5.33	1.41	1.33
30	T	61	LEU	CA-C	-5.33	1.45	1.52
12	B	1897	G	C3'-C2'	-5.33	1.44	1.52
16	F	25	MET	CA-CB	5.33	1.62	1.53
16	F	164	GLU	CA-C	-5.33	1.46	1.52
12	B	1711	A	C1'-N9	-5.33	1.40	1.48
13	C	62	ARG	NE-CZ	5.33	1.39	1.33
16	F	94	ARG	CZ-NH1	5.33	1.40	1.32
29	S	50	VAL	CA-CB	-5.33	1.47	1.54
6	5	60	ARG	CD-NE	5.33	1.53	1.46
9	8	31	PRO	N-CA	-5.33	1.42	1.47
12	B	12	U	C2'-C1'	-5.33	1.45	1.53
12	B	1189	A	C2'-O2'	5.33	1.50	1.42
12	B	272	A	C6-N6	5.32	1.44	1.33
12	B	273	G	O5'-C5'	-5.32	1.34	1.42
12	B	548	G	N7-C5	-5.32	1.28	1.39
12	B	1355	G	O3'-P	-5.32	1.53	1.61
13	C	186	ASP	N-CA	-5.32	1.39	1.46
13	C	254	LYS	CA-C	-5.32	1.48	1.53
23	M	76	LYS	CA-C	5.32	1.58	1.52
12	B	178	G	C4'-O4'	5.32	1.53	1.45
13	C	164	VAL	C-N	5.32	1.40	1.33
12	B	1731	G	C4'-O4'	-5.32	1.37	1.45
13	C	52	HIS	CB-CG	-5.32	1.42	1.50
2	1	62	GLY	C-N	5.32	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	51	G	P-O5'	-5.32	1.51	1.59
12	B	971	G	C2'-O2'	-5.31	1.34	1.42
12	B	1370	C	C1'-N1	5.31	1.56	1.48
12	B	2852	G	C2'-C1'	-5.31	1.45	1.53
12	B	342	A	C2'-C1'	-5.31	1.45	1.53
12	B	518	G	C5'-C4'	5.31	1.59	1.51
12	B	2112	G	O3'-P	-5.31	1.53	1.61
6	5	12	ARG	NE-CZ	5.31	1.38	1.33
12	B	1749	A	C3'-C2'	5.31	1.60	1.52
13	C	38	LYS	N-CA	-5.31	1.39	1.46
28	R	63	VAL	N-CA	-5.31	1.40	1.46
22	L	139	GLY	C-N	5.31	1.41	1.33
26	P	86	LYS	C-N	5.31	1.41	1.33
12	B	430	A	C2'-C1'	5.31	1.61	1.53
23	M	136	MET	CA-CB	5.31	1.64	1.53
12	B	1049	C	O4'-C1'	5.30	1.49	1.41
12	B	1079	C	C4'-O4'	-5.30	1.37	1.45
12	B	1847	A	C2'-C1'	-5.30	1.45	1.53
11	A	7	G	C2-N3	5.30	1.43	1.32
11	A	21	G	C2'-C1'	-5.30	1.45	1.53
12	B	2886	A	C4'-O4'	5.30	1.53	1.45
12	B	13	A	C1'-N9	5.30	1.54	1.47
12	B	698	C	C1'-N1	5.30	1.56	1.48
12	B	1947	C	P-O5'	-5.30	1.51	1.59
26	P	96	LEU	CA-CB	5.30	1.61	1.53
29	S	88	ARG	NE-CZ	5.30	1.38	1.33
12	B	1087	G	C3'-O3'	5.30	1.50	1.42
12	B	2511	U	C1'-N1	5.30	1.56	1.48
12	B	388	G	P-O5'	5.30	1.67	1.59
12	B	2105	U	O5'-C5'	5.30	1.50	1.42
22	L	132	ARG	NE-CZ	5.30	1.38	1.33
29	S	16	LYS	C-N	5.29	1.40	1.33
6	5	198	LYS	C-N	5.29	1.40	1.33
12	B	167	A	O4'-C1'	5.29	1.49	1.41
12	B	1803	A	O4'-C1'	5.29	1.49	1.41
12	B	2010	G	C4'-C3'	-5.29	1.44	1.52
16	F	2	LYS	CA-C	-5.29	1.45	1.52
16	F	67	THR	C-N	5.29	1.41	1.33
12	B	714	U	C3'-C2'	-5.29	1.44	1.52
12	B	1807	G	C2'-C1'	-5.29	1.45	1.53
12	B	1809	A	O3'-P	-5.29	1.53	1.61
12	B	2634	A	O3'-P	-5.29	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2799	A	C5'-C4'	5.29	1.59	1.51
23	M	108	VAL	N-CA	-5.29	1.40	1.46
32	W	79	ARG	CZ-NH1	5.29	1.40	1.32
9	8	36	ARG	CA-C	-5.29	1.48	1.52
12	B	663	G	C4'-C3'	-5.29	1.44	1.52
12	B	2566	A	C5'-C4'	5.29	1.59	1.51
10	9	4	VAL	N-CA	5.29	1.56	1.46
10	9	335	ASN	CA-CB	5.29	1.61	1.53
12	B	383	C	C4'-C3'	5.29	1.60	1.52
6	5	37	LYS	CA-CB	5.29	1.61	1.53
11	A	55	U	C2-N3	5.29	1.48	1.37
12	B	476	G	O3'-P	-5.29	1.53	1.61
13	C	78	GLU	N-CA	-5.29	1.39	1.46
15	E	21	ARG	CA-CB	5.29	1.59	1.53
23	M	75	GLU	CA-C	-5.28	1.46	1.52
12	B	2391	G	C4'-C3'	5.28	1.61	1.53
10	9	69	ARG	NE-CZ	5.28	1.38	1.33
12	B	1155	A	O3'-P	-5.28	1.53	1.61
14	D	3	GLY	CA-C	-5.28	1.47	1.52
24	N	60	VAL	N-CA	-5.28	1.39	1.46
8	7	23	HIS	N-CA	-5.28	1.39	1.45
12	B	147	C	P-O5'	-5.28	1.51	1.59
12	B	1072	C	O3'-P	-5.28	1.53	1.61
12	B	2768	U	C1'-N1	5.28	1.56	1.48
23	M	84	LYS	N-CA	-5.28	1.42	1.47
10	9	286	ASP	N-CA	5.28	1.52	1.46
12	B	1110	G	C2'-C1'	-5.28	1.45	1.53
12	B	2308	G	N7-C5	-5.28	1.28	1.39
12	B	2603	G	O3'-P	-5.28	1.53	1.61
21	K	38	ILE	CA-C	5.28	1.58	1.52
26	P	60	VAL	CA-C	-5.28	1.48	1.52
12	B	1256	G	O3'-P	-5.27	1.53	1.61
12	B	2168	G	C5'-C4'	5.27	1.59	1.51
13	C	102	TYR	CA-C	-5.27	1.46	1.52
21	K	25	LEU	CA-CB	5.27	1.62	1.53
21	K	59	LYS	C-N	5.27	1.40	1.33
8	7	7	ARG	NE-CZ	5.27	1.38	1.33
12	B	828	U	O3'-P	-5.27	1.53	1.61
22	L	126	ARG	CA-CB	5.27	1.61	1.53
29	S	110	ARG	N-CA	-5.27	1.36	1.46
32	W	63	ILE	N-CA	-5.27	1.40	1.46
12	B	1038	G	C2'-C1'	-5.27	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2573	C	C3'-O3'	5.27	1.50	1.42
18	H	130	VAL	N-CA	-5.27	1.40	1.46
12	B	329	G	C2-N3	5.27	1.43	1.32
11	A	83	G	O4'-C1'	-5.26	1.33	1.41
12	B	309	A	O5'-C5'	5.26	1.50	1.42
12	B	670	A	C3'-O3'	-5.26	1.35	1.43
12	B	2786	U	C5'-C4'	5.26	1.59	1.51
12	B	580	U	P-O5'	-5.26	1.51	1.59
8	7	41	ARG	CZ-NH1	5.26	1.40	1.32
12	B	510	C	C5'-C4'	5.26	1.59	1.51
12	B	2538	C	C4'-C3'	5.26	1.60	1.52
24	N	48	VAL	CA-CB	5.26	1.61	1.54
12	B	854	C	C2'-C1'	-5.26	1.45	1.53
14	D	195	GLY	CA-C	-5.26	1.46	1.52
15	E	78	TRP	C-N	5.26	1.41	1.33
3	2	31	ILE	CA-CB	5.26	1.61	1.54
12	B	87	U	P-O5'	-5.26	1.51	1.59
12	B	1055	G	C4'-C3'	5.26	1.60	1.52
12	B	1598	A	C2'-C1'	-5.26	1.45	1.53
12	B	2415	G	C2'-C1'	-5.26	1.45	1.53
12	B	2889	C	C3'-C2'	-5.26	1.44	1.52
20	J	123	LYS	C-N	5.26	1.41	1.33
8	7	44	ARG	NE-CZ	5.25	1.38	1.33
12	B	621	A	C1'-N9	5.25	1.55	1.48
12	B	1478	G	C3'-C2'	-5.25	1.44	1.52
12	B	2178	C	C5'-C4'	5.25	1.59	1.51
14	D	82	PHE	C-O	5.25	1.30	1.23
20	J	120	ARG	NE-CZ	5.25	1.38	1.33
25	O	55	GLU	CA-C	5.25	1.59	1.52
12	B	152	A	O3'-P	-5.25	1.53	1.61
12	B	802	A	C2'-C1'	-5.25	1.45	1.53
12	B	871	U	C5'-C4'	-5.25	1.43	1.51
22	L	75	ALA	CA-C	5.25	1.60	1.53
22	L	130	GLY	C-N	5.25	1.40	1.33
12	B	1924	C	C2'-C1'	-5.25	1.45	1.53
27	Q	66	ALA	CA-C	-5.25	1.46	1.52
3	2	44	ARG	CZ-NH2	5.25	1.40	1.33
12	B	1218	G	O3'-P	-5.25	1.53	1.61
12	B	1309	G	O5'-C5'	5.25	1.50	1.42
12	B	2395	C	C3'-C2'	-5.25	1.44	1.52
14	D	142	VAL	CA-C	5.25	1.58	1.52
23	M	66	ARG	CZ-NH2	5.25	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	Q	89	ILE	N-CA	5.25	1.52	1.46
10	9	53	LEU	C-O	-5.25	1.17	1.24
12	B	2111	U	C1'-N1	5.25	1.56	1.48
13	C	176	ARG	CD-NE	5.25	1.53	1.46
20	J	17	VAL	CA-C	-5.25	1.46	1.52
32	W	64	VAL	N-CA	-5.25	1.39	1.46
12	B	834	G	O3'-P	-5.25	1.53	1.61
12	B	945	A	C2'-O2'	-5.25	1.33	1.41
1	0	59	ASP	CA-CB	5.24	1.61	1.53
9	8	13	ASN	N-CA	-5.24	1.40	1.46
12	B	920	A	C2'-C1'	-5.24	1.45	1.53
12	B	1496	A	N7-C5	-5.24	1.28	1.39
12	B	2485	G	O3'-P	-5.24	1.53	1.61
12	B	2492	U	C2'-C1'	-5.24	1.45	1.53
12	B	2661	G	C1'-N9	5.24	1.55	1.48
6	5	149	VAL	N-CA	-5.24	1.41	1.46
12	B	527	C	O3'-P	-5.24	1.53	1.61
13	C	242	HIS	C-N	5.24	1.40	1.33
30	T	48	GLN	N-CA	-5.24	1.41	1.46
12	B	797	G	C4'-O4'	-5.24	1.37	1.45
32	W	2	PHE	C-O	5.24	1.29	1.23
12	B	49	A	C4'-C3'	5.24	1.61	1.53
12	B	1114	C	C5'-C4'	5.23	1.59	1.51
12	B	1702	G	C5'-C4'	5.23	1.59	1.51
12	B	2875	C	C3'-O3'	5.23	1.50	1.42
12	B	38	A	C2'-C1'	-5.23	1.45	1.53
12	B	1182	G	O3'-P	-5.23	1.53	1.61
12	B	1422	G	P-O5'	-5.23	1.51	1.59
12	B	1502	A	C5'-C4'	5.23	1.59	1.51
12	B	2240	U	C2'-C1'	-5.23	1.45	1.53
23	M	40	ARG	CA-C	-5.23	1.46	1.52
25	O	24	THR	CA-C	-5.23	1.46	1.52
12	B	59	U	C3'-O3'	-5.23	1.34	1.42
12	B	2019	A	C1'-N9	5.23	1.55	1.48
12	B	2520	C	O4'-C1'	-5.23	1.33	1.41
12	B	2818	U	O5'-C5'	5.23	1.50	1.42
12	B	2876	G	C3'-C2'	-5.23	1.45	1.52
14	D	140	HIS	ND1-CE1	5.23	1.37	1.32
12	B	298	G	C4'-C3'	5.23	1.60	1.52
28	R	47	VAL	N-CA	5.23	1.52	1.46
12	B	463	G	C3'-O3'	5.23	1.50	1.42
12	B	1384	A	C1'-N9	-5.23	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2822	G	C5'-C4'	5.23	1.59	1.51
19	I	105	LEU	CA-C	-5.23	1.46	1.52
5	4	18	HIS	CD2-NE2	5.23	1.43	1.37
14	D	127	PHE	C-O	-5.23	1.16	1.24
22	L	119	PRO	CA-CB	-5.23	1.46	1.53
1	0	31	ASN	CA-CB	5.22	1.60	1.53
1	0	49	ARG	CD-NE	5.22	1.53	1.46
12	B	2084	C	O4'-C1'	5.22	1.49	1.41
12	B	1153	C	O3'-P	-5.22	1.53	1.61
12	B	2487	G	O4'-C1'	-5.22	1.33	1.41
15	E	91	ASP	CA-C	5.22	1.58	1.52
33	Y	79	ILE	C-O	-5.22	1.18	1.23
15	E	52	VAL	N-CA	5.22	1.52	1.46
20	J	93	ILE	C-N	5.22	1.40	1.33
22	L	18	ARG	CZ-NH1	5.22	1.40	1.32
12	B	1400	U	C1'-N1	5.22	1.56	1.48
12	B	1859	U	C4'-C3'	5.22	1.60	1.52
12	B	1953	A	C4'-C3'	5.22	1.60	1.52
30	T	5	GLU	C-N	5.22	1.41	1.34
6	5	96	GLY	C-N	5.21	1.41	1.33
24	N	118	ARG	CD-NE	5.21	1.53	1.46
12	B	972	A	C5'-C4'	5.21	1.59	1.51
12	B	1774	C	C1'-N1	5.21	1.56	1.48
22	L	94	THR	CA-C	5.21	1.59	1.52
8	7	44	ARG	CD-NE	5.21	1.53	1.46
12	B	765	C	C3'-C2'	-5.21	1.45	1.52
12	B	2089	C	O3'-P	-5.21	1.53	1.61
12	B	2601	C	O3'-P	-5.21	1.53	1.61
17	G	152	ARG	CA-CB	5.21	1.61	1.53
8	7	31	ILE	C-N	5.21	1.41	1.33
12	B	1129	A	C4'-O4'	5.21	1.53	1.45
12	B	356	G	O4'-C1'	-5.21	1.33	1.41
12	B	458	G	C4'-O4'	-5.21	1.38	1.45
20	J	29	ALA	C-N	5.21	1.41	1.33
24	N	61	ALA	CA-C	-5.21	1.46	1.52
33	Y	19	ARG	CA-CB	5.21	1.62	1.53
12	B	875	G	N9-C4	-5.21	1.27	1.38
12	B	1697	G	C3'-C2'	-5.21	1.45	1.52
12	B	2179	C	C3'-C2'	5.21	1.60	1.52
16	F	84	ILE	CA-C	-5.21	1.46	1.52
16	F	131	VAL	C-O	-5.21	1.18	1.24
19	I	79	LEU	CA-C	5.21	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	T	85	VAL	CA-CB	-5.21	1.47	1.54
12	B	277	G	P-O5'	-5.21	1.51	1.59
12	B	2511	U	C4'-O4'	-5.21	1.37	1.45
15	E	173	THR	N-CA	-5.21	1.40	1.46
17	G	149	ALA	N-CA	-5.21	1.39	1.46
20	J	19	ASP	CA-C	-5.21	1.46	1.52
25	O	91	SER	CA-C	-5.21	1.46	1.52
12	B	1991	U	C3'-C2'	-5.20	1.45	1.52
18	H	50	ARG	CD-NE	5.20	1.53	1.46
7	6	33	ARG	CZ-NH2	5.20	1.40	1.33
18	H	141	LYS	N-CA	5.20	1.52	1.45
10	9	188	ASP	CA-C	-5.20	1.46	1.52
12	B	186	G	C3'-O3'	5.20	1.50	1.42
12	B	1155	A	C1'-N9	-5.20	1.40	1.48
12	B	1448	G	O5'-C5'	5.20	1.50	1.42
14	D	193	VAL	CA-C	-5.20	1.47	1.52
12	B	710	U	C2'-C1'	-5.20	1.45	1.53
15	E	119	ILE	N-CA	-5.20	1.40	1.46
12	B	1024	G	C1'-N9	5.20	1.55	1.48
17	G	24	THR	CA-CB	-5.19	1.46	1.53
10	9	92	VAL	CA-CB	-5.19	1.47	1.54
12	B	281	C	P-O5'	-5.19	1.51	1.59
12	B	282	A	C2'-C1'	-5.19	1.45	1.53
12	B	723	C	C5'-C4'	5.19	1.59	1.51
12	B	979	A	C3'-O3'	-5.19	1.34	1.42
14	D	46	ARG	CZ-NH2	5.19	1.40	1.33
14	D	77	ARG	CZ-NH2	5.19	1.40	1.33
26	P	106	ALA	CA-C	-5.19	1.45	1.52
26	P	112	ARG	CZ-NH1	5.19	1.40	1.32
27	Q	11	ALA	C-N	5.19	1.41	1.33
12	B	104	A	C2'-C1'	-5.19	1.45	1.53
12	B	273	G	C5'-C4'	5.19	1.59	1.51
12	B	1736	U	O3'-P	-5.19	1.53	1.61
13	C	199	HIS	CA-CB	5.19	1.61	1.53
12	B	274	C	C2'-C1'	-5.19	1.45	1.53
12	B	2138	G	O3'-P	-5.19	1.53	1.61
12	B	2837	A	C3'-C2'	-5.19	1.45	1.52
17	G	69	ALA	C-N	5.19	1.41	1.34
12	B	1042	G	C5'-C4'	5.19	1.59	1.51
12	B	2596	U	O3'-P	-5.18	1.53	1.61
10	9	282	PHE	N-CA	-5.18	1.39	1.46
12	B	30	G	P-O5'	-5.18	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	712	G	C2'-C1'	-5.18	1.45	1.53
12	B	1559	U	O3'-P	-5.18	1.53	1.61
2	1	23	ARG	CD-NE	5.18	1.53	1.46
12	B	1505	A	C2'-C1'	-5.18	1.45	1.53
12	B	2315	G	P-O5'	-5.18	1.51	1.59
12	B	2763	G	O3'-P	-5.18	1.53	1.61
20	J	14	ASP	N-CA	-5.18	1.39	1.46
6	5	201	PRO	N-CD	-5.18	1.40	1.47
12	B	415	A	O4'-C1'	5.18	1.49	1.41
12	B	1175	A	C1'-N9	5.18	1.55	1.48
12	B	1871	A	C4'-C3'	5.18	1.60	1.52
12	B	1989	G	C2'-C1'	-5.18	1.45	1.53
12	B	2231	U	C3'-O3'	5.18	1.50	1.42
12	B	2765	A	C3'-C2'	-5.18	1.45	1.52
24	N	17	ARG	CZ-NH1	5.18	1.40	1.32
12	B	1946	U	O4'-C1'	5.18	1.49	1.41
6	5	62	ALA	C-N	5.18	1.41	1.33
12	B	1098	A	C4'-O4'	-5.18	1.37	1.45
12	B	1717	A	O3'-P	-5.18	1.53	1.61
16	F	131	VAL	CA-C	-5.18	1.46	1.52
21	K	2	ILE	N-CA	-5.18	1.39	1.46
4	3	42	ILE	CA-C	-5.17	1.47	1.53
11	A	18	G	O4'-C1'	5.17	1.49	1.41
12	B	1229	C	O3'-P	-5.17	1.53	1.61
12	B	1235	G	C5'-C4'	5.17	1.59	1.51
12	B	1336	A	C5'-C4'	5.17	1.59	1.51
12	B	1548	A	C5'-C4'	5.17	1.59	1.51
12	B	2222	C	P-O5'	-5.17	1.51	1.59
12	B	2652	C	O3'-P	-5.17	1.53	1.61
14	D	152	PRO	C-N	5.17	1.41	1.33
3	2	10	ARG	CA-C	5.17	1.58	1.52
12	B	1907	G	O5'-C5'	-5.17	1.34	1.42
12	B	2737	G	C3'-C2'	-5.17	1.45	1.52
1	0	19	HIS	ND1-CE1	5.17	1.37	1.32
1	0	23	ALA	C-N	5.17	1.40	1.33
10	9	243	HIS	CG-CD2	5.17	1.41	1.35
24	N	54	LEU	C-N	5.17	1.41	1.33
12	B	1299	G	O3'-P	-5.17	1.53	1.61
11	A	64	G	C2'-C1'	-5.17	1.45	1.53
12	B	1086	A	C3'-C2'	5.17	1.60	1.52
12	B	2327	A	C1'-N9	5.17	1.55	1.48
20	J	35	ARG	N-CA	-5.17	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	K	111	LYS	CA-C	-5.17	1.46	1.52
13	C	142	ASN	CA-CB	5.17	1.62	1.53
26	P	66	GLY	C-N	5.17	1.41	1.33
10	9	16	GLY	CA-C	-5.16	1.44	1.51
10	9	20	CYS	N-CA	-5.16	1.39	1.46
12	B	602	A	C2'-C1'	-5.16	1.45	1.53
12	B	664	G	O4'-C1'	-5.16	1.33	1.41
12	B	980	A	O3'-P	-5.16	1.53	1.61
12	B	1529	G	C1'-N9	5.16	1.55	1.48
12	B	1935	G	C4'-O4'	5.16	1.53	1.45
12	B	1958	C	C3'-O3'	5.16	1.49	1.42
21	K	71	ARG	NE-CZ	5.16	1.38	1.33
10	9	66	ARG	NE-CZ	5.16	1.38	1.33
12	B	1558	C	C2'-O2'	5.16	1.49	1.41
1	0	41	SER	CA-C	5.16	1.59	1.52
11	A	40	U	C3'-O3'	5.16	1.50	1.43
12	B	725	G	C2'-C1'	-5.16	1.45	1.53
12	B	1046	A	C2'-C1'	-5.16	1.45	1.53
12	B	1359	A	O3'-P	-5.16	1.53	1.61
12	B	1421	G	C2'-C1'	-5.16	1.45	1.53
12	B	2665	A	C3'-O3'	5.16	1.49	1.42
12	B	727	A	C4'-O4'	5.16	1.53	1.45
12	B	1948	G	C2'-C1'	-5.16	1.45	1.53
12	B	2095	A	C4'-O4'	-5.16	1.37	1.45
13	C	261	ARG	CZ-NH1	5.16	1.40	1.32
16	F	7	TYR	N-CA	-5.16	1.40	1.46
16	F	90	LEU	C-O	-5.16	1.17	1.24
8	7	60	CYS	N-CA	-5.16	1.39	1.46
12	B	1996	C	C5'-C4'	5.16	1.59	1.51
12	B	2821	A	P-O5'	-5.16	1.52	1.59
16	F	2	LYS	C-N	5.16	1.41	1.33
12	B	1313	U	O3'-P	-5.16	1.53	1.61
15	E	17	THR	CA-C	-5.16	1.46	1.52
23	M	101	VAL	C-N	5.16	1.41	1.33
29	S	73	LYS	N-CA	-5.16	1.39	1.46
12	B	472	A	P-O5'	-5.15	1.52	1.59
12	B	587	C	C4'-C3'	-5.15	1.45	1.53
15	E	149	ILE	C-N	5.15	1.41	1.33
27	Q	21	LYS	N-CA	-5.15	1.40	1.45
12	B	156	A	C3'-C2'	-5.15	1.45	1.52
12	B	843	G	N9-C8	5.15	1.48	1.37
12	B	2674	G	C2'-C1'	-5.15	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
13	C	90	ILE	CA-C	-5.15	1.46	1.53
27	Q	6	GLY	CA-C	-5.15	1.45	1.51
12	B	952	G	C2'-C1'	-5.15	1.45	1.53
12	B	1502	A	P-O5'	-5.15	1.52	1.59
12	B	2878	U	P-O5'	-5.15	1.52	1.59
30	T	59	ASN	CA-C	-5.15	1.46	1.52
30	T	71	GLY	N-CA	5.15	1.52	1.45
9	8	36	ARG	C-O	-5.15	1.16	1.25
12	B	1431	A	P-O5'	-5.15	1.52	1.59
12	B	1449	G	O4'-C1'	5.15	1.49	1.41
12	B	2690	U	O3'-P	-5.15	1.53	1.61
18	H	12	LEU	CA-C	-5.15	1.46	1.53
6	5	163	TYR	C-N	5.15	1.40	1.33
12	B	1398	C	P-O5'	-5.15	1.52	1.59
23	M	51	ARG	CA-CB	5.15	1.61	1.53
6	5	211	LYS	CA-CB	5.15	1.60	1.53
12	B	858	G	O3'-P	-5.15	1.53	1.61
16	F	174	PHE	C-N	5.15	1.37	1.33
32	W	74	ALA	N-CA	-5.15	1.39	1.46
11	A	28	C	C2'-C1'	-5.14	1.45	1.53
12	B	1490	A	O3'-P	-5.14	1.53	1.61
12	B	2113	U	C4'-C3'	5.14	1.60	1.52
23	M	50	ARG	NE-CZ	5.14	1.38	1.33
12	B	420	C	C5'-C4'	5.14	1.58	1.51
12	B	694	U	C4'-O4'	-5.14	1.37	1.45
12	B	1095	A	C2'-O2'	-5.14	1.34	1.42
12	B	1659	G	C3'-O3'	5.14	1.49	1.42
12	B	1932	A	P-O5'	-5.14	1.52	1.59
12	B	2356	U	O5'-C5'	5.14	1.50	1.42
12	B	1018	U	P-O5'	-5.14	1.52	1.59
12	B	2011	U	C3'-O3'	5.14	1.49	1.42
12	B	2141	G	C4'-C3'	5.14	1.60	1.52
12	B	2534	A	N1-C2	5.14	1.44	1.34
12	B	2889	C	C4'-C3'	5.14	1.60	1.52
12	B	1309	G	C4'-C3'	5.14	1.60	1.52
29	S	25	ARG	CA-CB	5.14	1.61	1.53
12	B	2447	G	C2'-O2'	-5.14	1.33	1.41
12	B	2838	G	C1'-N9	-5.14	1.40	1.48
17	G	60	GLY	N-CA	-5.14	1.38	1.45
22	L	12	SER	N-CA	-5.14	1.39	1.46
12	B	2097	A	C1'-N9	5.13	1.55	1.48
12	B	2142	A	C3'-C2'	-5.13	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	9	55	THR	CA-C	-5.13	1.45	1.52
12	B	292	U	C4'-O4'	-5.13	1.37	1.45
12	B	422	A	C1'-N9	5.13	1.55	1.48
12	B	596	U	C4'-C3'	5.13	1.60	1.52
12	B	1613	G	C4'-O4'	5.13	1.53	1.45
20	J	37	ARG	CD-NE	5.13	1.53	1.46
21	K	108	ARG	CA-CB	5.13	1.59	1.52
26	P	50	ARG	CZ-NH1	5.13	1.40	1.32
26	P	102	ARG	NE-CZ	5.13	1.38	1.33
12	B	577	G	C2'-C1'	-5.13	1.45	1.53
12	B	838	C	C1'-N1	5.13	1.56	1.48
19	I	89	SER	CA-C	-5.13	1.46	1.53
1	0	43	LYS	CA-CB	5.13	1.61	1.53
12	B	329	G	C2'-C1'	-5.13	1.45	1.53
12	B	1771	C	C3'-C2'	-5.13	1.45	1.52
12	B	2470	G	C3'-C2'	5.13	1.60	1.52
29	S	11	ARG	CD-NE	5.13	1.53	1.46
12	B	2579	C	O4'-C1'	-5.12	1.33	1.41
12	B	1001	A	P-O5'	-5.12	1.52	1.59
12	B	1013	C	O4'-C1'	5.12	1.49	1.41
12	B	1872	A	N7-C5	5.12	1.49	1.39
12	B	2261	C	C2'-C1'	-5.12	1.45	1.53
17	G	169	ARG	CA-C	-5.12	1.46	1.52
20	J	24	THR	CA-C	-5.12	1.46	1.52
6	5	172	HIS	ND1-CE1	5.12	1.37	1.32
12	B	2093	G	O5'-C5'	5.12	1.50	1.42
12	B	2118	U	O3'-P	-5.12	1.53	1.61
12	B	2626	C	C1'-N1	5.12	1.56	1.48
10	9	198	LEU	CA-CB	5.12	1.62	1.53
12	B	2120	G	C3'-O3'	5.12	1.49	1.42
12	B	2683	C	C2'-C1'	5.12	1.61	1.53
12	B	1067	A	C5'-C4'	5.12	1.58	1.51
12	B	2779	U	C1'-N1	5.12	1.55	1.47
32	W	19	ARG	CD-NE	5.12	1.53	1.46
12	B	535	G	C4'-C3'	5.12	1.60	1.52
12	B	542	C	O4'-C1'	5.12	1.49	1.41
23	M	58	LYS	CA-C	-5.12	1.46	1.53
31	U	83	GLY	CA-C	-5.12	1.46	1.52
8	7	38	LYS	N-CA	-5.12	1.39	1.46
12	B	230	G	C5'-C4'	5.12	1.58	1.51
12	B	589	U	O3'-P	-5.12	1.53	1.61
12	B	833	A	C5'-C4'	5.12	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	Y	52	CYS	CA-CB	5.12	1.62	1.53
9	8	19	ARG	CZ-NH1	5.11	1.40	1.32
14	D	178	VAL	N-CA	-5.11	1.41	1.46
32	W	2	PHE	CA-C	-5.11	1.46	1.52
12	B	72	U	C4'-C3'	5.11	1.60	1.53
31	U	13	LEU	N-CA	5.11	1.52	1.46
12	B	29	U	C1'-N1	-5.11	1.40	1.48
12	B	110	G	C2'-C1'	-5.11	1.45	1.53
12	B	381	G	N1-C2	5.11	1.48	1.37
24	N	63	ARG	CA-C	-5.11	1.46	1.52
24	N	67	PHE	C-N	5.11	1.40	1.33
10	9	57	ILE	CB-CG1	5.11	1.63	1.53
12	B	1770	G	C2'-C1'	-5.11	1.45	1.53
10	9	85	ASP	CA-C	-5.11	1.46	1.52
12	B	1908	C	C2'-O2'	-5.11	1.34	1.42
12	B	2807	U	C2'-C1'	-5.11	1.45	1.53
18	H	115	VAL	CA-C	5.11	1.58	1.52
23	M	120	ALA	N-CA	-5.11	1.39	1.46
26	P	99	LEU	N-CA	-5.11	1.41	1.46
12	B	320	A	O3'-P	-5.11	1.53	1.61
12	B	1226	A	C2'-C1'	-5.11	1.45	1.53
12	B	2113	U	C3'-C2'	-5.11	1.45	1.52
12	B	2518	A	P-O5'	-5.11	1.52	1.59
13	C	13	ARG	NE-CZ	5.11	1.38	1.33
19	I	107	GLU	CA-C	-5.11	1.46	1.52
20	J	102	GLU	N-CA	5.11	1.52	1.46
26	P	94	ALA	CA-C	-5.11	1.47	1.53
12	B	1689	A	C5-C6	-5.10	1.30	1.41
12	B	2815	C	C4'-C3'	5.10	1.60	1.52
5	4	43	ARG	NE-CZ	5.10	1.38	1.33
12	B	1324	G	O3'-P	-5.10	1.53	1.61
12	B	1576	U	O3'-P	-5.10	1.53	1.61
12	B	1632	A	P-O5'	-5.10	1.52	1.59
12	B	1871	A	C5'-C4'	5.10	1.58	1.51
12	B	2511	U	O3'-P	-5.10	1.53	1.61
23	M	110	GLU	CA-C	-5.10	1.46	1.52
12	B	122	G	C4'-C3'	5.10	1.60	1.52
12	B	2453	A	C2'-C1'	-5.10	1.45	1.53
28	R	94	THR	N-CA	-5.10	1.39	1.45
12	B	13	A	C5'-C4'	5.10	1.58	1.51
12	B	2002	G	C2'-C1'	-5.10	1.45	1.53
18	H	17	ASP	CA-CB	5.10	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	Q	5	ARG	CA-C	-5.10	1.45	1.53
28	R	47	VAL	CA-C	-5.10	1.47	1.52
12	B	948	C	O3'-P	-5.10	1.53	1.61
11	A	31	C	C5'-C4'	5.10	1.58	1.51
10	9	157	MET	C-N	5.09	1.40	1.33
12	B	116	C	C4'-O4'	-5.09	1.38	1.45
12	B	364	C	C5'-C4'	5.09	1.58	1.51
12	B	2549	G	C5'-C4'	-5.09	1.43	1.51
17	G	114	HIS	CB-CG	5.09	1.57	1.50
29	S	35	ILE	CA-C	-5.09	1.46	1.52
12	B	1462	C	C3'-C2'	5.09	1.60	1.52
12	B	1826	G	C4'-O4'	-5.09	1.38	1.45
25	O	2	ASP	N-CA	5.09	1.55	1.46
10	9	113	GLN	C-O	-5.09	1.18	1.24
12	B	960	A	O3'-P	-5.09	1.53	1.61
12	B	2017	U	C4'-C3'	5.09	1.60	1.52
31	U	67	SER	CA-C	-5.09	1.45	1.52
1	0	27	ARG	NE-CZ	5.09	1.38	1.33
1	0	53	LYS	C-N	5.09	1.41	1.33
12	B	114	U	O5'-C5'	-5.09	1.34	1.42
12	B	1457	U	C5'-C4'	5.09	1.58	1.51
21	K	75	SER	CA-C	-5.09	1.46	1.52
26	P	108	ARG	N-CA	-5.09	1.39	1.46
8	7	6	VAL	CA-CB	5.09	1.60	1.54
12	B	715	A	O3'-P	-5.09	1.53	1.61
13	C	171	VAL	CA-CB	-5.09	1.47	1.54
12	B	1301	A	C2'-C1'	-5.09	1.45	1.53
12	B	1452	G	C1'-N9	-5.09	1.40	1.48
14	D	29	VAL	CA-C	-5.09	1.46	1.52
15	E	195	GLN	CD-NE2	5.09	1.44	1.33
17	G	85	LYS	CA-C	-5.09	1.46	1.52
18	H	39	ALA	CA-C	-5.09	1.46	1.52
12	B	756	A	C5'-C4'	5.08	1.58	1.51
12	B	942	G	C1'-N9	-5.08	1.40	1.48
12	B	1096	A	C5'-C4'	5.08	1.58	1.51
12	B	2070	A	C2'-C1'	-5.08	1.45	1.53
18	H	6	LEU	CA-CB	5.08	1.61	1.54
3	2	42	ALA	C-O	-5.08	1.18	1.24
8	7	44	ARG	CZ-NH1	5.08	1.39	1.32
12	B	329	G	C5'-C4'	5.08	1.58	1.51
12	B	1068	G	C2'-C1'	-5.08	1.45	1.53
12	B	1139	G	C2'-C1'	-5.08	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	1211	C	N3-C4	5.08	1.44	1.33
12	B	1953	A	P-O5'	-5.08	1.52	1.59
29	S	11	ARG	CA-CB	5.08	1.61	1.53
12	B	80	G	C2'-C1'	-5.08	1.45	1.53
12	B	2540	C	C2'-C1'	-5.08	1.45	1.53
13	C	53	ILE	CA-CB	5.08	1.60	1.54
25	O	40	ILE	N-CA	-5.08	1.40	1.46
31	U	43	LYS	CA-C	-5.08	1.46	1.52
33	Y	57	THR	C-N	5.08	1.40	1.33
5	4	11	VAL	CA-C	-5.08	1.46	1.52
12	B	1546	G	C4'-O4'	-5.08	1.38	1.45
12	B	2113	U	P-O5'	-5.08	1.52	1.59
12	B	2409	G	C3'-C2'	-5.08	1.45	1.52
17	G	88	LEU	CA-C	-5.08	1.46	1.52
19	I	77	VAL	CA-CB	5.08	1.60	1.54
29	S	98	LYS	N-CA	-5.08	1.39	1.46
12	B	332	A	C1'-N9	-5.08	1.39	1.47
12	B	835	C	C1'-N1	5.08	1.56	1.48
12	B	837	C	O3'-P	-5.08	1.53	1.61
17	G	41	GLU	CA-C	-5.08	1.46	1.52
25	O	29	HIS	CA-CB	5.08	1.62	1.53
10	9	46	TRP	C-N	5.07	1.41	1.33
10	9	202	ARG	NE-CZ	5.07	1.38	1.33
12	B	1241	A	C3'-C2'	-5.07	1.45	1.52
12	B	1323	C	C5'-C4'	5.07	1.58	1.51
12	B	1487	U	C4'-O4'	5.07	1.53	1.45
1	0	64	ASP	CA-CB	5.07	1.59	1.52
11	A	60	C	C4-N4	5.07	1.44	1.33
12	B	2297	A	C4'-C3'	5.07	1.60	1.52
18	H	62	LEU	CB-CG	5.07	1.63	1.53
32	W	59	GLU	CA-C	-5.07	1.46	1.52
14	D	78	GLY	CA-C	5.07	1.59	1.51
28	R	87	GLN	CA-CB	5.07	1.62	1.53
11	A	79	G	C1'-N9	5.07	1.55	1.48
12	B	102	U	C1'-N1	5.07	1.55	1.47
12	B	2776	A	O5'-C5'	5.07	1.50	1.42
12	B	774	G	C1'-N9	5.07	1.54	1.47
12	B	1164	C	O3'-P	-5.07	1.53	1.61
12	B	1766	G	C4'-O4'	-5.07	1.38	1.45
18	H	43	ASN	CA-C	-5.07	1.46	1.52
19	I	73	PRO	C-N	5.07	1.39	1.33
22	L	23	ILE	CA-CB	-5.07	1.47	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	U	2	ALA	C-N	5.07	1.40	1.33
11	A	38	C	C1'-N1	5.06	1.56	1.48
12	B	2429	G	C2'-C1'	-5.06	1.45	1.53
6	5	83	ASN	C-N	5.06	1.40	1.33
10	9	264	SER	CA-CB	5.06	1.61	1.53
12	B	949	G	O4'-C1'	5.06	1.49	1.41
12	B	1270	C	C2'-O2'	-5.06	1.34	1.42
12	B	1273	U	N1-C2	5.06	1.48	1.38
15	E	86	ALA	C-N	5.06	1.39	1.33
17	G	141	GLY	N-CA	-5.06	1.39	1.45
20	J	27	ARG	NE-CZ	5.06	1.38	1.33
6	5	80	GLN	CA-C	-5.06	1.44	1.52
6	5	113	VAL	N-CA	-5.06	1.40	1.46
10	9	189	TYR	CA-C	-5.06	1.47	1.52
12	B	210	C	C5'-C4'	5.06	1.58	1.51
12	B	233	A	C2'-C1'	-5.06	1.45	1.53
12	B	886	A	C3'-O3'	5.06	1.49	1.42
12	B	1676	A	C2'-C1'	-5.06	1.45	1.53
12	B	2592	G	O4'-C1'	5.06	1.49	1.41
12	B	2806	C	C1'-N1	5.06	1.56	1.48
13	C	258	SER	N-CA	-5.06	1.39	1.45
16	F	154	THR	CA-C	-5.06	1.46	1.52
31	U	3	LYS	CA-C	-5.06	1.46	1.52
9	8	26	ILE	CA-C	-5.06	1.47	1.52
10	9	201	VAL	C-N	5.06	1.40	1.33
12	B	15	G	C2-N3	5.06	1.42	1.32
12	B	2804	U	C1'-N1	5.06	1.56	1.48
21	K	22	ILE	C-N	5.06	1.39	1.33
22	L	21	ARG	CZ-NH1	5.06	1.39	1.32
27	Q	29	ARG	NE-CZ	5.06	1.38	1.33
11	A	20	G	C4'-O4'	5.06	1.53	1.45
12	B	2828	G	C3'-O3'	5.06	1.49	1.42
3	2	37	ARG	NE-CZ	5.05	1.38	1.33
3	2	43	ILE	N-CA	-5.05	1.40	1.46
12	B	514	A	P-O5'	-5.05	1.52	1.59
12	B	1293	C	P-O5'	-5.05	1.52	1.59
6	5	198	LYS	CA-CB	5.05	1.61	1.53
12	B	1248	G	C2-N2	5.05	1.44	1.34
12	B	1635	A	C5'-C4'	5.05	1.58	1.51
15	E	195	GLN	CA-C	-5.05	1.46	1.52
12	B	625	G	C2-N3	5.05	1.42	1.32
12	B	1692	U	C2'-C1'	-5.05	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	2238	G	C2'-C1'	-5.05	1.45	1.53
12	B	2754	U	C1'-N1	5.05	1.56	1.48
12	B	191	A	P-O5'	-5.05	1.52	1.59
13	C	89	ASN	CA-CB	5.05	1.60	1.53
28	R	68	ARG	CA-C	-5.05	1.46	1.53
33	Y	17	ALA	CA-C	-5.05	1.46	1.52
12	B	860	U	C1'-N1	5.05	1.56	1.48
12	B	1520	U	C2'-C1'	-5.05	1.45	1.53
12	B	2816	G	C3'-C2'	-5.05	1.45	1.52
21	K	86	LEU	CA-CB	-5.05	1.45	1.53
12	B	1945	G	C3'-O3'	5.05	1.49	1.42
15	E	130	LYS	CA-CB	5.05	1.61	1.53
18	H	79	THR	N-CA	5.05	1.52	1.46
12	B	277	G	O5'-C5'	-5.04	1.34	1.42
12	B	1124	G	C2-N3	5.04	1.42	1.32
12	B	1722	A	C2'-O2'	5.04	1.50	1.42
31	U	55	GLY	C-N	5.04	1.39	1.33
10	9	272	ASP	N-CA	-5.04	1.40	1.46
12	B	2382	G	P-O5'	-5.04	1.52	1.59
12	B	2680	U	P-O5'	-5.04	1.52	1.59
13	C	54	GLY	CA-C	-5.04	1.45	1.52
24	N	56	LYS	CA-CB	5.04	1.61	1.53
12	B	500	G	C2'-O2'	-5.04	1.34	1.42
12	B	695	G	C2'-C1'	-5.04	1.45	1.53
12	B	1248	G	C5'-C4'	5.04	1.58	1.51
12	B	1871	A	O3'-P	-5.04	1.53	1.61
12	B	2786	U	N3-C4	5.04	1.48	1.38
29	S	97	LEU	CA-C	-5.04	1.46	1.52
32	W	52	ALA	CA-CB	5.04	1.61	1.53
18	H	35	LYS	CA-C	-5.04	1.46	1.52
12	B	298	G	O3'-P	-5.04	1.53	1.61
12	B	872	U	C2'-C1'	-5.04	1.45	1.53
12	B	1642	G	O5'-C5'	5.04	1.50	1.42
14	D	6	GLY	C-N	5.04	1.39	1.33
25	O	47	VAL	N-CA	-5.04	1.40	1.46
30	T	21	SER	CA-C	5.04	1.59	1.52
1	0	54	GLY	C-N	5.04	1.40	1.33
12	B	1583	A	C2'-C1'	-5.04	1.45	1.53
12	B	2490	G	C1'-N9	5.04	1.54	1.47
12	B	2714	G	C1'-N9	5.04	1.55	1.48
12	B	2733	A	N7-C5	-5.04	1.29	1.39
20	J	41	LYS	CA-C	-5.04	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	9	81	LYS	C-N	5.03	1.40	1.33
12	B	471	A	C1'-N9	-5.03	1.40	1.48
12	B	1027	A	C4'-C3'	5.03	1.60	1.52
12	B	434	U	C1'-N1	5.03	1.54	1.47
12	B	1853	A	C2'-C1'	-5.03	1.45	1.53
24	N	86	ARG	CA-C	-5.03	1.45	1.52
12	B	1319	C	C5'-C4'	5.03	1.58	1.51
12	B	2764	A	O5'-C5'	5.03	1.50	1.42
6	5	160	GLN	CA-C	-5.03	1.46	1.52
12	B	1512	C	O4'-C1'	5.03	1.49	1.41
12	B	1784	A	C3'-C2'	5.03	1.60	1.52
14	D	203	VAL	CA-CB	-5.03	1.47	1.54
17	G	22	VAL	N-CA	-5.03	1.40	1.46
24	N	33	ILE	C-N	5.03	1.39	1.33
29	S	25	ARG	NE-CZ	5.03	1.38	1.33
31	U	47	PRO	C-N	5.03	1.39	1.33
11	A	76	G	C3'-O3'	5.02	1.49	1.42
12	B	1281	G	O5'-C5'	-5.02	1.34	1.42
12	B	1941	C	C4'-O4'	-5.02	1.38	1.45
20	J	35	ARG	CD-NE	5.02	1.53	1.46
26	P	18	SER	C-N	5.02	1.37	1.33
26	P	105	LYS	N-CA	-5.02	1.39	1.46
6	5	229	LEU	N-CA	-5.02	1.39	1.46
10	9	246	ASP	CA-C	-5.02	1.46	1.52
12	B	1158	C	C2'-C1'	-5.02	1.45	1.53
15	E	3	LEU	C-N	5.02	1.40	1.33
22	L	69	ARG	CD-NE	5.02	1.53	1.46
27	Q	41	ALA	CA-CB	5.02	1.61	1.53
12	B	1394	U	O4'-C1'	-5.02	1.34	1.41
12	B	2294	G	O3'-P	5.02	1.68	1.61
12	B	2539	C	C2'-C1'	-5.02	1.45	1.53
27	Q	115	ALA	C-N	5.02	1.40	1.33
12	B	1581	G	C1'-N9	5.02	1.55	1.48
21	K	37	ASP	CA-CB	5.02	1.63	1.54
27	Q	20	ALA	N-CA	-5.02	1.40	1.46
12	B	540	C	C2-N3	5.02	1.45	1.35
12	B	699	A	C4'-C3'	5.02	1.60	1.52
20	J	69	ARG	CZ-NH2	5.02	1.40	1.33
12	B	189	G	P-O5'	-5.01	1.52	1.59
12	B	434	U	C3'-C2'	5.01	1.60	1.52
12	B	557	C	C2'-C1'	-5.01	1.45	1.53
12	B	675	A	C3'-O3'	-5.01	1.34	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	B	973	A	C2'-C1'	-5.01	1.45	1.53
18	H	122	LEU	CA-C	-5.01	1.46	1.53
14	D	108	ASP	CA-CB	5.01	1.61	1.53
12	B	1645	G	O5'-C5'	-5.01	1.34	1.42
12	B	2097	A	C5'-C4'	5.01	1.58	1.51
12	B	2679	A	C1'-N9	-5.01	1.40	1.48
20	J	5	THR	CA-C	-5.01	1.46	1.52
24	N	90	ARG	CZ-NH1	5.01	1.39	1.32
2	1	6	LEU	CA-CB	5.01	1.61	1.53
12	B	190	A	N7-C5	-5.01	1.29	1.39
12	B	780	G	C4'-O4'	-5.01	1.38	1.45
12	B	1285	A	C5'-C4'	5.01	1.58	1.51
12	B	1429	G	C2-N3	5.01	1.42	1.32
12	B	1524	G	O5'-C5'	5.01	1.50	1.42
12	B	1631	G	C3'-C2'	5.01	1.60	1.52
18	H	30	LEU	C-N	-5.01	1.28	1.33
12	B	1237	A	P-O5'	5.01	1.67	1.59
12	B	1675	C	C3'-O3'	-5.01	1.34	1.42
31	U	44	HIS	N-CA	-5.01	1.40	1.46
12	B	18	U	C1'-N1	5.01	1.55	1.48
12	B	740	C	C3'-O3'	5.01	1.49	1.42
12	B	2835	A	C5'-C4'	5.01	1.58	1.51
6	5	191	ALA	CA-C	-5.00	1.46	1.52
12	B	2748	A	O5'-C5'	5.00	1.50	1.42
25	O	10	ARG	CZ-NH2	5.00	1.40	1.33
12	B	408	G	C4'-O4'	5.00	1.53	1.45
12	B	2546	U	O3'-P	-5.00	1.53	1.61
12	B	2086	U	C3'-O3'	-5.00	1.34	1.42
12	B	2192	U	C5'-C4'	5.00	1.58	1.51
18	H	120	GLY	CA-C	-5.00	1.44	1.51

