



Full wwPDB X-ray Structure Validation Report ⓘ

Aug 20, 2020 – 01:22 PM BST

PDB ID : 4KZY
Title : Rabbit 40S ribosomal subunit in complex with eIF1 and eIF1A.
Authors : Lomakin, I.B.; Steitz, T.A.
Deposited on : 2013-05-30
Resolution : 7.01 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.13
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.13

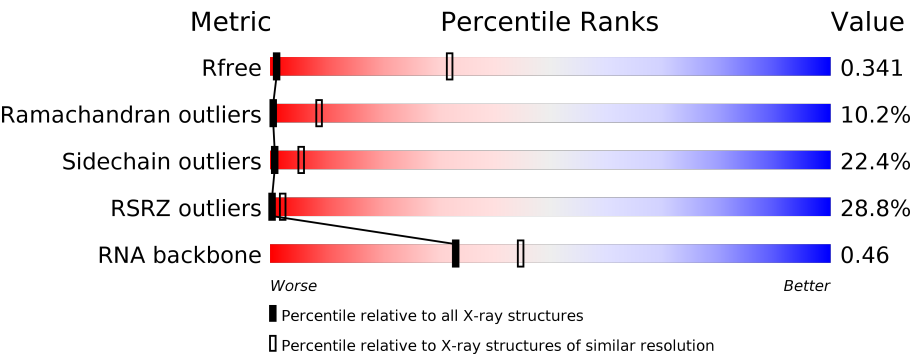
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 7.01 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1004 (10.00-3.90)
Ramachandran outliers	138981	1002 (10.00-3.90)
Sidechain outliers	138945	1002 (10.00-3.86)
RSRZ outliers	127900	1004 (9.50-3.80)
RNA backbone	3102	1078 (10.00-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	295	<div><div>6%</div><div>47%20%••29%</div></div>
2	B	264	<div><div>41%</div><div>56%22%•19%</div></div>
3	C	278	<div><div>14%</div><div>58%20%••19%</div></div>
4	D	243	<div><div>69%</div><div>63%26%5%7%</div></div>
5	E	263	<div><div>30%</div><div>67%29%•</div></div>
6	F	204	<div><div>46%</div><div>67%21%••6%</div></div>

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Mol	Chain	Length	Quality of chain
7	G	249	
8	H	194	
9	I	208	
10	J	194	
11	K	165	
12	L	158	
13	M	132	
14	N	151	
15	O	151	
16	P	145	
17	Q	146	
18	R	135	
19	S	152	
20	T	145	
21	U	119	
22	V	83	
23	W	130	
24	X	143	
25	Y	133	
26	Z	125	
27	a	115	
28	b	84	
29	c	69	
30	d	56	
31	e	133	

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Mol	Chain	Length	Quality of chain
32	f	156	<div><div><div></div><div></div><div></div><div></div><div></div></div><div>2%19%17%8%54%</div></div>
33	g	317	<div><div><div></div><div></div><div></div><div></div><div></div></div><div>6%74%20%</div></div>
34	i	1863	<div><div><div></div><div></div><div></div><div></div><div></div></div><div>18%8%65%25%</div></div>
35	l	113	<div><div><div></div><div></div><div></div><div></div><div></div></div><div>47%46%25%25%</div></div>
36	n	144	<div><div><div></div><div></div><div></div><div></div><div></div></div><div>27%43%12%43%</div></div>

2 Entry composition [i](#)

There are 36 unique types of molecules in this entry. The entry contains 78412 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 40S Ribosomal Protein SA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	208	Total	C	N	O	S	0	0	0
			1642	1045	289	300	8			

- Molecule 2 is a protein called 40S Ribosomal Protein S3A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	215	Total	C	N	O	S	0	0	0
			1741	1107	309	310	15			

- Molecule 3 is a protein called 40S Ribosomal Protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	226	Total	C	N	O	S	0	0	0
			1742	1127	300	306	9			

- Molecule 4 is a protein called 40S Ribosomal Protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	227	Total	C	N	O	S	0	0	0
			1764	1124	317	315	8			

- Molecule 5 is a protein called 40S Ribosomal Protein S4X.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	263	Total	C	N	O	S	0	0	0
			2083	1329	385	359	10			

- Molecule 6 is a protein called 40S Ribosomal Protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	191	Total	C	N	O	S	0	0	0
			1509	943	286	273	7			

- Molecule 7 is a protein called 40S Ribosomal Protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	G	237	Total	C	N	O	S	0	0	0
			1923	1200	387	329	7			

- Molecule 8 is a protein called 40S Ribosomal Protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	190	Total	C	N	O	S	0	0	0
			1530	975	281	273	1			

- Molecule 9 is a protein called 40S Ribosomal Protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	I	206	Total	C	N	O	S	0	0	0
			1679	1054	329	291	5			

- Molecule 10 is a protein called 40S Ribosomal Protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	182	Total	C	N	O	S	0	0	0
			1498	952	300	244	2			

- Molecule 11 is a protein called 40S Ribosomal Protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	98	Total	C	N	O	S	0	0	0
			827	539	148	134	6			

- Molecule 12 is a protein called 40S Ribosomal Protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	L	158	Total	C	N	O	S	0	0	0
			1296	827	241	221	7			

- Molecule 13 is a protein called 40S Ribosomal Protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	124	Total	C	N	O	S	0	0	0
			951	594	169	179	9			

- Molecule 14 is a protein called 40S Ribosomal Protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	150	Total	C	N	O	S	0	0	0
			1208	773	229	205	1			

- Molecule 15 is a protein called 40S Ribosomal Protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	O	136	Total	C	N	O	S	0	0	0
			1016	621	199	190	6			

- Molecule 16 is a protein called 40S Ribosomal Protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	P	127	Total	C	N	O	S	0	0	0
			1060	673	201	179	7			

- Molecule 17 is a protein called 40S Ribosomal Protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Q	141	Total	C	N	O	S	0	0	0
			1124	715	212	194	3			

- Molecule 18 is a protein called 40S Ribosomal Protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	R	126	Total	C	N	O	S	0	0	0
			1019	639	188	187	5			

- Molecule 19 is a protein called 40S Ribosomal Protein S18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	S	137	Total	C	N	O	S	0	0	0
			1139	714	231	193	1			

- Molecule 20 is a protein called 40S Ribosomal Protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	T	141	Total	C	N	O	S	0	0	0
			1112	701	213	195	3			

- Molecule 21 is a protein called 40S Ribosomal Protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	U	104	Total	C	N	O	S	0	0	0
			822	514	156	148	4			

- Molecule 22 is a protein called 40S Ribosomal Protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	V	82	Total	C	N	O	S	0	0	0
			619	378	117	119	5			

- Molecule 23 is a protein called 40S Ribosomal Protein S15A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	W	129	Total	C	N	O	S	0	0	0
			1034	659	193	176	6			

- Molecule 24 is a protein called 40S Ribosomal Protein S23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	X	142	Total	C	N	O	S	0	0	0
			1106	698	220	184	4			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
X	1	MET	ALA	SEE REMARK 999	UNP G1SZ47

- Molecule 25 is a protein called 40S Ribosomal Protein S24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	Y	126	Total	C	N	O	S	0	0	0
			1021	645	198	173	5			

- Molecule 26 is a protein called 40S Ribosomal Protein S25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Z	75	Total	C	N	O	S	0	0	0
			598	382	111	104	1			

- Molecule 27 is a protein called 40S Ribosomal Protein S26.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	a	107	Total	C	N	O	S	0	0	0
			844	527	173	138	6			

- Molecule 28 is a protein called 40S Ribosomal Protein S27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	b	84	Total	C	N	O	S	0	0	0
			659	413	122	116	8			

- Molecule 29 is a protein called 40S Ribosomal Protein S28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	c	64	Total	C	N	O	S	0	0	0
			506	308	102	94	2			

- Molecule 30 is a protein called 40S Ribosomal Protein S29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	d	53	Total	C	N	O	S	0	0	0
			445	278	90	72	5			

- Molecule 31 is a protein called 40S Ribosomal Protein S30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	e	59	Total	C	N	O	S	0	0	0
			468	290	102	75	1			

- Molecule 32 is a protein called 40S Ribosomal Protein S27A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	f	71	Total	C	N	O	S	0	0	0
			581	367	109	98	7			

- Molecule 33 is a protein called 40S Ribosomal Protein RACK1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	g	313	Total	C	N	O	S	0	0	0
			2436	1535	424	465	12			

- Molecule 34 is a RNA chain called 18S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	i	1840	Total	C	N	O	P	0	0	0
			38071	16944	6695	12593	1839			

- Molecule 35 is a protein called human initiation factor eIF1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	l	85	Total	C	N	O	S	0	0	0
			691	438	125	126	2			

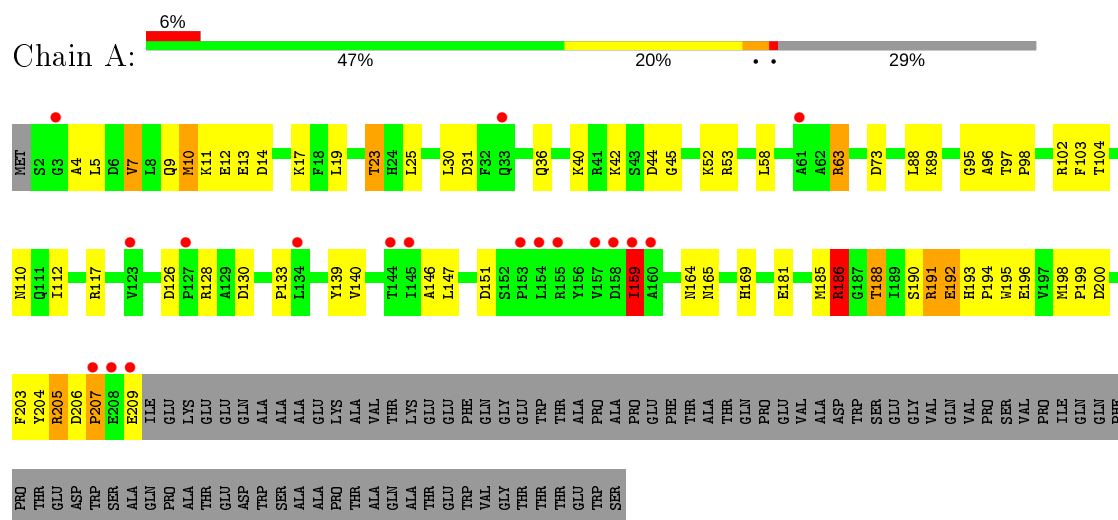
- Molecule 36 is a protein called human initiation factor eIF1A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	n	82	Total	C	N	O	S	0	0	0
			648	409	118	117	4			

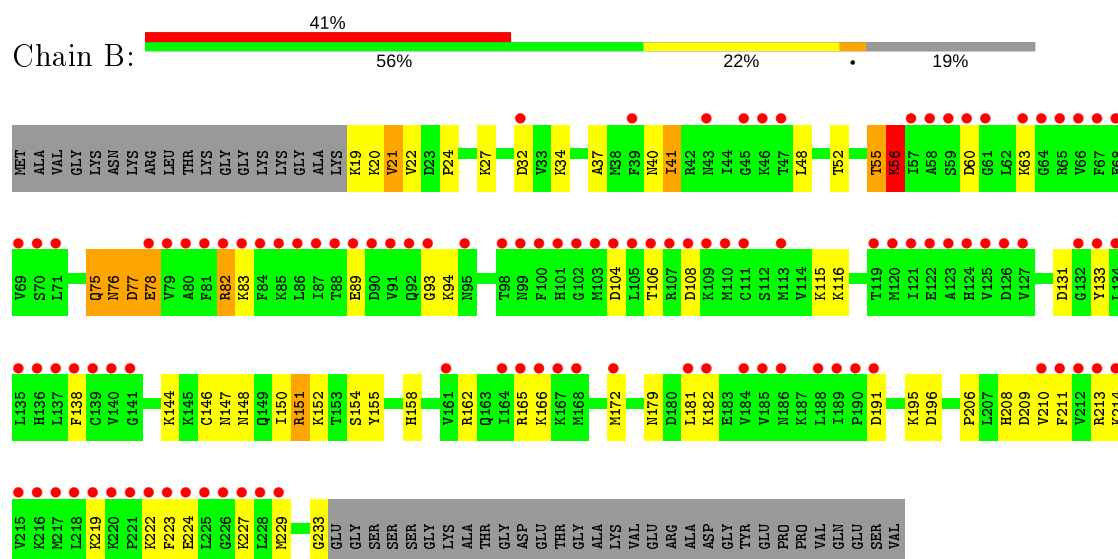
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron 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 dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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: 40S Ribosomal Protein SA

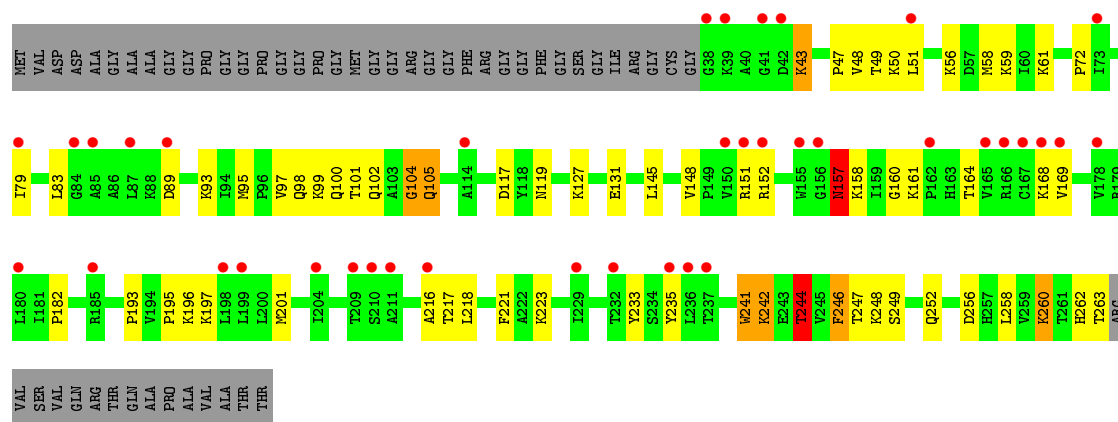


- Molecule 2: 40S Ribosomal Protein S3A

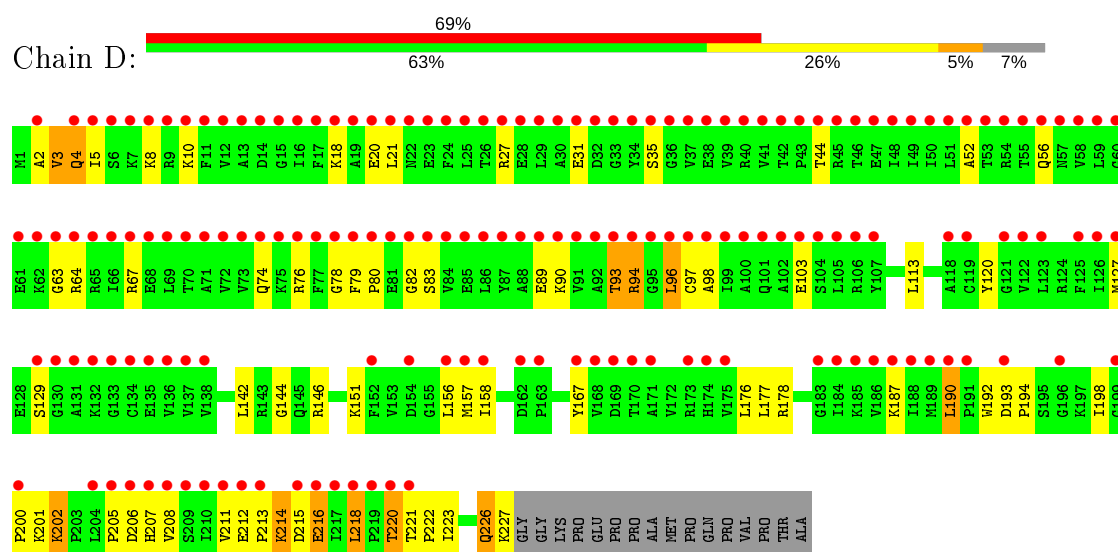


- Molecule 3: 40S Ribosomal Protein S2

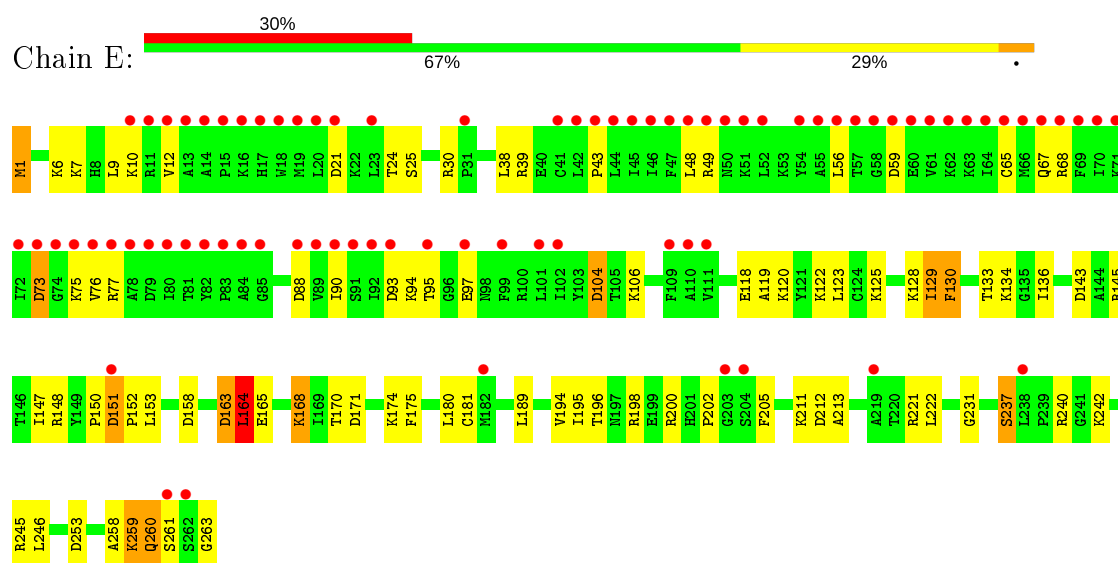




• Molecule 4: 40S Ribosomal Protein S3

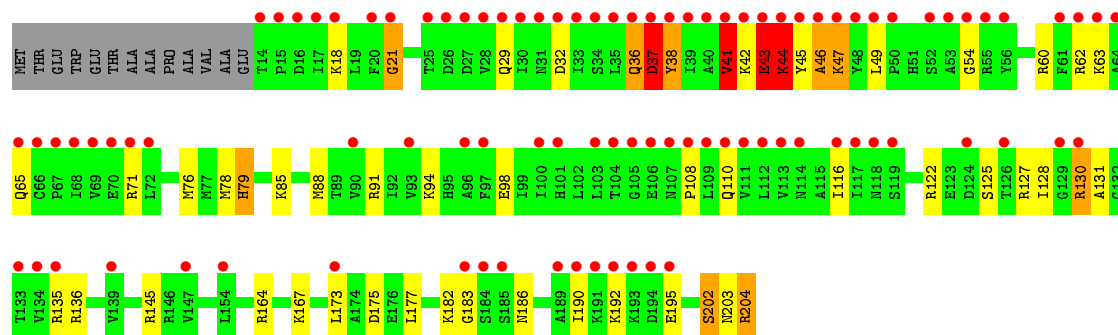


• Molecule 5: 40S Ribosomal Protein S4X



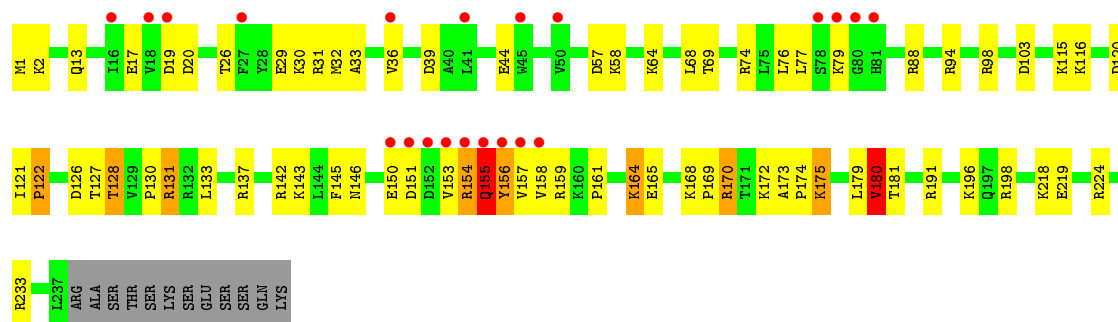
• Molecule 6: 40S Ribosomal Protein S5

Chain F: 



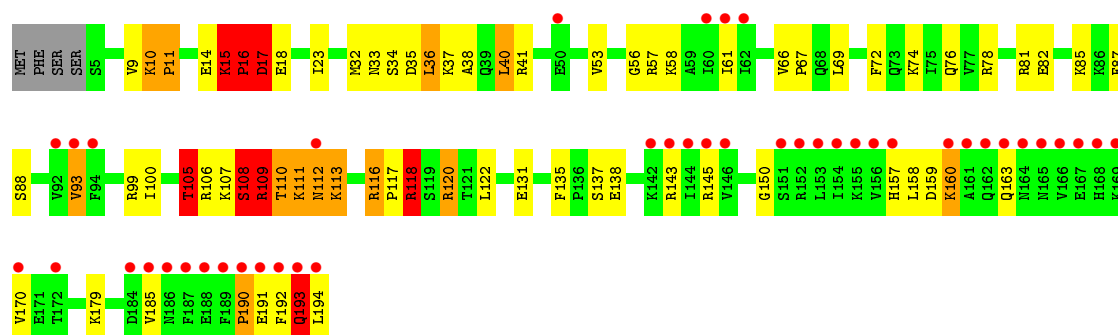
• Molecule 7: 40S Ribosomal Protein S6

Chain G: 




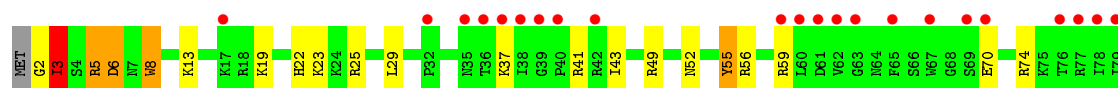
• Molecule 8: 40S Ribosomal Protein S7

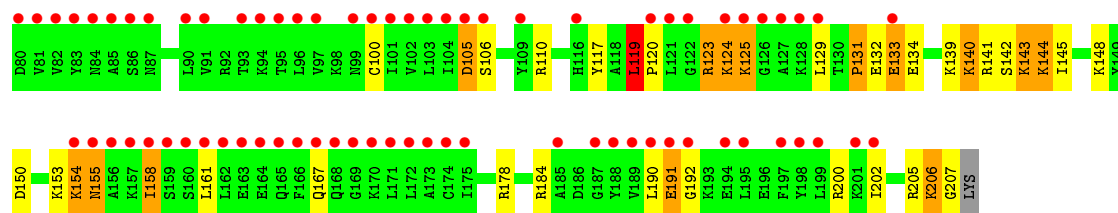
Chain H: 



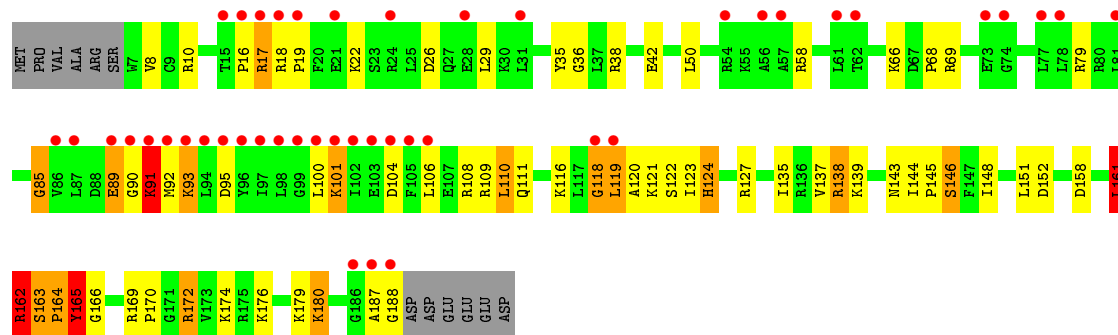
• Molecule 9: 40S Ribosomal Protein S8

Chain I: 

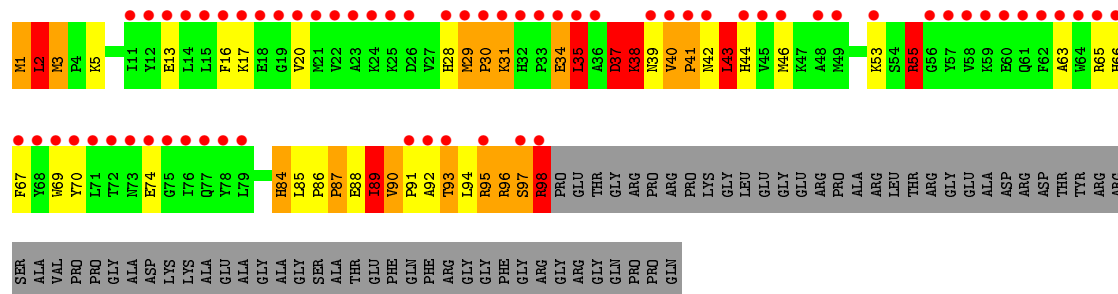
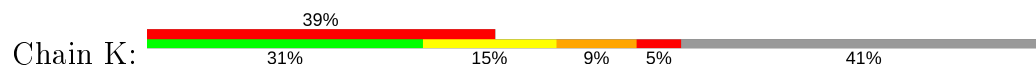




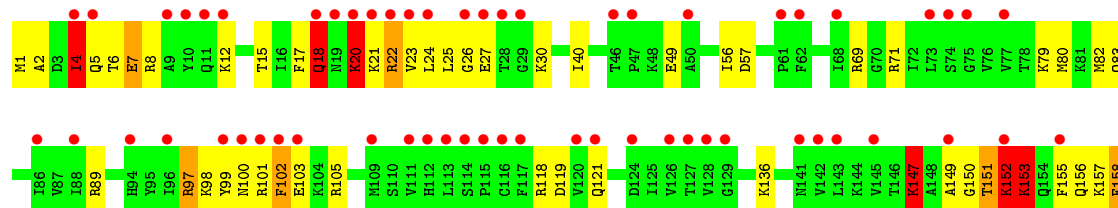
• Molecule 10: 40S Ribosomal Protein S9



• Molecule 11: 40S Ribosomal Protein S10

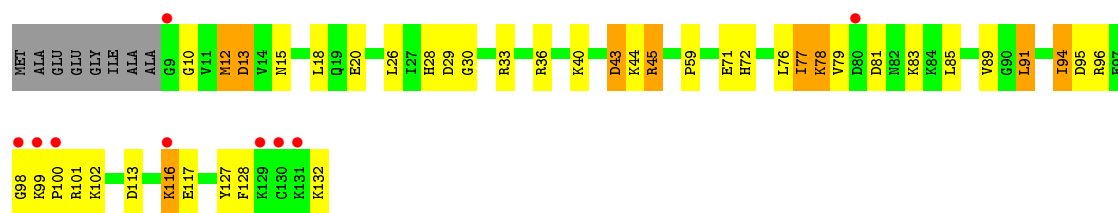


• Molecule 12: 40S Ribosomal Protein S11

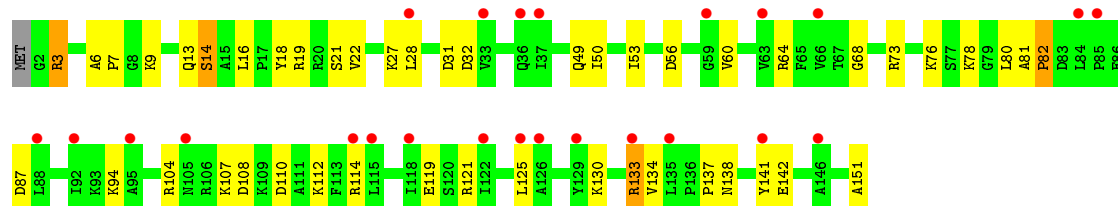


• Molecule 13: 40S Ribosomal Protein S12

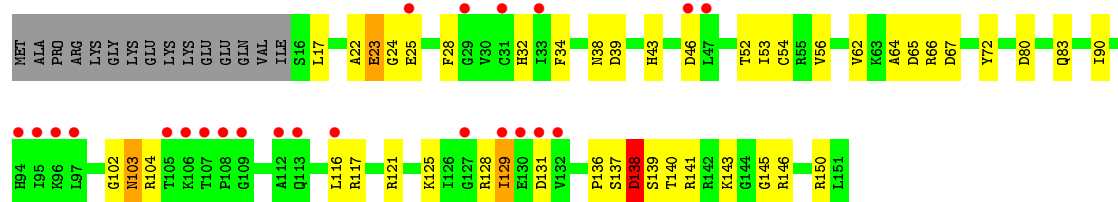




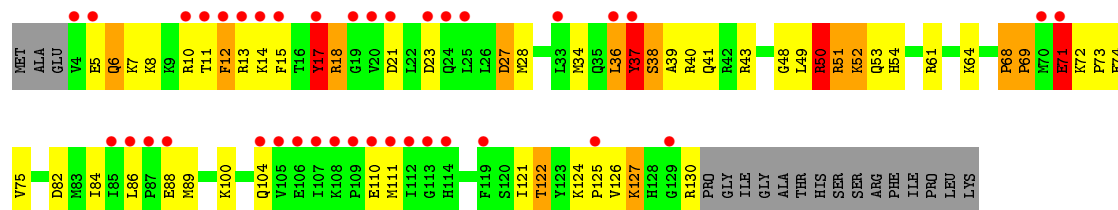
• Molecule 14: 40S Ribosomal Protein S13



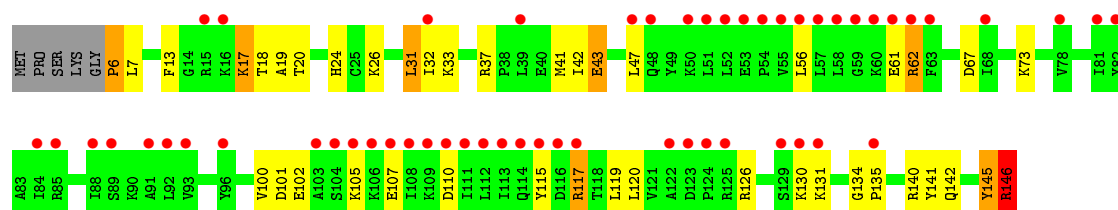
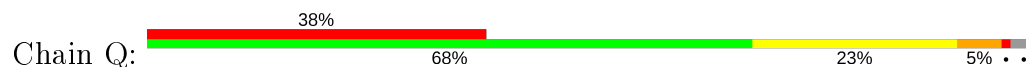
• Molecule 15: 40S Ribosomal Protein S14



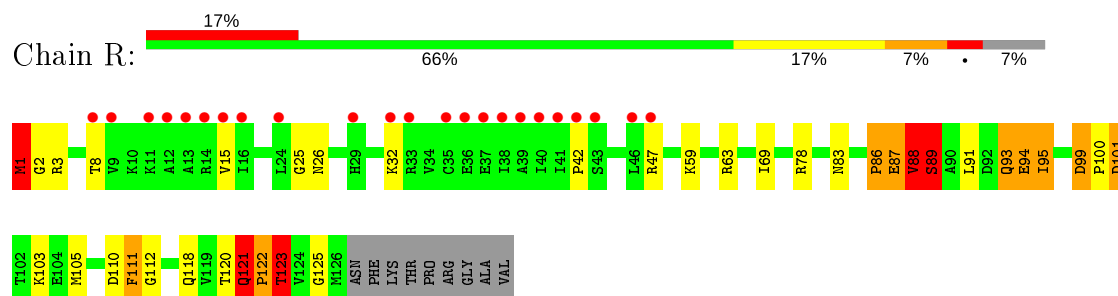
• Molecule 16: 40S Ribosomal Protein S15



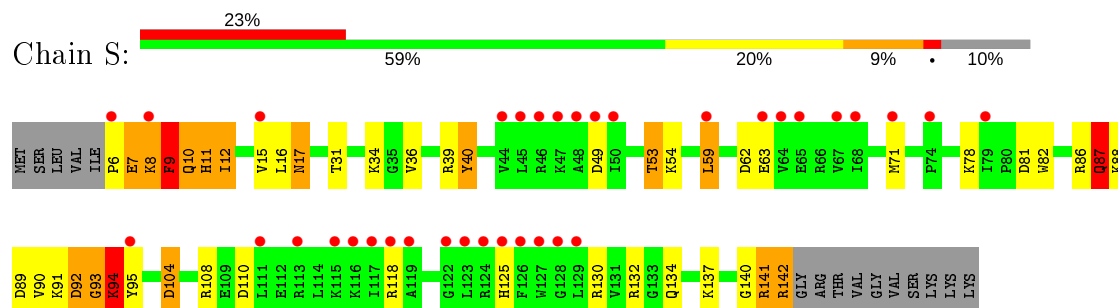
• Molecule 17: 40S Ribosomal Protein S16



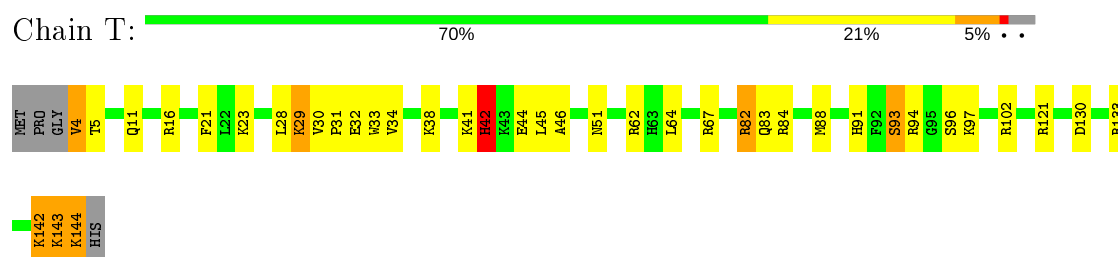
- Molecule 18: 40S Ribosomal Protein S17



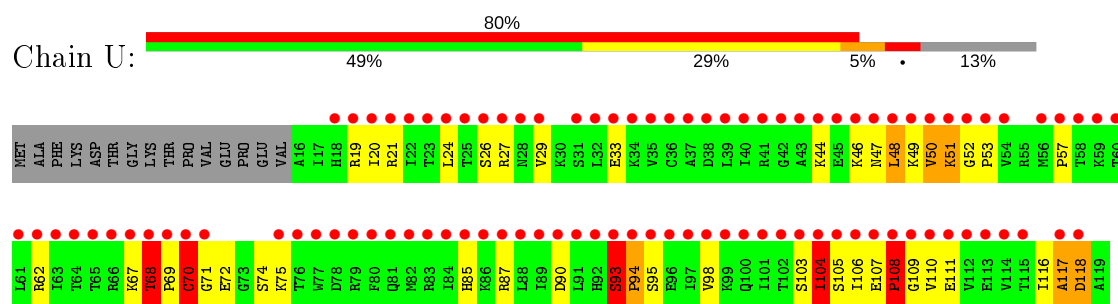
- Molecule 19: 40S Ribosomal Protein S18



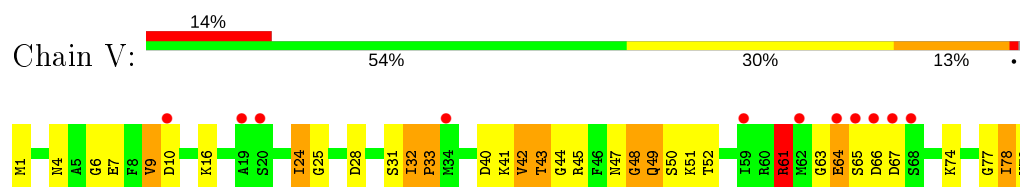
- Molecule 20: 40S Ribosomal Protein S19



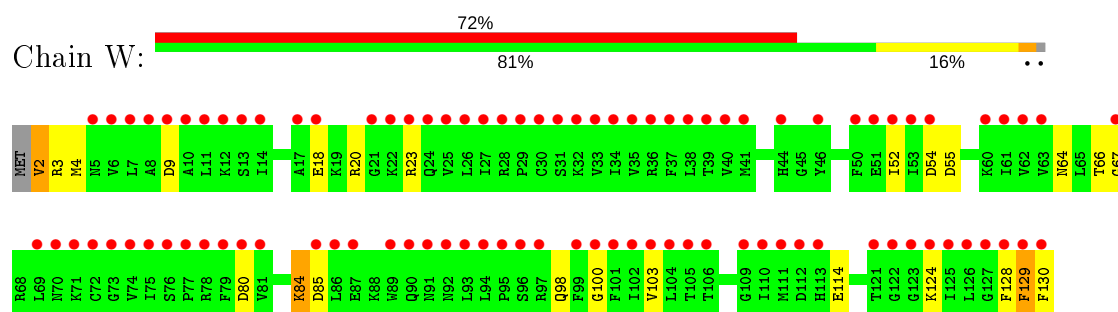
- Molecule 21: 40S Ribosomal Protein S20



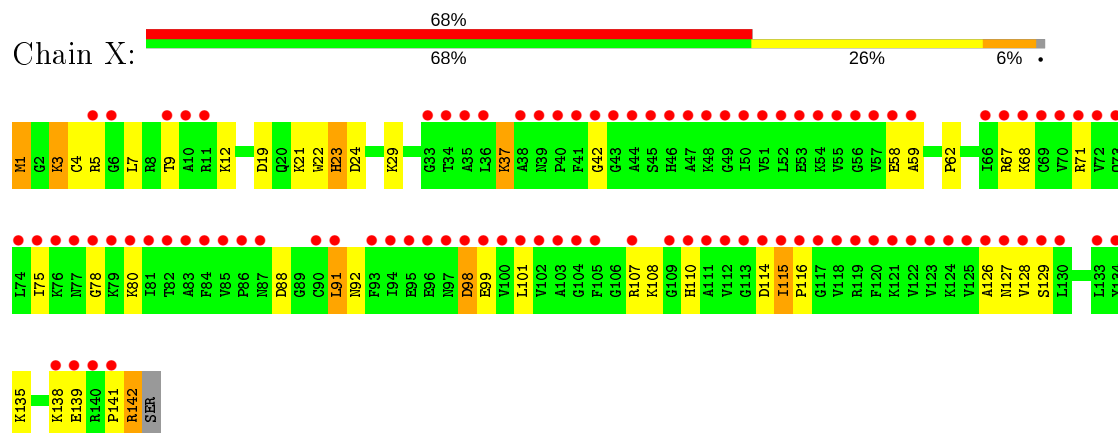
- Molecule 22: 40S Ribosomal Protein S21



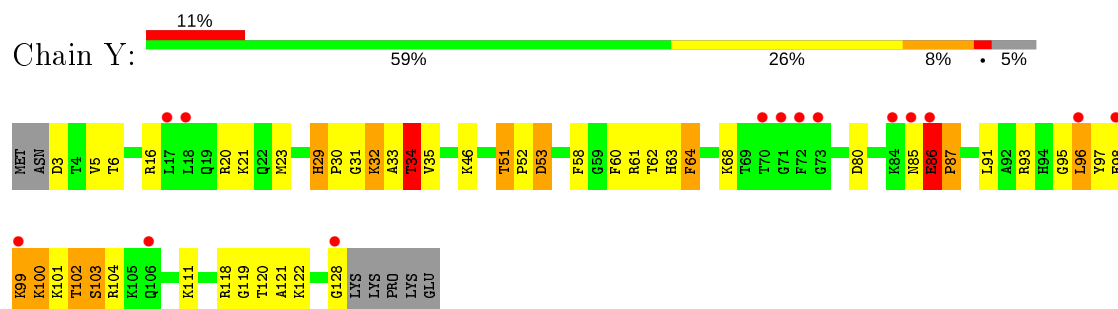
- Molecule 23: 40S Ribosomal Protein S15A