All (4883) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1780	A	P-O3'-C3'	18.20	147.50	120.20
10	9	234	HIS	CA-CB-CG	14.29	128.09	113.80
12	B	890	C	P-O3'-C3'	14.25	141.58	120.20
12	B	827	U	P-O3'-C3'	13.32	140.18	120.20
12	B	277	G	P-O5'-C5'	12.98	140.38	120.90
12	B	1452	G	P-O3'-C3'	12.98	139.66	120.20
12	B	102	U	P-O3'-C3'	12.91	139.57	120.20
12	B	2076	U	P-O3'-C3'	12.56	139.05	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	9	237	ARG	N-CA-C	12.11	125.64	111.71
16	F	155	ILE	N-CA-C	-12.06	100.90	112.96
12	B	1498	C	P-O3'-C3'	11.74	137.81	120.20
12	B	2425	A	P-O3'-C3'	11.50	137.45	120.20
12	B	653	U	P-O3'-C3'	11.49	137.43	120.20
12	B	655	A	P-O3'-C3'	11.47	137.40	120.20
11	A	87	U	P-O3'-C3'	11.43	137.34	120.20
10	9	278	ARG	N-CA-C	-11.33	91.59	109.72
12	B	110	G	C4'-C3'-C2'	-11.26	91.34	102.60
21	K	9	ASN	CA-CB-CG	-11.13	101.47	112.60
12	B	1617	C	P-O3'-C3'	11.04	136.76	120.20
10	9	297	ALA	CA-C-N	10.92	134.91	120.28
10	9	297	ALA	C-N-CA	10.92	134.91	120.28
12	B	733	G	P-O5'-C5'	10.90	137.25	120.90
25	O	108	ASP	N-CA-C	-10.83	100.20	113.41
18	H	42	LYS	CA-C-N	10.77	135.14	120.38
18	H	42	LYS	C-N-CA	10.77	135.14	120.38
12	B	2537	U	P-O5'-C5'	10.74	137.02	120.90
12	B	581	C	P-O5'-C5'	10.70	136.96	120.90
32	W	44	HIS	CA-CB-CG	-10.68	103.12	113.80
12	B	1284	A	P-O3'-C3'	10.62	136.13	120.20
15	E	27	LEU	N-CA-C	10.62	122.43	111.07
18	H	72	ILE	CB-CA-C	-10.61	100.25	110.65
16	F	140	ILE	N-CA-C	-10.58	102.12	112.17
12	B	391	A	P-O5'-C5'	10.51	136.66	120.90
12	B	2249	U	P-O5'-C5'	10.43	136.54	120.90
13	C	208	GLY	CA-C-N	10.41	134.23	120.28
13	C	208	GLY	C-N-CA	10.41	134.23	120.28
27	Q	56	PHE	CA-CB-CG	-10.39	103.41	113.80
12	B	1847	A	P-O3'-C3'	10.37	135.76	120.20
29	S	109	ASP	N-CA-C	-10.33	96.61	110.55
21	K	12	ASP	CA-C-N	10.23	133.74	120.44
21	K	12	ASP	C-N-CA	10.23	133.74	120.44
13	C	42	ARG	NE-CZ-NH2	-10.21	110.01	119.20
13	C	45	ASN	CA-CB-CG	-10.19	102.41	112.60
12	B	1922	G	P-O5'-C5'	10.18	136.17	120.90
16	F	175	PRO	N-CA-C	-10.16	100.14	114.98
14	D	35	THR	CA-C-O	-10.15	113.36	119.55
12	B	276	U	P-O5'-C5'	10.13	136.09	120.90
12	B	1211	C	P-O3'-C3'	10.12	135.39	120.20
12	B	920	A	P-O5'-C5'	10.10	136.05	120.90
8	7	23	HIS	CB-CG-CD2	-10.06	118.12	131.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	L	107	PHE	CA-CB-CG	-10.05	103.75	113.80
30	T	37	ASP	N-CA-C	-10.04	100.70	113.16
12	B	2478	A	P-O5'-C5'	10.04	135.96	120.90
12	B	670	A	P-O3'-C3'	10.02	135.24	120.20
12	B	899	A	P-O3'-C3'	-10.00	105.20	120.20
12	B	2147	A	P-O3'-C3'	9.96	135.14	120.20
12	B	2283	C	O5'-C5'-C4'	9.96	126.43	111.50
14	D	15	PHE	CA-CB-CG	-9.93	103.87	113.80
18	H	119	ASN	N-CA-C	-9.91	103.32	114.62
12	B	2114	A	C5'-C4'-C3'	9.88	130.82	116.00
12	B	180	G	P-O3'-C3'	9.87	135.00	120.20
2	1	26	PHE	CA-C-N	9.86	133.49	120.28
2	1	26	PHE	C-N-CA	9.86	133.49	120.28
12	B	1743	G	P-O3'-C3'	9.86	134.99	120.20
11	A	13	G	C1'-O4'-C4'	-9.83	100.07	109.90
12	B	2190	G	P-O3'-C3'	-9.78	105.52	120.20
27	Q	78	PHE	CA-C-N	9.74	134.27	120.53
27	Q	78	PHE	C-N-CA	9.74	134.27	120.53
8	7	63	TYR	N-CA-CB	9.73	126.93	110.49
12	B	314	C	P-O5'-C5'	9.70	135.44	120.90
12	B	1211	C	P-O5'-C5'	-9.69	106.37	120.90
24	N	107	ASN	CA-CB-CG	-9.67	102.93	112.60
12	B	2833	U	P-O3'-C3'	9.66	134.70	120.20
12	B	2470	G	C5'-C4'-C3'	-9.66	101.51	116.00
12	B	891	G	C5'-C4'-C3'	9.65	130.48	116.00
12	B	2596	U	P-O3'-C3'	9.65	134.68	120.20
12	B	2439	A	P-O5'-C5'	9.63	135.35	120.90
11	A	40	U	P-O5'-C5'	9.63	135.34	120.90
12	B	670	A	C2'-C3'-O3'	9.62	123.93	109.50
12	B	401	A	C4'-C3'-C2'	-9.58	93.02	102.60
7	6	28	ARG	NE-CZ-NH2	9.57	127.82	119.20
12	B	92	U	P-O5'-C5'	9.57	135.26	120.90
12	B	473	G	P-O5'-C5'	-9.55	106.57	120.90
12	B	532	A	P-O3'-C3'	9.54	134.52	120.20
18	H	57	LYS	CA-C-N	9.52	134.78	120.31
18	H	57	LYS	C-N-CA	9.52	134.78	120.31
16	F	7	TYR	N-CA-C	-9.51	99.37	112.30
12	B	1888	G	P-O3'-C3'	9.51	134.46	120.20
12	B	2291	U	P-O5'-C5'	9.47	135.11	120.90
12	B	1941	C	P-O3'-C3'	9.47	134.41	120.20
12	B	2713	U	C1'-O4'-C4'	-9.46	100.24	109.70
12	B	328	U	O3'-P-O5'	-9.46	89.82	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	9	22	SER	N-CA-C	9.43	123.54	110.24
10	9	65	PHE	CA-CB-CG	-9.42	104.38	113.80
18	H	72	ILE	N-CA-CB	9.42	124.83	112.12
12	B	242	G	C2'-C3'-O3'	9.41	123.61	109.50
12	B	1963	U	P-O3'-C3'	-9.40	106.09	120.20
10	9	65	PHE	N-CA-C	9.40	123.54	108.41
12	B	2283	C	P-O5'-C5'	9.40	134.99	120.90
12	B	1505	A	P-O5'-C5'	9.39	134.99	120.90
12	B	2420	C	O4'-C4'-C3'	-9.38	94.62	104.00
17	G	136	ASP	N-CA-CB	9.35	123.78	109.85
12	B	361	G	P-O5'-C5'	9.34	134.91	120.90
12	B	608	A	P-O5'-C5'	-9.32	106.92	120.90
12	B	966	G	C5'-C4'-C3'	-9.28	102.09	116.00
21	K	68	GLY	CA-C-N	9.27	136.16	123.46
21	K	68	GLY	C-N-CA	9.27	136.16	123.46
12	B	432	A	C4'-C3'-C2'	-9.26	93.34	102.60
10	9	325	CYS	CB-CA-C	-9.24	95.45	110.79
28	R	98	ILE	N-CA-CB	9.21	126.42	111.23
26	P	77	SER	N-CA-C	-9.20	98.22	109.72
12	B	2475	C	P-O5'-C5'	9.17	134.66	120.90
31	U	11	ILE	CA-C-N	9.16	138.45	121.97
31	U	11	ILE	C-N-CA	9.16	138.45	121.97
21	K	97	THR	N-CA-C	-9.15	103.22	114.75
5	4	18	HIS	CA-CB-CG	9.15	122.95	113.80
12	B	242	G	C4'-C3'-C2'	-9.15	93.45	102.60
12	B	2359	C	O4'-C1'-N1	9.15	122.22	108.50
10	9	21	VAL	CA-C-N	9.14	133.79	120.90
10	9	21	VAL	C-N-CA	9.14	133.79	120.90
12	B	1393	A	P-O5'-C5'	-9.14	107.18	120.90
10	9	59	TYR	N-CA-C	-9.14	101.06	113.30
16	F	126	ASN	N-CA-C	-9.13	98.48	110.53
12	B	2118	U	C1'-O4'-C4'	-9.12	100.58	109.70
12	B	1864	U	P-O5'-C5'	9.09	134.54	120.90
18	H	118	PRO	N-CA-CB	9.09	109.32	103.23
12	B	1853	A	C4'-C3'-C2'	-9.08	93.52	102.60
10	9	54	ASN	CA-C-N	9.07	138.87	121.54
10	9	54	ASN	C-N-CA	9.07	138.87	121.54
12	B	2336	A	P-O3'-C3'	9.07	133.81	120.20
16	F	151	LEU	CA-C-O	9.06	131.01	121.31
12	B	2215	C	P-O5'-C5'	9.04	134.47	120.90
18	H	64	ALA	CA-C-N	9.04	132.77	120.38
18	H	64	ALA	C-N-CA	9.04	132.77	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	2	50	VAL	CB-CA-C	-9.03	100.38	111.85
1	0	22	ASN	OD1-CG-ND2	9.02	131.62	122.60
24	N	82	GLU	N-CA-C	-9.01	100.12	114.09
12	B	122	G	P-O5'-C5'	9.00	134.40	120.90
15	E	193	VAL	CB-CA-C	-8.99	100.46	111.97
27	Q	105	PHE	CA-CB-CG	-8.98	104.81	113.80
6	5	180	PHE	CA-CB-CG	-8.97	104.83	113.80
12	B	2092	U	C5'-C4'-C3'	-8.97	101.74	115.20
12	B	2890	G	P-O5'-C5'	8.96	134.35	120.90
20	J	130	HIS	N-CA-C	-8.95	98.73	113.50
17	G	71	LEU	N-CA-C	-8.95	101.48	111.14
25	O	43	ASN	OD1-CG-ND2	8.93	131.53	122.60
12	B	988	A	P-O5'-C5'	8.92	134.28	120.90
12	B	1695	G	P-O3'-C3'	-8.92	106.82	120.20
1	0	10	ARG	NE-CZ-NH2	8.92	127.22	119.20
12	B	1266	G	C4'-C3'-C2'	-8.89	93.70	102.60
14	D	184	ARG	CA-C-N	8.89	134.71	122.34
14	D	184	ARG	C-N-CA	8.89	134.71	122.34
10	9	78	CYS	N-CA-C	8.89	123.68	110.52
14	D	14	ILE	CB-CA-C	8.89	123.39	110.77
12	B	402	A	P-O5'-C5'	8.88	134.22	120.90
10	9	61	PHE	CA-CB-CG	8.87	122.67	113.80
15	E	176	ASP	CA-CB-CG	-8.86	103.74	112.60
12	B	879	G	C5'-C4'-O4'	8.86	123.09	109.80
13	C	267	VAL	CB-CA-C	-8.83	101.38	111.80
25	O	21	LEU	N-CA-C	8.82	120.98	111.36
12	B	2795	C	P-O3'-C3'	8.81	133.41	120.20
30	T	80	TRP	N-CA-C	-8.81	96.61	108.24
12	B	1160	G	P-O5'-C5'	-8.81	107.69	120.90
10	9	41	ASP	CA-C-O	-8.80	113.85	120.19
10	9	311	TYR	N-CA-C	-8.79	95.95	109.85
12	B	823	C	C4'-C3'-O3'	-8.79	99.82	113.00
10	9	291	VAL	O-C-N	-8.78	111.59	122.57
12	B	2391	G	O3'-P-O5'	-8.78	90.83	104.00
4	3	45	ASP	N-CA-C	-8.77	99.95	113.02
12	B	686	U	P-O3'-C3'	8.76	133.35	120.20
13	C	220	ARG	CA-C-N	8.76	129.70	119.98
13	C	220	ARG	C-N-CA	8.76	129.70	119.98
13	C	24	HIS	CE1-NE2-CD2	-8.74	100.26	109.00
13	C	68	ARG	CA-C-N	8.73	132.35	120.38
13	C	68	ARG	C-N-CA	8.73	132.35	120.38
12	B	2342	C	C4'-C3'-C2'	-8.73	93.87	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	9	231	PHE	CA-CB-CG	-8.73	105.07	113.80
12	B	1355	G	P-O5'-C5'	8.72	133.99	120.90
12	B	2802	G	O4'-C1'-C2'	-8.72	98.88	107.60
13	C	188	ARG	NE-CZ-NH2	8.71	127.04	119.20
10	9	245	ILE	N-CA-C	-8.70	96.04	108.65
8	7	6	VAL	N-CA-C	-8.69	95.95	108.11
10	9	308	ASP	N-CA-C	-8.69	92.29	110.80
12	B	1481	U	O4'-C1'-N1	8.69	121.54	108.50
27	Q	76	SER	CA-C-O	8.69	131.19	121.02
6	5	120	ALA	N-CA-C	8.68	120.36	111.07
12	B	2646	C	C4'-C3'-C2'	-8.68	93.92	102.60
1	0	45	PHE	CA-CB-CG	-8.67	105.13	113.80
12	B	1080	A	O4'-C4'-C3'	-8.67	95.33	104.00
15	E	101	TYR	CB-CA-C	-8.67	97.20	110.90
15	E	93	SER	CA-C-N	8.66	133.12	120.90
15	E	93	SER	C-N-CA	8.66	133.12	120.90
30	T	33	LYS	N-CA-CB	8.64	123.01	109.71
12	B	2684	U	P-O5'-C5'	8.63	133.85	120.90
12	B	1827	U	C3'-C2'-C1'	8.63	109.93	101.30
12	B	2632	A	C4'-C3'-C2'	-8.62	93.97	102.60
12	B	265	A	P-O5'-C5'	8.62	133.83	120.90
19	I	91	LYS	CA-C-N	8.62	129.14	119.83
19	I	91	LYS	C-N-CA	8.62	129.14	119.83
12	B	349	U	O4'-C1'-C2'	-8.61	98.99	107.60
30	T	18	GLU	CA-C-N	8.61	133.75	120.75
30	T	18	GLU	C-N-CA	8.61	133.75	120.75
5	4	18	HIS	CE1-NE2-CD2	-8.61	100.39	109.00
22	L	87	GLY	CA-C-O	-8.61	113.70	122.56
12	B	1186	G	P-O5'-C5'	8.60	133.80	120.90
30	T	43	ILE	N-CA-C	-8.59	100.35	113.16
12	B	2420	C	C3'-C2'-C1'	-8.57	92.72	101.30
12	B	1061	U	C2'-C3'-O3'	8.57	122.35	109.50
28	R	71	LYS	N-CA-CB	8.57	123.00	110.06
10	9	258	ASN	CA-CB-CG	8.55	121.15	112.60
32	W	87	GLN	N-CA-C	-8.55	103.98	114.75
25	O	63	LYS	N-CA-C	-8.54	103.71	114.56
1	0	5	GLN	CA-C-N	8.54	131.38	120.70
1	0	5	GLN	C-N-CA	8.54	131.38	120.70
6	5	180	PHE	N-CA-C	-8.53	92.89	107.99
12	B	2089	C	P-O5'-C5'	8.53	133.70	120.90
12	B	2466	C	C5'-C4'-C3'	-8.53	103.20	116.00
12	B	1909	C	O3'-P-O5'	8.52	116.78	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2344	U	P-O3'-C3'	8.50	132.95	120.20
16	F	125	GLY	N-CA-C	-8.50	102.16	115.67
27	Q	86	SER	N-CA-CB	8.49	124.84	110.49
12	B	1846	G	C4'-C3'-C2'	-8.47	94.13	102.60
12	B	1537	G	P-O3'-C3'	8.47	132.90	120.20
12	B	2391	G	P-O3'-C3'	8.46	132.90	120.20
12	B	1425	G	C5'-C4'-C3'	-8.46	103.31	116.00
12	B	2098	U	C4'-C3'-C2'	-8.46	94.14	102.60
12	B	1551	A	P-O3'-C3'	8.45	132.88	120.20
12	B	1173	U	C3'-C2'-C1'	8.44	109.74	101.30
31	U	56	GLY	N-CA-C	-8.44	102.12	112.33
10	9	67	ALA	CA-C-N	8.44	137.65	121.54
10	9	67	ALA	C-N-CA	8.44	137.65	121.54
12	B	2483	C	P-O5'-C5'	8.44	133.55	120.90
12	B	2208	C	O4'-C1'-N1	8.43	121.14	108.50
15	E	43	THR	CA-CB-OG1	8.43	122.24	109.60
19	I	117	THR	CA-C-N	8.43	129.62	120.44
19	I	117	THR	C-N-CA	8.43	129.62	120.44
14	D	190	LYS	O-C-N	8.42	133.04	123.19
12	B	859	G	P-O3'-C3'	8.42	132.83	120.20
12	B	455	C	P-O3'-C3'	-8.40	107.59	120.20
12	B	880	G	P-O3'-C3'	8.39	132.79	120.20
22	L	135	ILE	N-CA-C	-8.39	103.05	111.77
12	B	135	U	P-O5'-C5'	8.38	133.47	120.90
12	B	2653	U	O5'-C5'-C4'	-8.38	98.93	111.50
12	B	2368	C	P-O5'-C5'	8.38	133.47	120.90
10	9	198	LEU	O-C-N	-8.36	112.60	123.21
12	B	2465	C	C1'-O4'-C4'	8.36	118.26	109.90
12	B	159	G	O4'-C1'-N9	8.34	121.01	108.50
15	E	7	ASP	N-CA-C	-8.34	103.30	113.97
23	M	57	VAL	CA-C-O	-8.32	111.67	119.91
12	B	686	U	O4'-C4'-C3'	-8.32	97.78	106.10
16	F	153	ILE	N-CA-CB	8.32	123.16	112.34
12	B	154	U	O4'-C4'-C3'	-8.31	95.69	104.00
25	O	29	HIS	ND1-CE1-NE2	8.30	116.70	108.40
12	B	2799	A	P-O3'-C3'	8.30	132.65	120.20
12	B	67	U	P-O5'-C5'	8.30	133.35	120.90
6	5	149	VAL	N-CA-CB	8.29	118.44	111.64
13	C	9	SER	N-CA-C	-8.29	97.42	108.11
12	B	2062	A	C5'-C4'-C3'	8.28	128.43	116.00
12	B	2254	C	O4'-C1'-N1	8.28	120.93	108.50
12	B	257	C	P-O5'-C5'	8.28	133.32	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2404	U	P-O3'-C3'	8.28	132.61	120.20
14	D	125	TRP	N-CA-C	-8.28	94.92	108.41
24	N	108	ALA	CA-C-O	-8.27	110.12	120.04
12	B	891	G	O4'-C1'-N9	8.26	120.89	108.50
9	8	31	PRO	N-CA-C	-8.25	105.10	114.92
10	9	109	THR	N-CA-C	-8.24	100.10	112.54
12	B	1166	G	O4'-C4'-C3'	-8.23	95.77	104.00
12	B	1416	G	C5'-C4'-C3'	8.23	127.55	115.20
13	C	111	ALA	CB-CA-C	8.23	124.76	112.09
12	B	1163	G	C4'-C3'-C2'	-8.22	94.38	102.60
17	G	73	SER	N-CA-C	-8.21	102.14	112.90
14	D	102	ALA	N-CA-C	-8.21	101.55	112.72
12	B	1940	U	C1'-O4'-C4'	-8.21	101.49	109.70
10	9	135	ASN	CA-CB-CG	-8.21	104.39	112.60
12	B	2225	A	C5'-C4'-C3'	-8.20	102.89	115.20
12	B	856	G	O5'-C5'-C4'	-8.19	99.21	111.50
24	N	35	LYS	N-CA-C	-8.19	95.06	108.41
12	B	2172	U	O4'-C1'-N1	8.19	120.48	108.20
29	S	96	ILE	N-CA-C	-8.18	96.34	108.12
12	B	13	A	C4'-C3'-C2'	-8.18	94.42	102.60
16	F	45	ASP	CA-CB-CG	-8.17	104.43	112.60
12	B	1105	U	O4'-C1'-N1	8.16	120.75	108.50
24	N	21	PHE	N-CA-C	-8.15	100.30	112.04
8	7	16	THR	CA-C-N	8.15	129.16	120.03
8	7	16	THR	C-N-CA	8.15	129.16	120.03
17	G	157	LYS	N-CA-C	-8.13	101.04	113.89
22	L	136	GLU	N-CA-C	-8.13	101.42	113.61
10	9	243	HIS	CB-CG-ND1	8.13	134.89	122.70
12	B	371	A	O3'-P-O5'	-8.13	91.81	104.00
12	B	62	U	P-O5'-C5'	8.12	133.09	120.90
15	E	182	ALA	O-C-N	-8.12	113.54	122.79
10	9	30	PRO	N-CA-C	8.12	129.19	112.47
12	B	364	C	C4'-C3'-O3'	-8.12	100.83	113.00
12	B	162	U	O4'-C1'-N1	8.10	120.35	108.20
12	B	164	C	O4'-C1'-N1	8.10	120.65	108.50
12	B	1133	A	O4'-C4'-C3'	-8.10	98.00	106.10
12	B	2425	A	C5'-C4'-C3'	-8.10	103.06	115.20
12	B	2206	C	P-O5'-C5'	-8.09	108.76	120.90
12	B	592	A	O4'-C1'-N9	8.08	120.62	108.50
20	J	126	ALA	N-CA-C	-8.08	102.47	113.30
8	7	44	ARG	O-C-N	-8.08	112.03	121.32
18	H	28	ASN	CA-CB-CG	8.08	120.68	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1226	A	P-O5'-C5'	8.08	133.02	120.90
33	Y	42	THR	N-CA-C	-8.08	101.76	111.69
16	F	103	ILE	N-CA-C	-8.07	104.84	112.83
27	Q	48	ASP	CA-CB-CG	-8.06	104.54	112.60
12	B	2410	G	C5'-C4'-C3'	-8.06	103.91	116.00
30	T	73	ARG	N-CA-C	-8.06	100.49	110.65
33	Y	35	ILE	N-CA-C	-8.06	103.34	111.88
12	B	2465	C	O4'-C1'-C2'	-8.05	99.55	107.60
12	B	2313	C	C4'-C3'-C2'	-8.05	94.55	102.60
12	B	1181	U	O4'-C1'-N1	8.04	120.57	108.50
26	P	24	THR	CA-C-O	-8.04	111.89	120.42
12	B	1693	U	P-O5'-C5'	-8.03	108.86	120.90
12	B	904	G	O3'-P-O5'	-8.03	91.96	104.00
12	B	2591	C	P-O5'-C5'	8.03	132.94	120.90
17	G	166	GLU	CB-CG-CD	-8.03	98.96	112.60
6	5	38	PHE	N-CA-C	-8.02	103.62	113.41
32	W	90	ASP	CA-CB-CG	-8.02	104.58	112.60
12	B	1022	G	O5'-C5'-C4'	-8.00	99.49	111.50
29	S	86	MET	CA-C-O	-7.99	113.36	119.59
27	Q	72	GLY	CA-C-N	7.98	131.44	120.35
27	Q	72	GLY	C-N-CA	7.98	131.44	120.35
12	B	1346	G	C4'-C3'-C2'	-7.96	94.64	102.60
11	A	56	G	O4'-C1'-C2'	7.96	113.75	105.80
30	T	66	LYS	N-CA-C	-7.95	96.99	108.60
12	B	2323	G	O5'-C5'-C4'	-7.95	99.58	111.50
12	B	2665	A	P-O3'-C3'	-7.95	108.28	120.20
30	T	63	VAL	N-CA-C	-7.95	96.15	107.75
12	B	1196	C	C4'-C3'-O3'	-7.94	101.09	113.00
12	B	28	A	C5'-C4'-C3'	7.93	127.90	116.00
12	B	1924	C	O4'-C4'-C3'	-7.93	96.06	104.00
1	0	2	ARG	N-CA-C	-7.93	93.90	110.80
24	N	19	ALA	O-C-N	7.93	131.19	122.15
12	B	154	U	C4'-C3'-C2'	7.93	110.53	102.60
12	B	2276	G	C4'-C3'-C2'	-7.93	94.67	102.60
12	B	1569	A	O4'-C1'-N9	7.93	120.39	108.50
22	L	40	SER	CA-C-N	7.92	136.67	121.54
22	L	40	SER	C-N-CA	7.92	136.67	121.54
24	N	116	VAL	N-CA-C	-7.92	105.60	113.20
6	5	125	GLY	CA-C-N	7.92	133.35	122.19
6	5	125	GLY	C-N-CA	7.92	133.35	122.19
12	B	1820	U	P-O5'-C5'	7.92	132.78	120.90
4	3	2	VAL	O-C-N	7.92	130.04	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	F	12	VAL	N-CA-C	-7.92	105.77	113.53
12	B	2282	G	P-O3'-C3'	7.91	132.07	120.20
10	9	53	LEU	N-CA-CB	7.91	123.85	110.49
12	B	1434	A	C4'-C3'-O3'	-7.90	101.15	113.00
12	B	1206	G	O3'-P-O5'	-7.89	92.16	104.00
12	B	1707	G	P-O5'-C5'	7.89	132.74	120.90
12	B	1498	C	O4'-C4'-C3'	-7.89	96.11	104.00
22	L	5	THR	N-CA-C	-7.89	101.77	113.61
13	C	61	TYR	CB-CA-C	7.89	123.98	109.46
11	A	12	C	P-O5'-C5'	7.88	132.73	120.90
12	B	1881	C	O4'-C1'-N1	7.88	120.33	108.50
13	C	146	LYS	CA-C-N	7.88	128.18	119.90
13	C	146	LYS	C-N-CA	7.88	128.18	119.90
12	B	1092	C	O4'-C1'-N1	7.88	120.32	108.50
12	B	1877	A	P-O3'-C3'	-7.88	108.39	120.20
19	I	123	ALA	CA-C-O	7.88	129.33	120.90
12	B	571	U	P-O5'-C5'	7.87	132.71	120.90
10	9	137	THR	O-C-N	-7.87	114.48	121.17
12	B	2002	G	P-O5'-C5'	-7.87	109.10	120.90
12	B	1875	G	P-O3'-C3'	7.87	132.00	120.20
22	L	129	LYS	N-CA-C	7.87	119.86	111.28
16	F	44	ALA	N-CA-C	-7.86	102.52	114.16
17	G	4	ALA	N-CA-C	-7.86	102.77	113.30
10	9	322	LYS	CA-C-N	7.85	130.79	120.28
10	9	322	LYS	C-N-CA	7.85	130.79	120.28
14	D	190	LYS	CA-C-O	-7.85	112.09	120.80
10	9	23	PHE	CA-CB-CG	-7.85	105.95	113.80
4	3	7	PRO	N-CA-C	7.84	123.68	111.21
29	S	34	ASP	CA-C-N	7.84	130.71	120.60
29	S	34	ASP	C-N-CA	7.84	130.71	120.60
12	B	2534	A	P-O5'-C5'	7.83	132.65	120.90
12	B	649	G	C4'-C3'-O3'	-7.83	101.26	113.00
14	D	137	SER	CA-C-N	7.83	133.23	122.19
14	D	137	SER	C-N-CA	7.83	133.23	122.19
12	B	2051	A	O4'-C4'-C3'	-7.82	98.28	106.10
14	D	15	PHE	CA-C-N	7.82	134.67	122.94
14	D	15	PHE	C-N-CA	7.82	134.67	122.94
12	B	1730	C	C1'-C2'-O2'	-7.82	100.07	111.80
29	S	31	GLN	CA-C-N	7.82	131.09	120.54
29	S	31	GLN	C-N-CA	7.82	131.09	120.54
14	D	64	GLU	CA-C-N	7.82	130.75	120.28
14	D	64	GLU	C-N-CA	7.82	130.75	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	L	100	ILE	N-CA-C	-7.80	101.54	113.16
6	5	202	THR	N-CA-C	-7.79	105.73	114.62
12	B	2804	U	P-O5'-C5'	7.79	132.59	120.90
12	B	2023	C	P-O5'-C5'	7.79	132.58	120.90
24	N	78	LYS	CA-C-N	7.78	131.85	120.95
24	N	78	LYS	C-N-CA	7.78	131.85	120.95
7	6	21	ARG	NE-CZ-NH2	7.78	126.20	119.20
12	B	2345	G	C2'-C3'-O3'	7.78	121.17	109.50
12	B	2371	G	O4'-C1'-N9	7.78	120.17	108.50
10	9	101	THR	N-CA-C	-7.78	103.92	113.41
29	S	60	HIS	CE1-NE2-CD2	-7.78	101.22	109.00
12	B	521	U	P-O5'-C5'	7.77	132.55	120.90
10	9	24	ARG	N-CA-CB	7.77	121.42	109.85
17	G	100	ASN	N-CA-C	-7.77	104.33	113.88
10	9	169	ASN	N-CA-C	-7.76	102.67	114.16
12	B	131	A	O4'-C1'-N9	7.76	120.14	108.50
20	J	112	GLY	CA-C-N	7.76	128.17	119.32
20	J	112	GLY	C-N-CA	7.76	128.17	119.32
31	U	52	ASN	N-CA-CB	7.76	123.61	110.49
16	F	131	VAL	O-C-N	7.76	130.24	122.71
12	B	1895	C	C4'-C3'-C2'	-7.76	94.84	102.60
12	B	1997	C	O4'-C1'-N1	7.75	120.13	108.50
12	B	640	C	P-O5'-C5'	-7.75	109.28	120.90
3	2	10	ARG	O-C-N	-7.75	116.44	123.41
12	B	1745	A	O5'-C5'-C4'	-7.75	99.88	111.50
10	9	172	LYS	N-CA-C	7.74	120.40	111.11
12	B	1670	C	O4'-C1'-N1	7.74	120.11	108.50
10	9	286	ASP	N-CA-C	-7.73	102.03	112.94
10	9	116	LEU	N-CA-CB	7.73	123.03	110.43
12	B	1410	G	C4'-C3'-C2'	-7.73	94.87	102.60
12	B	1323	C	C4'-C3'-O3'	-7.72	101.42	113.00
21	K	79	PHE	CA-CB-CG	-7.71	106.09	113.80
24	N	3	HIS	CE1-NE2-CD2	-7.71	101.29	109.00
12	B	1935	G	O5'-C5'-C4'	-7.70	99.95	111.50
10	9	230	ARG	CA-C-N	7.70	131.22	120.29
10	9	230	ARG	C-N-CA	7.70	131.22	120.29
12	B	1337	G	C5'-C4'-C3'	-7.70	104.45	116.00
13	C	101	ARG	NE-CZ-NH2	7.70	126.13	119.20
11	A	5	U	O5'-C5'-C4'	-7.70	99.96	111.50
12	B	2465	C	O4'-C1'-N1	7.70	120.05	108.50
12	B	2584	U	O3'-P-O5'	-7.69	92.46	104.00
12	B	1485	U	C4'-C3'-C2'	-7.69	94.91	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1842	G	P-O5'-C5'	-7.68	109.37	120.90
6	5	51	ASP	CA-CB-CG	-7.68	104.92	112.60
12	B	81	G	P-O5'-C5'	7.68	132.42	120.90
18	H	39	ALA	N-CA-C	-7.68	96.39	108.90
11	A	38	C	O4'-C1'-N1	7.67	120.01	108.50
13	C	145	MET	N-CA-C	-7.67	104.05	113.41
24	N	107	ASN	OD1-CG-ND2	-7.67	114.92	122.60
29	S	102	HIS	CA-C-N	7.67	131.57	120.91
29	S	102	HIS	C-N-CA	7.67	131.57	120.91
12	B	185	G	C4'-C3'-C2'	-7.67	94.93	102.60
8	7	59	ALA	CB-CA-C	-7.66	101.79	111.22
16	F	82	TYR	CA-C-N	7.66	127.42	119.76
16	F	82	TYR	C-N-CA	7.66	127.42	119.76
13	C	25	LYS	CA-C-O	7.66	129.47	120.66
24	N	106	ASP	O-C-N	-7.66	113.51	122.93
12	B	746	U	C4'-C3'-C2'	-7.65	94.95	102.60
14	D	65	ALA	N-CA-C	-7.65	102.94	111.28
12	B	2876	G	P-O5'-C5'	-7.65	109.42	120.90
5	4	5	ARG	N-CA-C	-7.65	97.22	109.76
4	3	43	THR	CA-C-N	7.64	136.14	121.54
4	3	43	THR	C-N-CA	7.64	136.14	121.54
11	A	66	A	P-O3'-C3'	7.64	131.66	120.20
12	B	224	U	O4'-C1'-N1	7.64	119.97	108.50
27	Q	28	SER	N-CA-C	-7.64	103.75	113.23
12	B	1566	A	C2'-C3'-O3'	7.63	120.95	109.50
12	B	1448	G	P-O3'-C3'	-7.63	108.75	120.20
21	K	89	ASN	OD1-CG-ND2	7.63	130.23	122.60
24	N	66	ALA	N-CA-C	-7.63	103.70	113.16
12	B	1382	G	O4'-C4'-C3'	-7.62	96.38	104.00
15	E	12	LEU	N-CA-CB	7.62	123.19	110.53
15	E	191	ASP	CA-CB-CG	-7.62	104.98	112.60
9	8	13	ASN	CA-CB-CG	-7.62	104.98	112.60
27	Q	69	ARG	NE-CZ-NH2	7.62	126.06	119.20
12	B	119	A	C5'-C4'-C3'	-7.61	103.78	115.20
10	9	335	ASN	CA-CB-CG	-7.61	104.99	112.60
11	A	55	U	P-O5'-C5'	7.61	132.31	120.90
12	B	118	A	C4'-C3'-C2'	-7.61	94.99	102.60
12	B	669	G	C1'-O4'-C4'	7.60	117.50	109.90
12	B	1417	C	P-O5'-C5'	7.60	132.31	120.90
12	B	1497	U	C5'-C4'-O4'	7.60	120.50	109.10
10	9	107	ASP	CA-CB-CG	-7.60	105.00	112.60
12	B	674	G	C1'-O4'-C4'	-7.60	102.30	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1353	A	C4'-C3'-C2'	-7.58	95.02	102.60
12	B	1929	G	P-O3'-C3'	7.58	131.57	120.20
12	B	552	U	O4'-C4'-C3'	-7.58	96.42	104.00
12	B	1029	A	C1'-O4'-C4'	-7.58	102.32	109.90
30	T	68	LYS	CA-C-N	7.58	136.02	121.54
30	T	68	LYS	C-N-CA	7.58	136.02	121.54
12	B	2559	C	O4'-C1'-N1	7.58	119.87	108.50
22	L	32	GLY	CA-C-O	7.58	128.97	119.80
10	9	230	ARG	CB-CA-C	-7.58	98.99	110.88
12	B	693	A	O4'-C1'-N9	7.57	119.86	108.50
12	B	2170	A	O3'-P-O5'	-7.57	92.64	104.00
26	P	100	ARG	NE-CZ-NH2	7.57	126.02	119.20
10	9	234	HIS	CE1-NE2-CD2	-7.57	101.43	109.00
12	B	2407	A	C4'-C3'-C2'	7.57	110.17	102.60
28	R	101	ILE	N-CA-C	-7.57	105.33	112.83
12	B	2637	U	C4'-C3'-C2'	-7.57	95.03	102.60
12	B	495	G	C4'-C3'-O3'	-7.56	101.66	113.00
15	E	44	ARG	N-CA-CB	7.56	123.27	110.49
12	B	2585	U	O4'-C4'-C3'	-7.56	98.54	106.10
12	B	2319	G	O4'-C4'-C3'	-7.56	98.54	106.10
23	M	97	GLN	O-C-N	-7.56	114.83	121.71
12	B	1912	A	C5'-C4'-C3'	7.55	127.33	116.00
17	G	106	LEU	N-CA-C	-7.55	100.83	112.99
12	B	196	A	C2'-C3'-O3'	7.55	120.82	109.50
12	B	2601	C	P-O3'-C3'	7.54	131.51	120.20
12	B	2627	G	P-O3'-C3'	7.54	131.51	120.20
12	B	2801	G	O4'-C4'-C3'	-7.54	96.46	104.00
12	B	519	U	C4'-C3'-O3'	-7.54	101.69	113.00
15	E	170	ARG	NE-CZ-NH2	7.54	125.98	119.20
12	B	28	A	C1'-O4'-C4'	7.53	117.43	109.90
28	R	37	GLU	N-CA-C	-7.53	104.23	113.50
12	B	607	U	C4'-C3'-C2'	-7.53	95.07	102.60
12	B	1411	U	C4'-C3'-C2'	-7.53	95.07	102.60
21	K	99	ILE	N-CA-C	-7.53	96.71	108.23
10	9	246	ASP	N-CA-C	-7.53	94.84	108.02
12	B	746	U	C3'-C2'-C1'	7.53	108.83	101.30
16	F	24	VAL	N-CA-C	-7.53	105.21	111.91
12	B	2193	G	C4'-C3'-C2'	-7.51	95.08	102.60
12	B	88	G	P-O5'-C5'	-7.51	109.63	120.90
12	B	289	G	O4'-C4'-C3'	-7.51	96.49	104.00
12	B	597	G	O5'-C5'-C4'	-7.51	100.24	111.50
12	B	1768	C	O4'-C1'-N1	7.51	119.76	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2063	C	P-O5'-C5'	-7.50	109.64	120.90
12	B	1289	C	C5'-C4'-C3'	-7.50	104.74	116.00
21	K	68	GLY	CA-C-O	-7.50	116.59	122.52
14	D	35	THR	O-C-N	7.50	127.46	120.71
14	D	199	SER	N-CA-CB	7.50	121.03	109.85
12	B	2312	U	O4'-C1'-C2'	-7.49	100.11	107.60
13	C	254	LYS	CA-C-N	7.49	131.35	120.71
13	C	254	LYS	C-N-CA	7.49	131.35	120.71
6	5	100	LEU	CA-C-N	7.49	130.18	120.44
6	5	100	LEU	C-N-CA	7.49	130.18	120.44
7	6	2	LYS	CA-C-N	7.49	131.38	120.82
7	6	2	LYS	C-N-CA	7.49	131.38	120.82
13	C	36	ASN	CA-CB-CG	-7.49	105.11	112.60
12	B	1625	C	P-O5'-C5'	7.49	132.13	120.90
12	B	2354	C	P-O5'-C5'	-7.49	109.67	120.90
12	B	2284	A	C4'-C3'-C2'	-7.49	95.11	102.60
2	1	44	LYS	N-CA-C	-7.48	103.20	111.36
12	B	2060	A	C5'-C4'-O4'	7.48	120.33	109.10
27	Q	41	ALA	CA-C-N	7.48	128.29	119.98
27	Q	41	ALA	C-N-CA	7.48	128.29	119.98
12	B	2637	U	C5'-C4'-C3'	-7.48	104.78	116.00
21	K	43	ILE	N-CA-CB	7.48	120.15	110.13
12	B	1870	C	P-O3'-C3'	7.47	131.41	120.20
13	C	245	THR	N-CA-CB	7.47	119.26	109.55
12	B	856	G	C5'-C4'-C3'	-7.47	104.80	116.00
2	1	23	ARG	CA-C-O	-7.47	113.18	121.84
30	T	70	HIS	CE1-NE2-CD2	-7.46	101.54	109.00
14	D	144	GLY	CA-C-N	7.46	131.34	120.82
14	D	144	GLY	C-N-CA	7.46	131.34	120.82
26	P	50	ARG	NE-CZ-NH2	7.46	125.92	119.20
10	9	272	ASP	CA-CB-CG	7.46	120.06	112.60
21	K	82	ASN	N-CA-C	-7.46	100.98	112.99
12	B	1919	A	P-O5'-C5'	7.46	132.08	120.90
10	9	196	PRO	N-CA-C	7.45	127.82	112.47
13	C	16	VAL	N-CA-C	-7.45	97.69	108.11
12	B	390	U	P-O5'-C5'	7.44	132.06	120.90
12	B	2740	A	O4'-C1'-N9	7.44	119.66	108.50
12	B	2219	U	P-O5'-C5'	7.43	132.05	120.90
10	9	52	ASN	CA-C-N	7.43	135.73	121.54
10	9	52	ASN	C-N-CA	7.43	135.73	121.54
6	5	93	GLU	N-CA-C	-7.43	103.84	113.12
12	B	2542	A	C2'-C3'-O3'	7.42	120.64	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2339	C	O4'-C1'-N1	7.42	119.64	108.50
10	9	77	ASP	CA-CB-CG	7.42	120.02	112.60
12	B	209	C	C1'-O4'-C4'	-7.42	102.48	109.90
12	B	876	C	C1'-O4'-C4'	-7.42	102.48	109.90
13	C	198	GLU	N-CA-C	-7.42	103.79	112.92
14	D	36	GLN	N-CA-CB	7.42	120.85	110.17
12	B	1746	A	C5'-C4'-C3'	-7.41	104.88	116.00
12	B	2585	U	P-O3'-C3'	-7.41	109.08	120.20
4	3	9	ARG	NE-CZ-NH2	7.41	125.87	119.20
12	B	2277	G	P-O5'-C5'	-7.41	109.79	120.90
26	P	76	HIS	CE1-NE2-CD2	-7.41	101.59	109.00
12	B	330	A	P-O5'-C5'	-7.41	109.79	120.90
12	B	363	G	C5'-C4'-C3'	-7.40	104.90	116.00
12	B	575	A	C5'-C4'-C3'	-7.40	104.90	116.00
12	B	1925	C	O4'-C1'-N1	7.40	119.60	108.50
26	P	108	ARG	NE-CZ-NH1	-7.40	114.10	121.50
12	B	1194	A	C4'-C3'-O3'	-7.40	101.91	113.00
31	U	47	PRO	N-CA-C	-7.40	97.23	112.47
28	R	53	PHE	N-CA-C	7.39	121.59	111.39
13	C	96	LYS	N-CA-C	-7.39	104.00	113.16
11	A	19	C	C4'-C3'-O3'	-7.38	101.93	113.00
12	B	2210	U	O4'-C4'-C3'	-7.38	98.72	106.10
2	1	15	ASN	CA-CB-CG	-7.38	105.22	112.60
12	B	502	A	C5'-C4'-C3'	-7.38	104.94	116.00
12	B	246	C	C4'-C3'-O3'	-7.38	101.94	113.00
12	B	51	G	P-O3'-C3'	-7.37	109.15	120.20
25	O	79	ALA	N-CA-C	7.37	120.18	111.71
13	C	86	ARG	NH1-CZ-NH2	-7.36	109.73	119.30
12	B	134	G	C4'-C3'-C2'	7.36	109.96	102.60
12	B	662	G	C4'-C3'-C2'	-7.36	95.24	102.60
18	H	26	ALA	CA-C-O	7.36	128.04	120.24
12	B	111	A	O4'-C1'-N9	7.36	119.54	108.50
12	B	899	A	C3'-C2'-C1'	-7.36	93.94	101.30
12	B	1753	G	C4'-C3'-O3'	-7.35	101.98	113.00
4	3	41	HIS	CE1-NE2-CD2	-7.34	101.66	109.00
12	B	2152	G	C4'-C3'-C2'	-7.34	95.25	102.60
12	B	496	G	C5'-C4'-C3'	-7.34	104.99	116.00
12	B	2196	C	P-O5'-C5'	-7.34	109.89	120.90
26	P	61	ARG	NE-CZ-NH1	-7.34	114.16	121.50
24	N	117	ASP	N-CA-C	-7.34	102.08	112.13
15	E	179	SER	CA-C-N	7.33	129.98	120.44
15	E	179	SER	C-N-CA	7.33	129.98	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	61	LYS	N-CA-C	-7.33	104.49	113.50
12	B	2255	G	P-O5'-C5'	-7.33	109.91	120.90
16	F	30	VAL	N-CA-CB	7.33	120.91	111.67
12	B	1180	U	O4'-C1'-N1	7.33	119.49	108.50
12	B	1336	A	C5'-C4'-C3'	-7.32	105.02	116.00
12	B	915	C	P-O5'-C5'	-7.32	109.92	120.90
22	L	103	ILE	CB-CG1-CD1	7.32	129.16	113.80
12	B	2702	G	P-O5'-C5'	7.31	131.87	120.90
12	B	2716	C	O4'-C1'-N1	7.31	119.47	108.50
17	G	41	GLU	N-CA-CB	7.31	121.10	110.06
12	B	2197	U	C2'-C3'-O3'	7.31	120.46	109.50
12	B	2211	A	P-O5'-C5'	7.30	131.85	120.90
27	Q	11	ALA	N-CA-C	-7.30	104.99	114.04
8	7	40	LYS	CA-C-N	7.30	130.79	120.28
8	7	40	LYS	C-N-CA	7.30	130.79	120.28
30	T	46	ALA	N-CA-C	-7.29	104.00	113.12
19	I	104	GLN	CA-C-N	7.29	130.05	120.28
19	I	104	GLN	C-N-CA	7.29	130.05	120.28
12	B	2889	C	O4'-C1'-N1	7.29	119.43	108.50
20	J	61	LYS	N-CA-C	-7.29	101.70	110.44
12	B	275	C	C1'-C2'-O2'	7.28	119.33	108.40
15	E	157	LEU	CA-C-N	7.28	130.04	120.28
15	E	157	LEU	C-N-CA	7.28	130.04	120.28
26	P	39	LEU	N-CA-C	-7.28	96.40	108.34
31	U	73	ASN	CA-CB-CG	7.28	119.88	112.60
13	C	190	THR	CA-C-N	7.27	131.73	120.75
13	C	190	THR	C-N-CA	7.27	131.73	120.75
12	B	135	U	O5'-C5'-C4'	-7.27	100.59	111.50
12	B	1034	G	P-O5'-C5'	7.27	131.81	120.90
13	C	57	HIS	ND1-CE1-NE2	7.27	115.67	108.40
17	G	94	ARG	CA-C-O	-7.27	113.44	121.87
12	B	2215	C	O4'-C1'-N1	7.27	119.40	108.50
12	B	508	A	C4'-C3'-C2'	-7.26	95.34	102.60
16	F	152	ASP	CA-C-N	-7.26	111.94	122.84
16	F	152	ASP	C-N-CA	-7.26	111.94	122.84
14	D	61	THR	CA-C-N	7.26	129.17	120.09
14	D	61	THR	C-N-CA	7.26	129.17	120.09
10	9	315	ALA	CA-C-O	7.26	129.47	121.56
12	B	1000	A	O3'-P-O5'	-7.26	93.11	104.00
14	D	178	VAL	N-CA-CB	7.26	117.59	111.64
12	B	1158	C	O4'-C1'-N1	7.25	119.38	108.50
12	B	1677	A	O4'-C4'-C3'	-7.25	96.75	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	N	108	ALA	O-C-N	7.25	128.48	121.66
12	B	17	G	C4'-C3'-C2'	-7.25	95.35	102.60
12	B	95	A	P-O5'-C5'	7.25	131.77	120.90
12	B	1575	C	C5'-C4'-C3'	-7.25	105.13	116.00
12	B	2150	C	C4'-C3'-O3'	-7.25	102.13	113.00
12	B	2195	U	O4'-C1'-N1	7.24	119.36	108.50
26	P	75	THR	N-CA-C	-7.24	103.49	113.56
26	P	100	ARG	NE-CZ-NH1	-7.24	114.26	121.50
12	B	1394	U	P-O5'-C5'	7.24	131.76	120.90
13	C	141	HIS	CE1-NE2-CD2	-7.24	101.76	109.00
29	S	32	ALA	CA-C-N	7.24	130.57	120.29
29	S	32	ALA	C-N-CA	7.24	130.57	120.29
31	U	24	VAL	CA-C-N	7.24	130.31	120.54
31	U	24	VAL	C-N-CA	7.24	130.31	120.54
12	B	1167	C	O4'-C1'-N1	7.24	119.35	108.50
6	5	122	ARG	NE-CZ-NH1	7.23	128.73	121.50
20	J	47	HIS	CB-CG-CD2	-7.23	121.80	131.20
12	B	264	C	P-O3'-C3'	7.23	131.05	120.20
14	D	201	LEU	CA-C-N	7.23	130.40	120.35
14	D	201	LEU	C-N-CA	7.23	130.40	120.35
10	9	54	ASN	CA-CB-CG	-7.22	105.38	112.60
12	B	2677	G	C4'-C3'-O3'	-7.22	102.17	113.00
3	2	33	HIS	CA-CB-CG	7.22	121.02	113.80
21	K	114	LYS	CA-C-N	7.22	131.06	120.74
21	K	114	LYS	C-N-CA	7.22	131.06	120.74
12	B	1540	G	C4'-C3'-C2'	-7.21	95.39	102.60
12	B	1710	G	O4'-C1'-N9	7.21	119.32	108.50
26	P	55	HIS	ND1-CE1-NE2	7.21	115.61	108.40
12	B	673	C	O4'-C1'-N1	7.21	119.32	108.50
21	K	89	ASN	CA-C-N	7.21	129.81	120.44
21	K	89	ASN	C-N-CA	7.21	129.81	120.44
12	B	1727	C	C5'-C4'-C3'	7.20	126.80	116.00
12	B	2199	A	C5'-C4'-C3'	-7.20	105.20	116.00
22	L	89	VAL	N-CA-C	-7.20	97.05	107.78
18	H	46	PHE	CB-CA-C	-7.20	99.88	110.96
12	B	1486	U	P-O5'-C5'	7.19	131.69	120.90
12	B	1949	G	P-O5'-C5'	7.19	131.69	120.90
12	B	2508	G	O5'-C5'-C4'	-7.19	100.72	111.50
15	E	39	ALA	CA-C-O	7.19	129.30	120.31
29	S	12	SER	CA-C-N	7.19	131.61	120.75
29	S	12	SER	C-N-CA	7.19	131.61	120.75
12	B	1714	U	C5'-C4'-C3'	-7.19	105.22	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	996	A	C5'-C4'-C3'	-7.19	105.22	116.00
2	1	40	SER	N-CA-C	-7.18	103.49	111.82
3	2	51	SER	CB-CA-C	-7.18	97.34	110.63
12	B	244	A	C4'-C3'-C2'	-7.18	95.42	102.60
12	B	2606	C	C3'-C2'-C1'	7.18	108.48	101.30
12	B	1721	G	P-O5'-C5'	7.18	131.67	120.90
7	6	3	ARG	NE-CZ-NH2	7.18	125.66	119.20
12	B	1389	G	C3'-C2'-C1'	-7.18	94.12	101.30
12	B	2885	G	O4'-C1'-C2'	-7.17	100.42	107.60
17	G	112	VAL	O-C-N	7.17	130.64	123.18
11	A	11	C	C3'-C2'-O2'	7.17	121.46	110.70
10	9	76	ARG	NE-CZ-NH1	7.17	128.67	121.50
10	9	228	GLY	CA-C-O	-7.17	116.28	122.16
12	B	2573	C	O4'-C1'-C2'	7.17	114.77	107.60
12	B	766	U	O4'-C1'-N1	7.17	119.25	108.50
1	0	33	HIS	ND1-CE1-NE2	7.16	115.56	108.40
12	B	882	G	P-O5'-C5'	7.16	131.65	120.90
1	0	7	THR	CA-C-O	7.16	126.93	119.05
16	F	143	ASP	N-CA-CB	7.16	122.59	110.49
12	B	1491	G	O4'-C1'-N9	7.16	119.24	108.50
25	O	53	THR	CA-C-O	7.16	128.04	119.59
27	Q	15	LYS	CA-C-O	-7.16	113.20	121.07
12	B	845	A	C4'-C3'-C2'	-7.16	95.44	102.60
12	B	1515	A	O4'-C1'-N9	7.15	119.23	108.50
29	S	38	TYR	N-CA-C	-7.15	105.48	114.56
27	Q	105	PHE	O-C-N	-7.15	114.37	122.09
12	B	2705	A	C3'-C2'-O2'	7.15	121.42	110.70
17	G	44	HIS	CE1-NE2-CD2	-7.14	101.86	109.00
12	B	1666	G	C4'-C3'-C2'	-7.14	95.46	102.60
12	B	2187	U	P-O5'-C5'	7.14	131.61	120.90
13	C	150	GLY	CA-C-O	-7.14	115.17	122.59
12	B	2581	G	O4'-C1'-N9	7.13	118.90	108.20
12	B	267	C	C5'-C4'-C3'	-7.13	105.30	116.00
12	B	449	A	C4'-C3'-C2'	-7.13	95.47	102.60
12	B	862	G	P-O5'-C5'	7.13	131.60	120.90
12	B	2282	G	C4'-C3'-C2'	7.13	109.73	102.60
27	Q	26	ALA	N-CA-CB	7.13	120.98	110.35
12	B	2606	C	C4'-C3'-C2'	-7.13	95.47	102.60
12	B	1254	A	C3'-C2'-C1'	7.13	108.43	101.30
12	B	2256	G	C5'-C4'-C3'	7.12	126.69	116.00
11	A	45	A	C4'-C3'-O3'	-7.12	102.31	113.00
12	B	2674	G	C4'-C3'-O3'	-7.12	102.31	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	E	12	LEU	CA-C-N	7.12	130.92	120.95
15	E	12	LEU	C-N-CA	7.12	130.92	120.95
12	B	59	U	C4'-C3'-O3'	-7.12	102.32	113.00
29	S	44	ALA	CA-C-N	7.12	134.79	121.97
29	S	44	ALA	C-N-CA	7.12	134.79	121.97
12	B	271	G	O5'-C5'-C4'	-7.12	101.03	111.70
12	B	1495	A	P-O3'-C3'	7.11	130.87	120.20
12	B	1016	G	P-O3'-C3'	-7.11	109.54	120.20
16	F	51	ASN	CA-C-N	7.11	129.80	120.28
16	F	51	ASN	C-N-CA	7.11	129.80	120.28
12	B	408	G	C4'-C3'-C2'	-7.10	95.50	102.60
14	D	163	GLY	CA-C-N	7.10	130.91	120.90
14	D	163	GLY	C-N-CA	7.10	130.91	120.90
24	N	1	MET	CA-C-N	7.10	135.10	121.54
24	N	1	MET	C-N-CA	7.10	135.10	121.54
12	B	1312	U	C4'-C3'-O3'	7.10	120.05	109.40
12	B	2304	G	O4'-C1'-C2'	-7.10	100.50	107.60
12	B	2892	G	P-O3'-C3'	-7.10	109.55	120.20
14	D	58	ASN	N-CA-C	-7.10	104.49	113.72
10	9	64	SER	N-CA-C	7.09	125.91	110.80
12	B	579	G	C3'-C2'-C1'	-7.09	94.21	101.30
12	B	1808	A	O4'-C1'-C2'	-7.09	98.71	105.80
30	T	90	GLY	CA-C-N	7.09	132.55	120.71
30	T	90	GLY	C-N-CA	7.09	132.55	120.71
12	B	1699	G	O4'-C1'-C2'	-7.09	98.71	105.80
31	U	17	ASP	CA-CB-CG	-7.09	105.51	112.60
12	B	710	U	C4'-C3'-C2'	-7.09	95.51	102.60
12	B	2016	U	O4'-C1'-N1	7.09	119.13	108.50
12	B	566	U	C4'-C3'-O3'	-7.08	102.37	113.00
12	B	2545	G	O4'-C1'-N9	7.08	119.13	108.50
16	F	11	VAL	N-CA-C	-7.08	106.40	113.20
4	3	44	ALA	N-CA-CB	7.08	122.46	110.49
12	B	2423	U	O4'-C1'-N1	7.08	118.81	108.20
20	J	118	MET	N-CA-C	-7.08	104.67	113.38
12	B	1203	U	P-O3'-C3'	7.07	130.81	120.20
10	9	61	PHE	N-CA-CB	7.07	120.35	110.17
12	B	2462	C	P-O3'-C3'	-7.07	109.60	120.20
24	N	16	HIS	CE1-NE2-CD2	-7.07	101.93	109.00
12	B	493	G	C3'-C2'-C1'	7.07	108.37	101.30
12	B	493	G	C4'-C3'-C2'	-7.07	95.53	102.60
12	B	1485	U	P-O5'-C5'	7.07	131.50	120.90
7	6	16	HIS	N-CA-C	-7.07	102.03	113.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2182	U	O3'-P-O5'	-7.07	93.40	104.00
12	B	2710	C	C4'-C3'-C2'	-7.06	95.54	102.60
14	D	156	PHE	CA-CB-CG	7.06	120.86	113.80
25	O	9	ARG	NE-CZ-NH2	7.06	125.56	119.20
29	S	35	ILE	O-C-N	7.06	129.00	121.94
11	A	26	C	C4'-C3'-C2'	-7.06	95.54	102.60
2	1	43	LEU	CA-C-N	7.06	130.31	120.29
2	1	43	LEU	C-N-CA	7.06	130.31	120.29
12	B	1879	C	O4'-C1'-N1	7.06	119.09	108.50
22	L	116	VAL	CA-C-N	7.05	132.65	122.35
22	L	116	VAL	C-N-CA	7.05	132.65	122.35
12	B	552	U	O4'-C1'-C2'	-7.05	100.55	107.60
12	B	2878	U	O5'-C5'-C4'	-7.05	100.92	111.50
12	B	906	U	O4'-C4'-C3'	-7.05	96.95	104.00
12	B	142	A	O4'-C4'-C3'	-7.05	96.95	104.00
12	B	2717	C	O4'-C1'-N1	7.05	119.07	108.50
10	9	63	LYS	CA-C-N	7.04	134.99	121.54
10	9	63	LYS	C-N-CA	7.04	134.99	121.54
23	M	10	ARG	NE-CZ-NH1	-7.04	114.46	121.50
12	B	2549	G	C5'-C4'-C3'	-7.04	105.44	116.00
6	5	7	ARG	N-CA-C	7.04	120.76	111.75
11	A	114	C	O4'-C1'-C2'	-7.04	100.56	107.60
27	Q	83	LYS	CA-C-N	7.04	133.77	120.97
27	Q	83	LYS	C-N-CA	7.04	133.77	120.97
12	B	1467	U	P-O5'-C5'	-7.03	110.35	120.90
30	T	23	ALA	N-CA-C	7.03	118.60	111.07
6	5	156	ALA	CA-C-N	7.03	129.70	120.28
6	5	156	ALA	C-N-CA	7.03	129.70	120.28
14	D	165	MET	N-CA-C	-7.03	96.59	108.26
33	Y	50	VAL	CA-C-N	7.03	131.46	120.00
33	Y	50	VAL	C-N-CA	7.03	131.46	120.00
15	E	184	ASP	N-CA-CB	7.03	122.36	110.49
12	B	2067	G	P-O3'-C3'	7.03	130.74	120.20
16	F	146	ASP	N-CA-C	-7.02	102.12	110.41
26	P	76	HIS	ND1-CE1-NE2	7.02	115.42	108.40
6	5	168	ASN	CA-CB-CG	-7.02	105.58	112.60
29	S	61	ASN	N-CA-CB	7.02	122.35	110.49
10	9	335	ASN	O-C-N	-7.02	113.25	121.32
12	B	137	U	O4'-C4'-C3'	-7.02	96.98	104.00
20	J	40	HIS	CE1-NE2-CD2	-7.02	101.98	109.00
12	B	2333	A	P-O3'-C3'	7.01	130.72	120.20
12	B	1532	A	C5'-C4'-C3'	-7.01	105.48	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2536	G	P-O3'-C3'	7.01	130.71	120.20
12	B	2527	C	P-O5'-C5'	7.01	131.41	120.90
12	B	566	U	C3'-C2'-O2'	7.01	121.21	110.70
29	S	55	ILE	CB-CA-C	-7.01	103.00	111.97
12	B	2531	A	C4'-C3'-C2'	-7.00	95.59	102.60
12	B	145	C	P-O5'-C5'	7.00	131.41	120.90
12	B	1382	G	P-O5'-C5'	-7.00	110.39	120.90
28	R	21	ARG	N-CA-C	-7.00	96.99	108.41
1	0	46	VAL	CA-C-N	7.00	134.91	121.54
1	0	46	VAL	C-N-CA	7.00	134.91	121.54
12	B	67	U	C4'-C3'-C2'	-7.00	95.60	102.60
12	B	96	C	O4'-C1'-N1	7.00	119.00	108.50
12	B	2472	G	C5'-C4'-C3'	7.00	126.50	116.00
12	B	1600	C	C5'-C4'-C3'	-6.99	105.51	116.00
12	B	2149	U	P-O5'-C5'	-6.99	110.41	120.90
13	C	142	ASN	CA-C-O	6.99	130.51	120.51
12	B	1120	G	O5'-C5'-C4'	-6.99	101.02	111.50
12	B	1779	U	C4'-C3'-C2'	-6.99	95.61	102.60
12	B	730	A	C4'-C3'-C2'	-6.99	95.61	102.60
12	B	897	C	O3'-P-O5'	6.99	114.48	104.00
21	K	72	PRO	N-CA-CB	-6.99	96.84	103.41
12	B	84	A	C4'-C3'-O3'	6.98	119.87	109.40
12	B	996	A	O5'-C5'-C4'	6.98	121.97	111.50
12	B	2178	C	C4'-C3'-C2'	-6.98	95.62	102.60
12	B	2781	A	C4'-C3'-C2'	-6.98	95.62	102.60
32	W	43	ASP	N-CA-C	-6.98	97.83	109.07
12	B	2668	G	C4'-C3'-C2'	-6.98	95.62	102.60
12	B	97	C	C4'-C3'-O3'	-6.98	102.53	113.00
12	B	900	A	C4'-C3'-C2'	-6.98	95.62	102.60
30	T	40	LYS	N-CA-C	-6.98	104.64	113.43
32	W	48	MET	CA-C-O	-6.98	113.43	120.90
12	B	2171	A	C3'-C2'-C1'	-6.97	94.53	101.50
12	B	2261	C	O4'-C1'-N1	6.97	118.96	108.50
13	C	93	VAL	N-CA-C	-6.97	98.44	108.48
12	B	468	G	P-O5'-C5'	6.97	131.35	120.90
12	B	2484	G	O5'-C5'-C4'	-6.97	101.05	111.50
12	B	375	G	C5'-C4'-C3'	-6.96	105.55	116.00
12	B	531	C	C4'-C3'-C2'	-6.96	95.64	102.60
26	P	102	ARG	N-CA-C	-6.96	98.98	108.38
15	E	115	GLN	CA-C-N	6.96	132.02	122.07
15	E	115	GLN	C-N-CA	6.96	132.02	122.07
2	1	27	ASN	CB-CG-ND2	-6.96	105.96	116.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1398	C	C4'-C3'-O3'	-6.96	102.57	113.00
12	B	2069	G	O4'-C4'-C3'	-6.95	97.05	104.00
21	K	43	ILE	CA-CB-CG1	6.95	122.22	110.40
21	K	51	LYS	CA-C-N	6.95	134.48	121.97
21	K	51	LYS	C-N-CA	6.95	134.48	121.97
12	B	1125	G	P-O5'-C5'	6.95	131.32	120.90
11	A	40	U	C1'-C2'-O2'	6.95	122.22	111.80
29	S	102	HIS	CE1-NE2-CD2	-6.95	102.05	109.00
1	0	2	ARG	N-CA-CB	6.95	122.23	110.49
1	0	58	ILE	CA-C-N	6.95	130.15	120.29
1	0	58	ILE	C-N-CA	6.95	130.15	120.29
10	9	186	VAL	N-CA-C	-6.95	97.85	107.99
6	5	150	ALA	N-CA-C	6.94	118.50	111.07
12	B	1703	G	C5'-C4'-C3'	-6.94	105.59	116.00
12	B	2252	G	O4'-C4'-C3'	-6.94	97.06	104.00
12	B	2279	G	C5'-C4'-C3'	-6.94	105.59	116.00
28	R	68	ARG	CA-C-O	-6.94	113.96	121.94
10	9	158	LEU	CA-C-N	6.93	134.18	121.70
10	9	158	LEU	C-N-CA	6.93	134.18	121.70
29	S	47	VAL	N-CA-C	-6.93	102.83	113.16
12	B	1086	A	O3'-P-O5'	-6.93	93.60	104.00
23	M	52	ALA	CA-C-O	-6.93	113.54	120.82
12	B	1801	A	P-O5'-C5'	6.93	131.29	120.90
17	G	92	GLY	N-CA-C	-6.93	105.06	115.32
25	O	40	ILE	CA-C-O	-6.93	113.08	121.54
12	B	1418	G	C3'-C2'-C1'	-6.93	94.37	101.30
12	B	2018	G	C4'-C3'-C2'	6.93	109.53	102.60
30	T	91	GLN	N-CA-C	-6.92	102.95	111.40
31	U	39	ASN	CA-CB-CG	6.92	119.53	112.60
12	B	2466	C	P-O5'-C5'	6.92	131.28	120.90
18	H	48	GLU	N-CA-C	6.92	119.70	111.33
10	9	272	ASP	N-CA-CB	6.92	120.28	110.12
12	B	1147	A	C4'-C3'-C2'	-6.91	95.69	102.60
12	B	1714	U	P-O3'-C3'	6.91	130.57	120.20
12	B	1918	A	P-O5'-C5'	-6.91	110.53	120.90
12	B	2863	C	P-O3'-C3'	-6.91	109.83	120.20
29	S	35	ILE	CA-C-O	-6.91	114.08	121.27
12	B	2739	U	O4'-C1'-N1	6.91	118.87	108.50
1	0	40	GLU	N-CA-C	-6.91	105.38	113.88
12	B	270	A	C4'-C3'-C2'	6.91	109.51	102.60
10	9	205	ASN	N-CA-C	-6.91	103.94	114.16
12	B	189	G	P-O5'-C5'	6.91	131.26	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1237	A	O4'-C4'-C3'	-6.91	97.09	104.00
31	U	95	PHE	CA-CB-CG	-6.91	106.89	113.80
12	B	1287	A	O4'-C4'-C3'	-6.91	97.09	104.00
13	C	145	MET	CA-C-O	-6.91	111.61	119.41
12	B	922	C	P-O5'-C5'	6.91	131.26	120.90
33	Y	30	VAL	N-CA-CB	-6.91	103.79	111.66
11	A	65	U	P-O5'-C5'	6.90	131.25	120.90
12	B	1460	U	P-O3'-C3'	6.90	130.55	120.20
12	B	2451	A	O4'-C4'-C3'	-6.90	97.10	104.00
12	B	5	A	O4'-C1'-N9	6.90	118.85	108.50
12	B	1286	A	P-O5'-C5'	-6.90	110.55	120.90
12	B	2808	G	C3'-C2'-C1'	6.90	108.20	101.30
12	B	1273	U	C3'-C2'-C1'	6.90	108.20	101.30
2	1	22	LEU	CA-C-N	6.89	132.15	122.36
2	1	22	LEU	C-N-CA	6.89	132.15	122.36
12	B	1499	C	P-O5'-C5'	-6.89	110.56	120.90
6	5	186	LYS	O-C-N	6.89	130.54	122.20
12	B	2158	A	O3'-P-O5'	-6.89	93.67	104.00
10	9	137	THR	CA-C-N	6.89	126.70	119.05
10	9	137	THR	C-N-CA	6.89	126.70	119.05
12	B	794	A	C4'-C3'-C2'	-6.89	95.71	102.60
12	B	1823	G	C4'-C3'-C2'	-6.89	95.71	102.60
12	B	1224	U	O4'-C1'-N1	6.88	118.83	108.50
13	C	199	HIS	ND1-CE1-NE2	6.88	115.28	108.40
18	H	38	PRO	N-CA-CB	6.88	110.48	103.25
10	9	63	LYS	N-CA-C	-6.88	96.14	110.80
33	Y	73	PRO	N-CA-CB	-6.88	97.18	103.31
12	B	376	G	C4'-C3'-C2'	-6.88	95.72	102.60
12	B	379	G	C5'-C4'-C3'	-6.88	105.68	116.00
32	W	13	GLY	CA-C-N	6.88	131.14	120.82
32	W	13	GLY	C-N-CA	6.88	131.14	120.82
12	B	320	A	P-O3'-C3'	6.88	130.52	120.20
12	B	1717	A	O5'-C5'-C4'	-6.88	101.18	111.50
12	B	1905	C	O4'-C1'-N1	6.88	118.82	108.50
12	B	2651	C	C4'-C3'-O3'	-6.88	102.68	113.00
15	E	72	SER	N-CA-CB	6.88	122.12	110.49
32	W	73	LYS	CA-C-N	6.88	131.69	121.72
32	W	73	LYS	C-N-CA	6.88	131.69	121.72
12	B	1243	C	C5'-C4'-C3'	-6.88	105.69	116.00
12	B	2445	G	O4'-C1'-C2'	6.88	114.48	107.60
12	B	2671	G	P-O3'-C3'	-6.88	109.89	120.20
12	B	2540	C	P-O3'-C3'	6.88	130.51	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	E	174	GLY	CA-C-N	6.87	134.34	121.97
15	E	174	GLY	C-N-CA	6.87	134.34	121.97
10	9	323	ASP	CA-CB-CG	-6.87	105.73	112.60
23	M	56	ALA	N-CA-C	6.87	119.79	111.82
12	B	1815	A	C1'-C2'-O2'	-6.87	101.49	111.80
13	C	263	ASP	CA-CB-CG	-6.87	105.73	112.60
25	O	116	GLN	N-CA-C	-6.87	99.11	110.17
12	B	2116	G	P-O5'-C5'	6.87	131.20	120.90
12	B	2022	U	O4'-C4'-C3'	-6.86	99.24	106.10
26	P	86	LYS	N-CA-CB	6.86	122.09	110.49
11	A	40	U	C3'-C2'-O2'	-6.86	104.31	114.60
33	Y	15	SER	N-CA-CB	6.86	122.03	111.46
12	B	2781	A	O4'-C1'-C2'	-6.86	100.74	107.60
12	B	607	U	C1'-O4'-C4'	-6.85	103.05	109.90
12	B	1578	U	C2'-C3'-O3'	6.85	123.98	113.70
12	B	2728	U	C4'-C3'-C2'	-6.85	95.75	102.60
12	B	1935	G	C1'-O4'-C4'	6.85	116.75	109.90
20	J	84	ILE	CA-C-N	6.85	131.88	122.77
20	J	84	ILE	C-N-CA	6.85	131.88	122.77
11	A	25	U	P-O5'-C5'	-6.85	110.63	120.90
17	G	19	ASN	CA-C-O	-6.85	114.12	121.45
12	B	493	G	O4'-C1'-C2'	-6.84	100.75	107.60
12	B	1173	U	C4'-C3'-C2'	-6.84	95.76	102.60
12	B	2340	A	O5'-C5'-C4'	-6.84	101.23	111.50
18	H	80	ILE	O-C-N	6.84	130.75	123.02
22	L	50	PHE	N-CA-CB	6.84	122.05	110.49
12	B	1088	A	C5'-C4'-C3'	-6.84	105.74	116.00
12	B	1959	G	O5'-C5'-C4'	-6.84	101.24	111.50
4	3	13	GLY	CA-C-N	6.84	129.44	120.28
4	3	13	GLY	C-N-CA	6.84	129.44	120.28
12	B	845	A	O3'-P-O5'	6.84	114.26	104.00
12	B	2210	U	C5'-C4'-O4'	6.84	119.36	109.10
12	B	2781	A	P-O3'-C3'	6.84	130.46	120.20
12	B	1480	C	P-O3'-C3'	-6.84	109.95	120.20
12	B	1084	A	O4'-C4'-C3'	-6.83	97.17	104.00
12	B	2484	G	O4'-C1'-N9	6.83	118.75	108.50
12	B	2770	G	P-O5'-C5'	6.83	131.15	120.90
12	B	360	U	P-O3'-C3'	6.83	130.44	120.20
12	B	1498	C	C5'-C4'-C3'	6.83	126.24	116.00
12	B	316	C	O4'-C1'-N1	6.83	118.74	108.50
12	B	2399	G	P-O5'-C5'	-6.83	110.66	120.90
27	Q	2	ARG	N-CA-C	-6.83	98.60	109.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	S	62	ASP	N-CA-CB	6.83	122.03	110.49
12	B	2405	G	P-O3'-C3'	6.82	130.43	120.20
20	J	24	THR	O-C-N	-6.82	115.56	123.27
12	B	1454	C	O4'-C1'-N1	6.82	118.73	108.50
12	B	1463	C	P-O3'-C3'	-6.82	109.97	120.20
15	E	17	THR	N-CA-C	-6.82	104.86	113.72
12	B	528	A	O4'-C1'-N9	6.81	118.72	108.50
13	C	89	ASN	CA-C-O	-6.81	113.08	120.92
12	B	1196	C	P-O5'-C5'	6.81	131.11	120.90
12	B	2564	A	C4'-C3'-C2'	-6.81	95.79	102.60
25	O	18	LEU	N-CA-C	6.81	118.70	111.28
27	Q	108	LEU	CA-C-N	6.81	129.38	120.60
27	Q	108	LEU	C-N-CA	6.81	129.38	120.60
12	B	459	U	P-O3'-C3'	-6.81	109.99	120.20
32	W	31	TYR	N-CA-C	-6.81	98.96	109.24
12	B	1589	U	O4'-C1'-N1	6.80	118.71	108.50
12	B	1839	G	P-O5'-C5'	-6.80	110.69	120.90
12	B	2480	C	O4'-C1'-C2'	-6.80	100.80	107.60
12	B	2898	U	C5'-C4'-C3'	-6.80	105.80	116.00
17	G	110	HIS	ND1-CE1-NE2	6.80	115.20	108.40
12	B	509	C	C1'-O4'-C4'	-6.80	103.10	109.90
14	D	130	GLN	N-CA-CB	6.80	121.17	110.56
32	W	24	ASN	OD1-CG-ND2	6.80	129.40	122.60
2	1	41	HIS	ND1-CE1-NE2	6.80	115.20	108.40
12	B	2198	A	P-O3'-C3'	6.80	130.40	120.20
32	W	54	ALA	CA-C-N	6.80	130.31	120.38
32	W	54	ALA	C-N-CA	6.80	130.31	120.38
10	9	63	LYS	N-CA-CB	6.80	121.98	110.49
12	B	1736	U	P-O3'-C3'	6.80	130.39	120.20
15	E	87	ALA	N-CA-C	-6.79	98.03	108.76
12	B	814	C	P-O3'-C3'	-6.79	110.02	120.20
12	B	2424	C	O4'-C4'-C3'	6.79	110.79	104.00
12	B	926	G	O4'-C4'-C3'	-6.78	97.22	104.00
12	B	2878	U	P-O5'-C5'	6.78	131.07	120.90
12	B	1955	U	O4'-C1'-C2'	-6.78	99.02	105.80
18	H	21	VAL	N-CA-CB	6.78	122.45	112.35
12	B	710	U	O5'-C5'-C4'	-6.78	101.33	111.50
2	1	40	SER	CA-C-N	6.78	130.61	120.31
2	1	40	SER	C-N-CA	6.78	130.61	120.31
6	5	72	SER	N-CA-C	-6.78	99.44	109.81
12	B	168	G	C5'-C4'-C3'	-6.78	105.84	116.00
6	5	36	ALA	N-CA-C	-6.77	97.17	108.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2210	U	P-O3'-C3'	-6.77	110.04	120.20
12	B	1000	A	P-O5'-C5'	-6.77	110.74	120.90
11	A	115	A	C4'-C3'-C2'	-6.77	95.83	102.60
12	B	606	U	C4'-C3'-O3'	-6.76	102.85	113.00
12	B	2119	A	C1'-O4'-C4'	6.76	116.47	109.70
33	Y	65	LYS	N-CA-CB	6.76	119.93	109.85
12	B	1904	G	O4'-C1'-N9	6.76	118.64	108.50
3	2	24	LEU	O-C-N	6.76	129.03	122.07
12	B	714	U	O4'-C1'-C2'	-6.76	100.84	107.60
12	B	924	G	O5'-C5'-C4'	-6.76	101.36	111.50
11	A	66	A	P-O5'-C5'	6.76	131.04	120.90
1	0	22	ASN	CA-CB-CG	-6.76	105.84	112.60
12	B	488	G	P-O3'-C3'	-6.75	110.07	120.20
12	B	1726	C	O4'-C1'-N1	6.75	118.63	108.50
16	F	129	MET	CG-SD-CE	-6.75	86.05	100.90
21	K	11	ALA	N-CA-C	-6.75	104.62	112.92
21	K	26	GLY	CA-C-N	6.75	127.58	120.43
21	K	26	GLY	C-N-CA	6.75	127.58	120.43
12	B	275	C	C4'-C3'-C2'	-6.75	95.85	102.60
12	B	1527	G	P-O5'-C5'	6.75	131.02	120.90
14	D	108	ASP	CA-CB-CG	-6.75	105.85	112.60
23	M	13	HIS	ND1-CE1-NE2	6.75	115.15	108.40
8	7	42	HIS	CB-CG-CD2	-6.75	122.43	131.20
12	B	1391	U	O4'-C1'-N1	6.75	118.62	108.50
12	B	2112	G	P-O3'-C3'	6.75	130.32	120.20
10	9	109	THR	CA-C-N	6.74	131.00	121.02
10	9	109	THR	C-N-CA	6.74	131.00	121.02
12	B	1348	C	C1'-O4'-C4'	-6.74	103.16	109.90
22	L	45	GLY	N-CA-C	-6.74	105.27	112.08
13	C	85	ASN	OD1-CG-ND2	6.74	129.34	122.60
12	B	2250	G	C2'-C3'-O3'	6.74	119.61	109.50
6	5	162	ARG	N-CA-C	-6.74	98.27	109.46
12	B	114	U	P-O3'-C3'	-6.74	110.09	120.20
12	B	1631	G	C4'-C3'-C2'	-6.74	95.86	102.60
12	B	2538	C	O4'-C4'-C3'	-6.74	97.26	104.00
17	G	48	THR	CA-C-N	6.74	131.51	120.94
17	G	48	THR	C-N-CA	6.74	131.51	120.94
12	B	575	A	P-O5'-C5'	6.73	131.00	120.90
16	F	128	SER	N-CA-C	-6.73	97.92	108.90
10	9	105	MET	CG-SD-CE	-6.73	86.09	100.90
12	B	365	U	C4'-C3'-C2'	-6.73	95.87	102.60
12	B	1291	C	P-O5'-C5'	-6.73	110.80	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1547	C	C5'-C4'-C3'	6.73	126.10	116.00
25	O	102	ARG	CA-C-N	6.73	129.04	120.56
25	O	102	ARG	C-N-CA	6.73	129.04	120.56
12	B	1358	G	P-O3'-C3'	6.73	130.29	120.20
27	Q	98	ALA	CB-CA-C	-6.73	97.75	110.67
29	S	7	HIS	CA-C-O	6.73	127.47	120.40
24	N	45	ARG	CA-C-N	6.73	129.97	120.28
24	N	45	ARG	C-N-CA	6.73	129.97	120.28
12	B	1759	A	O3'-P-O5'	-6.73	93.91	104.00
33	Y	21	GLY	CA-C-N	6.73	130.57	120.75
33	Y	21	GLY	C-N-CA	6.73	130.57	120.75
12	B	963	U	P-O5'-C5'	6.72	130.99	120.90
15	E	39	ALA	CA-C-N	6.72	130.92	121.24
15	E	39	ALA	C-N-CA	6.72	130.92	121.24
10	9	88	ILE	CA-C-N	6.72	132.67	122.65
10	9	88	ILE	C-N-CA	6.72	132.67	122.65
12	B	1576	U	C5'-C4'-C3'	-6.72	105.92	116.00
19	I	108	ILE	N-CA-C	-6.72	103.93	110.72
12	B	157	C	O4'-C1'-N1	6.72	118.58	108.50
12	B	508	A	P-O3'-C3'	-6.72	110.13	120.20
12	B	1801	A	C4'-C3'-C2'	6.72	109.32	102.60
12	B	2384	U	O4'-C4'-C3'	-6.71	99.39	106.10
10	9	157	MET	N-CA-CB	6.71	121.83	110.49
12	B	479	A	O3'-P-O5'	-6.71	93.93	104.00
12	B	1368	G	C4'-C3'-C2'	-6.71	95.89	102.60
12	B	2145	C	P-O5'-C5'	6.71	130.97	120.90
12	B	2692	G	C4'-C3'-C2'	-6.71	95.89	102.60
12	B	818	G	C4'-C3'-C2'	-6.71	95.89	102.60
6	5	135	GLY	CA-C-N	6.71	130.51	120.31
6	5	135	GLY	C-N-CA	6.71	130.51	120.31
12	B	2811	G	C5'-C4'-C3'	-6.71	105.94	116.00
20	J	112	GLY	CA-C-O	-6.71	111.93	121.52
12	B	432	A	P-O3'-C3'	-6.70	110.14	120.20
12	B	518	G	C5'-C4'-C3'	-6.70	105.94	116.00
12	B	2104	C	P-O5'-C5'	6.70	130.96	120.90
12	B	2525	G	O5'-C5'-C4'	-6.70	101.44	111.50
17	G	81	GLY	CA-C-N	6.70	129.56	120.44
17	G	81	GLY	C-N-CA	6.70	129.56	120.44
6	5	103	GLN	N-CA-C	6.70	118.24	111.07
6	5	117	SER	N-CA-C	-6.70	101.68	110.39
12	B	2212	A	C4'-C3'-C2'	-6.70	95.90	102.60
12	B	130	C	O4'-C4'-C3'	-6.70	97.30	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	754	U	O4'-C1'-C2'	-6.70	100.90	107.60
12	B	2105	U	O4'-C1'-N1	6.70	118.55	108.50
12	B	2214	C	O4'-C1'-N1	6.70	118.54	108.50
12	B	146	A	P-O3'-C3'	-6.69	110.16	120.20
12	B	71	A	C2'-C3'-O3'	6.69	119.54	109.50
12	B	858	G	C5'-C4'-C3'	-6.69	105.16	115.20
12	B	1232	G	C1'-O4'-C4'	6.69	116.59	109.90
24	N	40	LYS	N-CA-CB	6.69	119.95	110.12
28	R	78	ARG	CA-C-N	6.69	130.85	120.75
28	R	78	ARG	C-N-CA	6.69	130.85	120.75
4	3	15	ARG	NE-CZ-NH1	-6.69	114.81	121.50
25	O	12	THR	N-CA-C	-6.69	103.46	111.69
33	Y	24	ARG	CA-C-O	-6.69	114.27	121.56
8	7	3	ILE	N-CA-CB	6.69	118.62	111.00
3	2	8	GLN	CA-C-N	6.68	134.31	121.54
3	2	8	GLN	C-N-CA	6.68	134.31	121.54
12	B	676	A	C4'-C3'-O3'	-6.68	102.97	113.00
12	B	1551	A	P-O5'-C5'	-6.68	110.88	120.90
29	S	2	GLU	N-CA-CB	6.68	121.78	110.49
12	B	2552	U	C4'-C3'-C2'	-6.68	95.92	102.60
24	N	16	HIS	CG-CD2-NE2	6.68	113.88	107.20
22	L	16	GLY	CA-C-N	6.68	130.64	120.82
22	L	16	GLY	C-N-CA	6.68	130.64	120.82
4	3	2	VAL	CA-C-O	-6.68	114.27	120.34
12	B	2048	G	C3'-C2'-C1'	6.68	107.98	101.30
12	B	1985	C	O4'-C1'-N1	6.67	118.51	108.50
12	B	2411	A	O4'-C1'-N9	6.67	118.51	108.50
7	6	24	THR	CB-CA-C	6.67	120.30	109.90
12	B	1418	G	P-O3'-C3'	-6.67	110.20	120.20
27	Q	16	ILE	CA-C-N	6.67	129.88	120.28
27	Q	16	ILE	C-N-CA	6.67	129.88	120.28
12	B	350	G	C4'-C3'-O3'	-6.67	103.00	113.00
12	B	594	U	P-O5'-C5'	6.66	130.90	120.90
12	B	788	A	C2'-C3'-O3'	6.66	119.50	109.50
12	B	1609	A	O3'-P-O5'	-6.66	94.01	104.00
12	B	511	U	P-O5'-C5'	6.66	130.89	120.90
12	B	1757	A	P-O5'-C5'	6.66	130.89	120.90
10	9	234	HIS	ND1-CE1-NE2	6.66	115.06	108.40
12	B	1197	G	P-O5'-C5'	-6.66	110.91	120.90
26	P	42	PHE	CA-CB-CG	-6.66	107.14	113.80
26	P	43	GLU	CA-C-O	-6.66	114.49	121.55
27	Q	15	LYS	O-C-N	6.66	129.20	122.08