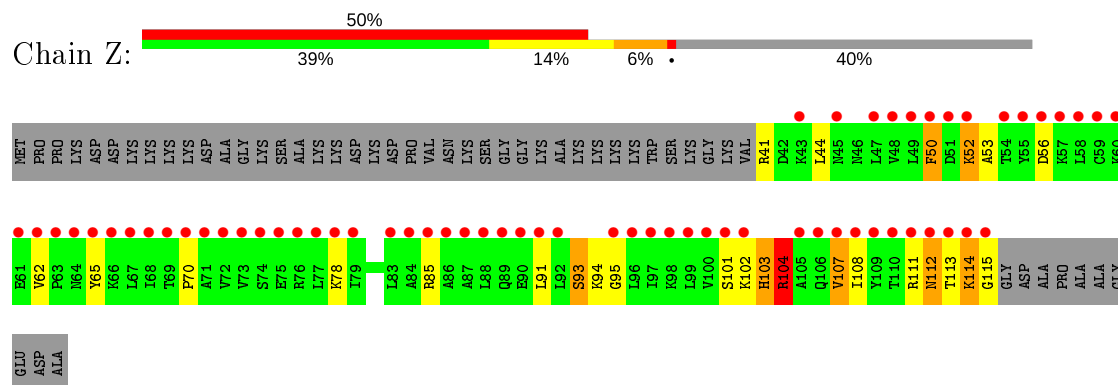
- Molecule 24: 40S Ribosomal Protein S23



- Molecule 25: 40S Ribosomal Protein S24

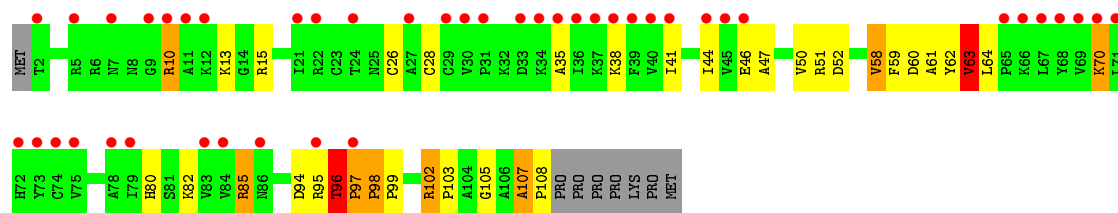


- Molecule 26: 40S Ribosomal Protein S25

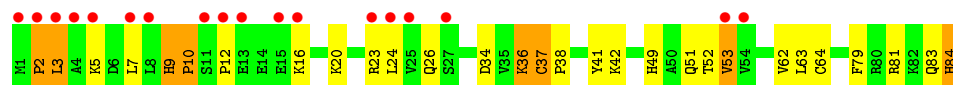


- Molecule 27: 40S Ribosomal Protein S26

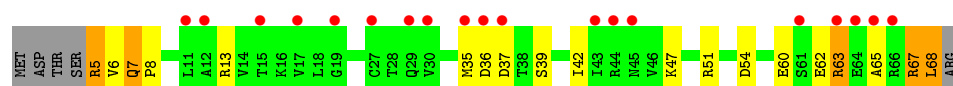




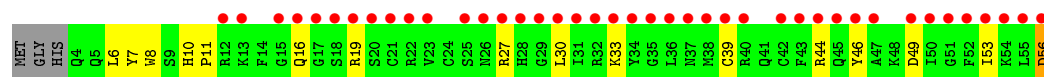
- Molecule 28: 40S Ribosomal Protein S27



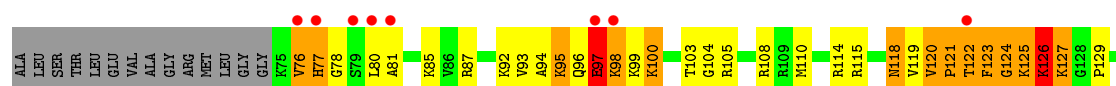
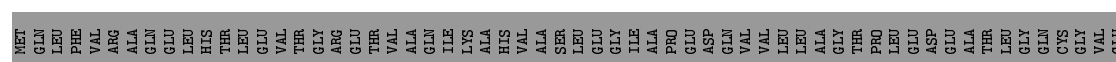
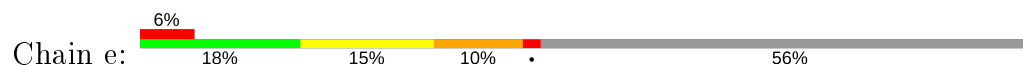
- Molecule 29: 40S Ribosomal Protein S28



- Molecule 30: 40S Ribosomal Protein S29

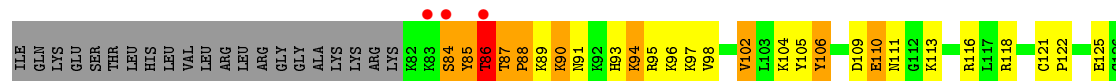
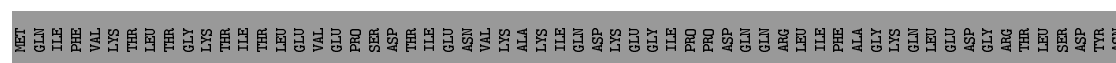
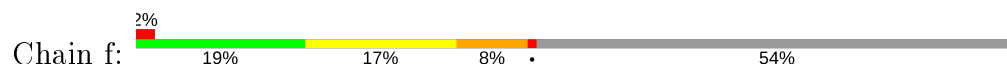


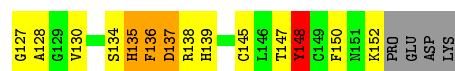
- Molecule 31: 40S Ribosomal Protein S30



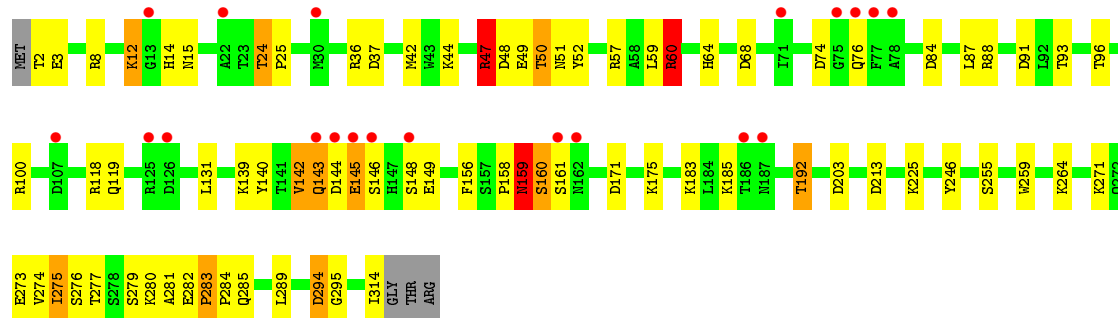
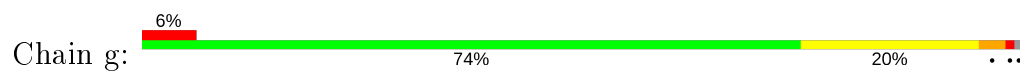
S133

- Molecule 32: 40S Ribosomal Protein S27A

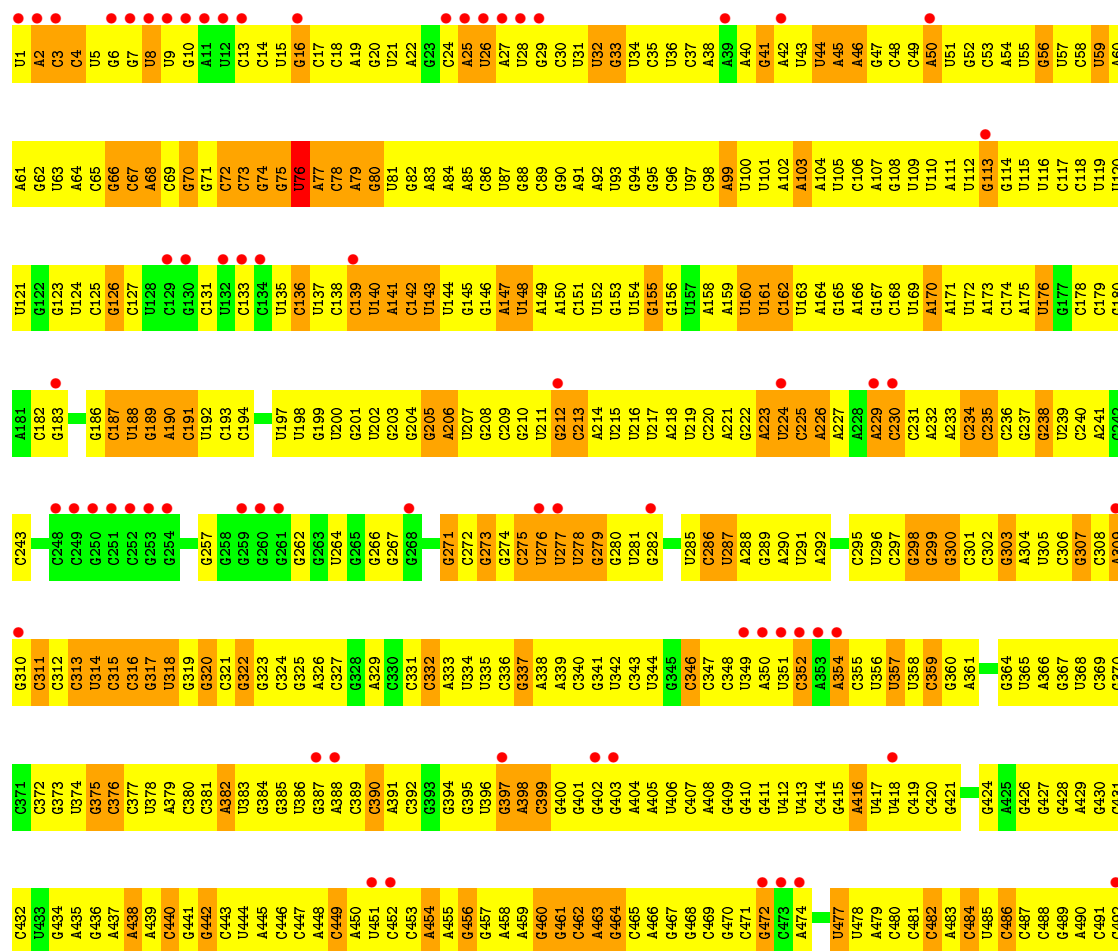
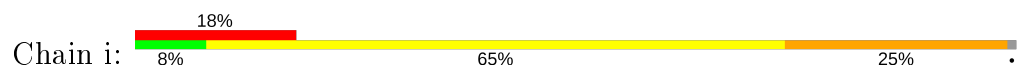




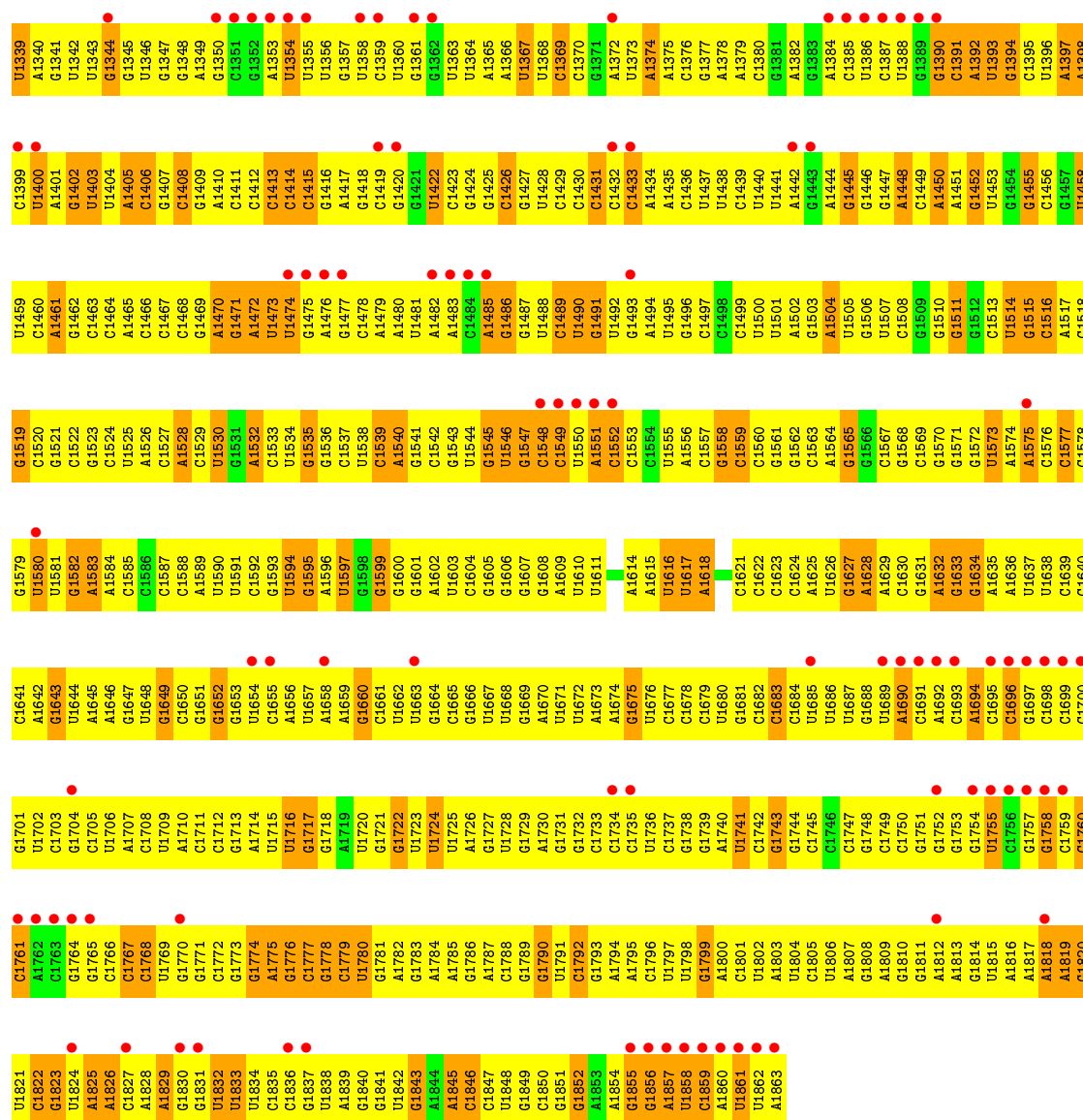
● Molecule 33: 40S Ribosomal Protein RACK1



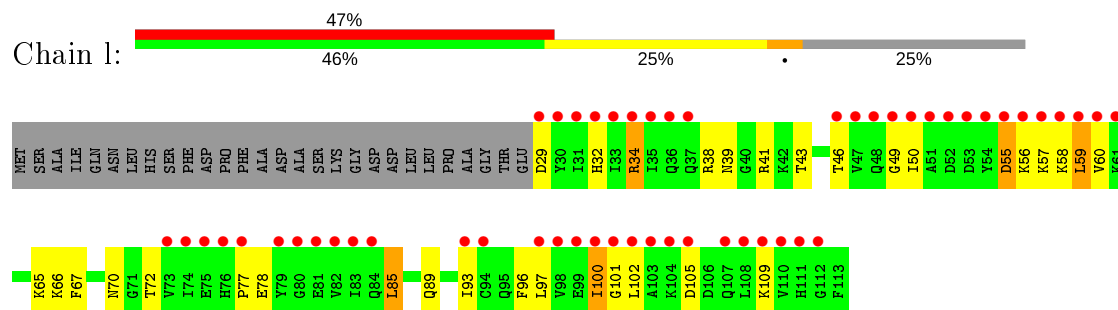
● Molecule 34: 18S Ribosomal RNA



C1279	A1219	G1159	G1098	A1038	A977	A916	G856	U795	C734	G674	C614	A554	C493
A1280	G1220	G1160	C1099	G1039	G978	G917	A857	U796	C735	A675	G615	G595	G494
G1281	U1221	G1161	G1100	G1040	A979	A918	A858	U797	C736	U676	G616	U567	G495
G1282	G1162	G1101	G1101	U1041	C980	A919	U859	U798	C	U677	U617	C557	G496
A1283	G1163	G1102	C1103	U1042	G981	G920	A860	C799	U	U678	A618	C558	G497
U1284	G1164	G1103	G1103	C1043	G982	G921	A861	U800	U739	U679	A619	C559	A498
U1285	G1165	G1104	G1104	G1044	A983	G922	U862	U801	G740	G	U620	C560	G499
G1286	C1105	C1105	C1105	A1045	C984	C923	G863	U804	C741	U	U621	U561	G500
C1227	G1106	G1106	G1106	A1046	C985	G924	G864	A804	C742	G882	C622	U562	U501
C1287	U1107	U1107	U1107	G1047	A986	G925	A865	A805	U743	A684	C623	U563	A502
C1288	U1108	U1108	U1108	G1048	G987	G926	A866	A806	C744	A684	G624	U564	G503
G1229	A1109	A1109	A1109	A1049	A988	G927	U867	A807	U745	G886	G625	A565	U504
C1230	U1110	U1110	U1110	G1050	G989	G928	A868	A808	C746	G887	C526	A566	
G1231	U1111	U1111	U1111	A1051	C990	G929	G869	A809	G747	G887	U627	U567	C507
G1232	G1172	G1172	G1172	U1052	G991	G930	U870	U810	C748	U688	C628	U568	G508
C1233	U1173	U1173	U1173	C1053	G992	G931	A871	U811	C749	U689	C629	C569	A509
G1294	G1174	G1174	G1174	A1054	A993	G932	C872	U812	G750	C590	A630	U570	A510
A1295	G1175	G1175	G1175	C1114	A994	A933	C873	U813	C751	G691	A631	U571	A511
U1296	A1115	A1115	A1115	G1055	G995	G934	C874	G813	G752	U692	U632	U572	
A1237	U1116	U1116	U1116	A1056	C996	U935	G874	A814	U693	U693	U633	A512	A513
C1237	G1177	G1177	G1177	U1057	A997	U936	C875	G815	C753	A693	A634	A573	A514
U1238	A1117	A1117	A1117	A1058	A998	C937	U876	U816	C754	A694	G634	A574	U514
C1299	U1118	U1118	U1118	U1059	U999	G938	U877	U817	C755	G695	C635	C575	A515
U1300	C1119	C1119	C1119	C1059	U999	G938	U878	U818	C756	G696	G636	A516	A516
C1241	U1240	U1240	U1240	C1060	U1000	U939	U879	U819	G757	G697	U637	A517	C517
C1301	G1181	G1181	G1181	U1061	G1001	A940	U880	C820	U758	G698	A638	A518	A518
A1242	U1182	U1182	U1182	U1062	G1002	U941	C881	A821	U760	C699	U639	A519	A519
C1243	G1183	G1183	G1183	C1063	C1003	U942	U882	A822	G761	G	A640	U520	U520
U1244	A1184	A1184	A1184	U1064	A1004	G943	A883	A823	C762	G	U641	A521	A521
C1245	A1185	A1185	A1185	U1065	A1005	C944	U884	G824	U763	U	A642	C582	C582
A1246	G1186	G1186	G1186	A1066	G1006	G945	U885	C825	C764	C	A643	C583	A523
C1307	U1247	U1247	U1247	G1067	A1007	C946	U886	A826	U765	C	A644	A584	G524
G1308	C1248	C1248	C1248	U1068	A1008	G947	U887	A827	U766	C	A645	U585	G525
A1309	U1189	U1189	U1189	U1069	U1009	G948	U888	G828	A767	C	A646	U586	A526
U1310	C1250	C1250	C1250	C1070	G1010	C949	U889	C829	C768	C	U647	G587	C527
U1311	A1191	A1191	A1191	C1071	U1011	U950	U890	C830	C769	G	U648	U588	U528
C1312	G1252	G1252	G1252	G1072	U1012	A951	U891	C831	U770	C	G649	C529	C529
G1313	G1193	G1193	G1193	A1073	U1013	G952	U892	G832	U771	C	C650	U530	U530
U1314	A1254	A1254	A1254	C1074	U1014	A953	U893	A833	A772	A	U651	U531	U531
A1255	G1134	G1134	G1134	C1075	C1015	G954	U894	A834	G773	G	G652	G592	C532
A1256	C1135	C1135	C1135	A1076	A1016	U955	U895	C835	U774	G	C653	C593	C533
C1257	G1136	G1136	G1136	U1077	U1017	G956	U896	C836	G775	C	A654	A594	G534
C1258	G1137	G1137	G1137	A1078	U1018	C957	C896	G837	U776	G	G655	A595	A635
U1259	G1138	G1138	G1138	A1079	A1019	A958	U897	C838	C777	A	U656	G596	G536
C1260	A1139	A1139	A1139	C1080	U1020	A959	U898	C839	C778	C	U657	U597	G537
A1261	A1140	A1140	A1140	U1081	U1021	A960	U899	C840	C779	C	A658	C598	C538
C1262	C1141	C1141	C1141	G1082	C1022	U961	A900	U840	G780	C719	A659	U599	C539
C1263	C1142	C1142	C1142	A1083	A1023	U962	C901	U841	C781	C720	A660	U600	C540
G1264	C1143	C1143	C1143	U1084	A1024	C963	U902	G842	C782	C721	A661	G601	U541
U1325	A1144	A1144	A1144	G1085	G1025	U964	G903	A843	G783	C722	A662	U602	G542
G1266	A1145	A1145	A1145	C1086	A1026	U965	A904	U844	G784	C723	C663	C603	U543
C1267	G1146	G1146	G1146	U1087	A1027	G966	G905	A845	G785	C724	C664	A544	A544
G1268	G1147	G1147	G1147	C1088	C1028	G967	G906	C846	C786	C725	U665	C605	A545
C1269	U1148	U1148	U1148	A1089	G1029	A968	C907	C847	C787	C726	C666	A606	U546
G1270	C1149	C1149	C1149	C1090	A1030	C969	C908	U848	C788	G727	G667	G607	U547
A1271	U1150	U1150	U1150	U1091	A1031	C970	A909	C849	U789	U728	U668	C608	G548
C1332	U1151	U1151	U1151	G1092	A1032	G971	U910	A850	C790	C729	A669	A609	G549
G1272	U1152	U1152	U1152	C1093	G1033	G972	G911	G851	C791	C730	G670	A610	A550
A1273	G1153	G1153	G1153	C1094	U1034	C973	A912	C852	C792	C731	G671	C611	A551
C1274	G1154	G1154	G1154	U1095	C1035	G974	U913	U853	C793	C732	U672	C612	U552
A1275	U1155	U1155	U1155	A1096	G1036	C975	U914	A854	G794	G733	G673	G613	G553
U1336	G1276	G1276	G1276	U1097	U1037	A976	A915	G855					
C1337	A1278	A1278	A1278										

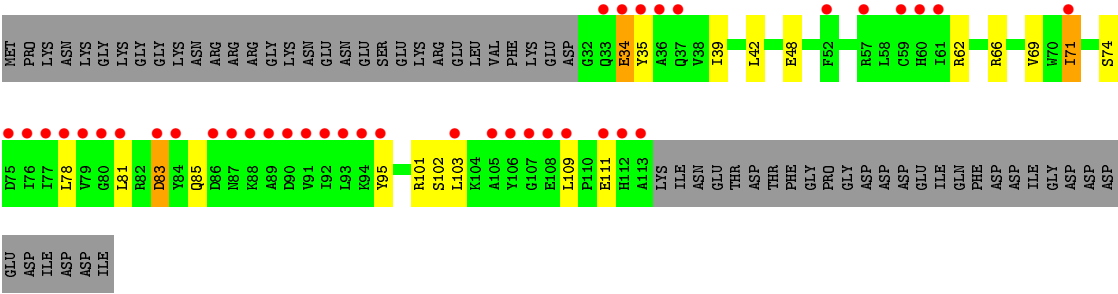


• Molecule 35: human initiation factor eIF1



• Molecule 36: human initiation factor eIF1A





4 Data and refinement statistics

Property	Value	Source
Space group	P 31 2 1	Depositor
Cell constants a, b, c, α , β , γ	296.90Å 296.90Å 478.31Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	113.24 – 7.01 113.24 – 7.01	Depositor EDS
% Data completeness (in resolution range)	98.0 (113.24-7.01) 98.1 (113.24-7.01)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.05 (at 6.73Å)	Xtriage
Refinement program	PHENIX 1.7.3_928	Depositor
R, R_{free}	0.366 , 0.348 0.351 , 0.341	Depositor DCC
R_{free} test set	1923 reflections (5.03%)	wwPDB-VP
Wilson B-factor (Å ²)	494.7	Xtriage
Anisotropy	0.354	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.21 , 83.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.36$, $\langle L^2 \rangle = 0.20$	Xtriage
Estimated twinning fraction	0.094 for -h,-k,l	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	78412	wwPDB-VP
Average B, all atoms (Å ²)	235.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.79% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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	A	0.76	3/1679 (0.2%)	1.05	17/2283 (0.7%)
2	B	0.79	6/1769 (0.3%)	1.08	20/2367 (0.8%)
3	C	0.97	7/1778 (0.4%)	1.19	19/2399 (0.8%)
4	D	1.03	6/1792 (0.3%)	1.30	22/2412 (0.9%)
5	E	0.76	4/2125 (0.2%)	0.98	23/2856 (0.8%)
6	F	0.99	5/1531 (0.3%)	1.21	17/2059 (0.8%)
7	G	0.97	15/1946 (0.8%)	1.23	25/2590 (1.0%)
8	H	1.09	7/1553 (0.5%)	2.20	29/2079 (1.4%)
9	I	1.11	7/1708 (0.4%)	1.51	34/2278 (1.5%)
10	J	1.27	19/1522 (1.2%)	1.51	42/2031 (2.1%)
11	K	1.21	7/851 (0.8%)	1.78	32/1147 (2.8%)
12	L	1.10	6/1319 (0.5%)	1.40	17/1761 (1.0%)
13	M	1.00	3/961 (0.3%)	1.23	7/1288 (0.5%)
14	N	0.83	3/1232 (0.2%)	1.01	13/1656 (0.8%)
15	O	0.61	0/1029	1.05	12/1380 (0.9%)
16	P	0.75	1/1079 (0.1%)	1.43	32/1437 (2.2%)
17	Q	0.70	3/1142 (0.3%)	1.11	15/1528 (1.0%)
18	R	1.23	10/1031 (1.0%)	1.64	30/1383 (2.2%)
19	S	1.21	11/1157 (1.0%)	1.61	36/1548 (2.3%)
20	T	0.95	3/1132 (0.3%)	1.26	13/1517 (0.9%)
21	U	0.96	1/832 (0.1%)	1.59	29/1117 (2.6%)
22	V	0.75	1/626 (0.2%)	1.40	15/839 (1.8%)
23	W	0.85	4/1051 (0.4%)	0.86	9/1406 (0.6%)
24	X	0.99	9/1124 (0.8%)	1.25	21/1500 (1.4%)
25	Y	0.93	3/1038 (0.3%)	1.42	22/1380 (1.6%)
26	Z	1.04	6/604 (1.0%)	1.35	16/810 (2.0%)
27	a	0.89	5/860 (0.6%)	1.60	21/1156 (1.8%)
28	b	1.03	2/673 (0.3%)	1.36	12/902 (1.3%)
29	c	0.80	1/508 (0.2%)	1.17	8/680 (1.2%)
30	d	0.90	2/455 (0.4%)	0.79	3/603 (0.5%)
31	e	1.48	5/472 (1.1%)	1.43	11/620 (1.8%)
32	f	1.10	4/593 (0.7%)	1.49	14/786 (1.8%)
33	g	0.92	1/2493 (0.0%)	1.29	25/3394 (0.7%)
34	i	2.41	1879/42474 (4.4%)	2.22	2609/66043 (4.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
35	l	1.18	5/700 (0.7%)	1.29	8/933 (0.9%)
36	n	0.40	0/657	0.38	0/881
All	All	1.85	2054/83496 (2.5%)	1.87	3278/121049 (2.7%)

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	A	0	11
2	B	0	4
3	C	1	5
4	D	0	5
5	E	1	2
6	F	0	3
7	G	0	1
8	H	0	10
9	I	0	8
10	J	1	11
11	K	0	11
12	L	0	7
13	M	0	1
14	N	0	4
15	O	0	1
16	P	0	10
17	Q	0	4
18	R	1	5
19	S	1	10
20	T	1	6
21	U	0	8
22	V	0	9
23	W	0	2
24	X	0	4
25	Y	1	6
26	Z	0	6
27	a	0	2
28	b	0	3
31	e	0	5
32	f	0	6
33	g	0	13
34	i	6	0
All	All	13	183