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	832	U	O4'-C1'-N1	6.66	118.48	108.50
18	H	119	ASN	CA-CB-CG	-6.65	105.95	112.60
16	F	175	PRO	CB-CA-C	-6.65	101.71	109.89
8	7	17	GLY	O-C-N	6.65	128.62	122.17
12	B	311	A	O5'-C5'-C4'	6.65	121.67	111.70
12	B	246	C	O4'-C1'-N1	6.64	118.47	108.50
12	B	178	G	P-O5'-C5'	6.64	130.86	120.90
12	B	2303	G	O4'-C1'-N9	6.64	118.46	108.50
9	8	14	CYS	N-CA-C	-6.64	98.56	108.99
12	B	752	A	C1'-O4'-C4'	-6.64	103.06	109.70
12	B	894	U	P-O5'-C5'	6.64	130.86	120.90
24	N	31	HIS	N-CA-C	-6.64	96.66	110.80
22	L	20	GLY	N-CA-C	-6.64	106.07	115.43
12	B	75	G	O3'-P-O5'	-6.63	94.05	104.00
12	B	413	C	O4'-C1'-N1	6.63	118.45	108.50
28	R	15	SER	CA-C-N	6.63	132.02	122.40
28	R	15	SER	C-N-CA	6.63	132.02	122.40
12	B	476	G	C3'-C2'-O2'	6.63	120.64	110.70
12	B	69	C	O3'-P-O5'	-6.63	94.06	104.00
22	L	122	VAL	N-CA-C	6.63	118.32	109.37
32	W	8	VAL	N-CA-C	6.63	119.17	109.63
6	5	17	ALA	N-CA-C	-6.62	103.94	113.21
12	B	117	G	O5'-C5'-C4'	-6.62	101.56	111.50
12	B	617	G	C5'-C4'-C3'	-6.62	106.07	116.00
32	W	47	VAL	N-CA-C	6.62	119.33	111.05
3	2	26	LEU	CA-C-N	6.62	133.50	121.85
3	2	26	LEU	C-N-CA	6.62	133.50	121.85
12	B	784	G	C2'-C3'-O3'	6.62	119.43	109.50
4	3	2	VAL	N-CA-C	-6.62	106.56	112.12
11	A	60	C	C1'-C2'-O2'	6.62	118.33	108.40
12	B	446	G	C2'-C3'-O3'	6.62	119.43	109.50
12	B	1283	G	O4'-C1'-N9	6.62	118.42	108.50
12	B	1929	G	C5'-C4'-C3'	-6.62	105.28	115.20
19	I	126	ARG	NE-CZ-NH2	6.62	125.15	119.20
25	O	97	PHE	CA-CB-CG	-6.62	107.18	113.80
10	9	69	ARG	N-CA-C	-6.61	99.14	109.72
12	B	1821	A	P-O5'-C5'	6.61	130.82	120.90
12	B	2024	G	O4'-C1'-N9	6.61	118.42	108.50
12	B	1084	A	P-O3'-C3'	6.61	130.12	120.20
12	B	1483	G	P-O5'-C5'	-6.61	110.98	120.90
15	E	82	GLY	CA-C-N	6.61	130.64	122.37
15	E	82	GLY	C-N-CA	6.61	130.64	122.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	3	41	HIS	CB-CG-ND1	6.61	132.61	122.70
12	B	203	A	P-O5'-C5'	6.61	130.81	120.90
27	Q	96	ASP	N-CA-CB	6.61	121.23	110.32
28	R	45	GLU	N-CA-C	-6.61	104.59	114.64
12	B	1389	G	O4'-C4'-C3'	-6.61	97.39	104.00
12	B	1428	C	C1'-O4'-C4'	6.61	116.31	109.70
20	J	5	THR	CA-CB-OG1	6.61	119.51	109.60
11	A	45	A	C5'-C4'-C3'	-6.61	106.09	116.00
12	B	164	C	O4'-C1'-C2'	-6.61	100.99	107.60
11	A	44	G	O4'-C4'-C3'	-6.61	99.49	106.10
29	S	75	PHE	CA-CB-CG	6.60	120.40	113.80
12	B	1960	A	C5'-C4'-C3'	-6.60	106.10	116.00
23	M	68	PHE	CA-C-N	6.60	126.99	119.93
23	M	68	PHE	C-N-CA	6.60	126.99	119.93
12	B	1459	G	O4'-C1'-N9	6.60	118.40	108.50
12	B	2183	A	O4'-C1'-C2'	-6.60	101.00	107.60
25	O	40	ILE	O-C-N	6.60	130.71	122.59
12	B	2747	G	O4'-C1'-N9	6.60	118.39	108.50
12	B	2352	A	P-O5'-C5'	6.59	130.79	120.90
12	B	800	A	P-O3'-C3'	6.59	130.09	120.20
12	B	1927	A	P-O5'-C5'	6.59	130.79	120.90
12	B	1577	C	P-O3'-C3'	6.59	130.08	120.20
12	B	2685	G	C4'-C3'-C2'	-6.59	96.01	102.60
14	D	42	ASN	N-CA-C	-6.59	105.99	112.97
19	I	115	ASP	CA-CB-CG	-6.59	106.01	112.60
20	J	45	THR	N-CA-CB	6.59	122.10	110.37
12	B	131	A	C4'-C3'-C2'	-6.59	96.01	102.60
12	B	2504	U	C4'-C3'-C2'	-6.59	96.01	102.60
24	N	25	ALA	CA-C-N	6.59	127.29	119.98
24	N	25	ALA	C-N-CA	6.59	127.29	119.98
30	T	85	VAL	N-CA-C	-6.59	104.43	110.82
12	B	217	A	C1'-O4'-C4'	-6.58	103.31	109.90
12	B	322	A	O3'-P-O5'	6.58	113.87	104.00
14	D	55	LYS	N-CA-C	-6.58	103.30	112.45
25	O	8	ILE	CA-C-N	6.58	129.76	120.28
25	O	8	ILE	C-N-CA	6.58	129.76	120.28
12	B	601	C	C5'-C4'-C3'	6.58	125.87	116.00
12	B	1477	A	P-O3'-C3'	6.58	130.07	120.20
12	B	867	C	O4'-C1'-N1	6.58	118.37	108.50
6	5	144	THR	CA-CB-OG1	6.58	119.47	109.60
12	B	1918	A	O4'-C1'-C2'	6.58	112.38	105.80
14	D	155	VAL	N-CA-C	-6.58	100.47	109.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	Y	44	PHE	CA-CB-CG	6.58	120.38	113.80
10	9	234	HIS	CG-CD2-NE2	6.58	113.78	107.20
22	L	87	GLY	N-CA-C	-6.58	102.97	112.17
28	R	41	ILE	N-CA-C	6.58	117.64	110.21
12	B	358	U	C4'-C3'-C2'	-6.57	96.03	102.60
12	B	619	G	O5'-C5'-C4'	-6.57	101.64	111.50
12	B	943	A	O3'-P-O5'	-6.57	94.14	104.00
12	B	1030	C	C4'-C3'-C2'	-6.57	96.03	102.60
12	B	2190	G	C4'-C3'-O3'	-6.57	103.14	113.00
12	B	2370	G	P-O5'-C5'	6.57	130.76	120.90
12	B	899	A	C1'-C2'-O2'	6.57	118.26	108.40
12	B	1614	A	O4'-C1'-C2'	-6.57	101.03	107.60
11	A	27	C	P-O5'-C5'	6.57	130.75	120.90
12	B	473	G	O3'-P-O5'	-6.57	94.15	104.00
12	B	917	A	P-O3'-C3'	-6.57	110.35	120.20
12	B	1793	C	P-O5'-C5'	6.57	130.75	120.90
12	B	1876	A	O4'-C1'-N9	6.57	118.35	108.50
12	B	108	G	C4'-C3'-O3'	-6.57	103.15	113.00
25	O	4	LYS	CA-C-N	6.57	129.32	120.65
25	O	4	LYS	C-N-CA	6.57	129.32	120.65
26	P	55	HIS	CE1-NE2-CD2	-6.57	102.43	109.00
27	Q	10	ARG	NE-CZ-NH2	-6.56	113.29	119.20
1	0	53	LYS	CA-C-N	6.56	127.38	120.03
1	0	53	LYS	C-N-CA	6.56	127.38	120.03
12	B	2644	G	C5'-C4'-C3'	-6.56	106.16	116.00
18	H	128	HIS	CB-CG-CD2	-6.56	122.67	131.20
12	B	2629	U	O3'-P-O5'	-6.56	94.16	104.00
12	B	30	G	O5'-C5'-C4'	-6.56	101.67	111.50
12	B	1791	A	P-O3'-C3'	-6.56	110.36	120.20
12	B	2327	A	P-O5'-C5'	6.56	130.74	120.90
20	J	40	HIS	ND1-CE1-NE2	6.56	114.96	108.40
24	N	59	SER	N-CA-CB	6.56	121.60	111.24
20	J	45	THR	CA-C-N	6.55	126.91	119.83
20	J	45	THR	C-N-CA	6.55	126.91	119.83
9	8	13	ASN	N-CA-C	-6.55	103.34	112.25
10	9	291	VAL	CA-C-O	6.55	128.97	120.78
12	B	898	C	O4'-C1'-N1	6.55	118.33	108.50
11	A	108	A	C4'-C3'-C2'	-6.55	96.05	102.60
16	F	149	ARG	N-CA-CB	6.55	119.63	109.48
6	5	234	ASN	OD1-CG-ND2	6.54	129.15	122.60
16	F	100	GLU	N-CA-C	-6.54	105.21	113.72
26	P	59	THR	CA-C-O	-6.54	114.45	121.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	T	2	ILE	CB-CA-C	-6.54	103.47	112.04
23	M	97	GLN	CA-C-N	6.54	128.02	119.84
23	M	97	GLN	C-N-CA	6.54	128.02	119.84
12	B	1272	A	O5'-C5'-C4'	6.54	121.51	111.70
12	B	615	U	C3'-C2'-C1'	-6.54	94.96	101.50
12	B	644	A	O3'-P-O5'	-6.54	94.19	104.00
20	J	95	ARG	O-C-N	6.54	129.60	122.15
23	M	85	GLY	N-CA-C	-6.54	105.37	112.04
11	A	110	C	O4'-C4'-C3'	-6.53	97.47	104.00
12	B	18	U	P-O5'-C5'	-6.53	111.10	120.90
12	B	186	G	C4'-C3'-C2'	-6.53	96.07	102.60
12	B	2825	G	P-O3'-C3'	-6.53	110.40	120.20
29	S	85	ILE	CB-CA-C	-6.53	100.62	110.55
29	S	54	ALA	N-CA-CB	6.53	119.72	110.12
12	B	1500	G	C4'-C3'-C2'	-6.53	96.07	102.60
23	M	23	GLY	N-CA-C	-6.53	97.70	113.18
27	Q	40	LYS	CA-C-N	6.53	128.93	120.44
27	Q	40	LYS	C-N-CA	6.53	128.93	120.44
29	S	18	ARG	CD-NE-CZ	-6.53	115.26	124.40
12	B	1479	G	O5'-C5'-C4'	-6.53	101.71	111.50
12	B	1643	G	C4'-C3'-C2'	-6.53	96.07	102.60
12	B	1115	G	C4'-C3'-O3'	-6.53	103.21	113.00
12	B	2271	G	O4'-C1'-C2'	-6.53	101.07	107.60
17	G	69	ALA	CA-C-N	6.53	130.23	120.31
17	G	69	ALA	C-N-CA	6.53	130.23	120.31
22	L	46	VAL	CA-CB-CG2	6.52	121.49	110.40
12	B	874	G	C5'-C4'-C3'	-6.52	106.22	116.00
12	B	2472	G	O4'-C4'-C3'	-6.52	97.48	104.00
10	9	129	ARG	CB-CG-CD	6.52	126.30	111.30
26	P	16	VAL	CA-C-N	6.52	127.99	119.84
26	P	16	VAL	C-N-CA	6.52	127.99	119.84
6	5	154	LYS	N-CA-C	6.52	118.93	111.11
10	9	117	VAL	N-CA-C	-6.52	96.91	107.28
12	B	514	A	C5'-C4'-C3'	6.52	125.78	116.00
26	P	44	GLY	CA-C-N	6.52	133.70	121.97
26	P	44	GLY	C-N-CA	6.52	133.70	121.97
13	C	203	VAL	CA-C-N	6.52	133.99	121.54
13	C	203	VAL	C-N-CA	6.52	133.99	121.54
12	B	889	C	P-O3'-C3'	6.51	129.97	120.20
13	C	261	ARG	N-CA-C	-6.51	96.93	110.80
14	D	90	PHE	CA-C-N	6.51	133.07	122.65
14	D	90	PHE	C-N-CA	6.51	133.07	122.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	639	U	P-O5'-C5'	6.51	130.67	120.90
12	B	2415	G	O5'-C5'-C4'	-6.51	101.73	111.50
28	R	36	ALA	N-CA-C	-6.51	102.57	111.56
12	B	121	G	P-O5'-C5'	-6.51	111.14	120.90
12	B	876	C	O4'-C1'-N1	6.51	118.26	108.50
12	B	1143	A	C3'-C2'-C1'	-6.51	94.99	101.50
12	B	2469	A	P-O3'-C3'	-6.51	110.44	120.20
25	O	59	ALA	N-CA-CB	6.51	121.49	110.49
12	B	2477	U	O4'-C1'-N1	6.51	118.26	108.50
1	0	28	PHE	N-CA-C	-6.51	99.11	109.59
12	B	102	U	C4'-C3'-O3'	6.51	119.16	109.40
12	B	393	C	C4'-C3'-O3'	-6.51	103.24	113.00
12	B	1671	U	O4'-C4'-C3'	-6.51	97.49	104.00
12	B	1484	U	O4'-C1'-N1	6.50	118.26	108.50
12	B	2578	G	C4'-C3'-O3'	-6.50	103.24	113.00
14	D	16	THR	N-CA-C	-6.50	98.80	109.40
12	B	169	G	O4'-C1'-C2'	-6.50	101.10	107.60
12	B	2214	C	O5'-C5'-C4'	-6.50	101.75	111.50
12	B	2499	C	O3'-P-O5'	-6.50	94.25	104.00
23	M	53	MET	CA-C-N	6.50	129.32	120.54
23	M	53	MET	C-N-CA	6.50	129.32	120.54
26	P	77	SER	CA-C-N	6.50	127.01	119.47
26	P	77	SER	C-N-CA	6.50	127.01	119.47
2	1	44	LYS	CA-C-O	6.50	127.31	120.42
12	B	104	A	C4'-C3'-C2'	-6.50	96.10	102.60
12	B	1497	U	O4'-C4'-C3'	-6.50	99.60	106.10
12	B	2281	A	O4'-C1'-N9	6.50	118.25	108.50
12	B	2420	C	O4'-C1'-N1	6.50	118.25	108.50
14	D	86	GLU	O-C-N	6.50	131.03	123.17
15	E	22	ASP	CA-CB-CG	-6.50	106.10	112.60
15	E	52	VAL	CA-C-N	6.50	130.19	120.31
15	E	52	VAL	C-N-CA	6.50	130.19	120.31
24	N	24	MET	CA-C-N	6.50	128.88	120.44
24	N	24	MET	C-N-CA	6.50	128.88	120.44
10	9	235	LEU	N-CA-C	6.50	118.36	111.28
12	B	1502	A	P-O3'-C3'	6.50	129.94	120.20
12	B	1574	C	O3'-P-O5'	-6.50	94.26	104.00
27	Q	73	ILE	CA-CB-CG1	6.49	121.44	110.40
6	5	157	LYS	O-C-N	6.49	129.00	122.12
12	B	639	U	O3'-P-O5'	-6.49	94.27	104.00
12	B	1100	C	C4'-C3'-C2'	-6.49	96.11	102.60
16	F	70	ARG	NE-CZ-NH1	6.49	127.99	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	338	G	O4'-C1'-C2'	-6.49	101.11	107.60
12	B	1302	A	O5'-C5'-C4'	6.49	121.43	111.70
23	M	116	ALA	CA-C-N	6.49	131.67	120.58
23	M	116	ALA	C-N-CA	6.49	131.67	120.58
12	B	1807	G	N9-C1'-C2'	-6.48	102.27	112.00
12	B	1853	A	C5'-C4'-O4'	6.48	119.53	109.80
12	B	1335	C	O4'-C1'-N1	6.48	118.22	108.50
33	Y	13	ARG	O-C-N	6.48	131.68	123.12
12	B	35	G	C4'-C3'-C2'	-6.48	96.12	102.60
12	B	1408	G	O4'-C1'-N9	6.48	118.22	108.50
12	B	191	A	O4'-C1'-N9	6.48	118.22	108.50
12	B	1533	C	C5'-C4'-C3'	6.48	125.72	116.00
12	B	1933	G	C4'-C3'-C2'	-6.48	96.12	102.60
12	B	310	A	C2'-C3'-O3'	6.48	119.21	109.50
13	C	65	ASP	CA-C-N	6.48	131.80	121.18
13	C	65	ASP	C-N-CA	6.48	131.80	121.18
12	B	2632	A	O3'-P-O5'	-6.47	94.29	104.00
18	H	97	ARG	N-CA-C	6.47	120.04	111.75
12	B	1530	G	O3'-P-O5'	-6.47	94.29	104.00
21	K	71	ARG	CA-C-N	6.47	126.60	119.87
21	K	71	ARG	C-N-CA	6.47	126.60	119.87
8	7	45	PRO	O-C-N	6.47	131.38	122.64
12	B	1450	G	C4'-C3'-O3'	-6.47	103.30	113.00
12	B	1064	C	O4'-C1'-N1	6.47	118.20	108.50
12	B	1101	U	C4'-C3'-C2'	-6.47	96.13	102.60
12	B	2033	A	C4'-C3'-C2'	-6.47	96.13	102.60
12	B	2512	C	O4'-C1'-N1	6.47	118.20	108.50
13	C	148	GLY	N-CA-C	-6.47	106.39	115.32
12	B	2055	C	O4'-C4'-C3'	-6.46	97.54	104.00
12	B	2070	A	C4'-C3'-C2'	-6.46	96.14	102.60
12	B	2629	U	C5'-C4'-C3'	6.46	124.90	115.20
12	B	264	C	P-O5'-C5'	-6.46	111.20	120.90
12	B	1469	A	C4'-C3'-C2'	-6.46	96.14	102.60
12	B	2321	U	O4'-C4'-C3'	-6.46	97.54	104.00
11	A	109	A	C5'-C4'-C3'	-6.46	106.31	116.00
12	B	2502	G	C4'-C3'-C2'	6.46	109.06	102.60
22	L	55	MET	N-CA-CB	6.46	118.63	110.04
12	B	66	C	O5'-C5'-C4'	-6.46	101.81	111.50
12	B	671	C	C4'-C3'-O3'	-6.46	103.31	113.00
12	B	2578	G	C4'-C3'-C2'	-6.46	96.14	102.60
12	B	2596	U	O4'-C4'-C3'	-6.46	97.54	104.00
13	C	33	LEU	CA-C-O	6.46	128.09	120.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2357	G	C4'-C3'-C2'	-6.46	96.14	102.60
13	C	247	TRP	CE2-CD2-CE3	6.46	125.26	118.80
12	B	463	G	P-O5'-C5'	6.45	130.58	120.90
12	B	1811	G	P-O5'-C5'	6.45	130.58	120.90
31	U	59	GLU	O-C-N	6.45	130.58	123.22
10	9	232	LEU	N-CA-C	-6.45	104.33	111.36
12	B	1393	A	C4'-C3'-C2'	-6.45	96.15	102.60
31	U	64	ILE	CA-C-N	6.45	133.86	121.54
31	U	64	ILE	C-N-CA	6.45	133.86	121.54
12	B	2127	G	P-O3'-C3'	6.45	129.87	120.20
13	C	86	ARG	NE-CZ-NH1	6.45	127.95	121.50
20	J	138	GLN	N-CA-C	-6.45	98.47	109.24
10	9	42	GLY	O-C-N	6.45	131.08	122.70
12	B	1578	U	C3'-C2'-C1'	6.45	107.75	101.30
12	B	1687	G	P-O3'-C3'	-6.45	110.53	120.20
13	C	89	ASN	CA-CB-CG	6.45	119.05	112.60
12	B	1392	A	C4'-C3'-C2'	-6.44	96.16	102.60
12	B	929	U	O4'-C1'-N1	6.44	118.17	108.50
12	B	274	C	P-O5'-C5'	-6.44	111.24	120.90
12	B	479	A	C3'-C2'-C1'	-6.44	95.06	101.50
12	B	481	G	C4'-C3'-C2'	-6.44	96.16	102.60
12	B	1312	U	O4'-C4'-C3'	-6.44	99.66	106.10
12	B	1784	A	P-O3'-C3'	-6.44	110.54	120.20
12	B	1906	G	P-O5'-C5'	-6.44	111.24	120.90
14	D	101	PHE	CA-CB-CG	-6.44	107.36	113.80
20	J	27	ARG	N-CA-C	-6.44	97.08	110.80
12	B	1528	A	C5'-C4'-C3'	6.44	125.66	116.00
10	9	280	LEU	N-CA-C	-6.44	98.91	109.40
12	B	149	A	C1'-O4'-C4'	6.43	116.33	109.90
12	B	404	A	O3'-P-O5'	-6.43	94.35	104.00
12	B	1501	G	O4'-C1'-N9	6.43	118.15	108.50
17	G	144	ALA	CA-C-N	6.43	128.81	120.44
17	G	144	ALA	C-N-CA	6.43	128.81	120.44
22	L	35	HIS	O-C-N	6.43	130.73	123.27
10	9	248	ASP	N-CA-CB	6.43	117.91	109.55
12	B	1867	G	C1'-O4'-C4'	-6.43	103.47	109.90
14	D	131	ASP	CA-CB-CG	6.43	119.03	112.60
15	E	21	ARG	N-CA-C	-6.43	99.89	109.15
8	7	52	GLY	O-C-N	6.43	130.03	122.38
10	9	29	ILE	CA-C-O	-6.43	115.01	119.38
12	B	2688	G	P-O3'-C3'	-6.43	110.55	120.20
12	B	547	A	C4'-C3'-C2'	-6.43	96.17	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2316	G	O4'-C1'-N9	6.43	118.14	108.50
12	B	2022	U	C1'-O4'-C4'	6.43	116.13	109.70
12	B	2203	U	P-O3'-C3'	-6.43	110.56	120.20
27	Q	4	LYS	CA-C-N	6.43	131.72	122.40
27	Q	4	LYS	C-N-CA	6.43	131.72	122.40
11	A	70	C	O5'-C5'-C4'	-6.42	101.86	111.50
12	B	1765	U	O4'-C1'-N1	6.42	118.14	108.50
17	G	63	GLN	OE1-CD-NE2	-6.42	116.17	122.60
20	J	47	HIS	CB-CG-ND1	6.42	132.34	122.70
12	B	2457	U	O4'-C1'-N1	6.42	118.14	108.50
13	C	34	GLU	N-CA-CB	6.42	123.47	111.52
12	B	1344	U	C1'-O4'-C4'	6.42	116.12	109.70
12	B	2283	C	O4'-C4'-C3'	-6.42	97.58	104.00
30	T	66	LYS	N-CA-CB	6.42	121.35	111.46
20	J	4	PHE	CA-CB-CG	-6.42	107.38	113.80
12	B	680	C	O4'-C1'-N1	6.42	118.12	108.50
12	B	2899	A	C4'-C3'-O3'	-6.42	103.38	113.00
22	L	133	ALA	N-CA-C	-6.42	102.59	110.61
17	G	64	ALA	CA-C-N	6.42	127.22	120.03
17	G	64	ALA	C-N-CA	6.42	127.22	120.03
5	4	22	THR	N-CA-C	-6.41	98.84	107.88
12	B	1014	A	P-O5'-C5'	6.41	130.52	120.90
12	B	1692	U	P-O3'-C3'	6.41	129.82	120.20
6	5	12	ARG	N-CA-C	6.41	119.08	111.71
12	B	1548	A	C3'-C2'-O2'	6.41	120.32	110.70
12	B	2266	A	C2'-C3'-O3'	6.41	119.12	109.50
6	5	37	LYS	O-C-N	6.41	129.95	122.19
30	T	70	HIS	N-CA-CB	6.41	121.32	110.49
12	B	1839	G	O4'-C1'-N9	6.41	118.11	108.50
14	D	207	VAL	CA-C-O	-6.41	114.59	121.19
12	B	302	C	O4'-C1'-N1	6.41	118.11	108.50
12	B	1129	A	C4'-C3'-O3'	-6.41	103.39	113.00
12	B	1610	A	C5'-C4'-C3'	-6.41	105.59	115.20
24	N	3	HIS	N-CA-CB	6.41	121.32	110.49
26	P	11	GLN	OE1-CD-NE2	6.41	129.00	122.60
6	5	135	GLY	N-CA-C	-6.40	102.87	114.46
12	B	2040	G	C5'-C4'-C3'	-6.40	106.40	116.00
27	Q	71	ASN	CA-CB-CG	-6.40	106.20	112.60
12	B	538	A	C4'-C3'-C2'	-6.40	96.20	102.60
12	B	1307	A	C4'-C3'-C2'	-6.40	96.20	102.60
12	B	576	U	O3'-P-O5'	-6.40	94.40	104.00
12	B	1481	U	P-O5'-C5'	-6.40	111.30	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1554	U	O4'-C1'-N1	6.40	117.80	108.20
12	B	1488	C	P-O5'-C5'	-6.40	111.31	120.90
12	B	1557	C	O4'-C1'-N1	6.40	118.10	108.50
12	B	1993	U	C1'-O4'-C4'	-6.40	103.50	109.90
16	F	141	ASP	CB-CA-C	-6.40	99.19	109.75
23	M	66	ARG	N-CA-C	-6.40	98.57	108.42
12	B	422	A	C4'-C3'-O3'	-6.39	103.41	113.00
12	B	786	C	C4'-C3'-C2'	-6.39	96.21	102.60
12	B	2550	G	C1'-C2'-O2'	6.39	117.99	108.40
27	Q	63	ARG	CA-C-N	6.39	129.22	120.46
27	Q	63	ARG	C-N-CA	6.39	129.22	120.46
12	B	715	A	C4'-C3'-C2'	-6.39	96.21	102.60
12	B	1649	G	O5'-C5'-C4'	-6.39	101.92	111.50
12	B	195	A	P-O5'-C5'	-6.39	111.32	120.90
12	B	553	G	O5'-C5'-C4'	-6.39	101.92	111.50
18	H	31	VAL	O-C-N	-6.39	116.48	121.46
10	9	184	PRO	N-CA-C	6.38	120.44	110.80
12	B	472	A	C4'-C3'-O3'	-6.38	103.42	113.00
12	B	2579	C	O4'-C1'-N1	6.38	118.08	108.50
12	B	2716	C	C4'-C3'-C2'	-6.38	96.22	102.60
24	N	120	GLU	CA-C-O	-6.38	109.95	120.80
12	B	1290	C	P-O5'-C5'	6.38	130.47	120.90
12	B	1935	G	O4'-C4'-C3'	-6.38	97.62	104.00
12	B	2902	C	P-O5'-C5'	6.38	130.47	120.90
25	O	29	HIS	CE1-NE2-CD2	-6.38	102.62	109.00
12	B	2601	C	O4'-C4'-C3'	-6.38	99.72	106.10
12	B	1257	C	P-O3'-C3'	-6.38	110.63	120.20
12	B	1301	A	O4'-C4'-C3'	-6.38	99.72	106.10
12	B	1519	G	C5'-C4'-C3'	-6.38	106.43	116.00
12	B	2504	U	O4'-C1'-C2'	-6.38	101.22	107.60
12	B	1318	U	C5'-C4'-C3'	-6.38	106.44	116.00
12	B	1562	U	O4'-C1'-N1	6.38	118.06	108.50
12	B	2196	C	O4'-C1'-N1	6.37	118.06	108.50
12	B	2627	G	O3'-P-O5'	-6.37	94.44	104.00
16	F	72	SER	CA-C-N	6.37	129.29	120.49
16	F	72	SER	C-N-CA	6.37	129.29	120.49
20	J	65	THR	CA-C-N	6.37	128.31	120.22
20	J	65	THR	C-N-CA	6.37	128.31	120.22
28	R	60	LYS	CA-C-N	6.37	130.81	121.31
28	R	60	LYS	C-N-CA	6.37	130.81	121.31
12	B	1773	A	C4'-C3'-C2'	-6.37	96.23	102.60
12	B	2687	U	P-O5'-C5'	6.37	130.46	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	9	254	ASP	O-C-N	-6.37	114.00	121.32
15	E	57	LYS	O-C-N	6.37	130.70	122.87
15	E	128	ALA	N-CA-CB	6.37	121.71	110.37
12	B	994	C	P-O5'-C5'	6.37	130.45	120.90
9	8	31	PRO	CA-C-N	6.37	128.81	120.28
9	8	31	PRO	C-N-CA	6.37	128.81	120.28
12	B	663	G	C3'-C2'-C1'	-6.37	94.94	101.30
12	B	789	A	P-O5'-C5'	6.37	130.45	120.90
12	B	1578	U	P-O3'-C3'	-6.37	110.65	120.20
6	5	5	THR	CA-C-N	6.36	129.13	120.54
6	5	5	THR	C-N-CA	6.36	129.13	120.54
12	B	817	C	O4'-C1'-N1	6.36	118.05	108.50
12	B	1748	C	O4'-C1'-N1	6.36	118.04	108.50
14	D	67	HIS	CA-C-N	6.36	129.28	120.63
14	D	67	HIS	C-N-CA	6.36	129.28	120.63
12	B	2822	G	P-O3'-C3'	6.36	129.74	120.20
20	J	110	PRO	CA-C-N	6.36	133.69	121.54
20	J	110	PRO	C-N-CA	6.36	133.69	121.54
22	L	85	VAL	N-CA-C	-6.36	105.50	111.48
11	A	58	A	C5'-C4'-C3'	-6.36	106.47	116.00
12	B	379	G	O4'-C1'-N9	6.36	118.04	108.50
12	B	2249	U	P-O3'-C3'	6.36	129.74	120.20
12	B	2260	C	O4'-C1'-C2'	-6.36	101.24	107.60
17	G	76	ILE	CA-C-N	6.36	126.99	120.00
17	G	76	ILE	C-N-CA	6.36	126.99	120.00
20	J	105	VAL	N-CA-CB	-6.36	102.52	110.47
29	S	95	ARG	NE-CZ-NH2	6.36	124.92	119.20
12	B	113	U	C4'-C3'-O3'	-6.36	103.47	113.00
12	B	2586	U	P-O5'-C5'	6.36	130.43	120.90
12	B	166	U	O4'-C1'-N1	6.35	118.03	108.50
12	B	2753	A	P-O5'-C5'	6.35	130.43	120.90
25	O	105	ALA	CA-C-N	6.35	134.46	123.91
25	O	105	ALA	C-N-CA	6.35	134.46	123.91
22	L	101	ILE	CA-C-N	6.35	130.75	121.67
22	L	101	ILE	C-N-CA	6.35	130.75	121.67
12	B	289	G	O4'-C1'-C2'	-6.35	101.25	107.60
12	B	2484	G	C4'-C3'-C2'	-6.35	96.25	102.60
14	D	112	THR	CA-C-O	6.35	127.37	120.32
17	G	173	ALA	CA-C-N	6.35	131.88	122.74
17	G	173	ALA	C-N-CA	6.35	131.88	122.74
12	B	2313	C	O4'-C4'-C3'	-6.35	97.65	104.00
12	B	2376	A	O4'-C1'-N9	6.35	118.02	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2389	G	P-O3'-C3'	6.35	129.72	120.20
12	B	2401	U	C1'-C2'-O2'	-6.35	102.28	111.80
12	B	175	G	O4'-C1'-N9	6.35	118.02	108.50
12	B	701	G	C4'-C3'-O3'	-6.35	103.48	113.00
10	9	50	ASP	N-CA-C	6.34	119.84	109.24
12	B	1977	A	O4'-C4'-C3'	-6.34	97.66	104.00
12	B	2809	A	O4'-C1'-N9	6.34	118.02	108.50
13	C	213	ARG	CB-CA-C	-6.34	100.81	111.02
17	G	48	THR	N-CA-CB	6.34	121.21	110.49
12	B	1808	A	C4'-C3'-C2'	-6.34	96.26	102.60
33	Y	56	HIS	CG-CD2-NE2	6.34	113.54	107.20
12	B	2735	G	C4'-C3'-O3'	-6.34	103.49	113.00
15	E	158	PHE	CB-CG-CD2	6.34	131.47	120.70
29	S	43	ALA	CA-C-N	6.34	129.60	120.79
29	S	43	ALA	C-N-CA	6.34	129.60	120.79
12	B	1772	A	O5'-C5'-C4'	-6.34	102.00	111.50
5	4	27	ARG	N-CA-C	-6.33	104.01	112.94
9	8	12	ARG	N-CA-C	-6.33	105.54	113.20
12	B	1349	C	O4'-C1'-N1	6.33	118.00	108.50
12	B	2708	G	P-O3'-C3'	-6.33	110.71	120.20
17	G	40	VAL	N-CA-CB	6.33	121.83	111.45
30	T	73	ARG	CA-C-N	6.33	129.15	120.35
30	T	73	ARG	C-N-CA	6.33	129.15	120.35
13	C	222	THR	CA-C-N	6.33	132.54	122.86
13	C	222	THR	C-N-CA	6.33	132.54	122.86
33	Y	40	ARG	N-CA-C	-6.33	104.82	113.30
12	B	1121	C	O4'-C1'-N1	6.33	117.99	108.50
12	B	655	A	C1'-O4'-C4'	6.32	116.02	109.70
12	B	735	A	C4'-C3'-O3'	-6.32	103.52	113.00
12	B	1737	G	P-O3'-C3'	6.32	129.69	120.20
12	B	1070	A	O4'-C1'-C2'	-6.32	101.28	107.60
20	J	15	TRP	CB-CG-CD2	-6.32	117.95	126.80
12	B	28	A	O4'-C1'-C2'	-6.32	101.28	107.60
12	B	2808	G	P-O5'-C5'	6.32	130.38	120.90
12	B	1236	G	C2'-C3'-O3'	6.32	118.98	109.50
12	B	2514	U	P-O5'-C5'	-6.32	111.42	120.90
12	B	2642	G	C4'-C3'-C2'	-6.32	96.28	102.60
6	5	83	ASN	N-CA-C	-6.32	104.03	112.94
12	B	295	G	O5'-C5'-C4'	-6.32	102.03	111.50
12	B	2175	C	P-O5'-C5'	-6.32	111.43	120.90
17	G	1	SER	CA-C-N	6.32	131.57	122.35
17	G	1	SER	C-N-CA	6.32	131.57	122.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	924	G	O4'-C1'-N9	6.31	117.97	108.50
12	B	2348	U	O4'-C1'-N1	6.31	117.97	108.50
12	B	1157	G	O5'-C5'-C4'	-6.31	102.03	111.50
32	W	47	VAL	CA-C-N	6.31	129.06	120.54
32	W	47	VAL	C-N-CA	6.31	129.06	120.54
10	9	334	GLU	CA-C-O	-6.31	111.62	119.38
20	J	120	ARG	NE-CZ-NH2	6.31	124.88	119.20
7	6	13	ASN	O-C-N	-6.31	114.84	122.22
12	B	541	A	C4'-C3'-O3'	-6.31	103.53	113.00
12	B	853	C	O4'-C1'-N1	6.31	117.97	108.50
12	B	1269	A	C4'-C3'-C2'	6.31	108.91	102.60
12	B	291	G	O4'-C1'-C2'	-6.31	101.29	107.60
12	B	883	G	C5'-C4'-O4'	6.31	119.26	109.80
12	B	1163	G	C1'-O4'-C4'	-6.31	103.59	109.90
12	B	1076	C	C4'-C3'-C2'	-6.31	96.29	102.60
12	B	1405	U	O4'-C1'-N1	6.31	117.96	108.50
12	B	1640	A	O4'-C1'-N9	6.31	117.96	108.50
12	B	552	U	O5'-C5'-C4'	-6.30	102.05	111.50
12	B	1548	A	P-O5'-C5'	-6.30	111.44	120.90
12	B	1906	G	C5'-C4'-C3'	6.30	125.46	116.00
14	D	170	VAL	CA-CB-CG1	6.30	121.12	110.40
26	P	5	LYS	N-CA-C	-6.30	105.72	113.41
1	0	23	ALA	N-CA-C	6.30	118.86	109.59
6	5	171	ILE	CB-CA-C	-6.30	103.17	111.81
12	B	891	G	P-O5'-C5'	6.30	130.35	120.90
11	A	8	C	C4'-C3'-C2'	-6.30	96.30	102.60
12	B	116	C	O4'-C1'-N1	6.30	117.95	108.50
12	B	1854	A	P-O5'-C5'	6.30	130.35	120.90
21	K	24	VAL	CB-CA-C	6.30	119.61	110.98
6	5	211	LYS	CA-C-N	6.30	130.97	122.90
6	5	211	LYS	C-N-CA	6.30	130.97	122.90
12	B	1578	U	O4'-C1'-N1	6.30	117.95	108.50
32	W	80	HIS	CB-CG-ND1	-6.30	113.25	122.70
12	B	820	A	C4'-C3'-O3'	-6.30	103.56	113.00
17	G	171	LYS	CA-C-N	6.29	131.51	120.87
17	G	171	LYS	C-N-CA	6.29	131.51	120.87
3	2	10	ARG	N-CA-C	-6.29	98.06	108.07
12	B	654	A	O4'-C1'-N9	6.29	117.64	108.20
13	C	142	ASN	CA-CB-CG	-6.29	106.31	112.60
1	0	22	ASN	N-CA-C	-6.29	101.21	110.52
10	9	143	ASN	OD1-CG-ND2	6.29	128.89	122.60
12	B	1232	G	O3'-P-O5'	-6.29	94.56	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2133	G	O3'-P-O5'	-6.29	94.56	104.00
12	B	2355	G	C5'-C4'-C3'	-6.29	106.56	116.00
12	B	2405	G	C4'-C3'-O3'	-6.29	103.56	113.00
12	B	557	C	C5'-C4'-C3'	-6.29	106.56	116.00
1	0	56	ARG	NE-CZ-NH2	6.29	124.86	119.20
11	A	62	C	C5'-C4'-C3'	-6.29	106.57	116.00
12	B	899	A	C5'-C4'-C3'	-6.29	106.57	116.00
12	B	1763	G	P-O5'-C5'	6.29	130.33	120.90
12	B	2456	C	C1'-C2'-O2'	6.29	117.83	108.40
10	9	290	LYS	N-CA-C	6.29	119.77	111.28
12	B	2768	U	O5'-C5'-C4'	-6.29	102.07	111.50
16	F	5	ASP	CA-CB-CG	-6.29	106.31	112.60
32	W	21	ARG	NE-CZ-NH1	6.29	127.79	121.50
6	5	181	ASP	CA-C-N	6.29	129.03	120.54
6	5	181	ASP	C-N-CA	6.29	129.03	120.54
17	G	114	HIS	CA-CB-CG	6.29	120.09	113.80
30	T	29	THR	CA-C-N	6.29	129.93	120.75
30	T	29	THR	C-N-CA	6.29	129.93	120.75
12	B	206	U	C4'-C3'-O3'	-6.28	103.58	113.00
12	B	2137	U	P-O5'-C5'	6.28	130.32	120.90
12	B	2401	U	N1-C1'-C2'	-6.28	104.57	114.00
12	B	565	C	C4'-C3'-O3'	-6.28	103.58	113.00
12	B	719	C	O4'-C1'-N1	6.28	117.92	108.50
12	B	1730	C	C4'-C3'-C2'	6.28	108.88	102.60
27	Q	38	VAL	CA-CB-CG1	6.28	121.08	110.40
12	B	784	G	C1'-C2'-O2'	-6.28	102.38	111.80
12	B	1801	A	C5'-C4'-C3'	-6.28	105.78	115.20
12	B	2324	U	O4'-C1'-N1	6.28	117.92	108.50
18	H	45	GLU	N-CA-C	-6.28	105.64	113.55
6	5	185	LEU	N-CA-C	6.28	117.81	110.97
12	B	512	G	C4'-C3'-C2'	-6.28	96.32	102.60
12	B	179	C	P-O3'-C3'	-6.28	110.78	120.20
12	B	1997	C	O4'-C1'-C2'	-6.28	101.32	107.60
22	L	59	ARG	CA-C-N	6.28	129.84	120.17
22	L	59	ARG	C-N-CA	6.28	129.84	120.17
12	B	1492	G	O4'-C4'-C3'	-6.28	97.72	104.00
17	G	156	TYR	N-CA-C	-6.28	105.11	112.89
9	8	35	GLN	N-CA-C	-6.27	99.88	109.41
12	B	168	G	P-O5'-C5'	6.27	130.31	120.90
12	B	1878	G	C4'-C3'-C2'	-6.27	96.33	102.60
13	C	61	TYR	N-CA-C	-6.27	101.20	110.48
25	O	69	ASP	CA-C-N	6.27	129.83	120.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	O	69	ASP	C-N-CA	6.27	129.83	120.17
30	T	10	VAL	N-CA-C	-6.27	106.59	113.43
12	B	2844	G	O4'-C1'-N9	6.27	117.90	108.50
21	K	71	ARG	N-CA-C	-6.27	95.95	109.81
24	N	68	ALA	N-CA-C	-6.27	104.79	112.88
29	S	53	SER	N-CA-C	-6.27	97.45	110.80
12	B	717	C	O4'-C1'-N1	6.27	117.90	108.50
12	B	1098	A	O3'-P-O5'	-6.27	94.60	104.00
12	B	1311	G	O4'-C1'-C2'	6.27	112.07	105.80
12	B	2118	U	P-O3'-C3'	6.27	129.60	120.20
11	A	61	G	O5'-C5'-C4'	-6.27	102.10	111.50
12	B	17	G	P-O5'-C5'	-6.27	111.50	120.90
12	B	908	C	C4'-C3'-O3'	-6.26	103.60	113.00
12	B	1181	U	O4'-C1'-C2'	-6.26	101.34	107.60
28	R	54	VAL	CA-C-N	6.26	129.77	120.87
28	R	54	VAL	C-N-CA	6.26	129.77	120.87
12	B	2431	U	O4'-C1'-N1	6.26	117.89	108.50
20	J	47	HIS	CE1-NE2-CD2	-6.26	102.74	109.00
12	B	1822	C	O4'-C1'-N1	6.26	117.89	108.50
12	B	2211	A	O4'-C1'-N9	6.26	117.89	108.50
20	J	58	ASN	CA-CB-CG	6.26	118.86	112.60
12	B	1580	A	C4'-C3'-C2'	-6.26	96.34	102.60
12	B	2677	G	O4'-C1'-N9	6.26	117.88	108.50
10	9	142	THR	N-CA-C	6.25	119.89	109.95
31	U	75	ALA	CA-C-N	6.25	131.21	121.76
31	U	75	ALA	C-N-CA	6.25	131.21	121.76
10	9	265	GLU	O-C-N	-6.25	115.49	122.12
12	B	458	G	C5'-C4'-O4'	6.25	118.48	109.10
14	D	178	VAL	N-CA-C	-6.25	106.68	111.62
27	Q	29	ARG	N-CA-C	-6.25	104.12	112.94
12	B	2511	U	P-O3'-C3'	6.25	129.58	120.20
1	0	49	ARG	N-CA-CB	6.25	120.67	110.17
10	9	105	MET	N-CA-C	-6.25	97.49	110.80
12	B	756	A	O4'-C1'-C2'	-6.25	101.35	107.60
10	9	20	CYS	N-CA-C	6.25	119.69	109.76
15	E	34	ALA	CA-C-O	-6.25	113.31	120.24
12	B	1882	U	O4'-C1'-N1	6.25	117.87	108.50
12	B	2762	C	P-O5'-C5'	-6.25	111.53	120.90
17	G	137	LYS	CA-C-N	6.25	129.12	120.63
17	G	137	LYS	C-N-CA	6.25	129.12	120.63
18	H	128	HIS	CB-CG-ND1	6.25	132.07	122.70
11	A	20	G	O4'-C1'-N9	6.24	117.87	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2401	U	P-O5'-C5'	-6.24	111.53	120.90
6	5	175	ILE	N-CA-CB	6.24	119.51	110.52
12	B	2416	C	P-O5'-C5'	6.24	130.26	120.90
12	B	2438	U	C4'-C3'-O3'	-6.24	103.64	113.00
12	B	735	A	O4'-C1'-N9	6.24	117.85	108.50
30	T	73	ARG	NE-CZ-NH2	-6.24	113.59	119.20
10	9	195	VAL	CA-C-N	6.23	127.63	119.84
10	9	195	VAL	C-N-CA	6.23	127.63	119.84
12	B	1994	C	O4'-C1'-N1	6.23	117.85	108.50
11	A	88	C	C4'-C3'-O3'	-6.23	103.65	113.00
12	B	1344	U	P-O5'-C5'	6.23	130.25	120.90
13	C	182	LYS	CA-C-N	6.23	128.94	122.27
13	C	182	LYS	C-N-CA	6.23	128.94	122.27
15	E	170	ARG	NE-CZ-NH1	-6.23	115.27	121.50
7	6	38	GLY	O-C-N	6.23	129.61	122.38
12	B	262	A	P-O5'-C5'	6.23	130.25	120.90
12	B	1483	G	C5'-C4'-C3'	-6.23	106.65	116.00
12	B	2556	C	C5'-C4'-C3'	-6.23	106.65	116.00
22	L	11	GLY	N-CA-C	-6.23	106.72	115.32
7	6	13	ASN	CA-C-O	6.23	127.14	120.10
12	B	855	G	C4'-C3'-O3'	-6.23	103.66	113.00
15	E	157	LEU	N-CA-C	-6.23	104.60	111.82
21	K	47	ILE	CA-C-N	6.23	126.42	119.32
21	K	47	ILE	C-N-CA	6.23	126.42	119.32
25	O	85	LYS	O-C-N	-6.23	114.61	122.27
6	5	165	ASN	N-CA-C	-6.23	102.50	110.53
10	9	295	GLU	O-C-N	6.23	128.48	122.07
12	B	621	A	C4'-C3'-C2'	-6.23	96.37	102.60
12	B	2097	A	C4'-C3'-O3'	-6.23	103.66	113.00
12	B	2680	U	C4'-C3'-O3'	-6.23	103.66	113.00
13	C	116	GLN	N-CA-C	-6.23	99.22	108.99
24	N	73	ASN	OD1-CG-ND2	6.23	128.83	122.60
12	B	1003	G	C2'-C3'-O3'	6.22	123.04	113.70
12	B	1209	U	C4'-C3'-O3'	-6.22	103.66	113.00
12	B	2183	A	C1'-O4'-C4'	6.22	116.12	109.90
12	B	2521	C	O4'-C1'-N1	6.22	117.84	108.50
12	B	239	C	C3'-C2'-C1'	6.22	107.52	101.30
12	B	2725	A	C5'-C4'-C3'	-6.22	105.86	115.20
1	0	57	VAL	CA-C-O	-6.22	114.06	120.71
12	B	1208	C	C5'-C4'-C3'	6.22	125.33	116.00
12	B	1550	C	O4'-C1'-N1	6.22	117.83	108.50
27	Q	63	ARG	N-CA-C	-6.22	105.82	113.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	5	86	ALA	N-CA-C	6.22	119.03	111.82
6	5	223	ALA	N-CA-C	6.22	119.84	109.95
15	E	193	VAL	N-CA-CB	6.22	117.83	110.55
17	G	14	VAL	CB-CA-C	6.22	120.08	110.50
12	B	1735	A	N9-C1'-C2'	-6.22	102.67	112.00
12	B	2113	U	C4'-C3'-O3'	-6.22	103.68	113.00
6	5	139	ASN	N-CA-C	-6.21	98.86	108.55
14	D	174	SER	CB-CA-C	-6.21	107.64	116.34
12	B	107	G	C4'-C3'-C2'	-6.21	96.39	102.60
12	B	1679	A	C4'-C3'-C2'	-6.21	96.39	102.60
20	J	75	TYR	N-CA-C	-6.21	100.10	108.86
12	B	2744	G	O5'-C5'-C4'	-6.21	102.18	111.50
1	0	71	ARG	NE-CZ-NH2	-6.21	113.61	119.20
12	B	404	A	C5'-C4'-C3'	6.21	124.52	115.20
12	B	1009	A	P-O5'-C5'	6.21	130.21	120.90
12	B	2341	G	O5'-C5'-C4'	-6.21	102.19	111.50
12	B	2718	G	C4'-C3'-C2'	-6.21	96.39	102.60
12	B	2760	C	C4'-C3'-C2'	-6.21	96.39	102.60
11	A	19	C	O4'-C4'-C3'	-6.21	97.79	104.00
12	B	661	A	O5'-C5'-C4'	-6.21	102.19	111.50
13	C	65	ASP	CA-CB-CG	-6.21	106.39	112.60
26	P	52	ARG	NE-CZ-NH2	6.21	124.79	119.20
12	B	1077	A	O4'-C1'-N9	6.21	117.81	108.50
18	H	2	GLN	N-CA-C	-6.20	99.87	109.24
28	R	95	ASP	CA-CB-CG	-6.20	106.40	112.60
21	K	59	LYS	CA-C-O	-6.20	114.39	121.40
6	5	53	ARG	CA-C-N	6.20	129.91	121.05
6	5	53	ARG	C-N-CA	6.20	129.91	121.05
12	B	2538	C	O4'-C1'-N1	6.20	117.80	108.50
30	T	70	HIS	CA-C-O	6.20	129.38	120.51
31	U	40	LEU	N-CA-CB	6.20	118.83	109.34
12	B	1058	U	O4'-C1'-N1	6.20	117.80	108.50
12	B	1502	A	C5'-C4'-C3'	6.20	125.30	116.00
12	B	2165	C	O3'-P-O5'	6.20	113.30	104.00
21	K	118	LEU	N-CA-C	-6.20	105.47	113.16
6	5	166	ASP	CA-CB-CG	6.20	118.80	112.60
12	B	1843	C	O4'-C1'-N1	6.20	117.79	108.50
12	B	2247	A	C4'-C3'-C2'	-6.20	96.40	102.60
16	F	89	THR	O-C-N	-6.20	115.94	123.19
11	A	22	U	O4'-C1'-N1	6.19	117.79	108.50
12	B	394	C	C4'-C3'-O3'	-6.19	103.71	113.00
20	J	130	HIS	CE1-NE2-CD2	-6.19	102.81	109.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	9	166	GLY	O-C-N	6.19	130.75	122.70
12	B	814	C	C1'-O4'-C4'	6.19	116.09	109.90
28	R	94	THR	CA-C-O	-6.19	114.16	121.16
12	B	256	A	C5'-C4'-C3'	-6.19	106.72	116.00
12	B	2203	U	C4'-C3'-C2'	-6.19	96.41	102.60
12	B	2617	U	O4'-C1'-N1	6.19	117.78	108.50
15	E	49	ARG	CD-NE-CZ	-6.19	115.74	124.40
15	E	135	ALA	N-CA-CB	6.19	119.29	110.13
21	K	52	VAL	CA-C-N	6.19	133.36	121.54
21	K	52	VAL	C-N-CA	6.19	133.36	121.54
22	L	4	ASN	N-CA-C	-6.19	103.41	113.19
28	R	37	GLU	CA-C-N	6.18	129.72	120.69
28	R	37	GLU	C-N-CA	6.18	129.72	120.69
12	B	371	A	C3'-C2'-O2'	-6.18	105.33	114.60
12	B	1825	U	P-O5'-C5'	6.18	130.17	120.90
30	T	15	HIS	N-CA-CB	6.18	120.48	110.77
30	T	59	ASN	CA-CB-CG	6.18	118.78	112.60
12	B	823	C	O4'-C1'-N1	6.18	117.77	108.50
10	9	161	ASP	CA-CB-CG	-6.18	106.42	112.60
12	B	2	G	O4'-C1'-N9	6.18	117.77	108.50
12	B	278	A	P-O5'-C5'	6.18	130.17	120.90
12	B	2102	G	C4'-C3'-O3'	-6.18	103.73	113.00
13	C	101	ARG	N-CA-C	-6.18	99.29	108.99
3	2	23	LEU	CB-CA-C	-6.18	100.93	110.81
12	B	1260	A	O4'-C1'-N9	6.18	117.77	108.50
12	B	269	C	O4'-C1'-N1	6.17	117.76	108.50
12	B	2095	A	C5'-C4'-C3'	-6.17	106.74	116.00
27	Q	69	ARG	NE-CZ-NH1	-6.17	115.33	121.50
9	8	33	HIS	CE1-NE2-CD2	-6.17	102.83	109.00
17	G	15	ASP	CA-CB-CG	6.17	118.77	112.60
12	B	1449	G	C1'-O4'-C4'	-6.17	103.73	109.90
29	S	94	ASP	N-CA-CB	6.17	121.17	110.81
12	B	542	C	O4'-C1'-N1	6.17	117.75	108.50
12	B	1231	U	O4'-C1'-N1	6.17	117.75	108.50
1	0	73	ARG	NE-CZ-NH2	6.16	124.75	119.20
10	9	157	MET	CA-C-N	6.16	133.31	121.54
10	9	157	MET	C-N-CA	6.16	133.31	121.54
12	B	2133	G	P-O3'-C3'	6.16	129.45	120.20
12	B	2437	G	C4'-C3'-O3'	-6.16	103.75	113.00
15	E	191	ASP	CA-C-N	6.16	128.86	120.54
15	E	191	ASP	C-N-CA	6.16	128.86	120.54
22	L	10	GLU	N-CA-CB	6.16	120.91	110.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	9	98	ASP	N-CA-C	-6.16	97.78	108.69
12	B	1782	U	C5'-C4'-C3'	-6.16	106.76	116.00
10	9	75	SER	N-CA-C	-6.16	99.83	109.25
12	B	864	G	C4'-C3'-O3'	-6.16	103.76	113.00
12	B	1983	G	O4'-C4'-C3'	-6.16	97.84	104.00
12	B	2222	C	P-O5'-C5'	6.16	130.14	120.90
13	C	7	PRO	N-CA-CB	6.16	108.81	103.27
21	K	121	GLU	N-CA-CB	6.16	120.97	110.50
6	5	65	LEU	CA-C-N	6.16	127.53	119.84
6	5	65	LEU	C-N-CA	6.16	127.53	119.84
12	B	1660	G	C2'-C3'-O3'	6.16	122.93	113.70
12	B	2308	G	C5'-C4'-C3'	-6.16	106.77	116.00
12	B	2422	C	C1'-O4'-C4'	-6.16	103.74	109.90
12	B	2714	G	O4'-C1'-C2'	-6.16	101.44	107.60
20	J	134	ALA	CA-C-O	6.16	126.05	119.34
12	B	1611	C	O3'-P-O5'	-6.15	94.77	104.00
13	C	33	LEU	O-C-N	-6.15	115.76	123.27
12	B	287	G	C5'-C4'-C3'	-6.15	106.77	116.00
12	B	539	G	P-O5'-C5'	6.15	130.13	120.90
12	B	1026	G	C4'-C3'-C2'	-6.15	96.45	102.60
14	D	134	HIS	N-CA-C	6.15	118.11	110.91
23	M	66	ARG	CB-CA-C	-6.15	100.10	110.43
12	B	339	U	O4'-C4'-C3'	-6.15	97.85	104.00
12	B	655	A	P-O5'-C5'	-6.15	111.68	120.90
12	B	2408	U	O4'-C4'-C3'	-6.15	97.85	104.00
13	C	123	ILE	N-CA-CB	6.15	121.37	111.23
12	B	1817	G	O4'-C1'-N9	6.15	117.72	108.50
12	B	2748	A	P-O3'-C3'	-6.15	110.98	120.20
12	B	161	A	C4'-C3'-O3'	-6.14	103.78	113.00
12	B	2722	G	P-O5'-C5'	6.14	130.12	120.90
23	M	44	ARG	N-CA-C	6.14	120.38	113.01
28	R	23	GLU	CA-C-N	6.14	131.03	121.26
28	R	23	GLU	C-N-CA	6.14	131.03	121.26
12	B	85	G	P-O5'-C5'	6.14	130.11	120.90
12	B	325	G	O4'-C1'-N9	6.14	117.72	108.50
12	B	1107	G	O4'-C1'-N9	6.14	117.71	108.50
12	B	1148	U	C4'-C3'-C2'	-6.14	96.46	102.60
21	K	100	PHE	O-C-N	6.14	129.94	123.06
12	B	1527	G	O3'-P-O5'	-6.14	94.79	104.00
12	B	2810	A	O4'-C1'-N9	6.14	117.71	108.50
1	0	62	GLY	N-CA-C	-6.14	98.63	113.18
12	B	635	C	O4'-C4'-C3'	-6.14	97.86	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1911	U	P-O5'-C5'	6.14	130.11	120.90
30	T	32	LEU	CA-C-O	-6.14	113.19	120.43
12	B	1838	C	P-O3'-C3'	6.14	129.40	120.20
12	B	2065	C	O4'-C1'-N1	6.14	117.71	108.50
13	C	258	SER	N-CA-C	-6.14	99.36	108.99
18	H	28	ASN	N-CA-CB	6.13	120.86	110.49
28	R	78	ARG	NE-CZ-NH2	6.13	124.72	119.20
12	B	1930	G	O4'-C1'-N9	6.13	117.70	108.50
11	A	29	A	P-O3'-C3'	6.13	129.40	120.20
27	Q	37	ALA	N-CA-C	-6.13	103.21	112.04
31	U	28	LEU	N-CA-C	-6.13	100.64	110.14
12	B	600	G	C4'-C3'-O3'	-6.13	103.81	113.00
21	K	4	GLU	N-CA-CB	6.13	119.60	110.29
12	B	516	C	P-O5'-C5'	6.13	130.09	120.90
12	B	699	A	P-O3'-C3'	-6.13	111.01	120.20
12	B	632	A	C4'-C3'-O3'	-6.12	103.81	113.00
14	D	42	ASN	OD1-CG-ND2	-6.12	116.47	122.60
6	5	209	ILE	N-CA-CB	6.12	117.98	111.00
12	B	183	C	P-O5'-C5'	6.12	130.09	120.90
12	B	961	C	P-O3'-C3'	6.12	129.38	120.20
12	B	1837	C	C4'-C3'-C2'	-6.12	96.48	102.60
12	B	291	G	O4'-C1'-N9	6.12	117.68	108.50
12	B	771	G	O5'-C5'-C4'	-6.12	102.32	111.50
12	B	2061	G	C1'-C2'-O2'	-6.12	102.62	111.80
31	U	13	LEU	CA-C-N	6.12	133.23	121.54
31	U	13	LEU	C-N-CA	6.12	133.23	121.54
12	B	905	A	O4'-C1'-N9	6.12	117.68	108.50
12	B	1091	G	C4'-C3'-C2'	-6.12	96.48	102.60
15	E	13	THR	CA-CB-OG1	6.12	118.78	109.60
10	9	55	THR	CA-C-N	6.12	131.11	121.99
10	9	55	THR	C-N-CA	6.12	131.11	121.99
12	B	737	C	O4'-C1'-C2'	-6.12	101.48	107.60
3	2	51	SER	N-CA-C	6.11	118.74	111.71
6	5	136	LEU	N-CA-C	-6.11	104.73	111.82
28	R	81	LYS	N-CA-CB	6.11	120.87	111.46
12	B	2099	U	P-O3'-C3'	-6.11	111.04	120.20
12	B	2448	A	O4'-C4'-C3'	-6.11	99.99	106.10
13	C	195	GLY	CA-C-N	6.11	133.21	121.54
13	C	195	GLY	C-N-CA	6.11	133.21	121.54
15	E	187	VAL	N-CA-C	-6.11	99.56	108.11
20	J	95	ARG	CA-C-O	-6.11	113.94	120.42
6	5	201	PRO	N-CD-CG	6.11	112.36	103.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	128	C	C1'-O4'-C4'	6.11	116.01	109.90
12	B	1915	U	O4'-C1'-N1	6.11	117.66	108.50
12	B	2616	C	P-O5'-C5'	6.11	130.06	120.90
12	B	1246	A	O5'-C5'-C4'	-6.11	102.34	111.50
12	B	1319	C	O4'-C1'-N1	6.11	117.66	108.50
12	B	1498	C	O4'-C1'-N1	6.11	117.66	108.50
12	B	2278	A	C4'-C3'-O3'	-6.11	103.84	113.00
12	B	2672	U	O4'-C1'-N1	6.11	117.66	108.50
12	B	631	A	C5'-C4'-C3'	6.10	125.16	116.00
13	C	240	GLY	CA-C-O	-6.10	115.95	122.05
6	5	67	HIS	CE1-NE2-CD2	-6.10	102.90	109.00
12	B	1009	A	O5'-C5'-C4'	-6.10	102.35	111.50
12	B	1135	C	C4'-C3'-C2'	-6.10	96.50	102.60
12	B	2547	A	C1'-O4'-C4'	-6.10	103.80	109.90
20	J	33	ALA	O-C-N	-6.10	115.08	122.22
30	T	72	GLN	CA-C-O	-6.10	114.08	120.55
7	6	14	ARG	CB-CA-C	-6.10	101.20	111.02
12	B	66	C	O4'-C1'-N1	6.10	117.65	108.50
12	B	2400	G	C4'-C3'-C2'	-6.10	96.50	102.60
22	L	59	ARG	N-CA-C	-6.10	104.43	112.72
10	9	129	ARG	NE-CZ-NH1	6.10	127.60	121.50
11	A	51	G	C5'-C4'-C3'	-6.10	106.86	116.00
10	9	282	PHE	CA-CB-CG	-6.09	107.71	113.80
12	B	946	C	O4'-C1'-N1	6.09	117.64	108.50
12	B	1507	C	O4'-C1'-N1	6.09	117.64	108.50
12	B	2106	U	O4'-C1'-N1	6.09	117.64	108.50
28	R	61	ALA	N-CA-C	6.09	118.88	110.35
12	B	1245	G	P-O3'-C3'	-6.09	111.06	120.20
12	B	2683	C	O4'-C1'-N1	6.09	117.64	108.50
12	B	600	G	C1'-O4'-C4'	-6.09	103.81	109.90
12	B	1188	U	P-O5'-C5'	-6.09	111.77	120.90
12	B	1925	C	P-O3'-C3'	-6.09	111.07	120.20
12	B	2845	U	O4'-C1'-N1	6.09	117.63	108.50
26	P	76	HIS	CG-CD2-NE2	6.09	113.29	107.20
12	B	2286	G	P-O5'-C5'	6.09	130.03	120.90
12	B	1687	G	O4'-C1'-N9	6.09	117.63	108.50
21	K	29	HIS	CA-C-N	6.09	129.35	120.71
21	K	29	HIS	C-N-CA	6.09	129.35	120.71
16	F	151	LEU	N-CA-CB	6.08	120.85	111.24
12	B	1285	A	O3'-P-O5'	-6.08	94.88	104.00
12	B	2685	G	O5'-C5'-C4'	-6.08	102.38	111.50
13	C	150	GLY	O-C-N	6.08	128.99	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	Q	90	ASP	CA-CB-CG	-6.08	106.52	112.60
12	B	1398	C	O3'-P-O5'	-6.08	94.88	104.00
12	B	2858	C	O4'-C1'-N1	6.08	117.62	108.50
13	C	5	CYS	CA-C-N	6.08	136.63	121.80
13	C	5	CYS	C-N-CA	6.08	136.63	121.80
13	C	96	LYS	CA-C-O	6.08	126.63	119.28
33	Y	45	HIS	CE1-NE2-CD2	-6.08	102.92	109.00
15	E	104	ALA	CA-C-N	6.08	131.20	122.21
15	E	104	ALA	C-N-CA	6.08	131.20	122.21
28	R	36	ALA	N-CA-CB	-6.08	102.73	111.54
10	9	192	THR	N-CA-C	-6.07	106.13	112.93
12	B	250	G	C3'-C2'-O2'	6.07	119.81	110.70
12	B	1433	A	C4'-C3'-C2'	-6.07	96.53	102.60
14	D	185	ASN	O-C-N	-6.07	115.29	122.58
12	B	208	C	C4'-C3'-C2'	-6.07	96.53	102.60
22	L	27	LEU	N-CA-C	-6.07	105.05	112.88
10	9	165	LEU	CB-CA-C	-6.07	102.61	111.23
12	B	1801	A	C1'-O4'-C4'	6.07	115.77	109.70
13	C	98	GLY	N-CA-C	-6.07	98.80	113.18
22	L	143	GLU	N-CA-C	-6.07	106.20	113.97
12	B	1076	C	P-O3'-C3'	-6.07	111.10	120.20
12	B	1188	U	C4'-C3'-C2'	-6.07	96.53	102.60
14	D	193	VAL	CA-C-N	6.07	127.43	119.84
14	D	193	VAL	C-N-CA	6.07	127.43	119.84
2	1	49	ASP	O-C-N	-6.07	114.52	122.59
14	D	112	THR	N-CA-C	-6.07	98.51	108.76
5	4	37	LYS	N-CA-C	-6.06	97.88	110.80
12	B	1284	A	P-O5'-C5'	-6.06	111.80	120.90
7	6	37	LYS	N-CA-C	-6.06	105.71	113.23
10	9	139	ARG	CA-C-N	6.06	132.03	122.21
10	9	139	ARG	C-N-CA	6.06	132.03	122.21
12	B	283	G	P-O5'-C5'	6.06	130.00	120.90
12	B	1615	C	O4'-C1'-N1	6.06	117.29	108.20
16	F	39	VAL	CA-C-O	-6.06	113.20	120.78
30	T	29	THR	CA-CB-OG1	6.06	118.69	109.60
33	Y	68	PHE	CA-CB-CG	-6.06	107.74	113.80
4	3	41	HIS	CG-CD2-NE2	6.06	113.26	107.20
24	N	85	PRO	N-CA-C	-6.06	106.92	114.68
12	B	82	U	C4'-C3'-C2'	-6.06	96.54	102.60
12	B	380	G	C3'-C2'-O2'	6.06	119.79	110.70
15	E	79	ARG	NE-CZ-NH1	6.06	127.56	121.50
24	N	63	ARG	N-CA-C	-6.06	97.89	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	9	204	ASP	CA-CB-CG	-6.06	106.54	112.60
12	B	248	G	O5'-C5'-C4'	-6.06	102.42	111.50
12	B	1234	U	O4'-C1'-N1	6.06	117.59	108.50
20	J	77	HIS	CE1-NE2-CD2	-6.06	102.94	109.00
9	8	13	ASN	CA-C-N	6.05	132.57	121.85
9	8	13	ASN	C-N-CA	6.05	132.57	121.85
12	B	1482	G	P-O3'-C3'	6.05	129.28	120.20
12	B	2276	G	P-O5'-C5'	6.05	129.98	120.90
17	G	20	GLY	N-CA-C	6.05	121.49	114.16
31	U	97	SER	N-CA-CB	6.05	120.72	110.49
12	B	853	C	C5'-C4'-C3'	-6.05	106.92	116.00
12	B	1621	U	P-O5'-C5'	6.05	129.98	120.90
12	B	2796	U	P-O5'-C5'	6.05	129.98	120.90
15	E	18	THR	CA-C-O	6.05	125.44	118.97
12	B	611	C	P-O5'-C5'	6.05	129.97	120.90
12	B	1052	C	O4'-C1'-C2'	-6.05	101.55	107.60
12	B	1133	A	C3'-C2'-C1'	6.05	107.55	101.50
12	B	1421	G	C5'-C4'-C3'	-6.05	106.93	116.00
16	F	82	TYR	O-C-N	-6.05	114.47	121.60
31	U	23	LYS	N-CA-C	-6.05	99.95	109.50
12	B	2732	G	O5'-C5'-C4'	6.04	120.57	111.50
12	B	415	A	P-O3'-C3'	-6.04	111.14	120.20
12	B	1406	U	C4'-C3'-O3'	-6.04	103.94	113.00
12	B	1727	C	P-O3'-C3'	6.04	129.26	120.20
6	5	75	VAL	CA-C-O	6.04	127.02	120.43
13	C	57	HIS	CG-CD2-NE2	6.04	113.24	107.20
12	B	1970	A	P-O5'-C5'	-6.04	111.84	120.90
12	B	2727	A	C4'-C3'-O3'	-6.04	103.94	113.00
12	B	596	U	O4'-C1'-N1	6.04	117.56	108.50
12	B	1533	C	O4'-C1'-N1	6.04	117.56	108.50
12	B	1613	G	O4'-C4'-C3'	-6.04	97.96	104.00
12	B	2350	C	P-O5'-C5'	-6.04	111.84	120.90
14	D	130	GLN	O-C-N	6.04	129.85	123.03
15	E	79	ARG	NH1-CZ-NH2	-6.04	111.45	119.30
12	B	2276	G	C1'-O4'-C4'	-6.04	103.86	109.90
32	W	73	LYS	CA-C-O	-6.04	113.72	120.66
10	9	215	PRO	O-C-N	6.04	130.21	122.85
12	B	39	G	C2'-C3'-O3'	6.04	122.75	113.70
12	B	335	C	O4'-C1'-N1	6.04	117.55	108.50
12	B	815	C	O4'-C1'-N1	6.04	117.55	108.50
13	C	232	GLY	O-C-N	-6.04	116.00	123.12
10	9	50	ASP	CA-C-N	6.03	128.64	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	9	50	ASP	C-N-CA	6.03	128.64	120.44
12	B	1116	G	C5'-C4'-O4'	6.03	118.85	109.80
12	B	1479	G	O4'-C1'-N9	6.03	117.54	108.50
12	B	2394	C	C5'-C4'-C3'	-6.03	106.95	116.00
12	B	1639	C	C4'-C3'-C2'	6.03	108.63	102.60
12	B	1914	C	O3'-P-O5'	6.03	113.04	104.00
14	D	134	HIS	CA-CB-CG	6.03	119.83	113.80
17	G	145	ALA	N-CA-CB	6.03	118.75	110.01
24	N	103	ARG	NE-CZ-NH2	-6.03	113.78	119.20
10	9	20	CYS	CA-C-N	6.03	131.03	121.09
10	9	20	CYS	C-N-CA	6.03	131.03	121.09
12	B	351	C	O4'-C1'-N1	6.03	117.54	108.50
12	B	1191	G	O5'-C5'-C4'	-6.03	102.46	111.50
13	C	99	GLU	N-CA-C	-6.03	99.91	109.07
12	B	1008	A	C2'-C3'-O3'	6.02	118.54	109.50
12	B	2516	A	C4'-C3'-O3'	-6.02	103.96	113.00
12	B	117	G	O3'-P-O5'	-6.02	94.97	104.00
12	B	224	U	O4'-C1'-C2'	-6.02	101.58	107.60
24	N	84	GLY	CA-C-O	-6.02	112.91	121.52
26	P	2	ASN	CA-CB-CG	-6.02	106.58	112.60
12	B	260	G	P-O5'-C5'	6.02	129.93	120.90
12	B	301	G	C2'-C3'-O3'	6.02	118.53	109.50
12	B	898	C	P-O5'-C5'	6.02	129.93	120.90
2	1	42	LEU	CA-C-N	6.02	128.84	120.29
2	1	42	LEU	C-N-CA	6.02	128.84	120.29
12	B	318	C	O4'-C1'-N1	6.02	117.53	108.50
12	B	752	A	C3'-C2'-C1'	-6.02	95.48	101.50
18	H	62	LEU	CA-C-N	6.02	128.95	120.28
18	H	62	LEU	C-N-CA	6.02	128.95	120.28
12	B	656	G	C4'-C3'-O3'	-6.01	103.98	113.00
12	B	2480	C	C4'-C3'-C2'	-6.01	96.58	102.60
22	L	126	ARG	N-CA-C	-6.01	102.59	110.53
28	R	57	GLY	O-C-N	6.01	128.79	123.80
12	B	1273	U	C5'-C4'-C3'	-6.01	106.98	116.00
12	B	1589	U	C4'-C3'-C2'	-6.01	96.59	102.60
12	B	2623	G	C4'-C3'-C2'	-6.01	96.59	102.60
10	9	56	LEU	N-CA-CB	6.01	119.55	109.94
10	9	243	HIS	CB-CG-CD2	-6.01	123.39	131.20
3	2	18	LYS	CG-CD-CE	6.01	125.11	111.30
12	B	978	G	C4'-C3'-C2'	-6.01	96.59	102.60
12	B	1417	C	N1-C1'-C2'	6.01	121.01	112.00
12	B	2312	U	C3'-C2'-C1'	6.01	107.31	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	9	15	ASP	O-C-N	6.00	129.56	123.26
12	B	2640	G	O4'-C1'-C2'	-6.00	101.59	107.60
12	B	645	C	O4'-C4'-C3'	-6.00	100.10	106.10
10	9	296	LYS	CA-C-N	6.00	128.24	120.44
10	9	296	LYS	C-N-CA	6.00	128.24	120.44
12	B	1217	U	C5'-C4'-C3'	-6.00	107.00	116.00
12	B	2076	U	P-O5'-C5'	6.00	129.90	120.90
14	D	169	ARG	N-CA-C	-6.00	100.72	110.20
18	H	49	ALA	N-CA-C	-6.00	104.82	111.36
10	9	46	TRP	CE2-CD2-CE3	6.00	124.80	118.80
12	B	1442	U	O5'-C5'-C4'	-6.00	102.50	111.50
13	C	141	HIS	CA-CB-CG	6.00	119.80	113.80
12	B	887	U	O4'-C1'-N1	6.00	117.19	108.20
12	B	1208	C	O4'-C1'-N1	6.00	117.49	108.50
12	B	1806	C	C4'-C3'-O3'	-6.00	104.00	113.00
12	B	18	U	C4'-C3'-C2'	-6.00	96.61	102.60
12	B	194	G	P-O3'-C3'	-6.00	111.21	120.20
27	Q	102	LYS	N-CA-C	-6.00	104.83	111.36
12	B	1638	C	O3'-P-O5'	-5.99	95.01	104.00
11	A	43	C	P-O5'-C5'	5.99	129.89	120.90
12	B	179	C	O4'-C1'-N1	5.99	117.49	108.50
12	B	1128	G	C1'-O4'-C4'	-5.99	103.71	109.70
12	B	1527	G	P-O3'-C3'	5.99	129.19	120.20
12	B	1857	G	C2'-C3'-O3'	5.99	118.49	109.50
12	B	2363	G	P-O3'-C3'	-5.99	111.22	120.20
16	F	110	ILE	CA-CB-CG1	5.99	120.58	110.40
12	B	1149	G	C4'-C3'-C2'	-5.99	96.61	102.60
6	5	92	ALA	O-C-N	-5.99	114.63	122.59
12	B	1333	G	C4'-C3'-C2'	-5.99	96.61	102.60
12	B	519	U	O4'-C1'-N1	5.99	117.48	108.50
12	B	1775	U	P-O5'-C5'	5.99	129.88	120.90
4	3	41	HIS	CB-CG-CD2	-5.98	123.42	131.20
12	B	409	G	O4'-C4'-C3'	-5.98	98.02	104.00
12	B	1165	A	C4'-C3'-C2'	-5.98	96.62	102.60
12	B	1168	G	C3'-C2'-C1'	-5.98	95.32	101.30
12	B	2901	C	P-O5'-C5'	5.98	129.88	120.90
10	9	97	ILE	N-CA-C	-5.98	99.68	108.23
12	B	493	G	P-O5'-C5'	5.98	129.87	120.90
12	B	2502	G	C1'-O4'-C4'	5.98	115.88	109.90
12	B	2728	U	C5'-C4'-C3'	-5.98	107.03	116.00
23	M	9	PHE	CA-C-N	5.98	130.57	120.88
23	M	9	PHE	C-N-CA	5.98	130.57	120.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	151	C	C3'-C2'-O2'	5.98	119.67	110.70
12	B	2325	G	C2'-C3'-O3'	-5.98	104.73	113.70
12	B	2360	G	C4'-C3'-O3'	-5.98	104.03	113.00
30	T	35	ALA	CA-C-N	5.98	132.96	121.54
30	T	35	ALA	C-N-CA	5.98	132.96	121.54
12	B	767	U	O4'-C1'-N1	5.98	117.47	108.50
12	B	1407	G	C4'-C3'-C2'	-5.98	96.62	102.60
15	E	66	GLY	N-CA-C	-5.98	107.25	114.66
15	E	139	LYS	N-CA-C	5.98	117.47	111.07
20	J	66	GLY	CA-C-O	-5.98	113.72	120.30
20	J	130	HIS	ND1-CE1-NE2	5.98	114.38	108.40
22	L	41	ARG	N-CA-CB	5.98	120.59	110.49
29	S	103	ILE	CA-C-O	-5.98	114.83	121.23
10	9	136	ARG	CA-C-N	-5.98	116.41	122.74
10	9	136	ARG	C-N-CA	-5.98	116.41	122.74
12	B	1029	A	C4'-C3'-C2'	-5.97	96.63	102.60
13	C	10	PRO	N-CA-CB	-5.97	97.99	103.31
19	I	99	LYS	N-CA-C	-5.97	100.22	109.24
20	J	40	HIS	N-CA-C	5.97	117.79	111.28
12	B	1569	A	C4'-C3'-C2'	-5.97	96.63	102.60
12	B	729	G	C5'-C4'-C3'	5.97	124.95	116.00
12	B	869	G	P-O5'-C5'	5.97	129.85	120.90
12	B	1133	A	O4'-C1'-C2'	-5.97	99.83	105.80
13	C	6	LYS	CA-C-N	5.97	126.28	119.83
13	C	6	LYS	C-N-CA	5.97	126.28	119.83
5	4	37	LYS	N-CA-CB	5.97	120.58	110.49
12	B	318	C	P-O5'-C5'	5.97	129.85	120.90
12	B	1725	U	O4'-C1'-N1	5.97	117.45	108.50
12	B	965	C	O4'-C1'-C2'	-5.97	101.63	107.60
12	B	2567	G	O5'-C5'-C4'	-5.97	102.55	111.50
30	T	65	GLY	O-C-N	-5.97	118.05	123.36
12	B	432	A	C4'-C3'-O3'	-5.96	104.05	113.00
12	B	1554	U	P-O5'-C5'	-5.96	111.95	120.90
15	E	162	ARG	NE-CZ-NH2	5.96	124.57	119.20
18	H	103	VAL	CA-C-O	-5.96	115.73	121.63
12	B	2321	U	P-O5'-C5'	-5.96	111.96	120.90
12	B	2803	G	C5'-C4'-C3'	-5.96	107.06	116.00
12	B	61	C	O4'-C1'-N1	5.96	117.44	108.50
27	Q	49	ARG	N-CA-CB	5.96	119.27	110.33
11	A	7	G	C2'-C3'-O3'	5.96	122.64	113.70
10	9	289	ASP	CA-C-O	5.96	126.32	119.35
12	B	865	C	O4'-C1'-N1	5.96	117.14	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1900	A	C2'-C3'-O3'	5.96	118.43	109.50
12	B	1721	G	C2'-C3'-O3'	5.96	118.43	109.50
12	B	2073	C	O5'-C5'-C4'	-5.96	102.57	111.50
22	L	90	VAL	CA-C-O	-5.96	113.94	120.43
12	B	194	G	C4'-C3'-C2'	-5.95	96.65	102.60
12	B	1161	C	O4'-C1'-N1	5.95	117.43	108.50
12	B	1315	C	C4'-C3'-O3'	-5.95	104.07	113.00
20	J	77	HIS	CG-CD2-NE2	5.95	113.15	107.20
27	Q	13	HIS	CG-CD2-NE2	5.95	113.15	107.20
12	B	875	G	C5'-C4'-C3'	-5.95	107.07	116.00
12	B	1438	U	O4'-C1'-N1	5.95	117.43	108.50
12	B	2834	G	C3'-C2'-C1'	-5.95	95.35	101.30
12	B	1536	C	O4'-C1'-C2'	-5.95	99.85	105.80
12	B	2102	G	P-O5'-C5'	5.95	129.82	120.90
12	B	2557	G	C5'-C4'-C3'	-5.95	107.07	116.00
12	B	2808	G	C1'-O4'-C4'	-5.95	103.95	109.90
10	9	226	GLY	CA-C-N	5.95	132.90	121.54
10	9	226	GLY	C-N-CA	5.95	132.90	121.54
12	B	822	G	P-O5'-C5'	-5.95	111.98	120.90
12	B	1413	A	C4'-C3'-C2'	-5.95	96.65	102.60
12	B	2733	A	C4'-C3'-C2'	-5.95	96.65	102.60
15	E	124	PHE	CA-CB-CG	5.95	119.75	113.80
18	H	29	PHE	CA-C-N	5.95	128.17	120.44
18	H	29	PHE	C-N-CA	5.95	128.17	120.44
10	9	172	LYS	CB-CA-C	-5.95	101.30	110.81
12	B	2572	A	O4'-C1'-C2'	-5.95	99.85	105.80
22	L	93	ASN	CA-CB-CG	-5.95	106.65	112.60
12	B	4	U	O4'-C1'-N1	5.94	117.42	108.50
12	B	2444	G	O5'-C5'-C4'	-5.94	102.58	111.50
22	L	86	GLU	CA-C-N	5.94	132.14	122.21
22	L	86	GLU	C-N-CA	5.94	132.14	122.21
12	B	328	U	C4'-C3'-O3'	-5.94	104.09	113.00
12	B	491	G	C5'-C4'-O4'	5.94	118.71	109.80
12	B	507	A	C4'-C3'-O3'	-5.94	104.09	113.00
12	B	814	C	O4'-C4'-C3'	-5.94	98.06	104.00
12	B	1150	C	C4'-C3'-O3'	-5.94	104.09	113.00
12	B	987	C	O4'-C1'-N1	5.94	117.41	108.50
10	9	41	ASP	N-CA-CB	5.94	115.56	109.51
12	B	477	A	C1'-O4'-C4'	5.94	115.84	109.90
12	B	942	G	C5'-C4'-C3'	-5.94	107.10	116.00
12	B	2137	U	O4'-C4'-C3'	-5.94	98.06	104.00
24	N	55	ALA	N-CA-C	-5.94	104.89	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	170	U	O4'-C1'-N1	5.93	117.40	108.50
12	B	1424	G	O4'-C1'-N9	5.93	117.40	108.50
12	B	2164	C	P-O3'-C3'	5.93	129.10	120.20
12	B	784	G	O4'-C1'-N9	5.93	117.10	108.20
12	B	1281	G	O4'-C1'-C2'	-5.93	101.67	107.60
12	B	2766	A	C5'-C4'-C3'	-5.93	107.10	116.00
12	B	502	A	P-O3'-C3'	5.93	129.10	120.20
12	B	1712	U	C4'-C3'-O3'	-5.93	104.11	113.00
10	9	116	LEU	CB-CA-C	-5.93	99.97	109.75
12	B	2094	A	C4'-C3'-O3'	-5.93	104.11	113.00
12	B	2400	G	O4'-C1'-N9	5.93	117.39	108.50
12	B	1510	G	O4'-C1'-C2'	-5.93	101.67	107.60
12	B	1785	A	O3'-P-O5'	-5.93	95.11	104.00
12	B	2092	U	O3'-P-O5'	-5.93	95.11	104.00
12	B	2356	U	O4'-C1'-N1	5.93	117.39	108.50
11	A	46	A	C5'-C4'-C3'	-5.92	107.11	116.00
12	B	2219	U	O4'-C4'-C3'	-5.92	98.08	104.00
12	B	2504	U	C4'-C3'-O3'	-5.92	104.11	113.00
29	S	103	ILE	O-C-N	5.92	129.07	122.61
30	T	44	LYS	N-CA-C	-5.92	104.74	111.14
12	B	339	U	O4'-C1'-N1	5.92	117.39	108.50
12	B	596	U	C4'-C3'-C2'	-5.92	96.68	102.60
12	B	1303	G	O3'-P-O5'	-5.92	95.12	104.00
4	3	48	TYR	N-CA-C	-5.92	98.19	110.80
12	B	901	C	C3'-C2'-C1'	5.92	107.22	101.30
12	B	1186	G	O4'-C1'-N9	5.92	117.38	108.50
12	B	1395	A	O4'-C1'-N9	5.92	117.08	108.20
12	B	1532	A	C4'-C3'-C2'	-5.92	96.68	102.60
12	B	2351	G	C4'-C3'-O3'	-5.92	104.12	113.00
10	9	200	VAL	CA-CB-CG2	-5.92	100.34	110.40
12	B	475	C	O5'-C5'-C4'	-5.92	102.62	111.50
12	B	1312	U	P-O5'-C5'	-5.92	112.03	120.90
21	K	50	GLY	CA-C-N	5.92	129.78	121.02
21	K	50	GLY	C-N-CA	5.92	129.78	121.02
12	B	1266	G	C2'-C3'-O3'	5.92	118.37	109.50
12	B	1972	G	O5'-C5'-C4'	-5.92	102.63	111.50
15	E	123	LYS	CB-CG-CD	5.92	124.90	111.30
17	G	29	ASN	CA-C-O	-5.92	114.98	121.84
12	B	591	U	O4'-C1'-N1	5.91	117.37	108.50
18	H	25	TYR	CB-CG-CD1	-5.91	111.93	120.80
12	B	457	A	C4'-C3'-C2'	-5.91	96.69	102.60
12	B	1642	G	O5'-C5'-C4'	-5.91	102.63	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2273	A	C4'-C3'-C2'	-5.91	96.69	102.60
15	E	66	GLY	CA-C-N	5.91	131.57	121.29
15	E	66	GLY	C-N-CA	5.91	131.57	121.29
20	J	11	VAL	CA-C-N	5.91	131.73	120.97
20	J	11	VAL	C-N-CA	5.91	131.73	120.97
6	5	102	ASP	CA-C-N	5.91	128.12	120.44
6	5	102	ASP	C-N-CA	5.91	128.12	120.44
12	B	358	U	O4'-C1'-N1	5.91	117.36	108.50
12	B	1936	A	O4'-C4'-C3'	-5.91	100.19	106.10
12	B	2867	G	O4'-C1'-N9	5.91	117.36	108.50
14	D	79	LEU	N-CA-C	-5.91	99.37	109.24
12	B	627	A	P-O3'-C3'	5.91	129.06	120.20
12	B	1945	G	C4'-C3'-C2'	5.91	108.51	102.60
12	B	112	U	C4'-C3'-O3'	-5.91	104.14	113.00
12	B	2455	G	C5'-C4'-O4'	5.91	118.66	109.80
23	M	10	ARG	NE-CZ-NH2	5.91	124.52	119.20
18	H	68	ARG	NE-CZ-NH2	5.90	124.51	119.20
12	B	810	U	O4'-C1'-N1	5.90	117.35	108.50
12	B	2329	U	C4'-C3'-O3'	-5.90	104.15	113.00
12	B	1805	A	P-O3'-C3'	-5.90	111.35	120.20
22	L	68	SER	CA-C-N	5.90	128.66	120.29
22	L	68	SER	C-N-CA	5.90	128.66	120.29
12	B	764	A	P-O5'-C5'	-5.90	112.06	120.90
12	B	846	U	O4'-C1'-N1	5.90	117.04	108.20
12	B	934	U	O4'-C1'-N1	5.90	117.34	108.50
25	O	84	GLU	CA-C-N	5.90	129.27	120.31
25	O	84	GLU	C-N-CA	5.90	129.27	120.31
12	B	106	C	P-O5'-C5'	5.89	129.74	120.90
12	B	934	U	C4'-C3'-C2'	-5.89	96.71	102.60
33	Y	59	PHE	CA-CB-CG	-5.89	107.91	113.80
13	C	57	HIS	CA-C-N	5.89	128.50	120.54
13	C	57	HIS	C-N-CA	5.89	128.50	120.54
20	J	34	ARG	N-CA-C	5.89	117.38	111.07
12	B	644	A	P-O3'-C3'	-5.89	111.36	120.20
12	B	2620	C	O4'-C1'-N1	5.89	117.34	108.50
13	C	149	LYS	CA-C-O	-5.89	113.70	120.24
27	Q	35	PHE	N-CA-C	-5.89	105.18	112.72
12	B	1848	A	N9-C1'-C2'	5.89	120.83	112.00
12	B	1974	C	P-O5'-C5'	-5.89	112.07	120.90
12	B	2212	A	O4'-C1'-N9	5.89	117.03	108.20
12	B	2521	C	C4'-C3'-O3'	-5.89	104.17	113.00
12	B	517	C	O4'-C1'-N1	5.89	117.33	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2469	A	C4'-C3'-O3'	-5.89	104.17	113.00
9	8	30	GLU	O-C-N	5.88	125.98	121.27
10	9	243	HIS	ND1-CE1-NE2	5.88	114.28	108.40
12	B	1715	G	C5'-C4'-C3'	-5.88	106.37	115.20
15	E	15	SER	N-CA-CB	5.88	118.67	110.26
12	B	156	A	O4'-C4'-C3'	-5.88	98.12	104.00
12	B	1909	C	C3'-C2'-C1'	-5.88	95.42	101.30
12	B	2325	G	O4'-C4'-C3'	-5.88	98.12	104.00
12	B	2370	G	C4'-C3'-C2'	-5.88	96.72	102.60
12	B	2430	A	C4'-C3'-C2'	5.88	108.48	102.60
12	B	2507	C	P-O5'-C5'	5.88	129.72	120.90
15	E	25	GLU	N-CA-C	5.88	118.45	111.33
28	R	65	ALA	CA-C-O	5.88	128.92	120.51
12	B	2879	A	O3'-P-O5'	-5.88	95.18	104.00
24	N	51	LEU	O-C-N	5.88	129.87	122.23
3	2	55	LYS	CA-C-O	5.88	127.68	121.33
6	5	78	PHE	N-CA-C	-5.88	98.94	108.41
11	A	68	C	C5'-C4'-O4'	5.88	118.62	109.80
12	B	2474	U	P-O3'-C3'	-5.88	111.38	120.20
13	C	199	HIS	CB-CG-CD2	-5.88	123.56	131.20
23	M	8	LYS	N-CA-CB	5.88	118.96	110.20
30	T	70	HIS	ND1-CE1-NE2	5.88	114.28	108.40
12	B	1362	C	C4'-C3'-O3'	-5.88	104.19	113.00
17	G	82	PHE	CA-C-N	5.87	129.10	120.82
17	G	82	PHE	C-N-CA	5.87	129.10	120.82
12	B	177	G	P-O5'-C5'	-5.87	112.09	120.90
12	B	1738	G	C4'-C3'-C2'	-5.87	96.73	102.60
12	B	1991	U	P-O3'-C3'	5.87	129.01	120.20
15	E	112	LEU	CA-C-N	5.87	127.96	120.56
15	E	112	LEU	C-N-CA	5.87	127.96	120.56
12	B	1909	C	C1'-O4'-C4'	-5.87	104.03	109.90
12	B	1290	C	O4'-C1'-N1	5.87	117.30	108.50
12	B	1796	U	C4'-C3'-C2'	-5.87	96.73	102.60
8	7	23	HIS	CA-CB-CG	5.87	119.67	113.80
11	A	48	U	C5'-C4'-C3'	-5.87	107.20	116.00
12	B	195	A	C4'-C3'-O3'	-5.87	104.20	113.00
12	B	1228	G	P-O5'-C5'	-5.87	112.10	120.90
12	B	1719	G	P-O3'-C3'	5.87	129.00	120.20
12	B	485	C	O4'-C1'-N1	5.87	117.30	108.50
12	B	885	C	O4'-C1'-N1	5.87	117.30	108.50
12	B	2185	U	P-O5'-C5'	-5.87	112.10	120.90
20	J	38	GLY	CA-C-N	5.87	128.73	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	J	38	GLY	C-N-CA	5.87	128.73	120.28
22	L	132	ARG	N-CA-C	-5.87	106.10	113.20
29	S	60	HIS	ND1-CE1-NE2	5.87	114.27	108.40
12	B	2084	C	O4'-C1'-N1	5.86	117.30	108.50
12	B	2092	U	C1'-O4'-C4'	5.86	115.56	109.70
12	B	2313	C	C5'-C4'-C3'	-5.86	107.20	116.00
12	B	451	U	C1'-O4'-C4'	-5.86	104.04	109.90
12	B	1931	U	P-O5'-C5'	-5.86	112.11	120.90
12	B	232	G	C5'-C4'-O4'	5.86	117.89	109.10
12	B	1181	U	C5'-C4'-C3'	-5.86	107.21	116.00
12	B	2603	G	O4'-C1'-N9	5.86	117.29	108.50
13	C	100	ARG	NE-CZ-NH1	5.86	127.36	121.50
32	W	57	TYR	CB-CA-C	-5.86	99.46	110.01
12	B	2161	C	C4'-C3'-C2'	-5.86	96.74	102.60
12	B	2727	A	O3'-P-O5'	-5.86	95.22	104.00
18	H	8	LYS	CB-CA-C	-5.86	102.15	111.17
12	B	1961	C	O4'-C1'-N1	5.86	117.28	108.50
13	C	167	ASP	CA-CB-CG	-5.86	106.74	112.60
20	J	96	ARG	CG-CD-NE	-5.86	99.12	112.00
22	L	78	ARG	NE-CZ-NH2	-5.86	113.93	119.20
12	B	805	G	O5'-C5'-C4'	-5.85	102.92	111.70
12	B	2894	G	C4'-C3'-C2'	5.85	108.45	102.60
16	F	152	ASP	N-CA-C	-5.85	100.25	109.50
12	B	569	U	P-O3'-C3'	-5.85	111.42	120.20
12	B	2750	A	N9-C1'-C2'	-5.85	105.22	114.00
23	M	57	VAL	N-CA-C	-5.85	106.61	112.17
12	B	1730	C	O4'-C4'-C3'	-5.85	100.25	106.10
6	5	26	ALA	CA-C-O	-5.85	114.64	120.90
12	B	1583	A	C5'-C4'-C3'	5.85	123.97	115.20
12	B	1751	U	O5'-C5'-C4'	-5.85	102.72	111.50
12	B	2232	C	C4'-C3'-C2'	-5.85	96.75	102.60
12	B	2624	G	O4'-C4'-C3'	-5.85	98.15	104.00
2	1	19	LEU	CA-C-N	5.85	128.43	120.54
2	1	19	LEU	C-N-CA	5.85	128.43	120.54
11	A	111	U	P-O3'-C3'	-5.85	111.43	120.20
12	B	1523	U	P-O3'-C3'	-5.85	111.43	120.20
12	B	1575	C	C1'-C2'-O2'	5.85	117.17	108.40
12	B	1804	C	C5'-C4'-C3'	5.85	124.77	116.00
14	D	59	ARG	N-CA-C	-5.85	104.37	112.03
7	6	16	HIS	CA-CB-CG	-5.85	107.95	113.80
12	B	113	U	O5'-C5'-C4'	-5.85	102.73	111.50
1	0	32	LEU	N-CA-CB	5.84	118.54	109.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	902	C	O4'-C1'-N1	5.84	117.27	108.50
15	E	69	ARG	N-CA-C	-5.84	106.01	113.02
22	L	95	LEU	N-CA-C	-5.84	106.49	113.97
12	B	328	U	C4'-C3'-C2'	-5.84	96.76	102.60
12	B	2499	C	C4'-C3'-C2'	-5.84	96.76	102.60
12	B	2734	A	C4'-C3'-C2'	-5.84	96.76	102.60
21	K	29	HIS	ND1-CE1-NE2	5.84	114.24	108.40
12	B	183	C	O4'-C1'-N1	5.84	117.26	108.50
12	B	2018	G	O4'-C4'-C3'	-5.84	98.16	104.00
12	B	2310	C	O4'-C1'-C2'	5.84	113.44	107.60
24	N	29	VAL	CA-C-N	5.84	128.91	120.38
24	N	29	VAL	C-N-CA	5.84	128.91	120.38
24	N	49	GLU	O-C-N	-5.84	114.92	120.70
20	J	47	HIS	ND1-CE1-NE2	5.84	114.24	108.40
26	P	46	VAL	CA-CB-CG2	-5.84	100.47	110.40
10	9	279	TRP	CG-CD2-CE3	-5.84	128.06	133.90
12	B	410	G	C1'-C2'-O2'	5.83	117.15	108.40
12	B	840	C	O4'-C1'-N1	5.83	117.25	108.50
12	B	50	U	C1'-C2'-O2'	-5.83	103.05	111.80
12	B	151	C	O4'-C1'-C2'	-5.83	101.77	107.60
12	B	1550	C	P-O3'-C3'	-5.83	111.45	120.20
12	B	2343	U	O4'-C1'-N1	5.83	117.25	108.50
16	F	12	VAL	CA-C-N	5.83	131.35	122.37
16	F	12	VAL	C-N-CA	5.83	131.35	122.37
28	R	89	HIS	CE1-NE2-CD2	-5.83	103.17	109.00
11	A	14	U	O3'-P-O5'	-5.83	95.25	104.00
12	B	919	U	C3'-C2'-C1'	5.83	107.13	101.30
12	B	1399	C	O5'-C5'-C4'	-5.83	102.75	111.50
12	B	1708	C	O5'-C5'-C4'	-5.83	102.75	111.50
12	B	1751	U	P-O3'-C3'	-5.83	111.45	120.20
12	B	2558	C	O4'-C1'-N1	5.83	117.25	108.50
11	A	30	C	C1'-O4'-C4'	5.83	115.73	109.90
12	B	28	A	O4'-C4'-C3'	-5.83	98.17	104.00
12	B	259	G	C4'-C3'-C2'	-5.83	96.77	102.60
12	B	548	G	O4'-C4'-C3'	-5.83	100.27	106.10
12	B	1040	A	O4'-C1'-C2'	-5.83	101.77	107.60
12	B	1989	G	O4'-C1'-N9	5.83	117.25	108.50
31	U	86	PHE	CB-CG-CD1	-5.83	110.79	120.70
10	9	171	GLY	CA-C-N	5.83	128.41	120.54
10	9	171	GLY	C-N-CA	5.83	128.41	120.54
12	B	1528	A	C4'-C3'-O3'	-5.83	104.26	113.00
22	L	50	PHE	CA-C-N	5.83	132.39	122.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	L	50	PHE	C-N-CA	5.83	132.39	122.36
24	N	24	MET	O-C-N	-5.83	115.94	122.12
18	H	99	ILE	CA-C-N	5.83	131.13	122.74
18	H	99	ILE	C-N-CA	5.83	131.13	122.74
12	B	1322	A	O4'-C4'-C3'	-5.83	98.17	104.00
12	B	1521	G	O4'-C1'-C2'	-5.82	101.78	107.60
12	B	1730	C	P-O3'-C3'	5.82	128.94	120.20
22	L	142	ILE	CB-CA-C	5.82	119.25	110.63
11	A	28	C	O4'-C1'-N1	5.82	117.23	108.50
12	B	1454	C	C5'-C4'-O4'	5.82	118.53	109.80
12	B	2778	A	C2'-C3'-O3'	5.82	118.23	109.50
21	K	36	GLY	N-CA-C	-5.82	104.82	114.48
5	4	46	VAL	CA-C-O	5.82	125.86	121.09
6	5	24	ASN	CA-C-N	5.82	128.55	120.29
6	5	24	ASN	C-N-CA	5.82	128.55	120.29
12	B	993	G	C4'-C3'-O3'	-5.82	104.27	113.00
12	B	1167	C	C4'-C3'-O3'	-5.82	104.27	113.00
12	B	2584	U	O4'-C1'-N1	5.82	117.23	108.50
7	6	18	PHE	N-CA-C	-5.82	104.86	111.14
10	9	18	ASN	CA-C-N	5.82	128.62	121.06
10	9	18	ASN	C-N-CA	5.82	128.62	121.06
10	9	150	ARG	NE-CZ-NH1	5.82	127.32	121.50
12	B	195	A	P-O3'-C3'	-5.82	111.47	120.20
13	C	233	GLY	N-CA-C	-5.82	99.39	113.18
10	9	78	CYS	CA-C-N	5.82	132.65	121.54
10	9	78	CYS	C-N-CA	5.82	132.65	121.54
12	B	797	G	C4'-C3'-C2'	-5.82	96.78	102.60
12	B	2362	C	O4'-C1'-N1	5.82	117.22	108.50
20	J	15	TRP	CB-CG-CD1	5.82	135.62	126.90
4	3	49	ARG	N-CA-C	-5.81	103.63	112.99
1	0	49	ARG	O-C-N	5.81	129.81	123.13
1	0	53	LYS	N-CA-C	-5.81	104.54	111.69
10	9	261	ILE	N-CA-C	5.81	116.59	110.72
11	A	77	U	C4'-C3'-C2'	-5.81	96.79	102.60
11	A	113	C	C5'-C4'-C3'	5.81	124.72	116.00
12	B	748	G	C5'-C4'-C3'	-5.81	107.28	116.00
12	B	2355	G	C1'-O4'-C4'	-5.81	104.09	109.90
17	G	98	LYS	N-CA-C	-5.81	104.36	113.02
33	Y	45	HIS	ND1-CE1-NE2	5.81	114.21	108.40
12	B	1275	A	O4'-C1'-N9	5.81	117.22	108.50
30	T	15	HIS	CG-CD2-NE2	5.81	113.01	107.20
12	B	954	G	C4'-C3'-O3'	-5.81	104.29	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1688	U	C5'-C4'-C3'	-5.81	107.29	116.00
12	B	2324	U	C5'-C4'-C3'	-5.81	107.29	116.00
12	B	2822	G	P-O5'-C5'	5.81	129.61	120.90
17	G	169	ARG	CA-C-O	-5.81	113.58	120.43
31	U	71	ILE	O-C-N	5.81	127.52	122.12
33	Y	18	LYS	O-C-N	-5.81	115.72	122.87
10	9	70	GLY	N-CA-C	5.81	121.45	111.98
12	B	742	A	P-O5'-C5'	5.81	129.61	120.90
32	W	45	ASP	CA-CB-CG	-5.81	106.79	112.60
15	E	77	ILE	CA-C-O	5.80	126.60	119.58
12	B	1728	C	O5'-C5'-C4'	-5.80	102.80	111.50
29	S	23	LEU	CA-C-O	-5.80	114.40	120.55
12	B	573	U	O4'-C1'-N1	5.80	116.90	108.20
10	9	31	LYS	CG-CD-CE	5.80	124.64	111.30
12	B	549	G	P-O3'-C3'	-5.80	111.50	120.20
12	B	935	C	P-O3'-C3'	-5.80	111.50	120.20
12	B	2448	A	C5'-C4'-O4'	5.80	117.80	109.10
12	B	2475	C	O5'-C5'-C4'	-5.80	102.80	111.50
12	B	2489	U	C4'-C3'-O3'	-5.80	104.30	113.00
12	B	2684	U	P-O3'-C3'	5.80	128.90	120.20
12	B	2557	G	P-O5'-C5'	-5.80	112.20	120.90
12	B	2668	G	P-O3'-C3'	-5.80	111.50	120.20
12	B	346	A	C1'-C2'-O2'	5.80	117.09	108.40
12	B	459	U	O4'-C4'-C3'	-5.80	98.20	104.00
12	B	1476	U	C2'-C3'-O3'	5.80	118.19	109.50
12	B	1955	U	O5'-C5'-C4'	-5.80	103.00	111.70
12	B	2523	G	P-O5'-C5'	5.80	129.59	120.90
16	F	7	TYR	CA-C-N	5.80	130.15	120.70
16	F	7	TYR	C-N-CA	5.80	130.15	120.70
14	D	153	GLY	N-CA-C	-5.79	107.32	115.32
25	O	92	PHE	CA-CB-CG	5.79	119.59	113.80
12	B	2488	G	P-O5'-C5'	5.79	129.59	120.90
12	B	159	G	C4'-C3'-C2'	-5.79	96.81	102.60
12	B	1633	G	C4'-C3'-O3'	-5.79	104.31	113.00
12	B	2034	U	O4'-C1'-N1	5.79	117.19	108.50
19	I	97	VAL	N-CA-C	-5.79	107.25	112.12
12	B	803	U	C4'-C3'-C2'	-5.79	96.81	102.60
12	B	2119	A	O4'-C1'-N9	5.79	116.88	108.20
24	N	29	VAL	N-CA-C	5.79	116.25	110.23
12	B	47	C	O4'-C4'-C3'	-5.79	98.21	104.00
12	B	1188	U	C4'-C3'-O3'	-5.79	104.32	113.00
12	B	1513	U	P-O3'-C3'	-5.79	111.52	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2641	G	O4'-C4'-C3'	-5.79	98.21	104.00
21	K	31	ARG	NE-CZ-NH2	-5.79	113.99	119.20
12	B	525	U	O4'-C1'-N1	5.79	117.18	108.50
12	B	685	A	P-O5'-C5'	-5.79	112.22	120.90
12	B	1040	A	C4'-C3'-C2'	-5.79	96.81	102.60
12	B	1752	C	C4'-C3'-C2'	-5.79	96.81	102.60
12	B	2149	U	O4'-C4'-C3'	-5.79	98.21	104.00
13	C	211	ARG	NE-CZ-NH1	-5.79	115.71	121.50
12	B	1640	A	O3'-P-O5'	-5.78	95.33	104.00
12	B	2135	A	O5'-C5'-C4'	5.78	120.17	111.50
33	Y	57	THR	O-C-N	-5.78	116.64	123.41
12	B	1732	C	O4'-C1'-C2'	5.78	111.58	105.80
6	5	214	ILE	N-CA-C	-5.78	100.35	108.27
12	B	793	A	O3'-P-O5'	-5.78	95.33	104.00
14	D	183	GLU	N-CA-C	-5.78	105.89	113.17
29	S	60	HIS	CG-CD2-NE2	5.78	112.98	107.20
21	K	108	ARG	N-CA-CB	5.78	117.73	110.45
12	B	217	A	P-O5'-C5'	5.78	129.57	120.90
12	B	276	U	O4'-C1'-N1	5.78	116.87	108.20
12	B	658	U	P-O5'-C5'	5.78	129.57	120.90
12	B	1269	A	C3'-C2'-C1'	-5.78	95.52	101.30
12	B	2813	A	O4'-C4'-C3'	-5.78	98.22	104.00
18	H	47	PHE	CA-C-N	5.78	128.30	120.38
18	H	47	PHE	C-N-CA	5.78	128.30	120.38
12	B	773	U	O4'-C1'-N1	5.78	117.16	108.50
12	B	1117	C	O4'-C4'-C3'	-5.78	98.22	104.00
12	B	1689	A	C4'-C3'-C2'	-5.78	96.83	102.60
12	B	2895	G	C4'-C3'-C2'	-5.78	96.83	102.60
20	J	42	ALA	CA-C-O	-5.78	114.47	121.05
30	T	15	HIS	CB-CG-CD2	-5.78	123.69	131.20
5	4	13	SER	CA-C-N	5.77	129.09	120.31
5	4	13	SER	C-N-CA	5.77	129.09	120.31
29	S	46	LEU	N-CA-C	-5.77	106.28	113.55
12	B	85	G	C4'-C3'-C2'	-5.77	96.83	102.60
12	B	749	A	C1'-C2'-O2'	5.77	117.06	108.40
12	B	872	U	P-O3'-C3'	5.77	128.86	120.20
12	B	2715	C	O4'-C1'-N1	5.77	117.16	108.50
12	B	622	G	C5'-C4'-C3'	-5.77	107.34	116.00
12	B	1071	G	P-O5'-C5'	5.77	129.56	120.90
12	B	2135	A	C4'-C3'-O3'	-5.77	104.34	113.00
21	K	16	ALA	O-C-N	5.77	129.68	123.56
24	N	73	ASN	CA-CB-CG	5.77	118.37	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	57	C	P-O3'-C3'	-5.77	111.55	120.20
12	B	331	C	O3'-P-O5'	5.77	112.66	104.00
12	B	1309	G	C4'-C3'-C2'	-5.77	96.83	102.60
12	B	1605	C	C4'-C3'-O3'	-5.77	104.34	113.00
12	B	1849	G	P-O3'-C3'	-5.77	111.54	120.20
18	H	26	ALA	N-CA-C	-5.77	98.88	108.34
18	H	49	ALA	CB-CA-C	-5.77	101.04	110.85
12	B	477	A	O4'-C1'-N9	5.77	117.15	108.50
12	B	565	C	C3'-C2'-C1'	-5.77	95.53	101.30
12	B	1406	U	C4'-C3'-C2'	-5.77	96.83	102.60
18	H	110	VAL	CA-CB-CG2	5.77	120.20	110.40
6	5	194	VAL	CB-CA-C	-5.76	104.27	112.22
12	B	1559	U	P-O3'-C3'	5.76	128.85	120.20
12	B	1906	G	C4'-C3'-C2'	-5.76	96.83	102.60
12	B	2189	U	O4'-C1'-N1	5.76	117.15	108.50
12	B	2820	A	P-O3'-C3'	5.76	128.85	120.20
11	A	19	C	P-O5'-C5'	5.76	129.54	120.90
12	B	772	C	C4'-C3'-O3'	-5.76	104.36	113.00
12	B	1232	G	O4'-C4'-C3'	-5.76	98.24	104.00
18	H	96	THR	N-CA-CB	5.76	120.23	110.49
20	J	136	GLN	CA-C-N	5.76	127.04	119.84
20	J	136	GLN	C-N-CA	5.76	127.04	119.84
31	U	23	LYS	CA-C-N	5.76	130.09	122.95
31	U	23	LYS	C-N-CA	5.76	130.09	122.95
15	E	117	ARG	N-CA-C	-5.76	106.48	112.93
10	9	137	THR	N-CA-CB	5.76	118.23	111.09
12	B	534	U	C4'-C3'-O3'	-5.76	104.36	113.00
13	C	14	HIS	ND1-CE1-NE2	5.76	114.16	108.40
12	B	1329	U	P-O3'-C3'	-5.75	111.57	120.20
12	B	2596	U	C5'-C4'-C3'	5.75	124.63	116.00
12	B	1980	G	P-O5'-C5'	-5.75	112.27	120.90
12	B	2076	U	O4'-C4'-C3'	-5.75	98.25	104.00
14	D	57	ALA	N-CA-C	-5.75	106.16	112.72
12	B	753	A	O4'-C1'-C2'	-5.75	101.85	107.60
7	6	10	LEU	N-CA-CB	5.75	118.30	109.91
14	D	107	VAL	N-CA-CB	5.75	120.71	111.23
24	N	40	LYS	O-C-N	5.75	128.21	122.12
30	T	90	GLY	N-CA-C	-5.75	99.56	113.18
12	B	2263	C	C4'-C3'-C2'	-5.75	96.85	102.60
12	B	2439	A	O3'-P-O5'	-5.75	95.38	104.00
18	H	82	SER	N-CA-C	-5.75	106.25	113.72
24	N	106	ASP	CA-C-N	5.75	130.62	121.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	N	106	ASP	C-N-CA	5.75	130.62	121.66
6	5	170	ILE	N-CA-CB	5.75	117.88	110.99
6	5	140	PRO	CA-C-N	5.74	127.91	120.44
6	5	140	PRO	C-N-CA	5.74	127.91	120.44
9	8	3	VAL	O-C-N	5.74	129.82	123.10
12	B	1115	G	O4'-C1'-C2'	5.74	113.34	107.60
14	D	34	VAL	N-CA-CB	5.74	117.19	110.82
20	J	64	VAL	CA-C-N	5.74	132.51	121.54
20	J	64	VAL	C-N-CA	5.74	132.51	121.54
8	7	18	LYS	N-CA-C	-5.74	105.54	113.18
10	9	138	PRO	N-CA-CB	5.74	109.65	103.33
10	9	241	LEU	N-CA-C	-5.74	100.53	109.72
12	B	1383	A	P-O5'-C5'	-5.74	112.29	120.90
12	B	1915	U	C4'-C3'-C2'	-5.74	96.86	102.60
25	O	18	LEU	CB-CA-C	-5.74	101.26	110.79
12	B	253	C	O4'-C1'-N1	5.74	117.11	108.50
12	B	1099	G	O5'-C5'-C4'	-5.74	102.89	111.50
12	B	2041	U	C4'-C3'-O3'	-5.74	104.39	113.00
12	B	2383	G	O3'-P-O5'	-5.74	95.39	104.00
13	C	12	ARG	N-CA-C	-5.74	105.00	113.61
15	E	40	ARG	NE-CZ-NH1	-5.74	115.76	121.50
12	B	1380	G	C4'-C3'-C2'	-5.74	96.86	102.60
12	B	1417	C	C4'-C3'-O3'	-5.74	104.39	113.00
12	B	2334	U	C4'-C3'-C2'	-5.74	96.86	102.60
12	B	2746	U	C3'-C2'-C1'	-5.74	95.56	101.30
15	E	201	ALA	CB-CA-C	-5.74	101.89	110.50
11	A	92	C	O4'-C1'-N1	5.74	117.11	108.50
12	B	1093	G	C1'-C2'-O2'	5.74	117.00	108.40
12	B	2082	A	O5'-C5'-C4'	-5.74	102.89	111.50
12	B	2208	C	C4'-C3'-C2'	-5.74	96.86	102.60
11	A	72	G	O3'-P-O5'	-5.74	95.40	104.00
11	A	91	C	O4'-C1'-N1	5.74	117.10	108.50
12	B	2726	A	P-O3'-C3'	5.74	128.80	120.20
12	B	1102	C	C2'-C3'-O3'	5.73	122.30	113.70
12	B	1792	G	O4'-C4'-C3'	-5.73	98.27	104.00
12	B	2676	C	O4'-C1'-N1	5.73	117.10	108.50
32	W	2	PHE	N-CA-C	-5.73	98.16	108.48
12	B	2335	A	C4'-C3'-O3'	-5.73	104.40	113.00
14	D	26	VAL	CA-CB-CG2	-5.73	100.66	110.40
19	I	87	SER	N-CA-C	-5.73	100.79	109.85
10	9	215	PRO	CA-C-N	5.73	129.34	120.00
10	9	215	PRO	C-N-CA	5.73	129.34	120.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	341	C	C4'-C3'-C2'	-5.73	96.87	102.60
12	B	1478	G	O4'-C1'-C2'	-5.73	101.87	107.60
12	B	2182	U	O4'-C1'-C2'	-5.73	101.87	107.60
15	E	199	MET	N-CA-C	5.73	117.53	111.28
25	O	100	HIS	N-CA-CB	5.73	121.42	111.39
12	B	60	G	O5'-C5'-C4'	-5.73	103.11	111.70
12	B	1811	G	C4'-C3'-O3'	-5.73	104.41	113.00
12	B	2892	G	C5'-C4'-C3'	5.73	124.59	116.00
10	9	190	PRO	N-CA-CB	5.73	106.83	102.36
12	B	318	C	C3'-C2'-O2'	5.73	119.29	110.70
12	B	765	C	O4'-C1'-C2'	-5.73	101.87	107.60
12	B	1938	A	O4'-C1'-C2'	5.73	111.53	105.80
14	D	172	VAL	O-C-N	5.73	127.73	121.83
12	B	812	C	C4'-C3'-C2'	-5.73	96.87	102.60
1	0	8	GLY	CA-C-N	5.72	128.89	120.82
1	0	8	GLY	C-N-CA	5.72	128.89	120.82
7	6	30	VAL	N-CA-C	-5.72	104.92	110.42
12	B	1109	C	P-O5'-C5'	-5.72	112.31	120.90
12	B	1328	A	O4'-C1'-C2'	5.72	113.32	107.60
33	Y	34	SER	N-CA-C	-5.72	99.28	108.55
10	9	182	ALA	O-C-N	5.72	129.89	123.19
12	B	151	C	C3'-C2'-C1'	5.72	107.02	101.30
12	B	1045	C	C5'-C4'-O4'	-5.72	101.22	109.80
12	B	1612	C	P-O5'-C5'	5.72	129.49	120.90
12	B	2605	U	O4'-C4'-C3'	-5.72	98.28	104.00
23	M	39	GLY	CA-C-O	5.72	125.71	120.79
12	B	2902	C	O3'-P-O5'	-5.72	95.42	104.00
23	M	68	PHE	CA-C-O	-5.72	114.39	120.28
12	B	1624	U	O4'-C1'-N1	5.72	117.08	108.50
12	B	2086	U	O4'-C1'-N1	5.72	117.08	108.50
13	C	73	ILE	CA-CB-CG1	5.72	120.12	110.40
20	J	13	ARG	CA-C-N	5.72	128.83	120.71
20	J	13	ARG	C-N-CA	5.72	128.83	120.71
12	B	734	A	C5'-C4'-O4'	5.72	118.38	109.80
15	E	187	VAL	CA-CB-CG2	-5.72	100.68	110.40
12	B	351	C	C4'-C3'-C2'	-5.72	96.88	102.60
12	B	661	A	C3'-C2'-C1'	-5.72	95.58	101.30
12	B	995	C	C1'-O4'-C4'	-5.72	104.18	109.90
12	B	1827	U	O4'-C4'-C3'	5.72	109.72	104.00
12	B	1916	A	C5'-C4'-C3'	5.72	124.57	116.00
27	Q	58	GLN	N-CA-C	-5.72	106.23	113.43
12	B	878	A	C4'-C3'-C2'	-5.71	96.89	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1338	G	C4'-C3'-O3'	-5.71	104.43	113.00
32	W	63	ILE	CA-CB-CG2	-5.71	100.78	110.50
16	F	111	ARG	N-CA-CB	5.71	118.52	110.12
11	A	116	G	O4'-C1'-N9	5.71	117.07	108.50
12	B	1062	G	O4'-C1'-C2'	-5.71	101.89	107.60
12	B	2072	C	C5'-C4'-O4'	5.71	118.37	109.80
21	K	105	ARG	NE-CZ-NH1	5.71	127.21	121.50
22	L	35	HIS	CA-CB-CG	5.71	119.51	113.80
3	2	33	HIS	CG-CD2-NE2	5.71	112.91	107.20
12	B	243	U	P-O5'-C5'	5.71	129.46	120.90
12	B	1269	A	C4'-C3'-O3'	-5.71	104.44	113.00
12	B	2769	U	O4'-C1'-N1	5.71	117.06	108.50
27	Q	43	GLN	CA-C-N	5.71	127.93	120.28
27	Q	43	GLN	C-N-CA	5.71	127.93	120.28
12	B	422	A	O4'-C1'-C2'	-5.71	101.89	107.60
12	B	1039	A	P-O5'-C5'	5.71	129.46	120.90
12	B	1417	C	C4'-C3'-C2'	-5.71	96.89	102.60
12	B	2088	A	C4'-C3'-O3'	-5.71	104.44	113.00
12	B	2616	C	O4'-C1'-N1	5.71	117.06	108.50
15	E	108	ILE	N-CA-C	-5.71	104.78	111.00
12	B	1488	C	O4'-C1'-N1	5.71	117.06	108.50
24	N	62	ASN	OD1-CG-ND2	5.71	128.31	122.60
25	O	16	ARG	CA-C-O	-5.71	112.35	120.51
12	B	225	C	P-O5'-C5'	5.70	129.46	120.90
12	B	532	A	O3'-P-O5'	-5.70	95.44	104.00
12	B	1609	A	C1'-O4'-C4'	-5.70	104.00	109.70
12	B	2788	C	O5'-C5'-C4'	-5.70	102.94	111.50
12	B	1061	U	O4'-C1'-N1	5.70	116.75	108.20
12	B	1222	U	O4'-C1'-N1	5.70	117.05	108.50
12	B	2704	C	C3'-C2'-C1'	-5.70	95.60	101.30
6	5	101	ALA	CA-C-O	5.70	126.81	120.82
12	B	2479	U	C1'-C2'-O2'	5.70	116.95	108.40
12	B	2691	C	P-O5'-C5'	5.70	129.45	120.90
12	B	2870	C	P-O5'-C5'	5.70	129.45	120.90
24	N	9	GLN	CG-CD-OE1	-5.70	109.40	120.80
25	O	82	ALA	CA-C-O	-5.70	114.38	120.42
12	B	647	G	O4'-C4'-C3'	5.70	109.70	104.00
12	B	1481	U	C5'-C4'-C3'	5.70	124.55	116.00
11	A	60	C	C4'-C3'-C2'	-5.70	96.90	102.60
13	C	97	ASP	CA-C-O	5.70	126.51	119.79
26	P	87	ARG	NE-CZ-NH1	-5.70	115.80	121.50
12	B	1254	A	O4'-C1'-N9	5.70	117.04	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1491	G	P-O5'-C5'	5.70	129.44	120.90
12	B	2037	A	C5'-C4'-C3'	-5.70	107.46	116.00
12	B	2556	C	C4'-C3'-C2'	-5.70	96.90	102.60
22	L	143	GLU	CA-C-O	5.70	125.06	118.97
6	5	207	VAL	CA-C-O	5.69	127.90	120.78
12	B	2110	G	P-O3'-C3'	-5.69	111.66	120.20
10	9	109	THR	CA-C-O	5.69	125.43	119.51
12	B	749	A	P-O5'-C5'	-5.69	112.36	120.90
12	B	1375	U	O5'-C5'-C4'	-5.69	102.96	111.50
12	B	1809	A	O4'-C1'-C2'	-5.69	101.91	107.60
12	B	2019	A	O4'-C1'-N9	5.69	117.04	108.50
12	B	379	G	P-O3'-C3'	-5.69	111.66	120.20
12	B	1344	U	C5'-C4'-C3'	-5.69	106.67	115.20
24	N	92	GLY	CA-C-O	-5.69	114.50	122.58
30	T	1	MET	CA-C-N	5.69	128.88	120.74
30	T	1	MET	C-N-CA	5.69	128.88	120.74
12	B	544	C	O4'-C1'-C2'	5.69	111.49	105.80
12	B	713	G	P-O5'-C5'	5.69	129.43	120.90
12	B	2370	G	C5'-C4'-C3'	-5.69	107.47	116.00
12	B	14	A	O3'-P-O5'	-5.68	95.47	104.00
12	B	2512	C	C1'-O4'-C4'	-5.68	104.22	109.90
12	B	2667	C	P-O3'-C3'	-5.68	111.67	120.20
17	G	124	CYS	O-C-N	5.68	126.37	121.54
7	6	7	PRO	CA-C-O	-5.68	114.49	121.31
10	9	196	PRO	CA-C-N	5.68	130.20	122.19
10	9	196	PRO	C-N-CA	5.68	130.20	122.19
12	B	913	U	O4'-C4'-C3'	-5.68	100.42	106.10
12	B	1289	C	O4'-C1'-N1	5.68	117.02	108.50
12	B	2506	U	P-O5'-C5'	-5.68	112.38	120.90
12	B	2706	A	C1'-O4'-C4'	-5.68	104.22	109.90
16	F	16	MET	N-CA-CB	5.68	120.09	110.49
12	B	134	G	P-O5'-C5'	-5.68	112.38	120.90
26	P	112	ARG	CA-C-N	5.68	132.16	123.47
26	P	112	ARG	C-N-CA	5.68	132.16	123.47
12	B	230	G	P-O5'-C5'	-5.68	112.38	120.90
12	B	1093	G	O5'-C5'-C4'	-5.68	102.98	111.50
12	B	1437	C	O4'-C1'-N1	5.68	117.02	108.50
32	W	80	HIS	O-C-N	-5.68	115.17	121.53
12	B	2464	G	P-O5'-C5'	-5.68	112.38	120.90
18	H	17	ASP	N-CA-CB	5.68	120.08	110.49
23	M	52	ALA	N-CA-CB	5.68	118.24	110.01
12	B	313	G	C1'-C2'-O2'	5.68	116.91	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	485	C	O5'-C5'-C4'	-5.68	102.98	111.50
12	B	1294	U	O4'-C1'-C2'	-5.68	101.92	107.60
12	B	1346	G	P-O5'-C5'	-5.68	112.38	120.90
12	B	1840	G	C4'-C3'-O3'	-5.68	104.48	113.00
12	B	2801	G	P-O5'-C5'	5.68	129.41	120.90
12	B	863	A	O5'-C5'-C4'	-5.67	102.99	111.50
12	B	2112	G	O3'-P-O5'	-5.67	95.49	104.00
12	B	2618	G	C4'-C3'-O3'	-5.67	104.49	113.00
22	L	25	SER	N-CA-C	-5.67	106.71	113.97
12	B	512	G	P-O3'-C3'	5.67	128.71	120.20
12	B	2282	G	C2'-C3'-O3'	5.67	118.01	109.50
12	B	2353	G	C1'-C2'-O2'	5.67	116.91	108.40
26	P	69	VAL	N-CA-C	-5.67	99.37	107.77
31	U	18	LYS	N-CA-C	-5.67	106.99	114.31
5	4	47	ILE	CA-C-O	-5.67	114.62	121.54
6	5	30	LEU	CA-C-N	5.67	128.15	120.38
6	5	30	LEU	C-N-CA	5.67	128.15	120.38
12	B	578	G	O5'-C5'-C4'	-5.67	102.99	111.50
12	B	637	A	C1'-O4'-C4'	-5.67	104.03	109.70
10	9	243	HIS	ND1-CG-CD2	-5.67	100.43	106.10
15	E	48	THR	O-C-N	-5.67	115.51	123.11
19	I	76	ALA	CA-C-N	5.67	127.70	120.56
19	I	76	ALA	C-N-CA	5.67	127.70	120.56
24	N	60	VAL	N-CA-C	-5.67	104.36	112.35
12	B	97	C	C3'-C2'-C1'	-5.67	95.63	101.30
12	B	2629	U	C2'-C3'-O3'	5.67	118.00	109.50
18	H	72	ILE	N-CA-C	-5.67	107.97	113.53
21	K	57	VAL	N-CA-CB	5.67	117.79	110.99
12	B	356	G	C4'-C3'-O3'	-5.67	104.50	113.00
12	B	2223	G	O5'-C5'-C4'	-5.67	103.00	111.50
12	B	497	A	O5'-C5'-C4'	-5.66	103.00	111.50
12	B	554	U	O4'-C1'-C2'	-5.66	101.94	107.60
12	B	717	C	C1'-O4'-C4'	-5.66	104.24	109.90
24	N	3	HIS	CG-CD2-NE2	5.66	112.86	107.20
28	R	90	ARG	N-CA-C	-5.66	100.70	109.14
12	B	795	C	P-O5'-C5'	-5.66	112.41	120.90
12	B	1569	A	O4'-C1'-C2'	-5.66	101.94	107.60
28	R	101	ILE	CA-C-N	5.66	128.75	120.71
28	R	101	ILE	C-N-CA	5.66	128.75	120.71
12	B	1026	G	C1'-O4'-C4'	-5.66	104.24	109.90
12	B	1609	A	C3'-C2'-C1'	-5.66	95.84	101.50
12	B	2841	C	O4'-C1'-N1	5.66	116.99	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	A	27	C	O4'-C4'-C3'	-5.66	98.34	104.00
12	B	1426	G	C5'-C4'-C3'	-5.66	107.51	116.00
12	B	1480	C	C5'-C4'-C3'	5.66	124.49	116.00
12	B	1827	U	C5'-C4'-O4'	-5.66	101.31	109.80
16	F	166	ARG	N-CA-C	-5.66	105.19	111.36
17	G	162	ARG	CG-CD-NE	-5.66	99.55	112.00
30	T	42	GLU	N-CA-C	-5.66	106.33	113.18
1	0	51	SER	N-CA-CB	5.66	118.53	110.44
12	B	1205	A	P-O3'-C3'	5.66	128.69	120.20
12	B	1633	G	O4'-C4'-C3'	5.66	109.66	104.00
12	B	2161	C	O4'-C1'-N1	5.66	116.98	108.50
12	B	2847	U	O4'-C1'-N1	5.66	116.98	108.50
2	1	10	SER	CA-C-N	5.66	127.89	120.60
2	1	10	SER	C-N-CA	5.66	127.89	120.60
15	E	60	TRP	CE2-CD2-CE3	5.66	124.46	118.80
23	M	39	GLY	O-C-N	-5.66	115.41	124.12
26	P	67	GLU	O-C-N	5.66	130.11	122.59
12	B	759	G	P-O5'-C5'	5.65	129.38	120.90
12	B	2504	U	C3'-C2'-C1'	5.65	106.95	101.30
12	B	2780	G	C4'-C3'-C2'	-5.65	96.95	102.60
24	N	45	ARG	CG-CD-NE	-5.65	99.56	112.00
31	U	82	VAL	CA-C-O	-5.65	114.77	120.31
1	0	15	ASN	CA-C-O	-5.65	115.01	121.40
12	B	2780	G	O4'-C1'-C2'	-5.65	100.15	105.80
15	E	182	ALA	N-CA-C	-5.65	103.07	110.53
19	I	115	ASP	O-C-N	5.65	130.44	122.41
12	B	615	U	O5'-C5'-C4'	5.65	120.17	111.70
12	B	653	U	O4'-C1'-N1	5.65	116.67	108.20
12	B	1819	A	C4'-C3'-O3'	5.65	117.87	109.40
13	C	24	HIS	ND1-CE1-NE2	5.65	114.05	108.40
26	P	3	ILE	N-CA-C	-5.65	105.09	113.39
10	9	265	GLU	N-CA-CB	5.65	118.42	110.12
10	9	269	TYR	CB-CG-CD2	-5.65	112.33	120.80
12	B	2224	G	P-O5'-C5'	5.65	129.37	120.90
29	S	55	ILE	O-C-N	5.65	127.44	121.91
12	B	25	U	C3'-C2'-C1'	5.64	106.94	101.30
12	B	619	G	O4'-C1'-N9	5.64	116.96	108.50
12	B	1236	G	O4'-C1'-C2'	5.64	111.44	105.80
12	B	1515	A	C3'-C2'-C1'	5.64	106.94	101.30
18	H	119	ASN	CB-CA-C	-5.64	101.77	109.28
31	U	48	VAL	CA-C-N	5.64	125.59	119.78
31	U	48	VAL	C-N-CA	5.64	125.59	119.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	7	27	ASN	OD1-CG-ND2	5.64	128.24	122.60
12	B	1830	C	P-O3'-C3'	-5.64	111.74	120.20
18	H	99	ILE	O-C-N	-5.64	116.56	122.20
23	M	71	LYS	CA-C-N	5.64	126.89	119.84
23	M	71	LYS	C-N-CA	5.64	126.89	119.84
29	S	20	VAL	O-C-N	-5.64	115.58	122.12
12	B	129	C	P-O5'-C5'	5.64	129.36	120.90
12	B	858	G	P-O5'-C5'	-5.64	112.45	120.90
12	B	2029	G	O4'-C1'-C2'	-5.64	101.96	107.60
12	B	2565	A	C4'-C3'-C2'	-5.64	96.96	102.60
12	B	2671	G	C4'-C3'-C2'	-5.64	96.96	102.60
29	S	77	ASP	CA-CB-CG	-5.64	106.96	112.60
12	B	24	G	O4'-C1'-N9	5.63	116.95	108.50
12	B	127	A	O4'-C4'-C3'	-5.63	98.36	104.00
12	B	792	A	O3'-P-O5'	-5.63	95.55	104.00
15	E	165	HIS	CG-CD2-NE2	5.63	112.83	107.20
27	Q	22	GLY	CA-C-O	5.63	126.11	119.46
12	B	1494	A	O4'-C1'-N9	5.63	116.95	108.50
9	8	11	CYS	N-CA-C	-5.63	100.92	108.86
12	B	277	G	O5'-C5'-C4'	-5.63	103.05	111.50
12	B	802	A	O5'-C5'-C4'	-5.63	103.05	111.50
12	B	939	G	O4'-C1'-N9	5.63	116.95	108.50
12	B	1531	C	P-O3'-C3'	5.63	128.65	120.20
12	B	2104	C	O4'-C1'-N1	5.63	116.95	108.50
26	P	62	LYS	N-CA-C	-5.63	102.46	111.02
12	B	863	A	O4'-C1'-N9	5.63	116.94	108.50
12	B	2135	A	C5'-C4'-C3'	-5.63	107.56	116.00
6	5	222	VAL	CB-CA-C	-5.63	100.64	110.38
12	B	268	C	P-O3'-C3'	5.63	128.64	120.20
12	B	485	C	P-O5'-C5'	5.63	129.34	120.90
12	B	643	A	P-O5'-C5'	-5.63	112.46	120.90
12	B	978	G	C3'-C2'-O2'	5.63	119.14	110.70
12	B	1117	C	P-O5'-C5'	5.63	129.34	120.90
12	B	2189	U	C2'-C3'-O3'	5.63	122.14	113.70
16	F	2	LYS	N-CA-C	-5.63	105.76	113.30
28	R	89	HIS	CG-CD2-NE2	5.63	112.83	107.20
6	5	177	LYS	N-CA-CB	5.63	118.97	110.42
12	B	838	C	P-O3'-C3'	-5.63	111.76	120.20
15	E	150	THR	N-CA-CB	5.63	120.00	110.49
25	O	103	VAL	N-CA-CB	5.63	117.13	110.55
2	1	41	HIS	CE1-NE2-CD2	-5.62	103.38	109.00
4	3	40	HIS	ND1-CE1-NE2	5.62	114.03	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	S	38	TYR	CA-C-O	5.62	124.96	118.55
12	B	277	G	C5'-C4'-C3'	5.62	124.44	116.00
12	B	398	C	O4'-C4'-C3'	-5.62	98.38	104.00
12	B	686	U	C5'-C4'-C3'	5.62	123.64	115.20
12	B	1686	C	O4'-C1'-N1	5.62	116.93	108.50
12	B	2041	U	O4'-C1'-N1	5.62	116.94	108.50
29	S	105	VAL	O-C-N	-5.62	117.40	123.14
12	B	1412	U	O4'-C1'-C2'	-5.62	101.98	107.60
12	B	2138	G	C1'-C2'-O2'	5.62	116.83	108.40
12	B	2670	A	O4'-C1'-N9	5.62	116.93	108.50
12	B	1063	G	C5'-C4'-C3'	5.62	124.43	116.00
12	B	1732	C	C3'-C2'-C1'	-5.62	95.88	101.50
12	B	1800	C	O5'-C5'-C4'	-5.62	103.27	111.70
12	B	1801	A	C2'-C3'-O3'	5.62	117.93	109.50
12	B	2269	G	C4'-C3'-C2'	-5.62	96.98	102.60
12	B	2286	G	O4'-C4'-C3'	-5.62	100.48	106.10
12	B	179	C	C4'-C3'-C2'	-5.62	96.98	102.60
12	B	976	G	C4'-C3'-O3'	-5.62	104.57	113.00
12	B	962	G	O4'-C4'-C3'	-5.62	98.39	104.00
12	B	1147	A	O4'-C1'-N9	5.62	116.92	108.50
12	B	1331	G	C5'-C4'-C3'	-5.62	107.58	116.00
12	B	2648	G	O4'-C1'-N9	5.62	116.92	108.50
13	C	189	ALA	N-CA-CB	5.62	119.98	110.49
16	F	46	LYS	O-C-N	5.62	130.06	122.59
27	Q	50	ARG	O-C-N	5.62	128.96	122.17
12	B	1054	A	O4'-C4'-C3'	-5.61	98.39	104.00
12	B	1713	A	C5'-C4'-O4'	5.61	117.52	109.10
12	B	1821	A	O4'-C4'-C3'	5.61	109.61	104.00
12	B	2715	C	C4'-C3'-O3'	-5.61	104.58	113.00
6	5	180	PHE	CA-C-O	-5.61	114.45	120.46
12	B	1953	A	O3'-P-O5'	-5.61	95.58	104.00
12	B	161	A	O4'-C4'-C3'	-5.61	98.39	104.00
13	C	13	ARG	N-CA-CB	5.61	118.14	110.01
16	F	175	PRO	N-CA-CB	5.61	107.55	101.88
21	K	70	ARG	CD-NE-CZ	-5.61	116.55	124.40
26	P	54	LEU	N-CA-C	5.61	117.48	111.36
6	5	209	ILE	N-CA-C	-5.61	99.65	108.23
12	B	1865	U	O4'-C1'-N1	5.61	116.61	108.20
12	B	25	U	O4'-C1'-N1	5.61	116.91	108.50
12	B	293	U	C4'-C3'-C2'	-5.61	96.99	102.60
12	B	1231	U	C5'-C4'-C3'	-5.61	107.59	116.00
12	B	1455	G	P-O3'-C3'	-5.61	111.79	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1608	A	C5'-C4'-C3'	5.61	123.61	115.20
12	B	723	C	C4'-C3'-C2'	-5.61	96.99	102.60
12	B	1376	C	C3'-C2'-C1'	5.61	106.91	101.30
12	B	1654	A	O5'-C5'-C4'	-5.61	103.09	111.50
12	B	2425	A	O4'-C4'-C3'	5.61	111.70	106.10
8	7	47	ALA	CA-C-N	5.60	131.17	120.97
8	7	47	ALA	C-N-CA	5.60	131.17	120.97
11	A	64	G	P-O3'-C3'	5.60	128.61	120.20
12	B	19	A	C4'-C3'-O3'	-5.60	104.59	113.00
12	B	178	G	O4'-C1'-N9	5.60	116.91	108.50
12	B	205	G	C3'-C2'-C1'	-5.60	95.90	101.50
12	B	1888	G	C2'-C3'-O3'	5.60	117.91	109.50
24	N	63	ARG	NE-CZ-NH2	5.60	124.24	119.20
11	A	9	G	O4'-C4'-C3'	5.60	109.60	104.00
32	W	26	PHE	CA-C-N	5.60	126.84	119.84
32	W	26	PHE	C-N-CA	5.60	126.84	119.84
12	B	709	U	C4'-C3'-C2'	-5.60	97.00	102.60
12	B	1074	G	O4'-C4'-C3'	-5.60	98.40	104.00
24	N	17	ARG	CA-C-O	-5.60	114.48	120.42
32	W	16	ALA	N-CA-C	5.60	117.83	111.11
12	B	134	G	C4'-C3'-O3'	-5.60	104.60	113.00
12	B	2664	G	P-O5'-C5'	5.60	129.30	120.90
12	B	2829	A	O5'-C5'-C4'	-5.60	103.10	111.50
17	G	35	THR	N-CA-C	-5.60	99.18	108.75
20	J	2	LYS	CA-C-O	5.60	125.11	118.79
25	O	54	VAL	CA-C-N	5.60	128.82	120.87
25	O	54	VAL	C-N-CA	5.60	128.82	120.87
12	B	266	G	O4'-C1'-N9	5.60	116.89	108.50
12	B	287	G	C4'-C3'-O3'	-5.60	104.61	113.00
12	B	1239	G	O4'-C1'-N9	5.60	116.89	108.50
12	B	1742	U	C4'-C3'-C2'	-5.60	97.00	102.60
6	5	112	ASP	CA-CB-CG	-5.59	107.01	112.60
15	E	135	ALA	N-CA-C	-5.59	104.58	111.40
28	R	6	GLN	N-CA-C	5.59	118.30	109.96
12	B	1506	U	P-O5'-C5'	5.59	129.29	120.90
20	J	63	ALA	N-CA-CB	5.59	120.40	111.56
23	M	124	LEU	CA-C-O	-5.59	114.60	120.70
25	O	21	LEU	CB-CA-C	-5.59	101.34	110.85
7	6	18	PHE	O-C-N	5.59	128.13	122.09
12	B	1169	A	C4'-C3'-O3'	-5.59	104.61	113.00
12	B	1223	G	C1'-O4'-C4'	-5.59	104.31	109.90
12	B	2288	A	O3'-P-O5'	-5.59	95.61	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1592	C	O4'-C1'-N1	5.59	116.89	108.50
12	B	2160	C	P-O3'-C3'	5.59	128.58	120.20
12	B	2878	U	C4'-C3'-C2'	-5.59	97.01	102.60
32	W	34	LYS	CA-C-N	5.59	128.81	120.87
32	W	34	LYS	C-N-CA	5.59	128.81	120.87
11	A	39	A	C1'-C2'-O2'	-5.59	100.02	108.40
12	B	853	C	C4'-C3'-C2'	-5.59	97.01	102.60
12	B	1934	C	O4'-C1'-N1	5.59	116.88	108.50
12	B	1556	C	O4'-C1'-N1	5.59	116.88	108.50
12	B	2426	A	P-O5'-C5'	-5.59	112.52	120.90
13	C	141	HIS	CG-CD2-NE2	5.59	112.79	107.20
10	9	68	GLU	N-CA-C	5.58	122.70	110.80
12	B	1271	G	O4'-C1'-N9	5.58	116.88	108.50
12	B	301	G	O3'-P-O5'	-5.58	95.62	104.00
12	B	552	U	C4'-C3'-C2'	-5.58	97.02	102.60
14	D	179	ARG	NE-CZ-NH1	-5.58	115.92	121.50
21	K	80	ASP	CA-C-O	5.58	126.39	119.97
12	B	641	U	C4'-C3'-O3'	-5.58	104.63	113.00
12	B	2739	U	C3'-C2'-C1'	5.58	106.88	101.30
18	H	70	GLU	CA-C-O	-5.58	114.67	120.92
12	B	228	C	O4'-C1'-N1	5.58	116.87	108.50
12	B	2334	U	O4'-C1'-N1	5.58	116.57	108.20
12	B	2439	A	O4'-C1'-N9	5.58	116.57	108.20
12	B	82	U	P-O5'-C5'	5.58	129.27	120.90
12	B	127	A	O3'-P-O5'	-5.58	95.63	104.00
12	B	1702	G	P-O3'-C3'	-5.58	111.83	120.20
12	B	2573	C	P-O3'-C3'	-5.58	111.83	120.20
21	K	49	ARG	CB-CG-CD	5.58	124.13	111.30
28	R	7	SER	N-CA-C	-5.58	104.00	111.87
12	B	1718	G	O4'-C1'-C2'	-5.58	102.02	107.60
12	B	69	C	O4'-C1'-N1	5.58	116.86	108.50
12	B	777	G	C1'-C2'-O2'	5.58	116.77	108.40
12	B	1577	C	C5'-C4'-C3'	5.58	124.36	116.00
12	B	1930	G	P-O3'-C3'	5.58	128.56	120.20
14	D	205	PRO	CA-C-O	-5.58	114.28	122.31
20	J	43	GLU	CA-C-N	5.58	128.07	120.54
20	J	43	GLU	C-N-CA	5.58	128.07	120.54
21	K	49	ARG	N-CA-C	-5.58	99.58	109.06
24	N	61	ALA	N-CA-CB	5.58	118.05	109.91
12	B	1850	G	C1'-C2'-O2'	5.57	116.76	108.40
14	D	48	ILE	N-CA-C	-5.57	99.65	108.90
16	F	89	THR	N-CA-C	-5.57	100.62	109.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	K	21	CYS	O-C-N	-5.57	116.28	122.86
6	5	70	GLY	CA-C-N	5.57	128.02	120.44
6	5	70	GLY	C-N-CA	5.57	128.02	120.44
12	B	708	G	C4'-C3'-C2'	-5.57	97.03	102.60
13	C	44	ASN	CA-C-N	5.57	132.64	122.50
13	C	44	ASN	C-N-CA	5.57	132.64	122.50
12	B	227	A	O3'-P-O5'	5.57	112.36	104.00
12	B	702	U	C1'-O4'-C4'	-5.57	104.33	109.90
12	B	2790	U	P-O5'-C5'	5.57	129.26	120.90
13	C	47	ARG	N-CA-CB	5.57	119.90	110.49
12	B	1238	G	O4'-C4'-C3'	-5.57	98.43	104.00
13	C	12	ARG	CA-C-N	5.57	127.68	120.44
13	C	12	ARG	C-N-CA	5.57	127.68	120.44
12	B	1936	A	C5'-C4'-O4'	5.57	117.45	109.10
13	C	267	VAL	CA-C-O	-5.57	114.84	120.69
16	F	94	ARG	N-CA-C	5.57	118.11	111.71
18	H	57	LYS	CG-CD-CE	5.57	124.11	111.30
12	B	128	C	O5'-C5'-C4'	-5.57	103.15	111.50
12	B	1734	G	O4'-C1'-N9	5.57	116.85	108.50
12	B	2139	U	O4'-C1'-C2'	-5.57	102.03	107.60
12	B	2798	U	C5'-C4'-O4'	5.57	117.45	109.10
12	B	2892	G	O4'-C1'-N9	5.57	116.85	108.50
23	M	129	THR	N-CA-C	-5.57	99.97	108.76
12	B	1102	C	O4'-C1'-C2'	-5.56	102.04	107.60
12	B	1400	U	O4'-C1'-N1	5.56	116.84	108.50
12	B	2780	G	O4'-C1'-N9	5.56	116.55	108.20
14	D	187	LEU	CA-C-O	-5.56	113.41	120.20
23	M	67	VAL	N-CA-CB	5.56	120.41	111.23
24	N	14	SER	N-CA-C	5.56	119.33	112.54
6	5	108	GLU	CA-C-N	5.56	130.58	122.85
6	5	108	GLU	C-N-CA	5.56	130.58	122.85
12	B	889	C	P-O5'-C5'	-5.56	112.56	120.90
12	B	2626	C	O4'-C4'-C3'	-5.56	98.44	104.00
13	C	117	SER	N-CA-C	-5.56	99.95	109.24
16	F	113	PHE	N-CA-C	5.56	118.51	110.28
17	G	67	ALA	CA-C-N	5.56	128.52	120.79
17	G	67	ALA	C-N-CA	5.56	128.52	120.79
10	9	46	TRP	CD2-CE2-CZ2	-5.56	116.84	122.40
32	W	77	VAL	N-CA-CB	5.56	120.41	111.23
12	B	940	G	O4'-C4'-C3'	-5.56	98.44	104.00
12	B	2078	C	P-O5'-C5'	5.56	129.24	120.90
12	B	2465	C	C4'-C3'-O3'	-5.56	104.66	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	U	88	ASP	N-CA-CB	-5.56	102.72	111.39
12	B	214	G	O4'-C1'-N9	5.56	116.83	108.50
12	B	583	G	O4'-C1'-N9	5.56	116.83	108.50
12	B	1727	C	O4'-C1'-C2'	-5.56	102.04	107.60
21	K	92	GLU	CA-C-N	5.56	128.98	121.20
21	K	92	GLU	C-N-CA	5.56	128.98	121.20
12	B	1932	A	O4'-C4'-C3'	-5.55	98.44	104.00
12	B	2222	C	O4'-C1'-N1	5.55	116.83	108.50
12	B	2290	G	O4'-C1'-N9	5.55	116.83	108.50
13	C	176	ARG	NE-CZ-NH1	5.55	127.05	121.50
21	K	20	MET	O-C-N	-5.55	116.89	123.22
12	B	957	C	C4'-C3'-C2'	-5.55	97.05	102.60
12	B	1102	C	O4'-C1'-N1	5.55	116.83	108.50
12	B	1354	A	O5'-C5'-C4'	-5.55	103.17	111.50
12	B	731	C	C3'-C2'-C1'	-5.55	95.75	101.30
12	B	1717	A	C5'-C4'-C3'	5.55	124.33	116.00
12	B	2070	A	O4'-C1'-N9	5.55	116.83	108.50
12	B	442	G	O4'-C4'-C3'	-5.55	100.55	106.10
12	B	1076	C	C5'-C4'-C3'	5.55	124.32	116.00
12	B	1129	A	P-O3'-C3'	5.55	128.52	120.20
12	B	1271	G	C4'-C3'-O3'	-5.55	104.68	113.00
12	B	1383	A	P-O3'-C3'	-5.55	111.88	120.20
12	B	2257	U	O4'-C1'-N1	5.55	116.82	108.50
12	B	761	A	C5'-C4'-C3'	-5.55	107.68	116.00
12	B	1665	A	C4'-C3'-C2'	-5.55	97.05	102.60
5	4	48	TYR	CB-CG-CD2	-5.55	112.48	120.80
12	B	1252	G	C3'-C2'-O2'	-5.55	106.28	114.60
12	B	2220	U	C5'-C4'-C3'	5.55	124.32	116.00
12	B	2760	C	O4'-C4'-C3'	5.55	109.55	104.00
12	B	2773	C	C4'-C3'-C2'	-5.55	97.05	102.60
16	F	92	GLY	CA-C-N	5.55	128.03	120.54
16	F	92	GLY	C-N-CA	5.55	128.03	120.54
29	S	54	ALA	CB-CA-C	-5.55	101.58	110.79
11	A	7	G	O4'-C4'-C3'	-5.54	98.45	104.00
12	B	942	G	C4'-C3'-O3'	-5.54	104.68	113.00
15	E	42	GLY	CA-C-N	5.54	130.08	121.26
15	E	42	GLY	C-N-CA	5.54	130.08	121.26
18	H	20	ASN	CA-C-O	5.54	127.30	120.92
12	B	1761	C	C6-N1-C1'	-5.54	104.17	120.80
12	B	1834	U	C4'-C3'-O3'	-5.54	104.68	113.00
12	B	2469	A	C4'-C3'-C2'	-5.54	97.06	102.60
12	B	1747	U	O5'-C5'-C4'	-5.54	103.19	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1960	A	O4'-C1'-N9	5.54	116.81	108.50
12	B	2401	U	C4'-C3'-C2'	5.54	108.14	102.60
3	2	3	THR	N-CA-CB	5.54	119.61	110.69
13	C	63	ILE	N-CA-C	-5.54	99.17	107.37
11	A	68	C	C4'-C3'-C2'	-5.54	97.06	102.60
12	B	526	A	C3'-C2'-O2'	5.54	119.01	110.70
21	K	50	GLY	N-CA-C	-5.54	107.62	115.43
12	B	2650	U	P-O3'-C3'	-5.54	111.89	120.20
14	D	118	PHE	CA-CB-CG	5.54	119.34	113.80
12	B	497	A	O4'-C1'-N9	5.54	116.80	108.50
12	B	557	C	P-O5'-C5'	5.54	129.20	120.90
12	B	1285	A	P-O5'-C5'	5.54	129.20	120.90
12	B	1441	G	P-O5'-C5'	5.54	129.20	120.90
13	C	68	ARG	N-CA-C	5.54	119.34	111.92
15	E	111	GLU	N-CA-C	-5.54	105.82	113.18
28	R	26	ASP	CA-CB-CG	-5.54	107.06	112.60
12	B	1199	U	P-O3'-C3'	-5.53	111.90	120.20
20	J	131	ASN	CA-C-N	5.53	132.11	121.54
20	J	131	ASN	C-N-CA	5.53	132.11	121.54
6	5	9	ARG	N-CA-C	5.53	117.75	111.11
12	B	789	A	C3'-C2'-C1'	-5.53	95.97	101.50
12	B	1562	U	C5'-C4'-C3'	-5.53	107.70	116.00
11	A	38	C	C3'-C2'-C1'	-5.53	95.77	101.30
12	B	408	G	C5'-C4'-C3'	-5.53	107.70	116.00
12	B	1032	A	O4'-C1'-C2'	-5.53	102.07	107.60
12	B	1385	A	C4'-C3'-C2'	-5.53	97.07	102.60
12	B	2518	A	O3'-P-O5'	-5.53	95.70	104.00
27	Q	72	GLY	O-C-N	5.53	129.89	122.70
12	B	2331	G	O4'-C1'-N9	5.53	116.79	108.50
12	B	2756	U	P-O3'-C3'	5.53	128.49	120.20
12	B	2776	A	C5'-C4'-O4'	5.53	117.39	109.10
8	7	32	LEU	N-CA-CB	5.53	119.83	110.49
12	B	721	A	C4'-C3'-O3'	-5.53	104.71	113.00
12	B	1020	A	C3'-C2'-O2'	-5.53	106.31	114.60
12	B	1648	U	O4'-C1'-N1	5.53	116.79	108.50
12	B	2097	A	O5'-C5'-C4'	-5.53	103.21	111.50
24	N	3	HIS	CA-C-N	5.53	130.21	122.36
24	N	3	HIS	C-N-CA	5.53	130.21	122.36
8	7	46	LYS	N-CA-C	-5.53	101.12	109.85
11	A	87	U	C2'-C3'-O3'	5.53	117.79	109.50
12	B	377	G	C3'-C2'-O2'	5.53	118.99	110.70
12	B	865	C	P-O3'-C3'	-5.53	111.91	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1069	A	O4'-C1'-N9	5.53	116.79	108.50
12	B	1558	C	C1'-C2'-O2'	-5.53	103.51	111.80
12	B	2120	G	C5'-C4'-C3'	-5.53	107.71	116.00
10	9	307	GLU	CA-C-N	5.52	132.09	121.54
10	9	307	GLU	C-N-CA	5.52	132.09	121.54
12	B	1864	U	O4'-C1'-N1	5.52	116.79	108.50
12	B	1944	U	C4'-C3'-C2'	5.52	108.12	102.60
12	B	89	A	O4'-C1'-N9	5.52	116.78	108.50
12	B	151	C	C4'-C3'-C2'	-5.52	97.08	102.60
12	B	591	U	O4'-C1'-C2'	-5.52	102.08	107.60
12	B	691	C	C4'-C3'-C2'	-5.52	97.08	102.60
12	B	2615	U	O4'-C1'-C2'	-5.52	102.08	107.60
12	B	2848	G	O3'-P-O5'	-5.52	95.72	104.00
32	W	58	SER	O-C-N	5.52	128.68	122.27
12	B	820	A	C5'-C4'-C3'	5.52	124.28	116.00
12	B	796	C	O4'-C1'-N1	5.52	116.78	108.50
12	B	957	C	O4'-C1'-C2'	-5.52	100.28	105.80
12	B	1859	U	C4'-C3'-O3'	-5.52	104.72	113.00
12	B	1970	A	C4'-C3'-O3'	5.52	117.68	109.40
18	H	75	LEU	N-CA-CB	5.52	119.82	110.49
19	I	121	ILE	CA-C-N	5.52	127.68	120.28
19	I	121	ILE	C-N-CA	5.52	127.68	120.28
20	J	88	THR	CA-C-N	5.52	127.99	120.54
20	J	88	THR	C-N-CA	5.52	127.99	120.54
12	B	1259	G	C3'-C2'-C1'	-5.52	95.78	101.30
12	B	1622	G	P-O3'-C3'	-5.52	111.92	120.20
12	B	2717	C	O4'-C4'-C3'	-5.52	98.48	104.00
15	E	161	ALA	CA-C-O	5.52	126.15	119.31
17	G	162	ARG	N-CA-C	-5.52	101.87	110.42
18	H	69	ALA	CA-C-N	5.52	129.10	120.82
18	H	69	ALA	C-N-CA	5.52	129.10	120.82
27	Q	83	LYS	CA-CB-CG	-5.52	103.06	114.10
29	S	100	THR	CA-C-O	-5.52	115.37	121.33
11	A	101	A	C1'-O4'-C4'	-5.52	104.38	109.90
28	R	41	ILE	CA-C-O	-5.52	116.01	122.13
11	A	39	A	P-O5'-C5'	-5.51	112.63	120.90
12	B	332	A	O4'-C1'-N9	5.51	116.47	108.20
12	B	2467	C	C4'-C3'-O3'	-5.51	104.73	113.00
12	B	2875	C	C5'-C4'-C3'	-5.51	107.73	116.00
13	C	226	PRO	CA-C-N	5.51	128.02	120.46
13	C	226	PRO	C-N-CA	5.51	128.02	120.46
12	B	2066	C	O4'-C1'-N1	5.51	116.77	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	O	17	LYS	N-CA-CB	-5.51	102.08	110.07
8	7	44	ARG	CA-C-N	5.51	126.73	119.84
8	7	44	ARG	C-N-CA	5.51	126.73	119.84
12	B	594	U	C3'-C2'-O2'	5.51	118.97	110.70
6	5	89	ALA	N-CA-CB	-5.51	101.99	110.20
12	B	101	A	C4'-C3'-C2'	-5.51	97.09	102.60
12	B	847	U	O4'-C1'-N1	5.51	116.76	108.50
12	B	2282	G	O4'-C4'-C3'	-5.51	100.59	106.10
12	B	2763	G	O4'-C1'-N9	5.51	116.76	108.50
15	E	165	HIS	CE1-NE2-CD2	-5.51	103.49	109.00
30	T	15	HIS	CE1-NE2-CD2	-5.51	103.49	109.00
26	P	32	VAL	CA-C-N	5.51	128.67	120.90
26	P	32	VAL	C-N-CA	5.51	128.67	120.90
12	B	1070	A	O3'-P-O5'	-5.51	95.74	104.00
12	B	1108	U	P-O3'-C3'	-5.51	111.94	120.20
12	B	2028	U	P-O3'-C3'	5.51	128.46	120.20
24	N	37	THR	CA-C-O	-5.51	115.13	121.19
29	S	10	ALA	O-C-N	-5.51	116.51	123.01
30	T	69	ARG	N-CA-C	5.51	122.53	110.80
11	A	46	A	C4'-C3'-C2'	-5.50	97.09	102.60
20	J	86	GLN	OE1-CD-NE2	5.50	128.10	122.60
6	5	110	ASN	N-CA-C	-5.50	106.60	113.15
12	B	737	C	O4'-C1'-N1	5.50	116.75	108.50
12	B	1368	G	O4'-C1'-N9	5.50	116.75	108.50
33	Y	7	GLY	CA-C-O	5.50	126.43	119.72
12	B	191	A	C3'-C2'-C1'	-5.50	95.80	101.30
12	B	1543	G	C4'-C3'-O3'	-5.50	104.75	113.00
12	B	1617	C	O4'-C1'-C2'	-5.50	100.30	105.80
12	B	2109	U	O3'-P-O5'	5.50	112.25	104.00
16	F	41	GLU	N-CA-CB	5.50	118.13	110.26
12	B	995	C	C5'-C4'-C3'	5.50	124.25	116.00
12	B	1634	A	C3'-C2'-O2'	-5.50	106.35	114.60
23	M	36	VAL	N-CA-C	-5.50	99.90	108.86
26	P	103	THR	N-CA-C	-5.50	98.96	108.69
18	H	70	GLU	O-C-N	5.50	128.43	122.11
21	K	114	LYS	N-CA-CB	5.50	119.78	110.49
12	B	2085	U	O4'-C1'-N1	5.50	116.75	108.50
12	B	2424	C	O5'-C5'-C4'	-5.50	103.25	111.50
32	W	49	ASN	CB-CA-C	-5.50	100.46	110.63
12	B	2048	G	P-O5'-C5'	5.50	129.14	120.90
12	B	2392	A	P-O3'-C3'	5.50	128.44	120.20
16	F	22	ASN	CA-CB-CG	5.50	118.09	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	J	63	ALA	N-CA-C	-5.50	100.77	108.96
2	1	41	HIS	CG-CD2-NE2	5.49	112.69	107.20
12	B	628	G	P-O5'-C5'	5.49	129.14	120.90
12	B	683	U	C4'-C3'-C2'	-5.49	97.11	102.60
12	B	755	U	P-O3'-C3'	-5.49	111.96	120.20
12	B	1369	G	O5'-C5'-C4'	-5.49	103.26	111.50
12	B	1381	G	P-O3'-C3'	-5.49	111.96	120.20
12	B	1776	G	O4'-C1'-C2'	-5.49	102.11	107.60
13	C	69	ASN	CA-C-O	-5.49	114.70	120.63
15	E	85	PHE	N-CA-C	-5.49	106.58	113.28
24	N	88	ALA	N-CA-C	-5.49	99.10	110.80
3	2	28	LEU	N-CA-CB	5.49	118.64	110.29
13	C	57	HIS	CE1-NE2-CD2	-5.49	103.51	109.00
3	2	39	ASP	CA-CB-CG	-5.49	107.11	112.60
12	B	291	G	C1'-O4'-C4'	5.49	115.39	109.90
12	B	1209	U	O4'-C1'-N1	5.49	116.73	108.50
12	B	1564	C	C5'-C4'-C3'	5.49	124.23	116.00
12	B	1912	A	C4'-C3'-C2'	-5.49	97.11	102.60
29	S	60	HIS	N-CA-C	-5.49	101.53	110.20
12	B	956	G	O4'-C1'-N9	5.49	116.73	108.50
12	B	381	G	P-O3'-C3'	-5.49	111.97	120.20
12	B	640	C	C5'-C4'-C3'	-5.49	107.77	116.00
12	B	1974	C	O5'-C5'-C4'	-5.49	103.27	111.50
12	B	2425	A	C3'-C2'-C1'	5.49	106.99	101.50
16	F	134	GLN	N-CA-CB	-5.49	103.74	110.98
18	H	89	LYS	CA-C-O	-5.49	114.70	121.06
21	K	77	ILE	N-CA-CB	5.49	118.58	111.67
12	B	1737	G	P-O5'-C5'	5.48	129.13	120.90
12	B	2633	G	C5'-C4'-C3'	-5.48	107.77	116.00
25	O	116	GLN	CB-CG-CD	-5.48	103.28	112.60
12	B	818	G	O4'-C4'-C3'	5.48	109.48	104.00
12	B	1667	G	C1'-O4'-C4'	-5.48	104.22	109.70
12	B	2443	C	O5'-C5'-C4'	-5.48	103.28	111.50
13	C	108	GLY	N-CA-C	-5.48	100.18	113.18
18	H	17	ASP	N-CA-C	-5.48	99.12	110.80
2	1	26	PHE	N-CA-C	-5.48	104.71	111.40
3	2	17	PRO	N-CA-CB	5.48	109.36	103.33
14	D	158	GLY	CA-C-N	5.48	132.01	121.54
14	D	158	GLY	C-N-CA	5.48	132.01	121.54
16	F	51	ASN	N-CA-CB	5.48	118.02	110.07
32	W	55	GLU	CA-C-N	5.48	127.56	120.44
32	W	55	GLU	C-N-CA	5.48	127.56	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	66	VAL	N-CA-C	-5.48	105.03	111.00
2	1	26	PHE	CB-CA-C	-5.48	101.59	110.79
10	9	313	ILE	CA-C-N	5.48	132.01	121.54
10	9	313	ILE	C-N-CA	5.48	132.01	121.54
12	B	673	C	P-O3'-C3'	-5.48	111.98	120.20
12	B	2785	C	O4'-C1'-N1	5.48	116.72	108.50
12	B	1651	G	C4'-C3'-O3'	-5.48	104.78	113.00
12	B	1897	G	O4'-C1'-N9	5.48	116.72	108.50
23	M	66	ARG	NE-CZ-NH2	-5.48	114.27	119.20
12	B	2354	C	O4'-C1'-C2'	-5.48	102.12	107.60
12	B	2661	G	C3'-C2'-C1'	5.48	106.78	101.30
2	1	29	ARG	NE-CZ-NH1	-5.47	116.03	121.50
12	B	645	C	O3'-P-O5'	-5.47	95.79	104.00
12	B	1005	C	O4'-C1'-N1	5.47	116.71	108.50
12	B	1043	C	C4'-C3'-C2'	-5.47	97.13	102.60
12	B	1300	G	C3'-C2'-C1'	-5.47	96.03	101.50
12	B	1862	G	C3'-C2'-C1'	-5.47	95.83	101.30
12	B	1936	A	O3'-P-O5'	5.47	112.21	104.00
28	R	95	ASP	N-CA-C	-5.47	100.96	109.72
2	1	54	LYS	CA-C-N	5.47	127.55	120.44
2	1	54	LYS	C-N-CA	5.47	127.55	120.44
6	5	32	GLU	N-CA-C	5.47	119.68	112.89
12	B	2144	G	C5'-C4'-C3'	-5.47	106.99	115.20
21	K	93	GLN	CA-C-N	5.47	126.24	120.11
21	K	93	GLN	C-N-CA	5.47	126.24	120.11
11	A	101	A	C5'-C4'-C3'	-5.47	107.80	116.00
12	B	139	U	O5'-C5'-C4'	5.47	119.90	111.70
12	B	2155	U	O4'-C1'-N1	5.47	116.70	108.50
12	B	2437	G	P-O3'-C3'	-5.47	112.00	120.20
13	C	19	VAL	N-CA-C	-5.47	100.31	108.46
23	M	46	ILE	O-C-N	5.47	127.42	121.90
6	5	195	ALA	N-CA-C	5.47	116.92	111.07
10	9	325	CYS	N-CA-CB	5.47	118.16	110.12
12	B	2735	G	C5'-C4'-C3'	-5.47	107.80	116.00
12	B	632	A	P-O5'-C5'	5.47	129.10	120.90
12	B	851	C	C1'-C2'-O2'	5.47	116.60	108.40
12	B	1824	G	P-O5'-C5'	-5.47	112.70	120.90
1	0	26	ARG	NE-CZ-NH1	5.46	126.96	121.50
17	G	160	GLY	CA-C-N	5.46	128.75	120.77
17	G	160	GLY	C-N-CA	5.46	128.75	120.77
25	O	78	VAL	N-CA-CB	5.46	119.69	110.56
3	2	55	LYS	N-CA-C	-5.46	100.77	109.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1211	C	O4'-C1'-N1	5.46	116.69	108.50
12	B	2612	C	O4'-C1'-N1	5.46	116.69	108.50
8	7	12	ARG	N-CA-C	-5.46	106.39	113.16
12	B	1460	U	P-O5'-C5'	5.46	129.09	120.90
16	F	86	CYS	N-CA-C	-5.46	99.41	108.75
25	O	45	SER	CA-C-O	5.46	126.25	119.97
12	B	2194	U	O4'-C1'-N1	5.46	116.69	108.50
6	5	90	ALA	N-CA-CB	5.46	118.24	110.16
12	B	15	G	C5'-C4'-C3'	-5.46	107.81	116.00
12	B	1273	U	O4'-C4'-C3'	5.46	109.46	104.00
17	G	51	PHE	CA-C-N	5.46	130.44	121.87
17	G	51	PHE	C-N-CA	5.46	130.44	121.87
20	J	98	GLU	CB-CA-C	-5.46	99.87	110.46
12	B	919	U	C5'-C4'-O4'	5.46	117.98	109.80
12	B	2731	G	O4'-C1'-N9	5.46	116.69	108.50
17	G	136	ASP	CA-C-N	5.46	128.14	120.28
17	G	136	ASP	C-N-CA	5.46	128.14	120.28
12	B	2212	A	O4'-C1'-C2'	-5.46	100.34	105.80
29	S	22	ASP	CA-CB-CG	-5.46	107.14	112.60
11	A	14	U	P-O3'-C3'	-5.45	112.02	120.20
12	B	1483	G	O5'-C5'-C4'	5.45	119.68	111.50
19	I	107	GLU	CA-C-N	5.45	128.16	120.42
19	I	107	GLU	C-N-CA	5.45	128.16	120.42
20	J	33	ALA	CA-C-N	5.45	127.53	120.44
20	J	33	ALA	C-N-CA	5.45	127.53	120.44
27	Q	33	VAL	CA-C-O	5.45	127.60	120.78
10	9	98	ASP	CA-C-N	5.45	128.60	120.31
10	9	98	ASP	C-N-CA	5.45	128.60	120.31
12	B	884	U	C4'-C3'-C2'	-5.45	97.15	102.60
12	B	552	U	O4'-C1'-N1	5.45	116.68	108.50
13	C	63	ILE	N-CA-CB	5.45	118.54	111.67
14	D	122	VAL	CA-CB-CG1	5.45	119.67	110.40
11	A	116	G	C4'-C3'-C2'	-5.45	97.15	102.60
12	B	806	C	O4'-C1'-N1	5.45	116.67	108.50
12	B	2850	A	C3'-C2'-C1'	5.45	106.75	101.30
18	H	58	LEU	N-CA-C	5.45	118.14	111.82
11	A	73	A	O3'-P-O5'	-5.45	95.83	104.00
12	B	1315	C	P-O5'-C5'	-5.45	112.73	120.90
12	B	2051	A	O3'-P-O5'	-5.45	95.83	104.00
12	B	2824	C	C5'-C4'-C3'	5.45	124.17	116.00
24	N	85	PRO	CA-C-O	5.45	123.52	118.29
11	A	42	C	O5'-C5'-C4'	5.45	119.67	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	A	71	C	P-O5'-C5'	5.45	129.07	120.90
12	B	576	U	O4'-C4'-C3'	-5.45	98.55	104.00
12	B	654	A	C3'-C2'-O2'	-5.45	106.43	114.60
12	B	1730	C	C4'-C3'-O3'	5.45	117.57	109.40
12	B	2330	G	C4'-C3'-O3'	-5.45	104.83	113.00
12	B	2636	C	O4'-C1'-N1	5.45	116.67	108.50
15	E	145	ASP	CA-CB-CG	-5.45	107.16	112.60
24	N	73	ASN	CA-C-N	5.45	128.12	120.28
24	N	73	ASN	C-N-CA	5.45	128.12	120.28
3	2	38	GLU	O-C-N	-5.44	116.82	123.19
12	B	354	A	C3'-C2'-C1'	5.44	106.74	101.30
12	B	1844	C	C3'-C2'-C1'	-5.44	95.86	101.30
11	A	12	C	C4'-C3'-O3'	5.44	117.56	109.40
12	B	731	C	C4'-C3'-O3'	-5.44	104.84	113.00
12	B	751	A	C1'-O4'-C4'	-5.44	104.46	109.90
12	B	1159	U	O5'-C5'-C4'	-5.44	103.33	111.50
12	B	1295	C	P-O5'-C5'	-5.44	112.74	120.90
12	B	1535	A	O4'-C1'-N9	5.44	116.36	108.20
12	B	1671	U	O4'-C1'-N1	5.44	116.66	108.50
12	B	2818	U	C4'-C3'-C2'	-5.44	97.16	102.60
5	4	30	PRO	CA-C-N	5.44	129.48	120.94
5	4	30	PRO	C-N-CA	5.44	129.48	120.94
6	5	140	PRO	N-CD-CG	5.44	111.36	103.20
11	A	34	A	C4'-C3'-O3'	-5.44	104.84	113.00
12	B	154	U	C1'-O4'-C4'	5.44	115.34	109.90
12	B	240	C	C4'-C3'-O3'	-5.44	104.84	113.00
12	B	400	G	O3'-P-O5'	-5.44	95.84	104.00
12	B	477	A	C4'-C3'-O3'	-5.44	104.84	113.00
12	B	2679	A	P-O3'-C3'	5.44	128.36	120.20
12	B	2855	C	C5'-C4'-C3'	-5.44	107.84	116.00
13	C	263	ASP	CA-C-O	-5.44	113.95	120.10
16	F	3	LEU	CA-C-N	5.44	131.93	121.54
16	F	3	LEU	C-N-CA	5.44	131.93	121.54
27	Q	48	ASP	CA-C-O	-5.44	112.25	119.10
12	B	1245	G	O4'-C1'-N9	5.44	116.66	108.50
12	B	2633	G	C4'-C3'-C2'	-5.44	97.16	102.60
12	B	2847	U	O4'-C1'-C2'	-5.44	102.16	107.60
21	K	11	ALA	CB-CA-C	-5.44	101.37	110.56
32	W	93	ARG	CA-C-N	5.44	131.49	121.70
32	W	93	ARG	C-N-CA	5.44	131.49	121.70
12	B	2850	A	C4'-C3'-C2'	-5.44	97.16	102.60
13	C	213	ARG	N-CA-C	-5.44	105.96	112.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	U	71	ILE	CA-C-O	-5.44	117.39	121.68
1	0	40	GLU	CA-C-N	5.43	127.51	120.44
1	0	40	GLU	C-N-CA	5.43	127.51	120.44
2	1	6	LEU	CA-C-O	-5.43	113.72	119.97
6	5	98	GLU	CB-CA-C	-5.43	99.73	109.24
12	B	477	A	P-O5'-C5'	-5.43	112.75	120.90
12	B	1055	G	O3'-P-O5'	5.43	112.15	104.00
12	B	1879	C	P-O5'-C5'	5.43	129.05	120.90
12	B	2262	U	C2'-C3'-O3'	5.43	121.85	113.70
3	2	41	PRO	CA-C-N	5.43	127.83	120.44
3	2	41	PRO	C-N-CA	5.43	127.83	120.44
8	7	51	LYS	N-CA-C	5.43	122.37	110.80
12	B	1000	A	C3'-C2'-C1'	-5.43	95.87	101.30
12	B	1761	C	O4'-C1'-N1	5.43	116.65	108.50
12	B	2074	U	C3'-C2'-C1'	5.43	106.73	101.30
12	B	2699	C	C5'-C4'-C3'	5.43	124.15	116.00
30	T	26	LYS	N-CA-CB	5.43	118.11	110.12
10	9	18	ASN	N-CA-C	-5.43	98.16	107.23
12	B	1403	A	C5'-C4'-C3'	-5.43	107.85	116.00
12	B	2396	G	C3'-C2'-C1'	-5.43	95.87	101.30
20	J	129	GLU	CA-C-O	-5.43	115.26	121.40
9	8	16	ILE	N-CA-CB	5.43	120.19	111.23
12	B	842	U	C3'-C2'-C1'	-5.43	95.87	101.30
12	B	1142	A	C4'-C3'-C2'	5.43	108.03	102.60
12	B	1760	C	O4'-C1'-N1	5.43	116.64	108.50
12	B	2320	U	C3'-C2'-C1'	-5.43	96.07	101.50
21	K	92	GLU	N-CA-C	-5.43	104.43	111.71
11	A	31	C	C1'-C2'-O2'	-5.43	100.26	108.40
33	Y	69	GLU	CA-C-N	5.43	130.55	123.06
33	Y	69	GLU	C-N-CA	5.43	130.55	123.06
12	B	1074	G	P-O3'-C3'	-5.43	112.06	120.20
12	B	1480	C	O4'-C1'-N1	5.43	116.64	108.50
25	O	85	LYS	CA-C-O	5.43	126.21	119.97
6	5	3	LYS	CB-CA-C	-5.42	100.53	110.62
10	9	147	GLY	N-CA-C	-5.42	105.33	112.82
12	B	137	U	O4'-C1'-C2'	-5.42	102.17	107.60
12	B	449	A	C4'-C3'-O3'	-5.42	104.86	113.00
12	B	622	G	O3'-P-O5'	-5.42	95.86	104.00
12	B	710	U	O4'-C1'-N1	5.42	116.64	108.50
12	B	714	U	C4'-C3'-C2'	-5.42	97.17	102.60
12	B	1022	G	C4'-C3'-C2'	-5.42	97.18	102.60
12	B	2178	C	O4'-C1'-C2'	-5.42	102.18	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	H	62	LEU	CA-C-O	5.42	125.16	119.03
29	S	84	ARG	CD-NE-CZ	-5.42	116.81	124.40
10	9	40	GLY	N-CA-C	5.42	126.03	113.18
11	A	110	C	O4'-C1'-N1	5.42	116.63	108.50
23	M	97	GLN	CG-CD-NE2	-5.42	108.27	116.40
29	S	11	ARG	CA-C-N	5.42	131.90	121.54
29	S	11	ARG	C-N-CA	5.42	131.90	121.54
12	B	1034	G	C5'-C4'-C3'	-5.42	107.87	116.00
12	B	2180	U	O4'-C1'-N1	5.42	116.63	108.50
12	B	2280	G	C5'-C4'-C3'	-5.42	107.87	116.00
22	L	17	LYS	N-CA-CB	5.42	118.59	109.92
10	9	96	VAL	O-C-N	5.42	128.87	123.18
12	B	2850	A	O4'-C1'-N9	5.42	116.63	108.50
6	5	168	ASN	N-CA-C	-5.42	105.98	112.59
12	B	1789	A	P-O5'-C5'	5.42	129.03	120.90
14	D	141	ARG	N-CA-C	-5.42	99.26	110.80
26	P	28	LYS	CB-CA-C	-5.42	101.96	110.79
12	B	1219	U	C4'-C3'-O3'	-5.42	104.87	113.00
12	B	1239	G	O4'-C1'-C2'	-5.42	102.18	107.60
12	B	2242	G	C4'-C3'-O3'	-5.42	104.87	113.00
12	B	2589	A	P-O5'-C5'	-5.42	112.78	120.90
15	E	169	VAL	CA-CB-CG1	-5.42	101.19	110.40
22	L	118	THR	CA-C-N	5.42	125.18	119.76
22	L	118	THR	C-N-CA	5.42	125.18	119.76
12	B	763	G	C4'-C3'-C2'	5.42	108.02	102.60
12	B	1638	C	C3'-C2'-C1'	5.42	106.72	101.30
12	B	1650	A	O4'-C4'-C3'	-5.42	98.58	104.00
13	C	225	ASN	CA-C-N	5.42	126.61	119.84
13	C	225	ASN	C-N-CA	5.42	126.61	119.84
12	B	1779	U	O4'-C1'-N1	5.41	116.62	108.50
12	B	2244	U	O4'-C1'-N1	5.41	116.62	108.50
12	B	2407	A	O3'-P-O5'	-5.41	95.88	104.00
19	I	135	MET	CB-CA-C	-5.41	100.27	110.01
12	B	600	G	O4'-C4'-C3'	5.41	109.41	104.00
14	D	157	LYS	CA-C-N	5.41	128.56	121.85
14	D	157	LYS	C-N-CA	5.41	128.56	121.85
22	L	84	LYS	CA-C-N	-5.41	117.67	122.97
22	L	84	LYS	C-N-CA	-5.41	117.67	122.97
28	R	73	LYS	N-CA-C	5.41	117.56	108.96
11	A	47	C	O4'-C1'-N1	5.41	116.61	108.50
12	B	1142	A	P-O3'-C3'	5.41	128.31	120.20
12	B	1638	C	P-O5'-C5'	5.41	129.02	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1908	C	P-O3'-C3'	-5.41	112.08	120.20
12	B	2166	U	O3'-P-O5'	-5.41	95.89	104.00
12	B	2377	A	P-O5'-C5'	5.41	129.02	120.90
20	J	121	LYS	CB-CA-C	-5.41	101.65	110.85
12	B	535	G	C4'-C3'-C2'	-5.41	97.19	102.60
12	B	1802	A	P-O3'-C3'	-5.41	112.09	120.20
12	B	2088	A	P-O3'-C3'	-5.41	112.09	120.20
12	B	2695	U	O5'-C5'-C4'	-5.41	103.39	111.50
17	G	126	THR	N-CA-C	-5.41	101.07	109.24
21	K	3	GLN	CB-CA-C	-5.41	102.39	110.88
32	W	34	LYS	N-CA-C	-5.41	104.28	112.99
12	B	2258	C	C1'-O4'-C4'	5.41	115.11	109.70
15	E	165	HIS	CA-C-N	5.41	127.53	120.28
15	E	165	HIS	C-N-CA	5.41	127.53	120.28
6	5	129	GLN	CB-CG-CD	-5.41	103.41	112.60
12	B	534	U	O4'-C1'-C2'	-5.41	102.19	107.60
12	B	1688	U	C4'-C3'-C2'	-5.41	97.19	102.60
12	B	1777	U	O4'-C1'-N1	5.41	116.61	108.50
12	B	1833	C	O4'-C4'-C3'	-5.41	98.59	104.00
11	A	73	A	C4'-C3'-O3'	-5.40	104.89	113.00
23	M	121	ALA	N-CA-C	5.40	118.67	111.75
12	B	591	U	C4'-C3'-C2'	-5.40	97.20	102.60
12	B	1315	C	O5'-C5'-C4'	-5.40	103.40	111.50
12	B	2238	G	O4'-C4'-C3'	-5.40	100.70	106.10
12	B	2607	G	C4'-C3'-C2'	-5.40	97.20	102.60
12	B	2873	A	C2'-C3'-O3'	5.40	117.60	109.50
15	E	117	ARG	CG-CD-NE	-5.40	100.12	112.00
12	B	523	C	O4'-C1'-N1	5.40	116.60	108.50
12	B	861	A	C4'-C3'-O3'	-5.40	104.90	113.00
12	B	1211	C	O4'-C1'-C2'	-5.40	102.20	107.60
12	B	1413	A	O4'-C1'-N9	5.40	116.60	108.50
12	B	1503	A	C1'-O4'-C4'	5.40	115.30	109.90
12	B	1840	G	O3'-P-O5'	-5.40	95.90	104.00
17	G	152	ARG	CB-CA-C	5.40	119.50	109.51
29	S	75	PHE	CA-C-O	5.40	128.23	120.51
12	B	1184	U	C3'-C2'-C1'	-5.40	95.90	101.30
12	B	1337	G	P-O3'-C3'	-5.40	112.10	120.20
12	B	1619	G	C4'-C3'-O3'	-5.40	104.90	113.00
11	A	24	G	P-O3'-C3'	5.40	128.30	120.20
11	A	97	C	C5'-C4'-C3'	5.40	124.10	116.00
12	B	1353	A	C5'-C4'-C3'	-5.40	107.90	116.00
12	B	1496	A	P-O3'-C3'	-5.40	112.10	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2263	C	O4'-C1'-C2'	-5.40	102.20	107.60
12	B	2743	U	O4'-C1'-N1	5.40	116.59	108.50
19	I	136	GLY	CA-C-N	-5.40	115.38	122.99
19	I	136	GLY	C-N-CA	-5.40	115.38	122.99
20	J	46	PRO	N-CA-CB	5.40	108.13	103.27
33	Y	70	VAL	N-CA-C	-5.40	100.71	108.48
12	B	986	C	O4'-C1'-C2'	-5.40	102.20	107.60
16	F	29	ARG	N-CA-C	-5.40	101.52	109.18
12	B	198	C	P-O5'-C5'	5.39	128.99	120.90
12	B	1083	U	O4'-C1'-N1	5.39	116.59	108.50
12	B	1142	A	O4'-C4'-C3'	-5.39	100.70	106.10
12	B	1851	U	C4'-C3'-O3'	-5.39	104.91	113.00
14	D	109	VAL	N-CA-CB	5.39	120.13	111.23
32	W	16	ALA	CB-CA-C	-5.39	102.18	110.81
12	B	494	G	C4'-C3'-C2'	-5.39	97.21	102.60
12	B	1706	C	C5'-C4'-C3'	-5.39	107.11	115.20
12	B	2486	C	O4'-C1'-N1	5.39	116.59	108.50
12	B	2077	A	P-O5'-C5'	5.39	128.99	120.90
14	D	68	PHE	N-CA-C	-5.39	105.05	111.03
12	B	817	C	O5'-C5'-C4'	-5.39	103.42	111.50
12	B	1000	A	P-O3'-C3'	5.39	128.28	120.20
16	F	119	LYS	N-CA-C	-5.39	106.58	114.39
18	H	117	LEU	CA-C-O	-5.39	112.78	120.16
32	W	60	VAL	O-C-N	5.39	129.22	122.59
33	Y	13	ARG	NE-CZ-NH2	-5.39	114.35	119.20
12	B	421	C	P-O5'-C5'	-5.39	112.82	120.90
12	B	2279	G	N9-C1'-C2'	-5.39	103.92	112.00
24	N	4	ARG	CB-CG-CD	5.39	123.69	111.30
5	4	23	THR	N-CA-C	-5.39	101.53	109.18
6	5	184	LYS	O-C-N	5.39	128.29	122.15
10	9	72	ASN	CA-CB-CG	5.39	117.99	112.60
12	B	202	U	C3'-C2'-O2'	5.39	118.78	110.70
12	B	1124	G	O4'-C1'-N9	5.39	116.58	108.50
12	B	1244	A	C4'-C3'-C2'	-5.39	97.21	102.60
12	B	1337	G	O4'-C1'-C2'	-5.39	102.21	107.60
12	B	1717	A	C4'-C3'-O3'	-5.39	104.92	113.00
12	B	2371	G	O3'-P-O5'	-5.39	95.92	104.00
10	9	23	PHE	N-CA-C	-5.38	100.99	109.50
12	B	109	C	C4'-C3'-C2'	-5.38	97.22	102.60
12	B	894	U	O4'-C1'-N1	5.38	116.58	108.50
12	B	935	C	C4'-C3'-O3'	-5.38	104.92	113.00
12	B	2836	U	O4'-C1'-N1	5.38	116.58	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	G	93	TYR	N-CA-C	-5.38	99.16	108.69
18	H	57	LYS	CA-CB-CG	-5.38	103.33	114.10
17	G	171	LYS	N-CA-C	-5.38	101.47	109.11
2	1	15	ASN	CA-C-O	5.38	126.00	119.11
7	6	41	ARG	CA-C-O	5.38	126.47	120.82
12	B	1582	C	O4'-C1'-N1	5.38	116.57	108.50
12	B	1638	C	C4'-C3'-C2'	-5.38	97.22	102.60
20	J	31	GLU	N-CA-C	-5.38	106.84	113.41
30	T	21	SER	N-CA-C	-5.38	99.34	110.80
10	9	232	LEU	CA-C-N	5.38	127.93	120.29
10	9	232	LEU	C-N-CA	5.38	127.93	120.29
12	B	2115	G	O4'-C1'-N9	5.38	116.57	108.50
12	B	2241	A	C4'-C3'-C2'	-5.38	97.22	102.60
17	G	50	THR	CB-CA-C	5.38	118.68	109.80
27	Q	94	LEU	N-CA-C	-5.38	105.54	113.61
3	2	30	ARG	N-CA-C	-5.38	101.58	109.81
4	3	28	SER	N-CA-C	-5.38	101.12	108.38
10	9	155	GLU	CB-CG-CD	-5.38	103.45	112.60
12	B	692	C	P-O5'-C5'	-5.38	112.83	120.90
12	B	1201	U	O4'-C4'-C3'	-5.38	98.62	104.00
13	C	138	SER	CA-C-O	-5.38	115.70	121.56
8	7	4	LYS	N-CA-C	5.38	116.86	110.19
10	9	196	PRO	CA-N-CD	-5.38	104.47	112.00
12	B	1870	C	C3'-C2'-C1'	-5.38	95.92	101.30
12	B	2881	U	C5'-C4'-C3'	-5.38	107.93	116.00
12	B	213	A	O4'-C1'-C2'	-5.38	102.22	107.60
12	B	2428	G	P-O3'-C3'	5.38	128.26	120.20
12	B	2510	C	O4'-C1'-N1	5.38	116.56	108.50
12	B	2819	G	O4'-C1'-C2'	5.38	112.97	107.60
18	H	95	GLY	CA-C-N	5.38	131.81	121.54
18	H	95	GLY	C-N-CA	5.38	131.81	121.54
27	Q	76	SER	O-C-N	-5.38	115.70	122.20
12	B	431	U	O4'-C1'-N1	5.37	116.56	108.50
12	B	489	G	N9-C1'-C2'	5.37	120.06	112.00
12	B	1751	U	P-O5'-C5'	5.37	128.96	120.90
12	B	2673	G	C5'-C4'-C3'	-5.37	107.94	116.00
10	9	111	HIS	ND1-CE1-NE2	5.37	113.77	108.40
11	A	66	A	C4'-C3'-O3'	-5.37	104.94	113.00
12	B	751	A	N1-C6-N6	5.37	134.71	118.60
12	B	1461	C	O5'-C5'-C4'	-5.37	103.44	111.50
18	H	99	ILE	N-CA-C	-5.37	106.61	113.22
12	B	27	G	O4'-C4'-C3'	5.37	109.37	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	C	53	ILE	CA-CB-CG1	5.37	119.53	110.40
19	I	77	VAL	N-CA-C	5.37	115.58	110.42
2	1	28	LEU	O-C-N	5.37	127.60	122.07
10	9	5	ASP	CA-C-N	5.37	130.99	122.62
10	9	5	ASP	C-N-CA	5.37	130.99	122.62
10	9	235	LEU	N-CA-CB	-5.37	102.23	110.12
12	B	1273	U	C4'-C3'-C2'	-5.37	97.23	102.60
12	B	1963	U	O4'-C4'-C3'	-5.37	98.63	104.00
12	B	2063	C	O4'-C4'-C3'	-5.37	98.63	104.00
6	5	186	LYS	CA-C-O	-5.37	114.74	121.02
12	B	690	G	P-O5'-C5'	-5.37	112.85	120.90
12	B	2398	U	O4'-C1'-N1	5.37	116.55	108.50
12	B	2706	A	O4'-C1'-N9	5.37	116.55	108.50
4	3	37	HIS	CB-CG-CD2	-5.37	124.22	131.20
12	B	739	A	C5'-C4'-O4'	5.37	117.15	109.10
12	B	1578	U	O5'-C5'-C4'	-5.37	103.45	111.50
12	B	1696	G	P-O3'-C3'	-5.37	112.15	120.20
12	B	2246	G	C1'-C2'-O2'	5.37	116.45	108.40
14	D	3	GLY	CA-C-O	-5.37	115.59	121.71
16	F	46	LYS	CA-C-O	-5.37	112.84	120.51
23	M	57	VAL	O-C-N	5.37	127.68	122.05
31	U	73	ASN	N-CA-C	-5.37	100.58	108.79
6	5	227	ALA	N-CA-C	-5.36	100.77	108.60
8	7	26	ALA	N-CA-C	5.36	117.25	110.33
10	9	53	LEU	CB-CA-C	-5.36	99.75	110.42
11	A	65	U	O4'-C1'-N1	5.36	116.55	108.50
12	B	1019	U	C4'-C3'-O3'	-5.36	104.96	113.00
12	B	1040	A	C2'-C3'-O3'	-5.36	105.65	113.70
12	B	2025	C	C4'-C3'-O3'	-5.36	104.95	113.00
12	B	2229	U	O4'-C1'-N1	5.36	116.54	108.50
12	B	2680	U	C4'-C3'-C2'	-5.36	97.24	102.60
20	J	108	MET	CA-C-O	5.36	126.86	120.53
12	B	1763	G	C5'-C4'-O4'	5.36	117.84	109.80
12	B	2216	G	C3'-C2'-O2'	5.36	118.74	110.70
14	D	17	GLU	N-CA-C	-5.36	106.59	113.02
20	J	125	TYR	N-CA-CB	5.36	120.77	111.39
12	B	336	C	O4'-C1'-N1	5.36	116.54	108.50
12	B	2433	A	O4'-C1'-N9	5.36	116.54	108.50
6	5	158	ALA	N-CA-C	5.36	116.93	111.14
12	B	493	G	O4'-C1'-N9	5.36	116.54	108.50
12	B	1847	A	C5'-C4'-O4'	5.36	117.84	109.80
12	B	848	C	O4'-C1'-N1	5.36	116.54	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1098	A	C4'-C3'-C2'	5.36	107.96	102.60
12	B	1707	G	C5'-C4'-C3'	-5.36	107.96	116.00
12	B	1981	A	C4'-C3'-O3'	-5.36	104.96	113.00
12	B	2077	A	O4'-C1'-N9	5.36	116.54	108.50
12	B	2728	U	P-O3'-C3'	5.36	128.24	120.20
13	C	148	GLY	O-C-N	-5.36	115.63	122.43
18	H	84	ALA	N-CA-CB	5.36	119.54	110.49
27	Q	69	ARG	N-CA-CB	5.36	117.84	110.07
12	B	166	U	O4'-C1'-C2'	-5.36	102.24	107.60
12	B	2248	C	O4'-C1'-N1	5.36	116.53	108.50
20	J	32	LEU	O-C-N	5.36	127.87	122.09
33	Y	80	SER	CA-C-O	-5.36	113.95	120.54
12	B	974	G	O4'-C1'-N9	5.35	116.23	108.20
12	B	2003	A	C4'-C3'-O3'	-5.35	104.97	113.00
12	B	2526	G	C2'-C3'-O3'	5.35	121.73	113.70
13	C	90	ILE	N-CA-CB	-5.35	106.24	112.34
16	F	176	PHE	CA-C-O	5.35	128.17	120.51
12	B	835	C	C4'-C3'-O3'	-5.35	104.97	113.00
12	B	1255	U	C4'-C3'-O3'	-5.35	104.97	113.00
12	B	1488	C	C4'-C3'-C2'	-5.35	97.25	102.60
17	G	140	ILE	CA-C-O	-5.35	115.50	121.17
12	B	1580	A	P-O5'-C5'	-5.35	112.87	120.90
12	B	1584	U	C4'-C3'-O3'	-5.35	104.97	113.00
29	S	65	ASP	CA-C-O	-5.35	115.32	121.47
11	A	108	A	P-O3'-C3'	5.35	128.22	120.20
12	B	1146	C	O5'-C5'-C4'	-5.35	103.48	111.50
12	B	1543	G	P-O3'-C3'	5.35	128.22	120.20
12	B	2624	G	C4'-C3'-O3'	-5.35	104.98	113.00
12	B	2673	G	C4'-C3'-C2'	-5.35	97.25	102.60
13	C	251	THR	CA-C-N	5.35	129.48	121.72
13	C	251	THR	C-N-CA	5.35	129.48	121.72
17	G	22	VAL	N-CA-C	-5.35	101.83	108.89
27	Q	30	VAL	N-CA-C	-5.35	99.85	107.77
29	S	84	ARG	N-CA-C	-5.35	101.36	108.74
12	B	673	C	C5'-C4'-C3'	-5.35	107.98	116.00
10	9	203	MET	N-CA-C	-5.35	105.98	112.88
12	B	2545	G	N9-C1'-C2'	-5.35	103.98	112.00
2	1	20	ASN	CA-CB-CG	5.34	117.94	112.60
12	B	164	C	C4'-C3'-C2'	-5.34	97.26	102.60
12	B	1674	G	C2'-C3'-O3'	5.34	117.52	109.50
12	B	1798	U	C1'-O4'-C4'	5.34	115.25	109.90
15	E	100	MET	CA-C-N	5.34	127.71	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	E	100	MET	C-N-CA	5.34	127.71	120.44
20	J	37	ARG	NE-CZ-NH1	-5.34	116.16	121.50
12	B	1632	A	O4'-C1'-C2'	-5.34	102.26	107.60
6	5	67	HIS	ND1-CE1-NE2	5.34	113.74	108.40
10	9	62	GLU	CA-C-N	5.34	131.74	121.54
10	9	62	GLU	C-N-CA	5.34	131.74	121.54
10	9	255	PRO	N-CA-C	5.34	120.95	113.53
13	C	202	ARG	NE-CZ-NH1	5.34	126.84	121.50
7	6	12	ARG	NE-CZ-NH2	5.34	124.00	119.20
12	B	2595	G	O4'-C1'-N9	5.34	116.51	108.50
12	B	591	U	P-O5'-C5'	5.34	128.91	120.90
12	B	636	G	O5'-C5'-C4'	-5.34	103.49	111.50
12	B	170	U	P-O5'-C5'	5.34	128.90	120.90
12	B	1660	G	P-O3'-C3'	-5.34	112.19	120.20
21	K	31	ARG	O-C-N	5.34	129.46	123.48
12	B	192	C	P-O5'-C5'	5.33	128.90	120.90
12	B	2458	G	C4'-C3'-O3'	5.33	117.40	109.40
12	B	1	G	C4'-C3'-C2'	-5.33	97.27	102.60
12	B	1540	G	O3'-P-O5'	-5.33	96.00	104.00
12	B	2443	C	O4'-C1'-N1	5.33	116.50	108.50
12	B	2585	U	O4'-C1'-N1	5.33	116.20	108.20
12	B	2840	C	O4'-C1'-N1	5.33	116.50	108.50
13	C	202	ARG	NE-CZ-NH2	-5.33	114.40	119.20
2	1	18	LEU	N-CA-CB	5.33	118.43	110.22
10	9	15	ASP	CA-C-N	5.33	131.86	121.41
10	9	15	ASP	C-N-CA	5.33	131.86	121.41
12	B	707	G	C4'-C3'-C2'	-5.33	97.27	102.60
12	B	1762	A	C4'-C3'-C2'	5.33	107.93	102.60
12	B	2400	G	O4'-C1'-C2'	-5.33	102.27	107.60
12	B	2497	A	O3'-P-O5'	-5.33	96.00	104.00
16	F	107	VAL	N-CA-C	5.33	120.40	108.88
23	M	114	ARG	NE-CZ-NH2	5.33	124.00	119.20
12	B	1726	C	C5'-C4'-C3'	5.33	123.99	116.00
12	B	776	G	C5'-C4'-O4'	5.33	117.09	109.10
12	B	1904	G	C4'-C3'-O3'	-5.33	105.01	113.00
12	B	2132	U	C3'-C2'-C1'	5.33	106.63	101.30
12	B	2722	G	C5'-C4'-O4'	5.33	117.79	109.80
18	H	91	PHE	CA-CB-CG	-5.33	108.47	113.80
12	B	1638	C	C2'-C3'-O3'	5.33	121.69	113.70
12	B	121	G	C4'-C3'-C2'	-5.33	97.28	102.60
12	B	862	G	C4'-C3'-O3'	-5.33	105.01	113.00
12	B	2312	U	N1-C1'-C2'	5.33	119.99	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	9	205	ASN	OD1-CG-ND2	5.32	127.92	122.60
12	B	564	C	C4'-C3'-O3'	-5.32	105.02	113.00
19	I	77	VAL	CA-C-N	5.32	127.41	120.28
19	I	77	VAL	C-N-CA	5.32	127.41	120.28
26	P	81	ASP	CA-CB-CG	-5.32	107.28	112.60
33	Y	78	PHE	N-CA-CB	5.32	119.49	110.49
12	B	2086	U	O4'-C4'-C3'	-5.32	98.68	104.00
12	B	2163	A	O4'-C1'-N9	5.32	116.48	108.50
12	B	419	U	O4'-C1'-N1	5.32	116.48	108.50
12	B	1237	A	P-O3'-C3'	5.32	128.18	120.20
12	B	1492	G	P-O3'-C3'	-5.32	112.22	120.20
13	C	238	ASN	N-CA-CB	5.32	120.54	111.66
15	E	21	ARG	CA-C-N	5.32	128.27	120.71
15	E	21	ARG	C-N-CA	5.32	128.27	120.71
15	E	98	LYS	N-CA-C	5.32	118.87	112.38
26	P	45	VAL	N-CA-C	5.32	120.41	109.34
12	B	743	A	P-O5'-C5'	5.32	128.88	120.90
12	B	1019	U	O4'-C1'-N1	5.32	116.48	108.50
5	4	18	HIS	ND1-CE1-NE2	5.32	113.72	108.40
12	B	112	U	C3'-C2'-C1'	5.32	106.62	101.30
12	B	640	C	O4'-C1'-N1	5.32	116.48	108.50
12	B	1326	U	C4'-C3'-O3'	-5.32	105.02	113.00
12	B	1462	C	O5'-C5'-C4'	-5.32	103.52	111.50
12	B	1528	A	O5'-C5'-C4'	-5.32	103.52	111.50
12	B	2419	U	C4'-C3'-C2'	-5.32	97.28	102.60
12	B	2573	C	C1'-O4'-C4'	-5.32	104.58	109.90
15	E	134	LEU	CA-C-O	5.32	125.92	119.11
12	B	727	A	C4'-C3'-O3'	-5.32	105.03	113.00
12	B	1422	G	P-O3'-C3'	-5.32	112.23	120.20
12	B	2583	G	C5'-C4'-C3'	-5.32	108.03	116.00
12	B	2643	G	P-O3'-C3'	-5.32	112.23	120.20
20	J	44	TYR	O-C-N	-5.32	116.56	122.09
24	N	3	HIS	CB-CG-CD2	-5.32	124.29	131.20
12	B	491	G	C1'-O4'-C4'	-5.31	104.59	109.90
12	B	664	G	O5'-C5'-C4'	-5.31	103.53	111.50
13	C	90	ILE	CA-CB-CG2	5.31	119.53	110.50
12	B	959	A	C5'-C4'-C3'	-5.31	108.03	116.00
16	F	95	MET	CA-C-N	5.31	131.94	122.06
16	F	95	MET	C-N-CA	5.31	131.94	122.06
20	J	84	ILE	N-CA-CB	5.31	119.28	111.52
30	T	70	HIS	O-C-N	-5.31	115.52	122.59
12	B	1003	G	O4'-C1'-C2'	-5.31	102.29	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1410	G	O4'-C1'-N9	5.31	116.47	108.50
12	B	2090	A	O5'-C5'-C4'	-5.31	103.53	111.50
6	5	141	LYS	N-CA-CB	5.31	117.71	110.01
9	8	22	VAL	CB-CA-C	-5.31	102.58	110.33
11	A	38	C	C1'-O4'-C4'	-5.31	104.59	109.90
13	C	105	ALA	CA-C-O	-5.31	112.89	120.16
15	E	177	PRO	CA-C-N	5.31	127.73	120.46
15	E	177	PRO	C-N-CA	5.31	127.73	120.46
17	G	144	ALA	N-CA-CB	5.31	117.71	110.01
29	S	21	ALA	CA-C-N	5.31	127.92	120.28
29	S	21	ALA	C-N-CA	5.31	127.92	120.28
3	2	45	GLY	CA-C-N	5.31	127.34	120.44
3	2	45	GLY	C-N-CA	5.31	127.34	120.44
12	B	1109	C	O4'-C1'-N1	5.31	116.46	108.50
12	B	1684	G	O4'-C1'-N9	5.31	116.46	108.50
12	B	2780	G	C3'-C2'-O2'	-5.31	106.64	114.60
17	G	59	ASP	N-CA-C	-5.31	106.19	113.30
21	K	72	PRO	CB-CA-C	5.31	119.45	111.44
22	L	129	LYS	CB-CA-C	-5.31	101.98	110.79
12	B	2584	U	C4'-C3'-O3'	-5.31	105.04	113.00
12	B	2705	A	P-O5'-C5'	5.31	128.86	120.90
16	F	5	ASP	CA-C-N	5.31	131.67	121.54
16	F	5	ASP	C-N-CA	5.31	131.67	121.54
12	B	375	G	O4'-C1'-N9	5.30	116.46	108.50
12	B	855	G	P-O3'-C3'	-5.30	112.24	120.20
12	B	1007	C	C5'-C4'-C3'	5.30	123.96	116.00
12	B	2642	G	O5'-C5'-C4'	-5.30	103.54	111.50
15	E	92	HIS	CA-CB-CG	-5.30	108.50	113.80
23	M	5	LYS	CA-C-O	5.30	125.20	119.15
27	Q	33	VAL	N-CA-CB	5.30	119.98	111.23
27	Q	37	ALA	CA-C-N	5.30	127.73	120.46
27	Q	37	ALA	C-N-CA	5.30	127.73	120.46
11	A	67	G	C1'-O4'-C4'	-5.30	104.60	109.90
12	B	744	U	C5'-C4'-C3'	5.30	123.95	116.00
12	B	1460	U	C5'-C4'-C3'	5.30	123.15	115.20
12	B	1497	U	C4'-C3'-C2'	5.30	107.90	102.60
12	B	1812	U	P-O5'-C5'	5.30	128.85	120.90
12	B	2671	G	P-O5'-C5'	-5.30	112.95	120.90
15	E	49	ARG	N-CA-C	5.30	118.85	112.38
10	9	322	LYS	CA-C-O	5.30	126.17	120.55
12	B	281	C	O3'-P-O5'	-5.30	96.05	104.00
12	B	723	C	O4'-C1'-N1	5.30	116.45	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1093	G	P-O5'-C5'	5.30	128.85	120.90
12	B	1204	A	C4'-C3'-C2'	-5.30	97.30	102.60
12	B	2342	C	O4'-C1'-C2'	-5.30	102.30	107.60
13	C	133	ASN	N-CA-C	-5.30	106.49	113.17
21	K	85	VAL	CA-C-O	5.30	125.98	120.36
30	T	71	GLY	CA-C-N	5.30	127.38	120.28
30	T	71	GLY	C-N-CA	5.30	127.38	120.28
10	9	244	LEU	N-CA-C	-5.30	101.64	110.17
12	B	194	G	C5'-C4'-C3'	-5.30	108.05	116.00
12	B	883	G	O5'-C5'-C4'	-5.30	103.55	111.50
12	B	1178	C	P-O3'-C3'	5.30	128.15	120.20
12	B	2807	U	C4'-C3'-O3'	-5.30	105.05	113.00
24	N	31	HIS	CE1-NE2-CD2	-5.30	103.70	109.00
6	5	207	VAL	N-CA-C	5.30	120.36	109.34
12	B	1156	A	O4'-C4'-C3'	-5.30	100.80	106.10
12	B	1313	U	C1'-O4'-C4'	-5.30	104.60	109.90
12	B	1722	A	O4'-C4'-C3'	-5.30	98.70	104.00
12	B	2335	A	C5'-C4'-C3'	5.30	123.94	116.00
29	S	18	ARG	N-CA-C	-5.30	105.62	111.71
28	R	68	ARG	CA-C-N	5.29	129.24	121.67
28	R	68	ARG	C-N-CA	5.29	129.24	121.67
3	2	37	ARG	N-CA-C	-5.29	101.25	109.24
10	9	326	TRP	CB-CA-C	5.29	119.85	110.85
12	B	787	C	C4'-C3'-O3'	-5.29	105.06	113.00
12	B	982	C	P-O5'-C5'	5.29	128.84	120.90
12	B	1663	G	C4'-C3'-O3'	-5.29	105.06	113.00
12	B	2885	G	P-O3'-C3'	-5.29	112.26	120.20
17	G	156	TYR	CA-CB-CG	-5.29	104.37	113.90
22	L	77	ILE	CA-CB-CG2	-5.29	101.50	110.50
23	M	93	VAL	N-CA-C	-5.29	100.76	108.97
28	R	13	ARG	N-CA-CB	5.29	117.93	110.36
12	B	278	A	C5'-C4'-C3'	-5.29	108.06	116.00
12	B	589	U	C4'-C3'-C2'	-5.29	97.31	102.60
12	B	1757	A	O4'-C1'-N9	5.29	116.44	108.50
12	B	2350	C	O5'-C5'-C4'	-5.29	103.56	111.50
15	E	135	ALA	CB-CA-C	-5.29	101.90	110.79
24	N	72	ASP	CA-C-N	5.29	130.40	121.14
24	N	72	ASP	C-N-CA	5.29	130.40	121.14
3	2	27	GLY	N-CA-C	-5.29	107.97	115.43
22	L	67	THR	N-CA-C	-5.29	101.40	108.86
12	B	138	U	C3'-C2'-C1'	5.29	106.59	101.30
12	B	344	A	O5'-C5'-C4'	-5.29	103.57	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	423	A	C4'-C3'-C2'	5.29	107.89	102.60
12	B	522	A	P-O5'-C5'	5.29	128.83	120.90
12	B	1159	U	O4'-C1'-N1	5.29	116.43	108.50
12	B	1889	A	O5'-C5'-C4'	-5.29	103.57	111.50
12	B	2314	A	C4'-C3'-C2'	-5.29	97.31	102.60
12	B	330	A	O5'-C5'-C4'	-5.29	103.77	111.70
12	B	495	G	C2'-C3'-O3'	5.29	121.63	113.70
12	B	811	U	C2'-C3'-O3'	5.29	117.43	109.50
12	B	1397	U	C5'-C4'-O4'	5.29	117.03	109.10
12	B	2757	A	O3'-P-O5'	-5.29	96.07	104.00
15	E	62	GLN	OE1-CD-NE2	5.29	127.89	122.60
17	G	1	SER	CB-CA-C	5.29	120.14	110.10
18	H	86	ASP	N-CA-CB	-5.29	102.46	110.92
23	M	10	ARG	CB-CG-CD	5.29	123.46	111.30
12	B	694	U	O4'-C1'-N1	5.28	116.42	108.50
12	B	754	U	C1'-O4'-C4'	5.28	115.18	109.90
12	B	2597	G	C1'-O4'-C4'	5.28	115.18	109.90
24	N	43	GLU	CA-C-N	5.28	127.89	120.28
24	N	43	GLU	C-N-CA	5.28	127.89	120.28
25	O	106	LEU	N-CA-CB	5.28	120.86	112.78
11	A	109	A	C4'-C3'-C2'	-5.28	97.32	102.60
12	B	417	C	O4'-C1'-N1	5.28	116.42	108.50
12	B	2392	A	O5'-C5'-C4'	-5.28	103.58	111.50
28	R	11	GLN	CB-CG-CD	5.28	121.58	112.60
5	4	18	HIS	CG-CD2-NE2	5.28	112.48	107.20
11	A	7	G	O4'-C1'-N9	5.28	116.42	108.50
12	B	2213	U	P-O5'-C5'	5.28	128.82	120.90
12	B	2498	C	P-O3'-C3'	-5.28	112.28	120.20
22	L	138	ALA	CA-C-N	5.28	130.53	121.87
22	L	138	ALA	C-N-CA	5.28	130.53	121.87
27	Q	67	ALA	CA-C-N	5.28	127.61	120.38
27	Q	67	ALA	C-N-CA	5.28	127.61	120.38
12	B	16	C	P-O3'-C3'	-5.28	112.28	120.20
12	B	2006	C	C1'-C2'-O2'	5.28	116.32	108.40
6	5	190	GLU	CA-C-O	5.28	126.36	120.82
12	B	254	G	O3'-P-O5'	-5.28	96.08	104.00
12	B	1455	G	C1'-O4'-C4'	-5.28	104.62	109.90
12	B	2547	A	C4'-C3'-C2'	-5.28	97.32	102.60
11	A	45	A	O4'-C1'-N9	5.28	116.41	108.50
12	B	287	G	P-O5'-C5'	-5.28	112.99	120.90
12	B	531	C	O4'-C1'-C2'	-5.28	100.52	105.80
12	B	1264	A	C4'-C3'-O3'	-5.28	105.09	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1484	U	P-O5'-C5'	5.28	128.81	120.90
12	B	1993	U	C4'-C3'-O3'	-5.28	105.09	113.00
12	B	123	G	O5'-C5'-C4'	-5.27	103.59	111.50
12	B	1076	C	P-O5'-C5'	-5.27	112.99	120.90
12	B	1805	A	C4'-C3'-C2'	-5.27	97.33	102.60
12	B	1901	A	C4'-C3'-C2'	-5.27	97.33	102.60
12	B	2134	A	C3'-C2'-O2'	5.27	118.61	110.70
11	A	64	G	O5'-C5'-C4'	-5.27	103.59	111.50
12	B	1165	A	O3'-P-O5'	-5.27	96.09	104.00
12	B	1969	A	C4'-C3'-O3'	-5.27	105.09	113.00
13	C	229	HIS	CA-CB-CG	-5.27	108.53	113.80
15	E	169	VAL	CA-CB-CG2	5.27	119.36	110.40
1	0	19	HIS	ND1-CE1-NE2	5.27	113.67	108.40
12	B	1434	A	O4'-C1'-N9	5.27	116.41	108.50
12	B	554	U	O3'-P-O5'	-5.27	96.09	104.00
12	B	1032	A	O4'-C1'-N9	5.27	116.40	108.50
12	B	2457	U	P-O3'-C3'	-5.27	112.30	120.20
12	B	2553	G	C4'-C3'-C2'	-5.27	97.33	102.60
12	B	2622	U	C5'-C4'-C3'	5.27	123.91	116.00
15	E	156	ASN	CA-C-N	5.27	128.32	120.31
15	E	156	ASN	C-N-CA	5.27	128.32	120.31
22	L	136	GLU	O-C-N	5.27	128.42	122.20
28	R	51	VAL	CA-C-N	5.27	125.47	120.31
28	R	51	VAL	C-N-CA	5.27	125.47	120.31
12	B	279	A	C5'-C4'-C3'	5.27	123.90	116.00
12	B	907	G	C5'-C4'-C3'	-5.27	108.10	116.00
12	B	1436	G	O5'-C5'-C4'	-5.27	103.60	111.50
12	B	1764	C	C4'-C3'-O3'	-5.27	105.10	113.00
12	B	1821	A	C1'-O4'-C4'	-5.27	104.63	109.90
12	B	2028	U	O4'-C1'-N1	5.27	116.40	108.50
15	E	72	SER	CA-C-O	5.27	128.04	120.51
12	B	1371	G	O4'-C1'-N9	5.27	116.40	108.50
12	B	1499	C	P-O3'-C3'	5.27	128.10	120.20
5	4	17	GLY	CA-C-N	5.26	128.34	120.87
5	4	17	GLY	C-N-CA	5.26	128.34	120.87
12	B	189	G	P-O3'-C3'	-5.26	112.30	120.20
12	B	370	G	N1-C6-O6	5.26	135.69	119.90
12	B	2455	G	C4'-C3'-O3'	-5.26	105.10	113.00
12	B	2762	C	C3'-C2'-O2'	5.26	118.60	110.70
28	R	41	ILE	O-C-N	5.26	127.96	122.54
6	5	179	ASP	CA-CB-CG	-5.26	107.34	112.60
12	B	421	C	O4'-C1'-N1	5.26	116.09	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	J	113	PRO	N-CD-CG	5.26	111.09	103.20
27	Q	68	ALA	CB-CA-C	-5.26	101.73	110.68
12	B	163	C	O4'-C1'-N1	5.26	116.39	108.50
12	B	672	C	O4'-C1'-N1	5.26	116.39	108.50
12	B	919	U	C4'-C3'-O3'	-5.26	105.11	113.00
12	B	1216	G	C4'-C3'-O3'	-5.26	105.11	113.00
12	B	2854	G	O4'-C1'-N9	5.26	116.39	108.50
14	D	140	HIS	CB-CG-CD2	-5.26	124.36	131.20
22	L	120	VAL	N-CA-CB	5.26	120.48	112.06
12	B	798	G	P-O3'-C3'	-5.26	112.31	120.20
12	B	1029	A	P-O5'-C5'	5.26	128.79	120.90
12	B	1665	A	O4'-C1'-N9	5.26	116.39	108.50
12	B	2104	C	C3'-C2'-C1'	5.26	106.56	101.30
16	F	102	LEU	N-CA-C	-5.26	107.52	114.31
10	9	132	SER	CA-C-O	5.26	124.98	119.51
11	A	7	G	C4'-C3'-O3'	-5.26	105.11	113.00
12	B	186	G	O4'-C1'-N9	5.26	116.39	108.50
12	B	1479	G	C5'-C4'-C3'	5.26	123.89	116.00
12	B	1989	G	O4'-C1'-C2'	-5.26	102.34	107.60
23	M	82	MET	CB-CA-C	-5.26	101.12	109.80
12	B	789	A	C5'-C4'-C3'	-5.26	107.31	115.20
12	B	1874	C	C4'-C3'-C2'	-5.26	97.34	102.60
4	3	15	ARG	NE-CZ-NH2	5.25	123.93	119.20
6	5	102	ASP	N-CA-C	5.25	120.04	111.37
10	9	196	PRO	N-CA-CB	5.25	108.77	103.25
12	B	75	G	O4'-C4'-C3'	-5.25	98.75	104.00
12	B	565	C	O4'-C1'-N1	5.25	116.38	108.50
2	1	31	GLN	O-C-N	5.25	127.48	122.07
6	5	218	MET	N-CA-C	-5.25	106.55	113.17
12	B	2028	U	C1'-C2'-O2'	5.25	116.28	108.40
12	B	2532	G	C5'-C4'-C3'	-5.25	108.12	116.00
12	B	2731	G	P-O5'-C5'	5.25	128.78	120.90
19	I	78	LEU	CB-CA-C	-5.25	102.07	110.79
12	B	232	G	P-O5'-C5'	-5.25	113.02	120.90
12	B	2319	G	C2'-C3'-O3'	5.25	117.38	109.50
12	B	2386	A	C4'-C3'-O3'	-5.25	105.12	113.00
16	F	78	ILE	N-CA-CB	5.25	119.89	111.23
27	Q	10	ARG	CD-NE-CZ	-5.25	117.05	124.40
12	B	1247	A	C2'-C3'-O3'	5.25	117.38	109.50
12	B	2107	G	C4'-C3'-O3'	-5.25	105.12	113.00
26	P	74	GLN	N-CA-C	-5.25	106.92	113.38
12	B	332	A	C2'-C3'-O3'	5.25	117.37	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	421	C	C3'-C2'-C1'	5.25	106.75	101.50
12	B	590	A	P-O5'-C5'	-5.25	113.03	120.90
12	B	1162	G	O4'-C1'-N9	5.25	116.37	108.50
12	B	2018	G	O4'-C1'-N9	5.25	116.37	108.50
12	B	2116	G	P-O3'-C3'	5.25	128.07	120.20
12	B	2227	A	P-O5'-C5'	5.25	128.77	120.90
12	B	2819	G	P-O5'-C5'	-5.25	113.03	120.90
13	C	29	PHE	CB-CG-CD1	5.25	129.62	120.70
27	Q	91	ARG	CD-NE-CZ	-5.25	117.05	124.40
6	5	101	ALA	N-CA-CB	5.25	117.62	110.01
12	B	1060	U	C3'-C2'-O2'	-5.25	106.73	114.60
12	B	2572	A	O4'-C1'-N9	5.25	116.07	108.20
12	B	2729	G	P-O3'-C3'	5.25	128.07	120.20
28	R	92	TRP	N-CA-CB	-5.25	103.27	111.56
2	1	30	MET	N-CA-CB	5.25	118.02	110.20
11	A	114	C	C4'-C3'-C2'	-5.25	97.36	102.60
12	B	371	A	O4'-C4'-C3'	-5.25	100.86	106.10
12	B	1081	U	C3'-C2'-O2'	5.25	118.57	110.70
12	B	212	G	O4'-C1'-N9	5.24	116.36	108.50
12	B	1303	G	P-O5'-C5'	5.24	128.76	120.90
12	B	2625	G	C5'-C4'-C3'	-5.24	108.14	116.00
12	B	2660	A	C1'-O4'-C4'	5.24	115.14	109.90
14	D	150	GLN	CB-CA-C	-5.24	101.94	110.85
23	M	42	THR	N-CA-CB	5.24	118.59	110.46
12	B	447	A	C1'-C2'-O2'	-5.24	103.94	111.80
12	B	754	U	C4'-C3'-C2'	-5.24	97.36	102.60
12	B	1380	G	C1'-C2'-O2'	5.24	116.26	108.40
32	W	20	LEU	N-CA-CB	5.24	117.67	110.07
12	B	431	U	O5'-C5'-C4'	-5.24	103.64	111.50
12	B	1462	C	C4'-C3'-C2'	-5.24	97.36	102.60
33	Y	33	GLY	N-CA-C	-5.24	107.49	115.66
12	B	833	A	O4'-C4'-C3'	-5.24	98.76	104.00
12	B	1671	U	C1'-C2'-O2'	5.24	116.25	108.40
12	B	2696	U	O3'-P-O5'	-5.24	96.14	104.00
15	E	141	MET	N-CA-C	-5.24	106.57	113.17
27	Q	25	GLY	CA-C-O	-5.24	115.37	122.39
11	A	117	G	O4'-C4'-C3'	-5.24	98.77	104.00
12	B	124	G	C1'-C2'-O2'	5.24	116.25	108.40
12	B	390	U	O4'-C4'-C3'	-5.24	100.86	106.10
12	B	871	U	C3'-C2'-C1'	5.24	106.54	101.30
12	B	880	G	C3'-C2'-O2'	5.24	118.56	110.70
1	0	17	ARG	CA-C-N	5.23	133.24	123.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	17	ARG	C-N-CA	5.23	133.24	123.09
12	B	1649	G	P-O5'-C5'	-5.23	113.05	120.90
12	B	2509	G	O4'-C1'-N9	5.23	116.35	108.50
12	B	2553	G	C5'-C4'-C3'	-5.23	108.15	116.00
18	H	66	ASN	N-CA-C	-5.23	105.75	111.82
12	B	960	A	P-O3'-C3'	5.23	128.05	120.20
12	B	1391	U	C1'-O4'-C4'	5.23	115.13	109.90
12	B	1617	C	C2'-C3'-O3'	5.23	117.35	109.50
12	B	2336	A	C1'-C2'-O2'	-5.23	103.95	111.80
12	B	2844	G	C4'-C3'-O3'	-5.23	105.15	113.00
12	B	2861	U	O4'-C1'-N1	5.23	116.35	108.50
12	B	2864	G	O4'-C1'-N9	5.23	116.35	108.50
16	F	33	ILE	N-CA-C	-5.23	102.18	109.45
16	F	70	ARG	CB-CA-C	-5.23	104.94	113.37
27	Q	116	LEU	CA-C-O	5.23	127.13	120.07
12	B	739	A	C4'-C3'-C2'	-5.23	97.37	102.60
12	B	912	C	C1'-O4'-C4'	5.23	115.13	109.90
12	B	2617	U	C4'-C3'-C2'	-5.23	97.37	102.60
12	B	2652	C	P-O3'-C3'	-5.23	112.35	120.20
12	B	2736	A	P-O5'-C5'	5.23	128.75	120.90
12	B	2780	G	O5'-C5'-C4'	-5.23	103.85	111.70
16	F	45	ASP	CA-C-O	-5.23	115.05	120.70
27	Q	38	VAL	N-CA-CB	5.23	117.65	110.54
12	B	464	U	P-O5'-C5'	-5.23	113.06	120.90
12	B	1369	G	P-O5'-C5'	5.23	128.74	120.90
12	B	1715	G	C4'-C3'-C2'	-5.23	97.37	102.60
12	B	1877	A	C4'-C3'-O3'	-5.23	105.16	113.00
12	B	2633	G	O4'-C1'-N9	5.23	116.34	108.50
16	F	66	ILE	O-C-N	-5.23	117.09	122.63
6	5	131	LEU	CB-CA-C	-5.22	101.73	110.56
12	B	33	C	C4'-C3'-O3'	5.22	117.24	109.40
12	B	505	A	O4'-C1'-N9	5.22	116.34	108.50
12	B	1787	A	P-O5'-C5'	-5.22	113.06	120.90
12	B	2144	G	C4'-C3'-O3'	5.22	117.23	109.40
12	B	2175	C	P-O3'-C3'	5.22	128.04	120.20
12	B	2697	G	P-O5'-C5'	5.22	128.74	120.90
12	B	2864	G	C3'-C2'-O2'	5.22	118.54	110.70
12	B	2	G	C4'-C3'-O3'	-5.22	105.17	113.00
12	B	445	C	O5'-C5'-C4'	-5.22	103.67	111.50
12	B	1365	A	O4'-C4'-C3'	-5.22	98.78	104.00
12	B	1629	U	P-O5'-C5'	5.22	128.73	120.90
12	B	2254	C	O4'-C4'-C3'	5.22	109.22	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1057	A	O3'-P-O5'	-5.22	96.17	104.00
12	B	1547	C	O4'-C4'-C3'	-5.22	98.78	104.00
12	B	1898	U	C5'-C4'-C3'	-5.22	108.17	116.00
12	B	2228	G	O4'-C1'-N9	5.22	116.33	108.50
15	E	106	LYS	O-C-N	-5.22	115.65	122.59
22	L	52	GLY	CA-C-O	5.22	126.29	121.38
33	Y	10	ARG	NE-CZ-NH2	5.22	123.90	119.20
12	B	2394	C	C5'-C4'-O4'	5.22	117.63	109.80
14	D	203	VAL	N-CA-C	-5.22	101.12	108.27
31	U	80	ASP	CA-CB-CG	5.22	117.82	112.60
4	3	8	THR	CA-CB-OG1	5.22	117.42	109.60
10	9	127	ASN	CA-C-N	5.22	128.24	120.31
10	9	127	ASN	C-N-CA	5.22	128.24	120.31
10	9	189	TYR	CA-C-O	-5.22	116.17	120.71
12	B	758	C	O4'-C1'-N1	5.22	116.33	108.50
12	B	1813	G	P-O3'-C3'	-5.22	112.38	120.20
12	B	2089	C	O4'-C1'-N1	5.22	116.33	108.50
12	B	98	G	C4'-C3'-O3'	-5.21	105.18	113.00
12	B	472	A	P-O5'-C5'	5.21	128.72	120.90
12	B	2211	A	O5'-C5'-C4'	5.21	119.32	111.50
12	B	2676	C	C5'-C4'-C3'	5.21	123.82	116.00
12	B	29	U	C4'-C3'-O3'	-5.21	105.18	113.00
12	B	932	U	C3'-C2'-C1'	5.21	106.51	101.30
12	B	1115	G	C5'-C4'-O4'	5.21	117.62	109.80
13	C	231	HIS	ND1-CE1-NE2	5.21	113.61	108.40
24	N	16	HIS	CA-C-N	5.21	127.69	120.29
24	N	16	HIS	C-N-CA	5.21	127.69	120.29
12	B	1388	G	O4'-C1'-C2'	-5.21	102.39	107.60
12	B	1991	U	O4'-C1'-N1	5.21	116.32	108.50
16	F	101	ARG	NE-CZ-NH1	-5.21	116.29	121.50
18	H	80	ILE	CA-C-O	-5.21	116.47	121.63
24	N	18	GLN	CB-CG-CD	-5.21	103.74	112.60
29	S	50	VAL	O-C-N	-5.21	116.46	121.83
14	D	45	TYR	CA-C-O	-5.21	115.27	121.89
12	B	653	U	C1'-O4'-C4'	-5.21	104.49	109.70
12	B	1310	G	O4'-C1'-N9	5.21	116.31	108.50
12	B	1662	U	O4'-C1'-N1	5.21	116.31	108.50
15	E	7	ASP	CA-CB-CG	-5.21	107.39	112.60
1	0	23	ALA	CA-C-O	5.21	126.62	120.58
1	0	66	VAL	CA-CB-CG2	-5.21	101.55	110.40
12	B	1655	A	C4'-C3'-O3'	-5.21	105.19	113.00
12	B	2566	A	P-O3'-C3'	5.21	128.01	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2642	G	P-O5'-C5'	5.21	128.71	120.90
27	Q	57	ARG	CB-CG-CD	5.21	123.28	111.30
29	S	48	LYS	N-CA-C	5.21	116.64	111.07
12	B	193	U	O4'-C1'-N1	5.21	116.31	108.50
12	B	2802	G	C4'-C3'-C2'	-5.21	97.39	102.60
13	C	24	HIS	N-CA-C	-5.21	100.21	109.06
1	0	45	PHE	CB-CG-CD2	-5.20	111.85	120.70
10	9	226	GLY	N-CA-C	-5.20	106.75	115.80
11	A	52	A	P-O5'-C5'	5.20	128.71	120.90
12	B	334	C	O3'-P-O5'	-5.20	96.20	104.00
12	B	774	G	C1'-O4'-C4'	5.20	114.90	109.70
12	B	993	G	C5'-C4'-C3'	-5.20	108.19	116.00
12	B	1194	A	C5'-C4'-C3'	-5.20	108.19	116.00
12	B	2607	G	C1'-O4'-C4'	-5.20	104.70	109.90
20	J	113	PRO	O-C-N	5.20	128.22	122.24
10	9	234	HIS	CA-C-N	5.20	127.25	120.28
10	9	234	HIS	C-N-CA	5.20	127.25	120.28
12	B	392	U	O3'-P-O5'	-5.20	96.20	104.00
12	B	892	A	C5'-C4'-C3'	5.20	123.80	116.00
12	B	1301	A	P-O3'-C3'	5.20	128.00	120.20
27	Q	79	ILE	N-CA-CB	5.20	116.97	110.47
12	B	819	A	C3'-C2'-C1'	5.20	106.50	101.30
14	D	86	GLU	CA-C-O	-5.20	115.52	121.40
19	I	123	ALA	CA-C-N	5.20	127.25	120.28
19	I	123	ALA	C-N-CA	5.20	127.25	120.28
12	B	408	G	P-O3'-C3'	-5.20	112.40	120.20
12	B	1746	A	C4'-C3'-O3'	-5.20	105.20	113.00
10	9	243	HIS	CA-CB-CG	5.20	119.00	113.80
12	B	354	A	C4'-C3'-C2'	-5.20	97.40	102.60
12	B	885	C	C4'-C3'-C2'	-5.20	97.40	102.60
12	B	1563	U	O4'-C1'-N1	5.20	116.30	108.50
12	B	2405	G	N9-C1'-C2'	5.20	119.80	112.00
10	9	18	ASN	CA-CB-CG	-5.20	107.40	112.60
12	B	957	C	C5'-C4'-C3'	-5.20	107.41	115.20
12	B	980	A	P-O3'-C3'	5.20	127.99	120.20
12	B	1206	G	C4'-C3'-O3'	-5.20	105.21	113.00
12	B	1988	G	P-O5'-C5'	5.20	128.69	120.90
24	N	103	ARG	N-CA-CB	5.20	118.35	110.45
31	U	30	SER	N-CA-C	-5.20	105.61	112.94
11	A	103	U	N1-C1'-C2'	-5.19	104.21	112.00
12	B	304	U	C4'-C3'-C2'	-5.19	97.41	102.60
12	B	1553	A	P-O3'-C3'	-5.19	112.41	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1672	A	C4'-C3'-O3'	-5.19	105.21	113.00
15	E	67	ARG	NE-CZ-NH1	-5.19	116.31	121.50
12	B	816	C	O4'-C1'-N1	5.19	116.29	108.50
12	B	1182	G	C2'-C3'-O3'	5.19	121.49	113.70
12	B	1515	A	N9-C1'-C2'	-5.19	104.21	112.00
12	B	2183	A	O4'-C4'-C3'	-5.19	98.81	104.00
5	4	45	HIS	N-CA-CB	5.19	117.64	110.17
12	B	1368	G	P-O3'-C3'	-5.19	112.42	120.20
12	B	1596	A	C5'-C4'-C3'	-5.19	108.22	116.00
12	B	2632	A	O4'-C1'-C2'	-5.19	102.41	107.60
15	E	51	GLU	CA-C-N	5.19	131.31	121.97
15	E	51	GLU	C-N-CA	5.19	131.31	121.97
16	F	84	ILE	CA-C-N	-5.19	117.55	122.17
16	F	84	ILE	C-N-CA	-5.19	117.55	122.17
17	G	151	ARG	N-CA-C	-5.19	99.74	110.80
12	B	370	G	P-O3'-C3'	5.19	127.98	120.20
12	B	548	G	O4'-C1'-N9	5.19	115.98	108.20
12	B	1783	A	C3'-C2'-C1'	-5.19	96.11	101.30
12	B	2650	U	O5'-C5'-C4'	-5.19	103.72	111.50
23	M	110	GLU	CA-C-N	5.19	127.23	120.28
23	M	110	GLU	C-N-CA	5.19	127.23	120.28
11	A	108	A	C5'-C4'-C3'	5.19	122.98	115.20
12	B	919	U	O4'-C1'-C2'	-5.19	102.41	107.60
12	B	1036	G	N9-C1'-C2'	-5.19	104.22	112.00
12	B	1573	G	O5'-C5'-C4'	-5.19	103.72	111.50
13	C	229	HIS	CA-C-N	-5.19	115.23	120.21
13	C	229	HIS	C-N-CA	-5.19	115.23	120.21
30	T	15	HIS	CB-CG-ND1	5.19	130.48	122.70
33	Y	69	GLU	N-CA-CB	5.19	117.60	109.97
12	B	304	U	O4'-C4'-C3'	5.19	109.19	104.00
12	B	545	U	C5'-C4'-C3'	5.19	123.78	116.00
12	B	1078	U	C5'-C4'-O4'	-5.19	102.02	109.80
12	B	2123	G	P-O3'-C3'	5.19	127.98	120.20
12	B	2869	G	O4'-C1'-N9	5.19	116.28	108.50
13	C	29	PHE	CB-CG-CD2	-5.19	111.88	120.70
5	4	45	HIS	ND1-CE1-NE2	5.18	113.58	108.40
12	B	201	C	O4'-C1'-N1	5.18	116.28	108.50
12	B	1010	A	P-O5'-C5'	5.18	128.68	120.90
13	C	83	ASP	CA-C-N	5.18	125.64	120.04
13	C	83	ASP	C-N-CA	5.18	125.64	120.04
18	H	37	VAL	CA-C-N	5.18	126.32	119.84
18	H	37	VAL	C-N-CA	5.18	126.32	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	R	59	ILE	N-CA-CB	5.18	116.18	110.53
32	W	62	THR	CA-C-O	5.18	127.73	120.52
4	3	22	THR	CA-C-N	5.18	128.07	120.71
4	3	22	THR	C-N-CA	5.18	128.07	120.71
12	B	331	C	C5'-C4'-O4'	5.18	116.87	109.10
12	B	437	U	P-O5'-C5'	-5.18	113.12	120.90
12	B	734	A	O4'-C1'-C2'	-5.18	102.42	107.60
12	B	862	G	O5'-C5'-C4'	-5.18	103.72	111.50
12	B	1661	G	O4'-C1'-N9	5.18	116.27	108.50
12	B	1762	A	O4'-C4'-C3'	-5.18	98.82	104.00
12	B	2795	C	O4'-C1'-N1	5.18	116.28	108.50
21	K	28	SER	CB-CA-C	-5.18	104.37	111.73
12	B	1352	U	C1'-O4'-C4'	5.18	115.08	109.90
12	B	1454	C	C4'-C3'-C2'	5.18	107.78	102.60
8	7	30	HIS	ND1-CE1-NE2	5.18	113.58	108.40
10	9	98	ASP	O-C-N	-5.18	117.04	123.36
12	B	1018	U	P-O5'-C5'	5.18	128.67	120.90
12	B	2240	U	O4'-C1'-N1	5.18	116.27	108.50
12	B	1576	U	C5'-C4'-O4'	5.18	117.57	109.80
12	B	1738	G	C3'-C2'-C1'	5.18	106.68	101.50
12	B	2150	C	P-O5'-C5'	5.18	128.67	120.90
12	B	2229	U	P-O3'-C3'	-5.18	112.43	120.20
12	B	2826	A	C1'-C2'-O2'	5.18	116.17	108.40
27	Q	32	ARG	NE-CZ-NH2	5.18	123.86	119.20
10	9	144	GLY	N-CA-C	-5.18	100.91	113.18
12	B	49	A	C5'-C4'-O4'	5.18	116.86	109.10
12	B	289	G	O4'-C1'-N9	5.18	116.26	108.50
12	B	709	U	C5'-C4'-C3'	-5.18	108.24	116.00
12	B	2088	A	P-O5'-C5'	5.18	128.66	120.90
12	B	30	G	P-O5'-C5'	5.17	128.66	120.90
12	B	188	G	P-O5'-C5'	-5.17	113.14	120.90
12	B	1007	C	C4'-C3'-O3'	-5.17	105.24	113.00
12	B	1407	G	P-O3'-C3'	-5.17	112.44	120.20
12	B	1556	C	C4'-C3'-C2'	-5.17	97.42	102.60
12	B	2399	G	P-O3'-C3'	-5.17	112.44	120.20
24	N	82	GLU	CB-CG-CD	-5.17	103.80	112.60
30	T	17	SER	N-CA-C	-5.17	101.27	109.96
12	B	392	U	C1'-O4'-C4'	-5.17	104.73	109.90
12	B	406	G	P-O5'-C5'	5.17	128.66	120.90
12	B	2305	U	C5'-C4'-C3'	-5.17	108.24	116.00
26	P	57	ALA	N-CA-C	-5.17	107.49	112.97
6	5	212	VAL	CA-C-N	5.17	131.19	122.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	5	212	VAL	C-N-CA	5.17	131.19	122.87
12	B	603	A	C5'-C4'-C3'	-5.17	107.44	115.20
12	B	984	A	C3'-C2'-O2'	5.17	118.46	110.70
12	B	1293	C	O5'-C5'-C4'	-5.17	103.74	111.50
12	B	1559	U	C3'-C2'-C1'	-5.17	96.33	101.50
12	B	2207	C	O4'-C1'-N1	5.17	116.26	108.50
12	B	314	C	O4'-C1'-C2'	-5.17	102.43	107.60
12	B	1306	C	C4'-C3'-C2'	-5.17	97.43	102.60
12	B	1524	G	C5'-C4'-C3'	-5.17	108.24	116.00
12	B	2329	U	P-O5'-C5'	5.17	128.66	120.90
6	5	80	GLN	CB-CG-CD	-5.17	103.81	112.60
7	6	16	HIS	CG-CD2-NE2	5.17	112.37	107.20
10	9	101	THR	CA-CB-OG1	5.17	117.35	109.60
12	B	534	U	O4'-C1'-N1	5.17	116.25	108.50
12	B	704	G	P-O3'-C3'	5.17	127.95	120.20
12	B	836	G	C4'-C3'-C2'	-5.17	97.43	102.60
13	C	167	ASP	N-CA-C	-5.17	100.61	109.24
20	J	50	THR	CA-C-N	5.17	128.05	122.16
20	J	50	THR	C-N-CA	5.17	128.05	122.16
11	A	8	C	O4'-C4'-C3'	5.17	109.17	104.00
12	B	673	C	O4'-C1'-C2'	-5.17	102.43	107.60
12	B	1000	A	O4'-C1'-C2'	5.17	112.77	107.60
12	B	1566	A	O4'-C1'-C2'	5.17	110.97	105.80
12	B	1577	C	P-O5'-C5'	-5.17	113.15	120.90
12	B	1583	A	C4'-C3'-C2'	-5.17	97.43	102.60
12	B	2526	G	P-O5'-C5'	-5.17	113.15	120.90
14	D	70	LYS	CA-CB-CG	5.17	124.43	114.10
16	F	174	PHE	N-CA-C	-5.17	99.86	108.23
18	H	12	LEU	N-CA-C	-5.17	102.25	109.69
6	5	173	THR	CA-C-N	5.17	129.21	121.72
6	5	173	THR	C-N-CA	5.17	129.21	121.72
10	9	326	TRP	CA-CB-CG	5.17	123.41	113.60
12	B	1761	C	C2-N1-C1'	5.17	134.29	118.80
12	B	2315	G	O4'-C1'-N9	5.17	116.25	108.50
12	B	536	G	C3'-C2'-C1'	-5.16	96.14	101.30
12	B	1775	U	O4'-C1'-C2'	-5.16	102.44	107.60
12	B	2395	C	O5'-C5'-C4'	-5.16	103.75	111.50
13	C	89	ASN	N-CA-CB	5.16	118.59	110.23
15	E	61	ARG	CA-CB-CG	5.16	124.43	114.10
26	P	25	VAL	N-CA-C	5.16	120.08	109.34
6	5	52	ALA	CA-C-O	-5.16	116.00	121.94
12	B	1454	C	C4'-C3'-O3'	-5.16	105.26	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2609	U	C4'-C3'-C2'	-5.16	97.44	102.60
18	H	108	VAL	CA-CB-CG1	5.16	119.18	110.40
12	B	1441	G	C4'-C3'-O3'	-5.16	105.26	113.00
12	B	2099	U	O4'-C4'-C3'	-5.16	98.84	104.00
12	B	2682	A	C4'-C3'-O3'	-5.16	105.26	113.00
18	H	11	ASN	OD1-CG-ND2	5.16	127.76	122.60
28	R	32	THR	N-CA-C	-5.16	102.11	110.32
30	T	56	GLU	CA-C-N	5.16	131.26	121.97
30	T	56	GLU	C-N-CA	5.16	131.26	121.97
12	B	2596	U	O4'-C1'-N1	5.16	116.24	108.50
12	B	2833	U	O3'-P-O5'	5.16	111.74	104.00
6	5	150	ALA	CA-C-O	5.16	126.23	120.82
12	B	995	C	C4'-C3'-C2'	5.16	107.76	102.60
12	B	1909	C	O4'-C1'-C2'	5.16	112.76	107.60
10	9	210	VAL	CA-CB-CG2	5.16	119.16	110.40
10	9	257	GLU	CA-C-N	5.16	127.19	120.28
10	9	257	GLU	C-N-CA	5.16	127.19	120.28
11	A	47	C	C1'-C2'-O2'	5.16	116.13	108.40
12	B	465	G	C4'-C3'-O3'	-5.16	105.27	113.00
12	B	2078	C	C4'-C3'-O3'	-5.16	105.27	113.00
14	D	169	ARG	NE-CZ-NH2	5.16	123.84	119.20
12	B	332	A	P-O5'-C5'	-5.15	113.17	120.90
12	B	1083	U	C1'-O4'-C4'	5.15	115.05	109.90
28	R	12	HIS	CE1-NE2-CD2	-5.15	103.85	109.00
2	1	12	GLU	CA-C-N	5.15	127.90	120.38
2	1	12	GLU	C-N-CA	5.15	127.90	120.38
10	9	280	LEU	O-C-N	-5.15	116.53	123.23
12	B	173	A	O4'-C4'-C3'	-5.15	98.85	104.00
12	B	1243	C	C1'-O4'-C4'	-5.15	104.75	109.90
12	B	1293	C	P-O5'-C5'	5.15	128.63	120.90
12	B	2268	A	C5'-C4'-C3'	-5.15	108.27	116.00
12	B	2526	G	P-O3'-C3'	5.15	127.93	120.20
23	M	27	SER	CB-CA-C	-5.15	100.17	110.42
9	8	32	LYS	CA-C-O	5.15	126.01	120.55
12	B	25	U	C4'-C3'-O3'	-5.15	105.28	113.00
12	B	440	C	O4'-C1'-N1	5.15	116.22	108.50
12	B	533	G	C4'-C3'-O3'	-5.15	105.27	113.00
12	B	1361	G	C4'-C3'-O3'	-5.15	105.28	113.00
12	B	1711	A	O4'-C1'-N9	5.15	116.22	108.50
12	B	2033	A	O4'-C1'-N9	5.15	115.93	108.20
12	B	2451	A	O4'-C1'-N9	5.15	116.22	108.50
12	B	2498	C	C2'-C3'-O3'	-5.15	105.98	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	G	107	GLY	N-CA-C	-5.15	107.70	115.32
28	R	47	VAL	N-CA-CB	5.15	116.14	110.53
12	B	631	A	O4'-C4'-C3'	-5.15	98.85	104.00
12	B	2445	G	C1'-O4'-C4'	-5.15	104.75	109.90
12	B	2724	U	O4'-C1'-N1	5.15	116.22	108.50
12	B	2870	C	O4'-C1'-N1	5.15	116.22	108.50
12	B	514	A	P-O3'-C3'	-5.15	112.48	120.20
12	B	563	A	C4'-C3'-O3'	-5.15	105.28	113.00
16	F	69	ALA	CB-CA-C	-5.15	100.07	109.54
18	H	74	ALA	O-C-N	5.15	128.92	122.23
11	A	59	A	O5'-C5'-C4'	-5.15	103.78	111.50
11	A	88	C	O4'-C1'-N1	5.15	116.22	108.50
12	B	72	U	C3'-C2'-C1'	5.15	106.65	101.50
12	B	386	G	P-O5'-C5'	-5.15	113.18	120.90
12	B	702	U	C1'-C2'-O2'	5.15	116.12	108.40
12	B	1012	U	O5'-C5'-C4'	-5.15	103.98	111.70
12	B	2434	A	O4'-C4'-C3'	-5.15	100.95	106.10
12	B	750	A	P-O5'-C5'	-5.14	113.18	120.90
12	B	944	C	P-O5'-C5'	-5.14	113.18	120.90
12	B	1176	U	O4'-C1'-C2'	-5.14	102.46	107.60
12	B	1755	A	C4'-C3'-O3'	-5.14	105.28	113.00
12	B	2155	U	P-O3'-C3'	5.14	127.92	120.20
12	B	2333	A	P-O5'-C5'	-5.14	113.18	120.90
21	K	23	LYS	N-CA-CB	5.14	120.39	111.39
27	Q	50	ARG	NE-CZ-NH1	5.14	126.64	121.50
30	T	57	VAL	CA-CB-CG1	5.14	119.14	110.40
10	9	213	ASP	CA-C-N	5.14	131.64	122.13
10	9	213	ASP	C-N-CA	5.14	131.64	122.13
12	B	1036	G	O4'-C4'-C3'	-5.14	98.86	104.00
12	B	1067	A	O4'-C1'-N9	5.14	116.21	108.50
12	B	1325	U	O4'-C1'-N1	5.14	115.91	108.20
12	B	2033	A	C4'-C3'-O3'	5.14	117.11	109.40
12	B	2172	U	O3'-P-O5'	-5.14	96.28	104.00
12	B	2547	A	O4'-C1'-N9	5.14	116.21	108.50
20	J	37	ARG	N-CA-C	-5.14	106.85	113.23
26	P	95	LYS	N-CA-C	-5.14	99.85	110.80
27	Q	1	ALA	CA-C-N	5.14	130.39	122.93
27	Q	1	ALA	C-N-CA	5.14	130.39	122.93
8	7	50	SER	CA-C-N	5.14	131.36	121.54
8	7	50	SER	C-N-CA	5.14	131.36	121.54
12	B	291	G	O4'-C4'-C3'	-5.14	98.86	104.00
12	B	754	U	O5'-C5'-C4'	-5.14	103.79	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	777	G	O4'-C1'-C2'	-5.14	102.46	107.60
12	B	896	A	C4'-C3'-C2'	-5.14	97.46	102.60
12	B	1262	A	C4'-C3'-O3'	-5.14	105.29	113.00
12	B	1923	U	P-O5'-C5'	5.14	128.61	120.90
12	B	2334	U	O4'-C4'-C3'	-5.14	100.96	106.10
12	B	2474	U	O4'-C1'-N1	5.14	116.21	108.50
11	A	100	G	O4'-C1'-C2'	-5.14	102.46	107.60
12	B	2418	A	O4'-C1'-N9	5.14	116.20	108.50
23	M	96	ILE	N-CA-C	-5.14	100.47	108.95
12	B	403	U	C2'-C3'-O3'	5.13	117.20	109.50
12	B	1419	A	C4'-C3'-C2'	-5.13	97.47	102.60
12	B	2813	A	P-O5'-C5'	-5.13	113.20	120.90
12	B	2837	A	C5'-C4'-C3'	-5.13	108.30	116.00
13	C	77	VAL	N-CA-CB	5.13	117.15	110.99
25	O	59	ALA	N-CA-C	-5.13	99.86	110.80
27	Q	58	GLN	CB-CG-CD	5.13	121.33	112.60
12	B	336	C	P-O3'-C3'	-5.13	112.50	120.20
12	B	951	C	O4'-C1'-N1	5.13	116.20	108.50
12	B	1789	A	O4'-C4'-C3'	-5.13	98.87	104.00
12	B	2038	G	O4'-C4'-C3'	-5.13	98.87	104.00
14	D	47	ALA	CA-C-N	5.13	129.98	122.69
14	D	47	ALA	C-N-CA	5.13	129.98	122.69
18	H	99	ILE	CA-CB-CG2	-5.13	101.77	110.50
20	J	65	THR	CA-CB-OG1	5.13	117.30	109.60
11	A	66	A	O4'-C4'-C3'	5.13	109.13	104.00
12	B	91	A	C1'-O4'-C4'	5.13	114.83	109.70
12	B	142	A	O4'-C1'-N9	5.13	116.20	108.50
12	B	1288	G	C2'-C3'-O3'	5.13	117.20	109.50
12	B	2200	C	O4'-C1'-N1	5.13	116.20	108.50
12	B	2420	C	C4'-C3'-C2'	5.13	107.73	102.60
12	B	2577	A	C4'-C3'-O3'	-5.13	105.30	113.00
15	E	88	ARG	CA-C-N	5.13	126.25	119.84
15	E	88	ARG	C-N-CA	5.13	126.25	119.84
21	K	100	PHE	CB-CA-C	-5.13	100.73	109.51
24	N	91	ALA	CB-CA-C	-5.13	102.20	110.77
3	2	46	MET	CG-SD-CE	-5.13	89.61	100.90
12	B	115	C	C1'-O4'-C4'	-5.13	104.77	109.90
12	B	420	C	C3'-C2'-C1'	-5.13	96.17	101.30
22	L	50	PHE	N-CA-C	-5.13	99.87	110.80
12	B	724	U	O4'-C1'-N1	5.13	116.19	108.50
12	B	2003	A	C3'-C2'-O2'	5.13	118.39	110.70
30	T	60	THR	N-CA-C	-5.13	100.34	109.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	A	103	U	O4'-C1'-N1	5.13	116.19	108.50
12	B	1568	G	C4'-C3'-O3'	-5.13	105.31	113.00
12	B	1653	G	C5'-C4'-O4'	5.13	116.79	109.10
12	B	1731	G	C5'-C4'-C3'	-5.13	107.51	115.20
12	B	1880	U	O4'-C1'-N1	5.13	116.19	108.50
20	J	141	ASP	N-CA-CB	5.13	118.62	110.16
15	E	137	LYS	O-C-N	-5.12	116.76	122.09
32	W	60	VAL	CA-C-O	-5.12	115.29	121.54
12	B	250	G	C1'-C2'-O2'	5.12	116.08	108.40
12	B	654	A	N9-C1'-C2'	-5.12	106.31	114.00
12	B	765	C	O4'-C1'-N1	5.12	116.19	108.50
12	B	996	A	C3'-C2'-O2'	5.12	118.38	110.70
12	B	1414	C	O4'-C1'-N1	5.12	116.19	108.50
12	B	1536	C	C1'-C2'-O2'	5.12	119.48	111.80
12	B	2884	U	O4'-C1'-N1	5.12	116.18	108.50
12	B	2893	A	C5'-C4'-C3'	5.12	122.89	115.20
15	E	167	VAL	N-CA-C	-5.12	101.03	108.36
17	G	163	TYR	CA-C-N	5.12	127.46	120.54
17	G	163	TYR	C-N-CA	5.12	127.46	120.54
9	8	27	CYS	N-CA-C	-5.12	101.51	109.14
10	9	96	VAL	N-CA-C	5.12	115.34	108.17
12	B	92	U	C5'-C4'-O4'	5.12	117.48	109.80
12	B	635	C	C5'-C4'-C3'	5.12	123.68	116.00
12	B	2061	G	C2'-C3'-O3'	5.12	117.18	109.50
27	Q	69	ARG	CB-CA-C	-5.12	102.81	110.90
12	B	677	A	C5'-C4'-C3'	-5.12	108.32	116.00
27	Q	51	GLN	N-CA-C	5.12	118.62	112.38
12	B	54	G	O5'-C5'-C4'	-5.12	103.83	111.50
12	B	1200	C	C1'-O4'-C4'	5.12	115.02	109.90
18	H	20	ASN	N-CA-CB	-5.12	101.94	110.23
32	W	66	ASP	N-CA-C	5.12	118.50	111.54
5	4	25	ASN	N-CA-C	-5.12	100.39	108.73
6	5	153	VAL	N-CA-CB	5.12	116.53	110.55
12	B	36	G	O5'-C5'-C4'	-5.12	103.83	111.50
17	G	138	GLN	O-C-N	5.12	127.56	122.03
11	A	20	G	O3'-P-O5'	-5.11	96.33	104.00
12	B	754	U	P-O3'-C3'	-5.11	112.53	120.20
12	B	1469	A	C1'-C2'-O2'	5.11	116.07	108.40
12	B	1570	A	C4'-C3'-O3'	-5.11	105.33	113.00
12	B	2691	C	O4'-C1'-N1	5.11	116.17	108.50
12	B	2778	A	P-O5'-C5'	-5.11	113.23	120.90
12	B	2818	U	C1'-O4'-C4'	5.11	115.01	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	G	19	ASN	OD1-CG-ND2	5.11	127.71	122.60
17	G	65	GLY	CA-C-N	5.11	131.31	121.54
17	G	65	GLY	C-N-CA	5.11	131.31	121.54
20	J	120	ARG	N-CA-C	-5.11	105.83	111.71
25	O	9	ARG	NE-CZ-NH1	-5.11	116.39	121.50
10	9	139	ARG	N-CA-CB	5.11	118.58	110.55
12	B	330	A	O3'-P-O5'	-5.11	96.33	104.00
12	B	383	C	P-O5'-C5'	-5.11	113.23	120.90
12	B	869	G	C4'-C3'-O3'	-5.11	105.33	113.00
24	N	16	HIS	ND1-CE1-NE2	5.11	113.51	108.40
3	2	11	SER	N-CA-C	-5.11	102.08	109.59
12	B	449	A	C2'-C3'-O3'	5.11	121.37	113.70
12	B	1718	G	C3'-C2'-O2'	5.11	118.37	110.70
12	B	1798	U	P-O3'-C3'	-5.11	112.53	120.20
12	B	2886	A	C3'-C2'-C1'	5.11	106.41	101.30
13	C	211	ARG	O-C-N	5.11	127.33	122.07
16	F	170	ALA	N-CA-C	-5.11	107.04	113.28
17	G	29	ASN	N-CA-CB	5.11	119.26	111.70
12	B	126	A	C4'-C3'-C2'	-5.11	97.49	102.60
12	B	871	U	C5'-C4'-O4'	-5.11	102.14	109.80
16	F	122	ASP	CA-CB-CG	-5.11	107.49	112.60
11	A	18	G	O3'-P-O5'	5.11	111.66	104.00
12	B	1089	A	O5'-C5'-C4'	-5.11	103.84	111.50
12	B	1421	G	C5'-C4'-O4'	5.11	117.46	109.80
12	B	1466	U	O5'-C5'-C4'	-5.11	103.84	111.50
12	B	1587	G	C5'-C4'-C3'	-5.11	108.34	116.00
12	B	2737	G	O5'-C5'-C4'	-5.11	103.84	111.50
14	D	135	GLY	CA-C-O	-5.11	117.87	122.57
25	O	69	ASP	N-CA-C	-5.11	106.06	113.21
7	6	16	HIS	CE1-NE2-CD2	-5.11	103.89	109.00
7	6	28	ARG	NH1-CZ-NH2	-5.11	112.66	119.30
10	9	243	HIS	CG-CD2-NE2	5.11	112.31	107.20
12	B	2534	A	C5'-C4'-O4'	5.11	117.46	109.80
12	B	2653	U	P-O5'-C5'	-5.11	113.24	120.90
22	L	85	VAL	O-C-N	5.11	125.73	121.85
28	R	78	ARG	N-CA-C	-5.10	100.02	108.75
10	9	286	ASP	CA-C-N	5.10	129.55	121.44
10	9	286	ASP	C-N-CA	5.10	129.55	121.44
12	B	476	G	O5'-C5'-C4'	-5.10	103.85	111.50
12	B	2420	C	O5'-C5'-C4'	-5.10	103.84	111.50
29	S	55	ILE	N-CA-C	5.10	115.32	110.42
12	B	182	A	C3'-C2'-C1'	-5.10	96.20	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	994	C	C4'-C3'-O3'	-5.10	105.35	113.00
12	B	1703	G	C3'-C2'-O2'	5.10	118.35	110.70
15	E	26	ALA	N-CA-C	-5.10	105.61	111.07
12	B	61	C	O4'-C4'-C3'	5.10	109.10	104.00
12	B	405	U	P-O5'-C5'	5.10	128.55	120.90
12	B	707	G	P-O3'-C3'	-5.10	112.55	120.20
12	B	1614	A	P-O5'-C5'	-5.10	113.25	120.90
12	B	1778	U	P-O5'-C5'	5.10	128.55	120.90
12	B	2032	G	O4'-C1'-N9	5.10	115.85	108.20
15	E	88	ARG	CB-CA-C	-5.10	104.51	110.17
25	O	32	PRO	N-CD-CG	5.10	110.85	103.20
29	S	9	HIS	CA-C-N	5.10	128.71	121.42
29	S	9	HIS	C-N-CA	5.10	128.71	121.42
7	6	45	SER	N-CA-C	-5.10	104.01	111.30
11	A	22	U	P-O3'-C3'	-5.10	112.56	120.20
11	A	44	G	C1'-O4'-C4'	5.10	114.80	109.70
12	B	1649	G	O4'-C1'-N9	5.10	116.15	108.50
12	B	2136	G	P-O3'-C3'	-5.10	112.55	120.20
12	B	2522	U	O3'-P-O5'	-5.10	96.35	104.00
28	R	56	GLY	CA-C-N	5.10	128.60	120.55
28	R	56	GLY	C-N-CA	5.10	128.60	120.55
7	6	5	PHE	CA-C-O	-5.10	115.31	120.71
12	B	908	C	O4'-C1'-N1	5.09	116.14	108.50
12	B	1304	A	C4'-C3'-O3'	-5.09	105.36	113.00
12	B	1873	G	P-O3'-C3'	-5.09	112.56	120.20
12	B	2182	U	P-O5'-C5'	5.09	128.54	120.90
12	B	2681	C	O4'-C1'-N1	5.09	115.84	108.20
32	W	61	LEU	N-CA-C	-5.09	101.97	110.17
10	9	98	ASP	N-CA-CB	5.09	119.37	110.81
12	B	522	A	O4'-C1'-C2'	5.09	112.69	107.60
12	B	2588	G	O4'-C1'-C2'	5.09	112.69	107.60
12	B	2826	A	O4'-C1'-C2'	-5.09	102.51	107.60
2	1	9	LYS	CA-C-N	5.09	131.26	121.54
2	1	9	LYS	C-N-CA	5.09	131.26	121.54
11	A	109	A	P-O5'-C5'	-5.09	113.26	120.90
12	B	265	A	C4'-C3'-C2'	-5.09	97.51	102.60
12	B	290	U	N1-C1'-C2'	-5.09	104.36	112.00
12	B	1619	G	O4'-C1'-C2'	-5.09	102.51	107.60
15	E	162	ARG	CA-C-O	-5.09	115.66	121.00
19	I	133	ARG	NE-CZ-NH2	-5.09	114.62	119.20
26	P	107	ALA	N-CA-C	-5.09	100.60	108.90
32	W	46	LYS	N-CA-CB	5.09	117.45	110.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	5	175	ILE	CB-CA-C	-5.09	105.37	112.04
10	9	27	LYS	CA-C-N	5.09	131.26	121.54
10	9	27	LYS	C-N-CA	5.09	131.26	121.54
12	B	1683	U	O4'-C1'-N1	5.09	116.13	108.50
12	B	1730	C	O4'-C1'-N1	5.09	115.83	108.20
12	B	1993	U	P-O5'-C5'	5.09	128.53	120.90
16	F	148	VAL	N-CA-CB	5.09	119.63	111.23
29	S	92	ARG	NE-CZ-NH1	5.09	126.59	121.50
6	5	189	LEU	CA-C-O	-5.09	115.48	120.82
9	8	31	PRO	N-CD-CG	5.09	110.83	103.20
12	B	1453	A	C4'-C3'-C2'	5.09	107.69	102.60
12	B	1510	G	O5'-C5'-C4'	-5.09	103.87	111.50
12	B	2885	G	O4'-C1'-N9	5.09	116.13	108.50
12	B	890	C	O4'-C4'-C3'	-5.09	98.91	104.00
12	B	1076	C	C1'-O4'-C4'	-5.09	104.81	109.90
12	B	1310	G	C5'-C4'-C3'	-5.09	108.37	116.00
12	B	1793	C	C4'-C3'-O3'	-5.09	105.37	113.00
12	B	2830	C	O4'-C1'-N1	5.09	116.13	108.50
14	D	66	GLY	O-C-N	5.09	127.06	122.18
27	Q	59	LEU	CA-C-N	5.09	127.05	120.44
27	Q	59	LEU	C-N-CA	5.09	127.05	120.44
6	5	194	VAL	N-CA-CB	5.08	118.21	110.58
12	B	275	C	C5'-C4'-C3'	5.08	123.63	116.00
12	B	964	C	O4'-C1'-N1	5.08	116.13	108.50
18	H	50	ARG	N-CA-CB	5.08	118.05	110.22
12	B	1027	A	O4'-C4'-C3'	-5.08	98.92	104.00
12	B	1473	G	C4'-C3'-C2'	-5.08	97.52	102.60
12	B	1658	C	C5'-C4'-C3'	-5.08	108.37	116.00
12	B	2375	G	P-O5'-C5'	5.08	128.53	120.90
12	B	2454	G	O4'-C1'-N9	5.08	116.13	108.50
14	D	68	PHE	CA-C-N	5.08	127.80	120.38
14	D	68	PHE	C-N-CA	5.08	127.80	120.38
15	E	96	VAL	O-C-N	-5.08	116.22	122.57
1	0	57	VAL	CB-CA-C	-5.08	105.43	112.24
12	B	36	G	O4'-C1'-C2'	-5.08	102.52	107.60
12	B	553	G	C4'-C3'-O3'	-5.08	105.38	113.00
12	B	736	C	P-O5'-C5'	5.08	128.52	120.90
12	B	1604	C	O5'-C5'-C4'	-5.08	103.88	111.50
14	D	156	PHE	CA-C-N	5.08	128.92	120.94
14	D	156	PHE	C-N-CA	5.08	128.92	120.94
12	B	660	C	P-O3'-C3'	-5.08	112.58	120.20
12	B	1270	C	O3'-P-O5'	-5.08	96.38	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	46	VAL	N-CA-CB	5.08	119.61	111.23
8	7	10	ALA	CA-C-O	5.08	127.04	118.91
12	B	288	U	P-O3'-C3'	-5.08	112.58	120.20
12	B	1518	C	O4'-C1'-N1	5.08	116.12	108.50
12	B	2577	A	C5'-C4'-C3'	5.08	123.62	116.00
12	B	2814	A	O4'-C1'-N9	5.08	116.12	108.50
13	C	107	LYS	N-CA-C	5.08	117.59	110.23
3	2	39	ASP	CA-C-N	5.08	133.19	123.65
3	2	39	ASP	C-N-CA	5.08	133.19	123.65
12	B	692	C	O4'-C1'-N1	5.08	116.11	108.50
23	M	130	PHE	CA-C-O	-5.08	115.27	121.36
29	S	75	PHE	O-C-N	-5.08	115.84	122.59
12	B	474	G	C5'-C4'-C3'	-5.08	107.59	115.20
12	B	596	U	O4'-C1'-C2'	-5.08	102.53	107.60
12	B	665	U	O4'-C1'-N1	5.08	116.11	108.50
12	B	736	C	O4'-C1'-N1	5.08	116.11	108.50
12	B	814	C	P-O5'-C5'	5.08	128.51	120.90
12	B	1805	A	O4'-C4'-C3'	5.08	109.08	104.00
12	B	2876	G	O4'-C1'-N9	5.08	116.11	108.50
24	N	64	ARG	CA-C-O	5.08	125.87	120.24
12	B	1230	A	O4'-C1'-N9	5.07	116.11	108.50
12	B	2022	U	P-O5'-C5'	-5.07	113.29	120.90
13	C	160	TYR	CA-CB-CG	-5.07	104.77	113.90
16	F	113	PHE	CA-CB-CG	-5.07	108.73	113.80
11	A	57	A	C2'-C3'-O3'	5.07	121.31	113.70
12	B	890	C	O4'-C1'-N1	5.07	116.11	108.50
17	G	102	ILE	N-CA-C	-5.07	98.79	109.34
1	0	7	THR	N-CA-CB	5.07	118.10	110.65
12	B	930	G	P-O5'-C5'	-5.07	113.30	120.90
12	B	2353	G	P-O3'-C3'	-5.07	112.59	120.20
33	Y	80	SER	N-CA-C	-5.07	100.08	108.75
12	B	879	G	O5'-C5'-C4'	-5.07	103.90	111.50
12	B	2264	C	O4'-C1'-N1	5.07	116.10	108.50
17	G	62	ALA	CA-C-N	5.07	130.01	121.14
17	G	62	ALA	C-N-CA	5.07	130.01	121.14
22	L	130	GLY	CA-C-N	5.07	127.07	120.28
22	L	130	GLY	C-N-CA	5.07	127.07	120.28
6	5	39	VAL	CA-C-N	5.07	131.22	121.54
6	5	39	VAL	C-N-CA	5.07	131.22	121.54
12	B	256	A	O4'-C1'-N9	5.07	116.10	108.50
12	B	596	U	C1'-C2'-O2'	5.07	116.00	108.40
12	B	1552	A	O4'-C4'-C3'	-5.07	98.93	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	2039	U	O4'-C1'-N1	5.07	116.10	108.50
22	L	57	LEU	N-CA-C	-5.07	106.61	112.89
28	R	17	GLY	O-C-N	-5.07	116.11	122.70
6	5	101	ALA	CB-CA-C	-5.07	102.93	110.88
12	B	169	G	O4'-C1'-N9	5.07	116.10	108.50
12	B	1191	G	O4'-C4'-C3'	-5.07	98.93	104.00
12	B	1325	U	O5'-C5'-C4'	-5.07	104.10	111.70
23	M	90	GLU	N-CA-C	-5.07	104.83	112.99
32	W	53	LYS	CA-C-N	5.07	127.07	120.28
32	W	53	LYS	C-N-CA	5.07	127.07	120.28
12	B	523	C	C4'-C3'-C2'	-5.06	97.54	102.60
12	B	2040	G	C4'-C3'-O3'	-5.06	105.41	113.00
9	8	3	VAL	N-CA-C	-5.06	100.46	107.80
12	B	771	G	O4'-C1'-C2'	-5.06	102.54	107.60
12	B	905	A	C4'-C3'-C2'	-5.06	97.54	102.60
12	B	1154	G	P-O5'-C5'	5.06	128.50	120.90
12	B	1292	G	C5'-C4'-C3'	-5.06	108.41	116.00
12	B	1621	U	C4'-C3'-O3'	-5.06	105.41	113.00
12	B	1902	C	C4'-C3'-C2'	-5.06	97.54	102.60
12	B	2118	U	O4'-C4'-C3'	5.06	111.16	106.10
12	B	2160	C	C3'-C2'-C1'	5.06	106.36	101.30
12	B	2659	G	P-O5'-C5'	-5.06	113.31	120.90
10	9	200	VAL	CA-C-N	5.06	129.63	123.10
10	9	200	VAL	C-N-CA	5.06	129.63	123.10
10	9	320	GLY	N-CA-C	-5.06	107.83	115.32
12	B	862	G	C4'-C3'-C2'	-5.06	97.54	102.60
12	B	1507	C	C4'-C3'-C2'	-5.06	97.54	102.60
24	N	53	THR	CA-CB-OG1	5.06	117.19	109.60
30	T	70	HIS	ND1-CG-CD2	5.06	111.16	106.10
12	B	394	C	P-O5'-C5'	-5.06	113.31	120.90
12	B	580	U	C4'-C3'-C2'	-5.06	97.54	102.60
12	B	2813	A	P-O3'-C3'	-5.06	112.61	120.20
1	0	73	ARG	O-C-N	5.06	129.32	122.59
11	A	4	C	P-O3'-C3'	-5.06	112.61	120.20
12	B	33	C	O4'-C1'-C2'	-5.06	100.74	105.80
12	B	346	A	P-O5'-C5'	5.06	128.49	120.90
12	B	658	U	O5'-C5'-C4'	-5.06	103.91	111.50
12	B	703	U	C4'-C3'-O3'	-5.06	105.41	113.00
10	9	84	LYS	N-CA-C	5.06	115.83	108.14
12	B	845	A	O4'-C1'-N9	5.06	116.08	108.50
15	E	97	ASN	CA-C-N	5.06	128.69	120.60
15	E	97	ASN	C-N-CA	5.06	128.69	120.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	K	97	THR	CA-C-O	5.06	124.23	118.47
3	2	8	GLN	OE1-CD-NE2	5.05	127.65	122.60
12	B	128	C	O4'-C1'-C2'	-5.05	102.55	107.60
12	B	148	U	O3'-P-O5'	-5.05	96.42	104.00
12	B	469	G	C5'-C4'-C3'	-5.05	108.42	116.00
12	B	535	G	O4'-C4'-C3'	-5.05	98.94	104.00
12	B	772	C	P-O3'-C3'	5.05	127.78	120.20
12	B	893	C	O4'-C1'-N1	5.05	116.08	108.50
12	B	2239	G	O4'-C4'-C3'	-5.05	98.94	104.00
12	B	2631	G	O4'-C1'-N9	5.05	116.08	108.50
25	O	30	ARG	NE-CZ-NH2	-5.05	114.65	119.20
26	P	47	ILE	CA-C-O	-5.05	114.95	120.96
28	R	28	ALA	CA-C-N	5.05	127.95	120.82
28	R	28	ALA	C-N-CA	5.05	127.95	120.82
12	B	233	A	C1'-O4'-C4'	-5.05	104.85	109.90
12	B	2772	C	C4'-C3'-C2'	-5.05	97.55	102.60
17	G	152	ARG	N-CA-CB	-5.05	102.77	110.05
23	M	22	GLN	N-CA-C	5.05	117.22	110.35
25	O	5	SER	O-C-N	-5.05	116.78	122.03
12	B	92	U	O4'-C1'-N1	5.05	116.08	108.50
12	B	1422	G	C4'-C3'-C2'	-5.05	97.55	102.60
12	B	2063	C	O4'-C1'-N1	5.05	116.08	108.50
12	B	2796	U	O4'-C1'-N1	5.05	116.08	108.50
12	B	2808	G	O5'-C5'-C4'	-5.05	103.92	111.50
28	R	90	ARG	NE-CZ-NH2	-5.05	114.65	119.20
10	9	15	ASP	CA-C-O	-5.05	116.03	121.38
12	B	863	A	C4'-C3'-O3'	-5.05	105.43	113.00
12	B	1388	G	C5'-C4'-C3'	-5.05	108.42	116.00
12	B	1887	C	C4'-C3'-O3'	-5.05	105.43	113.00
12	B	1902	C	P-O3'-C3'	-5.05	112.62	120.20
22	L	137	ALA	N-CA-C	-5.05	106.81	113.17
23	M	107	GLY	N-CA-C	-5.05	108.36	114.92
33	Y	43	LYS	N-CA-C	-5.05	101.62	109.14
12	B	148	U	C5'-C4'-C3'	-5.05	108.43	116.00
12	B	1855	U	C4'-C3'-O3'	-5.05	105.43	113.00
23	M	15	GLY	CA-C-N	5.05	130.44	122.36
23	M	15	GLY	C-N-CA	5.05	130.44	122.36
26	P	73	PHE	CB-CA-C	-5.05	99.13	109.38
33	Y	50	VAL	CA-C-O	5.05	126.11	119.85
6	5	12	ARG	O-C-N	-5.05	116.31	122.22
10	9	306	TRP	N-CA-C	5.05	115.97	108.60
12	B	1556	C	P-O5'-C5'	-5.05	113.33	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1846	G	P-O3'-C3'	-5.05	112.63	120.20
12	B	2021	C	P-O5'-C5'	-5.05	113.33	120.90
12	B	2308	G	O3'-P-O5'	-5.05	96.43	104.00
12	B	2565	A	P-O5'-C5'	-5.05	113.33	120.90
12	B	2675	A	O4'-C1'-N9	5.05	116.07	108.50
13	C	239	PHE	CA-C-O	-5.05	115.34	120.99
22	L	80	SER	N-CA-CB	5.05	118.63	110.40
27	Q	30	VAL	CA-C-N	5.05	129.21	120.58
27	Q	30	VAL	C-N-CA	5.05	129.21	120.58
12	B	406	G	O5'-C5'-C4'	-5.04	103.93	111.50
12	B	1708	C	C4'-C3'-C2'	-5.04	97.56	102.60
12	B	494	G	C3'-C2'-O2'	5.04	118.27	110.70
12	B	2513	A	C3'-C2'-O2'	5.04	118.26	110.70
12	B	2771	C	P-O3'-C3'	-5.04	112.63	120.20
12	B	2874	C	C4'-C3'-O3'	-5.04	105.44	113.00
13	C	122	ALA	N-CA-C	-5.04	106.72	112.92
16	F	12	VAL	CB-CA-C	5.04	115.59	110.65
16	F	48	LEU	CA-C-N	5.04	127.30	120.44
16	F	48	LEU	C-N-CA	5.04	127.30	120.44
21	K	56	ASP	CA-C-O	-5.04	116.20	121.55
23	M	115	GLU	CA-C-N	5.04	131.17	121.54
23	M	115	GLU	C-N-CA	5.04	131.17	121.54
4	3	51	ARG	CB-CG-CD	5.04	122.89	111.30
12	B	540	C	O4'-C1'-N1	5.04	116.06	108.50
12	B	2336	A	C2'-C3'-O3'	5.04	117.06	109.50
31	U	84	PHE	CA-C-N	5.04	128.67	120.60
31	U	84	PHE	C-N-CA	5.04	128.67	120.60
12	B	1576	U	O4'-C1'-N1	5.04	116.06	108.50
17	G	44	HIS	CG-CD2-NE2	5.04	112.24	107.20
8	7	15	LYS	N-CA-C	5.04	117.20	110.35
16	F	171	ALA	CA-C-N	5.04	127.97	120.31
16	F	171	ALA	C-N-CA	5.04	127.97	120.31
24	N	17	ARG	O-C-N	5.04	127.89	122.15
29	S	11	ARG	NE-CZ-NH2	-5.04	114.67	119.20
29	S	76	VAL	N-CA-CB	5.04	119.55	111.23
13	C	214	GLY	N-CA-C	-5.04	108.37	115.32
2	1	3	ALA	CA-C-N	5.04	127.79	120.79
2	1	3	ALA	C-N-CA	5.04	127.79	120.79
12	B	765	C	C4'-C3'-C2'	-5.04	97.56	102.60
12	B	2062	A	P-O3'-C3'	5.04	127.75	120.20
14	D	3	GLY	O-C-N	5.04	129.10	122.91
17	G	26	LYS	N-CA-C	-5.04	101.42	109.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	H	136	SER	N-CA-C	-5.04	106.98	113.02
26	P	63	ILE	N-CA-CB	5.04	119.54	111.23
10	9	152	LEU	N-CA-C	-5.03	102.62	110.42
12	B	833	A	C1'-C2'-O2'	-5.03	100.85	108.40
12	B	969	G	P-O5'-C5'	5.03	128.45	120.90
12	B	2301	C	O4'-C1'-N1	5.03	116.05	108.50
16	F	12	VAL	CA-C-O	-5.03	113.80	118.98
12	B	1291	C	O5'-C5'-C4'	-5.03	103.95	111.50
12	B	1945	G	P-O5'-C5'	5.03	128.45	120.90
12	B	2890	G	O4'-C4'-C3'	5.03	109.03	104.00
11	A	85	G	P-O3'-C3'	-5.03	112.65	120.20
12	B	16	C	C4'-C3'-O3'	-5.03	105.45	113.00
12	B	1771	C	C4'-C3'-O3'	-5.03	105.45	113.00
12	B	1846	G	C5'-C4'-C3'	-5.03	108.45	116.00
12	B	1941	C	O4'-C1'-N1	5.03	116.05	108.50
12	B	2493	U	C4'-C3'-C2'	-5.03	97.57	102.60
14	D	184	ARG	NE-CZ-NH2	5.03	123.73	119.20
12	B	145	C	O3'-P-O5'	-5.03	96.46	104.00
12	B	228	C	C4'-C3'-O3'	-5.03	105.46	113.00
12	B	1027	A	C3'-C2'-C1'	-5.03	96.27	101.30
12	B	1651	G	O5'-C5'-C4'	-5.03	103.96	111.50
18	H	49	ALA	O-C-N	5.03	127.88	122.15
31	U	35	VAL	N-CA-C	-5.03	101.25	108.89
10	9	279	TRP	CE2-CD2-CE3	5.03	123.83	118.80
11	A	11	C	O4'-C1'-N1	5.03	116.04	108.50
12	B	8	C	O4'-C1'-N1	5.03	116.04	108.50
12	B	512	G	C1'-O4'-C4'	-5.03	104.87	109.90
24	N	32	GLU	CA-C-N	5.03	130.02	122.58
24	N	32	GLU	C-N-CA	5.03	130.02	122.58
31	U	69	VAL	CA-C-N	5.03	130.14	122.65
31	U	69	VAL	C-N-CA	5.03	130.14	122.65
6	5	13	GLU	CA-C-N	5.03	127.42	120.29
6	5	13	GLU	C-N-CA	5.03	127.42	120.29
12	B	554	U	O4'-C4'-C3'	-5.03	98.97	104.00
12	B	758	C	C5'-C4'-C3'	-5.03	108.46	116.00
12	B	1272	A	C1'-C2'-O2'	-5.03	104.26	111.80
12	B	2720	U	C4'-C3'-C2'	-5.03	97.58	102.60
33	Y	9	THR	CA-C-O	-5.03	115.85	121.23
12	B	584	C	O4'-C1'-N1	5.02	116.04	108.50
12	B	1329	U	O4'-C4'-C3'	-5.02	101.08	106.10
12	B	2806	C	O4'-C1'-N1	5.02	116.03	108.50
12	B	1674	G	C1'-C2'-O2'	5.02	119.33	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1690	A	O4'-C1'-N9	5.02	116.03	108.50
12	B	1831	G	C4'-C3'-O3'	-5.02	105.47	113.00
12	B	2139	U	P-O3'-C3'	5.02	127.73	120.20
12	B	2880	C	O4'-C1'-N1	5.02	116.03	108.50
13	C	164	VAL	O-C-N	-5.02	116.29	122.57
25	O	74	VAL	CA-C-N	5.02	126.42	120.14
25	O	74	VAL	C-N-CA	5.02	126.42	120.14
12	B	143	C	P-O5'-C5'	5.02	128.43	120.90
12	B	2118	U	C5'-C4'-C3'	5.02	122.73	115.20
13	C	57	HIS	CA-C-O	-5.02	116.36	122.03
11	A	107	G	C2'-C3'-O3'	5.02	121.23	113.70
12	B	471	A	P-O3'-C3'	-5.02	112.67	120.20
12	B	1340	U	O4'-C1'-N1	5.02	115.73	108.20
12	B	1450	G	O4'-C1'-N9	5.02	116.03	108.50
12	B	2402	U	P-O5'-C5'	-5.02	113.37	120.90
12	B	2463	C	O4'-C1'-N1	5.02	116.03	108.50
12	B	2637	U	O4'-C4'-C3'	5.02	109.02	104.00
15	E	101	TYR	N-CA-CB	5.02	117.35	110.07
29	S	109	ASP	CA-C-N	5.02	130.74	121.70
29	S	109	ASP	C-N-CA	5.02	130.74	121.70
8	7	42	HIS	CA-C-N	5.02	128.35	120.82
8	7	42	HIS	C-N-CA	5.02	128.35	120.82
9	8	8	LYS	N-CA-CB	5.02	118.97	110.49
12	B	215	G	O4'-C4'-C3'	-5.02	101.08	106.10
12	B	513	A	C5'-C4'-C3'	-5.02	108.47	116.00
12	B	616	A	C4'-C3'-O3'	-5.02	105.47	113.00
12	B	912	C	O4'-C1'-N1	5.02	116.03	108.50
12	B	1495	A	O4'-C1'-N9	5.02	115.73	108.20
12	B	1642	G	C4'-C3'-O3'	-5.02	105.47	113.00
12	B	2314	A	C4'-C3'-O3'	-5.02	105.47	113.00
12	B	2778	A	O4'-C4'-C3'	-5.02	101.08	106.10
26	P	38	ARG	CD-NE-CZ	-5.02	117.38	124.40
28	R	18	GLN	CB-CG-CD	-5.02	104.07	112.60
12	B	255	A	C1'-C2'-O2'	5.02	115.92	108.40
12	B	2536	G	C4'-C3'-O3'	-5.02	105.48	113.00
15	E	139	LYS	O-C-N	5.02	127.24	122.07
10	9	182	ALA	CB-CA-C	-5.01	101.05	109.48
12	B	2156	G	O5'-C5'-C4'	-5.01	103.98	111.50
12	B	2371	G	C4'-C3'-O3'	-5.01	105.48	113.00
12	B	2659	G	O3'-P-O5'	5.01	111.52	104.00
12	B	2897	U	O5'-C5'-C4'	-5.01	103.98	111.50
14	D	25	THR	CA-CB-CG2	-5.01	101.98	110.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	F	155	ILE	CA-C-N	5.01	130.05	122.68
16	F	155	ILE	C-N-CA	5.01	130.05	122.68
10	9	186	VAL	N-CA-CB	5.01	117.08	111.21
12	B	2165	C	O5'-C5'-C4'	-5.01	103.98	111.50
12	B	2220	U	O4'-C4'-C3'	-5.01	98.99	104.00
12	B	874	G	O4'-C1'-N9	5.01	116.02	108.50
12	B	2456	C	O5'-C5'-C4'	-5.01	103.98	111.50
15	E	147	LEU	N-CA-CB	-5.01	103.70	110.67
11	A	28	C	C4'-C3'-C2'	-5.01	97.59	102.60
12	B	39	G	C1'-O4'-C4'	5.01	114.91	109.90
12	B	1247	A	O4'-C1'-N9	5.01	115.71	108.20
12	B	2263	C	P-O5'-C5'	5.01	128.41	120.90
12	B	2630	G	O4'-C1'-N9	5.01	116.01	108.50
12	B	2869	G	P-O5'-C5'	5.01	128.41	120.90
14	D	14	ILE	N-CA-C	-5.01	100.44	107.75
15	E	101	TYR	N-CA-C	-5.01	105.73	111.14
31	U	14	THR	CA-CB-OG1	5.01	117.11	109.60
7	6	40	ALA	N-CA-C	-5.01	100.14	110.80
10	9	9	ILE	CA-C-N	-5.01	115.94	123.00
10	9	9	ILE	C-N-CA	-5.01	115.94	123.00
12	B	193	U	C4'-C3'-O3'	-5.01	105.49	113.00
12	B	339	U	P-O5'-C5'	5.01	128.41	120.90
12	B	1623	G	C3'-C2'-C1'	-5.01	96.29	101.30
12	B	1984	G	C3'-C2'-O2'	5.01	118.21	110.70
14	D	13	ARG	NE-CZ-NH1	-5.01	116.49	121.50
14	D	71	ALA	CA-C-O	5.01	127.67	120.51
17	G	100	ASN	CA-CB-CG	-5.01	107.59	112.60
1	0	57	VAL	CA-C-N	5.00	127.59	120.53
1	0	57	VAL	C-N-CA	5.00	127.59	120.53
12	B	1454	C	O4'-C4'-C3'	-5.00	99.00	104.00
17	G	76	ILE	CA-CB-CG2	5.00	119.01	110.50
12	B	1155	A	C4'-C3'-O3'	-5.00	105.49	113.00
12	B	1217	U	O4'-C1'-N1	5.00	116.00	108.50
12	B	1311	G	P-O3'-C3'	-5.00	112.69	120.20
12	B	2866	U	C2'-C3'-O3'	5.00	117.00	109.50
15	E	41	GLN	CA-C-O	-5.00	115.38	121.88
20	J	77	HIS	N-CA-CB	5.00	117.67	110.37
6	5	7	ARG	CA-C-O	-5.00	114.60	120.20
6	5	144	THR	N-CA-C	-5.00	105.89	112.94
12	B	546	U	P-O5'-C5'	5.00	128.40	120.90
12	B	786	C	P-O3'-C3'	-5.00	112.70	120.20
12	B	1348	C	C5'-C4'-C3'	-5.00	108.50	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	B	1699	G	C5'-C4'-C3'	5.00	122.70	115.20
12	B	1952	A	C4'-C3'-O3'	-5.00	105.50	113.00
32	W	44	HIS	CE1-NE2-CD2	-5.00	104.00	109.00