All (2054) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1322	U	C2'-C1'	-25.25	1.25	1.53
34	i	66	G	C2'-C1'	-24.54	1.26	1.53
34	i	858	A	C2'-C1'	-23.80	1.27	1.53
34	i	652	G	C2'-C1'	-23.70	1.27	1.53
34	i	1307	C	C2'-C1'	-22.32	1.28	1.53
34	i	521	A	C2'-C1'	-22.17	1.28	1.53
34	i	1037	G	C2'-C1'	-21.94	1.29	1.53
34	i	1233	C	C2'-C1'	-21.75	1.29	1.53
34	i	145	G	C2'-C1'	-21.50	1.29	1.53
34	i	287	U	C2'-C1'	-21.33	1.29	1.53
4	D	5	ILE	C-N	21.23	1.82	1.34
34	i	299	G	C2'-C1'	-20.69	1.30	1.53
34	i	1393	U	C2'-C1'	-20.56	1.30	1.53
34	i	1327	C	C2'-C1'	-20.46	1.30	1.53
34	i	1503	G	O4'-C1'	-20.01	1.15	1.41
34	i	215	U	C2'-C1'	-19.94	1.31	1.53
34	i	343	C	C2'-C1'	-19.63	1.31	1.53
34	i	630	A	C2'-C1'	-19.59	1.31	1.53
34	i	1308	G	C2'-C1'	-19.48	1.31	1.53
34	i	612	C	C2'-C1'	-19.45	1.31	1.53
34	i	1407	G	C2'-C1'	-19.32	1.32	1.53
34	i	1855	G	C2'-C1'	-19.28	1.32	1.53
34	i	1738	G	C2'-C1'	-19.26	1.32	1.53
34	i	956	U	C2'-C1'	-19.25	1.32	1.53
34	i	684	A	C2'-C1'	-19.13	1.32	1.53
34	i	1496	G	C2'-C1'	-19.00	1.32	1.53
34	i	1159	C	C2'-C1'	-18.66	1.32	1.53
34	i	1227	C	C2'-C1'	-18.60	1.32	1.53
31	e	95	LYS	C-N	18.46	1.76	1.34
34	i	518	A	C2'-C1'	-18.41	1.33	1.53
34	i	1194	G	C2'-C1'	-18.38	1.33	1.53
34	i	1222	G	C2'-C1'	-18.05	1.33	1.53
34	i	859	U	C2'-C1'	-17.97	1.33	1.53
34	i	1774	G	C2'-C1'	-17.80	1.33	1.53
34	i	443	C	C2'-C1'	-17.76	1.33	1.53
34	i	1226	C	C2'-C1'	-17.72	1.33	1.53
34	i	1199	G	C2'-C1'	-17.50	1.34	1.53
34	i	1279	C	O4'-C1'	17.43	1.64	1.41
34	i	41	G	C2'-C1'	-17.43	1.34	1.53
34	i	606	A	C2'-C1'	-17.36	1.34	1.53
34	i	1214	C	C2'-C1'	-17.34	1.34	1.53
34	i	1472	A	O4'-C1'	-17.32	1.19	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	389	C	O4'-C1'	17.28	1.64	1.41
34	i	1010	G	C2'-C1'	-17.23	1.34	1.53
34	i	984	C	O4'-C1'	17.20	1.64	1.41
10	J	118	GLY	C-N	17.05	1.73	1.34
34	i	838	C	C2'-C1'	-16.84	1.34	1.53
34	i	1732	G	C2'-C1'	-16.82	1.34	1.53
34	i	1348	G	C2'-C1'	-16.81	1.34	1.53
34	i	1044	G	C2'-C1'	-16.81	1.34	1.53
34	i	1233	C	O4'-C1'	16.76	1.63	1.41
34	i	1258	C	C2'-C1'	-16.72	1.34	1.53
34	i	626	C	O4'-C1'	16.69	1.63	1.41
10	J	85	GLY	C-N	-16.66	0.95	1.34
34	i	1467	C	O4'-C1'	16.64	1.63	1.41
34	i	92	A	C2'-C1'	-16.59	1.35	1.53
34	i	929	G	C2'-C1'	-16.54	1.35	1.53
34	i	94	G	C2'-C1'	-16.52	1.35	1.53
34	i	435	A	C2'-C1'	-16.49	1.35	1.53
34	i	1308	G	O4'-C1'	16.43	1.63	1.41
34	i	604	G	O4'-C1'	16.41	1.62	1.41
34	i	844	U	C2'-C1'	-16.41	1.35	1.53
34	i	611	C	O4'-C1'	16.39	1.62	1.41
18	R	1	MET	N-CA	16.35	1.79	1.46
34	i	604	G	C2'-C1'	-16.34	1.35	1.53
34	i	1733	C	O4'-C1'	16.32	1.62	1.41
34	i	1325	U	C2'-C1'	-16.25	1.35	1.53
34	i	689	G	O4'-C1'	16.19	1.62	1.41
34	i	390	C	O4'-C1'	16.19	1.62	1.41
34	i	1571	G	C2'-C1'	-16.11	1.35	1.53
34	i	1043	C	O4'-C1'	16.10	1.62	1.41
34	i	277	U	O4'-C1'	16.07	1.62	1.41
34	i	1666	G	C2'-C1'	-16.06	1.35	1.53
34	i	1563	C	C2'-C1'	-15.96	1.35	1.53
34	i	1012	U	O4'-C1'	15.96	1.62	1.41
34	i	143	U	C2'-C1'	-15.93	1.35	1.53
34	i	446	C	C2'-C1'	-15.92	1.35	1.53
34	i	225	C	O4'-C1'	15.80	1.62	1.41
34	i	446	C	O4'-C1'	15.79	1.62	1.41
34	i	1847	C	C2'-C1'	-15.78	1.35	1.53
34	i	788	C	C2'-C1'	-15.77	1.36	1.53
34	i	581	U	C2'-C1'	-15.74	1.36	1.53
34	i	1305	C	O4'-C1'	15.74	1.62	1.41
34	i	830	C	C2'-C1'	-15.71	1.36	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1736	U	C2'-C1'	-15.72	1.36	1.53
34	i	792	G	C2'-C1'	-15.71	1.36	1.53
34	i	1683	C	C2'-C1'	-15.71	1.36	1.53
34	i	1660	G	C2'-C1'	-15.67	1.36	1.53
34	i	179	C	C2'-C1'	-15.65	1.36	1.53
34	i	286	C	O4'-C1'	15.64	1.61	1.41
34	i	794	G	O4'-C1'	15.63	1.61	1.41
34	i	1432	C	O4'-C1'	15.60	1.61	1.41
34	i	1688	G	C2'-C1'	-15.57	1.36	1.53
34	i	594	A	O4'-C1'	15.55	1.61	1.41
34	i	909	A	O4'-C1'	15.55	1.61	1.41
34	i	1227	C	O4'-C1'	15.53	1.61	1.41
34	i	541	U	C2'-C1'	-15.45	1.36	1.53
34	i	1452	G	C2'-C1'	-15.44	1.36	1.53
34	i	1659	A	C2'-C1'	-15.38	1.36	1.53
34	i	1524	C	O4'-C1'	15.37	1.61	1.41
34	i	741	C	O4'-C1'	15.37	1.61	1.41
34	i	730	C	O4'-C1'	15.36	1.61	1.41
34	i	222	G	C2'-C1'	-15.35	1.36	1.53
34	i	877	G	C2'-C1'	-15.35	1.36	1.53
34	i	1766	C	O4'-C1'	15.34	1.61	1.41
18	R	1	MET	CA-CB	15.33	1.87	1.53
34	i	1288	C	O4'-C1'	15.32	1.61	1.41
34	i	657	U	C2'-C1'	-15.30	1.36	1.53
34	i	1393	U	O4'-C1'	15.27	1.61	1.41
34	i	179	C	O4'-C1'	15.25	1.61	1.41
34	i	186	G	C2'-C1'	-15.23	1.36	1.53
34	i	1012	U	C2'-C1'	-15.23	1.36	1.53
34	i	1018	U	C2'-C1'	-15.22	1.36	1.53
34	i	1171	G	C2'-C1'	-15.21	1.36	1.53
34	i	1237	A	O4'-C1'	15.21	1.61	1.41
34	i	1615	A	C2'-C1'	-15.20	1.36	1.53
34	i	986	A	C2'-C1'	-15.16	1.36	1.53
34	i	214	A	O4'-C1'	15.13	1.61	1.41
34	i	62	G	C2'-C1'	-15.11	1.36	1.53
34	i	164	A	C2'-C1'	-15.11	1.36	1.53
34	i	225	C	C2'-C1'	-15.10	1.36	1.53
34	i	408	A	C2'-C1'	-15.09	1.36	1.53
34	i	734	C	C2'-C1'	-15.09	1.36	1.53
34	i	1406	C	O4'-C1'	14.92	1.61	1.41
34	i	205	G	C2'-C1'	-14.86	1.37	1.53
34	i	838	C	O4'-C1'	14.84	1.60	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1307	C	O4'-C1'	14.84	1.60	1.41
34	i	1610	U	C2'-C1'	-14.84	1.37	1.53
34	i	538	C	O4'-C1'	14.83	1.60	1.41
34	i	1413	C	O4'-C1'	14.81	1.60	1.41
34	i	4	C	C2'-C1'	-14.80	1.37	1.53
34	i	970	C	O4'-C1'	14.79	1.60	1.41
34	i	1494	A	C2'-C1'	-14.77	1.37	1.53
34	i	728	U	C2'-C1'	-14.74	1.37	1.53
10	J	188	GLY	C-O	-14.70	1.00	1.23
34	i	188	U	C2'-C1'	-14.68	1.37	1.53
34	i	1587	C	O4'-C1'	14.68	1.60	1.41
34	i	1703	C	O4'-C1'	14.66	1.60	1.41
34	i	1090	C	O4'-C1'	14.66	1.60	1.41
34	i	1828	A	C2'-C1'	-14.66	1.37	1.53
34	i	1656	A	C2'-C1'	-14.65	1.37	1.53
34	i	1142	C	C2'-C1'	-14.61	1.37	1.53
34	i	873	C	O4'-C1'	14.59	1.60	1.41
34	i	81	U	C2'-C1'	-14.57	1.37	1.53
9	I	207	GLY	C-O	-14.56	1.00	1.23
25	Y	128	GLY	C-O	-14.56	1.00	1.23
34	i	1230	C	O4'-C1'	14.55	1.60	1.41
34	i	1216	A	C2'-C1'	-14.54	1.37	1.53
34	i	845	A	C2'-C1'	-14.51	1.37	1.53
34	i	1289	A	O4'-C1'	14.48	1.60	1.41
26	Z	115	GLY	C-O	-14.46	1.00	1.23
34	i	431	C	O4'-C1'	14.45	1.60	1.41
2	B	233	GLY	C-O	-14.43	1.00	1.23
34	i	431	C	C2'-C1'	-14.43	1.37	1.53
34	i	1699	C	O4'-C1'	14.42	1.60	1.41
34	i	914	U	C2'-C1'	-14.42	1.37	1.53
5	E	263	GLY	C-O	-14.40	1.00	1.23
34	i	1014	U	C2'-C1'	-14.40	1.37	1.53
21	U	93	SER	C-N	14.39	1.61	1.34
34	i	1144	A	O4'-C1'	-14.35	1.23	1.41
34	i	1229	G	C2'-C1'	-14.34	1.37	1.53
34	i	1263	C	C2'-C1'	-14.33	1.37	1.53
34	i	1376	C	O4'-C1'	14.33	1.60	1.41
34	i	438	A	O4'-C1'	-14.33	1.23	1.41
9	I	43	ILE	C-N	14.30	1.67	1.34
34	i	144	U	O4'-C1'	14.30	1.60	1.41
34	i	804	A	C2'-C1'	-14.28	1.37	1.53
34	i	1416	G	C2'-C1'	-14.27	1.37	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1214	C	O4'-C1'	14.26	1.60	1.41
34	i	1611	U	C2'-C1'	-14.25	1.37	1.53
34	i	215	U	O4'-C1'	14.24	1.60	1.41
34	i	1755	U	C2'-C1'	-14.19	1.37	1.53
34	i	1738	G	O4'-C1'	14.16	1.60	1.41
34	i	1691	C	O4'-C1'	14.15	1.60	1.41
18	R	1	MET	CA-C	-14.13	1.16	1.52
34	i	35	C	O4'-C1'	14.11	1.59	1.41
34	i	1140	A	C2'-C1'	-14.11	1.37	1.53
34	i	1184	A	O4'-C1'	14.10	1.59	1.41
34	i	852	C	O4'-C1'	14.06	1.59	1.41
34	i	1801	C	C2'-C1'	-14.06	1.37	1.53
34	i	1520	C	O4'-C1'	14.01	1.59	1.41
34	i	1587	C	C2'-C1'	-14.01	1.38	1.53
34	i	187	C	O4'-C1'	13.99	1.59	1.41
34	i	915	A	C2'-C1'	-13.99	1.38	1.53
34	i	616	G	O4'-C1'	13.98	1.59	1.41
34	i	1793	G	C2'-C1'	-13.98	1.38	1.53
34	i	1602	A	C2'-C1'	-13.98	1.38	1.53
34	i	623	C	C2'-C1'	-13.94	1.38	1.53
34	i	1736	U	O4'-C1'	13.93	1.59	1.41
34	i	1003	C	O4'-C1'	13.92	1.59	1.41
34	i	1557	C	C2'-C1'	-13.91	1.38	1.53
34	i	830	C	O4'-C1'	13.91	1.59	1.41
34	i	1251	G	C2'-C1'	-13.91	1.38	1.53
34	i	947	C	O4'-C1'	13.90	1.59	1.41
34	i	168	C	O4'-C1'	13.84	1.59	1.41
34	i	735	C	O4'-C1'	13.81	1.59	1.41
34	i	1617	U	O4'-C1'	13.79	1.59	1.41
34	i	1693	C	O4'-C1'	13.78	1.59	1.41
34	i	1433	C	O4'-C1'	13.76	1.59	1.41
34	i	801	U	O4'-C1'	13.76	1.59	1.41
34	i	312	C	O4'-C1'	13.75	1.59	1.41
34	i	1427	G	C2'-C1'	-13.74	1.38	1.53
34	i	1002	C	O4'-C1'	13.71	1.59	1.41
34	i	1419	C	O4'-C1'	13.71	1.59	1.41
34	i	605	C	O4'-C1'	13.71	1.59	1.41
34	i	1765	G	C2'-C1'	-13.70	1.38	1.53
34	i	887	G	C2'-C1'	-13.69	1.38	1.53
34	i	734	C	O4'-C1'	13.68	1.59	1.41
34	i	564	A	O4'-C1'	13.67	1.59	1.41
34	i	852	C	C2'-C1'	-13.66	1.38	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1400	U	O4'-C1'	13.65	1.59	1.41
34	i	884	U	C2'-C1'	-13.65	1.38	1.53
34	i	1411	C	O4'-C1'	13.63	1.59	1.41
34	i	1263	C	O4'-C1'	13.62	1.59	1.41
34	i	13	C	O4'-C1'	13.57	1.59	1.41
34	i	402	G	O4'-C1'	13.57	1.59	1.41
34	i	1666	G	O4'-C1'	13.53	1.59	1.41
34	i	377	C	O4'-C1'	13.53	1.59	1.41
34	i	340	C	O4'-C1'	13.53	1.59	1.41
34	i	728	U	O4'-C1'	13.51	1.59	1.41
34	i	1805	C	O4'-C1'	13.50	1.59	1.41
34	i	903	G	C2'-C1'	-13.48	1.38	1.53
34	i	1241	G	C2'-C1'	-13.48	1.38	1.53
34	i	1270	G	C2'-C1'	-13.48	1.38	1.53
34	i	1436	C	O4'-C1'	13.46	1.59	1.41
34	i	1471	G	C2'-C1'	-13.45	1.38	1.53
34	i	1404	U	O4'-C1'	13.44	1.59	1.41
34	i	1639	C	C2'-C1'	-13.43	1.38	1.53
34	i	538	C	C2'-C1'	-13.41	1.38	1.53
34	i	548	G	C2'-C1'	-13.39	1.38	1.53
34	i	1777	C	O4'-C1'	13.39	1.59	1.41
34	i	980	C	C2'-C1'	-13.38	1.38	1.53
34	i	1091	U	C2'-C1'	-13.36	1.38	1.53
34	i	858	A	O4'-C1'	13.35	1.59	1.41
34	i	1577	C	C2'-C1'	-13.33	1.38	1.53
34	i	54	A	O4'-C1'	13.33	1.58	1.41
34	i	1022	C	O4'-C1'	13.33	1.58	1.41
34	i	568	C	O4'-C1'	13.32	1.58	1.41
34	i	1847	C	O4'-C1'	13.32	1.58	1.41
34	i	1267	C	O4'-C1'	13.32	1.58	1.41
34	i	1063	C	O4'-C1'	13.31	1.58	1.41
34	i	1406	C	C2'-C1'	-13.30	1.38	1.53
34	i	1623	C	C2'-C1'	-13.30	1.38	1.53
34	i	144	U	C2'-C1'	-13.29	1.38	1.53
34	i	510	A	C2'-C1'	-13.28	1.38	1.53
34	i	1074	C	C2'-C1'	-13.26	1.38	1.53
34	i	287	U	O4'-C1'	13.21	1.58	1.41
34	i	1015	C	O4'-C1'	13.21	1.58	1.41
34	i	826	A	O4'-C1'	-13.20	1.24	1.41
34	i	1433	C	C2'-C1'	-13.19	1.38	1.53
34	i	1455	G	C2'-C1'	-13.18	1.38	1.53
34	i	1583	A	C2'-C1'	-13.18	1.38	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	786	C	O4'-C1'	13.14	1.58	1.41
34	i	986	A	O4'-C1'	13.13	1.58	1.41
34	i	1128	C	C2'-C1'	-13.12	1.39	1.53
34	i	1232	G	O4'-C1'	-13.10	1.24	1.41
34	i	174	C	O4'-C1'	13.09	1.58	1.41
34	i	565	A	O4'-C1'	13.08	1.58	1.41
34	i	1542	C	O4'-C1'	13.06	1.58	1.41
34	i	1257	C	O4'-C1'	13.04	1.58	1.41
34	i	1447	G	O4'-C1'	13.04	1.58	1.41
34	i	1600	G	C2'-C1'	-13.01	1.39	1.53
34	i	542	G	C2'-C1'	-13.00	1.39	1.53
34	i	1771	G	C2'-C1'	-12.98	1.39	1.53
34	i	1683	C	O4'-C1'	12.95	1.58	1.41
34	i	1690	A	O4'-C1'	12.94	1.58	1.41
34	i	274	G	C2'-C1'	-12.91	1.39	1.53
34	i	1122	G	C2'-C1'	-12.91	1.39	1.53
34	i	1160	G	C2'-C1'	-12.90	1.39	1.53
34	i	1546	U	C2'-C1'	-12.90	1.39	1.53
34	i	1539	C	O4'-C1'	12.88	1.58	1.41
34	i	687	G	O4'-C1'	12.88	1.58	1.41
34	i	1075	C	O4'-C1'	12.82	1.58	1.41
34	i	1856	G	O4'-C1'	12.82	1.58	1.41
34	i	1515	G	C2'-C1'	-12.82	1.39	1.53
34	i	1563	C	O4'-C1'	12.79	1.58	1.41
34	i	1715	U	C2'-C1'	12.79	1.67	1.53
34	i	1390	G	C2'-C1'	-12.77	1.39	1.53
34	i	546	U	C2'-C1'	-12.76	1.39	1.53
34	i	646	G	C2'-C1'	-12.75	1.39	1.53
34	i	1792	C	C2'-C1'	-12.74	1.39	1.53
34	i	282	G	C2'-C1'	-12.73	1.39	1.53
34	i	853	U	C2'-C1'	-12.72	1.39	1.53
34	i	1837	G	C2'-C1'	-12.72	1.39	1.53
34	i	539	C	O4'-C1'	12.71	1.58	1.41
34	i	726	C	C2'-C1'	-12.71	1.39	1.53
34	i	788	C	O4'-C1'	12.70	1.58	1.41
34	i	973	C	O4'-C1'	12.69	1.58	1.41
34	i	985	C	O4'-C1'	12.68	1.58	1.41
34	i	484	C	O4'-C1'	12.65	1.58	1.41
34	i	731	C	O4'-C1'	12.65	1.58	1.41
34	i	1451	A	O4'-C1'	12.64	1.58	1.41
34	i	193	C	O4'-C1'	12.62	1.58	1.41
34	i	1113	C	O4'-C1'	-12.61	1.25	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1677	C	O4'-C1'	12.60	1.58	1.41
34	i	981	G	C2'-C1'	-12.59	1.39	1.53
34	i	1087	C	O4'-C1'	12.58	1.58	1.41
34	i	324	C	O4'-C1'	12.56	1.57	1.41
34	i	1786	G	C2'-C1'	-12.53	1.39	1.53
34	i	1326	G	C2'-C1'	-12.52	1.39	1.53
34	i	1079	A	C2'-C1'	-12.49	1.39	1.53
34	i	80	G	O4'-C1'	12.47	1.57	1.41
34	i	155	G	C2'-C1'	-12.46	1.39	1.53
34	i	1165	G	C2'-C1'	-12.45	1.39	1.53
34	i	482	C	O4'-C1'	12.45	1.57	1.41
34	i	1376	C	C2'-C1'	-12.45	1.39	1.53
34	i	798	A	C2'-C1'	-12.44	1.39	1.53
34	i	48	C	O4'-C1'	12.44	1.57	1.41
34	i	907	C	C2'-C1'	-12.41	1.39	1.53
34	i	1436	C	C2'-C1'	-12.41	1.39	1.53
34	i	1300	U	C2'-C1'	-12.40	1.39	1.53
34	i	638	A	C2'-C1'	-12.40	1.39	1.53
34	i	1063	C	C2'-C1'	-12.38	1.39	1.53
34	i	369	C	C2'-C1'	-12.38	1.39	1.53
34	i	1632	A	C2'-C1'	12.38	1.67	1.53
34	i	1261	A	C2'-C1'	-12.38	1.39	1.53
34	i	1003	C	C2'-C1'	-12.37	1.39	1.53
34	i	1259	U	O4'-C1'	12.36	1.57	1.41
34	i	741	C	C2'-C1'	-12.36	1.39	1.53
34	i	1338	U	O4'-C1'	12.36	1.57	1.41
34	i	1262	C	C2'-C1'	-12.35	1.39	1.53
34	i	1579	G	C2'-C1'	-12.35	1.39	1.53
34	i	34	U	C2'-C1'	-12.35	1.39	1.53
34	i	622	C	C2'-C1'	-12.34	1.39	1.53
34	i	1711	C	O4'-C1'	12.33	1.57	1.41
34	i	746	C	O4'-C1'	12.33	1.57	1.41
13	M	132	LYS	C-OXT	-12.30	0.99	1.23
34	i	744	C	O4'-C1'	12.29	1.57	1.41
34	i	748	G	C2'-C1'	-12.29	1.39	1.53
34	i	1322	U	O4'-C1'	12.29	1.57	1.41
34	i	751	C	O4'-C1'	12.28	1.57	1.41
34	i	611	C	C2'-C1'	-12.24	1.39	1.53
34	i	650	C	O4'-C1'	12.23	1.57	1.41
34	i	1002	C	C2'-C1'	-12.21	1.40	1.53
34	i	1542	C	C2'-C1'	-12.18	1.40	1.53
34	i	1801	C	O4'-C1'	12.18	1.57	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	869	G	C2'-C1'	-12.17	1.40	1.53
31	e	133	SER	C-OXT	-12.16	1.00	1.23
34	i	1524	C	C2'-C1'	-12.15	1.40	1.53
34	i	1116	U	C2'-C1'	-12.15	1.40	1.53
14	N	151	ALA	C-OXT	-12.15	1.00	1.23
23	W	130	PHE	C-O	-12.14	1.00	1.23
34	i	1262	C	O4'-C1'	12.14	1.57	1.41
34	i	1734	C	O4'-C1'	12.14	1.57	1.41
20	T	144	LYS	C-O	-12.13	1.00	1.23
34	i	62	G	O4'-C1'	12.13	1.57	1.41
34	i	64	A	O4'-C1'	-12.12	1.25	1.41
34	i	522	C	O4'-C1'	12.12	1.57	1.41
30	d	56	ASP	C-O	-12.11	1.00	1.23
32	f	152	LYS	C-O	-12.10	1.00	1.23
34	i	1548	C	O4'-C1'	-12.10	1.25	1.41
13	M	132	LYS	C-O	-12.09	1.00	1.23
3	C	263	THR	C-O	-12.07	1.00	1.23
8	H	194	LEU	C-O	-12.07	1.00	1.23
34	i	970	C	C2'-C1'	-12.07	1.40	1.53
28	b	84	HIS	C-OXT	-12.07	1.00	1.23
34	i	1532	A	O4'-C1'	12.06	1.57	1.41
34	i	1222	G	O4'-C1'	12.05	1.57	1.41
30	d	56	ASP	C-OXT	-12.04	1.00	1.23
14	N	151	ALA	C-O	-12.04	1.00	1.23
34	i	598	C	O4'-C1'	12.04	1.57	1.41
4	D	227	LYS	C-O	-12.03	1.00	1.23
31	e	133	SER	C-O	-12.03	1.00	1.23
11	K	98	ARG	C-O	-12.03	1.00	1.23
5	E	263	GLY	C-OXT	-12.02	1.00	1.23
34	i	1737	C	C2'-C1'	-12.02	1.40	1.53
34	i	623	C	O4'-C1'	12.02	1.57	1.41
34	i	1312	C	C2'-C1'	-12.02	1.40	1.53
33	g	314	ILE	C-O	-12.02	1.00	1.23
34	i	56	G	C2'-C1'	-12.02	1.40	1.53
6	F	204	ARG	C-O	-12.01	1.00	1.23
12	L	158	PHE	C-O	-12.01	1.00	1.23
24	X	142	ARG	C-O	-12.01	1.00	1.23
34	i	1066	A	C2'-C1'	-12.01	1.40	1.53
34	i	1428	U	O4'-C1'	12.00	1.57	1.41
34	i	299	G	O4'-C1'	11.98	1.57	1.41
34	i	1009	U	C2'-C1'	-11.98	1.40	1.53
12	L	158	PHE	C-OXT	-11.98	1.00	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	F	204	ARG	C-OXT	-11.98	1.00	1.23
23	W	130	PHE	C-OXT	-11.97	1.00	1.23
8	H	194	LEU	C-OXT	-11.96	1.00	1.23
34	i	465	C	O4'-C1'	11.96	1.57	1.41
29	c	68	LEU	C-O	-11.94	1.00	1.23
34	i	583	C	O4'-C1'	11.94	1.57	1.41
1	A	209	GLU	C-O	-11.93	1.00	1.23
34	i	302	C	O4'-C1'	11.93	1.57	1.41
34	i	1650	C	O4'-C1'	11.91	1.57	1.41
34	i	553	G	O4'-C1'	11.90	1.57	1.41
34	i	1114	C	C2'-C1'	11.90	1.66	1.53
28	b	84	HIS	C-O	-11.89	1.00	1.23
34	i	1060	C	O4'-C1'	11.87	1.57	1.41
34	i	67	C	C2'-C1'	11.86	1.66	1.53
34	i	664	C	C2'-C1'	-11.86	1.40	1.53
34	i	1628	A	O4'-C1'	11.86	1.57	1.41
10	J	146	SER	C-N	11.84	1.61	1.34
34	i	276	U	O4'-C1'	11.82	1.57	1.41
34	i	727	G	C2'-C1'	-11.82	1.40	1.53
34	i	667	G	C2'-C1'	-11.81	1.40	1.53
34	i	833	A	C2'-C1'	-11.79	1.40	1.53
34	i	1195	A	C2'-C1'	-11.80	1.40	1.53
34	i	1573	U	C2'-C1'	11.79	1.66	1.53
34	i	612	C	O4'-C1'	11.79	1.56	1.41
34	i	18	C	O4'-C1'	11.79	1.56	1.41
34	i	1404	U	C2'-C1'	-11.78	1.40	1.53
34	i	569	C	O4'-C1'	11.76	1.56	1.41
34	i	670	G	C2'-C1'	-11.75	1.40	1.53
34	i	906	G	C2'-C1'	-11.74	1.40	1.53
34	i	1387	C	O4'-C1'	11.74	1.56	1.41
34	i	971	G	C2'-C1'	-11.73	1.40	1.53
34	i	864	G	O4'-C1'	11.72	1.56	1.41
34	i	639	U	C2'-C1'	-11.70	1.40	1.53
34	i	907	C	O4'-C1'	11.69	1.56	1.41
34	i	318	U	C2'-C1'	-11.69	1.40	1.53
34	i	549	G	C2'-C1'	-11.68	1.40	1.53
34	i	396	U	C2'-C1'	-11.68	1.40	1.53
34	i	325	G	O4'-C1'	-11.67	1.26	1.41
34	i	471	C	C2'-C1'	-11.66	1.40	1.53
34	i	668	U	C2'-C1'	-11.66	1.40	1.53
34	i	682	G	C2'-C1'	-11.66	1.40	1.53
34	i	1788	C	O4'-C1'	11.65	1.56	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1537	C	O4'-C1'	11.64	1.56	1.41
34	i	539	C	C2'-C1'	-11.61	1.40	1.53
34	i	746	C	C2'-C1'	-11.59	1.40	1.53
34	i	606	A	O4'-C1'	11.58	1.56	1.41
34	i	1260	C	C2'-C1'	-11.58	1.40	1.53
34	i	622	C	O4'-C1'	11.57	1.56	1.41
34	i	745	U	O4'-C1'	11.56	1.56	1.41
34	i	589	A	C2'-C1'	-11.55	1.40	1.53
34	i	1181	C	O4'-C1'	11.54	1.56	1.41
34	i	1323	G	C2'-C1'	-11.53	1.40	1.53
34	i	48	C	C2'-C1'	-11.53	1.40	1.53
34	i	407	C	O4'-C1'	11.50	1.56	1.41
34	i	851	G	C2'-C1'	-11.50	1.40	1.53
34	i	545	A	O4'-C1'	11.49	1.56	1.41
34	i	887	G	O4'-C1'	11.49	1.56	1.41
34	i	1698	C	O4'-C1'	11.49	1.56	1.41
19	S	141	ARG	C-N	11.47	1.60	1.34
34	i	1074	C	O4'-C1'	11.47	1.56	1.41
34	i	805	A	C2'-C1'	-11.44	1.40	1.53
34	i	1124	C	O4'-C1'	11.44	1.56	1.41
34	i	976	A	C2'-C1'	-11.44	1.40	1.53
34	i	436	G	C2'-C1'	-11.43	1.40	1.53
34	i	436	G	O4'-C1'	11.43	1.56	1.41
34	i	1114	C	O4'-C1'	-11.41	1.26	1.41
34	i	936	U	C2'-C1'	-11.39	1.40	1.53
34	i	947	C	C2'-C1'	-11.38	1.40	1.53
25	Y	86	GLU	C-N	11.38	1.55	1.34
34	i	900	A	O4'-C1'	11.37	1.56	1.41
34	i	521	A	O4'-C1'	11.36	1.56	1.41
34	i	559	A	C2'-C1'	-11.36	1.40	1.53
34	i	1202	G	C2'-C1'	-11.35	1.40	1.53
34	i	1732	G	O4'-C1'	11.34	1.56	1.41
34	i	1025	G	C2'-C1'	-11.33	1.40	1.53
34	i	754	C	O4'-C1'	11.30	1.56	1.41
34	i	1015	C	C2'-C1'	-11.29	1.41	1.53
34	i	335	U	C2'-C1'	-11.28	1.41	1.53
34	i	288	A	C2'-C1'	-11.27	1.41	1.53
34	i	414	C	O4'-C1'	11.27	1.56	1.41
34	i	500	G	C2'-C1'	-11.27	1.41	1.53
34	i	1044	G	O4'-C1'	11.25	1.56	1.41
34	i	964	U	O4'-C1'	11.25	1.56	1.41
34	i	1101	G	C2'-C1'	-11.24	1.41	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1792	C	O4'-C1'	11.23	1.56	1.41
34	i	938	G	C2'-C1'	-11.23	1.41	1.53
34	i	1669	G	O4'-C1'	11.22	1.56	1.41
34	i	635	C	O4'-C1'	11.21	1.56	1.41
34	i	395	G	C2'-C1'	-11.21	1.41	1.53
34	i	1220	G	C2'-C1'	-11.21	1.41	1.53
34	i	1775	A	C2'-C1'	-11.20	1.41	1.53
34	i	323	G	C2'-C1'	-11.19	1.41	1.53
34	i	839	C	O4'-C1'	11.19	1.56	1.41
34	i	84	A	O4'-C1'	11.19	1.56	1.41
7	G	131	ARG	CG-CD	11.19	1.79	1.51
34	i	1653	G	C2'-C1'	-11.18	1.41	1.53
34	i	736	C	O4'-C1'	11.17	1.56	1.41
34	i	452	C	C2'-C1'	-11.16	1.41	1.53
23	W	2	VAL	C-N	11.16	1.59	1.34
34	i	479	A	O4'-C1'	11.15	1.56	1.41
7	G	131	ARG	C-N	11.14	1.59	1.34
34	i	360	G	C2'-C1'	-11.14	1.41	1.53
34	i	1448	A	O4'-C1'	11.13	1.56	1.41
34	i	402	G	C2'-C1'	-11.09	1.41	1.53
34	i	347	C	C2'-C1'	-11.08	1.41	1.53
34	i	77	A	C2'-C1'	11.05	1.65	1.53
34	i	1238	U	C2'-C1'	-11.05	1.41	1.53
34	i	4	C	O4'-C1'	11.04	1.55	1.41
34	i	1585	C	O4'-C1'	11.02	1.55	1.41
34	i	1289	A	C2'-C1'	-10.99	1.41	1.53
34	i	871	A	O4'-C1'	10.98	1.55	1.41
34	i	462	C	O4'-C1'	10.97	1.55	1.41
34	i	691	G	C2'-C1'	-10.97	1.41	1.53
34	i	1120	C	C2'-C1'	-10.96	1.41	1.53
18	R	1	MET	C-N	-10.95	1.13	1.33
34	i	1226	C	O4'-C1'	10.94	1.55	1.41
34	i	1568	G	C2'-C1'	-10.94	1.41	1.53
34	i	432	C	O4'-C1'	10.93	1.55	1.41
34	i	414	C	C2'-C1'	-10.92	1.41	1.53
34	i	633	A	O4'-C1'	10.92	1.55	1.41
34	i	483	A	C2'-C1'	-10.90	1.41	1.53
34	i	582	C	O4'-C1'	-10.90	1.27	1.41
34	i	751	C	C2'-C1'	-10.90	1.41	1.53
34	i	1369	C	O4'-C1'	10.90	1.55	1.41
34	i	1403	U	C2'-C1'	-10.89	1.41	1.53
34	i	1048	A	O4'-C1'	10.89	1.55	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	547	U	C2'-C1'	-10.89	1.41	1.53
34	i	1496	G	O4'-C1'	10.88	1.55	1.41
34	i	1813	A	C2'-C1'	-10.88	1.41	1.53
34	i	488	C	O4'-C1'	10.87	1.55	1.41
34	i	640	A	O4'-C1'	10.86	1.55	1.41
34	i	916	A	C2'-C1'	-10.86	1.41	1.53
34	i	1603	U	O4'-C1'	10.86	1.55	1.41
34	i	1527	C	C2'-C1'	-10.84	1.41	1.53
34	i	901	C	O4'-C1'	10.83	1.55	1.41
34	i	1159	C	O4'-C1'	10.83	1.55	1.41
34	i	870	G	C2'-C1'	-10.82	1.41	1.53
34	i	286	C	C2'-C1'	-10.82	1.41	1.53
34	i	1050	G	C2'-C1'	-10.81	1.41	1.53
34	i	664	C	O4'-C1'	10.81	1.55	1.41
34	i	480	C	O4'-C1'	10.80	1.55	1.41
34	i	1400	U	C2'-C1'	-10.79	1.41	1.53
34	i	1259	U	C2'-C1'	-10.79	1.41	1.53
34	i	1547	G	C2'-C1'	10.79	1.65	1.53
34	i	1807	A	C2'-C1'	-10.79	1.41	1.53
34	i	327	C	C2'-C1'	-10.77	1.41	1.53
34	i	1208	G	C2'-C1'	-10.77	1.41	1.53
34	i	1209	C	O4'-C1'	10.76	1.55	1.41
34	i	308	C	O4'-C1'	10.76	1.55	1.41
34	i	507	C	C2'-C1'	-10.74	1.41	1.53
34	i	1176	C	O4'-C1'	10.74	1.55	1.41
34	i	1578	C	O4'-C1'	10.74	1.55	1.41
34	i	1834	U	C2'-C1'	-10.71	1.41	1.53
34	i	1481	U	O4'-C1'	10.71	1.55	1.41
34	i	1684	C	C2'-C1'	-10.71	1.41	1.53
34	i	1716	U	C2'-C1'	10.70	1.65	1.53
34	i	975	C	O4'-C1'	10.70	1.55	1.41
34	i	839	C	C2'-C1'	-10.69	1.41	1.53
34	i	812	A	O4'-C1'	10.69	1.55	1.41
34	i	1729	G	C2'-C1'	-10.69	1.41	1.53
34	i	1708	C	O4'-C1'	10.68	1.55	1.41
34	i	529	C	O4'-C1'	10.65	1.55	1.41
34	i	352	C	O4'-C1'	10.65	1.55	1.41
34	i	1624	C	C2'-C1'	-10.63	1.41	1.53
34	i	143	U	O4'-C1'	10.62	1.55	1.41
34	i	54	A	C2'-C1'	-10.59	1.41	1.53
34	i	1258	C	O4'-C1'	10.59	1.55	1.41
34	i	1280	A	O4'-C1'	10.58	1.55	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	547	U	O4'-C1'	10.58	1.55	1.41
19	S	54	LYS	N-CA	10.57	1.67	1.46
34	i	16	G	C2'-C1'	-10.57	1.41	1.53
34	i	933	C	O4'-C1'	10.57	1.55	1.41
34	i	1301	C	C2'-C1'	-10.56	1.41	1.53
9	I	43	ILE	CA-C	-10.54	1.25	1.52
34	i	1257	C	C2'-C1'	-10.54	1.41	1.53
34	i	1755	U	O4'-C1'	10.54	1.55	1.41
19	S	40	TYR	C-N	-10.54	1.09	1.34
34	i	1207	G	C2'-C1'	-10.54	1.41	1.53
34	i	1481	U	C2'-C1'	-10.53	1.41	1.53
34	i	1200	A	O4'-C1'	10.53	1.55	1.41
34	i	230	C	O4'-C1'	10.51	1.55	1.41
34	i	1778	G	O4'-C1'	10.51	1.55	1.41
34	i	605	C	C2'-C1'	-10.50	1.41	1.53
34	i	416	A	O4'-C1'	10.50	1.55	1.41
34	i	385	G	C2'-C1'	-10.50	1.41	1.53
34	i	449	C	O4'-C1'	10.48	1.55	1.41
34	i	487	C	O4'-C1'	10.47	1.55	1.41
34	i	1617	U	C2'-C1'	-10.47	1.41	1.53
34	i	50	A	C2'-C1'	-10.46	1.41	1.53
34	i	1411	C	C2'-C1'	-10.45	1.41	1.53
34	i	316	C	O4'-C1'	10.45	1.55	1.41
34	i	875	C	C2'-C1'	-10.44	1.41	1.53
34	i	382	A	O4'-C1'	10.42	1.55	1.41
34	i	984	C	C2'-C1'	-10.42	1.41	1.53
34	i	560	C	O4'-C1'	10.42	1.55	1.41
34	i	729	C	O4'-C1'	10.40	1.55	1.41
34	i	1105	C	O4'-C1'	-10.40	1.28	1.41
34	i	1230	C	C2'-C1'	-10.40	1.42	1.53
34	i	355	C	O4'-C1'	10.39	1.55	1.41
34	i	178	C	C2'-C1'	-10.38	1.42	1.53
34	i	1578	C	C2'-C1'	-10.38	1.42	1.53
34	i	1682	C	C2'-C1'	-10.38	1.42	1.53
34	i	170	A	O4'-C1'	-10.38	1.28	1.41
34	i	868	A	O4'-C1'	-10.37	1.28	1.41
34	i	1576	C	O4'-C1'	10.36	1.55	1.41
34	i	1128	C	O4'-C1'	10.36	1.55	1.41
34	i	1700	C	O4'-C1'	10.33	1.55	1.41
34	i	1835	C	O4'-C1'	10.33	1.55	1.41
34	i	1165	G	O4'-C1'	10.32	1.55	1.41
34	i	1752	G	C2'-C1'	-10.32	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1398	A	O4'-C1'	10.31	1.55	1.41
34	i	1181	C	C2'-C1'	-10.30	1.42	1.53
34	i	825	C	O4'-C1'	10.27	1.54	1.41
34	i	1783	G	O4'-C1'	10.26	1.54	1.41
34	i	1309	A	C2'-C1'	-10.26	1.42	1.53
34	i	84	A	C2'-C1'	-10.25	1.42	1.53
34	i	683	G	C2'-C1'	-10.25	1.42	1.53
34	i	120	U	C2'-C1'	-10.24	1.42	1.53
34	i	1375	A	C2'-C1'	-10.24	1.42	1.53
34	i	653	C	C2'-C1'	-10.23	1.42	1.53
34	i	1410	A	C2'-C1'	-10.23	1.42	1.53
34	i	241	A	O4'-C1'	10.22	1.54	1.41
34	i	563	U	C2'-C1'	-10.22	1.42	1.53
34	i	52	G	C2'-C1'	-10.21	1.42	1.53
34	i	1076	A	O4'-C1'	-10.20	1.28	1.41
34	i	1827	C	O4'-C1'	10.20	1.54	1.41
34	i	1682	C	O4'-C1'	10.20	1.54	1.41
34	i	558	C	O4'-C1'	10.19	1.54	1.41
34	i	79	A	C2'-C1'	10.19	1.64	1.53
34	i	956	U	O4'-C1'	10.19	1.54	1.41
34	i	1139	A	C2'-C1'	-10.18	1.42	1.53
34	i	823	A	C2'-C1'	-10.18	1.42	1.53
34	i	352	C	C2'-C1'	-10.17	1.42	1.53
34	i	410	G	C2'-C1'	-10.16	1.42	1.53
34	i	313	C	O4'-C1'	10.16	1.54	1.41
34	i	1271	G	C2'-C1'	-10.15	1.42	1.53
34	i	1486	G	C2'-C1'	-10.15	1.42	1.53
34	i	1098	G	C2'-C1'	-10.15	1.42	1.53
34	i	1324	G	C2'-C1'	-10.14	1.42	1.53
34	i	209	C	O4'-C1'	10.14	1.54	1.41
34	i	1272	A	O4'-C1'	10.14	1.54	1.41
34	i	82	G	C2'-C1'	10.12	1.64	1.53
34	i	977	A	O4'-C1'	10.10	1.54	1.41
34	i	1133	U	O4'-C1'	10.10	1.54	1.41
34	i	1377	G	O4'-C1'	-10.10	1.28	1.41
34	i	1573	U	O4'-C1'	-10.09	1.28	1.41
34	i	76	U	O4'-C1'	10.08	1.54	1.41
34	i	809	A	O4'-C1'	10.08	1.54	1.41
34	i	428	G	C2'-C1'	10.07	1.64	1.53
34	i	1316	G	O4'-C1'	-10.07	1.28	1.41
34	i	1651	G	C2'-C1'	-10.06	1.42	1.53
34	i	1096	A	O4'-C1'	10.06	1.54	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1312	C	O4'-C1'	10.05	1.54	1.41
34	i	1594	U	C2'-C1'	10.05	1.64	1.53
34	i	1071	C	C2'-C1'	-10.04	1.42	1.53
34	i	1787	A	O4'-C1'	10.04	1.54	1.41
34	i	311	C	C2'-C1'	-10.03	1.42	1.53
34	i	855	G	C2'-C1'	-10.03	1.42	1.53
34	i	1740	A	C2'-C1'	10.03	1.64	1.53
34	i	142	C	O4'-C1'	-10.02	1.28	1.41
34	i	437	A	C2'-C1'	10.02	1.64	1.53
34	i	149	A	O4'-C1'	10.01	1.54	1.41
34	i	1209	C	C2'-C1'	-10.01	1.42	1.53
34	i	75	G	C2'-C1'	-10.00	1.42	1.53
34	i	588	G	C2'-C1'	-9.99	1.42	1.53
34	i	315	C	C2'-C1'	9.98	1.64	1.53
34	i	1359	C	O4'-C1'	9.96	1.54	1.41
34	i	1006	G	O4'-C1'	-9.96	1.28	1.41
34	i	1600	G	O4'-C1'	9.95	1.54	1.41
34	i	1559	C	O4'-C1'	9.95	1.54	1.41
34	i	1766	C	C2'-C1'	-9.95	1.42	1.53
34	i	85	A	C2'-C1'	-9.93	1.42	1.53
34	i	1428	U	C2'-C1'	-9.93	1.42	1.53
34	i	1678	C	O4'-C1'	9.93	1.54	1.41
34	i	946	C	O4'-C1'	9.92	1.54	1.41
34	i	1779	C	C2'-C1'	9.91	1.64	1.53
34	i	544	A	C2'-C1'	-9.91	1.42	1.53
34	i	1819	A	C2'-C1'	9.90	1.64	1.53
34	i	486	C	O4'-C1'	9.89	1.54	1.41
34	i	111	A	O4'-C1'	-9.89	1.28	1.41
34	i	96	C	O4'-C1'	9.88	1.54	1.41
34	i	1504	A	C2'-C1'	9.87	1.64	1.53
34	i	66	G	O4'-C1'	9.86	1.54	1.41
34	i	392	C	O4'-C1'	9.86	1.54	1.41
34	i	1329	U	C2'-C1'	9.83	1.64	1.53
34	i	359	C	C2'-C1'	-9.83	1.42	1.53
34	i	560	C	C2'-C1'	-9.83	1.42	1.53
34	i	1338	U	C2'-C1'	-9.83	1.42	1.53
34	i	1822	C	O4'-C1'	9.82	1.54	1.41
34	i	1201	C	C2'-C1'	-9.82	1.42	1.53
34	i	533	C	O4'-C1'	9.82	1.54	1.41