There are no chirality outliers.

All (1675) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	37	PHE	Sidechain
1	0	56	ARG	Sidechain
2	1	23	ARG	Sidechain
2	1	7	ARG	Sidechain
3	2	44	ARG	Sidechain
4	3	12	ARG	Sidechain
4	3	9	ARG	Sidechain
5	4	20	TYR	Sidechain
5	4	48	TYR	Sidechain
6	5	134	ARG	Sidechain
6	5	38	PHE	Sidechain
6	5	53	ARG	Sidechain
7	6	12	ARG	Sidechain
7	6	19	ARG	Sidechain
7	6	28	ARG	Sidechain
7	6	33	ARG	Sidechain
7	6	35	ARG	Sidechain
7	6	5	PHE	Sidechain
8	7	23	HIS	Sidechain
8	7	44	ARG	Sidechain
8	7	7	ARG	Sidechain
9	8	4	ARG	Sidechain
10	9	108	MET	Peptide
10	9	114	ARG	Sidechain
10	9	130	PHE	Sidechain
10	9	139	ARG	Sidechain
10	9	150	ARG	Sidechain
10	9	157	MET	Peptide
10	9	158	LEU	Peptide
10	9	175	PHE	Sidechain
10	9	183	LYS	Mainchain
10	9	189	TYR	Sidechain
10	9	202	ARG	Sidechain
10	9	226	GLY	Peptide