34	i	1055	G	C2'-C1'	-9.81	1.42	1.53
34	i	193	C	C2'-C1'	-9.81	1.42	1.53
34	i	645	A	C2'-C1'	-9.80	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1467	C	C2'-C1'	-9.80	1.42	1.53
34	i	1536	G	C2'-C1'	-9.78	1.42	1.53
34	i	88	G	C2'-C1'	-9.78	1.42	1.53
34	i	1029	G	C2'-C1'	-9.78	1.42	1.53
34	i	932	G	C2'-C1'	-9.76	1.42	1.53
34	i	1585	C	C2'-C1'	-9.76	1.42	1.53
34	i	298	G	O4'-C1'	-9.75	1.28	1.41
34	i	1099	C	C2'-C1'	-9.75	1.42	1.53
34	i	564	A	C2'-C1'	-9.74	1.42	1.53
34	i	1031	A	C2'-C1'	-9.74	1.42	1.53
34	i	487	C	C2'-C1'	-9.73	1.42	1.53
34	i	1462	G	C2'-C1'	-9.73	1.42	1.53
34	i	1204	A	C2'-C1'	9.72	1.64	1.53
34	i	507	C	O4'-C1'	9.71	1.54	1.41
34	i	829	C	C2'-C1'	-9.71	1.42	1.53
34	i	1669	G	C2'-C1'	-9.71	1.42	1.53
34	i	150	A	O4'-C1'	9.70	1.54	1.41
34	i	654	A	C2'-C1'	-9.69	1.42	1.53
34	i	1784	A	C2'-C1'	-9.69	1.42	1.53
34	i	31	U	C2'-C1'	9.68	1.64	1.53
34	i	448	A	O4'-C1'	9.65	1.54	1.41
34	i	1120	C	O4'-C1'	9.65	1.54	1.41
34	i	481	C	C2'-C1'	-9.65	1.42	1.53
34	i	1572	G	O4'-C1'	9.64	1.54	1.41
34	i	1742	C	O3'-P	-9.64	1.49	1.61
34	i	1337	C	O4'-C1'	9.63	1.54	1.41
34	i	1432	C	C2'-C1'	-9.63	1.42	1.53
34	i	1320	G	C2'-C1'	-9.63	1.42	1.53
34	i	1296	U	O4'-C1'	-9.62	1.29	1.41
34	i	67	C	O4'-C1'	-9.61	1.29	1.41
34	i	743	U	O4'-C1'	9.61	1.54	1.41
34	i	1464	C	O4'-C1'	9.61	1.54	1.41
34	i	419	C	O4'-C1'	9.61	1.54	1.41
34	i	511	A	C2'-C1'	-9.60	1.42	1.53
34	i	1503	G	C2'-C1'	-9.60	1.42	1.53
34	i	1707	A	C2'-C1'	-9.60	1.42	1.53
34	i	311	C	O4'-C1'	9.58	1.54	1.41
34	i	657	U	O4'-C1'	9.58	1.54	1.41
34	i	1781	G	C2'-C1'	-9.58	1.42	1.53
34	i	675	A	C2'-C1'	-9.57	1.42	1.53
34	i	445	A	O4'-C1'	9.57	1.54	1.41
34	i	1251	G	O4'-C1'	9.55	1.54	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	13	C	C2'-C1'	-9.55	1.42	1.53
34	i	457	G	O4'-C1'	9.55	1.54	1.41
34	i	1790	G	C2'-C1'	-9.53	1.42	1.53
34	i	285	U	O4'-C1'	9.51	1.54	1.41
34	i	166	A	C2'-C1'	-9.51	1.42	1.53
10	J	35	TYR	CD1-CE1	-9.50	1.25	1.39
34	i	888	U	C2'-C1'	-9.49	1.43	1.53
34	i	1328	A	O4'-C1'	9.49	1.53	1.41
34	i	1437	U	C2'-C1'	9.48	1.63	1.53
34	i	927	C	O4'-C1'	9.48	1.53	1.41
34	i	1808	G	C2'-C1'	-9.47	1.43	1.53
34	i	1534	U	C2'-C1'	9.47	1.63	1.53
34	i	1440	U	C2'-C1'	-9.46	1.43	1.53
34	i	1548	C	C2'-C1'	9.46	1.63	1.53
19	S	6	PRO	CA-C	9.44	1.71	1.52
34	i	884	U	O4'-C1'	9.44	1.53	1.41
34	i	1301	C	O4'-C1'	9.44	1.53	1.41
34	i	726	C	O4'-C1'	9.41	1.53	1.41
34	i	1339	U	O4'-C1'	9.41	1.53	1.41
34	i	1402	G	C2'-C1'	-9.41	1.43	1.53
34	i	944	C	O4'-C1'	9.41	1.53	1.41
34	i	1029	G	O4'-C1'	9.40	1.53	1.41
34	i	1744	G	C2'-C1'	-9.40	1.43	1.53
34	i	173	A	O4'-C1'	9.39	1.53	1.41
34	i	1112	C	O4'-C1'	-9.38	1.29	1.41
34	i	1460	C	O4'-C1'	9.38	1.53	1.41
34	i	1729	G	O4'-C1'	9.37	1.53	1.41
34	i	53	C	O4'-C1'	9.37	1.53	1.41
34	i	1849	G	C2'-C1'	-9.37	1.43	1.53
34	i	1607	G	C2'-C1'	9.35	1.63	1.53
34	i	614	C	O4'-C1'	9.35	1.53	1.41
34	i	980	C	O4'-C1'	9.35	1.53	1.41
34	i	298	G	C2'-C1'	9.34	1.63	1.53
34	i	1211	C	C2'-C1'	9.33	1.63	1.53
34	i	1025	G	O4'-C1'	9.32	1.53	1.41
34	i	1177	A	C2'-C1'	-9.31	1.43	1.53
34	i	1365	A	C2'-C1'	-9.31	1.43	1.53
34	i	1713	G	C2'-C1'	-9.30	1.43	1.53
34	i	1101	G	O4'-C1'	9.28	1.53	1.41
34	i	332	C	O4'-C1'	9.27	1.53	1.41
34	i	440	C	C2'-C1'	9.27	1.63	1.53
34	i	1618	A	C2'-C1'	9.27	1.63	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1477	G	C2'-C1'	-9.26	1.43	1.53
34	i	212	G	O4'-C1'	9.26	1.53	1.41
34	i	666	C	O4'-C1'	9.25	1.53	1.41
34	i	939	U	O4'-C1'	9.23	1.53	1.41
34	i	650	C	C2'-C1'	-9.23	1.43	1.53
34	i	1335	U	P-O5'	-9.23	1.50	1.59
4	D	96	LEU	C-N	9.22	1.55	1.34
34	i	234	C	C2'-C1'	9.22	1.63	1.53
34	i	1385	C	C2'-C1'	-9.22	1.43	1.53
34	i	790	A	O4'-C1'	9.22	1.53	1.41
34	i	799	C	C2'-C1'	-9.22	1.43	1.53
34	i	1861	U	C2'-C1'	9.21	1.63	1.53
34	i	481	C	O4'-C1'	9.21	1.53	1.41
34	i	49	C	C2'-C1'	-9.21	1.43	1.53
34	i	1735	C	O4'-C1'	9.20	1.53	1.41
34	i	1559	C	C2'-C1'	-9.19	1.43	1.53
34	i	1049	C	O4'-C1'	9.19	1.53	1.41
19	S	40	TYR	CA-C	-9.19	1.29	1.52
34	i	827	G	C2'-C1'	-9.19	1.43	1.53
34	i	367	G	C2'-C1'	-9.18	1.43	1.53
34	i	1028	C	C2'-C1'	-9.18	1.43	1.53
34	i	1557	C	O4'-C1'	9.18	1.53	1.41
34	i	1118	A	C2'-C1'	9.17	1.63	1.53
34	i	1565	G	O4'-C1'	-9.15	1.29	1.41
34	i	678	U	O4'-C1'	-9.15	1.29	1.41
34	i	1622	C	O4'-C1'	9.15	1.53	1.41
34	i	42	A	C2'-C1'	-9.14	1.43	1.53
34	i	618	A	O4'-C1'	-9.14	1.29	1.41
27	a	10	ARG	CD-NE	9.14	1.61	1.46
34	i	895	U	O4'-C1'	9.13	1.53	1.41
34	i	1040	G	C2'-C1'	-9.13	1.43	1.53
34	i	804	A	O4'-C1'	9.12	1.53	1.41
34	i	405	A	C2'-C1'	9.12	1.63	1.53
34	i	1850	C	O4'-C1'	9.12	1.53	1.41
3	C	47	PRO	N-CD	9.10	1.60	1.47
34	i	1341	G	O4'-C1'	9.10	1.53	1.41
34	i	1275	C	C2'-C1'	9.08	1.63	1.53
8	H	109	ARG	CA-CB	-9.07	1.33	1.53
34	i	653	C	O4'-C1'	9.05	1.53	1.41
34	i	1780	U	O4'-C1'	9.03	1.53	1.41
34	i	69	C	O4'-C1'	9.03	1.53	1.41
34	i	1647	G	C2'-C1'	-9.02	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	683	G	O4'-C1'	9.00	1.53	1.41
34	i	1054	A	O4'-C1'	9.00	1.53	1.41
34	i	900	A	C2'-C1'	-9.00	1.43	1.53
34	i	211	U	O4'-C1'	8.99	1.53	1.41
34	i	1829	A	O4'-C1'	8.99	1.53	1.41
34	i	171	A	O4'-C1'	-8.99	1.29	1.41
34	i	69	C	C2'-C1'	-8.97	1.43	1.53
34	i	1533	C	O4'-C1'	8.97	1.53	1.41
34	i	1225	G	C2'-C1'	-8.96	1.43	1.53
34	i	373	G	O4'-C1'	8.94	1.53	1.41
34	i	510	A	O4'-C1'	8.94	1.53	1.41
34	i	972	G	C2'-C1'	-8.94	1.43	1.53
34	i	292	A	C2'-C1'	8.92	1.63	1.53
27	a	97	PRO	C-N	8.91	1.51	1.34
34	i	106	C	O4'-C1'	8.91	1.53	1.41
34	i	666	C	C2'-C1'	-8.90	1.43	1.53
2	B	155	TYR	CB-CG	-8.90	1.38	1.51
34	i	1646	A	C2'-C1'	8.90	1.63	1.53
34	i	1288	C	C2'-C1'	-8.89	1.43	1.53
34	i	1791	U	O4'-C1'	8.89	1.53	1.41
34	i	204	G	C2'-C1'	8.88	1.63	1.53
34	i	380	C	O4'-C1'	8.88	1.53	1.41
34	i	1142	C	O4'-C1'	8.88	1.53	1.41
34	i	178	C	O4'-C1'	8.87	1.53	1.41
34	i	1678	C	C2'-C1'	-8.87	1.43	1.53
34	i	1018	U	O4'-C1'	8.87	1.53	1.41
34	i	1336	U	C2'-C1'	8.86	1.63	1.53
34	i	574	A	C2'-C1'	-8.85	1.43	1.53
34	i	1692	A	C2'-C1'	8.85	1.63	1.53
34	i	1478	C	O4'-C1'	8.84	1.53	1.41
34	i	853	U	O4'-C1'	8.84	1.53	1.41
34	i	220	C	O4'-C1'	8.83	1.53	1.41
34	i	1176	C	C2'-C1'	-8.83	1.43	1.53
34	i	41	G	O4'-C1'	8.82	1.53	1.41
34	i	688	U	C2'-C1'	-8.81	1.43	1.53
34	i	194	C	O4'-C1'	8.81	1.53	1.41
34	i	677	C	C2'-C1'	-8.80	1.43	1.53
34	i	1813	A	O4'-C1'	8.80	1.53	1.41
7	G	36	VAL	CB-CG1	-8.79	1.34	1.52
34	i	1385	C	O4'-C1'	8.78	1.53	1.41
34	i	170	A	C2'-C1'	-8.78	1.43	1.53
34	i	813	G	C2'-C1'	-8.77	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1039	G	C2'-C1'	-8.77	1.43	1.53
34	i	17	C	O4'-C1'	8.77	1.53	1.41
34	i	1104	G	O4'-C1'	-8.76	1.30	1.41
34	i	883	U	O4'-C1'	-8.76	1.30	1.41
34	i	1221	U	O4'-C1'	8.75	1.53	1.41
19	S	54	LYS	CA-C	8.74	1.75	1.52
34	i	1370	C	O4'-C1'	8.74	1.53	1.41
34	i	1218	G	C2'-C1'	-8.73	1.43	1.53
34	i	1407	G	O4'-C1'	8.73	1.52	1.41
34	i	575	C	O4'-C1'	8.73	1.52	1.41
34	i	1212	C	O4'-C1'	8.72	1.52	1.41
34	i	936	U	O4'-C1'	8.72	1.52	1.41
34	i	97	U	O4'-C1'	8.71	1.52	1.41
34	i	1706	U	C2'-C1'	-8.71	1.43	1.53
34	i	26	U	O4'-C1'	8.71	1.52	1.41
34	i	989	G	C2'-C1'	-8.70	1.43	1.53
34	i	1571	G	O4'-C1'	8.70	1.52	1.41
34	i	1221	U	C2'-C1'	-8.70	1.43	1.53
34	i	1185	A	O4'-C1'	8.69	1.52	1.41
34	i	939	U	C2'-C1'	-8.67	1.43	1.53
34	i	441	G	C2'-C1'	-8.66	1.43	1.53
34	i	1440	U	O4'-C1'	8.66	1.52	1.41
34	i	1465	A	O4'-C1'	8.65	1.52	1.41
34	i	432	C	C2'-C1'	-8.63	1.43	1.53
34	i	1085	G	C2'-C1'	-8.62	1.43	1.53
34	i	649	G	O4'-C1'	-8.62	1.30	1.41
34	i	324	C	C2'-C1'	-8.62	1.43	1.53
34	i	807	A	C2'-C1'	-8.61	1.43	1.53
34	i	1331	G	C2'-C1'	-8.61	1.43	1.53
34	i	824	G	O4'-C1'	-8.60	1.30	1.41
34	i	50	A	O4'-C1'	8.60	1.52	1.41
34	i	1434	A	O4'-C1'	8.60	1.52	1.41
34	i	1414	C	C2'-C1'	-8.60	1.43	1.53
34	i	1672	U	C2'-C1'	8.60	1.62	1.53
34	i	376	C	C2'-C1'	-8.59	1.44	1.53
34	i	537	G	C2'-C1'	-8.59	1.44	1.53
34	i	1822	C	C2'-C1'	-8.59	1.44	1.53
34	i	189	G	O4'-C1'	8.58	1.52	1.41
34	i	1223	G	O4'-C1'	8.58	1.52	1.41
34	i	844	U	O4'-C1'	8.57	1.52	1.41
34	i	1158	C	O4'-C1'	8.57	1.52	1.41
34	i	30	C	O4'-C1'	8.57	1.52	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	33	G	C2'-C1'	-8.56	1.44	1.53
34	i	1611	U	O4'-C1'	8.55	1.52	1.41
34	i	540	C	O4'-C1'	8.55	1.52	1.41
34	i	235	C	O4'-C1'	8.55	1.52	1.41
34	i	1532	A	C2'-C1'	8.54	1.62	1.53
34	i	107	A	C2'-C1'	8.54	1.62	1.53
34	i	1560	C	O4'-C1'	8.54	1.52	1.41
34	i	1345	G	O4'-C1'	8.54	1.52	1.41
34	i	1456	C	O4'-C1'	8.54	1.52	1.41
34	i	661	A	C2'-C1'	-8.53	1.44	1.53
34	i	990	C	C2'-C1'	-8.52	1.44	1.53
34	i	1624	C	O4'-C1'	8.52	1.52	1.41
34	i	1825	A	O4'-C1'	8.51	1.52	1.41
34	i	165	G	C2'-C1'	8.50	1.62	1.53
34	i	443	C	O4'-C1'	8.50	1.52	1.41
34	i	1168	U	C2'-C1'	8.50	1.62	1.53
34	i	1401	A	C2'-C1'	-8.49	1.44	1.53
34	i	1476	A	O4'-C1'	8.49	1.52	1.41
34	i	753	C	O4'-C1'	8.48	1.52	1.41
34	i	1138	G	C2'-C1'	8.48	1.62	1.53
34	i	902	U	O4'-C1'	8.47	1.52	1.41
34	i	1775	A	O4'-C1'	8.47	1.52	1.41
34	i	543	U	O4'-C1'	8.46	1.52	1.41
34	i	670	G	O4'-C1'	8.46	1.52	1.41
34	i	236	C	O4'-C1'	8.46	1.52	1.41
34	i	593	C	O4'-C1'	8.46	1.52	1.41
34	i	908	C	O4'-C1'	8.46	1.52	1.41
34	i	168	C	C2'-C1'	-8.45	1.44	1.53
34	i	1495	U	C2'-C1'	-8.44	1.44	1.53
34	i	528	U	O4'-C1'	8.43	1.52	1.41
34	i	1527	C	O4'-C1'	8.43	1.52	1.41
34	i	1569	C	C2'-C1'	-8.43	1.44	1.53
34	i	923	C	O4'-C1'	8.42	1.52	1.41
34	i	409	G	O4'-C1'	8.42	1.52	1.41
4	D	4	GLN	N-CA	-8.42	1.29	1.46
34	i	53	C	C2'-C1'	8.41	1.62	1.53
34	i	1068	U	C2'-C1'	8.41	1.62	1.53
34	i	965	U	O4'-C1'	8.41	1.52	1.41
34	i	453	C	O4'-C1'	8.40	1.52	1.41
34	i	72	C	C2'-C1'	8.40	1.62	1.53
34	i	1861	U	O4'-C1'	-8.40	1.30	1.41
10	J	164	PRO	C-N	8.39	1.53	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	313	C	C2'-C1'	-8.39	1.44	1.53
34	i	361	A	C2'-C1'	-8.38	1.44	1.53
34	i	1267	C	C2'-C1'	-8.37	1.44	1.53
34	i	625	G	O4'-C1'	8.37	1.52	1.41
34	i	1264	C	O4'-C1'	8.37	1.52	1.41
34	i	1367	U	O4'-C1'	8.37	1.52	1.41
34	i	1490	U	C2'-C1'	8.36	1.62	1.53
34	i	148	U	C2'-C1'	8.36	1.62	1.53
34	i	1630	C	O4'-C1'	8.36	1.52	1.41
34	i	941	U	C2'-C1'	-8.35	1.44	1.53
34	i	354	A	C2'-C1'	-8.34	1.44	1.53
34	i	557	C	O4'-C1'	8.34	1.52	1.41
34	i	1059	C	C2'-C1'	-8.34	1.44	1.53
34	i	1661	C	O4'-C1'	8.34	1.52	1.41
34	i	1292	U	C2'-C1'	-8.32	1.44	1.53
34	i	1577	C	O4'-C1'	8.32	1.52	1.41
34	i	937	C	O4'-C1'	8.32	1.52	1.41
34	i	303	G	C2'-C1'	8.32	1.62	1.53
34	i	1325	U	O4'-C1'	8.32	1.52	1.41
34	i	1699	C	C2'-C1'	-8.31	1.44	1.53
34	i	943	G	C2'-C1'	-8.30	1.44	1.53
34	i	625	G	C2'-C1'	-8.30	1.44	1.53
34	i	1200	A	C2'-C1'	-8.29	1.44	1.53
35	l	67	PHE	CD2-CE2	-8.29	1.22	1.39
34	i	187	C	C2'-C1'	-8.29	1.44	1.53
34	i	1807	A	O4'-C1'	8.29	1.52	1.41
34	i	596	G	O4'-C1'	-8.28	1.30	1.41
34	i	1304	U	O4'-C1'	-8.28	1.30	1.41
34	i	1480	A	O4'-C1'	8.28	1.52	1.41
34	i	159	A	O4'-C1'	8.27	1.52	1.41
34	i	1075	C	C2'-C1'	-8.27	1.44	1.53
34	i	1295	A	C2'-C1'	8.27	1.62	1.53
34	i	875	C	O4'-C1'	8.27	1.52	1.41
34	i	465	C	C2'-C1'	-8.25	1.44	1.53
34	i	1086	C	O4'-C1'	8.25	1.52	1.41
34	i	1079	A	O4'-C1'	8.25	1.52	1.41
34	i	164	A	O4'-C1'	8.25	1.52	1.41
34	i	1309	A	O4'-C1'	8.23	1.52	1.41
34	i	1390	G	O4'-C1'	8.23	1.52	1.41
34	i	1785	A	O4'-C1'	8.23	1.52	1.41
34	i	18	C	C2'-C1'	-8.23	1.44	1.53
34	i	1028	C	O4'-C1'	8.22	1.52	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1840	G	C2'-C1'	-8.22	1.44	1.53
34	i	462	C	C2'-C1'	-8.22	1.44	1.53
34	i	147	A	C2'-C1'	8.21	1.62	1.53
34	i	348	C	O4'-C1'	8.20	1.52	1.41
34	i	1252	G	O4'-C1'	8.20	1.52	1.41
34	i	1019	A	C2'-C1'	8.20	1.62	1.53
34	i	1425	G	O3'-P	-8.20	1.51	1.61
34	i	727	G	O4'-C1'	8.19	1.52	1.41
34	i	219	U	O4'-C1'	8.18	1.52	1.41
34	i	782	G	O4'-C1'	8.18	1.52	1.41
34	i	1001	G	C2'-C1'	-8.18	1.44	1.53
34	i	176	U	O4'-C1'	8.17	1.52	1.41
34	i	1446	G	C2'-C1'	-8.17	1.44	1.53
34	i	1679	C	O4'-C1'	8.16	1.52	1.41
34	i	1201	C	O4'-C1'	8.16	1.52	1.41
34	i	739	U	O4'-C1'	8.15	1.52	1.41
34	i	1304	U	C2'-C1'	8.15	1.62	1.53
34	i	86	C	C2'-C1'	-8.15	1.44	1.53
34	i	1046	A	C2'-C1'	-8.15	1.44	1.53
3	C	193	PRO	N-CD	8.14	1.59	1.47
34	i	1663	U	P-O5'	-8.14	1.51	1.59
34	i	1140	A	O4'-C1'	8.14	1.52	1.41
34	i	676	U	C2'-C1'	8.14	1.62	1.53
20	T	4	VAL	C-N	8.13	1.52	1.34
34	i	1183	G	O4'-C1'	8.13	1.52	1.41
34	i	57	U	C2'-C1'	8.12	1.62	1.53
34	i	1487	G	C2'-C1'	-8.12	1.44	1.53
34	i	832	G	C2'-C1'	8.11	1.62	1.53
34	i	955	G	C2'-C1'	-8.11	1.44	1.53
34	i	736	C	C2'-C1'	-8.10	1.44	1.53
34	i	918	A	C2'-C1'	8.10	1.62	1.53
34	i	1261	A	O4'-C1'	8.09	1.52	1.41
34	i	824	G	C2'-C1'	-8.09	1.44	1.53
34	i	1579	G	O4'-C1'	8.09	1.52	1.41
34	i	1327	C	O4'-C1'	8.08	1.52	1.41
34	i	1824	U	O4'-C1'	8.07	1.52	1.41
34	i	537	G	O4'-C1'	8.07	1.52	1.41
34	i	338	A	C2'-C1'	-8.07	1.44	1.53
34	i	754	C	C2'-C1'	-8.06	1.44	1.53
7	G	36	VAL	CA-CB	-8.06	1.37	1.54
34	i	1623	C	O4'-C1'	8.05	1.52	1.41
34	i	1061	G	C2'-C1'	-8.05	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	741	C	O3'-P	-8.05	1.51	1.61
34	i	40	A	C2'-C1'	8.04	1.62	1.53
34	i	369	C	O4'-C1'	8.02	1.52	1.41
34	i	1537	C	C2'-C1'	-8.02	1.44	1.53
34	i	607	G	C2'-C1'	-8.01	1.44	1.53
34	i	1818	A	O4'-C1'	-8.01	1.31	1.41
34	i	463	A	O4'-C1'	8.01	1.52	1.41
34	i	599	U	O4'-C1'	8.01	1.52	1.41
34	i	835	C	C2'-C1'	-8.01	1.44	1.53
34	i	924	G	C2'-C1'	-8.00	1.44	1.53
34	i	1450	A	O4'-C1'	8.00	1.52	1.41
34	i	1150	U	O4'-C1'	-8.00	1.31	1.41
34	i	26	U	C2'-C1'	-8.00	1.44	1.53
34	i	336	C	O4'-C1'	7.99	1.52	1.41
34	i	1102	C	C2'-C1'	7.99	1.62	1.53
34	i	1558	G	C2'-C1'	-7.99	1.44	1.53
18	R	89	SER	CA-C	7.98	1.73	1.52
34	i	1447	G	C2'-C1'	-7.98	1.44	1.53
34	i	988	A	O4'-C1'	7.98	1.52	1.41
34	i	618	A	C2'-C1'	7.97	1.62	1.53
34	i	536	G	O4'-C1'	7.97	1.52	1.41
34	i	829	C	O4'-C1'	7.96	1.51	1.41
34	i	1107	U	O4'-C1'	7.96	1.51	1.41
19	S	95	TYR	CD1-CE1	-7.95	1.27	1.39
34	i	959	A	O4'-C1'	-7.95	1.31	1.41
34	i	624	A	O4'-C1'	7.95	1.51	1.41
34	i	1800	A	C2'-C1'	-7.95	1.44	1.53
34	i	302	C	C2'-C1'	-7.95	1.44	1.53
34	i	1394	G	C2'-C1'	-7.95	1.44	1.53
34	i	152	U	C2'-C1'	-7.94	1.44	1.53
7	G	131	ARG	N-CA	-7.94	1.30	1.46
34	i	1705	C	O4'-C1'	7.94	1.51	1.41
34	i	864	G	C2'-C1'	-7.93	1.44	1.53
34	i	1794	A	O4'-C1'	7.93	1.51	1.41
34	i	1482	A	P-O5'	-7.92	1.51	1.59
34	i	1522	C	O4'-C1'	7.92	1.51	1.41
34	i	492	C	O4'-C1'	7.92	1.51	1.41
34	i	317	G	O4'-C1'	-7.91	1.31	1.41
34	i	969	C	O4'-C1'	7.91	1.51	1.41
34	i	1604	C	O4'-C1'	7.91	1.51	1.41
34	i	486	C	C2'-C1'	-7.90	1.44	1.53
34	i	1652	G	C2'-C1'	-7.90	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1126	G	O4'-C1'	-7.90	1.31	1.41
34	i	1857	A	C2'-C1'	7.89	1.62	1.53
34	i	275	C	O4'-C1'	7.89	1.51	1.41
34	i	1592	C	C2'-C1'	-7.89	1.44	1.53
34	i	1733	C	C2'-C1'	-7.89	1.44	1.53
34	i	211	U	O3'-P	-7.86	1.51	1.61
34	i	1386	U	C2'-C1'	-7.86	1.44	1.53
34	i	1535	G	C2'-C1'	-7.85	1.44	1.53
34	i	786	C	C2'-C1'	-7.85	1.44	1.53
34	i	566	A	C2'-C1'	-7.85	1.44	1.53
34	i	1279	C	C2'-C1'	-7.84	1.44	1.53
34	i	863	G	O4'-C1'	7.84	1.51	1.41
34	i	37	C	C2'-C1'	-7.83	1.44	1.53
34	i	874	G	C2'-C1'	-7.83	1.44	1.53
34	i	1796	C	O4'-C1'	7.83	1.51	1.41
34	i	953	A	C2'-C1'	-7.83	1.44	1.53
34	i	876	G	C2'-C1'	7.82	1.61	1.53
34	i	119	U	C2'-C1'	-7.82	1.44	1.53
34	i	447	C	O4'-C1'	7.82	1.51	1.41
34	i	1385	C	P-O5'	-7.81	1.51	1.59
34	i	189	G	C2'-C1'	-7.81	1.44	1.53
34	i	399	C	O4'-C1'	7.81	1.51	1.41
34	i	1027	A	O4'-C1'	7.80	1.51	1.41
34	i	1321	G	O4'-C1'	7.80	1.51	1.41
34	i	190	A	O4'-C1'	7.79	1.51	1.41
34	i	948	G	C2'-C1'	-7.79	1.44	1.53
34	i	604	G	C1'-N9	-7.78	1.35	1.46
34	i	563	U	O4'-C1'	7.78	1.51	1.41
34	i	1403	U	O4'-C1'	7.77	1.51	1.41
34	i	630	A	O4'-C1'	7.76	1.51	1.41
34	i	880	C	O4'-C1'	7.75	1.51	1.41
7	G	130	PRO	C-N	-7.75	1.16	1.34
34	i	557	C	C2'-C1'	-7.75	1.44	1.53
34	i	1480	A	C2'-C1'	-7.75	1.44	1.53
34	i	60	A	O4'-C1'	-7.75	1.31	1.41
34	i	37	C	O4'-C1'	7.73	1.51	1.41
34	i	846	C	C2'-C1'	-7.72	1.44	1.53
34	i	226	A	C2'-C1'	-7.71	1.44	1.53
34	i	271	G	O3'-P	-7.71	1.51	1.61
34	i	846	C	O4'-C1'	7.71	1.51	1.41
34	i	200	U	C2'-C1'	-7.71	1.44	1.53
34	i	859	U	O4'-C1'	7.69	1.51	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1382	A	O4'-C1'	7.69	1.51	1.41
34	i	49	C	O4'-C1'	7.68	1.51	1.41
34	i	1123	C	O4'-C1'	7.68	1.51	1.41
34	i	930	G	C2'-C1'	-7.68	1.44	1.53
34	i	938	G	O4'-C1'	7.68	1.51	1.41
34	i	29	G	C2'-C1'	-7.67	1.45	1.53
19	S	82	TRP	CA-CB	-7.67	1.37	1.53
34	i	521	A	O3'-P	-7.67	1.51	1.61
34	i	1392	A	C2'-C1'	7.67	1.61	1.53
34	i	151	C	P-O5'	-7.66	1.52	1.59
34	i	377	C	C2'-C1'	-7.66	1.45	1.53
34	i	1850	C	C2'-C1'	-7.66	1.45	1.53
34	i	194	C	C2'-C1'	-7.65	1.45	1.53
34	i	1299	C	O4'-C1'	-7.65	1.31	1.41
34	i	1638	U	O4'-C1'	7.65	1.51	1.41
34	i	725	C	O4'-C1'	7.65	1.51	1.41
34	i	171	A	C2'-C1'	7.64	1.61	1.53
34	i	449	C	C2'-C1'	-7.63	1.45	1.53
34	i	689	G	C1'-N9	-7.63	1.36	1.46
34	i	1045	A	O4'-C1'	-7.63	1.31	1.41
34	i	1633	G	O4'-C1'	7.63	1.51	1.41
34	i	872	C	O4'-C1'	7.63	1.51	1.41
34	i	820	C	O4'-C1'	7.63	1.51	1.41
34	i	1384	A	O4'-C1'	7.63	1.51	1.41
34	i	1332	C	O4'-C1'	7.62	1.51	1.41
34	i	95	G	C2'-C1'	-7.62	1.45	1.53
34	i	544	A	O4'-C1'	-7.61	1.31	1.41
34	i	1444	A	C2'-C1'	-7.61	1.45	1.53
34	i	1041	U	O4'-C1'	7.61	1.51	1.41
34	i	1071	C	O4'-C1'	7.60	1.51	1.41
34	i	337	G	O4'-C1'	7.60	1.51	1.41
34	i	1823	G	O4'-C1'	7.60	1.51	1.41
34	i	452	C	O4'-C1'	7.60	1.51	1.41
10	J	35	TYR	CD2-CE2	-7.59	1.27	1.39
34	i	1465	A	C2'-C1'	-7.59	1.45	1.53
34	i	1187	C	O4'-C1'	7.59	1.51	1.41
34	i	750	G	C2'-C1'	-7.58	1.45	1.53
34	i	386	U	O4'-C1'	7.58	1.51	1.41
34	i	685	G	C1'-N9	-7.58	1.36	1.46
34	i	1006	G	C2'-C1'	7.58	1.61	1.53
34	i	1423	C	C2'-C1'	7.58	1.61	1.53
34	i	342	U	O4'-C1'	7.57	1.51	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1343	U	O4'-C1'	7.57	1.51	1.41
34	i	442	G	O4'-C1'	7.56	1.51	1.41
34	i	1687	U	C2'-C1'	-7.56	1.45	1.53
34	i	355	C	C2'-C1'	-7.56	1.45	1.53
34	i	38	A	C2'-C1'	7.55	1.61	1.53
34	i	1664	G	C2'-C1'	-7.54	1.45	1.53
34	i	368	U	C2'-C1'	-7.53	1.45	1.53
34	i	428	G	O4'-C1'	-7.53	1.31	1.41
34	i	1835	C	C2'-C1'	-7.53	1.45	1.53
34	i	518	A	O4'-C1'	7.52	1.51	1.41
10	J	164	PRO	N-CA	-7.52	1.34	1.47
34	i	3	C	C2'-C1'	7.51	1.61	1.53
34	i	1839	A	C2'-C1'	-7.51	1.45	1.53
34	i	1340	A	O4'-C1'	7.51	1.51	1.41
34	i	1245	C	O4'-C1'	7.50	1.51	1.41
34	i	1137	G	O4'-C1'	-7.50	1.31	1.41
34	i	1814	G	C2'-C1'	-7.50	1.45	1.53
34	i	278	U	O4'-C1'	7.50	1.51	1.41
34	i	460	G	C2'-C1'	-7.49	1.45	1.53
34	i	1423	C	O4'-C1'	7.48	1.51	1.41
7	G	170	ARG	CA-CB	7.48	1.70	1.53
34	i	1398	A	C2'-C1'	-7.48	1.45	1.53
34	i	621	U	C2'-C1'	-7.47	1.45	1.53
34	i	1799	G	O4'-C1'	7.47	1.51	1.41
34	i	1151	U	O4'-C1'	7.47	1.51	1.41
34	i	1493	G	O4'-C1'	7.47	1.51	1.41
34	i	343	C	O4'-C1'	7.47	1.51	1.41
34	i	818	U	O4'-C1'	7.46	1.51	1.41
34	i	1292	U	O4'-C1'	7.46	1.51	1.41
34	i	1345	G	C2'-C1'	-7.46	1.45	1.53
34	i	1489	C	C2'-C1'	7.43	1.61	1.53
34	i	399	C	C2'-C1'	-7.42	1.45	1.53
34	i	1472	A	C2'-C1'	7.42	1.61	1.53
34	i	1123	C	C2'-C1'	-7.42	1.45	1.53
34	i	1091	U	O4'-C1'	7.41	1.51	1.41
34	i	493	C	O4'-C1'	7.41	1.51	1.41
34	i	1568	G	O4'-C1'	7.41	1.51	1.41
34	i	1778	G	C2'-C1'	-7.40	1.45	1.53
34	i	223	A	O4'-C1'	7.40	1.51	1.41
34	i	1676	U	C2'-C1'	-7.40	1.45	1.53
34	i	86	C	O4'-C1'	7.39	1.51	1.41
34	i	202	U	C2'-C1'	-7.39	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	485	U	C2'-C1'	-7.39	1.45	1.53
34	i	1138	G	O4'-C1'	-7.38	1.32	1.41
34	i	456	G	C4'-C3'	7.38	1.61	1.53
34	i	1313	U	O4'-C1'	7.38	1.51	1.41
34	i	360	G	O4'-C1'	7.38	1.51	1.41
34	i	1260	C	O4'-C1'	7.38	1.51	1.41
34	i	743	U	O3'-P	-7.37	1.52	1.61
9	I	3	ILE	CA-CB	-7.37	1.37	1.54
34	i	120	U	O4'-C1'	7.37	1.51	1.41
34	i	225	C	O3'-P	-7.37	1.52	1.61
34	i	488	C	C2'-C1'	-7.37	1.45	1.53
34	i	933	C	C2'-C1'	-7.36	1.45	1.53
34	i	1145	A	C2'-C1'	-7.36	1.45	1.53
34	i	596	G	C2'-C1'	-7.36	1.45	1.53
34	i	840	U	O4'-C1'	7.36	1.51	1.41
34	i	982	G	C2'-C1'	-7.35	1.45	1.53
34	i	404	A	C2'-C1'	7.35	1.61	1.53
34	i	1096	A	C2'-C1'	-7.35	1.45	1.53
34	i	1186	A	O4'-C1'	7.34	1.51	1.41
34	i	1808	G	O4'-C1'	7.34	1.51	1.41
34	i	798	A	O4'-C1'	7.34	1.51	1.41
34	i	1008	A	C2'-C1'	-7.34	1.45	1.53
34	i	1434	A	C2'-C1'	7.34	1.61	1.53
34	i	1626	U	C2'-C1'	-7.33	1.45	1.53
34	i	820	C	C2'-C1'	-7.33	1.45	1.53
34	i	1758	G	C5'-C4'	7.33	1.60	1.51
34	i	485	U	O4'-C1'	7.32	1.51	1.41
34	i	515	A	C2'-C1'	-7.32	1.45	1.53
34	i	856	G	O4'-C1'	7.31	1.51	1.41
34	i	652	G	O4'-C1'	7.29	1.51	1.41
34	i	845	A	O4'-C1'	7.29	1.51	1.41
34	i	960	A	C2'-C1'	7.29	1.61	1.53
16	P	122	THR	CA-CB	7.29	1.72	1.53
34	i	85	A	O4'-C1'	7.28	1.51	1.41
34	i	86	C	P-O5'	-7.28	1.52	1.59
34	i	347	C	O4'-C1'	7.27	1.51	1.41
10	J	91	LYS	C-O	-7.27	1.09	1.23
34	i	1798	U	O4'-C1'	7.27	1.51	1.41
34	i	327	C	O4'-C1'	7.25	1.51	1.41
34	i	686	G	C2'-C1'	-7.25	1.45	1.53
34	i	937	C	C2'-C1'	-7.25	1.45	1.53
34	i	6	G	C2'-C1'	-7.25	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	576	G	O4'-C1'	7.25	1.51	1.41
34	i	656	U	O4'-C1'	7.25	1.51	1.41
34	i	74	G	O4'-C1'	7.25	1.51	1.41
34	i	897	G	C2'-C1'	-7.24	1.45	1.53
34	i	1054	A	C2'-C1'	-7.24	1.45	1.53
34	i	42	A	O4'-C1'	7.23	1.51	1.41
34	i	216	U	O4'-C1'	7.23	1.51	1.41
6	F	108	PRO	N-CD	7.23	1.57	1.47
34	i	660	A	O4'-C1'	-7.22	1.32	1.41
34	i	1668	U	C2'-C1'	-7.22	1.45	1.53
34	i	1424	G	C2'-C1'	7.22	1.61	1.53
34	i	1405	A	O4'-C1'	7.22	1.51	1.41
34	i	1387	C	C2'-C1'	-7.21	1.45	1.53
14	N	137	PRO	N-CD	7.21	1.57	1.47
34	i	1223	G	C2'-C1'	-7.21	1.45	1.53
34	i	1363	U	O4'-C1'	7.19	1.50	1.41
34	i	1059	C	O4'-C1'	7.18	1.50	1.41
34	i	514	U	O4'-C1'	7.17	1.50	1.41
34	i	1259	U	C5'-C4'	7.17	1.59	1.51
34	i	1045	A	C2'-C1'	7.17	1.61	1.53
34	i	916	A	O4'-C1'	7.16	1.50	1.41
34	i	632	U	O4'-C1'	7.16	1.50	1.41
34	i	213	C	O4'-C1'	7.15	1.50	1.41
34	i	361	A	O4'-C1'	7.14	1.50	1.41
34	i	1460	C	C2'-C1'	-7.14	1.45	1.53
34	i	1519	G	O4'-C1'	-7.14	1.32	1.41
34	i	516	A	C2'-C1'	-7.13	1.45	1.53
34	i	871	A	C2'-C1'	-7.13	1.45	1.53
8	H	111	LYS	CA-C	-7.13	1.34	1.52
34	i	632	U	C2'-C1'	-7.13	1.45	1.53
25	Y	91	LEU	C-N	7.11	1.50	1.34
34	i	1293	U	C2'-C1'	7.10	1.61	1.53
34	i	742	C	C2'-C1'	-7.09	1.45	1.53
34	i	470	G	C2'-C1'	-7.09	1.45	1.53
3	C	93	LYS	C-N	-7.08	1.17	1.34
34	i	876	G	O4'-C1'	-7.08	1.32	1.41
34	i	1741	U	O3'-P	7.07	1.69	1.61
7	G	131	ARG	CB-CG	7.06	1.71	1.52
34	i	860	A	C2'-C1'	-7.05	1.45	1.53
24	X	24	ASP	CA-C	-7.04	1.34	1.52
34	i	1256	A	C2'-C1'	-7.04	1.45	1.53
34	i	35	C	C2'-C1'	-7.04	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1395	C	O4'-C1'	7.04	1.50	1.41
34	i	1283	A	C2'-C1'	7.02	1.61	1.53
34	i	783	G	O4'-C1'	7.01	1.50	1.41
34	i	1175	G	C2'-C1'	-7.01	1.45	1.53
34	i	390	C	C2'-C1'	-7.01	1.45	1.53
34	i	655	G	C2'-C1'	-7.01	1.45	1.53
34	i	1043	C	C2'-C1'	-7.00	1.45	1.53
34	i	1174	U	C2'-C1'	-7.00	1.45	1.53
34	i	1033	G	C2'-C1'	-7.00	1.45	1.53
34	i	1303	U	C2'-C1'	7.00	1.61	1.53
34	i	118	C	O4'-C1'	6.99	1.50	1.41
34	i	880	C	C2'-C1'	-6.99	1.45	1.53
34	i	1355	U	C2'-C1'	6.99	1.61	1.53
34	i	601	G	O4'-C1'	6.98	1.50	1.41
34	i	959	A	C2'-C1'	-6.97	1.45	1.53
34	i	1782	A	O4'-C1'	6.97	1.50	1.41
34	i	1784	A	O4'-C1'	6.96	1.50	1.41
34	i	1255	A	O4'-C1'	-6.96	1.32	1.41
34	i	231	C	C2'-C1'	-6.96	1.45	1.53
34	i	735	C	C2'-C1'	-6.95	1.45	1.53
34	i	1528	A	C2'-C1'	-6.95	1.45	1.53
34	i	1021	U	C2'-C1'	6.95	1.60	1.53
34	i	464	G	C2'-C1'	-6.94	1.45	1.53
34	i	823	A	O4'-C1'	6.94	1.50	1.41
34	i	81	U	O4'-C1'	6.92	1.50	1.41
34	i	899	A	O4'-C1'	-6.92	1.32	1.41
34	i	1654	U	O3'-P	-6.92	1.52	1.61
34	i	1583	A	O4'-C1'	6.92	1.50	1.41
34	i	988	A	C2'-C1'	-6.92	1.45	1.53
34	i	1211	C	O4'-C1'	6.91	1.50	1.41
34	i	489	G	C2'-C1'	-6.91	1.45	1.53
34	i	1717	G	O4'-C1'	6.91	1.50	1.41
34	i	1244	U	C2'-C1'	-6.90	1.45	1.53
34	i	1250	C	O4'-C1'	6.90	1.50	1.41
34	i	104	A	O4'-C1'	6.90	1.50	1.41
34	i	609	A	C2'-C1'	6.89	1.60	1.53
34	i	1696	C	O4'-C1'	6.89	1.50	1.41
34	i	812	A	C2'-C1'	-6.89	1.45	1.53
34	i	668	U	O4'-C1'	6.88	1.50	1.41
34	i	1125	G	C2'-C1'	-6.88	1.45	1.53
34	i	941	U	O4'-C1'	6.87	1.50	1.41
34	i	1419	C	C2'-C1'	-6.87	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	133	TYR	CB-CG	-6.87	1.41	1.51
34	i	556	U	C2'-C1'	6.87	1.60	1.53
34	i	818	U	C2'-C1'	-6.87	1.45	1.53
34	i	969	C	C5'-C4'	6.87	1.59	1.51
34	i	1681	G	C2'-C1'	-6.87	1.45	1.53
34	i	382	A	C2'-C1'	-6.87	1.45	1.53
34	i	418	U	C2'-C1'	6.87	1.60	1.53
34	i	1670	A	O4'-C1'	-6.86	1.32	1.41
34	i	1044	G	C5'-C4'	6.85	1.59	1.51
34	i	1072	G	C2'-C1'	-6.85	1.45	1.53
34	i	1723	U	O4'-C1'	6.85	1.50	1.41
34	i	434	G	O4'-C1'	-6.85	1.32	1.41
34	i	1039	G	O4'-C1'	6.85	1.50	1.41
34	i	46	A	C2'-C1'	-6.85	1.45	1.53
34	i	811	U	O4'-C1'	6.84	1.50	1.41
34	i	628	C	O4'-C1'	6.84	1.50	1.41
34	i	1378	A	O4'-C1'	6.84	1.50	1.41
24	X	126	ALA	CA-CB	-6.83	1.38	1.52
19	S	95	TYR	CE1-CZ	-6.83	1.29	1.38
34	i	1051	A	C5'-C4'	6.83	1.59	1.51
34	i	903	G	O4'-C1'	6.83	1.50	1.41
34	i	1734	C	C2'-C1'	-6.83	1.45	1.53
10	J	35	TYR	CE1-CZ	-6.82	1.29	1.38
34	i	172	U	O4'-C1'	6.82	1.50	1.41
34	i	320	G	C2'-C1'	-6.82	1.45	1.53
34	i	325	G	C2'-C1'	6.82	1.60	1.53
34	i	348	C	C2'-C1'	-6.82	1.45	1.53
34	i	1149	C	O4'-C1'	-6.81	1.32	1.41
34	i	913	U	C2'-C1'	6.81	1.60	1.53
34	i	983	A	O4'-C1'	6.81	1.50	1.41
34	i	147	A	O4'-C1'	-6.81	1.32	1.41
34	i	1707	A	O4'-C1'	6.81	1.50	1.41
34	i	59	U	C2'-C1'	6.80	1.60	1.53
24	X	128	VAL	CA-CB	-6.80	1.40	1.54
34	i	1018	U	O3'-P	-6.79	1.52	1.61
34	i	1843	G	C2'-C1'	-6.79	1.45	1.53
34	i	435	A	O4'-C1'	6.79	1.50	1.41
34	i	65	C	C2'-C1'	6.79	1.60	1.53
34	i	1051	A	O4'-C1'	6.79	1.50	1.41
34	i	1144	A	C2'-C1'	6.77	1.60	1.53
34	i	1691	C	C2'-C1'	-6.77	1.46	1.53
34	i	1514	U	C2'-C1'	6.76	1.60	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	470	G	O4'-C1'	6.76	1.50	1.41
34	i	674	G	C2'-C1'	-6.76	1.46	1.53
34	i	1805	C	C2'-C1'	-6.76	1.46	1.53
34	i	597	U	C2'-C1'	-6.75	1.46	1.53
34	i	264	U	O3'-P	-6.74	1.53	1.61
34	i	1232	G	C3'-C2'	6.74	1.60	1.52
10	J	163	SER	C-N	-6.74	1.21	1.34
34	i	1032	A	C2'-C1'	-6.73	1.46	1.53
34	i	1810	G	C2'-C1'	-6.73	1.46	1.53
7	G	157	VAL	CA-CB	-6.72	1.40	1.54
34	i	1031	A	O4'-C1'	6.72	1.50	1.41
34	i	896	C	O4'-C1'	6.72	1.50	1.41
34	i	9	U	O4'-C1'	6.72	1.50	1.41
34	i	30	C	C2'-C1'	-6.72	1.46	1.53
34	i	619	A	C2'-C1'	6.72	1.60	1.53
34	i	1842	U	C2'-C1'	-6.71	1.46	1.53
34	i	1452	G	O4'-C1'	6.71	1.50	1.41
34	i	996	C	O4'-C1'	6.70	1.50	1.41
34	i	1525	U	O4'-C1'	6.70	1.50	1.41
34	i	1797	U	O4'-C1'	6.69	1.50	1.41
34	i	314	U	O4'-C1'	-6.68	1.32	1.41
34	i	411	G	O3'-P	-6.67	1.53	1.61
34	i	1621	C	O4'-C1'	6.67	1.50	1.41
34	i	1735	C	C2'-C1'	-6.67	1.46	1.53
34	i	965	U	C2'-C1'	-6.66	1.46	1.53
34	i	467	G	C2'-C1'	-6.65	1.46	1.53
34	i	1836	C	C2'-C1'	-6.65	1.46	1.53
34	i	165	G	O4'-C1'	-6.65	1.33	1.41
34	i	1842	U	O4'-C1'	6.65	1.50	1.41
34	i	699	C	C5'-C4'	6.64	1.59	1.51
34	i	1737	C	O4'-C1'	6.64	1.50	1.41
34	i	438	A	C2'-C1'	6.64	1.60	1.53
34	i	1391	C	O4'-C1'	6.63	1.50	1.41
34	i	1702	U	C2'-C1'	-6.62	1.46	1.53
34	i	103	A	O4'-C1'	-6.62	1.33	1.41
34	i	946	C	C2'-C1'	-6.62	1.46	1.53
34	i	806	A	O4'-C1'	6.62	1.50	1.41
34	i	273	G	O4'-C1'	6.61	1.50	1.41
34	i	14	C	O4'-C1'	6.61	1.50	1.41
34	i	118	C	C2'-C1'	-6.61	1.46	1.53
34	i	1731	G	C2'-C1'	-6.60	1.46	1.53
34	i	1538	U	P-O5'	-6.60	1.53	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	513	A	O4'-C1'	6.59	1.50	1.41
34	i	442	G	C2'-C1'	-6.59	1.46	1.53
34	i	160	U	O4'-C1'	6.58	1.50	1.41
34	i	1311	U	C5'-C4'	6.58	1.59	1.51
34	i	928	G	C2'-C1'	-6.57	1.46	1.53
34	i	1667	U	C2'-C1'	-6.57	1.46	1.53
34	i	338	A	O4'-C1'	6.57	1.50	1.41
34	i	227	A	O4'-C1'	6.57	1.50	1.41
34	i	300	G	C2'-C1'	-6.57	1.46	1.53
34	i	1836	C	O4'-C1'	6.57	1.50	1.41
34	i	1712	C	O4'-C1'	6.56	1.50	1.41
34	i	205	G	O4'-C1'	6.56	1.50	1.41
34	i	1234	U	C2'-C1'	-6.56	1.46	1.53
34	i	1414	C	O4'-C1'	-6.56	1.33	1.41
3	C	72	PRO	N-CD	6.54	1.57	1.47
34	i	1203	G	O4'-C1'	6.54	1.50	1.41
34	i	1243	C	O4'-C1'	6.54	1.50	1.41
34	i	1121	C	O4'-C1'	6.53	1.50	1.41
34	i	397	G	C2'-C1'	6.52	1.60	1.53
34	i	494	G	C2'-C1'	-6.52	1.46	1.53
34	i	879	U	C5'-C4'	6.52	1.59	1.51
34	i	504	U	C2'-C1'	-6.52	1.46	1.53
19	S	95	TYR	CD2-CE2	-6.51	1.29	1.39
34	i	201	G	C2'-C1'	6.51	1.60	1.53
34	i	733	G	C2'-C1'	6.51	1.60	1.53
34	i	1479	A	C2'-C1'	6.51	1.60	1.53
34	i	1035	C	O4'-C1'	6.51	1.50	1.41
9	I	8	TRP	CD2-CE3	-6.51	1.30	1.40
34	i	799	C	O4'-C1'	6.51	1.50	1.41
34	i	1061	G	O4'-C1'	6.50	1.50	1.41
34	i	101	U	C2'-C1'	6.50	1.60	1.53
34	i	1392	A	O4'-C1'	-6.49	1.33	1.41
34	i	663	G	P-O5'	-6.48	1.53	1.59
34	i	1256	A	O3'-P	-6.48	1.53	1.61
34	i	1626	U	O4'-C1'	6.48	1.50	1.41
34	i	100	U	O4'-C1'	6.48	1.50	1.41
34	i	388	A	O4'-C1'	6.47	1.50	1.41
34	i	1610	U	O4'-C1'	6.46	1.50	1.41
34	i	421	G	C2'-C1'	-6.46	1.46	1.53
34	i	1797	U	C2'-C1'	-6.45	1.46	1.53
34	i	1840	G	O4'-C1'	6.45	1.50	1.41
34	i	1603	U	C2'-C1'	-6.45	1.46	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	958	A	C2'-C1'	6.44	1.60	1.53
26	Z	104	ARG	CD-NE	-6.44	1.35	1.46
34	i	1173	U	O4'-C1'	6.44	1.50	1.41
34	i	94	G	O4'-C1'	6.44	1.50	1.41
34	i	678	U	C2'-C1'	6.44	1.60	1.53
34	i	1278	A	O4'-C1'	6.43	1.50	1.41
34	i	1743	G	C2'-C1'	-6.43	1.46	1.53
34	i	471	C	O4'-C1'	6.43	1.50	1.41
34	i	892	U	O4'-C1'	6.42	1.50	1.41
34	i	1499	C	O4'-C1'	6.42	1.50	1.41
34	i	962	U	C2'-C1'	-6.42	1.46	1.53
34	i	1138	G	P-O5'	-6.42	1.53	1.59
18	R	89	SER	C-N	6.41	1.48	1.34
34	i	1121	C	C2'-C1'	-6.41	1.46	1.53
34	i	1233	C	P-O5'	-6.40	1.53	1.59
34	i	639	U	O4'-C1'	6.40	1.50	1.41
34	i	461	G	O4'-C1'	-6.39	1.33	1.41
34	i	1622	C	C2'-C1'	-6.39	1.46	1.53
34	i	139	C	C2'-C1'	6.39	1.60	1.53
34	i	1463	C	O4'-C1'	6.39	1.50	1.41
34	i	627	U	C2'-C1'	6.38	1.60	1.53
34	i	1047	G	C2'-C1'	-6.38	1.46	1.53
34	i	1569	C	O4'-C1'	6.37	1.50	1.41
34	i	1584	A	C2'-C1'	6.37	1.60	1.53
34	i	1634	G	O4'-C1'	6.37	1.50	1.41
34	i	1090	C	C2'-C1'	-6.37	1.46	1.53
34	i	469	C	O4'-C1'	6.37	1.50	1.41
34	i	273	G	C2'-C1'	-6.36	1.46	1.53
34	i	637	U	O4'-C1'	6.34	1.49	1.41
34	i	954	G	O4'-C1'	-6.34	1.33	1.41
34	i	583	C	C2'-C1'	-6.34	1.46	1.53
34	i	1030	A	C2'-C1'	6.34	1.60	1.53
34	i	1032	A	C5'-C4'	6.34	1.58	1.51
34	i	1102	C	O4'-C1'	6.33	1.49	1.41
34	i	795	U	C2'-C1'	-6.32	1.46	1.53
10	J	144	ILE	CA-CB	-6.32	1.40	1.54
34	i	349	U	C2'-C1'	-6.32	1.46	1.53
34	i	406	U	C2'-C1'	6.32	1.60	1.53
7	G	170	ARG	CA-C	-6.32	1.36	1.52
34	i	1799	G	C2'-C1'	-6.32	1.46	1.53
7	G	156	TYR	CB-CG	-6.31	1.42	1.51
34	i	404	A	O4'-C1'	6.31	1.49	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	997	A	C2'-C1'	6.31	1.60	1.53
34	i	826	A	C2'-C1'	6.31	1.60	1.53
17	Q	145	TYR	CD2-CE2	-6.30	1.29	1.39
34	i	567	U	O4'-C1'	6.30	1.49	1.41
34	i	370	G	O4'-C1'	-6.30	1.33	1.41
34	i	806	A	C2'-C1'	-6.30	1.46	1.53
34	i	1103	G	C2'-C1'	-6.29	1.46	1.53
10	J	101	LYS	N-CA	6.29	1.58	1.46
34	i	1280	A	C2'-C1'	-6.28	1.46	1.53
34	i	1444	A	O4'-C1'	6.28	1.49	1.41
34	i	528	U	C2'-C1'	-6.28	1.46	1.53
34	i	364	G	C2'-C1'	-6.27	1.46	1.53
34	i	1615	A	O4'-C1'	-6.27	1.33	1.41
34	i	1167	G	C5'-C4'	6.27	1.58	1.51
34	i	337	G	C2'-C1'	-6.27	1.46	1.53
5	E	150	PRO	N-CD	6.26	1.56	1.47
34	i	920	G	P-O5'	-6.26	1.53	1.59
34	i	1215	C	O4'-C1'	6.26	1.49	1.41
34	i	1684	C	O4'-C1'	6.26	1.49	1.41
34	i	1334	G	O4'-C1'	6.25	1.49	1.41
34	i	458	A	C2'-C1'	-6.25	1.46	1.53
34	i	1042	U	O4'-C1'	6.25	1.49	1.41
34	i	945	G	C2'-C1'	-6.24	1.46	1.53
34	i	969	C	C2'-C1'	-6.24	1.46	1.53
34	i	898	G	C2'-C1'	-6.24	1.46	1.53
34	i	1167	G	C2'-C1'	6.24	1.60	1.53
34	i	408	A	O4'-C1'	6.23	1.49	1.41
34	i	1427	G	O4'-C1'	6.22	1.49	1.41
34	i	994	A	C2'-C1'	6.22	1.60	1.53
4	D	20	GLU	CG-CD	6.22	1.61	1.51
34	i	1402	G	O4'-C1'	6.21	1.49	1.41
34	i	1085	G	O4'-C1'	6.21	1.49	1.41
34	i	1426	C	C2'-C1'	6.20	1.60	1.53
34	i	1657	U	O4'-C1'	6.20	1.49	1.41
34	i	1415	C	O4'-C1'	6.20	1.49	1.41
34	i	974	G	C2'-C1'	-6.20	1.46	1.53
34	i	1078	A	O4'-C1'	6.20	1.49	1.41
34	i	629	C	C2'-C1'	-6.18	1.46	1.53
34	i	793	C	O3'-P	-6.18	1.53	1.61
34	i	220	C	C2'-C1'	-6.18	1.46	1.53
34	i	1015	C	C4'-C3'	6.18	1.59	1.53
24	X	116	PRO	CA-C	6.18	1.65	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	195	PRO	N-CD	6.17	1.56	1.47
34	i	889	U	C2'-C1'	6.17	1.60	1.53
34	i	1476	A	C2'-C1'	-6.17	1.46	1.53
34	i	290	A	C2'-C1'	6.17	1.60	1.53
34	i	1710	A	O4'-C1'	6.17	1.49	1.41
34	i	1284	U	C5'-C4'	6.17	1.58	1.51
34	i	627	U	C5'-C4'	6.17	1.58	1.51
34	i	665	U	O4'-C1'	6.17	1.49	1.41
34	i	601	G	C2'-C1'	-6.17	1.46	1.53
34	i	33	G	O4'-C1'	6.16	1.49	1.41
34	i	1119	C	C5'-C4'	6.16	1.58	1.51
34	i	1739	G	C2'-C1'	6.16	1.60	1.53
34	i	1097	U	C2'-C1'	-6.15	1.46	1.53
34	i	342	U	C4'-C3'	-6.15	1.46	1.53
34	i	1628	A	C2'-C1'	-6.14	1.46	1.53
34	i	656	U	C2'-C1'	6.14	1.60	1.53
34	i	1093	G	O4'-C1'	-6.14	1.33	1.41
34	i	1426	C	P-O5'	-6.14	1.53	1.59
34	i	930	G	O4'-C1'	6.14	1.49	1.41
34	i	1652	G	P-O5'	-6.13	1.53	1.59
7	G	36	VAL	CB-CG2	-6.13	1.40	1.52
34	i	370	G	P-O5'	-6.13	1.53	1.59
34	i	1740	A	O4'-C1'	-6.13	1.33	1.41
34	i	1774	G	O4'-C1'	6.13	1.49	1.41
34	i	1845	A	O4'-C1'	6.13	1.49	1.41
34	i	335	U	O4'-C1'	6.12	1.49	1.41
34	i	494	G	C3'-C2'	-6.12	1.46	1.52
34	i	1852	G	C2'-C1'	-6.12	1.46	1.53
34	i	1032	A	O4'-C1'	6.11	1.49	1.41
34	i	175	A	O4'-C1'	6.11	1.49	1.41
34	i	749	C	C5'-C4'	6.11	1.58	1.51
34	i	934	A	C2'-C1'	-6.11	1.46	1.53
34	i	1753	G	C2'-C1'	-6.11	1.46	1.53
34	i	1652	G	C4'-C3'	6.11	1.59	1.53
34	i	1700	C	C2'-C1'	-6.10	1.46	1.53
34	i	1037	G	O4'-C1'	6.09	1.49	1.41
34	i	1791	U	P-O5'	-6.09	1.53	1.59
34	i	389	C	C2'-C1'	-6.09	1.46	1.53
34	i	477	U	C4'-C3'	6.07	1.59	1.53
34	i	1172	G	O4'-C1'	6.06	1.49	1.41
17	Q	145	TYR	CD1-CE1	-6.04	1.30	1.39
34	i	593	C	C2'-C1'	-6.04	1.46	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	356	U	O4'-C1'	6.04	1.49	1.41
34	i	545	A	C2'-C1'	-6.02	1.46	1.53
18	R	86	PRO	N-CD	6.02	1.56	1.47
18	R	111	PHE	CB-CG	-6.01	1.41	1.51
6	F	45	TYR	CB-CG	-6.01	1.42	1.51
34	i	1397	A	C2'-C1'	6.01	1.59	1.53
10	J	188	GLY	CA-C	6.00	1.61	1.51
34	i	656	U	O3'-P	-6.00	1.53	1.61
34	i	891	G	C2'-C1'	-6.00	1.46	1.53
34	i	351	U	C2'-C1'	6.00	1.59	1.53
34	i	1402	G	C5'-C4'	6.00	1.58	1.51
34	i	301	C	C2'-C1'	6.00	1.59	1.53
34	i	8	U	C2'-C1'	5.99	1.59	1.53
34	i	742	C	C5'-C4'	5.99	1.58	1.51
34	i	867	U	O4'-C1'	-5.98	1.33	1.41
34	i	1591	U	O4'-C1'	5.98	1.49	1.41
34	i	1564	A	C2'-C1'	5.98	1.59	1.53
34	i	1800	A	O4'-C1'	5.98	1.49	1.41
34	i	1502	A	O4'-C1'	5.97	1.49	1.41
34	i	155	G	P-O5'	-5.97	1.53	1.59
34	i	396	U	O4'-C1'	5.97	1.49	1.41
34	i	1804	U	O4'-C1'	5.97	1.49	1.41
34	i	146	G	C3'-O3'	5.97	1.50	1.42
34	i	472	G	C2'-C1'	-5.97	1.46	1.53
34	i	391	A	C2'-C1'	5.96	1.59	1.53
34	i	155	G	O4'-C1'	5.96	1.49	1.41
27	a	10	ARG	NE-CZ	5.96	1.40	1.33
34	i	170	A	O3'-P	-5.96	1.54	1.61
34	i	1604	C	P-O5'	-5.95	1.53	1.59
8	H	111	LYS	N-CA	5.95	1.58	1.46
34	i	1040	G	O4'-C1'	5.95	1.49	1.41
34	i	1332	C	P-O5'	-5.95	1.53	1.59
34	i	1066	A	O4'-C1'	5.95	1.49	1.41
34	i	529	C	C2'-C1'	-5.95	1.46	1.53
34	i	1016	A	C5'-C4'	5.94	1.58	1.51
34	i	1582	G	O4'-C1'	-5.94	1.33	1.41
32	f	85	TYR	CE2-CZ	-5.93	1.30	1.38
34	i	797	U	P-O5'	-5.93	1.53	1.59
34	i	804	A	O3'-P	-5.93	1.54	1.61
7	G	131	ARG	C-O	-5.93	1.12	1.23
34	i	565	A	C2'-C1'	-5.92	1.46	1.53
34	i	1311	U	O4'-C1'	-5.92	1.33	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1667	U	P-O5'	-5.92	1.53	1.59
10	J	187	ALA	CA-C	5.92	1.68	1.52
34	i	83	A	C2'-C1'	-5.92	1.46	1.53
4	D	4	GLN	C-N	-5.92	1.20	1.34
34	i	1641	C	C4'-O4'	-5.91	1.37	1.45
34	i	214	A	C2'-C1'	-5.91	1.46	1.53
34	i	410	G	O4'-C1'	-5.91	1.33	1.41
34	i	439	A	C5'-C4'	5.91	1.58	1.51
34	i	1132	U	O4'-C1'	5.91	1.49	1.41
34	i	279	G	C2'-C1'	5.91	1.59	1.53
34	i	1161	G	C2'-C1'	5.91	1.59	1.53
34	i	1730	A	O4'-C1'	5.90	1.49	1.41
34	i	990	C	O4'-C1'	5.90	1.49	1.41
34	i	1373	U	C2'-C1'	-5.89	1.46	1.53
34	i	1809	A	O4'-C1'	5.89	1.49	1.41
5	E	130	PHE	CB-CG	-5.88	1.41	1.51
34	i	106	C	C2'-C1'	-5.88	1.46	1.53
34	i	1415	C	O3'-P	-5.88	1.54	1.61
34	i	68	A	O4'-C1'	5.88	1.49	1.41
34	i	1246	A	C2'-C1'	5.88	1.59	1.53
34	i	449	C	C5'-C4'	5.87	1.58	1.51
34	i	1264	C	C2'-C1'	-5.87	1.46	1.53
35	l	100	ILE	CA-CB	5.87	1.68	1.54
34	i	210	G	C2'-C1'	5.87	1.59	1.53
34	i	1556	A	O4'-C1'	5.86	1.49	1.41
34	i	795	U	C3'-C2'	5.85	1.59	1.52
24	X	23	HIS	N-CA	-5.85	1.34	1.46
34	i	566	A	O4'-C1'	5.85	1.49	1.41
34	i	343	C	O3'-P	-5.85	1.54	1.61
34	i	1296	U	C2'-C1'	5.85	1.59	1.53
34	i	819	U	O4'-C1'	-5.85	1.34	1.41
34	i	1633	G	C2'-C1'	-5.84	1.47	1.53
34	i	1523	G	O4'-C1'	-5.84	1.34	1.41
34	i	1048	A	O3'-P	-5.84	1.54	1.61
34	i	649	G	C2'-C1'	5.83	1.59	1.53
34	i	1577	C	C5'-C4'	5.83	1.58	1.51
34	i	1650	C	C2'-C1'	-5.83	1.47	1.53
34	i	647	U	O4'-C1'	5.83	1.49	1.41
34	i	1821	U	O4'-C1'	5.83	1.49	1.41
34	i	1414	C	O3'-P	-5.82	1.54	1.61
34	i	1599	G	C3'-C2'	-5.82	1.46	1.52
34	i	1845	A	C2'-C1'	5.82	1.59	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	231	C	O4'-C1'	5.82	1.49	1.41
34	i	602	U	C2'-C1'	-5.82	1.47	1.53
34	i	1515	G	C4'-C3'	5.82	1.59	1.53
34	i	1830	G	C2'-C1'	-5.81	1.47	1.53
34	i	1544	U	O4'-C1'	5.81	1.49	1.41
23	W	129	PHE	CB-CG	-5.81	1.41	1.51
34	i	318	U	O4'-C1'	5.80	1.49	1.41
34	i	825	C	O3'-P	-5.80	1.54	1.61
34	i	787	C	C5'-C4'	5.80	1.58	1.51
34	i	1412	C	C2'-C1'	-5.80	1.47	1.53
34	i	366	A	C2'-C1'	-5.80	1.47	1.53
34	i	306	C	O4'-C1'	5.79	1.49	1.41
34	i	1776	G	C2'-C1'	-5.79	1.47	1.53
34	i	1232	G	C2'-C1'	-5.79	1.47	1.53
34	i	1439	C	O4'-C1'	5.79	1.49	1.41
34	i	1073	A	O4'-C1'	5.78	1.49	1.41
34	i	1567	C	C2'-C1'	-5.78	1.47	1.53
34	i	1639	C	O4'-C1'	5.78	1.49	1.41
34	i	1567	C	O4'-C1'	5.78	1.49	1.41
34	i	1647	G	O4'-C1'	5.78	1.49	1.41
34	i	2	A	O4'-C1'	5.77	1.49	1.41
34	i	224	U	C5'-C4'	5.77	1.58	1.51
34	i	1014	U	O4'-C1'	5.77	1.49	1.41
34	i	805	A	O4'-C1'	5.77	1.49	1.41
34	i	1324	G	O4'-C1'	5.76	1.49	1.41
31	e	77	HIS	C-N	5.76	1.43	1.33
34	i	1394	G	O4'-C1'	5.76	1.49	1.41
34	i	314	U	O3'-P	-5.76	1.54	1.61
34	i	589	A	O4'-C1'	5.75	1.49	1.41
34	i	1777	C	C2'-C1'	-5.75	1.47	1.53
34	i	834	G	C2'-C1'	-5.75	1.47	1.53
34	i	1487	G	O4'-C1'	5.74	1.49	1.41
34	i	1618	A	O4'-C1'	-5.74	1.34	1.41
34	i	97	U	C2'-C1'	-5.74	1.47	1.53
34	i	550	A	C2'-C1'	-5.74	1.47	1.53
34	i	54	A	C5'-C4'	5.72	1.58	1.51
34	i	1658	A	O4'-C1'	5.72	1.49	1.41
34	i	1335	U	C2'-C1'	-5.72	1.47	1.53
34	i	282	G	O4'-C1'	5.71	1.49	1.41
34	i	1662	U	C2'-C1'	-5.71	1.47	1.53
34	i	911	G	O4'-C1'	-5.71	1.34	1.41
34	i	18	C	O3'-P	-5.71	1.54	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	285	U	C2'-C1'	-5.71	1.47	1.53
12	L	103	GLU	CG-CD	5.71	1.60	1.51
34	i	1379	A	O4'-C1'	5.71	1.49	1.41
34	i	743	U	C2'-C1'	-5.70	1.47	1.53
34	i	1310	U	O4'-C1'	-5.70	1.34	1.41
34	i	883	U	C5'-C4'	5.69	1.58	1.51
34	i	721	C	P-O5'	5.69	1.65	1.59
34	i	1494	A	C4'-C3'	-5.69	1.46	1.52
34	i	1473	U	O4'-C1'	5.69	1.49	1.41
34	i	1609	A	C2'-C1'	-5.69	1.47	1.53
34	i	1727	G	C2'-C1'	-5.69	1.47	1.53
34	i	319	G	C2'-C1'	-5.68	1.47	1.53
34	i	1799	G	C5'-C4'	5.68	1.58	1.51
32	f	136	PHE	CB-CG	-5.68	1.41	1.51
34	i	1272	A	P-O5'	-5.68	1.54	1.59
34	i	98	C	O4'-C1'	5.68	1.49	1.41
34	i	1760	C	C4'-C3'	5.68	1.59	1.53
34	i	211	U	C2'-C1'	-5.67	1.47	1.53
34	i	1789	G	C2'-C1'	-5.67	1.47	1.53
9	I	6	ASP	N-CA	-5.66	1.35	1.46
11	K	40	VAL	CB-CG1	-5.66	1.41	1.52
34	i	428	G	O3'-P	-5.66	1.54	1.61
31	e	97	GLU	CG-CD	-5.65	1.43	1.51
34	i	77	A	C4'-C3'	5.65	1.59	1.53
34	i	415	G	P-O5'	-5.64	1.54	1.59
34	i	796	U	P-O5'	-5.64	1.54	1.59
34	i	1725	U	O4'-C1'	5.64	1.49	1.41
34	i	562	U	C2'-C1'	5.64	1.59	1.53
34	i	1641	C	C5'-C4'	5.64	1.58	1.51
34	i	1564	A	P-O5'	-5.64	1.54	1.59
34	i	644	A	O4'-C1'	5.64	1.49	1.41
34	i	152	U	C5'-C4'	5.64	1.58	1.51
34	i	1038	A	O4'-C1'	5.63	1.49	1.41
34	i	854	A	O4'-C1'	5.63	1.49	1.41
34	i	1711	C	C2'-C1'	-5.63	1.47	1.53
10	J	188	GLY	N-CA	5.63	1.54	1.46
34	i	336	C	P-O5'	-5.63	1.54	1.59
8	H	67	PRO	N-CD	5.62	1.55	1.47
34	i	654	A	O4'-C1'	5.62	1.49	1.41
34	i	1696	C	C5'-C4'	5.62	1.58	1.51
34	i	818	U	C4'-C3'	5.62	1.59	1.53
32	f	148	TYR	CD1-CE1	-5.62	1.30	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	l	67	PHE	CB-CG	-5.62	1.41	1.51
34	i	1712	C	C2'-C1'	-5.61	1.47	1.53
34	i	1833	U	O3'-P	-5.61	1.54	1.61
12	L	102	PHE	C-O	5.61	1.34	1.23
17	Q	145	TYR	CB-CG	-5.61	1.43	1.51
34	i	1415	C	C2'-C1'	5.60	1.59	1.53
34	i	1680	U	C5'-C4'	5.60	1.58	1.51
34	i	794	G	O3'-P	-5.60	1.54	1.61
34	i	1702	U	O4'-C1'	5.60	1.49	1.41
34	i	374	U	O4'-C1'	5.60	1.49	1.41
34	i	99	A	P-O5'	-5.60	1.54	1.59
34	i	731	C	C2'-C1'	-5.60	1.47	1.53
34	i	325	G	C4'-C3'	5.59	1.59	1.53
34	i	669	A	C2'-C1'	-5.59	1.47	1.53
34	i	21	U	C2'-C1'	5.59	1.59	1.53
34	i	1356	U	C2'-C1'	-5.59	1.47	1.53
34	i	408	A	C5'-C4'	5.58	1.58	1.51
34	i	910	U	C2'-C1'	5.58	1.59	1.53
34	i	1424	G	O4'-C1'	-5.58	1.34	1.41
34	i	574	A	O4'-C1'	5.58	1.49	1.41
34	i	586	U	C2'-C1'	-5.58	1.47	1.53
34	i	1366	A	O4'-C1'	5.58	1.48	1.41
34	i	402	G	C5'-C4'	5.57	1.58	1.51
34	i	914	U	O4'-C1'	5.57	1.48	1.41
34	i	1218	G	O4'-C1'	5.57	1.48	1.41
34	i	307	G	C2'-C1'	-5.57	1.47	1.53
34	i	189	G	C3'-C2'	-5.57	1.46	1.52
34	i	1529	C	O4'-C1'	5.57	1.48	1.41
34	i	272	C	O3'-P	-5.56	1.54	1.61
10	J	187	ALA	N-CA	5.56	1.57	1.46
34	i	36	U	O4'-C1'	5.56	1.48	1.41
34	i	1780	U	C2'-C1'	-5.56	1.47	1.53
34	i	753	C	C2'-C1'	-5.55	1.47	1.53
34	i	1196	A	C2'-C1'	-5.55	1.47	1.53
34	i	93	U	C2'-C1'	5.55	1.59	1.53
34	i	1726	A	O4'-C1'	5.55	1.48	1.41
34	i	312	C	C2'-C1'	-5.55	1.47	1.53
34	i	1026	A	C2'-C1'	5.55	1.59	1.53
34	i	469	C	C2'-C1'	-5.54	1.47	1.53
34	i	472	G	O4'-C1'	-5.54	1.34	1.41
34	i	962	U	O4'-C1'	5.54	1.48	1.41
34	i	1248	C	O4'-C1'	5.53	1.48	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	976	A	O4'-C1'	5.53	1.48	1.41
34	i	1332	C	C2'-C1'	-5.53	1.47	1.53
34	i	390	C	C5'-C4'	5.53	1.57	1.51
34	i	45	A	C2'-C1'	-5.52	1.47	1.53
34	i	73	C	O4'-C1'	5.52	1.48	1.41
34	i	497	G	C5'-C4'	5.52	1.57	1.51
34	i	1419	C	C5'-C4'	5.52	1.57	1.51
34	i	401	G	C2'-C1'	-5.51	1.47	1.53
34	i	1390	G	C4'-O4'	5.51	1.52	1.45
34	i	281	U	O3'-P	-5.51	1.54	1.61
34	i	317	G	C5'-C4'	5.51	1.57	1.51
18	R	42	PRO	N-CD	5.50	1.55	1.47
34	i	1821	U	C2'-C1'	-5.50	1.47	1.53
34	i	112	U	O3'-P	-5.50	1.54	1.61
34	i	44	U	C2'-C1'	-5.48	1.47	1.53
34	i	94	G	O3'-P	-5.48	1.54	1.61
34	i	1812	A	C5'-C4'	5.48	1.57	1.51
34	i	1829	A	C2'-C1'	-5.48	1.47	1.53
34	i	1375	A	O4'-C1'	5.48	1.48	1.41
34	i	1373	U	O4'-C1'	5.48	1.48	1.41
34	i	343	C	P-O5'	-5.47	1.54	1.59
34	i	585	U	C2'-C1'	-5.46	1.47	1.53
34	i	1533	C	O3'-P	-5.46	1.54	1.61
34	i	1665	C	O4'-C1'	5.46	1.48	1.41
34	i	87	U	O4'-C1'	5.46	1.48	1.41
34	i	188	U	O4'-C1'	5.46	1.48	1.41
34	i	1730	A	C2'-C1'	-5.46	1.47	1.53
34	i	221	A	O4'-C1'	5.46	1.48	1.41
34	i	387	G	O4'-C1'	5.46	1.48	1.41
34	i	1124	C	O3'-P	-5.45	1.54	1.61
34	i	1523	G	P-O5'	-5.45	1.54	1.59
11	K	89	ILE	N-CA	-5.45	1.35	1.46
34	i	32	U	C2'-C1'	5.45	1.59	1.53
34	i	112	U	C5'-C4'	5.45	1.57	1.51
34	i	430	G	C2'-C1'	-5.45	1.47	1.53
34	i	817	G	O3'-P	-5.45	1.54	1.61
34	i	1334	G	P-O5'	-5.45	1.54	1.59
34	i	1412	C	O3'-P	-5.45	1.54	1.61
9	I	8	TRP	CB-CG	5.45	1.60	1.50
34	i	360	G	C4'-C3'	5.45	1.59	1.53
34	i	1709	U	O4'-C1'	5.44	1.48	1.41
34	i	955	G	O4'-C1'	5.44	1.48	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	34	U	C5'-C4'	5.44	1.57	1.51
34	i	1172	G	C2'-C1'	-5.44	1.47	1.53
34	i	1382	A	C5'-C4'	5.44	1.57	1.51
34	i	457	G	C2'-C1'	-5.44	1.47	1.53
34	i	403	G	C2'-C1'	-5.44	1.47	1.53
34	i	186	G	O4'-C1'	5.43	1.48	1.41
34	i	1370	C	C2'-C1'	-5.43	1.47	1.53
34	i	267	G	O3'-P	-5.43	1.54	1.61
34	i	418	U	O4'-C1'	-5.43	1.34	1.41
34	i	1673	A	O4'-C1'	-5.43	1.34	1.41
34	i	217	U	P-O5'	-5.43	1.54	1.59
34	i	1302	U	C2'-C1'	-5.43	1.47	1.53
34	i	1764	G	C5'-C4'	5.43	1.57	1.51
34	i	1847	C	P-O5'	-5.43	1.54	1.59
34	i	1718	G	O4'-C1'	-5.42	1.34	1.41
35	l	100	ILE	N-CA	5.42	1.57	1.46
34	i	965	U	C5'-C4'	5.42	1.57	1.51
34	i	978	G	C2'-C1'	-5.42	1.47	1.53
34	i	1445	G	O4'-C1'	5.42	1.48	1.41
34	i	427	G	C2'-C1'	-5.41	1.47	1.53
7	G	180	VAL	CA-CB	-5.41	1.43	1.54
34	i	577	A	C2'-C1'	-5.41	1.47	1.53
34	i	687	G	C2'-C1'	-5.41	1.47	1.53
10	J	144	ILE	C-N	5.41	1.44	1.34
34	i	145	G	O4'-C1'	5.40	1.48	1.41
34	i	1848	U	C2'-C1'	5.40	1.59	1.53
34	i	290	A	C3'-C2'	-5.39	1.46	1.52
34	i	752	C	C2'-C1'	-5.39	1.47	1.53
34	i	1862	U	C4'-C3'	5.39	1.59	1.53
34	i	395	G	O4'-C1'	5.39	1.48	1.41
34	i	573	A	O4'-C1'	5.39	1.48	1.41
34	i	82	G	O3'-P	-5.38	1.54	1.61
34	i	308	C	P-O5'	-5.38	1.54	1.59
34	i	346	C	C2'-C1'	-5.38	1.47	1.53
34	i	1167	G	O3'-P	-5.38	1.54	1.61
35	l	66	LYS	CB-CG	-5.38	1.38	1.52
11	K	37	ASP	CB-CG	5.38	1.63	1.51
34	i	1523	G	C5'-C4'	-5.38	1.44	1.51
34	i	979	A	O4'-C1'	5.37	1.48	1.41
34	i	1400	U	C4'-C3'	5.37	1.59	1.53
34	i	867	U	C3'-O3'	5.37	1.49	1.42
34	i	1819	A	O4'-C1'	-5.37	1.34	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	942	U	C2'-C1'	-5.37	1.47	1.53
34	i	1076	A	O3'-P	-5.37	1.54	1.61
34	i	645	A	C5'-C4'	5.36	1.57	1.51
34	i	460	G	O4'-C1'	5.36	1.48	1.41
34	i	1405	A	C5'-C4'	5.36	1.57	1.51
34	i	1365	A	O4'-C1'	5.35	1.48	1.41
34	i	1636	A	O3'-P	-5.35	1.54	1.61
34	i	782	G	C2'-C1'	-5.35	1.47	1.53
34	i	1064	G	C2'-C1'	-5.35	1.47	1.53
34	i	520	U	O3'-P	-5.35	1.54	1.61
34	i	1637	U	C2'-C1'	5.35	1.59	1.53
26	Z	104	ARG	N-CA	-5.34	1.35	1.46
34	i	1416	G	O4'-C1'	5.34	1.48	1.41
34	i	629	C	O4'-C1'	5.34	1.48	1.41
34	i	1503	G	O3'-P	-5.34	1.54	1.61
2	B	155	TYR	CD1-CE1	-5.34	1.31	1.39
34	i	1708	C	C2'-C1'	-5.33	1.47	1.53
34	i	1395	C	C2'-C1'	-5.33	1.47	1.53
34	i	1068	U	O4'-C1'	5.33	1.48	1.41
34	i	1287	A	C2'-C1'	5.33	1.59	1.53
34	i	1795	A	C5'-C4'	5.33	1.57	1.51
12	L	20	LYS	N-CA	-5.32	1.35	1.46
7	G	169	PRO	N-CD	5.32	1.55	1.47
8	H	111	LYS	CA-CB	5.32	1.65	1.53
34	i	98	C	C4'-C3'	5.32	1.58	1.53
34	i	1009	U	O4'-C1'	5.31	1.48	1.41
34	i	626	C	P-O5'	-5.30	1.54	1.59
34	i	1439	C	O3'-P	-5.30	1.54	1.61
34	i	1070	C	O4'-C1'	5.30	1.48	1.41
34	i	801	U	C2'-C1'	-5.30	1.47	1.53
34	i	1130	G	C2'-C1'	-5.30	1.47	1.53
34	i	1462	G	O3'-P	-5.29	1.54	1.61
34	i	78	C	C3'-C2'	5.29	1.58	1.52
34	i	662	A	C4'-C3'	5.29	1.58	1.53
34	i	1146	A	C5'-C4'	5.29	1.57	1.51
34	i	1418	G	C2'-C1'	5.29	1.59	1.53
34	i	839	C	O3'-P	-5.28	1.54	1.61
34	i	1667	U	O4'-C1'	5.28	1.48	1.41
34	i	1504	A	O4'-C1'	-5.28	1.34	1.41
13	M	116	LYS	N-CA	5.27	1.56	1.46
27	a	97	PRO	CA-C	5.27	1.63	1.52
34	i	935	U	C5'-C4'	5.26	1.57	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1056	A	C2'-C1'	-5.26	1.47	1.53
34	i	266	G	C5'-C4'	5.26	1.57	1.51
34	i	1119	C	O4'-C1'	5.26	1.48	1.41
34	i	1260	C	O3'-P	-5.26	1.54	1.61
34	i	1704	G	C2'-C1'	-5.25	1.47	1.53
34	i	241	A	C2'-C1'	5.25	1.59	1.53
34	i	1372	A	C3'-C2'	-5.25	1.47	1.52
34	i	730	C	O3'-P	-5.25	1.54	1.61
34	i	1341	G	C2'-C1'	-5.25	1.47	1.53
34	i	1638	U	C2'-C1'	-5.25	1.47	1.53
34	i	1363	U	C2'-C1'	-5.24	1.47	1.53
34	i	139	C	O3'-P	-5.24	1.54	1.61
34	i	1088	G	O4'-C1'	5.24	1.48	1.41
34	i	1649	G	C2'-C1'	-5.24	1.47	1.53
34	i	667	G	O4'-C1'	5.24	1.48	1.41
34	i	1027	A	C2'-C1'	-5.24	1.47	1.53
34	i	1311	U	C2'-C1'	5.24	1.59	1.53
34	i	978	G	C5'-C4'	5.23	1.57	1.51
34	i	553	G	C5'-C4'	5.23	1.57	1.51
34	i	1627	G	O4'-C1'	-5.23	1.34	1.41
34	i	1818	A	C3'-C2'	5.23	1.58	1.52
34	i	1314	G	C2'-C1'	-5.23	1.47	1.53
11	K	35	LEU	N-CA	-5.23	1.35	1.46
34	i	102	A	O3'-P	-5.22	1.54	1.61
34	i	411	G	C2'-C1'	-5.22	1.47	1.53
34	i	643	A	C2'-C1'	-5.21	1.47	1.53
34	i	1264	C	P-O5'	-5.21	1.54	1.59
34	i	828	G	C2'-C1'	-5.21	1.47	1.53
34	i	1346	U	O4'-C1'	5.21	1.48	1.41
34	i	394	G	C5'-C4'	5.21	1.57	1.51
34	i	288	A	C5'-C4'	5.20	1.57	1.51
34	i	308	C	C2'-C1'	-5.20	1.47	1.53
34	i	901	C	C2'-C1'	-5.20	1.47	1.53
24	X	139	GLU	CB-CG	5.20	1.62	1.52
34	i	484	C	C5'-C4'	5.20	1.57	1.51
34	i	1141	A	C2'-C1'	5.20	1.59	1.53
34	i	1695	C	C2'-C1'	5.20	1.59	1.53
34	i	742	C	O4'-C1'	5.19	1.48	1.41
6	F	130	ARG	N-CA	5.19	1.56	1.46
34	i	1406	C	C4'-O4'	-5.19	1.38	1.45
34	i	1768	C	O4'-C1'	5.19	1.48	1.41
34	i	1543	G	C4'-C3'	-5.19	1.47	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	542	G	O4'-C1'	5.18	1.48	1.41
34	i	861	A	C5'-C4'	5.18	1.57	1.51
34	i	1657	U	C2'-C1'	-5.18	1.47	1.53
34	i	1766	C	C3'-C2'	-5.18	1.47	1.52
34	i	1380	C	O4'-C1'	5.18	1.48	1.41
34	i	1689	U	C5'-C4'	5.17	1.57	1.51
34	i	51	U	P-O5'	-5.17	1.54	1.59
34	i	766	U	C5'-C4'	5.17	1.57	1.51
34	i	151	C	C2'-C1'	-5.17	1.47	1.53
34	i	1094	C	O4'-C1'	5.17	1.48	1.41
34	i	1775	A	C5'-C4'	5.17	1.57	1.51
11	K	93	THR	CA-C	5.17	1.66	1.52
34	i	1563	C	C5'-C4'	5.17	1.57	1.51
3	C	182	PRO	N-CD	5.16	1.55	1.47
34	i	1549	C	O3'-P	-5.16	1.54	1.61
34	i	116	U	O4'-C1'	5.16	1.48	1.41
34	i	1339	U	C2'-C1'	-5.16	1.47	1.53
34	i	1858	U	P-O5'	-5.16	1.54	1.59
26	Z	104	ARG	CG-CD	5.16	1.64	1.51
34	i	597	U	O4'-C1'	5.16	1.48	1.41
34	i	672	U	P-O5'	-5.16	1.54	1.59
34	i	1695	C	O4'-C1'	5.16	1.48	1.41
34	i	90	G	O4'-C1'	5.15	1.48	1.41
34	i	83	A	O4'-C1'	5.15	1.48	1.41
34	i	1039	G	C5'-C4'	5.15	1.57	1.51
34	i	216	U	C5'-C4'	5.14	1.57	1.51
24	X	115	ILE	CA-C	-5.14	1.39	1.52
34	i	1199	G	O4'-C1'	5.14	1.48	1.41
34	i	1148	U	O4'-C1'	5.14	1.48	1.41
34	i	1574	A	P-O5'	-5.14	1.54	1.59
34	i	113	G	C4'-C3'	5.14	1.58	1.53
34	i	1420	G	C5'-C4'	5.14	1.57	1.51
34	i	683	G	C4'-O4'	5.13	1.52	1.45
34	i	1609	A	P-O5'	-5.13	1.54	1.59
34	i	394	G	O4'-C1'	-5.13	1.34	1.41
11	K	31	LYS	N-CA	-5.13	1.36	1.46
34	i	176	U	P-O5'	-5.13	1.54	1.59
34	i	659	A	C2'-C1'	5.13	1.58	1.53
34	i	21	U	O4'-C1'	5.13	1.48	1.41
2	B	41	ILE	N-CA	-5.12	1.36	1.46
26	Z	104	ARG	CB-CG	-5.12	1.38	1.52
34	i	917	G	O4'-C1'	5.12	1.48	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1235	U	O3'-P	-5.12	1.55	1.61
34	i	1540	A	C2'-C1'	-5.12	1.47	1.53
34	i	1168	U	O3'-P	-5.12	1.55	1.61
34	i	790	A	C2'-C1'	-5.12	1.47	1.53
19	S	6	PRO	N-CA	5.12	1.55	1.47
34	i	1808	G	C5'-C4'	5.12	1.57	1.51
34	i	1713	G	P-O5'	-5.11	1.54	1.59
34	i	1538	U	O4'-C1'	5.11	1.48	1.41
2	B	155	TYR	CD2-CE2	-5.11	1.31	1.39
34	i	281	U	C2'-C1'	5.11	1.58	1.53
34	i	878	U	C4'-C3'	5.11	1.58	1.53
34	i	140	U	C2'-C1'	-5.11	1.47	1.53
34	i	1242	A	C2'-C1'	-5.10	1.47	1.53
34	i	1761	C	C4'-C3'	5.10	1.58	1.53
20	T	82	ARG	CD-NE	5.10	1.55	1.46
34	i	659	A	O3'-P	-5.10	1.55	1.61
34	i	1029	G	O3'-P	-5.10	1.55	1.61
34	i	1466	C	C2'-C1'	-5.10	1.47	1.53
34	i	1546	U	O3'-P	-5.10	1.55	1.61
12	L	152	LYS	C-N	5.10	1.45	1.34
34	i	543	U	P-O5'	-5.09	1.54	1.59
34	i	1339	U	O3'-P	-5.09	1.55	1.61
34	i	95	G	O4'-C1'	5.09	1.48	1.41
34	i	1358	U	O4'-C1'	-5.09	1.35	1.41
34	i	1570	G	O4'-C1'	-5.09	1.35	1.41
34	i	853	U	P-O5'	5.09	1.64	1.59
34	i	1477	G	O3'-P	-5.08	1.55	1.61
34	i	1618	A	C4'-C3'	-5.08	1.47	1.52
34	i	1328	A	P-O5'	-5.08	1.54	1.59
34	i	16	G	P-O5'	-5.07	1.54	1.59
27	a	108	PRO	N-CD	5.07	1.54	1.47
34	i	1680	U	C2'-C1'	-5.07	1.47	1.53
34	i	1776	G	C5'-C4'	5.07	1.57	1.51
10	J	89	GLU	CG-CD	-5.07	1.44	1.51
34	i	910	U	O4'-C1'	5.06	1.48	1.41
1	A	53	ARG	CA-CB	-5.06	1.42	1.53
34	i	1157	U	C2'-C1'	5.06	1.58	1.53
24	X	128	VAL	CB-CG1	-5.06	1.42	1.52
34	i	1279	C	O3'-P	-5.06	1.55	1.61
34	i	1075	C	C5'-C4'	5.06	1.57	1.51
18	R	89	SER	N-CA	5.06	1.56	1.46
34	i	34	U	O4'-C1'	5.05	1.48	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	931	G	C2'-C1'	5.05	1.58	1.53
22	V	33	PRO	N-CD	5.05	1.54	1.47
34	i	1417	A	O4'-C1'	5.04	1.48	1.41
34	i	1792	C	C5'-C4'	5.04	1.57	1.51
34	i	1846	C	C2'-C1'	-5.04	1.47	1.53
34	i	1602	A	O4'-C1'	5.04	1.48	1.41
34	i	411	G	O4'-C1'	-5.03	1.35	1.41
34	i	1592	C	C4'-O4'	-5.03	1.39	1.45
34	i	1643	G	O3'-P	-5.03	1.55	1.61
34	i	1575	A	C2'-C1'	-5.03	1.47	1.53
34	i	665	U	C2'-C1'	-5.03	1.47	1.53
34	i	735	C	O3'-P	-5.03	1.55	1.61
34	i	79	A	C5'-C4'	5.03	1.57	1.51
34	i	461	G	C2'-C1'	5.03	1.58	1.53
34	i	741	C	C5'-C4'	5.03	1.57	1.51
34	i	851	G	O3'-P	-5.03	1.55	1.61
34	i	1344	G	C2'-C1'	5.03	1.58	1.53
34	i	1084	U	C4'-C3'	5.02	1.58	1.53
34	i	1429	C	O3'-P	5.02	1.67	1.61
34	i	349	U	C5'-C4'	5.02	1.57	1.51
34	i	1232	G	C4'-C3'	-5.02	1.47	1.52
34	i	1601	G	O4'-C1'	-5.02	1.35	1.41
34	i	1391	C	C5'-C4'	5.02	1.57	1.51
34	i	1541	G	O4'-C1'	-5.02	1.35	1.41
34	i	951	A	C5'-C4'	5.01	1.57	1.51
1	A	200	ASP	CA-C	-5.01	1.40	1.52
34	i	600	G	P-O5'	-5.01	1.54	1.59
34	i	1206	G	O4'-C1'	-5.01	1.35	1.41
34	i	1397	A	C5'-C4'	5.01	1.57	1.51
34	i	689	G	C2'-C1'	-5.01	1.47	1.53
34	i	1223	G	C5'-C4'	5.01	1.57	1.51
34	i	651	U	C5'-C4'	5.01	1.57	1.51
34	i	1102	C	C5'-C4'	5.01	1.57	1.51
34	i	178	C	C3'-O3'	5.01	1.49	1.42
26	Z	103	HIS	C-N	-5.00	1.22	1.34
34	i	384	G	C2'-C1'	-5.00	1.47	1.53
34	i	1344	G	O3'-P	-5.00	1.55	1.61
34	i	278	U	C5'-C4'	5.00	1.57	1.51