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Mol	Chain	Res	Type	Group
10	9	231	PHE	Sidechain
10	9	234	HIS	Sidechain
10	9	239	ARG	Sidechain
10	9	24	ARG	Sidechain
10	9	25	ARG	Sidechain
10	9	28	TYR	Sidechain
10	9	282	PHE	Sidechain
10	9	310	TYR	Sidechain
10	9	311	TYR	Sidechain
10	9	331	PHE	Sidechain
10	9	40	GLY	Mainchain
10	9	53	LEU	Peptide
10	9	54	ASN	Mainchain
10	9	60	ARG	Peptide
10	9	82	ARG	Sidechain
11	A	10	G	Sidechain
11	A	100	G	Sidechain
11	A	104	A	Sidechain
11	A	105	G	Sidechain
11	A	107	G	Sidechain
11	A	11	C	Sidechain
11	A	111	U	Sidechain
11	A	114	C	Sidechain
11	A	115	A	Sidechain
11	A	116	G	Sidechain
11	A	117	G	Sidechain
11	A	118	C	Sidechain
11	A	13	G	Sidechain
11	A	14	U	Sidechain
11	A	17	C	Sidechain
11	A	18	G	Sidechain
11	A	20	G	Sidechain
11	A	23	G	Sidechain
11	A	24	G	Sidechain
11	A	25	U	Sidechain
11	A	32	U	Sidechain
11	A	33	G	Sidechain
11	A	36	C	Sidechain
11	A	37	C	Sidechain
11	A	38	C	Sidechain
11	A	4	C	Sidechain
11	A	40	U	Sidechain

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Mol	Chain	Res	Type	Group
11	A	43	C	Sidechain
11	A	44	G	Sidechain
11	A	49	C	Sidechain
11	A	53	A	Sidechain
11	A	55	U	Sidechain
11	A	56	G	Sidechain
11	A	57	A	Sidechain
11	A	58	A	Sidechain
11	A	59	A	Sidechain
11	A	62	C	Sidechain
11	A	63	C	Sidechain
11	A	64	G	Sidechain
11	A	65	U	Sidechain
11	A	66	A	Sidechain
11	A	70	C	Sidechain
11	A	71	C	Sidechain
11	A	72	G	Sidechain
11	A	74	U	Sidechain
11	A	76	G	Sidechain
11	A	79	G	Sidechain
11	A	82	U	Sidechain
11	A	84	G	Sidechain
11	A	85	G	Sidechain
11	A	86	G	Sidechain
11	A	87	U	Sidechain
11	A	92	C	Sidechain
11	A	96	G	Sidechain
11	A	98	G	Sidechain
12	B	1	G	Sidechain
12	B	10	A	Sidechain
12	B	1001	A	Sidechain
12	B	1002	G	Sidechain
12	B	1003	G	Sidechain
12	B	1005	C	Sidechain
12	B	1006	C	Sidechain
12	B	1007	C	Sidechain
12	B	1008	A	Sidechain
12	B	101	A	Sidechain
12	B	1011	G	Sidechain
12	B	1014	A	Sidechain
12	B	1016	G	Sidechain
12	B	1019	U	Sidechain

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Mol	Chain	Res	Type	Group
12	B	102	U	Sidechain
12	B	1021	A	Sidechain
12	B	1022	G	Sidechain
12	B	1023	U	Sidechain
12	B	1024	G	Sidechain
12	B	1025	G	Sidechain
12	B	1026	G	Sidechain
12	B	1027	A	Sidechain
12	B	1031	G	Sidechain
12	B	1034	G	Sidechain
12	B	1035	U	Sidechain
12	B	1038	G	Sidechain
12	B	1040	A	Sidechain
12	B	1042	G	Sidechain
12	B	1044	C	Sidechain
12	B	1045	C	Sidechain
12	B	1047	G	Sidechain
12	B	1054	A	Sidechain
12	B	1056	G	Sidechain
12	B	1059	G	Sidechain
12	B	1060	U	Sidechain
12	B	1061	U	Sidechain
12	B	1063	G	Sidechain
12	B	1065	U	Sidechain
12	B	1067	A	Sidechain
12	B	1068	G	Sidechain
12	B	1069	A	Sidechain
12	B	1070	A	Sidechain
12	B	1071	G	Sidechain
12	B	1074	G	Sidechain
12	B	1077	A	Sidechain
12	B	1081	U	Sidechain
12	B	1085	A	Sidechain
12	B	1086	A	Sidechain
12	B	1087	G	Sidechain
12	B	1088	A	Sidechain
12	B	1090	A	Sidechain
12	B	1091	G	Sidechain
12	B	1095	A	Sidechain
12	B	1096	A	Sidechain
12	B	1098	A	Sidechain
12	B	1099	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	110	G	Sidechain
12	B	1100	C	Sidechain
12	B	1103	A	Sidechain
12	B	1105	U	Sidechain
12	B	111	A	Sidechain
12	B	1110	G	Sidechain
12	B	1116	G	Sidechain
12	B	1122	G	Sidechain
12	B	1123	C	Sidechain
12	B	1124	G	Sidechain
12	B	1125	G	Sidechain
12	B	1126	A	Sidechain
12	B	1127	A	Sidechain
12	B	1128	G	Sidechain
12	B	1129	A	Sidechain
12	B	1131	G	Sidechain
12	B	1132	U	Sidechain
12	B	1134	A	Sidechain
12	B	1135	C	Sidechain
12	B	1136	G	Sidechain
12	B	1137	G	Sidechain
12	B	1138	G	Sidechain
12	B	1139	G	Sidechain
12	B	1140	C	Sidechain
12	B	1141	U	Sidechain
12	B	1142	A	Sidechain
12	B	1143	A	Sidechain
12	B	1144	A	Sidechain
12	B	1146	C	Sidechain
12	B	1147	A	Sidechain
12	B	1157	G	Sidechain
12	B	1158	C	Sidechain
12	B	1166	G	Sidechain
12	B	1167	C	Sidechain
12	B	1168	G	Sidechain
12	B	117	G	Sidechain
12	B	1171	G	Sidechain
12	B	1172	C	Sidechain
12	B	1173	U	Sidechain
12	B	1174	U	Sidechain
12	B	118	A	Sidechain
12	B	1180	U	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1181	U	Sidechain
12	B	1183	U	Sidechain
12	B	1185	G	Sidechain
12	B	1186	G	Sidechain
12	B	1189	A	Sidechain
12	B	119	A	Sidechain
12	B	1190	G	Sidechain
12	B	1192	G	Sidechain
12	B	1193	G	Sidechain
12	B	1194	A	Sidechain
12	B	1195	G	Sidechain
12	B	1198	U	Sidechain
12	B	1199	U	Sidechain
12	B	1204	A	Sidechain
12	B	1205	A	Sidechain
12	B	1206	G	Sidechain
12	B	1208	C	Sidechain
12	B	1209	U	Sidechain
12	B	1210	G	Sidechain
12	B	1211	C	Sidechain
12	B	1212	G	Sidechain
12	B	1213	A	Sidechain
12	B	1216	G	Sidechain
12	B	1220	G	Sidechain
12	B	1223	G	Sidechain
12	B	1225	G	Sidechain
12	B	1227	G	Sidechain
12	B	1228	G	Sidechain
12	B	1230	A	Sidechain
12	B	1231	U	Sidechain
12	B	1232	G	Sidechain
12	B	1234	U	Sidechain
12	B	1235	G	Sidechain
12	B	1236	G	Sidechain
12	B	1237	A	Sidechain
12	B	1238	G	Sidechain
12	B	1240	U	Sidechain
12	B	1241	A	Sidechain
12	B	1242	U	Sidechain
12	B	1244	A	Sidechain
12	B	125	A	Sidechain
12	B	1250	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1251	C	Sidechain
12	B	1252	G	Sidechain
12	B	1253	A	Sidechain
12	B	1256	G	Sidechain
12	B	1258	U	Sidechain
12	B	126	A	Sidechain
12	B	1260	A	Sidechain
12	B	1261	C	Sidechain
12	B	1264	A	Sidechain
12	B	1267	U	Sidechain
12	B	1269	A	Sidechain
12	B	1271	G	Sidechain
12	B	1272	A	Sidechain
12	B	1273	U	Sidechain
12	B	1275	A	Sidechain
12	B	1277	G	Sidechain
12	B	128	C	Sidechain
12	B	1280	G	Sidechain
12	B	1284	A	Sidechain
12	B	1285	A	Sidechain
12	B	1289	C	Sidechain
12	B	1290	C	Sidechain
12	B	1291	C	Sidechain
12	B	1293	C	Sidechain
12	B	1294	U	Sidechain
12	B	1296	G	Sidechain
12	B	1298	C	Sidechain
12	B	1303	G	Sidechain
12	B	1305	C	Sidechain
12	B	1307	A	Sidechain
12	B	1310	G	Sidechain
12	B	1317	G	Sidechain
12	B	1318	U	Sidechain
12	B	132	G	Sidechain
12	B	1320	C	Sidechain
12	B	1324	G	Sidechain
12	B	1326	U	Sidechain
12	B	1327	A	Sidechain
12	B	1328	A	Sidechain
12	B	1331	G	Sidechain
12	B	1333	G	Sidechain
12	B	1335	C	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1336	A	Sidechain
12	B	1337	G	Sidechain
12	B	134	G	Sidechain
12	B	1340	U	Sidechain
12	B	1341	G	Sidechain
12	B	1344	U	Sidechain
12	B	1345	C	Sidechain
12	B	1346	G	Sidechain
12	B	1347	A	Sidechain
12	B	1349	C	Sidechain
12	B	135	U	Sidechain
12	B	1352	U	Sidechain
12	B	1353	A	Sidechain
12	B	1355	G	Sidechain
12	B	1356	G	Sidechain
12	B	1358	G	Sidechain
12	B	136	G	Sidechain
12	B	1360	G	Sidechain
12	B	1363	C	Sidechain
12	B	1366	A	Sidechain
12	B	137	U	Sidechain
12	B	1371	G	Sidechain
12	B	1375	U	Sidechain
12	B	1378	A	Sidechain
12	B	1379	U	Sidechain
12	B	1381	G	Sidechain
12	B	1382	G	Sidechain
12	B	1383	A	Sidechain
12	B	1384	A	Sidechain
12	B	1387	A	Sidechain
12	B	1388	G	Sidechain
12	B	139	U	Sidechain
12	B	1390	U	Sidechain
12	B	1392	A	Sidechain
12	B	1395	A	Sidechain
12	B	1396	U	Sidechain
12	B	1397	U	Sidechain
12	B	1399	C	Sidechain
12	B	14	A	Sidechain
12	B	1400	U	Sidechain
12	B	1401	G	Sidechain
12	B	1402	U	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1405	U	Sidechain
12	B	1406	U	Sidechain
12	B	1407	G	Sidechain
12	B	1408	G	Sidechain
12	B	1409	U	Sidechain
12	B	1410	G	Sidechain
12	B	1415	U	Sidechain
12	B	1416	G	Sidechain
12	B	1417	C	Sidechain
12	B	1418	G	Sidechain
12	B	142	A	Sidechain
12	B	1421	G	Sidechain
12	B	1422	G	Sidechain
12	B	1423	G	Sidechain
12	B	1424	G	Sidechain
12	B	1425	G	Sidechain
12	B	1429	G	Sidechain
12	B	143	C	Sidechain
12	B	1432	G	Sidechain
12	B	1433	A	Sidechain
12	B	1435	G	Sidechain
12	B	1438	U	Sidechain
12	B	1439	A	Sidechain
12	B	1440	U	Sidechain
12	B	1441	G	Sidechain
12	B	1445	G	Sidechain
12	B	1447	C	Sidechain
12	B	1448	G	Sidechain
12	B	1450	G	Sidechain
12	B	1451	C	Sidechain
12	B	1453	A	Sidechain
12	B	1454	C	Sidechain
12	B	1456	G	Sidechain
12	B	1458	U	Sidechain
12	B	1459	G	Sidechain
12	B	146	A	Sidechain
12	B	1460	U	Sidechain
12	B	1462	C	Sidechain
12	B	1464	G	Sidechain
12	B	1467	U	Sidechain
12	B	1468	U	Sidechain
12	B	1471	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1474	U	Sidechain
12	B	1475	G	Sidechain
12	B	1476	U	Sidechain
12	B	1477	A	Sidechain
12	B	1478	G	Sidechain
12	B	148	U	Sidechain
12	B	1480	C	Sidechain
12	B	1482	G	Sidechain
12	B	1484	U	Sidechain
12	B	1485	U	Sidechain
12	B	1486	U	Sidechain
12	B	1487	U	Sidechain
12	B	1489	C	Sidechain
12	B	1490	A	Sidechain
12	B	1492	G	Sidechain
12	B	1493	C	Sidechain
12	B	1494	A	Sidechain
12	B	1495	A	Sidechain
12	B	1497	U	Sidechain
12	B	1499	C	Sidechain
12	B	15	G	Sidechain
12	B	1504	A	Sidechain
12	B	1505	A	Sidechain
12	B	1506	U	Sidechain
12	B	1508	A	Sidechain
12	B	151	C	Sidechain
12	B	1510	G	Sidechain
12	B	1512	C	Sidechain
12	B	1514	G	Sidechain
12	B	1515	A	Sidechain
12	B	1516	G	Sidechain
12	B	1517	G	Sidechain
12	B	1518	C	Sidechain
12	B	1519	G	Sidechain
12	B	1520	U	Sidechain
12	B	1522	A	Sidechain
12	B	1524	G	Sidechain
12	B	1526	C	Sidechain
12	B	1527	G	Sidechain
12	B	153	U	Sidechain
12	B	1531	C	Sidechain
12	B	1533	C	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1534	U	Sidechain
12	B	1536	C	Sidechain
12	B	1537	G	Sidechain
12	B	1538	G	Sidechain
12	B	1539	U	Sidechain
12	B	154	U	Sidechain
12	B	1541	C	Sidechain
12	B	1543	G	Sidechain
12	B	1545	A	Sidechain
12	B	1547	C	Sidechain
12	B	1549	A	Sidechain
12	B	1551	A	Sidechain
12	B	1552	A	Sidechain
12	B	1558	C	Sidechain
12	B	1559	U	Sidechain
12	B	1563	U	Sidechain
12	B	1564	C	Sidechain
12	B	1565	C	Sidechain
12	B	1567	G	Sidechain
12	B	1568	G	Sidechain
12	B	1569	A	Sidechain
12	B	1571	A	Sidechain
12	B	1573	G	Sidechain
12	B	1574	C	Sidechain
12	B	1576	U	Sidechain
12	B	1577	C	Sidechain
12	B	1580	A	Sidechain
12	B	1581	G	Sidechain
12	B	1583	A	Sidechain
12	B	1584	U	Sidechain
12	B	1585	C	Sidechain
12	B	1588	G	Sidechain
12	B	159	G	Sidechain
12	B	1592	C	Sidechain
12	B	1598	A	Sidechain
12	B	1599	U	Sidechain
12	B	160	A	Sidechain
12	B	1600	C	Sidechain
12	B	1602	U	Sidechain
12	B	1603	A	Sidechain
12	B	1605	C	Sidechain
12	B	1607	C	Sidechain

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Mol	Chain	Res	Type	Group
12	B	161	A	Sidechain
12	B	1610	A	Sidechain
12	B	1611	C	Sidechain
12	B	1613	G	Sidechain
12	B	1616	A	Sidechain
12	B	1619	G	Sidechain
12	B	162	U	Sidechain
12	B	1620	G	Sidechain
12	B	1621	U	Sidechain
12	B	1627	G	Sidechain
12	B	1628	G	Sidechain
12	B	1629	U	Sidechain
12	B	163	C	Sidechain
12	B	1630	A	Sidechain
12	B	1631	G	Sidechain
12	B	1633	G	Sidechain
12	B	1634	A	Sidechain
12	B	1638	C	Sidechain
12	B	1639	C	Sidechain
12	B	1641	A	Sidechain
12	B	1645	G	Sidechain
12	B	1646	C	Sidechain
12	B	1649	G	Sidechain
12	B	1652	A	Sidechain
12	B	1656	C	Sidechain
12	B	1658	C	Sidechain
12	B	166	U	Sidechain
12	B	1660	G	Sidechain
12	B	1661	G	Sidechain
12	B	1662	U	Sidechain
12	B	1663	G	Sidechain
12	B	1666	G	Sidechain
12	B	1668	A	Sidechain
12	B	1669	A	Sidechain
12	B	1671	U	Sidechain
12	B	1672	A	Sidechain
12	B	1673	G	Sidechain
12	B	1674	G	Sidechain
12	B	1676	A	Sidechain
12	B	1677	A	Sidechain
12	B	1679	A	Sidechain
12	B	1680	U	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1688	U	Sidechain
12	B	1692	U	Sidechain
12	B	17	G	Sidechain
12	B	1700	A	Sidechain
12	B	1701	A	Sidechain
12	B	1702	G	Sidechain
12	B	1703	G	Sidechain
12	B	1705	A	Sidechain
12	B	1706	C	Sidechain
12	B	1711	A	Sidechain
12	B	1712	U	Sidechain
12	B	1713	A	Sidechain
12	B	1715	G	Sidechain
12	B	1716	U	Sidechain
12	B	1717	A	Sidechain
12	B	1718	G	Sidechain
12	B	1719	G	Sidechain
12	B	1720	U	Sidechain
12	B	1721	G	Sidechain
12	B	1722	A	Sidechain
12	B	1723	G	Sidechain
12	B	1724	G	Sidechain
12	B	173	A	Sidechain
12	B	1732	C	Sidechain
12	B	1733	G	Sidechain
12	B	1737	G	Sidechain
12	B	1738	G	Sidechain
12	B	174	U	Sidechain
12	B	1741	C	Sidechain
12	B	1743	G	Sidechain
12	B	1745	A	Sidechain
12	B	1746	A	Sidechain
12	B	1750	G	Sidechain
12	B	1751	U	Sidechain
12	B	1753	G	Sidechain
12	B	1756	G	Sidechain
12	B	1757	A	Sidechain
12	B	1759	A	Sidechain
12	B	176	A	Sidechain
12	B	1761	C	Sidechain
12	B	1762	A	Sidechain
12	B	1763	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1764	C	Sidechain
12	B	1766	G	Sidechain
12	B	1768	C	Sidechain
12	B	1769	U	Sidechain
12	B	1771	C	Sidechain
12	B	1774	C	Sidechain
12	B	1775	U	Sidechain
12	B	1776	G	Sidechain
12	B	1777	U	Sidechain
12	B	1778	U	Sidechain
12	B	1781	U	Sidechain
12	B	1783	A	Sidechain
12	B	1784	A	Sidechain
12	B	1785	A	Sidechain
12	B	1787	A	Sidechain
12	B	1788	C	Sidechain
12	B	1789	A	Sidechain
12	B	179	C	Sidechain
12	B	1792	G	Sidechain
12	B	1793	C	Sidechain
12	B	1797	G	Sidechain
12	B	1798	U	Sidechain
12	B	1799	G	Sidechain
12	B	180	G	Sidechain
12	B	1801	A	Sidechain
12	B	1806	C	Sidechain
12	B	1809	A	Sidechain
12	B	181	A	Sidechain
12	B	1813	G	Sidechain
12	B	1815	A	Sidechain
12	B	1819	A	Sidechain
12	B	1821	A	Sidechain
12	B	1823	G	Sidechain
12	B	1824	G	Sidechain
12	B	1825	U	Sidechain
12	B	1827	U	Sidechain
12	B	1829	A	Sidechain
12	B	1831	G	Sidechain
12	B	1832	C	Sidechain
12	B	1835	G	Sidechain
12	B	1838	C	Sidechain
12	B	1841	U	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1842	G	Sidechain
12	B	1843	C	Sidechain
12	B	1844	C	Sidechain
12	B	1845	G	Sidechain
12	B	1846	G	Sidechain
12	B	1849	G	Sidechain
12	B	1850	G	Sidechain
12	B	1856	U	Sidechain
12	B	1858	A	Sidechain
12	B	1859	U	Sidechain
12	B	1860	G	Sidechain
12	B	1861	G	Sidechain
12	B	1862	G	Sidechain
12	B	1863	G	Sidechain
12	B	1864	U	Sidechain
12	B	1866	A	Sidechain
12	B	1867	G	Sidechain
12	B	187	G	Sidechain
12	B	1872	A	Sidechain
12	B	1875	G	Sidechain
12	B	1879	C	Sidechain
12	B	1880	U	Sidechain
12	B	1882	U	Sidechain
12	B	1883	U	Sidechain
12	B	1885	A	Sidechain
12	B	1887	C	Sidechain
12	B	1888	G	Sidechain
12	B	1889	A	Sidechain
12	B	189	G	Sidechain
12	B	1891	G	Sidechain
12	B	1893	C	Sidechain
12	B	1896	G	Sidechain
12	B	1897	G	Sidechain
12	B	1899	A	Sidechain
12	B	190	A	Sidechain
12	B	1900	A	Sidechain
12	B	1903	G	Sidechain
12	B	1906	G	Sidechain
12	B	1907	G	Sidechain
12	B	1908	C	Sidechain
12	B	1909	C	Sidechain
12	B	191	A	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1915	U	Sidechain
12	B	1918	A	Sidechain
12	B	1919	A	Sidechain
12	B	1920	C	Sidechain
12	B	1922	G	Sidechain
12	B	1923	U	Sidechain
12	B	1924	C	Sidechain
12	B	1925	C	Sidechain
12	B	1927	A	Sidechain
12	B	1928	A	Sidechain
12	B	1929	G	Sidechain
12	B	193	U	Sidechain
12	B	1930	G	Sidechain
12	B	1936	A	Sidechain
12	B	1937	A	Sidechain
12	B	1939	U	Sidechain
12	B	1941	C	Sidechain
12	B	1943	U	Sidechain
12	B	1944	U	Sidechain
12	B	1945	G	Sidechain
12	B	1948	G	Sidechain
12	B	1949	G	Sidechain
12	B	1952	A	Sidechain
12	B	1953	A	Sidechain
12	B	1954	G	Sidechain
12	B	1956	U	Sidechain
12	B	1960	A	Sidechain
12	B	1962	C	Sidechain
12	B	1963	U	Sidechain
12	B	1964	G	Sidechain
12	B	1967	C	Sidechain
12	B	1968	G	Sidechain
12	B	1970	A	Sidechain
12	B	1971	U	Sidechain
12	B	1973	G	Sidechain
12	B	1975	G	Sidechain
12	B	1978	A	Sidechain
12	B	1979	U	Sidechain
12	B	198	C	Sidechain
12	B	1983	G	Sidechain
12	B	1988	G	Sidechain
12	B	1991	U	Sidechain

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Mol	Chain	Res	Type	Group
12	B	1992	G	Sidechain
12	B	1993	U	Sidechain
12	B	1999	C	Sidechain
12	B	2	G	Sidechain
12	B	200	U	Sidechain
12	B	2003	A	Sidechain
12	B	2005	A	Sidechain
12	B	2007	U	Sidechain
12	B	201	C	Sidechain
12	B	2010	G	Sidechain
12	B	2012	G	Sidechain
12	B	2013	A	Sidechain
12	B	2014	A	Sidechain
12	B	2015	A	Sidechain
12	B	2017	U	Sidechain
12	B	2022	U	Sidechain
12	B	2024	G	Sidechain
12	B	2028	U	Sidechain
12	B	2029	G	Sidechain
12	B	203	A	Sidechain
12	B	2032	G	Sidechain
12	B	2033	A	Sidechain
12	B	2038	G	Sidechain
12	B	204	A	Sidechain
12	B	2041	U	Sidechain
12	B	2042	A	Sidechain
12	B	2046	G	Sidechain
12	B	2048	G	Sidechain
12	B	205	G	Sidechain
12	B	2051	A	Sidechain
12	B	2053	G	Sidechain
12	B	2057	G	Sidechain
12	B	2058	A	Sidechain
12	B	2061	G	Sidechain
12	B	2062	A	Sidechain
12	B	2066	C	Sidechain
12	B	2067	G	Sidechain
12	B	2070	A	Sidechain
12	B	2071	A	Sidechain
12	B	2075	U	Sidechain
12	B	2076	U	Sidechain
12	B	2077	A	Sidechain

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Mol	Chain	Res	Type	Group
12	B	2079	U	Sidechain
12	B	208	C	Sidechain
12	B	2081	U	Sidechain
12	B	2085	U	Sidechain
12	B	2086	U	Sidechain
12	B	2088	A	Sidechain
12	B	209	C	Sidechain
12	B	2093	G	Sidechain
12	B	2094	A	Sidechain
12	B	2097	A	Sidechain
12	B	2098	U	Sidechain
12	B	210	C	Sidechain
12	B	2100	G	Sidechain
12	B	2101	A	Sidechain
12	B	2105	U	Sidechain
12	B	2106	U	Sidechain
12	B	2109	U	Sidechain
12	B	2110	G	Sidechain
12	B	2111	U	Sidechain
12	B	2112	G	Sidechain
12	B	2113	U	Sidechain
12	B	2115	G	Sidechain
12	B	2116	G	Sidechain
12	B	2117	A	Sidechain
12	B	2123	G	Sidechain
12	B	2125	G	Sidechain
12	B	2126	A	Sidechain
12	B	2127	G	Sidechain
12	B	2128	G	Sidechain
12	B	2129	C	Sidechain
12	B	2130	U	Sidechain
12	B	2133	G	Sidechain
12	B	2134	A	Sidechain
12	B	2136	G	Sidechain
12	B	2137	U	Sidechain
12	B	2138	G	Sidechain
12	B	214	G	Sidechain
12	B	2141	G	Sidechain
12	B	2142	A	Sidechain
12	B	2144	G	Sidechain
12	B	2147	A	Sidechain
12	B	2148	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	215	G	Sidechain
12	B	2151	U	Sidechain
12	B	2152	G	Sidechain
12	B	2155	U	Sidechain
12	B	2156	G	Sidechain
12	B	216	A	Sidechain
12	B	2160	C	Sidechain
12	B	2162	G	Sidechain
12	B	2164	C	Sidechain
12	B	2168	G	Sidechain
12	B	2171	A	Sidechain
12	B	2175	C	Sidechain
12	B	2180	U	Sidechain
12	B	2182	U	Sidechain
12	B	2185	U	Sidechain
12	B	2186	G	Sidechain
12	B	2187	U	Sidechain
12	B	2191	A	Sidechain
12	B	2193	G	Sidechain
12	B	2194	U	Sidechain
12	B	2195	U	Sidechain
12	B	2197	U	Sidechain
12	B	2199	A	Sidechain
12	B	22	C	Sidechain
12	B	220	G	Sidechain
12	B	2200	C	Sidechain
12	B	2202	U	Sidechain
12	B	2207	C	Sidechain
12	B	2210	U	Sidechain
12	B	2213	U	Sidechain
12	B	2214	C	Sidechain
12	B	2216	G	Sidechain
12	B	2217	G	Sidechain
12	B	2218	G	Sidechain
12	B	222	A	Sidechain
12	B	2220	U	Sidechain
12	B	2221	G	Sidechain
12	B	2223	G	Sidechain
12	B	2224	G	Sidechain
12	B	2227	A	Sidechain
12	B	2228	G	Sidechain
12	B	2229	U	Sidechain

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Mol	Chain	Res	Type	Group
12	B	2230	G	Sidechain
12	B	2231	U	Sidechain
12	B	2232	C	Sidechain
12	B	2233	U	Sidechain
12	B	2235	G	Sidechain
12	B	2236	U	Sidechain
12	B	2237	G	Sidechain
12	B	2238	G	Sidechain
12	B	224	U	Sidechain
12	B	2241	A	Sidechain
12	B	2242	G	Sidechain
12	B	2244	U	Sidechain
12	B	2248	C	Sidechain
12	B	2253	G	Sidechain
12	B	2254	C	Sidechain
12	B	2255	G	Sidechain
12	B	2256	G	Sidechain
12	B	2258	C	Sidechain
12	B	226	A	Sidechain
12	B	2260	C	Sidechain
12	B	2262	U	Sidechain
12	B	2263	C	Sidechain
12	B	2264	C	Sidechain
12	B	2265	U	Sidechain
12	B	2266	A	Sidechain
12	B	2269	G	Sidechain
12	B	2270	A	Sidechain
12	B	2271	G	Sidechain
12	B	2273	A	Sidechain
12	B	2275	C	Sidechain
12	B	2279	G	Sidechain
12	B	2280	G	Sidechain
12	B	2281	A	Sidechain
12	B	2282	G	Sidechain
12	B	2284	A	Sidechain
12	B	2285	C	Sidechain
12	B	2286	G	Sidechain
12	B	2288	A	Sidechain
12	B	2289	G	Sidechain
12	B	2290	G	Sidechain
12	B	2292	U	Sidechain
12	B	2293	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	2294	G	Sidechain
12	B	2296	U	Sidechain
12	B	2298	A	Sidechain
12	B	2303	G	Sidechain
12	B	2304	G	Sidechain
12	B	2305	U	Sidechain
12	B	2306	C	Sidechain
12	B	2307	G	Sidechain
12	B	2308	G	Sidechain
12	B	231	A	Sidechain
12	B	2316	G	Sidechain
12	B	2318	G	Sidechain
12	B	2319	G	Sidechain
12	B	2321	U	Sidechain
12	B	2324	U	Sidechain
12	B	2325	G	Sidechain
12	B	2327	A	Sidechain
12	B	2328	A	Sidechain
12	B	233	A	Sidechain
12	B	2330	G	Sidechain
12	B	2333	A	Sidechain
12	B	2334	U	Sidechain
12	B	2336	A	Sidechain
12	B	2337	G	Sidechain
12	B	2338	C	Sidechain
12	B	234	U	Sidechain
12	B	2340	A	Sidechain
12	B	2342	C	Sidechain
12	B	2344	U	Sidechain
12	B	2345	G	Sidechain
12	B	2349	G	Sidechain
12	B	2350	C	Sidechain
12	B	2351	G	Sidechain
12	B	2352	A	Sidechain
12	B	2353	G	Sidechain
12	B	2355	G	Sidechain
12	B	2356	U	Sidechain
12	B	2357	G	Sidechain
12	B	2359	C	Sidechain
12	B	2360	G	Sidechain
12	B	2363	G	Sidechain
12	B	2364	C	Sidechain