All (3278) bond angle outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	H	109	ARG	NE-CZ-NH2	-53.45	93.58	120.30
8	H	109	ARG	NE-CZ-NH1	42.64	141.62	120.30
34	i	1774	G	P-O3'-C3'	38.29	165.65	119.70
34	i	1114	C	O4'-C1'-N1	35.27	136.41	108.20
34	i	582	C	O4'-C1'-N1	32.57	134.25	108.20
34	i	67	C	O4'-C1'-N1	31.31	133.25	108.20
34	i	72	C	O4'-C1'-N1	30.29	132.43	108.20
8	H	118	ARG	NE-CZ-NH1	29.62	135.11	120.30
34	i	678	U	O4'-C1'-N1	29.21	131.57	108.20
34	i	1548	C	O4'-C1'-N1	28.75	131.20	108.20
34	i	883	U	P-O3'-C3'	28.32	153.68	119.70
34	i	793	C	O4'-C1'-N1	28.23	130.78	108.20
34	i	1299	C	O4'-C1'-N1	27.78	130.43	108.20
34	i	1113	C	O4'-C1'-N1	27.55	130.24	108.20
34	i	1080	A	P-O3'-C3'	27.24	152.39	119.70
34	i	418	U	O4'-C1'-N1	27.23	129.99	108.20
34	i	1817	A	P-O3'-C3'	27.21	152.35	119.70
34	i	521	A	P-O3'-C3'	26.70	151.74	119.70
34	i	746	C	P-O3'-C3'	26.22	151.16	119.70
34	i	1105	C	O4'-C1'-N1	25.58	128.66	108.20
34	i	1311	U	O4'-C1'-N1	25.24	128.39	108.20
34	i	1392	A	O4'-C1'-N9	24.84	128.07	108.20
34	i	1627	G	P-O3'-C3'	24.28	148.84	119.70
34	i	867	U	O4'-C1'-N1	24.19	127.55	108.20
34	i	730	C	P-O3'-C3'	23.87	148.34	119.70
34	i	317	G	P-O3'-C3'	23.76	148.22	119.70
34	i	1470	A	P-O3'-C3'	23.71	148.15	119.70
34	i	1564	A	O4'-C1'-N9	23.47	126.98	108.20
34	i	165	G	O4'-C1'-N9	23.24	126.79	108.20
34	i	1150	U	O4'-C1'-N1	23.19	126.75	108.20
34	i	66	G	P-O3'-C3'	23.06	147.37	119.70
34	i	1472	A	O4'-C1'-N9	23.00	126.60	108.20
34	i	211	U	P-O3'-C3'	22.86	147.14	119.70
34	i	1304	U	O4'-C1'-N1	22.80	126.44	108.20
34	i	793	C	P-O3'-C3'	22.69	146.93	119.70
10	J	146	SER	O-C-N	-22.62	86.51	122.70
34	i	544	A	O4'-C1'-N9	22.55	126.24	108.20
34	i	140	U	P-O3'-C3'	22.53	146.73	119.70
34	i	314	U	O4'-C1'-N1	22.37	126.10	108.20
34	i	836	C	P-O3'-C3'	22.21	146.35	119.70
8	H	118	ARG	NE-CZ-NH2	-22.00	109.30	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	876	G	O4'-C1'-N9	21.93	125.74	108.20
34	i	1573	U	O4'-C1'-N1	21.90	125.72	108.20
34	i	1552	C	O4'-C1'-N1	21.88	125.70	108.20
34	i	1776	G	O4'-C1'-N9	21.86	125.69	108.20
34	i	685	G	P-O3'-C3'	21.64	145.67	119.70
34	i	750	G	P-O3'-C3'	21.62	145.64	119.70
34	i	1516	C	P-O3'-C3'	21.54	145.55	119.70
34	i	1296	U	O4'-C1'-N1	21.49	125.39	108.20
34	i	743	U	P-O3'-C3'	21.46	145.45	119.70
34	i	298	G	O4'-C1'-N9	21.36	125.29	108.20
34	i	1562	G	O4'-C1'-N9	21.34	125.27	108.20
34	i	1664	G	P-O5'-C5'	21.28	154.94	120.90
34	i	722	C	P-O3'-C3'	21.20	145.14	119.70
34	i	1473	U	P-O3'-C3'	20.91	144.79	119.70
34	i	264	U	P-O3'-C3'	20.74	144.58	119.70
34	i	1391	C	P-O3'-C3'	20.70	144.53	119.70
34	i	1503	G	O4'-C1'-C2'	20.65	126.45	105.80
34	i	1819	A	O4'-C1'-N9	20.42	124.54	108.20
34	i	325	G	O4'-C1'-N9	20.19	124.35	108.20
34	i	1414	C	C3'-C2'-C1'	-19.99	85.51	101.50
34	i	618	A	O4'-C1'-N9	19.92	124.13	108.20
34	i	1392	A	P-O3'-C3'	19.91	143.60	119.70
34	i	1112	C	O4'-C1'-N1	19.89	124.11	108.20
34	i	1716	U	O4'-C1'-N1	19.86	124.09	108.20
34	i	1426	C	O4'-C1'-N1	19.72	123.98	108.20
34	i	319	G	P-O3'-C3'	19.64	143.26	119.70
34	i	1819	A	P-O3'-C3'	19.54	143.14	119.70
18	R	1	MET	CA-C-N	-19.42	77.37	116.20
34	i	317	G	O4'-C1'-N9	19.36	123.68	108.20
34	i	1471	G	P-O3'-C3'	19.23	142.78	119.70
34	i	225	C	P-O3'-C3'	19.21	142.75	119.70
34	i	1358	U	O4'-C1'-N1	18.99	123.39	108.20
34	i	1151	U	N1-C1'-C2'	18.85	138.50	114.00
34	i	142	C	O4'-C1'-N1	18.84	123.27	108.20
34	i	697	G	P-O3'-C3'	18.79	142.25	119.70
34	i	954	G	O4'-C1'-N9	18.65	123.12	108.20
34	i	78	C	P-O3'-C3'	18.64	142.07	119.70
34	i	126	G	P-O3'-C3'	18.63	142.06	119.70
34	i	688	U	P-O3'-C3'	18.61	142.03	119.70
34	i	747	G	P-O3'-C3'	18.61	142.03	119.70
34	i	180	G	P-O3'-C3'	-18.55	97.44	119.70
34	i	1673	A	O4'-C1'-N9	18.51	123.01	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	749	C	P-O5'-C5'	18.46	150.44	120.90
34	i	911	G	O4'-C1'-N9	18.37	122.90	108.20
34	i	899	A	O4'-C1'-N9	18.29	122.83	108.20
34	i	72	C	P-O3'-C3'	18.18	141.52	119.70
34	i	883	U	O4'-C1'-N1	18.18	122.75	108.20
34	i	1393	U	N1-C1'-C2'	18.18	137.63	114.00
34	i	1133	U	P-O3'-C3'	18.06	141.37	119.70
34	i	1544	U	P-O3'-C3'	18.01	141.31	119.70
34	i	1226	C	N1-C1'-C2'	18.00	137.40	114.00
34	i	1740	A	O4'-C1'-N9	17.88	122.50	108.20
34	i	1316	G	O4'-C1'-N9	17.79	122.43	108.20
34	i	1377	G	O4'-C1'-N9	17.77	122.42	108.20
34	i	428	G	O4'-C1'-N9	17.75	122.40	108.20
34	i	727	G	P-O3'-C3'	17.72	140.97	119.70
27	a	10	ARG	NE-CZ-NH2	17.58	129.09	120.30
34	i	1012	U	N1-C1'-C2'	17.57	136.84	114.00
34	i	257	G	P-O3'-C3'	17.57	140.78	119.70
34	i	346	C	O4'-C1'-N1	17.45	122.16	108.20
7	G	131	ARG	CB-CA-C	17.44	145.29	110.40
34	i	524	G	P-O3'-C3'	17.36	140.54	119.70
34	i	189	G	P-O3'-C3'	17.36	140.53	119.70
34	i	1045	A	O4'-C1'-N9	17.22	121.97	108.20
18	R	1	MET	N-CA-CB	17.14	141.46	110.60
34	i	135	U	P-O3'-C3'	17.12	140.24	119.70
34	i	1322	U	N1-C1'-C2'	17.11	136.25	114.00
34	i	1399	C	O4'-C1'-N1	17.08	121.86	108.20
34	i	819	U	O4'-C1'-N1	17.05	121.84	108.20
34	i	1149	C	O4'-C1'-N1	17.03	121.82	108.20
34	i	885	U	O4'-C1'-N1	17.02	121.82	108.20
22	V	61	ARG	NE-CZ-NH2	-17.02	111.79	120.30
34	i	1618	A	O4'-C1'-N9	16.97	121.78	108.20
34	i	136	C	P-O3'-C3'	16.95	140.04	119.70
34	i	222	G	P-O3'-C3'	16.89	139.97	119.70
34	i	74	G	O4'-C1'-N9	16.87	121.70	108.20
34	i	826	A	O4'-C1'-N9	16.87	121.70	108.20
34	i	1470	A	O4'-C1'-N9	16.76	121.61	108.20
34	i	239	U	P-O3'-C3'	16.73	139.78	119.70
34	i	868	A	O4'-C1'-N9	16.71	121.57	108.20
34	i	1563	C	N1-C1'-C2'	16.69	135.69	114.00
7	G	131	ARG	CB-CG-CD	16.63	154.83	111.60
34	i	1294	G	O4'-C1'-N9	16.61	121.49	108.20
16	P	37	TYR	N-CA-CB	-16.43	81.03	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	171	A	O4'-C1'-N9	16.38	121.31	108.20
34	i	358	U	P-O3'-C3'	16.38	139.35	119.70
34	i	748	G	P-O3'-C3'	16.21	139.15	119.70
34	i	299	G	N9-C1'-C2'	16.15	134.99	114.00
34	i	1144	A	O4'-C1'-N9	15.94	120.95	108.20
34	i	1233	C	N1-C1'-C2'	15.91	134.68	114.00
34	i	141	A	P-O3'-C3'	15.83	138.69	119.70
34	i	73	C	O4'-C1'-N1	15.83	120.86	108.20
9	I	134	GLU	N-CA-CB	15.80	139.04	110.60
34	i	1006	G	O4'-C1'-N9	15.61	120.69	108.20
4	D	5	ILE	O-C-N	-15.61	97.73	122.70
34	i	138	C	P-O3'-C3'	15.58	138.39	119.70
34	i	1327	C	N1-C1'-C2'	15.58	134.25	114.00
34	i	620	U	O4'-C1'-N1	15.57	120.66	108.20
34	i	1425	G	P-O3'-C3'	15.49	138.29	119.70
25	Y	86	GLU	C-N-CD	-15.47	86.57	120.60
34	i	1056	A	O4'-C1'-N9	15.42	120.53	108.20
34	i	64	A	O4'-C1'-N9	15.36	120.49	108.20
34	i	295	C	P-O3'-C3'	15.36	138.13	119.70
34	i	79	A	O4'-C1'-C2'	-15.31	90.49	105.80
10	J	146	SER	CA-C-N	15.24	150.72	117.20
34	i	1607	G	O4'-C1'-N9	15.23	120.39	108.20
27	a	102	ARG	C-N-CD	-15.22	87.12	120.60
34	i	396	U	P-O3'-C3'	15.20	137.93	119.70
34	i	60	A	O4'-C1'-N9	15.17	120.34	108.20
34	i	1279	C	P-O3'-C3'	15.16	137.90	119.70
34	i	1663	U	O4'-C1'-N1	15.12	120.30	108.20
34	i	1543	G	O4'-C1'-N9	15.06	120.25	108.20
9	I	43	ILE	O-C-N	-14.99	98.72	122.70
34	i	734	C	P-O3'-C3'	14.88	137.56	119.70
8	H	109	ARG	CD-NE-CZ	14.85	144.39	123.60
34	i	857	A	O4'-C1'-N9	14.82	120.06	108.20
34	i	1670	A	O4'-C1'-N9	14.81	120.05	108.20
34	i	781	C	P-O3'-C3'	14.81	137.47	119.70
27	a	97	PRO	N-CA-C	14.80	150.59	112.10
34	i	478	U	P-O3'-C3'	14.78	137.44	119.70
34	i	1492	U	P-O3'-C3'	14.75	137.40	119.70
34	i	835	C	N1-C1'-C2'	14.71	133.12	114.00
34	i	835	C	C3'-C2'-C1'	-14.70	89.74	101.50
34	i	215	U	N1-C1'-C2'	14.66	133.06	114.00
34	i	111	A	O4'-C1'-N9	14.65	119.92	108.20
34	i	1010	G	O4'-C1'-C2'	14.64	120.78	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1424	G	O4'-C1'-N9	14.64	119.91	108.20
34	i	1594	U	O4'-C1'-N1	14.60	119.88	108.20
34	i	538	C	P-O3'-C3'	14.59	137.20	119.70
34	i	720	A	P-O3'-C3'	14.54	137.15	119.70
20	T	93	SER	N-CA-CB	14.49	132.23	110.50
34	i	786	C	P-O3'-C3'	14.49	137.08	119.70
34	i	1412	C	O4'-C1'-N1	14.48	119.78	108.20
34	i	543	U	O4'-C1'-N1	14.47	119.78	108.20
34	i	1390	G	P-O3'-C3'	14.44	137.03	119.70
34	i	1773	G	O4'-C1'-N9	14.43	119.75	108.20
9	I	184	ARG	NE-CZ-NH1	-14.40	113.10	120.30
34	i	1475	G	O4'-C1'-N9	14.40	119.72	108.20
34	i	133	C	P-O3'-C3'	14.38	136.95	119.70
34	i	1227	C	N1-C1'-C2'	14.34	132.64	114.00
34	i	383	U	O4'-C1'-N1	14.33	119.66	108.20
34	i	581	U	O4'-C1'-N1	14.32	119.65	108.20
34	i	1344	G	O4'-C1'-N9	14.29	119.63	108.20
34	i	1412	C	P-O3'-C3'	14.29	136.84	119.70
34	i	210	G	O4'-C1'-N9	14.25	119.60	108.20
34	i	682	G	P-O3'-C3'	14.24	136.79	119.70
25	Y	103	SER	O-C-N	-14.21	99.96	122.70
34	i	1235	U	P-O3'-C3'	-14.20	102.66	119.70
34	i	1637	U	O4'-C1'-N1	14.19	119.55	108.20
34	i	677	C	O4'-C1'-N1	14.19	119.55	108.20
14	N	81	ALA	C-N-CD	-14.16	89.44	120.60
7	G	170	ARG	CA-CB-CG	14.16	144.56	113.40
34	i	1414	C	O4'-C1'-N1	14.15	119.52	108.20
34	i	1824	U	P-O3'-C3'	14.12	136.65	119.70
19	S	40	TYR	CB-CG-CD1	14.10	129.46	121.00
34	i	1818	A	O4'-C1'-N9	14.10	119.48	108.20
34	i	1293	U	O4'-C1'-N1	14.07	119.46	108.20
25	Y	86	GLU	N-CA-C	14.07	148.98	111.00
34	i	1861	U	O4'-C1'-N1	13.98	119.38	108.20
34	i	295	C	C4'-C3'-O3'	-13.96	80.07	109.40
34	i	649	G	O4'-C1'-N9	13.96	119.37	108.20
34	i	912	A	O4'-C1'-N9	13.89	119.32	108.20
34	i	794	G	P-O3'-C3'	13.89	136.37	119.70
34	i	1413	C	O4'-C1'-C2'	-13.85	91.95	105.80
34	i	240	C	P-O3'-C3'	13.78	136.24	119.70
34	i	1018	U	N1-C1'-C2'	13.77	131.90	114.00
19	S	141	ARG	O-C-N	-13.75	100.69	122.70
34	i	276	U	P-O3'-C3'	13.73	136.17	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1721	G	O4'-C1'-N9	13.72	119.18	108.20
34	i	1754	G	O4'-C1'-N9	13.71	119.17	108.20
28	b	36	LYS	C-N-CA	13.69	155.91	121.70
34	i	454	A	P-O3'-C3'	-13.68	103.28	119.70
34	i	313	C	P-O3'-C3'	13.65	136.08	119.70
34	i	1773	G	P-O3'-C3'	13.62	136.04	119.70
34	i	287	U	N1-C1'-C2'	13.61	131.69	114.00
34	i	1393	U	O4'-C1'-N1	-13.58	97.34	108.20
34	i	478	U	O4'-C1'-N1	13.55	119.04	108.20
34	i	1862	U	P-O3'-C3'	13.51	135.91	119.70
34	i	1011	U	O4'-C1'-N1	13.51	119.00	108.20
34	i	1510	G	O4'-C1'-N9	13.49	118.99	108.20
34	i	829	C	P-O3'-C3'	13.46	135.85	119.70
20	T	4	VAL	N-CA-C	13.45	147.32	111.00
34	i	548	G	O4'-C1'-N9	13.44	118.95	108.20
34	i	1741	U	P-O3'-C3'	13.43	135.81	119.70
34	i	438	A	O4'-C1'-N9	13.40	118.92	108.20
34	i	556	U	O4'-C1'-N1	13.38	118.91	108.20
34	i	519	A	P-O3'-C3'	-13.37	103.66	119.70
34	i	889	U	O4'-C1'-N1	13.36	118.89	108.20
34	i	960	A	O4'-C1'-N9	13.33	118.86	108.20
34	i	830	C	N1-C1'-C2'	13.31	131.30	114.00
7	G	131	ARG	CA-CB-CG	13.30	142.67	113.40
34	i	1449	C	O4'-C1'-N1	13.31	118.84	108.20
34	i	1769	U	O4'-C1'-N1	13.30	118.84	108.20
34	i	530	U	O4'-C1'-N1	13.26	118.81	108.20
34	i	24	C	P-O3'-C3'	13.26	135.61	119.70
34	i	837	G	O4'-C1'-N9	13.26	118.81	108.20
34	i	627	U	O4'-C1'-N1	13.26	118.81	108.20
34	i	748	G	O4'-C1'-N9	13.24	118.79	108.20
34	i	768	G	P-O3'-C3'	13.23	135.58	119.70
27	a	97	PRO	CB-CA-C	-13.22	78.96	112.00
34	i	742	C	P-O3'-C3'	13.21	135.55	119.70
34	i	1514	U	O4'-C1'-N1	13.18	118.74	108.20
34	i	1616	U	O4'-C1'-N1	13.17	118.74	108.20
34	i	1715	U	P-O3'-C3'	13.17	135.50	119.70
34	i	1841	G	O4'-C1'-N9	13.16	118.73	108.20
11	K	55	ARG	CG-CD-NE	13.14	139.39	111.80
34	i	1482	A	O4'-C1'-N9	13.14	118.71	108.20
34	i	1261	A	N9-C1'-C2'	13.11	131.04	114.00
34	i	1548	C	C3'-C2'-C1'	-13.11	91.01	101.50
34	i	406	U	O4'-C1'-N1	13.07	118.66	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	277	U	O4'-C1'-N1	-13.07	97.75	108.20
34	i	1257	C	N1-C1'-C2'	13.06	130.98	114.00
34	i	415	G	O4'-C1'-N9	13.06	118.65	108.20
34	i	147	A	O4'-C1'-N9	13.00	118.60	108.20
34	i	1459	U	C4'-C3'-O3'	-12.98	82.13	109.40
34	i	1523	G	O4'-C1'-N9	12.95	118.56	108.20
34	i	1	U	O4'-C1'-N1	12.94	118.55	108.20
34	i	456	G	O4'-C1'-N9	12.91	118.53	108.20
34	i	1565	G	O4'-C1'-N9	12.91	118.53	108.20
34	i	876	G	P-O3'-C3'	12.90	135.18	119.70
34	i	1503	G	O4'-C1'-N9	12.89	118.52	108.20
34	i	1307	C	N1-C1'-C2'	12.88	130.74	114.00
34	i	594	A	P-O3'-C3'	12.87	135.14	119.70
34	i	747	G	O4'-C1'-N9	12.85	118.48	108.20
34	i	869	G	P-O3'-C3'	12.85	135.12	119.70
34	i	721	C	P-O3'-C3'	12.85	135.12	119.70
34	i	1406	C	N1-C1'-C2'	12.84	130.69	114.00
34	i	1533	C	P-O3'-C3'	12.82	135.08	119.70
34	i	622	C	N1-C1'-C2'	12.81	130.66	114.00
34	i	1240	U	O4'-C1'-N1	12.81	118.45	108.20
34	i	75	G	O4'-C1'-N9	12.80	118.44	108.20
34	i	1429	C	O3'-P-O5'	-12.78	79.71	104.00
34	i	126	G	C4'-C3'-O3'	-12.78	82.56	109.40
34	i	1402	G	P-O3'-C3'	12.75	135.00	119.70
34	i	123	G	O4'-C1'-N9	12.74	118.39	108.20
34	i	139	C	P-O3'-C3'	12.74	134.99	119.70
34	i	1249	A	O4'-C1'-N9	12.73	118.39	108.20
34	i	1238	U	N1-C1'-C2'	12.69	130.50	114.00
17	Q	18	THR	N-CA-CB	12.66	134.35	110.30
18	R	88	VAL	O-C-N	-12.64	102.47	122.70
24	X	23	HIS	O-C-N	-12.63	102.49	122.70
34	i	59	U	O4'-C1'-N1	12.62	118.30	108.20
34	i	170	A	O4'-C1'-C2'	12.61	118.95	107.60
34	i	38	A	O4'-C1'-N9	12.61	118.28	108.20
34	i	1168	U	O4'-C1'-N1	12.59	118.27	108.20
34	i	1145	A	O4'-C1'-N9	12.57	118.26	108.20
18	R	89	SER	N-CA-C	12.57	144.93	111.00
34	i	1588	C	P-O3'-C3'	12.56	134.77	119.70
34	i	24	C	C1'-C2'-O2'	-12.54	72.98	110.60
34	i	1104	G	O4'-C1'-N9	12.52	118.22	108.20
34	i	816	U	O4'-C1'-N1	12.50	118.20	108.20
7	G	170	ARG	N-CA-CB	12.45	133.01	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	616	G	C3'-C2'-C1'	12.43	111.44	101.50
34	i	881	U	O4'-C1'-N1	12.42	118.14	108.20
34	i	66	G	C1'-O4'-C4'	-12.42	99.96	109.90
34	i	785	G	O4'-C1'-N9	12.41	118.13	108.20
34	i	77	A	P-O3'-C3'	12.41	134.59	119.70
34	i	831	C	P-O5'-C5'	12.38	140.71	120.90
34	i	1753	G	O4'-C1'-N9	12.35	118.08	108.20
34	i	542	G	P-O3'-C3'	12.33	134.50	119.70
34	i	696	G	P-O3'-C3'	12.33	134.50	119.70
34	i	1167	G	O4'-C1'-N9	12.32	118.06	108.20
34	i	20	G	O4'-C1'-N9	12.31	118.05	108.20
34	i	1044	G	N9-C1'-C2'	12.31	130.01	114.00
34	i	1414	C	O4'-C1'-C2'	12.30	118.67	107.60
34	i	1097	U	O4'-C1'-N1	12.27	118.02	108.20
16	P	17	TYR	CB-CG-CD2	-12.25	113.65	121.00
34	i	1126	G	O4'-C1'-N9	12.24	117.99	108.20
4	D	4	GLN	CG-CD-OE1	-12.23	97.15	121.60
34	i	280	G	O4'-C1'-N9	12.19	117.95	108.20
34	i	329	A	C4'-C3'-O3'	-12.19	83.81	109.40
34	i	1430	C	P-O3'-C3'	12.17	134.31	119.70
34	i	866	A	O4'-C1'-N9	12.17	117.93	108.20
34	i	986	A	N9-C1'-C2'	12.17	129.82	114.00
34	i	1081	C	P-O5'-C5'	-12.15	101.45	120.90
34	i	359	C	O4'-C1'-N1	12.14	117.92	108.20
34	i	1469	G	O3'-P-O5'	12.13	127.06	104.00
34	i	1716	U	N1-C1'-C2'	-12.13	98.23	114.00
34	i	4	C	N1-C1'-C2'	12.12	129.76	114.00
34	i	1188	U	O4'-C1'-N1	12.12	117.90	108.20
33	g	24	THR	C-N-CD	-12.10	93.98	120.60
34	i	1562	G	C3'-C2'-C1'	-12.09	91.83	101.50
34	i	520	U	O4'-C1'-N1	12.07	117.86	108.20
25	Y	86	GLU	CA-C-O	-12.07	94.75	120.10
34	i	1255	A	O4'-C1'-N9	12.06	117.85	108.20
34	i	1310	U	O4'-C1'-N1	12.05	117.84	108.20
17	Q	146	ARG	NE-CZ-NH2	12.05	126.32	120.30
34	i	237	G	P-O3'-C3'	12.05	134.16	119.70
34	i	224	U	O4'-C1'-N1	12.03	117.82	108.20
34	i	1397	A	P-O3'-C3'	12.03	134.13	119.70
34	i	146	G	O4'-C1'-N9	12.03	117.82	108.20
34	i	531	U	O4'-C1'-N1	12.02	117.81	108.20
34	i	426	G	O4'-C1'-N9	12.02	117.81	108.20
34	i	1372	A	O4'-C1'-N9	12.00	117.80	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	857	A	N9-C1'-C2'	-11.99	98.41	114.00
31	e	95	LYS	O-C-N	-11.97	103.54	122.70
34	i	1550	U	O4'-C1'-N1	11.97	117.78	108.20
34	i	412	U	O4'-C1'-N1	11.96	117.77	108.20
34	i	1659	A	P-O3'-C3'	11.96	134.05	119.70
34	i	1838	U	O4'-C1'-N1	11.95	117.76	108.20
11	K	1	MET	N-CA-CB	-11.94	89.10	110.60
34	i	1231	G	O4'-C1'-N9	11.94	117.75	108.20
34	i	915	A	P-O3'-C3'	11.94	134.03	119.70
34	i	868	A	P-O3'-C3'	11.93	134.02	119.70
34	i	1538	U	P-O3'-C3'	11.90	133.98	119.70
34	i	1607	G	N9-C1'-C2'	-11.88	98.55	114.00
34	i	278	U	P-O3'-C3'	11.88	133.95	119.70
34	i	179	C	N1-C1'-C2'	11.87	129.43	114.00
34	i	1549	C	O3'-P-O5'	-11.87	81.45	104.00
34	i	835	C	O4'-C1'-N1	11.87	117.69	108.20
34	i	1355	U	O4'-C1'-N1	11.87	117.69	108.20
34	i	807	A	P-O3'-C3'	11.86	133.93	119.70
34	i	1103	G	O4'-C1'-N9	11.83	117.66	108.20
34	i	736	C	N1-C1'-C2'	11.81	129.35	114.00
4	D	4	GLN	N-CA-CB	-11.81	89.34	110.60
34	i	596	G	O4'-C1'-N9	11.81	117.65	108.20
34	i	734	C	N1-C1'-C2'	11.79	129.33	114.00
34	i	1671	U	O4'-C1'-N1	11.77	117.62	108.20
18	R	1	MET	C-N-CA	-11.76	97.61	122.30
34	i	1670	A	N9-C1'-C2'	-11.76	98.71	114.00
34	i	1418	G	O4'-C1'-N9	11.73	117.58	108.20
34	i	1515	G	N9-C1'-C2'	11.72	129.24	114.00
2	B	41	ILE	CB-CA-C	11.71	135.02	111.60
34	i	1494	A	C1'-O4'-C4'	-11.70	100.54	109.90
34	i	1157	U	O4'-C1'-N1	11.67	117.54	108.20
34	i	1233	C	C1'-O4'-C4'	-11.67	100.56	109.90
34	i	817	G	O4'-C1'-N9	11.67	117.54	108.20
9	I	134	GLU	CB-CA-C	-11.67	87.06	110.40
34	i	1007	A	O4'-C1'-N9	11.66	117.53	108.20
34	i	225	C	C3'-C2'-C1'	11.66	110.83	101.50
34	i	365	U	O4'-C1'-N1	11.66	117.53	108.20
34	i	461	G	O4'-C1'-N9	11.65	117.52	108.20
13	M	99	LYS	C-N-CD	-11.65	94.98	120.60
34	i	1315	U	O4'-C1'-N1	11.64	117.51	108.20
34	i	1828	A	N9-C1'-C2'	11.64	129.13	114.00
34	i	1319	U	O4'-C1'-N1	11.63	117.50	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	570	U	P-O3'-C3'	-11.62	105.75	119.70
34	i	796	U	O4'-C1'-N1	11.61	117.49	108.20
34	i	672	U	O4'-C1'-N1	11.61	117.49	108.20
18	R	1	MET	N-CA-C	-11.59	79.71	111.00
34	i	1833	U	O4'-C1'-N1	11.56	117.45	108.20
34	i	31	U	O4'-C1'-N1	11.55	117.44	108.20
34	i	277	U	C3'-C2'-C1'	11.55	110.74	101.50
34	i	1446	G	O4'-C1'-N9	11.54	117.43	108.20
34	i	1552	C	P-O3'-C3'	11.54	133.55	119.70
34	i	1718	G	O4'-C1'-N9	11.54	117.43	108.20
34	i	526	A	P-O3'-C3'	-11.53	105.86	119.70
34	i	368	U	O4'-C1'-N1	11.53	117.42	108.20
34	i	800	U	O4'-C1'-N1	11.52	117.42	108.20
34	i	1437	U	O4'-C1'-N1	11.51	117.41	108.20
34	i	1000	U	O4'-C1'-N1	11.51	117.41	108.20
12	L	153	LYS	O-C-N	-11.50	104.30	122.70
34	i	413	U	O4'-C1'-N1	11.50	117.40	108.20
34	i	417	U	O4'-C1'-N1	11.49	117.40	108.20
34	i	1806	U	O4'-C1'-N1	11.49	117.39	108.20
34	i	728	U	P-O3'-C3'	11.48	133.47	119.70
34	i	929	G	C1'-O4'-C4'	-11.46	100.73	109.90
34	i	358	U	O4'-C1'-N1	11.45	117.36	108.20
10	J	146	SER	C-N-CA	11.44	150.30	121.70
34	i	1206	G	O4'-C1'-N9	11.39	117.31	108.20
34	i	536	G	P-O3'-C3'	11.37	133.34	119.70
34	i	728	U	P-O5'-C5'	11.35	139.05	120.90
34	i	1643	G	C4'-C3'-O3'	11.32	135.65	113.00
34	i	861	A	O4'-C1'-N9	11.29	117.24	108.20
34	i	474	A	P-O3'-C3'	11.27	133.22	119.70
34	i	1815	U	O4'-C1'-N1	11.23	117.19	108.20
34	i	1405	A	P-O3'-C3'	11.22	133.16	119.70
34	i	145	G	C1'-O4'-C4'	-11.21	100.93	109.90
4	D	5	ILE	CA-C-N	11.20	141.84	117.20
34	i	1237	A	C3'-C2'-C1'	11.20	110.46	101.50
12	L	20	LYS	N-CA-CB	-11.19	90.47	110.60
34	i	749	C	O4'-C1'-N1	11.19	117.15	108.20
27	a	98	PRO	C-N-CD	-11.17	96.02	120.60
34	i	411	G	O4'-C1'-N9	11.17	117.14	108.20
9	I	6	ASP	CB-CG-OD2	-11.16	108.25	118.30
34	i	1742	C	P-O3'-C3'	11.16	133.09	119.70
34	i	1414	C	P-O3'-C3'	11.15	133.09	119.70
34	i	1496	G	N9-C1'-C2'	11.14	128.49	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1062	U	O4'-C1'-N1	11.14	117.11	108.20
34	i	947	C	C3'-C2'-C1'	11.13	110.41	101.50
34	i	170	A	C1'-O4'-C4'	-11.12	101.00	109.90
34	i	948	G	O4'-C1'-N9	11.12	117.09	108.20
34	i	520	U	C4'-C3'-O3'	-11.11	86.07	109.40
34	i	385	G	O4'-C1'-N9	11.10	117.08	108.20
34	i	1500	U	O4'-C1'-N1	11.10	117.08	108.20
34	i	913	U	O4'-C1'-N1	11.09	117.07	108.20
34	i	1414	C	C1'-O4'-C4'	-11.09	101.03	109.90
34	i	1848	U	O4'-C1'-N1	11.05	117.04	108.20
34	i	1348	G	C1'-O4'-C4'	-11.05	101.06	109.90
34	i	1024	A	P-O3'-C3'	-11.03	106.46	119.70
34	i	1194	G	O4'-C1'-C2'	11.02	117.52	107.60
34	i	1648	U	O4'-C1'-N1	11.02	117.02	108.20
34	i	1715	U	O4'-C1'-N1	11.01	117.00	108.20
34	i	340	C	O4'-C1'-C2'	-11.00	94.80	105.80
34	i	918	A	O4'-C1'-N9	10.97	116.97	108.20
34	i	1672	U	O4'-C1'-N1	10.96	116.97	108.20
34	i	207	U	P-O3'-C3'	10.95	132.84	119.70
34	i	1772	C	O4'-C1'-N1	10.95	116.96	108.20
34	i	1290	G	O4'-C1'-N9	10.94	116.95	108.20
34	i	1154	G	O4'-C1'-N9	10.94	116.95	108.20
34	i	1193	G	O4'-C1'-N9	10.94	116.95	108.20
34	i	103	A	O4'-C1'-N9	10.93	116.94	108.20
34	i	1432	C	C3'-C2'-C1'	10.92	110.23	101.50
34	i	1255	A	O4'-C1'-C2'	10.91	117.42	107.60
34	i	1738	G	N9-C1'-C2'	10.91	128.19	114.00
24	X	91	LEU	CA-CB-CG	10.88	140.32	115.30
34	i	1408	C	P-O3'-C3'	10.87	132.75	119.70
34	i	61	A	O4'-C1'-N9	10.86	116.89	108.20
34	i	862	U	O4'-C1'-N1	10.86	116.89	108.20
34	i	684	A	O4'-C1'-N9	10.85	116.88	108.20
26	Z	107	VAL	N-CA-CB	-10.84	87.64	111.50
34	i	200	U	O4'-C1'-N1	10.82	116.86	108.20
34	i	671	U	O4'-C1'-N1	10.82	116.86	108.20
34	i	1138	G	O4'-C1'-N9	10.82	116.85	108.20
34	i	676	U	O4'-C1'-N1	10.81	116.85	108.20
34	i	684	A	O4'-C1'-C2'	10.81	117.33	107.60
34	i	991	G	O4'-C1'-N9	10.81	116.85	108.20
18	R	86	PRO	CA-N-CD	-10.81	96.37	111.50
34	i	832	G	O4'-C1'-N9	10.81	116.84	108.20
34	i	436	G	N9-C1'-C2'	10.80	128.04	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	405	A	O4'-C1'-N9	10.80	116.84	108.20
34	i	1037	G	C1'-O4'-C4'	-10.79	101.27	109.90
34	i	1329	U	O4'-C1'-N1	10.77	116.82	108.20
34	i	878	U	O4'-C1'-N1	10.77	116.82	108.20
34	i	631	A	O4'-C1'-N9	10.75	116.80	108.20
18	R	89	SER	CA-C-N	10.74	140.83	117.20
34	i	1632	A	P-O3'-C3'	10.74	132.59	119.70
34	i	827	G	O4'-C1'-N9	10.73	116.79	108.20
34	i	907	C	P-O5'-C5'	10.72	138.06	120.90
34	i	477	U	P-O3'-C3'	10.72	132.57	119.70
34	i	1743	G	O4'-C1'-N9	10.72	116.78	108.20
34	i	522	C	O4'-C1'-C2'	-10.70	95.10	105.80
34	i	592	G	O4'-C1'-N9	10.69	116.75	108.20
34	i	521	A	C1'-O4'-C4'	-10.69	101.34	109.90