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Mol	Chain	Res	Type	Group
12	B	2365	G	Sidechain
12	B	2370	G	Sidechain
12	B	2373	G	Sidechain
12	B	2375	G	Sidechain
12	B	2377	A	Sidechain
12	B	2378	A	Sidechain
12	B	2380	C	Sidechain
12	B	2381	A	Sidechain
12	B	2382	G	Sidechain
12	B	2383	G	Sidechain
12	B	2384	U	Sidechain
12	B	2385	C	Sidechain
12	B	2386	A	Sidechain
12	B	2388	A	Sidechain
12	B	239	C	Sidechain
12	B	2390	U	Sidechain
12	B	2392	A	Sidechain
12	B	2393	U	Sidechain
12	B	2395	C	Sidechain
12	B	2396	G	Sidechain
12	B	2397	G	Sidechain
12	B	2399	G	Sidechain
12	B	24	G	Sidechain
12	B	2400	G	Sidechain
12	B	2401	U	Sidechain
12	B	2403	C	Sidechain
12	B	2405	G	Sidechain
12	B	2406	A	Sidechain
12	B	2407	A	Sidechain
12	B	2408	U	Sidechain
12	B	241	A	Sidechain
12	B	2410	G	Sidechain
12	B	2412	A	Sidechain
12	B	2413	G	Sidechain
12	B	2414	G	Sidechain
12	B	2415	G	Sidechain
12	B	2416	C	Sidechain
12	B	2419	U	Sidechain
12	B	242	G	Sidechain
12	B	2421	G	Sidechain
12	B	2422	C	Sidechain
12	B	2423	U	Sidechain

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Mol	Chain	Res	Type	Group
12	B	2424	C	Sidechain
12	B	2425	A	Sidechain
12	B	2426	A	Sidechain
12	B	2427	C	Sidechain
12	B	2429	G	Sidechain
12	B	243	U	Sidechain
12	B	2430	A	Sidechain
12	B	2432	A	Sidechain
12	B	2433	A	Sidechain
12	B	2435	A	Sidechain
12	B	2436	G	Sidechain
12	B	2437	G	Sidechain
12	B	2439	A	Sidechain
12	B	244	A	Sidechain
12	B	2440	C	Sidechain
12	B	2441	U	Sidechain
12	B	2444	G	Sidechain
12	B	2445	G	Sidechain
12	B	2448	A	Sidechain
12	B	2450	A	Sidechain
12	B	2451	A	Sidechain
12	B	2452	C	Sidechain
12	B	2457	U	Sidechain
12	B	2458	G	Sidechain
12	B	246	C	Sidechain
12	B	2463	C	Sidechain
12	B	2464	G	Sidechain
12	B	2467	C	Sidechain
12	B	2468	A	Sidechain
12	B	2470	G	Sidechain
12	B	2471	A	Sidechain
12	B	2473	U	Sidechain
12	B	2474	U	Sidechain
12	B	2475	C	Sidechain
12	B	2476	A	Sidechain
12	B	2477	U	Sidechain
12	B	248	G	Sidechain
12	B	2481	G	Sidechain
12	B	2482	A	Sidechain
12	B	2483	C	Sidechain
12	B	2484	G	Sidechain
12	B	2485	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	2487	G	Sidechain
12	B	2488	G	Sidechain
12	B	249	C	Sidechain
12	B	2493	U	Sidechain
12	B	2494	G	Sidechain
12	B	2495	G	Sidechain
12	B	2497	A	Sidechain
12	B	2498	C	Sidechain
12	B	2499	C	Sidechain
12	B	25	U	Sidechain
12	B	250	G	Sidechain
12	B	2500	U	Sidechain
12	B	2502	G	Sidechain
12	B	2503	A	Sidechain
12	B	2504	U	Sidechain
12	B	2506	U	Sidechain
12	B	2507	C	Sidechain
12	B	2509	G	Sidechain
12	B	251	A	Sidechain
12	B	2513	A	Sidechain
12	B	2516	A	Sidechain
12	B	2518	A	Sidechain
12	B	252	G	Sidechain
12	B	2523	G	Sidechain
12	B	2524	G	Sidechain
12	B	2526	G	Sidechain
12	B	2527	C	Sidechain
12	B	2529	G	Sidechain
12	B	2532	G	Sidechain
12	B	2535	G	Sidechain
12	B	2536	G	Sidechain
12	B	2538	C	Sidechain
12	B	254	G	Sidechain
12	B	2541	A	Sidechain
12	B	2543	G	Sidechain
12	B	2545	G	Sidechain
12	B	2548	U	Sidechain
12	B	2551	C	Sidechain
12	B	2552	U	Sidechain
12	B	2553	G	Sidechain
12	B	2554	U	Sidechain
12	B	2556	C	Sidechain

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Mol	Chain	Res	Type	Group
12	B	2557	G	Sidechain
12	B	2558	C	Sidechain
12	B	2560	A	Sidechain
12	B	2561	U	Sidechain
12	B	2562	U	Sidechain
12	B	2563	U	Sidechain
12	B	2565	A	Sidechain
12	B	2566	A	Sidechain
12	B	2569	G	Sidechain
12	B	2573	C	Sidechain
12	B	2576	G	Sidechain
12	B	2577	A	Sidechain
12	B	258	G	Sidechain
12	B	2580	U	Sidechain
12	B	2582	G	Sidechain
12	B	2583	G	Sidechain
12	B	2584	U	Sidechain
12	B	2586	U	Sidechain
12	B	2590	A	Sidechain
12	B	2593	U	Sidechain
12	B	2597	G	Sidechain
12	B	2599	G	Sidechain
12	B	26	G	Sidechain
12	B	2600	A	Sidechain
12	B	2602	A	Sidechain
12	B	2604	U	Sidechain
12	B	2605	U	Sidechain
12	B	2606	C	Sidechain
12	B	2607	G	Sidechain
12	B	261	G	Sidechain
12	B	2610	C	Sidechain
12	B	2611	C	Sidechain
12	B	2614	A	Sidechain
12	B	2615	U	Sidechain
12	B	2617	U	Sidechain
12	B	2618	G	Sidechain
12	B	2619	C	Sidechain
12	B	262	A	Sidechain
12	B	2621	G	Sidechain
12	B	2623	G	Sidechain
12	B	2624	G	Sidechain
12	B	2630	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	2631	G	Sidechain
12	B	2632	A	Sidechain
12	B	2633	G	Sidechain
12	B	2636	C	Sidechain
12	B	2637	U	Sidechain
12	B	2638	G	Sidechain
12	B	2639	A	Sidechain
12	B	2641	G	Sidechain
12	B	2642	G	Sidechain
12	B	2643	G	Sidechain
12	B	2644	G	Sidechain
12	B	2647	U	Sidechain
12	B	265	A	Sidechain
12	B	2650	U	Sidechain
12	B	2651	C	Sidechain
12	B	2652	C	Sidechain
12	B	2655	G	Sidechain
12	B	2657	A	Sidechain
12	B	2658	C	Sidechain
12	B	266	G	Sidechain
12	B	2660	A	Sidechain
12	B	2662	A	Sidechain
12	B	2664	G	Sidechain
12	B	2666	C	Sidechain
12	B	2669	G	Sidechain
12	B	2672	U	Sidechain
12	B	2674	G	Sidechain
12	B	2675	A	Sidechain
12	B	2677	G	Sidechain
12	B	2679	A	Sidechain
12	B	2680	U	Sidechain
12	B	2683	C	Sidechain
12	B	2684	U	Sidechain
12	B	2685	G	Sidechain
12	B	2686	G	Sidechain
12	B	2688	G	Sidechain
12	B	269	C	Sidechain
12	B	2692	G	Sidechain
12	B	2693	G	Sidechain
12	B	2699	C	Sidechain
12	B	27	G	Sidechain
12	B	270	A	Sidechain

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Mol	Chain	Res	Type	Group
12	B	2702	G	Sidechain
12	B	2705	A	Sidechain
12	B	2706	A	Sidechain
12	B	2707	U	Sidechain
12	B	2709	G	Sidechain
12	B	2710	C	Sidechain
12	B	2711	A	Sidechain
12	B	2712	C	Sidechain
12	B	2713	U	Sidechain
12	B	2714	G	Sidechain
12	B	2715	C	Sidechain
12	B	2719	G	Sidechain
12	B	2722	G	Sidechain
12	B	2725	A	Sidechain
12	B	2726	A	Sidechain
12	B	2728	U	Sidechain
12	B	2729	G	Sidechain
12	B	2730	C	Sidechain
12	B	2731	G	Sidechain
12	B	2732	G	Sidechain
12	B	2735	G	Sidechain
12	B	2736	A	Sidechain
12	B	2737	G	Sidechain
12	B	2738	A	Sidechain
12	B	274	C	Sidechain
12	B	2742	G	Sidechain
12	B	2746	U	Sidechain
12	B	275	C	Sidechain
12	B	2750	A	Sidechain
12	B	2751	G	Sidechain
12	B	2752	C	Sidechain
12	B	2754	U	Sidechain
12	B	2755	C	Sidechain
12	B	2756	U	Sidechain
12	B	2758	A	Sidechain
12	B	276	U	Sidechain
12	B	2762	C	Sidechain
12	B	2763	G	Sidechain
12	B	2764	A	Sidechain
12	B	2765	A	Sidechain
12	B	2766	A	Sidechain
12	B	2767	C	Sidechain

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Mol	Chain	Res	Type	Group
12	B	277	G	Sidechain
12	B	2770	G	Sidechain
12	B	2771	C	Sidechain
12	B	2773	C	Sidechain
12	B	2774	C	Sidechain
12	B	2775	G	Sidechain
12	B	278	A	Sidechain
12	B	2780	G	Sidechain
12	B	2787	C	Sidechain
12	B	2795	C	Sidechain
12	B	2797	U	Sidechain
12	B	2799	A	Sidechain
12	B	2803	G	Sidechain
12	B	2804	U	Sidechain
12	B	2805	C	Sidechain
12	B	2810	A	Sidechain
12	B	2813	A	Sidechain
12	B	2816	G	Sidechain
12	B	2819	G	Sidechain
12	B	282	A	Sidechain
12	B	2824	C	Sidechain
12	B	2825	G	Sidechain
12	B	2827	C	Sidechain
12	B	2831	G	Sidechain
12	B	2833	U	Sidechain
12	B	2834	G	Sidechain
12	B	2842	G	Sidechain
12	B	2843	G	Sidechain
12	B	2844	G	Sidechain
12	B	2845	U	Sidechain
12	B	2846	G	Sidechain
12	B	2847	U	Sidechain
12	B	285	G	Sidechain
12	B	2852	G	Sidechain
12	B	2854	G	Sidechain
12	B	2856	A	Sidechain
12	B	2857	G	Sidechain
12	B	2858	C	Sidechain
12	B	2861	U	Sidechain
12	B	2862	G	Sidechain
12	B	2863	C	Sidechain
12	B	2864	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	2866	U	Sidechain
12	B	2867	G	Sidechain
12	B	2869	G	Sidechain
12	B	2871	U	Sidechain
12	B	2872	A	Sidechain
12	B	2881	U	Sidechain
12	B	2882	A	Sidechain
12	B	2883	A	Sidechain
12	B	2884	U	Sidechain
12	B	2892	G	Sidechain
12	B	2893	A	Sidechain
12	B	2894	G	Sidechain
12	B	2899	A	Sidechain
12	B	29	U	Sidechain
12	B	290	U	Sidechain
12	B	2902	C	Sidechain
12	B	293	U	Sidechain
12	B	295	G	Sidechain
12	B	296	U	Sidechain
12	B	297	G	Sidechain
12	B	30	G	Sidechain
12	B	300	A	Sidechain
12	B	301	G	Sidechain
12	B	303	G	Sidechain
12	B	304	U	Sidechain
12	B	306	U	Sidechain
12	B	308	G	Sidechain
12	B	310	A	Sidechain
12	B	311	A	Sidechain
12	B	312	G	Sidechain
12	B	313	G	Sidechain
12	B	314	C	Sidechain
12	B	319	G	Sidechain
12	B	322	A	Sidechain
12	B	324	A	Sidechain
12	B	325	G	Sidechain
12	B	327	G	Sidechain
12	B	328	U	Sidechain
12	B	329	G	Sidechain
12	B	33	C	Sidechain
12	B	332	A	Sidechain
12	B	333	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	335	C	Sidechain
12	B	336	C	Sidechain
12	B	338	G	Sidechain
12	B	339	U	Sidechain
12	B	34	U	Sidechain
12	B	340	A	Sidechain
12	B	343	C	Sidechain
12	B	344	A	Sidechain
12	B	346	A	Sidechain
12	B	352	A	Sidechain
12	B	359	G	Sidechain
12	B	360	U	Sidechain
12	B	361	G	Sidechain
12	B	363	G	Sidechain
12	B	365	U	Sidechain
12	B	366	C	Sidechain
12	B	368	A	Sidechain
12	B	37	C	Sidechain
12	B	370	G	Sidechain
12	B	371	A	Sidechain
12	B	373	U	Sidechain
12	B	376	G	Sidechain
12	B	377	G	Sidechain
12	B	379	G	Sidechain
12	B	38	A	Sidechain
12	B	380	G	Sidechain
12	B	382	A	Sidechain
12	B	383	C	Sidechain
12	B	384	A	Sidechain
12	B	386	G	Sidechain
12	B	387	U	Sidechain
12	B	388	G	Sidechain
12	B	39	G	Sidechain
12	B	390	U	Sidechain
12	B	391	A	Sidechain
12	B	392	U	Sidechain
12	B	393	C	Sidechain
12	B	394	C	Sidechain
12	B	397	U	Sidechain
12	B	4	U	Sidechain
12	B	402	A	Sidechain
12	B	404	A	Sidechain

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Mol	Chain	Res	Type	Group
12	B	405	U	Sidechain
12	B	406	G	Sidechain
12	B	408	G	Sidechain
12	B	410	G	Sidechain
12	B	413	C	Sidechain
12	B	414	C	Sidechain
12	B	415	A	Sidechain
12	B	417	C	Sidechain
12	B	420	C	Sidechain
12	B	423	A	Sidechain
12	B	424	G	Sidechain
12	B	425	G	Sidechain
12	B	428	A	Sidechain
12	B	429	A	Sidechain
12	B	434	U	Sidechain
12	B	438	G	Sidechain
12	B	439	A	Sidechain
12	B	443	A	Sidechain
12	B	445	C	Sidechain
12	B	446	G	Sidechain
12	B	448	U	Sidechain
12	B	450	G	Sidechain
12	B	452	G	Sidechain
12	B	455	C	Sidechain
12	B	457	A	Sidechain
12	B	459	U	Sidechain
12	B	460	A	Sidechain
12	B	461	C	Sidechain
12	B	463	G	Sidechain
12	B	464	U	Sidechain
12	B	465	G	Sidechain
12	B	468	G	Sidechain
12	B	469	G	Sidechain
12	B	473	G	Sidechain
12	B	474	G	Sidechain
12	B	477	A	Sidechain
12	B	48	G	Sidechain
12	B	480	A	Sidechain
12	B	481	G	Sidechain
12	B	482	A	Sidechain
12	B	483	A	Sidechain
12	B	484	C	Sidechain

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Mol	Chain	Res	Type	Group
12	B	486	C	Sidechain
12	B	489	G	Sidechain
12	B	490	C	Sidechain
12	B	491	G	Sidechain
12	B	497	A	Sidechain
12	B	498	G	Sidechain
12	B	499	U	Sidechain
12	B	5	A	Sidechain
12	B	50	U	Sidechain
12	B	502	A	Sidechain
12	B	503	A	Sidechain
12	B	51	G	Sidechain
12	B	511	U	Sidechain
12	B	513	A	Sidechain
12	B	516	C	Sidechain
12	B	518	G	Sidechain
12	B	520	G	Sidechain
12	B	525	U	Sidechain
12	B	527	C	Sidechain
12	B	529	A	Sidechain
12	B	531	C	Sidechain
12	B	535	G	Sidechain
12	B	537	G	Sidechain
12	B	539	G	Sidechain
12	B	540	C	Sidechain
12	B	541	A	Sidechain
12	B	548	G	Sidechain
12	B	549	G	Sidechain
12	B	551	G	Sidechain
12	B	553	G	Sidechain
12	B	554	U	Sidechain
12	B	557	C	Sidechain
12	B	562	U	Sidechain
12	B	564	C	Sidechain
12	B	566	U	Sidechain
12	B	567	U	Sidechain
12	B	568	U	Sidechain
12	B	569	U	Sidechain
12	B	57	C	Sidechain
12	B	572	A	Sidechain
12	B	575	A	Sidechain
12	B	577	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	579	G	Sidechain
12	B	580	U	Sidechain
12	B	581	C	Sidechain
12	B	582	A	Sidechain
12	B	585	G	Sidechain
12	B	586	A	Sidechain
12	B	587	C	Sidechain
12	B	588	U	Sidechain
12	B	589	U	Sidechain
12	B	590	A	Sidechain
12	B	595	C	Sidechain
12	B	596	U	Sidechain
12	B	598	U	Sidechain
12	B	599	A	Sidechain
12	B	600	G	Sidechain
12	B	604	G	Sidechain
12	B	605	G	Sidechain
12	B	607	U	Sidechain
12	B	608	A	Sidechain
12	B	611	C	Sidechain
12	B	612	G	Sidechain
12	B	615	U	Sidechain
12	B	617	G	Sidechain
12	B	619	G	Sidechain
12	B	620	G	Sidechain
12	B	622	G	Sidechain
12	B	624	C	Sidechain
12	B	625	G	Sidechain
12	B	626	A	Sidechain
12	B	627	A	Sidechain
12	B	629	G	Sidechain
12	B	63	A	Sidechain
12	B	630	G	Sidechain
12	B	633	A	Sidechain
12	B	639	U	Sidechain
12	B	640	C	Sidechain
12	B	642	U	Sidechain
12	B	643	A	Sidechain
12	B	644	A	Sidechain
12	B	645	C	Sidechain
12	B	646	U	Sidechain
12	B	647	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	651	G	Sidechain
12	B	653	U	Sidechain
12	B	654	A	Sidechain
12	B	655	A	Sidechain
12	B	656	G	Sidechain
12	B	658	U	Sidechain
12	B	660	C	Sidechain
12	B	663	G	Sidechain
12	B	666	A	Sidechain
12	B	667	U	Sidechain
12	B	668	A	Sidechain
12	B	669	G	Sidechain
12	B	670	A	Sidechain
12	B	674	G	Sidechain
12	B	675	A	Sidechain
12	B	677	A	Sidechain
12	B	682	G	Sidechain
12	B	684	G	Sidechain
12	B	685	A	Sidechain
12	B	687	C	Sidechain
12	B	688	U	Sidechain
12	B	689	A	Sidechain
12	B	690	G	Sidechain
12	B	694	U	Sidechain
12	B	695	G	Sidechain
12	B	696	G	Sidechain
12	B	697	G	Sidechain
12	B	7	G	Sidechain
12	B	70	G	Sidechain
12	B	701	G	Sidechain
12	B	706	A	Sidechain
12	B	709	U	Sidechain
12	B	71	A	Sidechain
12	B	711	G	Sidechain
12	B	712	G	Sidechain
12	B	713	G	Sidechain
12	B	714	U	Sidechain
12	B	715	A	Sidechain
12	B	716	A	Sidechain
12	B	718	A	Sidechain
12	B	721	A	Sidechain
12	B	722	A	Sidechain

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Mol	Chain	Res	Type	Group
12	B	723	C	Sidechain
12	B	724	U	Sidechain
12	B	726	G	Sidechain
12	B	727	A	Sidechain
12	B	729	G	Sidechain
12	B	734	A	Sidechain
12	B	736	C	Sidechain
12	B	737	C	Sidechain
12	B	738	G	Sidechain
12	B	739	A	Sidechain
12	B	74	A	Sidechain
12	B	740	C	Sidechain
12	B	744	U	Sidechain
12	B	746	U	Sidechain
12	B	748	G	Sidechain
12	B	749	A	Sidechain
12	B	75	G	Sidechain
12	B	750	A	Sidechain
12	B	753	A	Sidechain
12	B	754	U	Sidechain
12	B	756	A	Sidechain
12	B	757	G	Sidechain
12	B	759	G	Sidechain
12	B	76	C	Sidechain
12	B	760	G	Sidechain
12	B	765	C	Sidechain
12	B	767	U	Sidechain
12	B	770	G	Sidechain
12	B	771	G	Sidechain
12	B	772	C	Sidechain
12	B	773	U	Sidechain
12	B	775	G	Sidechain
12	B	776	G	Sidechain
12	B	777	G	Sidechain
12	B	779	U	Sidechain
12	B	78	U	Sidechain
12	B	780	G	Sidechain
12	B	783	A	Sidechain
12	B	784	G	Sidechain
12	B	786	C	Sidechain
12	B	788	A	Sidechain
12	B	792	A	Sidechain

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Mol	Chain	Res	Type	Group
12	B	793	A	Sidechain
12	B	794	A	Sidechain
12	B	796	C	Sidechain
12	B	797	G	Sidechain
12	B	798	G	Sidechain
12	B	799	G	Sidechain
12	B	801	G	Sidechain
12	B	802	A	Sidechain
12	B	803	U	Sidechain
12	B	806	C	Sidechain
12	B	809	G	Sidechain
12	B	81	G	Sidechain
12	B	815	C	Sidechain
12	B	817	C	Sidechain
12	B	818	G	Sidechain
12	B	819	A	Sidechain
12	B	827	U	Sidechain
12	B	836	G	Sidechain
12	B	84	A	Sidechain
12	B	840	C	Sidechain
12	B	847	U	Sidechain
12	B	848	C	Sidechain
12	B	85	G	Sidechain
12	B	850	U	Sidechain
12	B	851	C	Sidechain
12	B	852	U	Sidechain
12	B	854	C	Sidechain
12	B	856	G	Sidechain
12	B	857	G	Sidechain
12	B	858	G	Sidechain
12	B	859	G	Sidechain
12	B	86	G	Sidechain
12	B	860	U	Sidechain
12	B	866	A	Sidechain
12	B	868	U	Sidechain
12	B	869	G	Sidechain
12	B	870	U	Sidechain
12	B	873	C	Sidechain
12	B	875	G	Sidechain
12	B	876	C	Sidechain
12	B	878	A	Sidechain
12	B	880	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	882	G	Sidechain
12	B	883	G	Sidechain
12	B	884	U	Sidechain
12	B	886	A	Sidechain
12	B	887	U	Sidechain
12	B	891	G	Sidechain
12	B	892	A	Sidechain
12	B	893	C	Sidechain
12	B	894	U	Sidechain
12	B	895	U	Sidechain
12	B	897	C	Sidechain
12	B	898	C	Sidechain
12	B	899	A	Sidechain
12	B	9	G	Sidechain
12	B	90	U	Sidechain
12	B	900	A	Sidechain
12	B	902	C	Sidechain
12	B	904	G	Sidechain
12	B	905	A	Sidechain
12	B	906	U	Sidechain
12	B	908	C	Sidechain
12	B	91	A	Sidechain
12	B	910	A	Sidechain
12	B	911	A	Sidechain
12	B	912	C	Sidechain
12	B	913	U	Sidechain
12	B	915	C	Sidechain
12	B	916	G	Sidechain
12	B	917	A	Sidechain
12	B	919	U	Sidechain
12	B	92	U	Sidechain
12	B	921	C	Sidechain
12	B	923	G	Sidechain
12	B	924	G	Sidechain
12	B	926	G	Sidechain
12	B	929	U	Sidechain
12	B	93	G	Sidechain
12	B	931	U	Sidechain
12	B	932	U	Sidechain
12	B	935	C	Sidechain
12	B	937	C	Sidechain
12	B	939	G	Sidechain

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Mol	Chain	Res	Type	Group
12	B	94	A	Sidechain
12	B	940	G	Sidechain
12	B	941	A	Sidechain
12	B	943	A	Sidechain
12	B	946	C	Sidechain
12	B	947	A	Sidechain
12	B	949	G	Sidechain
12	B	950	G	Sidechain
12	B	951	C	Sidechain
12	B	953	G	Sidechain
12	B	955	U	Sidechain
12	B	956	G	Sidechain
12	B	957	C	Sidechain
12	B	958	U	Sidechain
12	B	959	A	Sidechain
12	B	960	A	Sidechain
12	B	961	C	Sidechain
12	B	962	G	Sidechain
12	B	965	C	Sidechain
12	B	966	G	Sidechain
12	B	97	C	Sidechain
12	B	971	G	Sidechain
12	B	972	A	Sidechain
12	B	973	A	Sidechain
12	B	974	G	Sidechain
12	B	975	A	Sidechain
12	B	977	G	Sidechain
12	B	978	G	Sidechain
12	B	98	G	Sidechain
12	B	981	A	Sidechain
12	B	982	C	Sidechain
12	B	988	A	Sidechain
12	B	99	U	Sidechain
12	B	990	A	Sidechain
12	B	991	C	Sidechain
12	B	992	C	Sidechain
12	B	995	C	Sidechain
12	B	996	A	Sidechain
12	B	997	G	Sidechain
12	B	999	U	Sidechain
13	C	160	TYR	Sidechain
13	C	170	TYR	Sidechain

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Mol	Chain	Res	Type	Group
13	C	176	ARG	Sidechain
13	C	216	ARG	Sidechain
13	C	270	ARG	Sidechain
13	C	29	PHE	Sidechain
13	C	51	ARG	Sidechain
13	C	68	ARG	Sidechain
13	C	95	TYR	Sidechain
14	D	127	PHE	Sidechain
14	D	141	ARG	Sidechain
14	D	151	THR	Peptide
14	D	59	ARG	Sidechain
15	E	102	ARG	Sidechain
15	E	35	TYR	Sidechain
15	E	57	LYS	Peptide
15	E	88	ARG	Sidechain
15	E	92	HIS	Sidechain
16	F	127	TYR	Sidechain
16	F	137	PHE	Sidechain
16	F	147	ARG	Sidechain
16	F	176	PHE	Sidechain
16	F	6	TYR	Sidechain
16	F	7	TYR	Sidechain
17	G	150	TYR	Sidechain
17	G	152	ARG	Sidechain
17	G	156	TYR	Sidechain
17	G	82	PHE	Sidechain
18	H	123	ARG	Sidechain
18	H	97	ARG	Sidechain
20	J	120	ARG	Sidechain
20	J	44	TYR	Sidechain
20	J	53	TYR	Sidechain
20	J	69	ARG	Sidechain
20	J	75	TYR	Sidechain
20	J	99	ARG	Sidechain
21	K	100	PHE	Sidechain
21	K	112	PHE	Sidechain
21	K	31	ARG	Sidechain
21	K	70	ARG	Sidechain
21	K	71	ARG	Sidechain,Peptide
21	K	79	PHE	Sidechain
22	L	64	PHE	Sidechain
22	L	78	ARG	Sidechain

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Mol	Chain	Res	Type	Group
23	M	114	ARG	Sidechain
23	M	16	ARG	Sidechain
23	M	31	PHE	Sidechain
23	M	44	ARG	Sidechain
23	M	50	ARG	Sidechain
23	M	81	ARG	Sidechain
23	M	91	TYR	Sidechain
24	N	101	GLY	Peptide
24	N	17	ARG	Sidechain
24	N	2	ARG	Sidechain
24	N	22	ARG	Sidechain
24	N	4	ARG	Sidechain
24	N	64	ARG	Sidechain
24	N	80	PHE	Sidechain
25	O	111	ARG	Sidechain
25	O	117	PHE	Sidechain
25	O	13	ARG	Sidechain
25	O	36	TYR	Sidechain
25	O	9	ARG	Sidechain
26	P	102	ARG	Sidechain
26	P	51	ASN	Peptide
26	P	71	ARG	Sidechain
27	Q	24	TYR	Sidechain
27	Q	35	PHE	Sidechain
27	Q	49	ARG	Sidechain
27	Q	78	PHE	Sidechain
28	R	21	ARG	Sidechain
28	R	79	ARG	Sidechain
28	R	80	ARG	Mainchain
28	R	82	HIS	Peptide
28	R	83	TYR	Sidechain
29	S	25	ARG	Sidechain
29	S	88	ARG	Sidechain
29	S	92	ARG	Sidechain
30	T	3	ARG	Sidechain
30	T	76	ARG	Sidechain
31	U	21	ARG	Sidechain
31	U	93	ARG	Sidechain
32	W	26	PHE	Sidechain
32	W	57	TYR	Sidechain
32	W	79	ARG	Sidechain
33	Y	24	ARG	Sidechain

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Mol	Chain	Res	Type	Group
33	Y	68	PHE	Sidechain
33	Y	76	ARG	Sidechain

5.2 Too-close contacts

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	0	625	0	655	5	0
2	1	509	0	543	1	0
3	2	449	0	491	0	0
4	3	444	0	461	3	0
5	4	410	0	440	2	0
6	5	1733	0	1824	8	0
7	6	377	0	418	3	0
8	7	504	0	574	8	0
9	8	302	0	343	1	0
10	9	2541	0	2555	68	0
11	A	2455	0	1253	15	0
12	B	62317	0	31306	523	0
13	C	2083	0	2157	14	0
14	D	1565	0	1616	9	0
15	E	1552	0	1619	7	0
16	F	1420	0	1460	9	0
17	G	1317	0	1364	7	0
18	H	1111	0	1148	4	0
19	I	495	0	525	4	0
20	J	1129	0	1162	7	0
21	K	932	0	1003	9	0
22	L	1045	0	1117	9	0
23	M	1074	0	1157	8	0
24	N	961	0	1000	8	0
25	O	892	0	923	3	0
26	P	917	0	965	13	0
27	Q	947	0	1022	4	0
28	R	816	0	839	5	0
29	S	857	0	922	9	0
30	T	739	0	807	7	0
31	U	758	0	807	8	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	W	753	0	780	1	0
33	Y	596	0	610	5	0
All	All	94625	0	63866	709	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 4.

All (709) 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)
12:B:1481:U:H3	12:B:1511:G:H21	1.23	0.85
12:B:2267:A:H61	12:B:2271:G:H1	1.25	0.79
30:T:20:ALA:H	30:T:23:ALA:HB3	1.50	0.75
10:9:279:TRP:CG	10:9:328:VAL:HG13	2.21	0.75
12:B:2507:C:H41	12:B:2576:G:H22	1.35	0.74
20:J:35:ARG:HA	20:J:40:HIS:CD2	2.22	0.74
10:9:279:TRP:CD2	10:9:328:VAL:HG13	2.23	0.73
12:B:91:A:H61	30:T:69:ARG:HH22	1.36	0.73
10:9:182:ALA:HB2	12:B:2661:G:H1'	1.71	0.72
12:B:2719:G:H21	12:B:2872:A:H61	1.37	0.70
6:5:114:VAL:H	6:5:162:ARG:HH21	1.40	0.68
12:B:962:G:H21	12:B:2250:G:H1	1.41	0.68
8:7:6:VAL:HG13	12:B:247:G:H1	1.59	0.67
12:B:327:G:H21	31:U:67:SER:HB3	1.61	0.66
26:P:63:ILE:H	26:P:68:GLY:HA2	1.59	0.66
12:B:877:A:H61	12:B:900:A:H62	1.44	0.66
10:9:167:MET:HE2	10:9:169:ASN:HB2	1.77	0.65
10:9:200:VAL:HG22	10:9:210:VAL:HG12	1.78	0.65
10:9:187:ALA:HB3	10:9:189:TYR:CZ	2.33	0.63
14:D:141:ARG:HE	14:D:141:ARG:HA	1.64	0.62
12:B:2013:A:H2	29:S:88:ARG:HH22	1.47	0.62
10:9:56:LEU:HD22	12:B:2529:G:H4'	1.81	0.61
12:B:1048:A:H61	17:G:2:ARG:HH22	1.49	0.61
6:5:172:HIS:CG	12:B:2123:G:H21	2.18	0.61
13:C:74:PRO:HB2	13:C:114:GLN:HE21	1.66	0.61
23:M:3:GLN:CD	23:M:3:GLN:H	2.09	0.60
20:J:24:THR:HG23	20:J:64:VAL:HA	1.83	0.60
12:B:546:U:H4'	12:B:547:A:H5''	1.83	0.60
12:B:64:A:H2'	12:B:65:U:C6	2.35	0.60
12:B:2320:U:H5''	12:B:2321:U:C2	2.37	0.59
12:B:2132:U:H5''	12:B:2133:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:1782:U:O5'	12:B:1782:U:H6	1.86	0.59
10:9:46:TRP:CE2	10:9:116:LEU:HB3	2.38	0.58
12:B:2472:G:H3'	12:B:2473:U:H5''	1.85	0.58
12:B:28:A:C2	12:B:513:A:C8	2.91	0.58
10:9:95:ARG:HH21	10:9:97:ILE:CG2	2.16	0.58
12:B:2847:U:C5	12:B:2848:G:C5	2.92	0.58
12:B:1715:G:H1'	12:B:1716:U:C5	2.39	0.57
12:B:446:G:H5''	27:Q:2:ARG:HH11	1.69	0.57
12:B:855:G:H21	33:Y:23:LYS:HE3	1.70	0.57
12:B:1820:U:H3	13:C:197:ALA:HA	1.68	0.57
12:B:2233:U:H2'	12:B:2234:G:C8	2.40	0.57
12:B:2267:A:N6	12:B:2271:G:H1	2.00	0.57
12:B:2311:A:C5	16:F:76:PHE:CE2	2.93	0.57
12:B:17:G:H2'	12:B:18:U:C6	2.40	0.57
12:B:713:G:H21	12:B:718:A:H2	1.53	0.56
11:A:54:G:H21	16:F:25:MET:HG3	1.70	0.56
12:B:661:A:C2	12:B:662:G:C5	2.93	0.56
12:B:2086:U:H2'	12:B:2087:G:C8	2.40	0.56
26:P:77:SER:HB2	26:P:80:VAL:HG23	1.87	0.56
10:9:60:ARG:HA	12:B:2478:A:N1	2.20	0.56
12:B:2202:U:H4'	12:B:2203:U:C5	2.41	0.56
12:B:1394:U:H4'	12:B:1603:A:H5''	1.87	0.56
18:H:94:ILE:HD12	18:H:94:ILE:H	1.70	0.56
10:9:95:ARG:HH21	10:9:97:ILE:HG21	1.72	0.55
10:9:189:TYR:HB2	10:9:191:PHE:CE1	2.41	0.55
12:B:1281:G:C5	12:B:1282:U:C4	2.94	0.55
12:B:2446:G:H21	12:B:2449:U:H3	1.54	0.55
10:9:229:ILE:HG22	12:B:1069:A:H62	1.72	0.55
12:B:480:A:H3'	12:B:481:G:H5''	1.89	0.55
12:B:2453:A:N6	12:B:2499:C:H42	2.04	0.55
8:7:44:ARG:H	8:7:45:PRO:CD	2.20	0.54
12:B:1172:C:C4	12:B:1173:U:C2	2.95	0.54
12:B:2115:G:H3'	12:B:2116:G:C5'	2.38	0.54
13:C:221:GLY:HA3	13:C:229:HIS:CD2	2.43	0.54
4:3:8:THR:H	4:3:11:LYS:HD2	1.71	0.54
6:5:57:GLN:HB3	6:5:202:THR:HG21	1.90	0.54
12:B:604:G:C6	12:B:625:G:C6	2.96	0.54
21:K:11:ALA:HB2	21:K:83:ALA:HB1	1.90	0.54
7:6:7:PRO:HB3	7:6:12:ARG:HH12	1.73	0.54
12:B:1454:C:N4	12:B:2703:C:H41	2.06	0.54
10:9:279:TRP:CG	10:9:328:VAL:CG1	2.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:2627:G:H2'	12:B:2628:C:C6	2.42	0.54
12:B:2849:U:H2'	26:P:92:ARG:HH12	1.72	0.54
12:B:1711:A:C2	12:B:1748:C:O2	2.61	0.53
10:9:5:ASP:HB3	10:9:191:PHE:HA	1.90	0.53
12:B:870:U:H2'	12:B:871:U:H5''	1.90	0.53
12:B:895:U:O4	12:B:897:C:C4	2.61	0.53
13:C:42:ARG:HA	13:C:48:ILE:HA	1.90	0.53
12:B:919:U:H2'	12:B:920:A:C8	2.43	0.53
12:B:1496:A:H2'	12:B:1498:C:C6	2.43	0.53
12:B:2095:A:H2'	12:B:2096:C:C6	2.43	0.53
12:B:2411:A:H2'	12:B:2412:A:C8	2.44	0.53
12:B:2505:G:H21	12:B:2506:U:H5	1.55	0.53
12:B:1167:C:H42	12:B:1182:G:H1	1.56	0.53
12:B:1827:U:H4'	12:B:1972:G:H5''	1.90	0.53
10:9:53:LEU:HD22	10:9:91:PRO:HB3	1.90	0.53
10:9:209:PHE:CZ	10:9:333:ILE:HD11	2.44	0.53
12:B:603:A:H1'	12:B:625:G:N2	2.24	0.53
12:B:1343:G:H1'	12:B:1597:A:C4	2.44	0.53
12:B:1800:C:C5	13:C:153:LEU:HD21	2.44	0.53
12:B:1620:G:C6	12:B:1621:U:C4	2.97	0.52
12:B:851:C:H2'	12:B:852:U:C6	2.43	0.52
12:B:2199:A:C2	12:B:2225:A:C4	2.98	0.52
14:D:33:ARG:HH12	14:D:53:GLY:HA2	1.74	0.52
24:N:52:ILE:HG21	24:N:94:TYR:CG	2.44	0.52
26:P:73:PHE:CD1	26:P:80:VAL:HG22	2.45	0.52
12:B:626:A:H3'	22:L:78:ARG:HH21	1.74	0.52
12:B:1269:A:H2'	12:B:1270:C:C6	2.44	0.52
12:B:722:A:C5	12:B:723:C:C5	2.97	0.52
12:B:1455:G:H5'	24:N:63:ARG:HH12	1.75	0.52
20:J:47:HIS:CG	20:J:48:VAL:H	2.27	0.52
6:5:218:MET:HE1	12:B:2130:U:C6	2.45	0.52
12:B:46:G:C6	12:B:47:C:C4	2.97	0.52
12:B:2120:G:H2'	12:B:2121:G:C8	2.44	0.52
12:B:1518:C:C2	12:B:1519:G:C8	2.97	0.52
12:B:1837:C:H2'	12:B:1838:C:H5'	1.91	0.52
12:B:1040:A:C2	12:B:1116:G:N1	2.78	0.52
12:B:1214:A:H61	12:B:1235:G:H1'	1.75	0.51
12:B:1275:A:H61	12:B:1295:C:H1'	1.75	0.51
12:B:2849:U:H6	26:P:92:ARG:HH22	1.57	0.51
10:9:301:ALA:HB1	10:9:309:LYS:HA	1.93	0.51
12:B:1205:A:H3'	15:E:165:HIS:CE1	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:K:72:PRO:HD2	26:P:71:ARG:HH12	1.74	0.51
12:B:1281:G:H2'	12:B:1282:U:C6	2.45	0.51
12:B:2402:U:H6	12:B:2403:C:H41	1.57	0.51
12:B:2370:G:C6	12:B:2371:G:C5	2.99	0.51
10:9:20:CYS:H	10:9:127:ASN:HD21	1.59	0.51
12:B:1749:A:C2	12:B:1750:G:C4	2.98	0.51
13:C:257:ARG:HB3	13:C:269:ARG:HH22	1.76	0.51
21:K:46:ALA:HB3	21:K:51:LYS:HG3	1.93	0.51
12:B:247:G:C2	12:B:252:G:C6	2.98	0.51
12:B:2359:C:H2'	12:B:2360:G:C8	2.45	0.51
14:D:173:GLN:HE21	14:D:209:ALA:HA	1.76	0.51
26:P:63:ILE:H	26:P:68:GLY:CA	2.24	0.51
12:B:661:A:C2	12:B:662:G:C4	2.98	0.51
12:B:1341:G:OP1	12:B:1602:U:C2	2.64	0.51
12:B:1632:A:H2'	12:B:1633:G:C2	2.45	0.51
10:9:61:PHE:CD2	12:B:2472:G:H5''	2.46	0.50
12:B:1476:U:C4	12:B:1516:G:C6	2.99	0.50
12:B:2820:A:H4'	24:N:3:HIS:CG	2.46	0.50
26:P:49:ILE:HG23	26:P:52:ARG:HH22	1.77	0.50
12:B:1637:A:H4'	12:B:1760:C:H1'	1.93	0.50
12:B:2564:A:C2	12:B:2647:U:H4'	2.46	0.50
12:B:618:G:C6	12:B:619:G:C5	3.00	0.50
21:K:19:VAL:HG13	21:K:43:ILE:HA	1.92	0.50
10:9:207:LYS:HA	12:B:2662:A:O2'	2.10	0.50
12:B:24:G:C5	12:B:25:U:C4	3.00	0.50
12:B:2838:G:C6	12:B:2839:G:C5	3.00	0.50
12:B:1456:G:C6	12:B:1457:U:C4	3.00	0.50
12:B:1473:G:C5	12:B:1474:U:C4	3.00	0.50
12:B:2556:C:C5	12:B:2557:G:C8	3.00	0.50
19:I:85:ILE:HD13	19:I:85:ILE:H	1.77	0.50
10:9:242:LEU:HD11	10:9:279:TRP:HB2	1.93	0.50
12:B:2858:C:C4	12:B:2859:G:C6	2.99	0.50
15:E:1:MET:HE3	15:E:113:VAL:HG21	1.94	0.50
10:9:200:VAL:HG13	10:9:210:VAL:HG12	1.94	0.50
12:B:418:C:C4	12:B:419:U:C4	3.00	0.50
12:B:1655:A:H4'	14:D:118:PHE:CD2	2.46	0.50
18:H:37:VAL:HB	18:H:47:PHE:CE1	2.47	0.50
12:B:619:G:H3'	12:B:620:G:H21	1.76	0.50
12:B:1537:G:C6	12:B:1538:G:H1'	2.47	0.50
12:B:2712:C:H3'	12:B:2714:G:H5''	1.94	0.50
10:9:181:ALA:H	10:9:202:ARG:HG3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:9:228:GLY:HA3	12:B:1095:A:N3	2.27	0.49
12:B:178:G:C6	12:B:179:C:C5	3.00	0.49
12:B:371:A:C8	12:B:373:U:C2	3.00	0.49
12:B:519:U:H4'	29:S:25:ARG:HH22	1.77	0.49
12:B:1062:G:C4	12:B:1077:A:C2	3.00	0.49
12:B:1090:A:H61	12:B:1101:U:H3	1.60	0.49
12:B:2756:U:H1'	12:B:2757:A:H5''	1.94	0.49
29:S:33:LEU:HA	29:S:36:LEU:HD12	1.93	0.49
31:U:39:ASN:HB3	31:U:62:ALA:H	1.76	0.49
7:6:1:MET:HG2	7:6:2:LYS:H	1.76	0.49
12:B:646:U:C5	12:B:647:G:H1'	2.48	0.49
12:B:952:G:C6	12:B:966:G:C6	3.00	0.49
12:B:1065:U:C5	12:B:1066:U:C4	3.01	0.49
12:B:2722:G:H2'	12:B:2723:C:C6	2.47	0.49
12:B:629:G:C6	12:B:630:G:C5	3.00	0.49
12:B:892:A:C6	12:B:893:C:C4	2.99	0.49
4:3:42:ILE:HG22	24:N:100:CYS:HA	1.94	0.49
16:F:114:ARG:HA	16:F:114:ARG:NE	2.28	0.49
28:R:2:TYR:O	28:R:3:ALA:HB2	2.13	0.49
8:7:44:ARG:H	8:7:45:PRO:HD2	1.76	0.49
12:B:30:G:H2'	12:B:31:C:C6	2.47	0.49
24:N:15:SER:HA	24:N:18:GLN:HE21	1.77	0.49
12:B:71:A:H5''	12:B:73:A:C4	2.47	0.49
12:B:866:A:C5	12:B:867:C:C5	3.01	0.49
11:A:34:A:H3'	16:F:91:ARG:HH22	1.78	0.49
12:B:5:A:C2	12:B:6:A:C4	3.01	0.49
12:B:2444:G:C6	12:B:2445:G:C5	3.01	0.49
14:D:126:ASN:HD22	14:D:141:ARG:HH12	1.59	0.49
12:B:957:C:C5	12:B:959:A:C5	3.01	0.49
12:B:1483:G:H22	12:B:1507:C:H1'	1.78	0.49
24:N:37:THR:HG22	24:N:39:PRO:HD2	1.95	0.49
12:B:150:U:H2'	12:B:151:C:O4'	2.13	0.49
12:B:262:A:C6	12:B:263:G:C4	3.01	0.49
11:A:69:G:H3'	11:A:70:C:H6	1.77	0.48
12:B:1218:G:C6	12:B:1232:G:C6	3.01	0.48
12:B:898:C:H3'	12:B:899:A:H8	1.78	0.48
12:B:1341:G:H1'	30:T:59:ASN:HB3	1.95	0.48
12:B:2065:C:C2	12:B:2446:G:N2	2.82	0.48
12:B:2373:G:C2	12:B:2381:A:C2	3.01	0.48
28:R:39:LEU:HB2	28:R:53:PHE:H	1.78	0.48
10:9:227:LEU:HB3	10:9:231:PHE:CG	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:664:G:H2'	12:B:665:U:H6	1.79	0.48
12:B:719:C:C5	12:B:720:U:C5	3.01	0.48
12:B:1024:G:H3'	12:B:1025:G:H5''	1.94	0.48
13:C:70:LYS:H	13:C:101:ARG:NH2	2.11	0.48
12:B:1037:G:C2	12:B:1119:U:C2	3.01	0.48
12:B:1721:G:H1'	12:B:1739:A:H61	1.78	0.48
12:B:195:A:H61	12:B:198:C:H3'	1.77	0.48
12:B:322:A:H5'	12:B:340:A:H1'	1.94	0.48
12:B:519:U:H2'	12:B:520:G:C8	2.48	0.48
12:B:2681:C:C4	12:B:2724:U:C4	3.01	0.48
10:9:182:ALA:CB	12:B:2661:G:H1'	2.43	0.48
12:B:870:U:C2'	12:B:871:U:H5''	2.44	0.48
12:B:1023:U:C5	12:B:1024:G:C4	3.01	0.48
12:B:1877:A:H2'	12:B:1878:G:C8	2.49	0.48
12:B:346:A:H3'	12:B:347:A:C8	2.49	0.48
12:B:452:G:H3'	12:B:453:A:H8	1.79	0.48
12:B:494:G:C2	12:B:495:G:C4	3.02	0.48
12:B:1503:A:H2'	12:B:1504:A:C8	2.48	0.48
12:B:2373:G:H2'	12:B:2374:C:C6	2.48	0.48
5:4:38:PHE:CD2	12:B:2348:U:H1'	2.49	0.48
10:9:123:HIS:H	10:9:145:THR:HG21	1.78	0.48
12:B:486:C:H2'	12:B:487:C:C6	2.48	0.48
12:B:813:U:H5''	28:R:84:ARG:HH11	1.78	0.48
12:B:1128:G:C6	12:B:2518:A:C6	3.02	0.48
12:B:2661:G:H2'	12:B:2662:A:C8	2.49	0.48
16:F:118:ALA:HA	16:F:129:MET:HE3	1.95	0.48
12:B:901:C:H2'	12:B:902:C:C6	2.49	0.48
12:B:1300:G:H1'	12:B:1626:A:C2	2.49	0.48
12:B:1551:A:H3'	12:B:1552:A:H5''	1.94	0.48
12:B:1620:G:C5	12:B:1621:U:C5	3.02	0.48
12:B:1752:C:H2'	12:B:1753:G:C8	2.49	0.48
15:E:35:TYR:CD1	15:E:178:VAL:HG21	2.49	0.48
11:A:33:G:H21	11:A:35:C:N4	2.12	0.48
12:B:298:G:C2	12:B:339:U:C5	3.02	0.48
12:B:546:U:OP1	12:B:548:G:C8	2.67	0.48
22:L:48:ARG:H	22:L:48:ARG:HD2	1.78	0.48
28:R:6:GLN:HE22	28:R:11:GLN:HE21	1.61	0.48
8:7:54:LEU:HD12	8:7:54:LEU:H	1.78	0.47
10:9:180:SER:OG	10:9:182:ALA:HB3	2.13	0.47
12:B:1838:C:C6	12:B:1899:A:C6	3.03	0.47
6:5:76:ALA:HB2	6:5:111:PHE:CD2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:1019:U:H2'	12:B:1020:A:C8	2.49	0.47
12:B:1311:G:H21	12:B:1603:A:H62	1.62	0.47
12:B:2063:C:C5	12:B:2064:C:C5	3.01	0.47
12:B:2846:G:C5	12:B:2847:U:C4	3.02	0.47
11:A:51:G:C8	25:O:64:TYR:HE2	2.32	0.47
12:B:1074:G:C5	12:B:1075:C:C5	3.02	0.47
12:B:1887:C:C5	12:B:1888:G:C6	3.02	0.47
12:B:2458:G:H8	12:B:2459:A:H62	1.63	0.47
10:9:26:GLU:HB2	10:9:29:ILE:H	1.79	0.47
12:B:155:A:C2	12:B:172:A:C2	3.02	0.47
12:B:490:C:H4'	12:B:491:G:OP2	2.15	0.47
12:B:1120:G:C6	12:B:1121:C:C4	3.02	0.47
12:B:1613:G:C6	12:B:1619:G:C6	3.02	0.47
29:S:87:PRO:HA	29:S:93:ALA:HA	1.97	0.47
12:B:2043:C:C4	12:B:2777:G:C5	3.02	0.47
31:U:101:THR:HG22	31:U:102:ILE:H	1.80	0.47
10:9:54:ASN:C	12:B:2531:A:OP1	2.58	0.47
11:A:48:U:H4'	25:O:100:HIS:HB2	1.95	0.47
12:B:2849:U:H5'	12:B:2868:A:C6	2.50	0.47
13:C:57:HIS:CD2	13:C:59:GLN:H	2.32	0.47
10:9:188:ASP:HB2	17:G:175:LYS:HZ1	1.78	0.47
12:B:27:G:H22	12:B:512:G:H2'	1.79	0.47
12:B:559:G:C5	12:B:560:C:C5	3.03	0.47
12:B:1209:U:N3	12:B:1238:G:C6	2.83	0.47
12:B:1551:A:N6	12:B:1552:A:C2	2.83	0.47
12:B:1778:U:C2	12:B:1787:A:C2	3.03	0.47
12:B:603:A:H1'	12:B:625:G:H21	1.79	0.47
12:B:603:A:C4	12:B:655:A:C2	3.03	0.47
12:B:704:G:H2'	12:B:726:G:H22	1.80	0.47
10:9:66:ARG:HH22	12:B:2481:G:H5'	1.79	0.47
12:B:68:G:C5	12:B:69:C:C5	3.03	0.47
12:B:298:G:C2	12:B:339:U:C4	3.03	0.47
12:B:338:G:C4	12:B:339:U:C6	3.03	0.47
12:B:1308:A:N6	12:B:1606:C:H1'	2.30	0.47
12:B:1478:G:C6	12:B:1479:G:C6	3.03	0.47
14:D:183:GLU:CD	14:D:183:GLU:H	2.23	0.47
12:B:863:A:H2'	12:B:864:G:C8	2.50	0.46
12:B:1550:C:H5''	12:B:1740:G:H21	1.80	0.46
12:B:2401:U:H2'	12:B:2402:U:C2	2.50	0.46
12:B:41:C:C2	12:B:439:A:C2	3.03	0.46
12:B:136:G:C5	12:B:137:U:C5	3.02	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:221:A:H61	12:B:428:A:H62	1.63	0.46
12:B:554:U:C4	12:B:555:G:C5	3.03	0.46
12:B:2688:G:C2	12:B:2720:U:C5	3.03	0.46
12:B:858:G:H3'	12:B:859:G:C8	2.50	0.46
12:B:1381:G:C5	12:B:1382:G:C2	3.02	0.46
12:B:2306:C:C5	12:B:2307:G:C5	3.04	0.46
11:A:18:G:C2	11:A:67:G:C5	3.04	0.46
12:B:422:A:H3'	12:B:423:A:C8	2.50	0.46
6:5:65:LEU:HD22	6:5:191:ALA:HB1	1.97	0.46
12:B:633:A:H5''	22:L:70:LYS:HE3	1.97	0.46
12:B:1420:A:C5	12:B:2211:A:C8	3.04	0.46
19:I:123:ALA:HA	19:I:126:ARG:HH21	1.81	0.46
31:U:11:ILE:HD13	31:U:21:ARG:HH11	1.80	0.46
11:A:100:G:C6	11:A:101:A:C5	3.04	0.46
12:B:898:C:H3'	12:B:899:A:C8	2.51	0.46
12:B:1154:G:H5''	27:Q:58:GLN:HE22	1.80	0.46
12:B:1324:G:H3'	12:B:1325:U:H4'	1.98	0.46
12:B:1906:G:H1	12:B:1924:C:H42	1.63	0.46
12:B:1933:G:C5	12:B:1934:C:C5	3.04	0.46
12:B:2091:C:C5	12:B:2092:U:H2'	2.50	0.46
12:B:2427:C:C5'	12:B:2429:G:H5'	2.46	0.46
21:K:104:THR:HB	21:K:106:GLU:H	1.81	0.46
10:9:69:ARG:NH1	10:9:147:GLY:H	2.14	0.46
12:B:548:G:H5'	12:B:549:G:C5	2.51	0.46
12:B:715:A:H2'	12:B:716:A:C8	2.51	0.46
12:B:1011:G:C2	12:B:1013:C:C2	3.04	0.46
12:B:1128:G:C5	12:B:2518:A:N1	2.83	0.46
12:B:1613:G:H3'	12:B:1617:C:H42	1.81	0.46
12:B:2364:C:H2'	12:B:2365:G:C8	2.50	0.46
10:9:21:VAL:HG13	10:9:72:ASN:HD21	1.81	0.46
12:B:1900:A:C2	12:B:1970:A:C4	3.04	0.46
10:9:164:MET:HA	10:9:242:LEU:HB2	1.98	0.46
12:B:404:A:C6	12:B:421:C:H2'	2.51	0.46
12:B:907:G:H21	23:M:68:PHE:HB3	1.81	0.46
12:B:2318:G:C5	12:B:2319:G:C6	3.04	0.46
16:F:63:LYS:HB2	16:F:64:PRO:HD2	1.98	0.46
12:B:892:A:C5	12:B:893:C:C4	3.04	0.46
12:B:1850:G:C4	12:B:1851:U:C5	3.04	0.46
12:B:415:A:C5	12:B:416:U:C5	3.04	0.45
12:B:605:G:H21	12:B:658:U:H5'	1.82	0.45
12:B:710:U:H2'	12:B:711:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:2104:C:H42	12:B:2184:A:N6	2.14	0.45
12:B:2495:G:C5	12:B:2496:C:C5	3.04	0.45
12:B:2555:U:C5	12:B:2556:C:C2	3.03	0.45
29:S:100:THR:HG22	29:S:101:SER:N	2.31	0.45
10:9:27:LYS:HE3	12:B:2504:U:H3'	1.98	0.45
10:9:53:LEU:HD13	10:9:91:PRO:HA	1.98	0.45
10:9:54:ASN:HD21	10:9:185:LYS:NZ	2.15	0.45
12:B:2409:G:C6	12:B:2410:G:C5	3.04	0.45
12:B:2625:G:C6	12:B:2626:C:C4	3.04	0.45
31:U:66:VAL:O	31:U:66:VAL:HG22	2.16	0.45
12:B:843:G:C6	12:B:844:A:C6	3.05	0.45
12:B:2400:G:C5	12:B:2401:U:C5	3.05	0.45
24:N:59:SER:HB2	24:N:62:ASN:H	1.80	0.45
12:B:232:G:H22	12:B:420:C:H5''	1.82	0.45
12:B:1705:A:C5	12:B:1706:C:C4	3.04	0.45
23:M:6:ARG:HH21	23:M:8:LYS:HB3	1.82	0.45
7:6:28:ARG:HA	7:6:31:LEU:HD12	1.98	0.45
12:B:61:C:H2'	12:B:62:U:C6	2.51	0.45
12:B:443:A:H2'	12:B:443:A:N3	2.32	0.45
12:B:657:U:H2'	12:B:658:U:C6	2.52	0.45
12:B:1584:U:C6	12:B:1584:U:H3'	2.52	0.45
10:9:242:LEU:CD1	10:9:279:TRP:HB2	2.46	0.45
11:A:96:G:C5	11:A:97:C:C5	3.05	0.45
12:B:858:G:H22	12:B:919:U:H3	1.64	0.45
12:B:1270:C:HO2'	12:B:1325:U:H6	1.64	0.45
12:B:1641:A:C8	12:B:1642:G:C8	3.05	0.45
12:B:1696:G:C6	12:B:1697:G:C4	3.05	0.45
12:B:94:A:H3'	12:B:95:A:H8	1.81	0.45
12:B:372:G:H22	12:B:400:G:H3'	1.82	0.45
19:I:81:LYS:HD2	19:I:81:LYS:C	2.42	0.45
12:B:1583:A:H4'	12:B:1585:C:C6	2.52	0.45
12:B:2568:U:H2'	12:B:2569:G:C8	2.51	0.45
30:T:29:THR:H	30:T:91:GLN:HG2	1.82	0.45
12:B:599:A:C6	12:B:659:G:C6	3.05	0.45
12:B:1797:G:N1	12:B:1823:G:C5	2.85	0.45
12:B:1874:C:C5	12:B:1875:G:C8	3.05	0.45
31:U:36:GLU:H	31:U:36:GLU:CD	2.25	0.45
12:B:741:U:H2'	12:B:742:A:C8	2.52	0.45
12:B:1902:C:C5	12:B:1903:G:C8	3.05	0.45
18:H:8:LYS:HD3	18:H:8:LYS:C	2.42	0.45
10:9:54:ASN:HD21	10:9:185:LYS:HZ1	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:360:U:C6	12:B:361:G:C6	3.06	0.44
12:B:672:C:C2	12:B:809:G:C2	3.05	0.44
12:B:947:A:H2'	12:B:948:C:C6	2.52	0.44
12:B:1320:C:C5	12:B:1329:U:H5''	2.51	0.44
13:C:158:GLY:H	13:C:194:VAL:HG13	1.82	0.44
12:B:23:G:C6	12:B:518:G:C6	3.05	0.44
12:B:960:A:C8	12:B:962:G:C8	3.05	0.44
12:B:1071:G:H1'	12:B:1089:A:H3'	1.98	0.44
12:B:1082:U:O2	12:B:1086:A:C6	2.70	0.44
12:B:2757:A:H2'	12:B:2758:A:H5'	1.99	0.44
12:B:2805:C:C4	12:B:2806:C:C4	3.05	0.44
12:B:455:C:C6	12:B:472:A:C2	3.06	0.44
12:B:532:A:H4'	12:B:533:G:C8	2.51	0.44
12:B:826:U:C2	12:B:828:U:H4'	2.53	0.44
12:B:858:G:N2	12:B:919:U:H3	2.15	0.44
12:B:1056:G:H5'	12:B:1057:A:H5'	1.98	0.44
12:B:1484:U:C5	12:B:1485:U:C5	3.05	0.44
12:B:656:G:H2'	12:B:657:U:C6	2.53	0.44
12:B:764:A:C6	13:C:207:ALA:HB1	2.53	0.44
12:B:1877:A:C2'	12:B:1878:G:C8	3.00	0.44
12:B:1948:G:C6	12:B:1949:G:C5	3.06	0.44
16:F:118:ALA:HB3	16:F:176:PHE:HA	1.99	0.44
12:B:533:G:C6	12:B:534:U:C4	3.06	0.44
27:Q:31:TYR:O	27:Q:34:ALA:HB3	2.17	0.44
10:9:52:ASN:HB3	10:9:54:ASN:HD22	1.83	0.44
10:9:54:ASN:CG	12:B:2531:A:N7	2.75	0.44
12:B:871:U:H4'	23:M:68:PHE:CE1	2.52	0.44
12:B:1090:A:N6	12:B:1101:U:H3	2.15	0.44
12:B:1256:G:H21	15:E:77:ILE:HB	1.82	0.44
12:B:1265:A:H62	12:B:2015:A:N6	2.16	0.44
12:B:1416:G:N2	12:B:1585:C:H41	2.16	0.44
12:B:1715:G:H1'	12:B:1716:U:C6	2.52	0.44
12:B:2306:C:C4	12:B:2307:G:C6	3.06	0.44
12:B:2527:C:C4	12:B:2528:U:C4	3.05	0.44
30:T:69:ARG:HD2	30:T:70:HIS:CE1	2.52	0.44
10:9:226:GLY:H	10:9:228:GLY:H	1.65	0.44
12:B:280:U:C4	12:B:281:C:C4	3.06	0.44
12:B:610:C:H2'	12:B:611:C:C6	2.53	0.44
12:B:2464:G:C6	12:B:2487:G:C6	3.06	0.44
12:B:2624:G:C2	12:B:2625:G:C8	3.06	0.44
12:B:2884:U:OP2	12:B:2885:G:C2	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:81:G:N7	12:B:82:U:C5	2.85	0.44
12:B:89:A:C5	12:B:90:U:C5	3.06	0.44
12:B:649:G:H2'	12:B:650:C:C6	2.53	0.44
12:B:2061:G:C8	12:B:2503:A:H5'	2.52	0.44
12:B:2191:A:H3'	12:B:2192:U:H6	1.83	0.44
12:B:2396:G:C6	12:B:2421:G:C6	3.05	0.44
12:B:2461:A:C2	12:B:2491:U:O4	2.71	0.44
12:B:2563:U:O2	12:B:2565:A:C8	2.71	0.44
12:B:2768:U:C4	12:B:2769:U:C5	3.05	0.44
21:K:78:ARG:H	26:P:70:GLU:HB3	1.83	0.44
12:B:391:A:C5	12:B:392:U:C6	3.06	0.44
12:B:927:A:H2'	12:B:928:A:C8	2.53	0.44
12:B:1000:A:H62	12:B:1154:G:H2'	1.83	0.44
12:B:1069:A:C2	12:B:1095:A:H2'	2.53	0.44
12:B:1418:G:O6	12:B:1578:U:H5''	2.18	0.44
12:B:2111:U:C4	12:B:2142:A:H4'	2.53	0.44
12:B:89:A:H2'	12:B:90:U:H6	1.83	0.43
12:B:1000:A:C4	12:B:1155:A:C6	3.06	0.43
12:B:2279:G:C8	33:Y:9:THR:HG21	2.53	0.43
12:B:2305:U:H2'	12:B:2306:C:C6	2.53	0.43
12:B:2714:G:C4	12:B:2715:C:C6	3.06	0.43
13:C:77:VAL:HG22	13:C:93:VAL:HG22	1.98	0.43
10:9:69:ARG:HH12	10:9:147:GLY:H	1.66	0.43
12:B:1141:U:C4	20:J:67:ASN:HB2	2.54	0.43
12:B:1375:U:N3	12:B:1376:C:C5	2.87	0.43
12:B:2411:A:H2'	12:B:2412:A:H8	1.83	0.43
12:B:118:A:H5'	12:B:119:A:H8	1.84	0.43
12:B:519:U:H2'	12:B:520:G:H8	1.81	0.43
12:B:532:A:N6	12:B:2020:A:H1'	2.33	0.43
12:B:696:G:C2	12:B:767:U:C2	3.06	0.43
12:B:1451:C:H4'	12:B:1452:G:C8	2.53	0.43
12:B:1468:U:H2'	12:B:1522:A:H61	1.82	0.43
12:B:1564:C:H2'	12:B:1565:C:C6	2.53	0.43
12:B:1784:A:O5'	12:B:1784:A:C8	2.71	0.43
12:B:2371:G:C6	12:B:2372:U:C4	3.06	0.43
25:O:106:LEU:H	25:O:109:ALA:HB3	1.82	0.43
12:B:1484:U:C5	12:B:1485:U:C4	3.06	0.43
12:B:1681:G:H4'	12:B:1763:G:N7	2.34	0.43
12:B:1798:U:C4	12:B:1819:A:C2	3.06	0.43
12:B:1935:G:N2	12:B:1964:G:C5	2.86	0.43
12:B:2292:U:H5''	12:B:2378:A:H61	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:2681:C:C5	12:B:2724:U:C5	3.06	0.43
12:B:2747:G:O6	12:B:2755:C:H5''	2.17	0.43
8:7:23:HIS:HA	22:L:64:PHE:CZ	2.54	0.43
10:9:25:ARG:HB3	12:B:2452:C:H4'	2.01	0.43
12:B:42:A:C2	12:B:43:G:H1'	2.54	0.43
12:B:1180:U:C4	12:B:1181:U:C4	3.05	0.43
12:B:1281:G:C6	12:B:1282:U:C4	3.07	0.43
12:B:2199:A:H61	12:B:2224:G:H1'	1.82	0.43
13:C:206:LYS:HG3	13:C:209:ALA:H	1.83	0.43
10:9:288:LEU:HD23	10:9:288:LEU:HA	1.96	0.43
12:B:189:G:H2'	12:B:205:G:H22	1.82	0.43
12:B:667:U:H2'	12:B:668:A:O4'	2.18	0.43
12:B:696:G:C2	12:B:697:G:C4	3.07	0.43
12:B:892:A:C5	12:B:893:C:C5	3.06	0.43
12:B:2199:A:H5'	12:B:2200:C:OP2	2.18	0.43
15:E:98:LYS:HA	15:E:101:TYR:CD1	2.54	0.43
6:5:166:ASP:CG	6:5:167:LYS:H	2.27	0.43
10:9:91:PRO:HG3	10:9:189:TYR:HA	2.01	0.43
11:A:33:G:H21	11:A:35:C:H41	1.65	0.43
12:B:1484:U:C6	12:B:1485:U:C5	3.07	0.43
12:B:2267:A:C8	12:B:2267:A:H3'	2.53	0.43
17:G:122:ALA:HB2	17:G:132:LEU:HA	2.00	0.43
26:P:59:THR:HG22	26:P:72:VAL:HA	2.00	0.43
12:B:2516:A:C5	12:B:2517:C:C4	3.07	0.43
12:B:2714:G:C6	12:B:2715:C:C4	3.07	0.43
31:U:3:LYS:HD3	31:U:84:PHE:CZ	2.54	0.43
12:B:12:U:O2	12:B:2626:C:H4'	2.19	0.43
12:B:825:A:C2	12:B:833:A:C2	3.07	0.43
12:B:1448:G:H1'	12:B:1528:A:C2	2.54	0.43
20:J:57:LEU:HD22	20:J:129:GLU:H	1.83	0.43
10:9:4:VAL:HA	10:9:191:PHE:CE2	2.53	0.43
10:9:77:ASP:C	12:B:2555:U:H3	2.26	0.43
12:B:329:G:H1	31:U:16:LYS:HE3	1.84	0.43
12:B:636:G:H3'	22:L:128:THR:HB	2.00	0.43
12:B:1237:A:H2'	12:B:1237:A:N3	2.33	0.43
29:S:75:PHE:HD2	29:S:76:VAL:H	1.67	0.43
10:9:179:VAL:HB	10:9:314:SER:H	1.83	0.42
11:A:34:A:C2	11:A:49:C:N3	2.87	0.42
12:B:354:A:H3'	12:B:355:U:C6	2.54	0.42
12:B:740:C:H1'	12:B:1981:A:C4	2.54	0.42
12:B:910:A:C8	23:M:12:MET:HE3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:1460:U:H5''	12:B:1461:C:C5	2.54	0.42
12:B:1462:C:C4	12:B:1463:C:C5	3.06	0.42
12:B:1567:G:H4'	12:B:1568:G:C2	2.54	0.42
12:B:2064:C:H1'	12:B:2450:A:C6	2.54	0.42
12:B:2352:A:C2	12:B:2366:A:C2	3.07	0.42
12:B:2553:G:N3	12:B:2583:G:H1'	2.34	0.42
22:L:6:LEU:H	22:L:6:LEU:HD23	1.84	0.42
1:O:19:HIS:O	1:O:19:HIS:CG	2.73	0.42
8:7:9:ALA:HA	8:7:12:ARG:HH21	1.84	0.42
12:B:251:A:C5	12:B:252:G:H1'	2.54	0.42
12:B:1418:G:C2	12:B:1579:A:N7	2.86	0.42
12:B:2219:U:C4	12:B:2220:U:C5	3.07	0.42
12:B:2476:A:N1	12:B:2477:U:C5	2.87	0.42
33:Y:25:PHE:CE1	33:Y:32:ALA:O	2.72	0.42
12:B:165:A:C2	12:B:166:U:C2	3.07	0.42
12:B:711:G:C2	12:B:712:G:C5	3.08	0.42
12:B:1855:U:H2'	12:B:1856:U:C6	2.54	0.42
12:B:2209:G:C6	12:B:2210:U:C4	3.07	0.42
12:B:2513:A:C2	12:B:2514:U:C2	3.07	0.42
12:B:2596:U:C5	12:B:2597:G:C6	3.08	0.42
33:Y:27:GLY:HA3	33:Y:31:LEU:HD13	2.00	0.42
12:B:288:U:H2'	12:B:289:G:O4'	2.19	0.42
12:B:607:U:C5	12:B:620:G:C2	3.07	0.42
12:B:974:G:H5''	12:B:1186:G:H21	1.84	0.42
12:B:2165:C:C5	12:B:2166:U:C2	3.07	0.42
12:B:2446:G:H2'	12:B:2447:G:H4'	2.01	0.42
12:B:2868:A:H2'	12:B:2869:G:C8	2.54	0.42
30:T:66:LYS:H	30:T:77:ARG:HB3	1.84	0.42
12:B:81:G:C8	12:B:82:U:C5	3.07	0.42
12:B:307:G:C2	12:B:310:A:C8	3.08	0.42
12:B:1440:U:H2'	12:B:1441:G:C8	2.54	0.42
12:B:1651:G:H2'	12:B:1652:A:C8	2.54	0.42
12:B:7:G:H2'	12:B:8:C:C6	2.54	0.42
12:B:608:A:C2	12:B:609:A:C4	3.07	0.42
12:B:801:G:C4	15:E:49:ARG:HD3	2.54	0.42
12:B:891:G:H2'	12:B:892:A:C8	2.55	0.42
12:B:1252:G:C2	12:B:1253:A:C2	3.08	0.42
12:B:2028:U:N3	12:B:2029:G:C5	2.87	0.42
12:B:2355:G:C6	12:B:2363:G:C6	3.08	0.42
12:B:2368:C:H2'	12:B:2369:A:C8	2.55	0.42
12:B:2543:G:H21	12:B:2646:C:H5''	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:9:245:ILE:HG21	10:9:282:PHE:CD2	2.54	0.42
12:B:460:A:C2	12:B:470:A:C4	3.07	0.42
12:B:486:C:H4'	29:S:60:HIS:CE1	2.54	0.42
12:B:1477:A:C2	12:B:1515:A:C2	3.07	0.42
12:B:1658:C:H5''	14:D:138:LEU:HD22	2.02	0.42
12:B:2663:G:C8	12:B:2664:G:C8	3.07	0.42
12:B:2681:C:C4	12:B:2724:U:C5	3.08	0.42
12:B:2846:G:C6	12:B:2847:U:C4	3.07	0.42
30:T:30:ILE:HG23	30:T:86:THR:H	1.85	0.42
10:9:60:ARG:HG3	12:B:2478:A:C2	2.55	0.42
11:A:73:A:C4	11:A:104:A:C2	3.07	0.42
12:B:559:G:C6	12:B:560:C:C4	3.07	0.42
12:B:1171:G:C5	12:B:1172:C:C4	3.07	0.42
12:B:1247:A:H3'	12:B:1248:G:H5''	2.02	0.42
12:B:1797:G:C2	12:B:1823:G:C4	3.08	0.42
12:B:1867:G:C6	12:B:1868:C:C4	3.08	0.42
12:B:1935:G:N2	12:B:1964:G:C4	2.88	0.42
12:B:2279:G:C6	12:B:2280:G:C5	3.07	0.42
12:B:2846:G:H5''	26:P:52:ARG:NH1	2.34	0.42
1:0:59:ASP:CG	18:H:27:ARG:HH11	2.27	0.42
12:B:572:A:C2	12:B:2033:A:C2	3.08	0.42
12:B:823:C:H2'	12:B:824:U:C6	2.55	0.42
12:B:940:G:C2	12:B:941:A:H1'	2.54	0.42
12:B:1547:C:H2'	12:B:1548:A:H8	1.84	0.42
12:B:1783:A:C2	12:B:2587:A:C5	3.07	0.42
12:B:1791:A:C8	12:B:1792:G:C8	3.07	0.42
12:B:1930:G:H22	12:B:1968:G:H2'	1.85	0.42
12:B:2596:U:C4	12:B:2597:G:C2	3.08	0.42
12:B:2652:C:C4	12:B:2653:U:C4	3.08	0.42
16:F:105:ILE:HG23	16:F:138:PRO:HD3	2.02	0.42
22:L:6:LEU:H	22:L:6:LEU:CD2	2.33	0.42
10:9:206:GLU:HA	12:B:2662:A:H5''	2.02	0.42
12:B:783:A:H4'	12:B:2588:G:H4'	2.02	0.42
12:B:870:U:C3'	12:B:871:U:H5''	2.50	0.42
12:B:1498:C:H2'	12:B:1499:C:C6	2.55	0.42
12:B:1585:C:H3'	12:B:1586:A:H8	1.85	0.42
12:B:2028:U:C4	12:B:2029:G:C5	3.08	0.42
12:B:2091:C:H3'	12:B:2092:U:H5''	2.02	0.42
13:C:221:GLY:HA3	13:C:229:HIS:HD2	1.81	0.42
23:M:20:LEU:HD22	32:W:81:PRO:HG2	2.01	0.42
4:3:5:ASN:HD21	12:B:2019:A:H3'	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:422:A:H3'	12:B:423:A:H8	1.85	0.41
12:B:1022:G:C6	12:B:1140:C:C4	3.07	0.41
12:B:1448:G:H21	12:B:1529:G:H5'	1.85	0.41
12:B:2724:U:H2'	12:B:2725:A:C8	2.54	0.41
9:8:2:LYS:HG3	9:8:3:VAL:H	1.85	0.41
10:9:183:LYS:NZ	12:B:2661:G:C6	2.78	0.41
12:B:89:A:C6	12:B:90:U:C4	3.08	0.41
12:B:1467:U:C5	12:B:1546:G:H2'	2.55	0.41
12:B:2472:G:C5	12:B:2475:C:C4	3.08	0.41
12:B:2792:A:C2	12:B:2805:C:C2	3.08	0.41
2:1:11:VAL:HG23	2:1:12:GLU:N	2.36	0.41
10:9:231:PHE:CD2	10:9:231:PHE:N	2.88	0.41
12:B:221:A:C2	12:B:233:A:C5	3.08	0.41
12:B:646:U:C6	12:B:647:G:H1'	2.55	0.41
12:B:925:A:C2	12:B:926:G:C4	3.08	0.41
12:B:1316:U:H3	12:B:1336:A:H61	1.68	0.41
12:B:1380:G:N2	12:B:1571:A:C2	2.88	0.41
12:B:1444:G:H2'	12:B:1445:G:C8	2.55	0.41
12:B:1473:G:C6	12:B:1474:U:C4	3.08	0.41
12:B:2323:G:C5	12:B:2324:U:C5	3.08	0.41
12:B:2328:A:C2	12:B:2329:U:C2	3.08	0.41
12:B:2352:A:C8	12:B:2353:G:C8	3.08	0.41
12:B:2455:G:C6	12:B:2456:C:C4	3.08	0.41
21:K:66:LYS:HE3	21:K:82:ASN:HD21	1.85	0.41
12:B:1425:G:H2'	12:B:1426:G:C8	2.55	0.41
12:B:2073:C:C2	12:B:2437:G:C2	3.08	0.41
29:S:2:GLU:HA	29:S:108:SER:HA	2.01	0.41
6:5:172:HIS:CD2	12:B:2123:G:H21	2.38	0.41
12:B:190:A:C4	12:B:207:A:C2	3.07	0.41
12:B:410:G:H2'	12:B:2407:A:N7	2.36	0.41
12:B:883:G:C5	12:B:884:U:C5	3.09	0.41
12:B:1223:G:C6	12:B:1227:G:C6	3.09	0.41
12:B:2232:C:C4	12:B:2233:U:C4	3.09	0.41
12:B:2345:G:H1'	12:B:2382:G:H5'	2.00	0.41
12:B:2812:G:C2	12:B:2813:A:C4	3.08	0.41
12:B:2832:U:H1'	12:B:2834:G:C4	2.55	0.41
10:9:200:VAL:HG11	12:B:2661:G:C2	2.56	0.41
12:B:6:A:C2	12:B:7:G:C5	3.09	0.41
12:B:539:G:C5	12:B:540:C:C5	3.08	0.41
12:B:1028:A:H2'	12:B:1029:A:C8	2.55	0.41
12:B:1071:G:OP1	12:B:1097:U:H4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:1219:U:H2'	12:B:1220:G:H8	1.85	0.41
12:B:1688:U:N3	12:B:1698:A:C2	2.88	0.41
12:B:2284:A:H61	12:B:2384:U:H3	1.68	0.41
12:B:2294:G:C5	12:B:2295:C:C5	3.08	0.41
21:K:40:LYS:HE3	21:K:57:VAL:HB	2.02	0.41
8:7:32:LEU:HB3	8:7:39:ARG:HH12	1.86	0.41
12:B:327:G:C2	12:B:336:C:C2	3.08	0.41
12:B:634:C:H2'	12:B:635:C:C6	2.55	0.41
12:B:694:U:H5''	12:B:1569:A:C6	2.54	0.41
12:B:695:G:C2	12:B:768:G:C4	3.09	0.41
12:B:1005:C:C2	12:B:1143:A:C6	3.09	0.41
12:B:1665:A:C2	12:B:1666:G:C4	3.08	0.41
12:B:2393:U:H1'	22:L:59:ARG:HG2	2.03	0.41
12:B:2578:G:C5	14:D:145:SER:HB2	2.55	0.41
12:B:2800:A:N6	12:B:2801:G:C5	2.89	0.41
16:F:124:ARG:HD3	16:F:124:ARG:HA	1.91	0.41
17:G:86:LEU:HB2	17:G:132:LEU:HD11	2.02	0.41
12:B:77:G:C6	12:B:110:G:C6	3.08	0.41
12:B:869:G:C2	12:B:909:A:C2	3.09	0.41
12:B:1167:C:N4	12:B:1182:G:H1	2.17	0.41
17:G:88:LEU:HD21	17:G:95:ALA:CB	2.51	0.41
19:I:79:LEU:HD11	19:I:128:ILE:HG23	2.03	0.41
1:0:71:ARG:NH1	1:0:75:GLU:H	2.19	0.41
8:7:38:LYS:O	8:7:42:HIS:CD2	2.74	0.41
10:9:61:PHE:HD1	10:9:61:PHE:H	1.68	0.41
10:9:223:GLU:OE2	12:B:1067:A:C8	2.73	0.41
12:B:138:U:H2'	12:B:140:C:C4	2.56	0.41
12:B:247:G:C5	12:B:249:C:H1'	2.56	0.41
12:B:255:A:C6	12:B:256:A:C4	3.09	0.41
12:B:293:U:C5	12:B:345:A:C6	3.08	0.41
12:B:361:G:H2'	12:B:362:A:H8	1.85	0.41
12:B:638:G:C5	12:B:639:U:C4	3.09	0.41
12:B:895:U:O4	12:B:897:C:C5	2.74	0.41
12:B:1960:A:C5	12:B:1961:C:C5	3.09	0.41
12:B:2542:A:H4'	12:B:2543:G:H5'	2.01	0.41
12:B:2656:U:C2	12:B:2657:A:C8	3.09	0.41
12:B:2804:U:N3	12:B:2805:C:C5	2.88	0.41
12:B:2834:G:H1'	12:B:2883:A:N6	2.34	0.41
14:D:78:GLY:HA3	14:D:80:TRP:CZ2	2.56	0.41
23:M:65:ILE:HG22	23:M:103:TYR:CE1	2.56	0.41
24:N:96:ARG:HH22	24:N:120:GLU:H	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:S:6:LYS:HD2	29:S:8:ARG:HH11	1.85	0.41
10:9:175:PHE:CZ	10:9:284:LYS:HG2	2.56	0.41
12:B:1873:G:C6	12:B:1874:C:C4	3.09	0.41
12:B:2345:G:C6	12:B:2381:A:C6	3.09	0.41
12:B:611:C:C4	12:B:612:G:C5	3.09	0.40
12:B:668:A:H2'	12:B:670:A:H62	1.85	0.40
12:B:883:G:C5	12:B:884:U:C4	3.10	0.40
12:B:1638:C:C4	12:B:1639:C:C5	3.09	0.40
12:B:2714:G:C5	12:B:2715:C:C4	3.10	0.40
13:C:154:ALA:HB1	13:C:160:TYR:HA	2.04	0.40
15:E:36:ALA:O	15:E:39:ALA:HB3	2.21	0.40
10:9:13:ALA:CB	10:9:43:GLY:O	2.69	0.40
10:9:24:ARG:HH12	12:B:2583:G:H2'	1.87	0.40
10:9:61:PHE:CE2	12:B:2472:G:H5''	2.56	0.40
10:9:182:ALA:HB1	10:9:200:VAL:HB	2.03	0.40
11:A:9:G:C6	11:A:112:G:C6	3.09	0.40
12:B:232:G:H22	12:B:420:C:C5'	2.33	0.40
12:B:277:G:H1'	12:B:360:U:O4	2.22	0.40
12:B:380:G:H2'	12:B:381:G:O4'	2.21	0.40
12:B:893:C:C4	12:B:894:U:C6	3.10	0.40
12:B:1301:A:C8	12:B:1303:G:C8	3.10	0.40
12:B:1319:C:H1'	12:B:1334:G:N2	2.36	0.40
12:B:1485:U:C4	12:B:1486:U:C4	3.09	0.40
12:B:2279:G:N7	33:Y:9:THR:HG21	2.35	0.40
12:B:2744:G:H5'	12:B:2755:C:C5	2.56	0.40
20:J:26:GLY:H	20:J:29:ALA:HB3	1.86	0.40
23:M:114:ARG:HG2	23:M:130:PHE:CE1	2.56	0.40
10:9:61:PHE:CG	12:B:2472:G:H5''	2.56	0.40
10:9:175:PHE:CD1	10:9:175:PHE:N	2.85	0.40
12:B:7:G:C6	12:B:8:C:C4	3.09	0.40
12:B:363:G:C6	12:B:364:C:C4	3.09	0.40
12:B:577:G:C6	12:B:578:G:C6	3.09	0.40
12:B:759:G:C4	12:B:760:G:C8	3.09	0.40
12:B:904:G:C2	12:B:905:A:C4	3.09	0.40
12:B:1346:G:C6	12:B:1347:A:C5	3.10	0.40
12:B:2345:G:C5	12:B:2347:C:C5	3.09	0.40
21:K:105:ARG:HH12	26:P:71:ARG:HD3	1.85	0.40
26:P:54:LEU:HD12	26:P:76:HIS:CD2	2.56	0.40
5:4:6:GLU:HB3	5:4:27:ARG:HH21	1.86	0.40
12:B:283:G:C6	12:B:284:U:C4	3.09	0.40
12:B:531:C:N3	12:B:2019:A:C2	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:1381:G:C2'	12:B:1382:G:H5'	2.51	0.40
12:B:1558:C:C6	12:B:1560:G:H1'	2.57	0.40
12:B:1628:G:C6	12:B:1629:U:C4	3.10	0.40
12:B:1684:G:C5	12:B:1685:C:C5	3.09	0.40
12:B:1934:C:H2'	12:B:1935:G:C8	2.56	0.40
12:B:2371:G:C6	12:B:2372:U:C5	3.09	0.40
17:G:40:VAL:HG13	17:G:63:GLN:HB3	2.03	0.40
28:R:39:LEU:CB	28:R:53:PHE:H	2.35	0.40
1:0:18:SER:HB2	1:0:22:ASN:H	1.86	0.40
1:0:28:PHE:HB3	12:B:396:G:H1'	2.04	0.40
10:9:23:PHE:HB3	10:9:31:LYS:HE3	2.04	0.40
10:9:273:LEU:HA	10:9:276:LYS:HG2	2.04	0.40
11:A:47:C:C4	11:A:48:U:C4	3.10	0.40
11:A:69:G:H3'	11:A:70:C:C6	2.54	0.40
12:B:18:U:H2'	12:B:19:A:C8	2.57	0.40
12:B:1563:U:H2'	12:B:1564:C:C6	2.56	0.40
12:B:1961:C:H2'	12:B:1963:U:H3	1.86	0.40
12:B:2528:U:C2	12:B:2536:G:C2	3.10	0.40
17:G:66:THR:HG22	17:G:70:LEU:HD22	2.04	0.40
20:J:103:ILE:HG21	20:J:103:ILE:HD13	1.87	0.40
22:L:58:TYR:C	22:L:60:ARG:H	2.29	0.40
27:Q:31:TYR:CZ	27:Q:35:PHE:CZ	3.10	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	0	75/77 (97%)	61 (81%)	10 (13%)	4 (5%)	1	14
2	1	61/63 (97%)	50 (82%)	8 (13%)	3 (5%)	1	15
3	2	56/58 (97%)	50 (89%)	5 (9%)	1 (2%)	6	33