34	i	1111	U	O4'-C1'-N1	10.68	116.75	108.20
34	i	57	U	O4'-C1'-N1	10.66	116.72	108.20
34	i	835	C	C1'-O4'-C4'	-10.65	101.38	109.90
34	i	1354	U	O4'-C1'-N1	10.64	116.71	108.20
34	i	1615	A	N9-C1'-C2'	10.63	127.82	114.00
19	S	87	GLN	O-C-N	-10.63	105.70	122.70
34	i	1724	U	O4'-C1'-N1	10.62	116.70	108.20
34	i	1856	G	O4'-C1'-C2'	-10.62	95.18	105.80
19	S	40	TYR	CB-CG-CD2	-10.61	114.63	121.00
34	i	915	A	N9-C1'-C2'	10.61	127.80	114.00
34	i	1570	G	O4'-C1'-N9	10.60	116.68	108.20
34	i	1021	U	O4'-C1'-N1	10.60	116.68	108.20
34	i	858	A	N9-C1'-C2'	10.58	127.75	114.00
19	S	88	LYS	CB-CA-C	10.58	131.55	110.40
27	a	10	ARG	CD-NE-CZ	10.57	138.40	123.60
34	i	739	U	O4'-C1'-N1	10.57	116.65	108.20
34	i	1546	U	O4'-C1'-C2'	10.57	117.11	107.60
34	i	143	U	N1-C1'-C2'	10.56	127.73	114.00
34	i	1536	G	O4'-C1'-N9	10.56	116.64	108.20
34	i	154	U	O4'-C1'-N1	10.55	116.64	108.20
34	i	894	U	P-O3'-C3'	10.54	132.35	119.70
34	i	1308	G	O4'-C1'-N9	-10.53	99.78	108.20
34	i	19	A	O4'-C1'-N9	10.51	116.61	108.20
34	i	1555	U	O4'-C1'-N1	10.51	116.61	108.20
34	i	1079	A	C1'-O4'-C4'	-10.50	101.50	109.90
34	i	1674	A	P-O3'-C3'	10.50	132.30	119.70
34	i	1346	U	O4'-C1'-N1	10.49	116.59	108.20
9	I	6	ASP	CB-CG-OD1	10.48	127.73	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	93	U	O4'-C1'-N1	10.47	116.58	108.20
34	i	815	G	O4'-C1'-N9	10.47	116.58	108.20
34	i	1299	C	C3'-C2'-C1'	-10.45	93.14	101.50
34	i	1255	A	C3'-C2'-C1'	-10.45	93.14	101.50
34	i	682	G	O4'-C1'-N9	10.44	116.55	108.20
34	i	204	G	O4'-C1'-N9	10.44	116.55	108.20
34	i	79	A	O4'-C1'-N9	10.43	116.55	108.20
34	i	1295	A	O4'-C1'-N9	10.42	116.53	108.20
34	i	794	G	O4'-C1'-C2'	-10.41	95.39	105.80
34	i	490	A	O3'-P-O5'	-10.41	84.22	104.00
7	G	170	ARG	CB-CG-CD	10.40	138.64	111.60
34	i	1584	A	O4'-C1'-N9	10.40	116.52	108.20
34	i	1479	A	O4'-C1'-N9	10.39	116.52	108.20
34	i	322	G	O4'-C1'-N9	10.39	116.51	108.20
34	i	1288	C	C3'-C2'-C1'	10.39	109.81	101.50
34	i	1407	G	C1'-O4'-C4'	-10.39	101.59	109.90
34	i	1170	U	O4'-C1'-N1	10.39	116.51	108.20
34	i	385	G	C1'-O4'-C4'	-10.38	101.59	109.90
34	i	542	G	O4'-C1'-N9	10.37	116.50	108.20
34	i	1210	A	P-O3'-C3'	10.37	132.15	119.70
34	i	1074	C	N1-C1'-C2'	10.36	127.47	114.00
34	i	170	A	C3'-C2'-C1'	-10.35	93.22	101.50
34	i	1012	U	C3'-C2'-C1'	10.34	109.77	101.50
34	i	1811	G	O4'-C1'-N9	10.33	116.47	108.20
15	O	129	ILE	CB-CA-C	-10.33	90.94	111.60
34	i	1404	U	N1-C1'-C2'	10.33	127.43	114.00
11	K	55	ARG	NE-CZ-NH1	10.30	125.45	120.30
10	J	138	ARG	N-CA-C	10.29	138.78	111.00
34	i	517	C	O4'-C1'-N1	10.27	116.42	108.20
34	i	1774	G	C1'-O4'-C4'	-10.27	101.69	109.90
34	i	168	C	N1-C1'-C2'	10.26	127.34	114.00
34	i	65	C	P-O3'-C3'	10.26	132.01	119.70
34	i	971	G	O4'-C1'-N9	10.26	116.40	108.20
34	i	546	U	P-O5'-C5'	10.23	137.27	120.90
34	i	1857	A	O4'-C1'-C2'	-10.23	95.57	105.80
34	i	792	G	O4'-C1'-N9	10.22	116.38	108.20
34	i	74	G	C3'-C2'-C1'	10.21	109.67	101.50
34	i	141	A	O4'-C1'-C2'	-10.21	95.59	105.80
34	i	1232	G	O4'-C1'-C2'	10.21	116.79	107.60
34	i	789	G	O4'-C1'-N9	10.21	116.37	108.20
5	E	171	ASP	N-CA-C	10.20	138.54	111.00
34	i	1722	G	O4'-C1'-N9	10.19	116.35	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	K	43	LEU	CA-CB-CG	10.18	138.71	115.30
34	i	1662	U	O4'-C1'-N1	10.18	116.34	108.20
34	i	167	G	O4'-C1'-N9	10.17	116.34	108.20
34	i	1416	G	C1'-O4'-C4'	-10.17	101.76	109.90
34	i	349	U	O4'-C1'-N1	10.15	116.32	108.20
18	R	2	GLY	O-C-N	-10.15	106.46	122.70
34	i	749	C	P-O3'-C3'	10.14	131.87	119.70
34	i	1075	C	C3'-C2'-C1'	10.14	109.61	101.50
21	U	71	GLY	N-CA-C	10.14	138.45	113.10
34	i	662	A	O4'-C1'-N9	10.14	116.31	108.20
34	i	590	G	O4'-C1'-N9	10.13	116.31	108.20
34	i	1551	A	P-O3'-C3'	10.13	131.86	119.70
34	i	102	A	P-O3'-C3'	10.12	131.85	119.70
34	i	1281	G	C4'-C3'-O3'	10.12	133.25	113.00
34	i	585	U	O4'-C1'-N1	10.12	116.29	108.20
34	i	1303	U	P-O3'-C3'	10.11	131.83	119.70
34	i	1408	C	O3'-P-O5'	-10.10	84.81	104.00
34	i	300	G	O4'-C1'-N9	10.10	116.28	108.20
34	i	1414	C	P-O5'-C5'	10.08	137.03	120.90
34	i	344	U	O4'-C1'-N1	10.07	116.26	108.20
34	i	1010	G	C1'-O4'-C4'	-10.07	101.84	109.90
34	i	1532	A	O4'-C1'-C2'	-10.06	95.74	105.80
34	i	865	A	P-O3'-C3'	10.06	131.77	119.70
34	i	1276	G	O4'-C1'-N9	10.05	116.24	108.20
4	D	4	GLN	CG-CD-NE2	10.04	140.79	116.70
34	i	287	U	C1'-O4'-C4'	-10.04	101.87	109.90
34	i	1615	A	O4'-C1'-N9	10.03	116.22	108.20
34	i	31	U	P-O3'-C3'	10.03	131.73	119.70
34	i	935	U	O4'-C1'-N1	10.03	116.22	108.20
34	i	1258	C	N1-C1'-C2'	10.02	127.03	114.00
34	i	1010	G	O4'-C1'-N9	9.98	116.18	108.20
8	H	110	THR	CA-C-O	-9.97	99.16	120.10
11	K	1	MET	CB-CG-SD	9.97	142.32	112.40
34	i	547	U	N1-C1'-C2'	9.97	126.97	114.00
34	i	1072	G	O4'-C1'-N9	9.97	116.18	108.20
34	i	1397	A	O4'-C1'-N9	9.96	116.17	108.20
34	i	1771	G	C3'-C2'-C1'	-9.96	93.53	101.50
34	i	1643	G	P-O3'-C3'	9.96	131.66	119.70
24	X	23	HIS	CB-CA-C	9.96	130.32	110.40
34	i	73	C	O4'-C1'-C2'	-9.96	95.84	105.80
34	i	795	U	O4'-C1'-N1	9.96	116.17	108.20
34	i	204	G	N9-C1'-C2'	-9.95	101.05	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	546	U	C4'-C3'-C2'	-9.94	92.66	102.60
34	i	1472	A	N9-C1'-C2'	-9.92	101.08	112.00
34	i	663	G	O4'-C1'-N9	9.91	116.13	108.20
7	G	180	VAL	CB-CA-C	-9.90	92.58	111.40
9	I	43	ILE	CA-C-O	9.90	140.89	120.10
34	i	1798	U	O4'-C1'-N1	9.89	116.11	108.20
34	i	616	G	O4'-C1'-C2'	-9.89	95.91	105.80
34	i	1435	A	O4'-C1'-N9	9.87	116.09	108.20
34	i	92	A	N9-C1'-C2'	9.86	126.82	114.00
34	i	665	U	O4'-C1'-N1	9.86	116.09	108.20
34	i	1036	G	O4'-C1'-N9	9.86	116.09	108.20
34	i	1211	C	O4'-C1'-C2'	-9.86	95.94	105.80
34	i	1151	U	O4'-C1'-N1	9.84	116.07	108.20
34	i	914	U	N1-C1'-C2'	9.83	126.78	114.00
34	i	1194	G	C1'-O4'-C4'	-9.83	102.04	109.90
34	i	1715	U	C1'-O4'-C4'	9.83	117.76	109.90
34	i	810	U	O4'-C1'-N1	9.81	116.05	108.20
34	i	748	G	C3'-C2'-C1'	-9.81	93.65	101.50
34	i	520	U	O4'-C4'-C3'	-9.80	94.20	104.00
18	R	42	PRO	CA-N-CD	-9.79	97.79	111.50
19	S	91	LYS	CG-CD-CE	9.79	141.26	111.90
34	i	189	G	C1'-O4'-C4'	-9.78	102.08	109.90
34	i	1716	U	P-O3'-C3'	9.77	131.43	119.70
34	i	1004	A	P-O3'-C3'	9.77	131.42	119.70
34	i	381	C	O4'-C1'-N1	9.77	116.01	108.20
34	i	1413	C	C3'-C2'-C1'	9.77	109.31	101.50
34	i	105	U	O4'-C1'-N1	9.76	116.01	108.20
34	i	1333	C	O4'-C1'-N1	9.76	116.01	108.20
34	i	394	G	O4'-C1'-N9	9.76	116.01	108.20
34	i	879	U	O4'-C1'-N1	9.76	116.00	108.20
34	i	1503	G	C1'-O4'-C4'	-9.75	102.10	109.90
34	i	1115	A	O4'-C1'-N9	9.75	116.00	108.20
34	i	626	C	C3'-C2'-C1'	9.74	109.29	101.50
34	i	1328	A	O4'-C1'-C2'	-9.74	96.06	105.80
34	i	1803	A	O4'-C1'-N9	9.74	115.99	108.20
34	i	1249	A	P-O3'-C3'	9.73	131.38	119.70
21	U	104	ILE	N-CA-C	-9.73	84.72	111.00
34	i	121	U	O4'-C1'-N1	9.73	115.99	108.20
34	i	1659	A	N9-C1'-C2'	9.73	126.65	114.00
34	i	5	U	O4'-C1'-N1	9.72	115.98	108.20
34	i	743	U	O4'-C1'-N1	9.72	115.98	108.20
34	i	1234	U	O4'-C1'-N1	9.72	115.98	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	R	1	MET	CA-C-O	9.71	140.49	120.10
28	b	36	LYS	N-CA-C	9.71	137.22	111.00
33	g	142	VAL	CA-C-N	-9.70	95.86	117.20
3	C	93	LYS	C-N-CA	9.69	145.93	121.70
1	A	200	ASP	CB-CA-C	-9.68	91.03	110.40
34	i	928	G	O4'-C1'-N9	9.68	115.95	108.20
34	i	1599	G	O4'-C1'-N9	9.68	115.94	108.20
34	i	824	G	O4'-C1'-C2'	9.68	116.31	107.60
34	i	838	C	C3'-C2'-C1'	9.67	109.23	101.50
34	i	1432	C	P-O3'-C3'	9.67	131.30	119.70
34	i	434	G	O4'-C1'-N9	9.65	115.92	108.20
34	i	1551	A	O4'-C1'-N9	9.65	115.92	108.20
33	g	159	ASN	N-CA-C	9.64	137.04	111.00
34	i	1126	G	N9-C1'-C2'	-9.64	101.39	112.00
34	i	80	G	C3'-C2'-C1'	9.64	109.21	101.50
18	R	3	ARG	N-CA-CB	9.63	127.94	110.60
34	i	1490	U	P-O3'-C3'	9.63	131.26	119.70
10	J	89	GLU	N-CA-C	9.63	137.00	111.00
34	i	830	C	C1'-O4'-C4'	-9.62	102.20	109.90
34	i	1771	G	O4'-C1'-N9	9.62	115.90	108.20
34	i	1077	U	O4'-C1'-N1	9.62	115.89	108.20
34	i	787	C	O4'-C1'-N1	9.62	115.89	108.20
34	i	468	G	O4'-C1'-N9	9.61	115.89	108.20
34	i	321	C	O4'-C1'-N1	9.59	115.87	108.20
34	i	1132	U	O4'-C1'-N1	9.59	115.88	108.20
34	i	1197	U	O4'-C1'-N1	9.59	115.87	108.20
19	S	54	LYS	N-CA-C	9.59	136.89	111.00
34	i	66	G	N9-C1'-C2'	9.59	126.46	114.00
34	i	1288	C	O4'-C1'-N1	-9.57	100.54	108.20
34	i	1291	A	O4'-C1'-N9	9.56	115.85	108.20
4	D	193	ASP	N-CA-C	-9.56	85.19	111.00
34	i	1232	G	O4'-C1'-N9	9.54	115.83	108.20
34	i	1546	U	O4'-C1'-N1	9.54	115.83	108.20
34	i	1163	G	O4'-C1'-N9	9.53	115.83	108.20
34	i	1215	C	O4'-C1'-N1	9.53	115.82	108.20
34	i	1251	G	C1'-O4'-C4'	-9.52	102.29	109.90
34	i	826	A	C3'-C2'-C1'	-9.52	93.89	101.50
34	i	397	G	O4'-C1'-N9	9.51	115.81	108.20
34	i	1530	U	P-O3'-C3'	9.51	131.11	119.70
34	i	999	U	O4'-C1'-N1	9.51	115.80	108.20
34	i	504	U	O4'-C1'-N1	9.48	115.79	108.20
34	i	1125	G	O4'-C1'-N9	9.48	115.79	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1140	A	N9-C1'-C2'	9.47	126.32	114.00
34	i	1585	C	N1-C1'-C2'	9.47	126.31	114.00
34	i	1802	U	O4'-C1'-N1	9.47	115.78	108.20
9	I	105	ASP	CB-CG-OD2	9.46	126.82	118.30
34	i	1490	U	O4'-C1'-N1	9.46	115.77	108.20
34	i	160	U	P-O3'-C3'	9.45	131.04	119.70
34	i	545	A	P-O3'-C3'	9.45	131.04	119.70
22	V	61	ARG	NE-CZ-NH1	9.45	125.03	120.30
34	i	728	U	N1-C1'-C2'	9.45	126.28	114.00
34	i	1204	A	O4'-C1'-N9	9.45	115.76	108.20
27	a	63	VAL	C-N-CA	9.45	145.31	121.70
34	i	431	C	N1-C1'-C2'	9.45	126.28	114.00
34	i	1582	G	O4'-C1'-N9	9.45	115.76	108.20
34	i	951	A	O4'-C1'-N9	9.44	115.75	108.20
34	i	67	C	C3'-C2'-C1'	-9.44	93.95	101.50
27	a	10	ARG	CB-CG-CD	9.43	136.11	111.60
34	i	883	U	P-O5'-C5'	9.43	135.98	120.90
34	i	647	U	O4'-C1'-N1	9.42	115.73	108.20
34	i	1266	G	O4'-C1'-N9	9.41	115.73	108.20
34	i	1845	A	O4'-C1'-C2'	-9.41	96.39	105.80
25	Y	103	SER	CA-C-N	9.40	137.88	117.20
8	H	111	LYS	N-CA-CB	9.39	127.51	110.60
34	i	909	A	C3'-C2'-C1'	9.39	109.01	101.50
34	i	1444	A	P-O3'-C3'	9.39	130.96	119.70
34	i	424	G	C4'-C3'-O3'	-9.38	89.69	109.40
34	i	961	U	O4'-C1'-N1	9.38	115.71	108.20
34	i	51	U	O4'-C1'-N1	9.38	115.70	108.20
34	i	642	U	O4'-C1'-N1	9.37	115.69	108.20
34	i	207	U	C4'-C3'-O3'	9.37	131.73	113.00
34	i	1810	G	O4'-C1'-N9	9.36	115.69	108.20
34	i	651	U	O4'-C1'-N1	9.36	115.69	108.20
7	G	122	PRO	CA-N-CD	-9.36	98.39	111.50
34	i	793	C	C3'-C2'-C1'	9.36	108.99	101.50
34	i	987	G	O4'-C1'-N9	9.36	115.69	108.20
34	i	1564	A	O5'-P-OP2	-9.36	97.28	105.70
34	i	107	A	O4'-C1'-N9	9.35	115.68	108.20
34	i	1037	G	O4'-C1'-C2'	9.35	116.01	107.60
34	i	660	A	O4'-C1'-N9	9.34	115.68	108.20
34	i	53	C	O4'-C1'-C2'	-9.33	96.47	105.80
4	D	82	GLY	C-N-CA	-9.33	98.39	121.70
34	i	1013	U	O4'-C1'-N1	9.30	115.64	108.20
34	i	79	A	C5'-C4'-O4'	9.30	120.26	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1068	U	O4'-C1'-N1	9.30	115.64	108.20
34	i	905	G	O3'-P-O5'	9.29	121.66	104.00
34	i	1617	U	O4'-C1'-N1	-9.29	100.77	108.20
34	i	1786	G	O4'-C1'-C2'	9.29	115.96	107.60
34	i	408	A	N9-C1'-C2'	9.29	126.08	114.00
34	i	524	G	O3'-P-O5'	-9.28	86.36	104.00
19	S	40	TYR	N-CA-C	9.28	136.05	111.00
34	i	1153	G	O4'-C1'-N9	9.27	115.62	108.20
34	i	855	G	O4'-C1'-N9	9.27	115.61	108.20
26	Z	104	ARG	CD-NE-CZ	-9.26	110.63	123.60
34	i	1317	G	O4'-C1'-N9	9.25	115.60	108.20
34	i	892	U	O4'-C1'-N1	9.24	115.59	108.20
34	i	1065	U	P-O3'-C3'	9.24	130.79	119.70
34	i	840	U	O4'-C1'-N1	9.24	115.59	108.20
34	i	1288	C	N1-C1'-C2'	9.23	126.00	114.00
33	g	274	VAL	O-C-N	-9.23	107.94	122.70
2	B	40	ASN	C-N-CA	-9.22	98.65	121.70
7	G	157	VAL	N-CA-C	9.21	135.86	111.00
21	U	94	PRO	CA-N-CD	-9.20	98.62	111.50
34	i	214	A	C3'-C2'-C1'	9.19	108.86	101.50
34	i	551	A	C4'-C3'-O3'	-9.19	90.11	109.40
34	i	147	A	N9-C1'-C2'	-9.18	101.90	112.00
34	i	619	A	O4'-C1'-N9	9.18	115.54	108.20
34	i	1228	U	O4'-C1'-N1	9.18	115.54	108.20
12	L	17	PHE	O-C-N	9.17	137.37	122.70
34	i	1360	U	O3'-P-O5'	9.17	121.43	104.00
21	U	53	PRO	CA-N-CD	-9.17	98.66	111.50
34	i	1199	G	N9-C1'-C2'	9.16	125.91	114.00
34	i	641	U	O4'-C1'-N1	9.15	115.52	108.20
34	i	1102	C	O4'-C1'-N1	9.15	115.52	108.20
34	i	824	G	C3'-C2'-C1'	-9.15	94.18	101.50
34	i	1261	A	C3'-C2'-C1'	9.13	108.81	101.50
34	i	1642	A	O4'-C1'-N9	9.13	115.50	108.20
34	i	1736	U	N1-C1'-C2'	9.13	125.87	114.00
34	i	995	G	O4'-C1'-N9	9.12	115.50	108.20
34	i	446	C	N1-C1'-C2'	9.11	125.85	114.00
34	i	640	A	C3'-C2'-C1'	9.11	108.79	101.50
34	i	1403	U	N1-C1'-C2'	9.11	125.84	114.00
34	i	1129	A	O4'-C1'-N9	9.11	115.49	108.20
34	i	56	G	O4'-C1'-N9	9.09	115.47	108.20
34	i	1076	A	O4'-C1'-N9	9.09	115.47	108.20
16	P	37	TYR	CB-CG-CD2	-9.09	115.55	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	89	C	O4'-C1'-N1	9.08	115.47	108.20
34	i	99	A	O4'-C1'-N9	9.07	115.46	108.20
34	i	24	C	O3'-P-O5'	-9.07	86.77	104.00
34	i	910	U	O4'-C1'-N1	9.07	115.45	108.20
34	i	414	C	N1-C1'-C2'	9.06	125.78	114.00
4	D	5	ILE	C-N-CA	9.06	144.34	121.70
34	i	484	C	C3'-C2'-C1'	9.06	108.75	101.50
34	i	1743	G	P-O5'-C5'	9.06	135.39	120.90
19	S	53	THR	O-C-N	-9.05	108.21	122.70
34	i	776	U	P-O3'-C3'	9.05	130.56	119.70
34	i	1189	U	O4'-C1'-N1	9.05	115.44	108.20
34	i	561	U	O4'-C1'-N1	9.05	115.44	108.20
34	i	60	A	C3'-C2'-C1'	-9.04	94.27	101.50
34	i	437	A	O4'-C1'-C2'	-9.04	96.76	105.80
34	i	1022	C	C3'-C2'-C1'	9.04	108.73	101.50
34	i	1455	G	C1'-O4'-C4'	-9.04	102.67	109.90
12	L	17	PHE	CA-C-N	-9.03	97.33	117.20
27	a	10	ARG	NH1-CZ-NH2	-9.03	109.47	119.40
34	i	1469	G	P-O3'-C3'	9.03	130.53	119.70
34	i	482	C	O4'-C1'-C2'	-9.02	96.78	105.80
34	i	652	G	N9-C1'-C2'	9.02	125.73	114.00
34	i	1631	G	O4'-C1'-N9	9.02	115.42	108.20
34	i	1214	C	N1-C1'-C2'	9.02	125.73	114.00
9	I	105	ASP	CB-CG-OD1	-9.02	110.18	118.30
34	i	201	G	O4'-C1'-N9	9.02	115.41	108.20
34	i	405	A	N9-C1'-C2'	-9.01	102.08	112.00
34	i	1335	U	O4'-C1'-N1	9.01	115.41	108.20
34	i	114	G	O4'-C1'-N9	9.01	115.40	108.20
34	i	730	C	O4'-C1'-C2'	-9.00	96.80	105.80
34	i	735	C	N1-C1'-C2'	8.99	125.68	114.00
27	a	97	PRO	N-CA-CB	-8.98	92.52	103.30
34	i	25	A	N9-C1'-C2'	-8.97	102.13	112.00
34	i	956	U	N1-C1'-C2'	8.97	125.66	114.00
34	i	298	G	C3'-C2'-C1'	-8.97	94.33	101.50
34	i	1523	G	C3'-C2'-C1'	-8.97	94.33	101.50
34	i	733	G	C1'-O4'-C4'	8.96	117.07	109.90
34	i	1515	G	C1'-O4'-C4'	-8.96	102.73	109.90
34	i	152	U	O4'-C1'-N1	8.96	115.37	108.20
34	i	653	C	N1-C1'-C2'	8.96	125.65	114.00
21	U	93	SER	C-N-CD	8.96	147.21	128.40
34	i	1405	A	P-O5'-C5'	8.95	135.22	120.90
34	i	1687	U	O4'-C1'-N1	8.95	115.36	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1775	A	P-O3'-C3'	8.94	130.43	119.70
34	i	1824	U	C3'-C2'-C1'	8.94	108.66	101.50
34	i	1473	U	P-O5'-C5'	8.93	135.19	120.90
34	i	1184	A	O4'-C1'-C2'	-8.93	96.87	105.80
34	i	542	G	P-O5'-C5'	8.93	135.19	120.90
34	i	1191	A	O4'-C1'-N9	8.93	115.34	108.20
34	i	1501	U	O4'-C1'-N1	8.93	115.34	108.20
10	J	165	TYR	CB-CA-C	8.92	128.23	110.40
24	X	62	PRO	CA-N-CD	-8.91	99.02	111.50
34	i	1272	A	N9-C1'-C2'	-8.91	102.20	112.00
34	i	444	U	O4'-C1'-N1	8.91	115.33	108.20
34	i	543	U	O4'-C1'-C2'	-8.90	96.90	105.80
34	i	1596	A	P-O3'-C3'	8.90	130.38	119.70
34	i	1847	C	N1-C1'-C2'	8.89	125.56	114.00
34	i	847	C	O3'-P-O5'	-8.89	87.10	104.00
34	i	325	G	N9-C1'-C2'	-8.89	102.22	112.00
34	i	224	U	N1-C1'-C2'	-8.88	102.23	112.00
34	i	108	G	O4'-C1'-N9	8.88	115.31	108.20
34	i	583	C	C3'-C2'-C1'	8.88	108.61	101.50
34	i	609	A	O4'-C1'-N9	8.88	115.31	108.20
34	i	689	G	P-O3'-C3'	8.88	130.35	119.70
19	S	142	ARG	CB-CA-C	-8.87	92.66	110.40
34	i	501	U	O4'-C1'-N1	8.87	115.30	108.20
34	i	189	G	N9-C1'-C2'	8.87	125.53	114.00
34	i	947	C	P-O5'-C5'	8.86	135.08	120.90
25	Y	52	PRO	CA-N-CD	-8.86	99.10	111.50
34	i	1427	G	O4'-C1'-N9	8.86	115.29	108.20
34	i	1436	C	C3'-C2'-C1'	8.86	108.59	101.50
34	i	1676	U	O4'-C1'-N1	8.86	115.29	108.20
34	i	1159	C	N1-C1'-C2'	8.85	125.51	114.00
19	S	94	LYS	CA-C-N	-8.85	97.74	117.20
34	i	1425	G	O4'-C1'-N9	8.83	115.26	108.20
34	i	1716	U	O4'-C1'-C2'	-8.82	96.98	105.80
34	i	1855	G	O4'-C1'-C2'	8.82	115.54	107.60
19	S	88	LYS	C-N-CA	-8.82	99.66	121.70
33	g	145	GLU	N-CA-C	-8.82	87.19	111.00
34	i	951	A	P-O3'-C3'	8.82	130.28	119.70
34	i	1472	A	C1'-O4'-C4'	8.81	116.95	109.90
34	i	1466	C	O4'-C1'-N1	8.81	115.25	108.20
34	i	1546	U	C1'-O4'-C4'	-8.81	102.85	109.90
34	i	872	C	O4'-C1'-N1	8.81	115.25	108.20
28	b	12	PRO	CA-N-CD	-8.81	99.17	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	V	67	ASP	CB-CA-C	8.79	127.98	110.40
34	i	1861	U	C3'-C2'-C1'	-8.79	94.47	101.50
34	i	1388	U	O4'-C1'-N1	8.78	115.22	108.20
6	F	130	ARG	NE-CZ-NH1	8.78	124.69	120.30
34	i	1222	G	N9-C1'-C2'	8.78	125.41	114.00
34	i	611	C	N1-C1'-C2'	8.77	125.40	114.00
34	i	1428	U	C3'-C2'-C1'	8.77	108.52	101.50
34	i	1104	G	P-O3'-C3'	8.76	130.21	119.70
34	i	140	U	O4'-C1'-N1	8.76	115.21	108.20
34	i	963	C	O4'-C1'-N1	8.76	115.20	108.20
34	i	472	G	O4'-C1'-N9	8.75	115.20	108.20
34	i	564	A	C3'-C2'-C1'	8.75	108.50	101.50
34	i	1706	U	O4'-C1'-N1	8.75	115.20	108.20
34	i	1068	U	C1'-O4'-C4'	8.75	116.90	109.90
34	i	837	G	C1'-C2'-O2'	-8.74	84.36	110.60
34	i	222	G	C1'-O4'-C4'	-8.74	102.91	109.90
34	i	929	G	O4'-C1'-N9	8.73	115.19	108.20
34	i	212	G	O4'-C1'-N9	8.73	115.18	108.20
34	i	1776	G	C3'-C2'-C1'	-8.73	94.52	101.50
3	C	104	GLY	N-CA-C	8.72	134.91	113.10
34	i	299	G	C1'-O4'-C4'	-8.72	102.92	109.90
25	Y	86	GLU	CB-CA-C	-8.71	92.98	110.40
34	i	455	A	P-O3'-C3'	8.71	130.15	119.70
34	i	161	U	O4'-C1'-C2'	-8.70	97.10	105.80
34	i	1208	G	N9-C1'-C2'	8.69	125.30	114.00
34	i	1576	C	O4'-C1'-C2'	-8.70	97.11	105.80
17	Q	134	GLY	C-N-CD	-8.69	101.49	120.60
34	i	1601	G	O4'-C1'-N9	8.68	115.15	108.20
21	U	67	LYS	C-N-CA	-8.68	100.01	121.70
34	i	548	G	C3'-C2'-C1'	-8.66	94.57	101.50
10	J	118	GLY	O-C-N	-8.65	108.86	122.70
34	i	1272	A	O4'-C1'-C2'	-8.65	97.15	105.80
34	i	1770	G	O4'-C1'-N9	8.65	115.12	108.20
34	i	58	C	O4'-C1'-N1	8.65	115.12	108.20
34	i	604	G	C3'-C2'-C1'	8.65	108.42	101.50
8	H	111	LYS	N-CA-C	-8.64	87.67	111.00
34	i	234	C	O4'-C1'-C2'	-8.64	97.16	105.80
34	i	1108	U	O4'-C1'-N1	8.64	115.11	108.20
34	i	1131	C	O4'-C1'-N1	8.63	115.11	108.20
34	i	21	U	O4'-C1'-N1	8.63	115.11	108.20
34	i	43	U	O4'-C1'-N1	8.63	115.11	108.20
34	i	153	G	O4'-C1'-N9	8.63	115.11	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1198	U	N1-C1'-C2'	-8.63	102.51	112.00
34	i	849	C	O3'-P-O5'	8.62	120.38	104.00
34	i	835	C	P-O3'-C3'	8.62	130.04	119.70
32	f	122	PRO	CA-N-CD	-8.61	99.45	111.50
34	i	234	C	C1'-O4'-C4'	8.61	116.78	109.90
34	i	792	G	P-O3'-C3'	8.61	130.03	119.70
8	H	36	LEU	CA-CB-CG	-8.60	95.51	115.30
9	I	184	ARG	N-CA-CB	8.60	126.08	110.60
34	i	972	G	P-O5'-C5'	8.60	134.65	120.90
34	i	1232	G	C3'-C2'-C1'	-8.60	94.62	101.50
16	P	17	TYR	CB-CA-C	8.59	127.59	110.40
34	i	959	A	O4'-C1'-N9	8.59	115.07	108.20
34	i	79	A	C4'-C3'-C2'	-8.59	94.01	102.60
34	i	1002	C	N1-C1'-C2'	8.59	125.16	114.00
34	i	180	G	C4'-C3'-O3'	8.58	130.17	113.00
34	i	518	A	C1'-O4'-C4'	-8.58	103.04	109.90
34	i	1548	C	P-O3'-C3'	8.58	130.00	119.70
34	i	1205	A	O4'-C1'-N9	8.58	115.06	108.20
34	i	25	A	O4'-C1'-C2'	-8.57	97.23	105.80
6	F	45	TYR	CA-CB-CG	-8.56	97.13	113.40
34	i	1316	G	C3'-C2'-C1'	-8.56	94.65	101.50
34	i	903	G	N9-C1'-C2'	8.56	125.13	114.00
34	i	669	A	O4'-C1'-N9	8.55	115.04	108.20
34	i	1199	G	C1'-O4'-C4'	-8.55	103.06	109.90
34	i	1109	A	O4'-C1'-N9	8.55	115.04	108.20
34	i	159	A	O4'-C1'-N9	8.54	115.03	108.20
34	i	1517	A	O4'-C1'-N9	8.54	115.03	108.20
34	i	296	U	P-O3'-C3'	-8.54	109.46	119.70
34	i	1229	G	C1'-O4'-C4'	-8.54	103.07	109.90
34	i	824	G	O4'-C1'-N9	8.53	115.03	108.20
34	i	1655	C	O4'-C1'-N1	8.53	115.03	108.20
34	i	234	C	O4'-C1'-N1	8.52	115.02	108.20
34	i	442	G	C3'-C2'-C1'	8.52	108.32	101.50
34	i	1118	A	O4'-C1'-C2'	-8.52	97.28	105.80
27	a	80	HIS	N-CA-CB	-8.52	95.27	110.60
34	i	1726	A	O4'-C1'-N9	8.52	115.01	108.20
10	J	161	LEU	O-C-N	-8.51	109.08	122.70
34	i	859	U	C1'-O4'-C4'	-8.51	103.09	109.90
34	i	1442	A	P-O3'-C3'	8.51	129.91	119.70
11	K	87	PRO	C-N-CA	8.51	142.97	121.70
34	i	144	U	N1-C1'-C2'	8.51	125.06	114.00
34	i	343	C	C5'-C4'-C3'	8.51	129.62	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1646	A	N9-C1'-C2'	-8.51	102.64	112.00
34	i	602	U	O4'-C1'-N1	8.50	115.00	108.20
34	i	1425	G	N9-C1'-C2'	-8.50	102.65	112.00
28	b	10	PRO	CA-N-CD	-8.49	99.61	111.50
34	i	1411	C	N1-C1'-C2'	8.49	125.04	114.00
34	i	795	U	N1-C1'-C2'	8.49	125.03	114.00
16	P	69	PRO	CA-N-CD	-8.48	99.62	111.50
34	i	1272	A	C3'-C2'-C1'	8.48	108.28	101.50
34	i	739	U	O4'-C1'-C2'	-8.47	97.33	105.80
34	i	1581	U	O4'-C1'-N1	8.47	114.98	108.20
34	i	1198	U	O4'-C1'-N1	8.46	114.97	108.20
34	i	28	U	O4'-C1'-N1	8.46	114.97	108.20
34	i	639	U	C1'-O4'-C4'	-8.45	103.14	109.90
34	i	1067	G	O4'-C1'-N9	8.45	114.96	108.20
34	i	1458	U	C4'-C3'-O3'	8.45	129.90	113.00
34	i	848	G	P-O3'-C3'	8.44	129.83	119.70
34	i	1110	U	O4'-C1'-N1	8.44	114.95	108.20
34	i	1003	C	C3'-C2'-C1'	8.43	108.25	101.50
34	i	543	U	C4'-C3'-C2'	-8.42	94.18	102.60
34	i	727	G	O3'-P-O5'	8.42	120.00	104.00
34	i	1685	U	O4'-C1'-N1	8.42	114.94	108.20
17	Q	18	THR	CA-CB-OG1	8.42	126.67	109.00
34	i	1082	G	O3'-P-O5'	-8.42	88.01	104.00
19	S	95	TYR	N-CA-CB	-8.41	95.46	110.60
31	e	95	LYS	CA-C-N	8.41	135.70	117.20
34	i	849	C	P-O3'-C3'	-8.41	109.61	119.70
34	i	1014	U	N1-C1'-C2'	8.41	124.93	114.00
34	i	313	C	C3'-C2'-C1'	8.40	108.22	101.50
34	i	929	G	O4'-C1'-C2'	8.40	115.16	107.60
34	i	1504	A	N9-C1'-C2'	-8.40	102.76	112.00
8	H	108	SER	N-CA-CB	8.40	123.10	110.50
4	D	193	ASP	C-N-CD	8.39	146.02	128.40
7	G	170	ARG	CB-CA-C	-8.38	93.63	110.40
34	i	1529	C	O4'-C1'-C2'	-8.38	97.42	105.80
34	i	1474	U	O4'-C1'-N1	8.38	114.90	108.20