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	3	54/56 (96%)	43 (80%)	4 (7%)	7 (13%)	0	4
5	4	49/54 (91%)	43 (88%)	4 (8%)	2 (4%)	2	17
6	5	232/234 (99%)	197 (85%)	25 (11%)	10 (4%)	2	17
7	6	44/46 (96%)	33 (75%)	8 (18%)	3 (7%)	1	11
8	7	62/64 (97%)	47 (76%)	10 (16%)	5 (8%)	1	9
9	8	36/38 (95%)	27 (75%)	7 (19%)	2 (6%)	1	14
10	9	332/390 (85%)	261 (79%)	43 (13%)	28 (8%)	0	8
13	C	270/272 (99%)	216 (80%)	31 (12%)	23 (8%)	0	8
14	D	207/209 (99%)	160 (77%)	34 (16%)	13 (6%)	1	12
15	E	199/201 (99%)	163 (82%)	16 (8%)	20 (10%)	0	7
16	F	176/178 (99%)	135 (77%)	22 (12%)	19 (11%)	0	6
17	G	172/176 (98%)	126 (73%)	31 (18%)	15 (9%)	0	8
18	H	147/149 (99%)	112 (76%)	21 (14%)	14 (10%)	0	8
19	I	67/141 (48%)	65 (97%)	0	2 (3%)	3	22
20	J	140/142 (99%)	108 (77%)	20 (14%)	12 (9%)	0	8
21	K	120/123 (98%)	98 (82%)	16 (13%)	6 (5%)	1	15
22	L	141/143 (99%)	115 (82%)	17 (12%)	9 (6%)	1	12
23	M	134/136 (98%)	112 (84%)	16 (12%)	6 (4%)	2	16
24	N	119/127 (94%)	94 (79%)	17 (14%)	8 (7%)	1	11
25	O	114/116 (98%)	88 (77%)	20 (18%)	6 (5%)	1	14
26	P	112/114 (98%)	84 (75%)	19 (17%)	9 (8%)	1	9
27	Q	115/117 (98%)	95 (83%)	12 (10%)	8 (7%)	1	10
28	R	101/103 (98%)	83 (82%)	14 (14%)	4 (4%)	2	18
29	S	108/110 (98%)	87 (81%)	11 (10%)	10 (9%)	0	8
30	T	92/100 (92%)	68 (74%)	16 (17%)	8 (9%)	0	8
31	U	96/103 (93%)	73 (76%)	15 (16%)	8 (8%)	0	9
32	W	92/94 (98%)	78 (85%)	11 (12%)	3 (3%)	3	20
33	Y	77/84 (92%)	54 (70%)	15 (20%)	8 (10%)	0	6
All	All	3800/4018 (95%)	3026 (80%)	498 (13%)	276 (7%)	1	10

All (276) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	0	73	ARG
3	2	9	THR
4	3	3	GLN
6	5	40	GLU
10	9	54	ASN
10	9	55	THR
10	9	63	LYS
10	9	64	SER
10	9	68	GLU
10	9	77	ASP
10	9	92	VAL
10	9	145	THR
10	9	159	LEU
10	9	225	ALA
10	9	227	LEU
10	9	254	ASP
10	9	308	ASP
13	C	52	HIS
13	C	166	ARG
13	C	177	SER
14	D	107	VAL
14	D	123	LYS
15	E	44	ARG
15	E	96	VAL
15	E	130	LYS
16	F	46	LYS
16	F	110	ILE
17	G	95	ALA
17	G	120	ILE
18	H	84	ALA
20	J	45	THR
20	J	59	ALA
20	J	68	LYS
20	J	111	LYS
20	J	132	HIS
21	K	33	ALA
21	K	71	ARG
22	L	3	LEU
22	L	50	PHE
22	L	113	ALA
24	N	2	ARG
24	N	3	HIS
25	O	37	ALA

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Mol	Chain	Res	Type
25	O	59	ALA
26	P	25	VAL
26	P	45	VAL
26	P	90	ALA
26	P	106	ALA
27	Q	101	ASP
29	S	2	GLU
29	S	62	ASP
29	S	76	VAL
30	T	9	LYS
30	T	36	LYS
30	T	57	VAL
31	U	12	VAL
31	U	80	ASP
33	Y	17	ALA
33	Y	75	ASN
1	0	2	ARG
2	1	34	SER
4	3	33	SER
4	3	48	TYR
5	4	50	GLU
6	5	181	ASP
6	5	229	LEU
7	6	40	ALA
8	7	35	LYS
8	7	51	LYS
10	9	40	GLY
10	9	53	LEU
10	9	74	ALA
10	9	148	ASP
10	9	157	MET
10	9	161	ASP
10	9	214	ILE
10	9	316	ALA
13	C	120	ASP
13	C	189	ALA
13	C	233	GLY
13	C	235	GLU
14	D	74	GLU
15	E	4	VAL
15	E	30	GLN
15	E	52	VAL

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Mol	Chain	Res	Type
15	E	80	SER
15	E	123	LYS
15	E	125	SER
16	F	84	ILE
16	F	143	ASP
16	F	148	VAL
17	G	3	VAL
17	G	21	GLN
17	G	84	LYS
17	G	135	ALA
18	H	28	ASN
18	H	41	LYS
18	H	76	GLU
20	J	65	THR
21	K	110	GLU
22	L	64	PHE
23	M	67	VAL
24	N	63	ARG
25	O	57	ALA
26	P	71	ARG
27	Q	27	ARG
29	S	12	SER
29	S	28	LYS
29	S	29	VAL
29	S	53	SER
29	S	61	ASN
29	S	64	ALA
30	T	69	ARG
30	T	90	GLY
31	U	13	LEU
33	Y	46	ALA
33	Y	52	CYS
1	0	26	ARG
2	1	2	LYS
2	1	38	GLN
4	3	22	THR
6	5	159	GLY
6	5	219	GLY
6	5	220	ALA
9	8	37	GLN
10	9	38	ASP
13	C	26	GLY

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Mol	Chain	Res	Type
13	C	35	LYS
13	C	79	ARG
13	C	204	LEU
14	D	71	ALA
14	D	94	GLN
14	D	131	ASP
14	D	152	PRO
14	D	159	LYS
14	D	194	PRO
15	E	8	ALA
15	E	20	GLY
15	E	62	GLN
15	E	64	GLY
15	E	82	GLY
15	E	150	THR
16	F	16	MET
16	F	77	LYS
16	F	114	ARG
16	F	123	GLY
16	F	136	ILE
17	G	80	GLU
17	G	151	ARG
18	H	107	GLY
20	J	48	VAL
20	J	64	VAL
22	L	44	GLY
23	M	72	PRO
24	N	42	LYS
25	O	60	GLU
25	O	107	ALA
26	P	13	LYS
27	Q	71	ASN
27	Q	81	GLY
28	R	3	ALA
28	R	17	GLY
28	R	87	GLN
30	T	88	LYS
33	Y	20	LEU
4	3	51	ARG
5	4	33	LEU
6	5	228	GLY
7	6	35	ARG

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Mol	Chain	Res	Type
8	7	30	HIS
8	7	32	LEU
8	7	44	ARG
10	9	146	PRO
10	9	196	PRO
13	C	27	LYS
13	C	112	GLY
13	C	125	PRO
13	C	152	GLN
13	C	205	GLY
13	C	231	HIS
13	C	236	GLY
14	D	43	ASP
14	D	109	VAL
14	D	140	HIS
15	E	106	LYS
15	E	128	ALA
16	F	6	TYR
16	F	19	PHE
16	F	124	ARG
16	F	173	ASP
17	G	39	ALA
18	H	14	SER
18	H	17	ASP
18	H	29	PHE
18	H	32	PRO
18	H	33	GLN
18	H	75	LEU
19	I	140	GLU
20	J	22	GLY
21	K	29	HIS
21	K	113	MET
22	L	41	ARG
22	L	42	SER
23	M	27	SER
23	M	73	ILE
23	M	79	ALA
24	N	98	LEU
24	N	100	CYS
26	P	87	ARG
30	T	21	SER
31	U	50	ALA

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Mol	Chain	Res	Type
31	U	63	ALA
32	W	24	ASN
33	Y	16	GLU
33	Y	28	GLU
33	Y	41	GLY
1	0	71	ARG
9	8	16	ILE
10	9	93	GLY
10	9	314	SER
13	C	132	ARG
13	C	229	HIS
13	C	241	LYS
15	E	11	ALA
16	F	32	LYS
16	F	64	PRO
16	F	79	ARG
18	H	117	LEU
20	J	136	GLN
21	K	53	LYS
24	N	43	GLU
25	O	41	ALA
26	P	97	TYR
28	R	98	ILE
30	T	18	GLU
31	U	14	THR
31	U	98	ASN
32	W	44	HIS
4	3	44	ALA
6	5	53	ARG
10	9	251	ASP
13	C	196	ASN
14	D	132	ALA
15	E	59	PRO
16	F	59	ILE
17	G	110	HIS
17	G	123	GLU
18	H	38	PRO
18	H	93	SER
19	I	93	ASN
22	L	10	GLU
22	L	62	PRO
23	M	21	ALA

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Mol	Chain	Res	Type
26	P	52	ARG
27	Q	78	PHE
27	Q	91	ARG
31	U	52	ASN
16	F	39	VAL
17	G	11	PRO
4	3	53	VAL
10	9	220	GLY
13	C	123	ILE
17	G	125	PRO
17	G	155	PRO
20	J	137	PRO
6	5	59	VAL
7	6	44	VAL
15	E	175	ILE
20	J	81	ILE
27	Q	33	VAL
29	S	87	PRO
6	5	133	PRO
17	G	53	PRO
24	N	97	ILE
27	Q	97	ILE
32	W	33	GLY

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	0	67/67 (100%)	64 (96%)	3 (4%)	24	46
2	1	55/55 (100%)	52 (94%)	3 (6%)	19	41
3	2	48/48 (100%)	45 (94%)	3 (6%)	16	37
4	3	47/47 (100%)	46 (98%)	1 (2%)	47	65
5	4	45/48 (94%)	43 (96%)	2 (4%)	25	47
6	5	181/181 (100%)	173 (96%)	8 (4%)	25	47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	6	38/38 (100%)	38 (100%)	0	100	100
8	7	51/51 (100%)	48 (94%)	3 (6%)	18	39
9	8	34/34 (100%)	31 (91%)	3 (9%)	9	28
10	9	268/321 (84%)	235 (88%)	33 (12%)	4	17
13	C	216/217 (100%)	207 (96%)	9 (4%)	26	48
14	D	164/164 (100%)	147 (90%)	17 (10%)	7	22
15	E	165/165 (100%)	154 (93%)	11 (7%)	15	36
16	F	149/149 (100%)	141 (95%)	8 (5%)	20	41
17	G	136/137 (99%)	128 (94%)	8 (6%)	18	39
18	H	114/114 (100%)	104 (91%)	10 (9%)	9	28
19	I	51/109 (47%)	47 (92%)	4 (8%)	11	32
20	J	116/116 (100%)	108 (93%)	8 (7%)	14	36
21	K	102/104 (98%)	98 (96%)	4 (4%)	28	49
22	L	102/102 (100%)	94 (92%)	8 (8%)	11	32
23	M	109/109 (100%)	99 (91%)	10 (9%)	8	26
24	N	100/103 (97%)	95 (95%)	5 (5%)	22	43
25	O	86/86 (100%)	81 (94%)	5 (6%)	18	39
26	P	99/99 (100%)	97 (98%)	2 (2%)	48	66
27	Q	89/89 (100%)	86 (97%)	3 (3%)	32	54
28	R	84/84 (100%)	78 (93%)	6 (7%)	13	35
29	S	93/93 (100%)	86 (92%)	7 (8%)	12	33
30	T	80/84 (95%)	71 (89%)	9 (11%)	5	19
31	U	81/84 (96%)	77 (95%)	4 (5%)	22	43
32	W	78/78 (100%)	75 (96%)	3 (4%)	29	50
33	Y	59/62 (95%)	53 (90%)	6 (10%)	7	23
All	All	3107/3238 (96%)	2901 (93%)	206 (7%)	17	37

All (206) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	11	PRO
1	0	22	ASN
1	0	69	GLU

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Mol	Chain	Res	Type
2	1	38	GLN
2	1	43	LEU
2	1	57	LEU
3	2	2	LYS
3	2	33	HIS
3	2	55	LYS
4	3	14	MET
5	4	34	GLU
5	4	44	GLN
6	5	18	THR
6	5	53	ARG
6	5	57	GLN
6	5	59	VAL
6	5	73	VAL
6	5	137	MET
6	5	207	VAL
6	5	222	VAL
8	7	41	ARG
8	7	45	PRO
8	7	46	LYS
9	8	8	LYS
9	8	12	ARG
9	8	20	ASP
10	9	6	GLU
10	9	20	CYS
10	9	31	LYS
10	9	55	THR
10	9	56	LEU
10	9	57	ILE
10	9	60	ARG
10	9	61	PHE
10	9	63	LYS
10	9	64	SER
10	9	82	ARG
10	9	97	ILE
10	9	99	GLN
10	9	103	GLU
10	9	116	LEU
10	9	117	VAL
10	9	129	ARG
10	9	149	LYS
10	9	162	VAL

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Mol	Chain	Res	Type
10	9	167	MET
10	9	174	THR
10	9	179	VAL
10	9	183	LYS
10	9	189	TYR
10	9	201	VAL
10	9	207	LYS
10	9	257	GLU
10	9	263	ILE
10	9	286	ASP
10	9	292	GLU
10	9	294	GLU
10	9	310	TYR
10	9	329	MET
13	C	3	VAL
13	C	22	GLU
13	C	76	VAL
13	C	90	ILE
13	C	100	ARG
13	C	120	ASP
13	C	146	LYS
13	C	174	ARG
13	C	193	GLU
14	D	1	MET
14	D	2	ILE
14	D	9	VAL
14	D	12	THR
14	D	22	ILE
14	D	40	LEU
14	D	62	LYS
14	D	74	GLU
14	D	84	LEU
14	D	96	ILE
14	D	99	GLU
14	D	103	ASP
14	D	146	ILE
14	D	183	GLU
14	D	201	LEU
14	D	202	ILE
14	D	203	VAL
15	E	61	ARG
15	E	72	SER

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Mol	Chain	Res	Type
15	E	78	TRP
15	E	95	LYS
15	E	102	ARG
15	E	126	VAL
15	E	144	GLU
15	E	153	LEU
15	E	165	HIS
15	E	170	ARG
15	E	173	THR
16	F	62	GLN
16	F	67	THR
16	F	78	ILE
16	F	87	LYS
16	F	91	ARG
16	F	114	ARG
16	F	122	ASP
16	F	135	ILE
17	G	25	ILE
17	G	28	LYS
17	G	33	THR
17	G	63	GLN
17	G	70	LEU
17	G	88	LEU
17	G	91	VAL
17	G	94	ARG
18	H	5	LEU
18	H	9	VAL
18	H	19	VAL
18	H	37	VAL
18	H	44	ILE
18	H	50	ARG
18	H	61	VAL
18	H	94	ILE
18	H	109	GLU
18	H	110	VAL
19	I	85	ILE
19	I	99	LYS
19	I	105	LEU
19	I	138	VAL
20	J	9	GLU
20	J	23	LYS
20	J	32	LEU

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Mol	Chain	Res	Type
20	J	47	HIS
20	J	69	ARG
20	J	81	ILE
20	J	89	PHE
20	J	101	ILE
21	K	41	ILE
21	K	49	ARG
21	K	61	VAL
21	K	114	LYS
22	L	6	LEU
22	L	13	LYS
22	L	29	LYS
22	L	57	LEU
22	L	63	LYS
22	L	117	THR
22	L	118	THR
22	L	142	ILE
23	M	10	ARG
23	M	24	THR
23	M	25	ASP
23	M	36	VAL
23	M	47	GLU
23	M	53	MET
23	M	69	PRO
23	M	105	MET
23	M	119	LEU
23	M	128	THR
24	N	37	THR
24	N	40	LYS
24	N	76	VAL
24	N	86	ARG
24	N	114	GLU
25	O	35	ILE
25	O	49	VAL
25	O	60	GLU
25	O	87	ILE
25	O	112	GLU
26	P	21	PRO
26	P	50	ARG
27	Q	38	VAL
27	Q	73	ILE
27	Q	87	VAL

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Mol	Chain	Res	Type
28	R	4	VAL
28	R	15	SER
28	R	21	ARG
28	R	22	LEU
28	R	37	GLU
28	R	99	THR
29	S	15	GLN
29	S	31	GLN
29	S	33	LEU
29	S	46	LEU
29	S	70	LYS
29	S	71	VAL
29	S	85	ILE
30	T	1	MET
30	T	7	LEU
30	T	16	VAL
30	T	32	LEU
30	T	48	GLN
30	T	62	VAL
30	T	66	LYS
30	T	80	TRP
30	T	89	GLU
31	U	13	LEU
31	U	34	ILE
31	U	36	GLU
31	U	61	GLU
32	W	30	ILE
32	W	47	VAL
32	W	51	GLN
33	Y	16	GLU
33	Y	22	VAL
33	Y	35	ILE
33	Y	44	PHE
33	Y	50	VAL
33	Y	70	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (87) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	5	GLN
1	0	19	HIS
1	0	22	ASN

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Mol	Chain	Res	Type
2	1	27	ASN
2	1	39	GLN
2	1	41	HIS
3	2	8	GLN
4	3	37	HIS
4	3	40	HIS
6	5	58	ASN
6	5	80	GLN
6	5	110	ASN
6	5	155	ASN
7	6	13	ASN
7	6	26	ASN
9	8	33	HIS
10	9	52	ASN
10	9	54	ASN
10	9	71	GLN
10	9	127	ASN
10	9	234	HIS
10	9	243	HIS
10	9	271	GLN
13	C	14	HIS
13	C	20	ASN
13	C	24	HIS
13	C	52	HIS
13	C	57	HIS
13	C	59	GLN
13	C	85	ASN
13	C	114	GLN
13	C	196	ASN
13	C	250	GLN
13	C	259	ASN
14	D	58	ASN
14	D	67	HIS
14	D	94	GLN
14	D	126	ASN
14	D	136	ASN
14	D	148	GLN
14	D	149	ASN
14	D	173	GLN
15	E	29	HIS
15	E	165	HIS
16	F	22	ASN

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Mol	Chain	Res	Type
16	F	36	ASN
17	G	44	HIS
17	G	63	GLN
17	G	87	GLN
17	G	100	ASN
18	H	73	ASN
18	H	128	HIS
18	H	135	HIS
19	I	106	GLN
20	J	40	HIS
20	J	136	GLN
21	K	29	HIS
21	K	82	ASN
21	K	93	GLN
22	L	4	ASN
22	L	38	GLN
23	M	13	HIS
24	N	3	HIS
24	N	18	GLN
24	N	31	HIS
24	N	81	ASN
25	O	34	HIS
25	O	104	GLN
26	P	2	ASN
26	P	6	GLN
26	P	76	HIS
27	Q	58	GLN
27	Q	70	GLN
27	Q	71	ASN
28	R	6	GLN
28	R	86	GLN
28	R	89	HIS
29	S	15	GLN
30	T	70	HIS
31	U	26	ASN
31	U	53	GLN
32	W	44	HIS
32	W	49	ASN
32	W	51	GLN
32	W	80	HIS
32	W	87	GLN
33	Y	11	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
11	A	112/118 (94%)	21 (18%)	3 (2%)
12	B	2902/2903 (99%)	547 (18%)	96 (3%)
All	All	3014/3021 (99%)	568 (18%)	99 (3%)

All (568) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
11	A	9	G
11	A	13	G
11	A	14	U
11	A	16	G
11	A	26	C
11	A	29	A
11	A	30	C
11	A	41	G
11	A	42	C
11	A	45	A
11	A	52	A
11	A	53	A
11	A	57	A
11	A	66	A
11	A	67	G
11	A	88	C
11	A	89	U
11	A	90	C
11	A	91	C
11	A	99	A
11	A	109	A
12	B	11	C
12	B	34	U
12	B	35	G
12	B	46	G
12	B	50	U
12	B	51	G
12	B	63	A
12	B	71	A
12	B	74	A
12	B	75	G
12	B	84	A
12	B	91	A
12	B	92	U

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Mol	Chain	Res	Type
12	B	94	A
12	B	95	A
12	B	100	U
12	B	103	A
12	B	118	A
12	B	119	A
12	B	120	U
12	B	126	A
12	B	128	C
12	B	136	G
12	B	137	U
12	B	139	U
12	B	140	C
12	B	141	G
12	B	143	C
12	B	144	A
12	B	160	A
12	B	163	C
12	B	164	C
12	B	180	G
12	B	181	A
12	B	196	A
12	B	199	A
12	B	216	A
12	B	217	A
12	B	221	A
12	B	222	A
12	B	228	C
12	B	233	A
12	B	241	A
12	B	248	G
12	B	249	C
12	B	252	G
12	B	265	A
12	B	266	G
12	B	268	C
12	B	271	G
12	B	273	G
12	B	276	U
12	B	277	G
12	B	281	C
12	B	283	G

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Mol	Chain	Res	Type
12	B	286	U
12	B	294	A
12	B	299	A
12	B	311	A
12	B	312	G
12	B	321	U
12	B	329	G
12	B	330	A
12	B	333	G
12	B	346	A
12	B	347	A
12	B	352	A
12	B	353	C
12	B	362	A
12	B	363	G
12	B	364	C
12	B	371	A
12	B	372	G
12	B	387	U
12	B	388	G
12	B	389	G
12	B	403	U
12	B	404	A
12	B	405	U
12	B	406	G
12	B	411	G
12	B	412	A
12	B	424	G
12	B	451	U
12	B	457	A
12	B	461	C
12	B	479	A
12	B	481	G
12	B	489	G
12	B	490	C
12	B	491	G
12	B	498	G
12	B	504	A
12	B	505	A
12	B	508	A
12	B	509	C
12	B	512	G

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Mol	Chain	Res	Type
12	B	533	G
12	B	544	C
12	B	545	U
12	B	546	U
12	B	547	A
12	B	548	G
12	B	549	G
12	B	555	G
12	B	563	A
12	B	568	U
12	B	573	U
12	B	575	A
12	B	586	A
12	B	603	A
12	B	613	A
12	B	614	A
12	B	615	U
12	B	616	A
12	B	620	G
12	B	631	A
12	B	632	A
12	B	637	A
12	B	647	G
12	B	651	G
12	B	653	U
12	B	654	A
12	B	656	G
12	B	669	G
12	B	670	A
12	B	671	C
12	B	686	U
12	B	687	C
12	B	730	A
12	B	747	U
12	B	748	G
12	B	751	A
12	B	757	G
12	B	764	A
12	B	775	G
12	B	782	A
12	B	784	G
12	B	785	G

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Mol	Chain	Res	Type
12	B	788	A
12	B	789	A
12	B	790	U
12	B	792	A
12	B	793	A
12	B	802	A
12	B	805	G
12	B	811	U
12	B	812	C
12	B	819	A
12	B	827	U
12	B	828	U
12	B	830	G
12	B	846	U
12	B	847	U
12	B	859	G
12	B	869	G
12	B	871	U
12	B	875	G
12	B	878	A
12	B	881	G
12	B	887	U
12	B	888	C
12	B	889	C
12	B	890	C
12	B	891	G
12	B	896	A
12	B	897	C
12	B	901	C
12	B	910	A
12	B	912	C
12	B	919	U
12	B	931	U
12	B	932	U
12	B	933	A
12	B	941	A
12	B	946	C
12	B	958	U
12	B	961	C
12	B	962	G
12	B	973	A
12	B	974	G

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Mol	Chain	Res	Type
12	B	980	A
12	B	981	A
12	B	982	C
12	B	983	A
12	B	984	A
12	B	988	A
12	B	991	C
12	B	995	C
12	B	996	A
12	B	1005	C
12	B	1012	U
12	B	1013	C
12	B	1022	G
12	B	1025	G
12	B	1033	U
12	B	1046	A
12	B	1054	A
12	B	1056	G
12	B	1057	A
12	B	1061	U
12	B	1062	G
12	B	1070	A
12	B	1071	G
12	B	1077	A
12	B	1078	U
12	B	1083	U
12	B	1085	A
12	B	1088	A
12	B	1090	A
12	B	1095	A
12	B	1096	A
12	B	1104	C
12	B	1112	G
12	B	1116	G
12	B	1130	U
12	B	1132	U
12	B	1133	A
12	B	1134	A
12	B	1135	C
12	B	1136	G
12	B	1142	A
12	B	1171	G

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Mol	Chain	Res	Type
12	B	1174	U
12	B	1175	A
12	B	1176	U
12	B	1205	A
12	B	1206	G
12	B	1211	C
12	B	1212	G
12	B	1237	A
12	B	1238	G
12	B	1241	A
12	B	1242	U
12	B	1248	G
12	B	1250	G
12	B	1253	A
12	B	1256	G
12	B	1266	G
12	B	1271	G
12	B	1272	A
12	B	1273	U
12	B	1275	A
12	B	1276	A
12	B	1284	A
12	B	1285	A
12	B	1300	G
12	B	1301	A
12	B	1312	U
12	B	1313	U
12	B	1321	A
12	B	1325	U
12	B	1332	G
12	B	1333	G
12	B	1337	G
12	B	1341	G
12	B	1352	U
12	B	1365	A
12	B	1368	G
12	B	1374	G
12	B	1379	U
12	B	1380	G
12	B	1383	A
12	B	1386	C
12	B	1392	A

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Mol	Chain	Res	Type
12	B	1393	A
12	B	1394	U
12	B	1396	U
12	B	1416	G
12	B	1417	C
12	B	1419	A
12	B	1420	A
12	B	1421	G
12	B	1427	A
12	B	1428	C
12	B	1452	G
12	B	1453	A
12	B	1458	U
12	B	1459	G
12	B	1460	U
12	B	1461	C
12	B	1469	A
12	B	1476	U
12	B	1477	A
12	B	1478	G
12	B	1482	G
12	B	1490	A
12	B	1493	C
12	B	1496	A
12	B	1497	U
12	B	1498	C
12	B	1504	A
12	B	1505	A
12	B	1507	C
12	B	1509	A
12	B	1510	G
12	B	1523	U
12	B	1524	G
12	B	1532	A
12	B	1535	A
12	B	1536	C
12	B	1538	G
12	B	1552	A
12	B	1578	U
12	B	1585	C
12	B	1608	A
12	B	1610	A

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Mol	Chain	Res	Type
12	B	1614	A
12	B	1617	C
12	B	1618	A
12	B	1634	A
12	B	1635	A
12	B	1640	A
12	B	1647	U
12	B	1648	U
12	B	1654	A
12	B	1671	U
12	B	1672	A
12	B	1674	G
12	B	1676	A
12	B	1700	A
12	B	1714	U
12	B	1715	G
12	B	1729	U
12	B	1731	G
12	B	1733	G
12	B	1738	G
12	B	1739	A
12	B	1756	G
12	B	1758	U
12	B	1759	A
12	B	1761	C
12	B	1763	G
12	B	1764	C
12	B	1773	A
12	B	1781	U
12	B	1784	A
12	B	1786	A
12	B	1787	A
12	B	1800	C
12	B	1801	A
12	B	1808	A
12	B	1809	A
12	B	1816	C
12	B	1828	G
12	B	1829	A
12	B	1847	A
12	B	1848	A
12	B	1870	C

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Mol	Chain	Res	Type
12	B	1871	A
12	B	1884	G
12	B	1888	G
12	B	1889	A
12	B	1906	G
12	B	1913	A
12	B	1916	A
12	B	1917	U
12	B	1929	G
12	B	1930	G
12	B	1936	A
12	B	1938	A
12	B	1940	U
12	B	1941	C
12	B	1942	C
12	B	1944	U
12	B	1952	A
12	B	1955	U
12	B	1962	C
12	B	1963	U
12	B	1965	C
12	B	1966	A
12	B	1967	C
12	B	1970	A
12	B	1971	U
12	B	1972	G
12	B	1991	U
12	B	1993	U
12	B	1997	C
12	B	2020	A
12	B	2022	U
12	B	2023	C
12	B	2032	G
12	B	2043	C
12	B	2051	A
12	B	2052	A
12	B	2055	C
12	B	2056	G
12	B	2059	A
12	B	2060	A
12	B	2061	G
12	B	2062	A

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Mol	Chain	Res	Type
12	B	2065	C
12	B	2069	G
12	B	2076	U
12	B	2077	A
12	B	2102	G
12	B	2104	C
12	B	2111	U
12	B	2112	G
12	B	2116	G
12	B	2117	A
12	B	2119	A
12	B	2120	G
12	B	2126	A
12	B	2128	G
12	B	2129	C
12	B	2131	U
12	B	2132	U
12	B	2133	G
12	B	2134	A
12	B	2135	A
12	B	2136	G
12	B	2137	U
12	B	2144	G
12	B	2145	C
12	B	2146	C
12	B	2147	A
12	B	2148	G
12	B	2149	U
12	B	2153	C
12	B	2155	U
12	B	2158	A
12	B	2159	G
12	B	2160	C
12	B	2161	C
12	B	2164	C
12	B	2165	C
12	B	2166	U
12	B	2167	U
12	B	2172	U
12	B	2176	A
12	B	2178	C
12	B	2179	C

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Mol	Chain	Res	Type
12	B	2181	U
12	B	2183	A
12	B	2187	U
12	B	2192	U
12	B	2198	A
12	B	2199	A
12	B	2203	U
12	B	2204	G
12	B	2210	U
12	B	2211	A
12	B	2212	A
12	B	2213	U
12	B	2214	C
12	B	2225	A
12	B	2238	G
12	B	2239	G
12	B	2251	G
12	B	2266	A
12	B	2278	A
12	B	2279	G
12	B	2283	C
12	B	2286	G
12	B	2287	A
12	B	2288	A
12	B	2297	A
12	B	2305	U
12	B	2307	G
12	B	2308	G
12	B	2310	C
12	B	2311	A
12	B	2320	U
12	B	2321	U
12	B	2322	A
12	B	2324	U
12	B	2325	G
12	B	2334	U
12	B	2335	A
12	B	2336	A
12	B	2337	G
12	B	2347	C
12	B	2383	G
12	B	2385	C

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Mol	Chain	Res	Type
12	B	2396	G
12	B	2402	U
12	B	2406	A
12	B	2407	A
12	B	2423	U
12	B	2426	A
12	B	2429	G
12	B	2430	A
12	B	2434	A
12	B	2441	U
12	B	2447	G
12	B	2448	A
12	B	2449	U
12	B	2472	G
12	B	2474	U
12	B	2476	A
12	B	2478	A
12	B	2491	U
12	B	2498	C
12	B	2502	G
12	B	2503	A
12	B	2505	G
12	B	2506	U
12	B	2519	U
12	B	2520	C
12	B	2529	G
12	B	2535	G
12	B	2554	U
12	B	2566	A
12	B	2567	G
12	B	2573	C
12	B	2585	U
12	B	2586	U
12	B	2602	A
12	B	2609	U
12	B	2613	U
12	B	2629	U
12	B	2661	G
12	B	2682	A
12	B	2689	U
12	B	2690	U
12	B	2691	C

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Mol	Chain	Res	Type
12	B	2712	C
12	B	2713	U
12	B	2714	G
12	B	2744	G
12	B	2748	A
12	B	2751	G
12	B	2757	A
12	B	2765	A
12	B	2778	A
12	B	2780	G
12	B	2791	G
12	B	2793	C
12	B	2797	U
12	B	2799	A
12	B	2800	A
12	B	2820	A
12	B	2821	A
12	B	2833	U
12	B	2834	G
12	B	2836	U
12	B	2849	U
12	B	2850	A
12	B	2867	G
12	B	2872	A
12	B	2873	A
12	B	2879	A
12	B	2883	A
12	B	2885	G
12	B	2893	A
12	B	2894	G

All (99) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
11	A	15	A
11	A	66	A
11	A	87	U
12	B	50	U
12	B	102	U
12	B	139	U
12	B	180	G
12	B	196	A

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Mol	Chain	Res	Type
12	B	276	U
12	B	311	A
12	B	320	A
12	B	329	G
12	B	451	U
12	B	491	G
12	B	532	A
12	B	614	A
12	B	615	U
12	B	631	A
12	B	653	U
12	B	669	G
12	B	670	A
12	B	686	U
12	B	784	G
12	B	788	A
12	B	811	U
12	B	827	U
12	B	830	G
12	B	858	G
12	B	880	G
12	B	888	C
12	B	889	C
12	B	890	C
12	B	891	G
12	B	933	A
12	B	961	C
12	B	973	A
12	B	1008	A
12	B	1050	A
12	B	1133	A
12	B	1205	A
12	B	1248	G
12	B	1272	A
12	B	1275	A
12	B	1312	U
12	B	1332	G
12	B	1452	G
12	B	1497	U
12	B	1508	A
12	B	1608	A
12	B	1617	C

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Mol	Chain	Res	Type
12	B	1633	G
12	B	1671	U
12	B	1677	A
12	B	1679	A
12	B	1730	C
12	B	1758	U
12	B	1763	G
12	B	1786	A
12	B	1801	A
12	B	1847	A
12	B	1888	G
12	B	1938	A
12	B	1940	U
12	B	1943	U
12	B	1963	U
12	B	2051	A
12	B	2058	A
12	B	2076	U
12	B	2111	U
12	B	2116	G
12	B	2118	U
12	B	2133	G
12	B	2134	A
12	B	2145	C
12	B	2147	A
12	B	2158	A
12	B	2160	C
12	B	2172	U
12	B	2198	A
12	B	2282	G
12	B	2286	G
12	B	2307	G
12	B	2308	G
12	B	2320	U
12	B	2324	U
12	B	2333	A
12	B	2336	A
12	B	2425	A
12	B	2430	A
12	B	2447	G
12	B	2502	G
12	B	2519	U

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Mol	Chain	Res	Type
12	B	2585	U
12	B	2601	C
12	B	2660	A
12	B	2712	C
12	B	2713	U
12	B	2756	U
12	B	2893	A

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

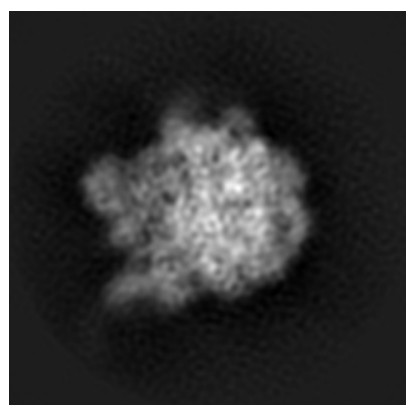
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-2605. These allow visual inspection of the internal detail of the map and identification of artifacts.

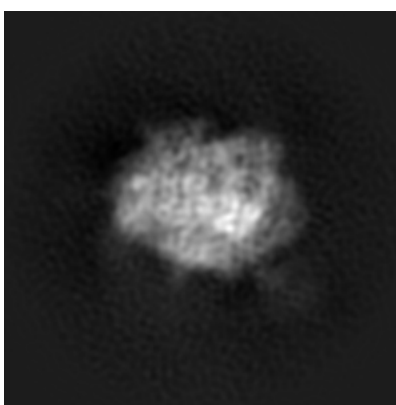
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

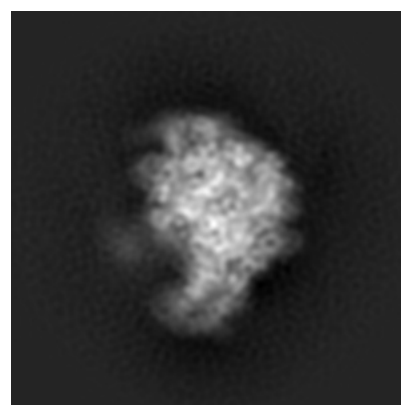
6.1.1 Primary map



X



Y

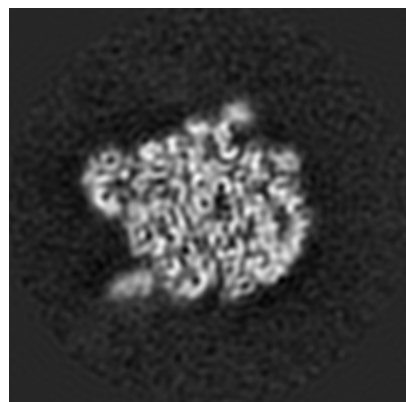


Z

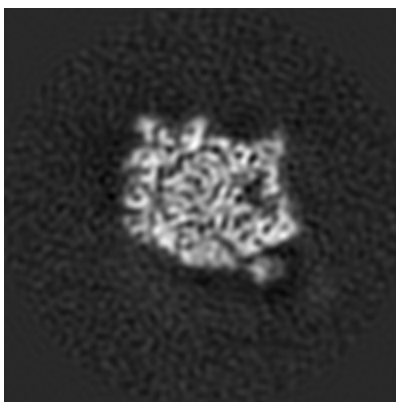
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

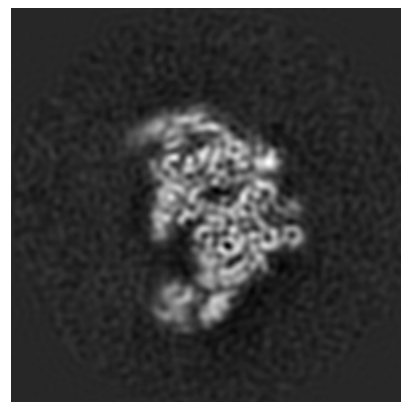
6.2.1 Primary map



X Index: 128



Y Index: 128

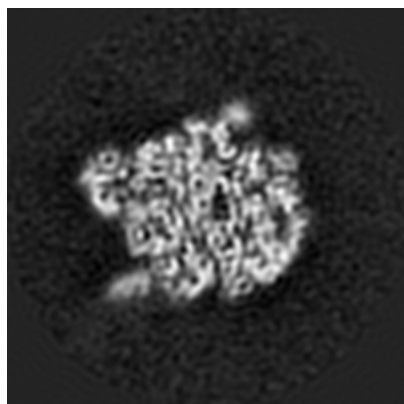


Z Index: 128

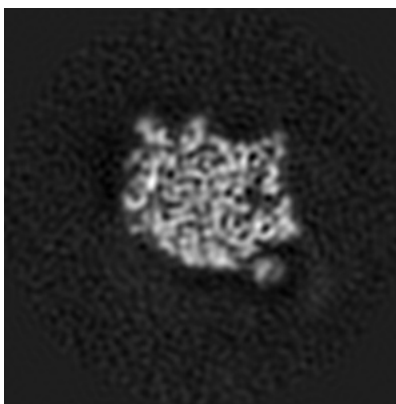
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

6.3.1 Primary map



X Index: 129



Y Index: 126

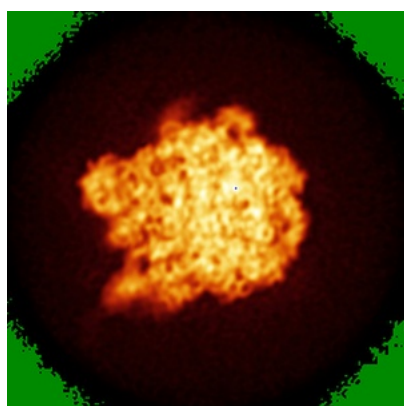


Z Index: 143

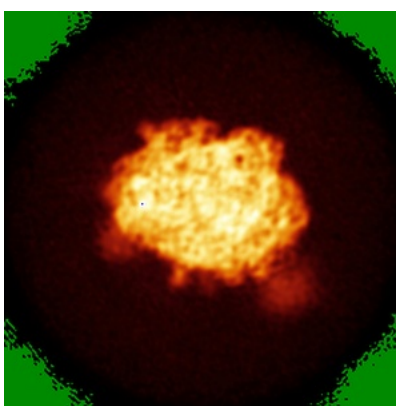
The images above show the largest variance slices of the map in three orthogonal directions.

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

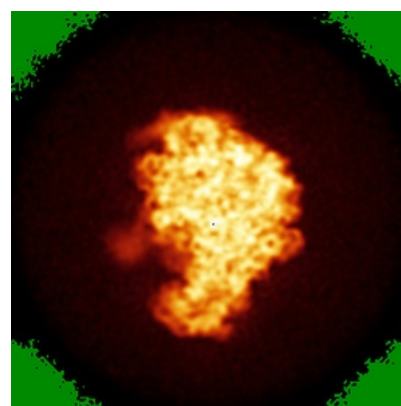
6.4.1 Primary map



X



Y

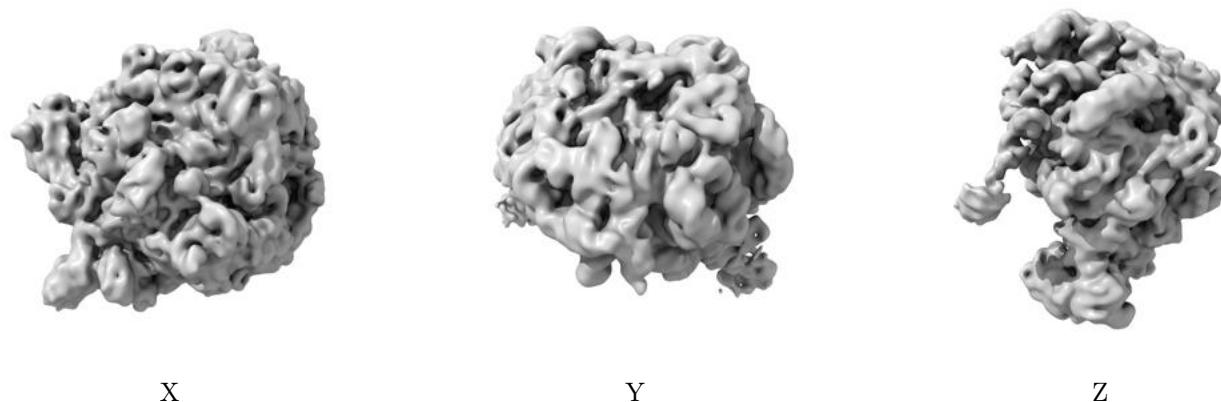


Z

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



The images above show the 3D surface view of the map at the recommended contour level 0.045. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

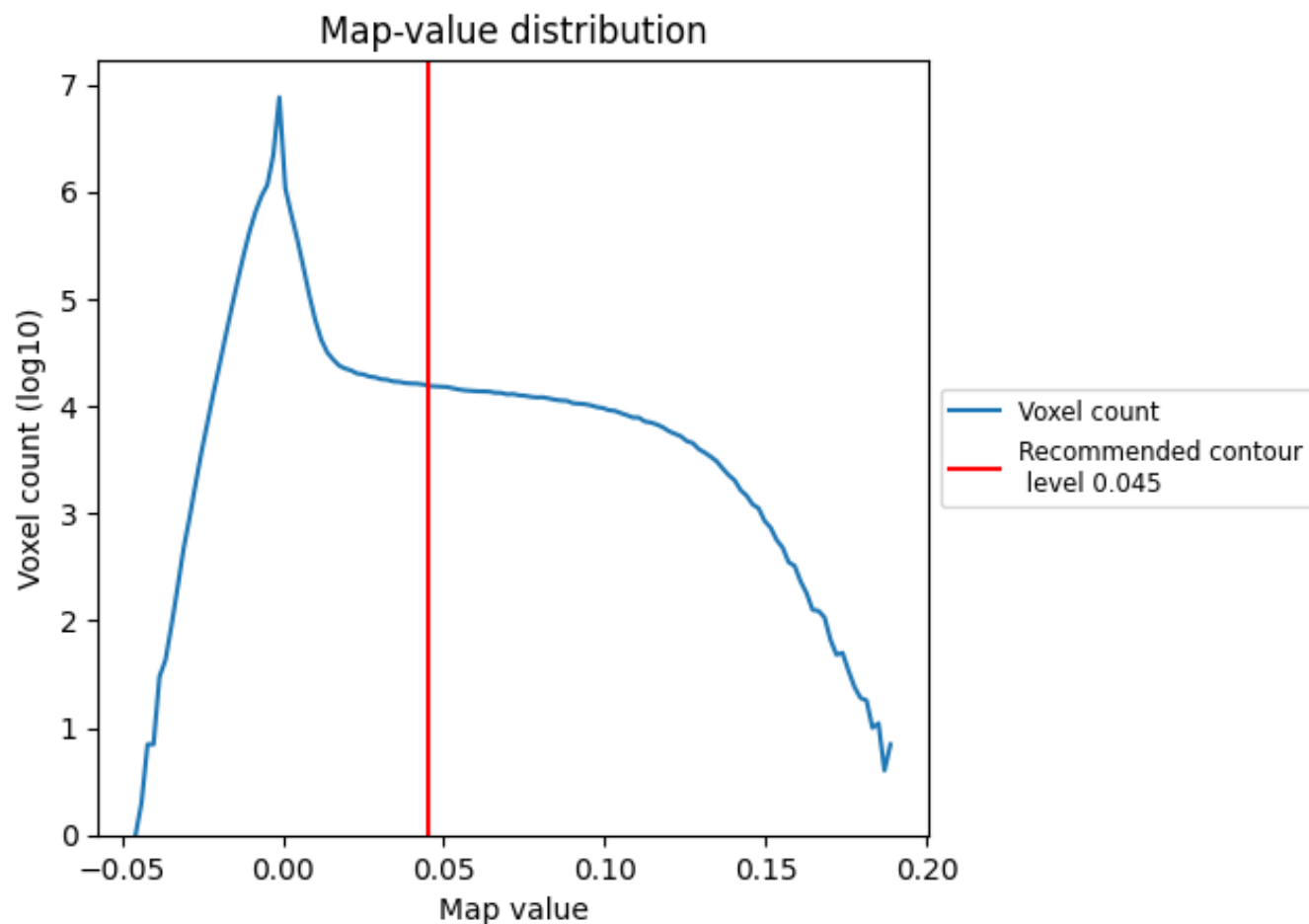
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

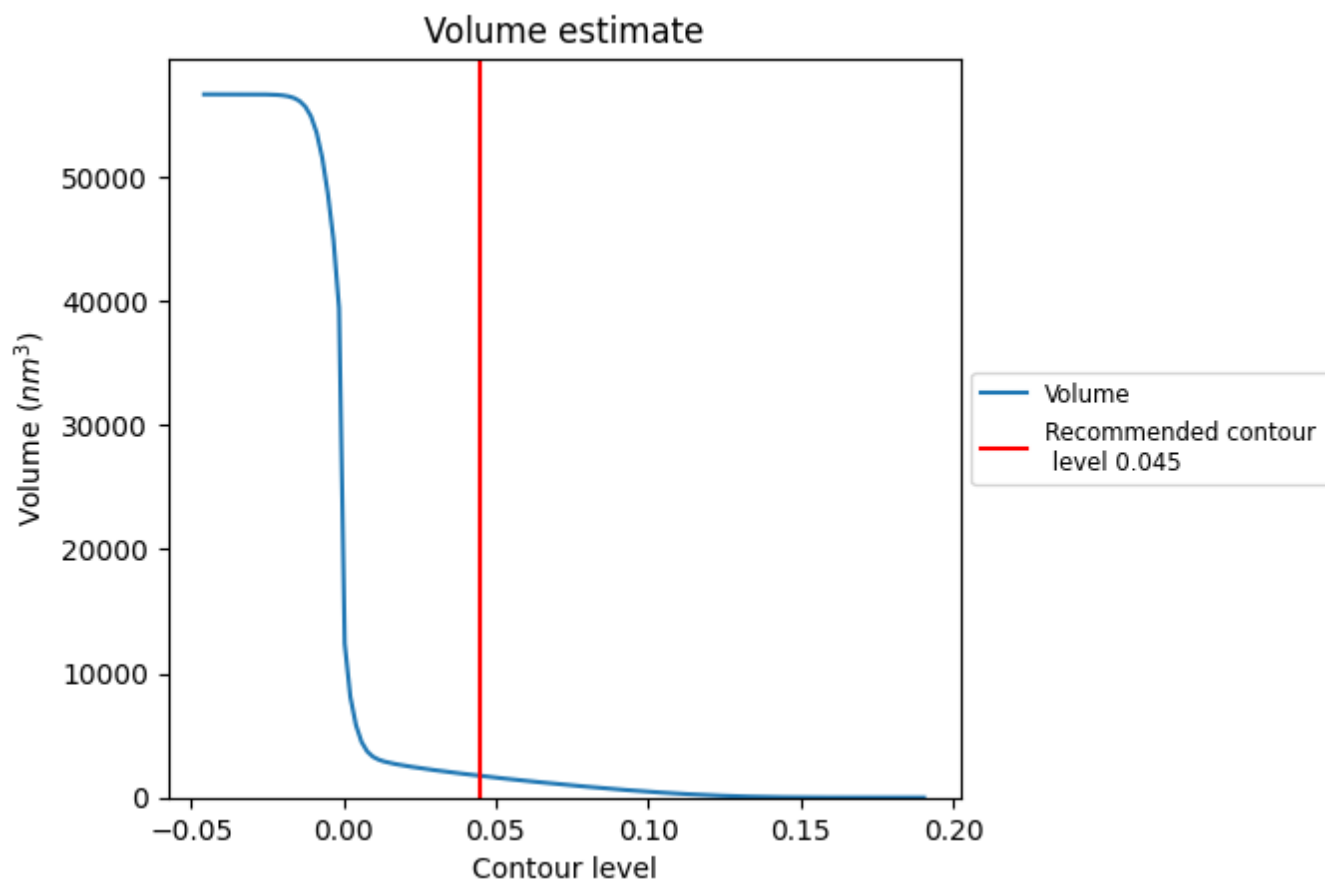
This section contains the results of statistical analysis of the map.

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.

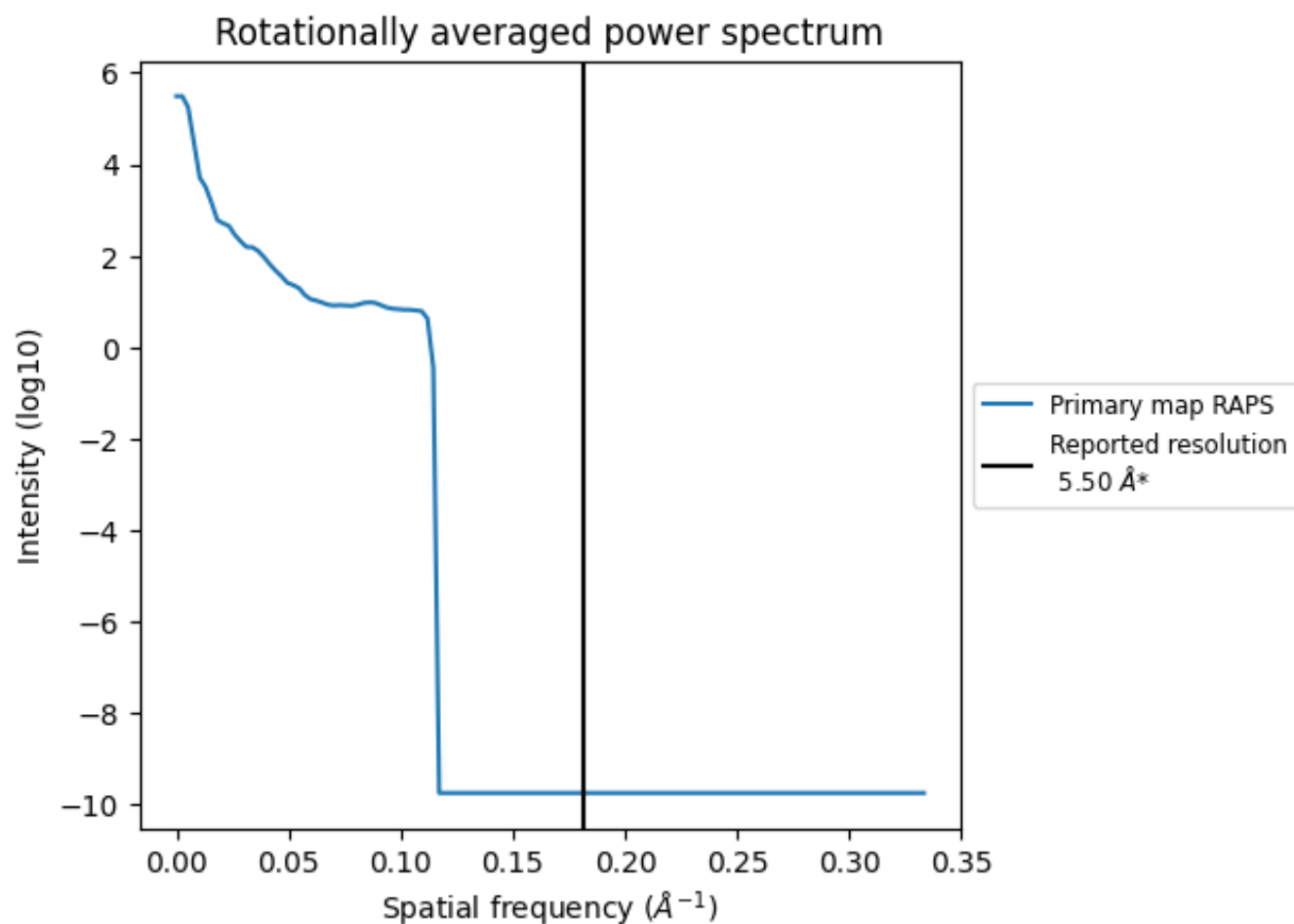
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1748 nm³; this corresponds to an approximate mass of 1579 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 0.182 Å⁻¹

8 Fourier-Shell correlation

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

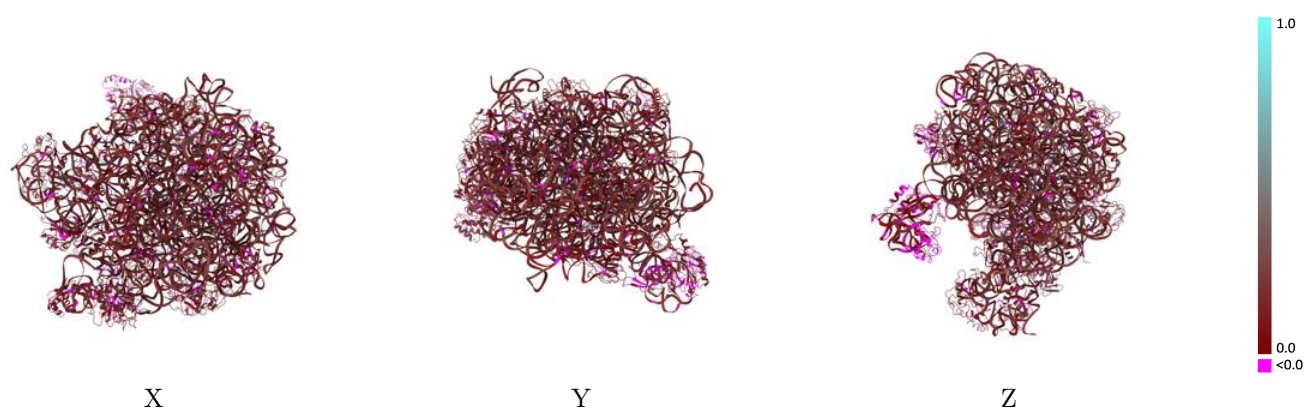
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-2605 and PDB model 4CSU. Per-residue inclusion information can be found in section 3 on page 10.

9.1 Map-model overlay [i](#)

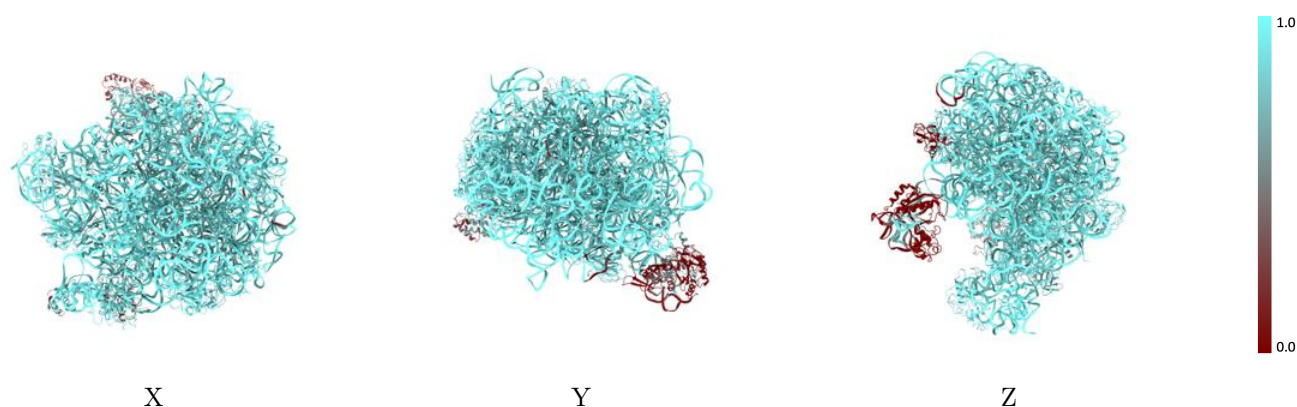
This section was not generated.

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



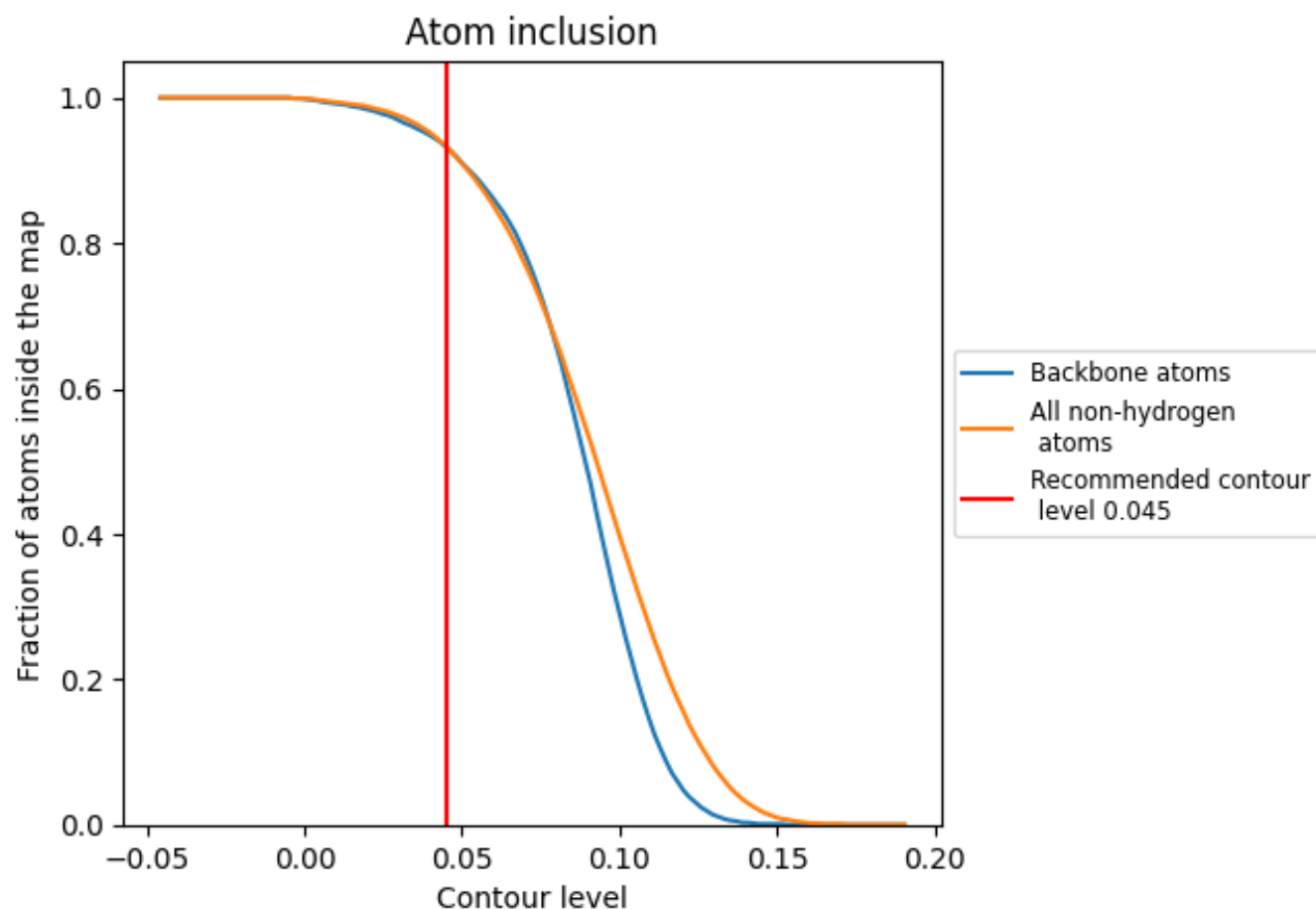
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.045).

9.4 Atom inclusion [i](#)



At the recommended contour level, 93% of all backbone atoms, 93% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.045) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9330	 0.1580
0	 0.9020	 0.1240
1	 0.9860	 0.1510
2	 0.9150	 0.1450
3	 0.8510	 0.0740
4	 0.7790	 0.0940
5	 0.0840	 0.0310
6	 0.9350	 0.1170
7	 0.9330	 0.1150
8	 0.9730	 0.0750
9	 0.6850	 0.1020
A	 0.9980	 0.1940
B	 0.9730	 0.1770
C	 0.9440	 0.1260
D	 0.9600	 0.1280
E	 0.9070	 0.1380
F	 0.9530	 0.1170
G	 0.9250	 0.1390
H	 0.3160	 0.0780
I	 0.8100	 0.0820
J	 0.9560	 0.1520
K	 0.9610	 0.1330
L	 0.9490	 0.1220
M	 0.9600	 0.1390
N	 0.9320	 0.1200
O	 0.9820	 0.1260
P	 0.9460	 0.1390
Q	 0.9390	 0.1150
R	 0.9440	 0.1360
S	 0.9220	 0.1300
T	 0.9540	 0.1280
U	 0.9560	 0.1220
W	 0.9250	 0.1430
Y	 0.9240	 0.0970