34	i	1292	U	O4'-C1'-N1	8.37	114.90	108.20
34	i	964	U	O4'-C1'-C2'	-8.37	97.43	105.80
10	J	180	LYS	C-N-CA	8.37	139.87	122.30
34	i	1468	C	C4'-C3'-O3'	8.36	129.72	113.00
34	i	1026	A	O4'-C1'-N9	8.36	114.88	108.20
34	i	1513	C	O4'-C1'-N1	8.36	114.89	108.20
34	i	131	C	P-O3'-C3'	8.35	129.72	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1434	A	O4'-C1'-C2'	-8.35	97.45	105.80
34	i	1325	U	C1'-O4'-C4'	-8.34	103.22	109.90
21	U	70	CYS	C-N-CA	8.34	139.81	122.30
34	i	1137	G	O4'-C1'-N9	8.34	114.87	108.20
34	i	389	C	C3'-C2'-C1'	8.34	108.17	101.50
34	i	520	U	P-O3'-C3'	8.34	129.71	119.70
34	i	1010	G	C3'-C2'-C1'	-8.33	94.83	101.50
34	i	546	U	N1-C1'-C2'	8.33	124.82	114.00
34	i	1044	G	C1'-O4'-C4'	-8.32	103.24	109.90
34	i	1322	U	C3'-C2'-C1'	8.32	108.16	101.50
1	A	133	PRO	CA-N-CD	-8.32	99.86	111.50
5	E	43	PRO	CA-N-CD	-8.31	99.86	111.50
34	i	1660	G	O4'-C1'-C2'	8.31	115.08	107.60
34	i	1691	C	N1-C1'-C2'	8.31	124.81	114.00
34	i	1688	G	C1'-O4'-C4'	-8.31	103.25	109.90
34	i	451	U	O4'-C1'-N1	8.31	114.85	108.20
34	i	1226	C	C1'-O4'-C4'	-8.30	103.26	109.90
34	i	1728	U	O4'-C1'-N1	8.30	114.84	108.20
12	L	147	LYS	N-CA-C	8.30	133.41	111.00
34	i	691	G	P-O3'-C3'	8.30	129.66	119.70
34	i	1526	A	O4'-C1'-N9	8.30	114.84	108.20
34	i	1208	G	C1'-O4'-C4'	-8.29	103.27	109.90
34	i	276	U	C3'-C2'-C1'	8.29	108.13	101.50
34	i	291	U	O4'-C1'-N1	8.29	114.83	108.20
34	i	1014	U	C1'-O4'-C4'	-8.29	103.27	109.90
19	S	6	PRO	N-CA-C	8.28	133.63	112.10
34	i	281	U	O4'-C1'-N1	8.28	114.83	108.20
34	i	38	A	N9-C1'-C2'	-8.28	102.89	112.00
34	i	276	U	O4'-C1'-N1	-8.28	101.58	108.20
34	i	97	U	N1-C1'-C2'	8.27	124.76	114.00
14	N	7	PRO	CA-N-CD	-8.27	99.92	111.50
27	a	58	VAL	CB-CA-C	-8.27	95.68	111.40
34	i	103	A	C3'-C2'-C1'	-8.27	94.88	101.50
34	i	966	G	P-O3'-C3'	8.27	129.62	119.70
34	i	733	G	N9-C1'-C2'	-8.27	102.91	112.00
9	I	5	ARG	O-C-N	-8.26	109.48	122.70
34	i	1464	C	O4'-C1'-N1	8.26	114.81	108.20
26	Z	104	ARG	NE-CZ-NH1	-8.26	116.17	120.30
34	i	1618	A	C3'-C2'-C1'	-8.26	94.89	101.50
34	i	82	G	O4'-C1'-C2'	-8.25	97.55	105.80
34	i	303	G	O4'-C1'-N9	8.25	114.80	108.20
34	i	385	G	C3'-C2'-C1'	-8.25	94.90	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	36	U	O4'-C1'-N1	8.24	114.80	108.20
34	i	546	U	O4'-C1'-N1	8.24	114.80	108.20
34	i	1151	U	C5'-C4'-O4'	8.24	118.99	109.10
34	i	1804	U	O4'-C1'-N1	8.23	114.79	108.20
34	i	512	A	O4'-C1'-N9	8.23	114.78	108.20
34	i	1836	C	O4'-C1'-N1	8.23	114.78	108.20
34	i	357	U	O4'-C1'-N1	8.23	114.78	108.20
34	i	1233	C	C3'-C2'-C1'	8.23	108.08	101.50
34	i	905	G	P-O3'-C3'	-8.22	109.83	119.70
34	i	80	G	P-O5'-C5'	8.22	134.05	120.90
34	i	186	G	C1'-O4'-C4'	-8.22	103.32	109.90
34	i	435	A	C1'-O4'-C4'	-8.22	103.32	109.90
34	i	544	A	C3'-C2'-C1'	-8.22	94.92	101.50
34	i	1344	G	N9-C1'-C2'	-8.22	102.96	112.00
32	f	87	THR	N-CA-C	-8.21	88.82	111.00
34	i	1376	C	C3'-C2'-C1'	8.21	108.07	101.50
34	i	376	C	N1-C1'-C2'	8.21	124.67	114.00
34	i	156	G	P-O3'-C3'	-8.20	109.86	119.70
34	i	837	G	O4'-C4'-C3'	-8.20	95.80	104.00
34	i	887	G	C1'-O4'-C4'	-8.20	103.34	109.90
34	i	1632	A	O4'-C1'-N9	8.20	114.76	108.20
34	i	1336	U	O4'-C1'-N1	8.20	114.76	108.20
34	i	1006	G	C3'-C2'-C1'	-8.19	94.95	101.50
34	i	578	G	O3'-P-O5'	-8.18	88.45	104.00
34	i	1178	A	O4'-C1'-N9	8.18	114.75	108.20
34	i	334	U	O4'-C1'-N1	8.18	114.74	108.20
34	i	1777	C	O4'-C1'-C2'	-8.18	97.62	105.80
34	i	1332	C	O4'-C1'-N1	8.17	114.74	108.20
11	K	55	ARG	NE-CZ-NH2	-8.17	116.22	120.30
34	i	315	C	P-O3'-C3'	8.17	129.50	119.70
34	i	495	G	O4'-C1'-N9	8.16	114.73	108.20
34	i	1307	C	C1'-O4'-C4'	-8.15	103.38	109.90
3	C	93	LYS	O-C-N	-8.15	109.66	122.70
34	i	162	C	P-O3'-C3'	8.15	129.48	119.70
21	U	93	SER	CA-C-N	-8.15	94.29	117.10
34	i	1615	A	C1'-O4'-C4'	-8.14	103.39	109.90
34	i	909	A	O4'-C1'-C2'	-8.14	97.66	105.80
34	i	908	C	C3'-C2'-C1'	8.13	108.01	101.50
25	Y	87	PRO	CA-N-CD	-8.13	100.11	111.50
34	i	1305	C	O4'-C1'-C2'	-8.13	97.67	105.80
12	L	153	LYS	C-N-CA	8.13	142.03	121.70
34	i	1651	G	O4'-C1'-N9	8.13	114.70	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1715	U	O4'-C1'-C2'	-8.13	97.67	105.80
16	P	37	TYR	CB-CG-CD1	8.12	125.87	121.00
34	i	1133	U	C2'-C3'-O3'	8.12	127.37	109.50
34	i	851	G	O4'-C1'-N9	8.12	114.69	108.20
34	i	854	A	O4'-C1'-C2'	-8.12	97.68	105.80
21	U	57	PRO	CA-N-CD	-8.11	100.14	111.50
34	i	605	C	N1-C1'-C2'	8.11	124.55	114.00
34	i	238	G	O4'-C1'-N9	8.11	114.69	108.20
34	i	562	U	O4'-C1'-N1	8.11	114.69	108.20
34	i	927	C	C5'-C4'-C3'	-8.11	103.02	116.00
34	i	1030	A	O4'-C1'-N9	8.10	114.68	108.20
34	i	351	U	O4'-C1'-N1	8.08	114.67	108.20
21	U	103	SER	C-N-CA	-8.08	101.50	121.70
34	i	311	C	C3'-C2'-C1'	8.08	107.96	101.50
34	i	1191	A	O4'-C4'-C3'	-8.08	95.92	104.00
21	U	93	SER	O-C-N	8.08	136.45	121.10
34	i	1034	U	O4'-C1'-N1	8.08	114.66	108.20
34	i	939	U	O4'-C1'-N1	8.07	114.66	108.20
34	i	1786	G	C3'-C2'-C1'	-8.07	95.04	101.50
34	i	570	U	C4'-C3'-O3'	8.07	129.14	113.00
34	i	630	A	C1'-O4'-C4'	-8.07	103.45	109.90
34	i	366	A	O4'-C1'-N9	8.06	114.65	108.20
34	i	1359	C	C3'-C2'-C1'	8.06	107.95	101.50
34	i	1714	A	C1'-O4'-C4'	8.06	116.35	109.90
34	i	619	A	O4'-C1'-C2'	-8.06	97.74	105.80
34	i	145	G	N9-C1'-C2'	8.05	124.47	114.00
11	K	84	HIS	CB-CA-C	-8.05	94.30	110.40
34	i	217	U	O4'-C1'-N1	8.05	114.64	108.20
34	i	205	G	N9-C1'-C2'	8.05	124.46	114.00
34	i	342	U	C3'-C2'-C1'	8.05	107.94	101.50
34	i	1322	U	C1'-O4'-C4'	-8.04	103.47	109.90
34	i	1303	U	O4'-C1'-N1	8.04	114.63	108.20
34	i	744	C	C3'-C2'-C1'	8.04	107.93	101.50
34	i	1660	G	C1'-O4'-C4'	-8.04	103.47	109.90
34	i	464	G	N9-C1'-C2'	8.03	124.44	114.00
34	i	1161	G	N9-C1'-C2'	-8.03	103.17	112.00
34	i	1537	C	C1'-O4'-C4'	-8.03	103.48	109.90
34	i	1677	C	O4'-C1'-C2'	-8.03	97.77	105.80
34	i	917	G	O4'-C1'-N9	8.02	114.62	108.20
34	i	1060	C	O4'-C1'-C2'	-8.01	97.79	105.80
34	i	1095	G	O4'-C1'-N9	8.01	114.61	108.20
34	i	1534	U	O4'-C1'-C2'	-8.01	97.79	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	429	A	N9-C1'-C2'	-8.01	103.19	112.00
17	Q	31	LEU	N-CA-C	8.01	132.62	111.00
34	i	960	A	C1'-O4'-C4'	8.01	116.31	109.90
34	i	491	C	P-O3'-C3'	8.01	129.31	119.70
34	i	520	U	P-O5'-C5'	-8.01	108.09	120.90
34	i	1289	A	N9-C1'-C2'	8.00	124.39	114.00
34	i	1312	C	N1-C1'-C2'	7.98	124.38	114.00
34	i	1485	A	O4'-C1'-N9	7.98	114.58	108.20
34	i	520	U	N1-C1'-C2'	-7.98	103.23	112.00
34	i	333	A	O4'-C1'-N9	7.97	114.58	108.20
34	i	1467	C	N1-C1'-C2'	7.97	124.37	114.00
34	i	1068	U	O4'-C1'-C2'	-7.97	97.83	105.80
7	G	131	ARG	C-N-CA	-7.97	101.78	121.70
34	i	1741	U	C4'-C3'-O3'	7.97	128.94	113.00
34	i	435	A	N9-C1'-C2'	7.95	124.34	114.00
34	i	598	C	C3'-C2'-C1'	7.95	107.86	101.50
9	I	184	ARG	CB-CA-C	-7.95	94.50	110.40
34	i	41	G	O4'-C1'-N9	-7.94	101.85	108.20
34	i	525	G	P-O3'-C3'	7.94	129.22	119.70
34	i	844	U	N1-C1'-C2'	7.93	124.31	114.00
34	i	1650	C	N1-C1'-C2'	7.93	124.31	114.00
34	i	222	G	O4'-C1'-C2'	7.93	114.74	107.60
34	i	1655	C	P-O3'-C3'	-7.93	110.19	119.70
34	i	1707	A	O4'-C1'-N9	7.92	114.54	108.20
34	i	1850	C	O4'-C1'-N1	7.92	114.54	108.20
34	i	872	C	O4'-C1'-C2'	-7.92	97.89	105.80
34	i	147	A	C1'-O4'-C4'	7.91	116.23	109.90
34	i	650	C	N1-C1'-C2'	7.91	124.28	114.00
34	i	1229	G	O4'-C1'-C2'	7.91	114.72	107.60
34	i	1420	G	O4'-C1'-N9	7.91	114.53	108.20
26	Z	70	PRO	CA-N-CD	-7.91	100.43	111.50
34	i	1709	U	O4'-C1'-N1	7.91	114.52	108.20
34	i	207	U	O3'-P-O5'	-7.90	88.99	104.00
34	i	1524	C	N1-C1'-C2'	7.90	124.27	114.00
34	i	1117	G	O4'-C1'-N9	7.90	114.52	108.20
34	i	1091	U	N1-C1'-C2'	7.89	124.26	114.00
34	i	1297	A	C4'-C3'-O3'	7.89	128.78	113.00
34	i	626	C	P-O5'-C5'	7.89	133.53	120.90
34	i	169	U	P-O3'-C3'	7.89	129.17	119.70
34	i	1369	C	C3'-C2'-C1'	7.89	107.81	101.50
34	i	316	C	O4'-C1'-C2'	-7.89	97.91	105.80
34	i	1136	G	O4'-C1'-N9	7.89	114.51	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	467	G	O4'-C1'-N9	7.88	114.51	108.20
34	i	1653	G	O4'-C1'-C2'	7.88	114.70	107.60
34	i	490	A	P-O3'-C3'	7.88	129.16	119.70
34	i	1725	U	O4'-C1'-N1	7.88	114.50	108.20
34	i	1111	U	P-O3'-C3'	7.88	129.16	119.70
34	i	1515	G	O3'-P-O5'	7.87	118.96	104.00
34	i	905	G	C4'-C3'-O3'	7.87	128.74	113.00
34	i	791	A	O4'-C1'-N9	7.87	114.50	108.20
34	i	1093	G	O4'-C1'-N9	7.86	114.49	108.20
34	i	690	C	O4'-C1'-N1	7.86	114.49	108.20
26	Z	104	ARG	N-CA-CB	-7.86	96.45	110.60
34	i	1666	G	N9-C1'-C2'	7.86	124.22	114.00
34	i	1449	C	N1-C1'-C2'	7.86	124.22	114.00
34	i	329	A	C2'-C3'-O3'	7.86	126.79	109.50
34	i	890	G	O4'-C1'-N9	7.86	114.48	108.20
34	i	735	C	O4'-C1'-C2'	-7.85	97.95	105.80
34	i	1539	C	C3'-C2'-C1'	7.85	107.78	101.50
34	i	77	A	N9-C1'-C2'	-7.85	103.36	112.00
34	i	986	A	C3'-C2'-C1'	7.85	107.78	101.50
34	i	1046	A	O4'-C1'-N9	7.85	114.48	108.20
34	i	1655	C	C5'-C4'-C3'	-7.84	103.45	116.00
34	i	817	G	P-O3'-C3'	7.84	129.11	119.70
34	i	1386	U	O4'-C1'-N1	7.84	114.47	108.20
34	i	594	A	O4'-C1'-C2'	-7.83	97.97	105.80
7	G	161	PRO	CA-N-CD	-7.83	100.54	111.50
34	i	987	G	O4'-C1'-C2'	7.83	114.65	107.60
34	i	40	A	O4'-C1'-N9	7.83	114.46	108.20
34	i	80	G	O4'-C1'-C2'	-7.83	97.97	105.80
34	i	117	C	O4'-C1'-N1	7.83	114.46	108.20
34	i	549	G	O4'-C1'-N9	7.83	114.46	108.20
34	i	821	A	P-O3'-C3'	-7.83	110.31	119.70
34	i	541	U	N1-C1'-C2'	7.82	124.17	114.00
34	i	429	A	O4'-C1'-N9	7.82	114.46	108.20
34	i	1786	G	C1'-O4'-C4'	-7.82	103.64	109.90
34	i	33	G	O4'-C1'-N9	7.82	114.45	108.20
34	i	96	C	N1-C1'-C2'	7.82	124.17	114.00
34	i	1686	U	O4'-C1'-N1	7.81	114.44	108.20
11	K	35	LEU	CA-CB-CG	-7.80	97.35	115.30
34	i	1632	A	N9-C1'-C2'	-7.80	103.42	112.00
34	i	164	A	C1'-O4'-C4'	-7.80	103.66	109.90
34	i	1860	A	P-O3'-C3'	7.80	129.06	119.70
34	i	907	C	N1-C1'-C2'	7.80	124.14	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	X	23	HIS	CA-C-N	7.79	134.34	117.20
34	i	342	U	O4'-C1'-C2'	-7.79	98.01	105.80
34	i	612	C	N1-C1'-C2'	7.79	124.13	114.00
25	Y	51	THR	C-N-CD	-7.79	103.47	120.60
34	i	1471	G	P-O5'-C5'	7.79	133.36	120.90
9	I	178	ARG	CG-CD-NE	-7.78	95.47	111.80
34	i	1348	G	O4'-C1'-C2'	7.78	114.60	107.60
34	i	1003	C	N1-C1'-C2'	7.77	124.11	114.00
34	i	1606	G	O4'-C1'-N9	7.77	114.42	108.20
34	i	1405	A	C5'-C4'-C3'	7.77	128.43	116.00
8	H	15	LYS	C-N-CD	-7.77	103.51	120.60
34	i	904	A	O3'-P-O5'	-7.77	89.24	104.00
9	I	5	ARG	C-N-CA	7.76	141.11	121.70
16	P	36	LEU	CA-C-N	-7.76	100.13	117.20
7	G	155	GLN	O-C-N	-7.76	110.29	122.70
34	i	296	U	O4'-C1'-N1	7.75	114.40	108.20
18	R	89	SER	O-C-N	-7.74	110.32	122.70
34	i	1678	C	N1-C1'-C2'	7.74	124.06	114.00
34	i	1841	G	N9-C1'-C2'	-7.74	103.49	112.00
34	i	82	G	O4'-C1'-N9	7.73	114.39	108.20
34	i	1696	C	O4'-C1'-C2'	-7.73	98.07	105.80
34	i	1779	C	O4'-C1'-C2'	-7.73	98.07	105.80
34	i	3	C	O4'-C1'-C2'	-7.72	98.08	105.80
34	i	524	G	C4'-C3'-O3'	7.72	128.44	113.00
2	B	37	ALA	C-N-CA	-7.72	102.40	121.70
20	T	42	HIS	CB-CA-C	-7.71	94.97	110.40
34	i	1215	C	C3'-C2'-C1'	7.71	107.67	101.50
34	i	191	C	C4'-C3'-O3'	7.71	128.42	113.00
34	i	1771	G	C1'-O4'-C4'	-7.71	103.73	109.90
34	i	171	A	N9-C1'-C2'	-7.71	103.52	112.00
34	i	977	A	C3'-C2'-C1'	7.70	107.66	101.50
34	i	368	U	C1'-O4'-C4'	-7.70	103.74	109.90
34	i	959	A	O4'-C1'-C2'	7.70	114.53	107.60
35	l	67	PHE	CB-CG-CD2	-7.70	115.41	120.80
34	i	522	C	O4'-C1'-N1	7.70	114.36	108.20
10	J	166	GLY	C-N-CA	-7.69	106.15	122.30
19	S	6	PRO	CA-C-N	7.68	134.10	117.20
3	C	148	VAL	C-N-CD	-7.68	103.70	120.60
34	i	645	A	O4'-C1'-N9	7.68	114.34	108.20
34	i	1056	A	N9-C1'-C2'	7.68	123.98	114.00
34	i	1632	A	C1'-O4'-C4'	7.67	116.04	109.90
34	i	1499	C	O4'-C1'-N1	7.67	114.34	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1448	A	C3'-C2'-C1'	7.67	107.64	101.50
31	e	77	HIS	C-N-CA	7.66	138.39	122.30
34	i	784	G	O4'-C1'-N9	7.66	114.33	108.20
34	i	1270	G	C3'-C2'-C1'	7.66	107.62	101.50
5	E	259	LYS	N-CA-C	7.66	131.67	111.00
34	i	1771	G	O4'-C1'-C2'	7.65	114.49	107.60
34	i	446	C	C3'-C2'-C1'	7.65	107.62	101.50
34	i	1597	U	O3'-P-O5'	-7.65	89.46	104.00
17	Q	146	ARG	NE-CZ-NH1	-7.64	116.48	120.30
34	i	484	C	O4'-C1'-C2'	-7.64	98.16	105.80
34	i	521	A	O4'-C4'-C3'	-7.64	96.36	104.00
34	i	931	G	O4'-C1'-N9	7.64	114.31	108.20
34	i	227	A	C1'-O4'-C4'	7.64	116.01	109.90
34	i	400	G	O4'-C1'-N9	7.63	114.31	108.20
10	J	93	LYS	C-N-CA	7.63	140.78	121.70
34	i	1692	A	O4'-C1'-N9	7.63	114.31	108.20
34	i	2	A	P-O3'-C3'	7.63	128.85	119.70
34	i	1134	C	O3'-P-O5'	7.63	118.50	104.00
34	i	514	U	O4'-C1'-N1	7.63	114.30	108.20
34	i	595	A	O4'-C1'-N9	7.62	114.30	108.20
34	i	1113	C	C3'-C2'-C1'	-7.62	95.40	101.50
34	i	385	G	O4'-C1'-C2'	7.62	114.46	107.60
34	i	76	U	O4'-C1'-N1	7.62	114.29	108.20
34	i	1859	C	C4'-C3'-O3'	7.62	128.23	113.00
34	i	733	G	O4'-C1'-N9	7.61	114.29	108.20
34	i	837	G	P-O5'-C5'	7.60	133.06	120.90
34	i	604	G	N9-C1'-C2'	7.60	123.88	114.00
34	i	1289	A	C3'-C2'-C1'	7.60	107.58	101.50
34	i	526	A	C4'-C3'-O3'	7.59	128.18	113.00
34	i	848	G	C4'-C3'-O3'	-7.59	93.47	109.40
34	i	1182	U	O4'-C1'-N1	7.59	114.27	108.20
34	i	1517	A	C5'-C4'-O4'	7.59	118.20	109.10
33	g	274	VAL	C-N-CA	-7.58	102.74	121.70
34	i	301	C	O4'-C1'-N1	7.58	114.27	108.20
13	M	10	GLY	N-CA-C	7.58	132.05	113.10
34	i	436	G	C3'-C2'-C1'	7.58	107.56	101.50
34	i	689	G	O4'-C1'-C2'	-7.58	98.22	105.80
12	L	153	LYS	CA-C-N	7.57	133.86	117.20
9	I	55	TYR	CA-CB-CG	-7.57	99.01	113.40
34	i	1092	G	O4'-C1'-N9	7.57	114.26	108.20
34	i	1828	A	O4'-C1'-N9	7.57	114.26	108.20
34	i	1591	U	O4'-C1'-N1	7.56	114.25	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	F	131	ALA	C-N-CA	-7.55	106.43	122.30
34	i	78	C	N1-C1'-C2'	-7.55	103.69	112.00
34	i	902	U	O4'-C1'-N1	7.55	114.24	108.20
34	i	1488	U	O4'-C1'-N1	7.55	114.24	108.20
34	i	1043	C	C3'-C2'-C1'	7.55	107.54	101.50
34	i	1263	C	N1-C1'-C2'	7.54	123.81	114.00
16	P	52	LYS	C-N-CA	-7.54	102.85	121.70
34	i	594	A	C3'-C2'-C1'	7.54	107.53	101.50
34	i	1447	G	C3'-C2'-C1'	7.54	107.53	101.50
6	F	36	GLN	N-CA-C	-7.53	90.67	111.00
34	i	1559	C	N1-C1'-C2'	7.53	123.79	114.00
34	i	1028	C	N1-C1'-C2'	7.53	123.78	114.00
34	i	630	A	N9-C1'-C2'	7.52	123.78	114.00
34	i	1720	U	O4'-C1'-N1	7.52	114.22	108.20
34	i	296	U	P-O5'-C5'	7.52	132.93	120.90
34	i	865	A	O4'-C1'-N9	7.51	114.21	108.20
4	D	94	ARG	CB-CA-C	-7.51	95.37	110.40
34	i	927	C	O4'-C1'-C2'	-7.51	98.29	105.80
34	i	1406	C	C3'-C2'-C1'	7.51	107.51	101.50
34	i	554	A	O4'-C1'-N9	7.51	114.20	108.20
34	i	1689	U	O4'-C1'-N1	7.51	114.20	108.20
8	H	106	ARG	NE-CZ-NH1	-7.50	116.55	120.30
34	i	1530	U	O3'-P-O5'	-7.50	89.74	104.00
34	i	218	A	O4'-C1'-N9	7.50	114.20	108.20
34	i	1505	U	C4'-C3'-O3'	-7.50	93.65	109.40
34	i	35	C	C3'-C2'-C1'	7.50	107.50	101.50
34	i	1690	A	O4'-C1'-C2'	-7.50	98.30	105.80
34	i	1269	C	P-O3'-C3'	-7.50	110.70	119.70
34	i	1664	G	O4'-C1'-N9	7.50	114.20	108.20
34	i	529	C	O4'-C1'-N1	7.49	114.19	108.20
21	U	104	ILE	N-CA-CB	7.49	128.02	110.80
34	i	34	U	C1'-O4'-C4'	-7.49	103.91	109.90
34	i	1504	A	C1'-O4'-C4'	7.48	115.89	109.90
34	i	795	U	P-O3'-C3'	7.48	128.68	119.70
34	i	794	G	P-O5'-C5'	7.48	132.87	120.90
34	i	1396	U	O4'-C1'-N1	7.48	114.18	108.20
34	i	659	A	O4'-C1'-N9	7.47	114.18	108.20
34	i	1055	G	P-O3'-C3'	7.47	128.67	119.70
34	i	1127	G	O4'-C1'-N9	7.47	114.18	108.20
10	J	161	LEU	C-N-CA	-7.46	103.04	121.70
34	i	628	C	O4'-C1'-N1	7.46	114.17	108.20
34	i	825	C	O4'-C1'-C2'	-7.46	98.34	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	188	U	O4'-C1'-N1	7.46	114.17	108.20
34	i	1410	A	O4'-C1'-N9	7.46	114.17	108.20
34	i	230	C	O4'-C1'-N1	7.46	114.17	108.20
34	i	798	A	C1'-O4'-C4'	-7.46	103.93	109.90
34	i	606	A	N9-C1'-C2'	7.46	123.69	114.00
34	i	639	U	N1-C1'-C2'	7.45	123.69	114.00
8	H	109	ARG	CA-CB-CG	-7.45	97.02	113.40
34	i	170	A	O4'-C1'-N9	7.44	114.16	108.20
34	i	210	G	N9-C1'-C2'	-7.44	103.81	112.00
18	R	1	MET	CB-CA-C	7.44	125.28	110.40
34	i	1776	G	C5'-C4'-C3'	7.44	127.91	116.00
34	i	35	C	O4'-C1'-C2'	-7.44	98.36	105.80
34	i	808	A	O4'-C1'-N9	7.44	114.15	108.20
34	i	976	A	C1'-O4'-C4'	-7.44	103.95	109.90
34	i	1424	G	N9-C1'-C2'	-7.43	103.82	112.00
34	i	689	G	C3'-C2'-C1'	7.43	107.44	101.50
10	J	17	ARG	CB-CA-C	-7.43	95.55	110.40
34	i	547	U	O4'-C1'-C2'	-7.43	98.37	105.80
19	S	9	PHE	N-CA-C	7.42	131.04	111.00
34	i	1451	A	O4'-C1'-C2'	-7.42	98.38	105.80
34	i	450	A	O4'-C1'-N9	7.42	114.13	108.20
34	i	1667	U	O4'-C1'-N1	7.41	114.13	108.20
34	i	14	C	O4'-C1'-N1	7.41	114.12	108.20
34	i	1068	U	P-O3'-C3'	7.40	128.58	119.70
34	i	1459	U	P-O5'-C5'	7.40	132.74	120.90
34	i	797	U	O4'-C1'-N1	7.40	114.12	108.20
32	f	148	TYR	CA-CB-CG	-7.39	99.35	113.40
34	i	1845	A	P-O3'-C3'	7.39	128.57	119.70
34	i	608	C	O4'-C1'-N1	7.39	114.11	108.20
34	i	1818	A	P-O3'-C3'	7.39	128.57	119.70
34	i	76	U	P-O5'-C5'	7.39	132.72	120.90
34	i	420	C	O4'-C1'-N1	7.38	114.11	108.20
34	i	798	A	O4'-C1'-N9	7.38	114.11	108.20
34	i	1043	C	O4'-C1'-C2'	-7.38	98.42	105.80
5	E	75	LYS	N-CA-C	7.38	130.92	111.00
34	i	17	C	O4'-C1'-N1	7.38	114.10	108.20
34	i	534	G	O4'-C1'-N9	7.38	114.10	108.20
34	i	542	G	C3'-C2'-C1'	-7.38	95.60	101.50
34	i	1433	C	C1'-O4'-C4'	-7.38	104.00	109.90
24	X	115	ILE	N-CA-C	-7.38	91.09	111.00
23	W	100	GLY	N-CA-C	-7.37	94.67	113.10
9	I	133	GLU	O-C-N	-7.37	110.91	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1413	C	C1'-O4'-C4'	7.37	115.80	109.90
10	J	144	ILE	CA-CB-CG1	-7.37	97.01	111.00
34	i	1194	G	C3'-C2'-C1'	-7.36	95.61	101.50
34	i	1648	U	P-O3'-C3'	7.36	128.54	119.70
34	i	27	A	O4'-C1'-N9	7.36	114.09	108.20
34	i	168	C	C3'-C2'-C1'	7.36	107.39	101.50
34	i	1630	C	O4'-C1'-N1	7.36	114.09	108.20
34	i	1184	A	C3'-C2'-C1'	7.36	107.39	101.50
34	i	187	C	O4'-C1'-C2'	-7.35	98.45	105.80
34	i	743	U	O4'-C1'-C2'	-7.35	98.45	105.80
34	i	1590	U	N1-C1'-C2'	-7.35	103.91	112.00
34	i	1600	G	C1'-O4'-C4'	-7.35	104.02	109.90
33	g	50	THR	C-N-CA	-7.35	103.33	121.70
34	i	106	C	O4'-C1'-N1	7.35	114.08	108.20
28	b	9	HIS	C-N-CD	-7.35	104.44	120.60
34	i	432	C	C3'-C2'-C1'	7.34	107.38	101.50
10	J	180	LYS	CB-CA-C	-7.34	95.72	110.40
34	i	1325	U	N1-C1'-C2'	7.34	123.54	114.00
34	i	1355	U	C1'-O4'-C4'	7.34	115.77	109.90
34	i	893	U	O3'-P-O5'	-7.34	90.06	104.00
9	I	3	ILE	N-CA-C	7.34	130.81	111.00
18	R	3	ARG	NE-CZ-NH2	7.33	123.97	120.30
34	i	225	C	N1-C1'-C2'	7.33	123.53	114.00
34	i	1301	C	O4'-C1'-N1	7.33	114.06	108.20
34	i	1533	C	C4'-C3'-C2'	-7.33	95.27	102.60
34	i	1717	G	P-O5'-C5'	7.32	132.62	120.90
34	i	997	A	O4'-C1'-C2'	-7.32	98.48	105.80
34	i	1204	A	N9-C1'-C2'	-7.32	103.95	112.00
34	i	1237	A	P-O3'-C3'	7.32	128.49	119.70
34	i	1258	C	C1'-O4'-C4'	-7.32	104.04	109.90
24	X	23	HIS	C-N-CA	7.32	139.99	121.70
34	i	332	C	C3'-C2'-C1'	7.32	107.36	101.50
21	U	93	SER	C-N-CA	-7.30	91.32	122.00
34	i	1019	A	C1'-O4'-C4'	7.30	115.74	109.90
34	i	1766	C	C3'-C2'-C1'	7.30	107.34	101.50
34	i	841	G	P-O3'-C3'	-7.30	110.94	119.70
34	i	853	U	C1'-O4'-C4'	-7.30	104.06	109.90
34	i	980	C	N1-C1'-C2'	7.30	123.49	114.00
34	i	1557	C	N1-C1'-C2'	7.30	123.49	114.00
34	i	498	A	O4'-C1'-N9	7.29	114.03	108.20
34	i	1059	C	C3'-C2'-C1'	7.29	107.33	101.50
34	i	359	C	N1-C1'-C2'	7.28	123.47	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	81	U	N1-C1'-C2'	7.28	123.46	114.00
34	i	656	U	O4'-C1'-C2'	-7.28	98.52	105.80
25	Y	64	PHE	C-N-CA	-7.28	107.02	122.30
34	i	684	A	C3'-C2'-C1'	-7.28	95.68	101.50
34	i	985	C	O4'-C1'-C2'	-7.27	98.53	105.80
34	i	1675	G	O4'-C1'-N9	7.27	114.01	108.20
34	i	1773	G	C3'-C2'-C1'	-7.27	95.69	101.50
34	i	1773	G	N9-C1'-C2'	-7.27	104.00	112.00
4	D	82	GLY	O-C-N	-7.26	111.08	122.70
34	i	1060	C	C3'-C2'-C1'	7.26	107.31	101.50
34	i	431	C	C1'-O4'-C4'	-7.26	104.09	109.90
34	i	1186	A	O4'-C1'-C2'	-7.26	98.54	105.80
18	R	89	SER	C-N-CA	-7.26	103.56	121.70
18	R	1	MET	O-C-N	7.25	135.53	123.20
34	i	541	U	P-O5'-C5'	7.25	132.50	120.90
34	i	1041	U	O4'-C1'-N1	7.25	114.00	108.20
34	i	1237	A	O4'-C1'-C2'	-7.25	98.55	105.80
34	i	673	G	O4'-C1'-N9	7.25	114.00	108.20
34	i	942	U	O4'-C1'-N1	7.25	114.00	108.20
34	i	57	U	C1'-O4'-C4'	7.24	115.70	109.90
34	i	1244	U	O4'-C1'-N1	7.24	114.00	108.20
14	N	19	ARG	N-CA-C	-7.24	91.45	111.00
34	i	1663	U	O5'-P-OP2	-7.24	99.18	105.70
34	i	1527	C	C3'-C2'-C1'	7.23	107.29	101.50
34	i	574	A	P-O5'-C5'	7.23	132.47	120.90
34	i	791	A	O4'-C1'-C2'	-7.23	98.57	105.80
34	i	1305	C	C3'-C2'-C1'	7.23	107.28	101.50
34	i	277	U	O4'-C1'-C2'	-7.23	98.57	105.80
34	i	873	C	O4'-C1'-C2'	-7.22	98.58	105.80
34	i	740	G	C3'-C2'-C1'	7.22	107.27	101.50
33	g	275	ILE	N-CA-C	7.22	130.49	111.00
34	i	1045	A	C4'-C3'-C2'	-7.21	95.39	102.60
34	i	1459	U	O4'-C1'-N1	7.21	113.97	108.20
18	R	1	MET	CA-CB-CG	7.21	125.56	113.30
34	i	149	A	C3'-C2'-C1'	7.21	107.27	101.50
34	i	1404	U	C1'-O4'-C4'	-7.21	104.13	109.90
34	i	1175	G	O4'-C1'-N9	7.21	113.97	108.20
34	i	1015	C	N1-C1'-C2'	7.21	123.37	114.00
34	i	503	G	O4'-C1'-N9	7.21	113.97	108.20
35	l	102	LEU	CA-CB-CG	7.21	131.87	115.30
4	D	52	ALA	C-N-CA	-7.20	103.69	121.70
10	J	91	LYS	O-C-N	-7.20	111.17	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	H	110	THR	CA-C-N	7.20	133.03	117.20
10	J	35	TYR	CA-C-N	-7.20	101.81	116.20
18	R	111	PHE	N-CA-C	7.19	130.42	111.00
32	f	88	PRO	O-C-N	-7.19	111.19	122.70
34	i	1001	G	O4'-C1'-N9	7.19	113.95	108.20
34	i	454	A	O3'-P-O5'	7.19	117.66	104.00
34	i	1672	U	N1-C1'-C2'	-7.18	104.10	112.00
34	i	1504	A	O4'-C1'-N9	7.18	113.94	108.20
34	i	32	U	O4'-C1'-N1	7.18	113.94	108.20
34	i	170	A	C5'-C4'-C3'	-7.17	104.52	116.00
34	i	279	G	N9-C1'-C2'	-7.17	104.11	112.00
34	i	1767	C	O4'-C1'-N1	7.17	113.94	108.20
8	H	191	GLU	O-C-N	-7.17	111.22	122.70
34	i	827	G	C3'-C2'-C1'	-7.17	95.76	101.50
34	i	1666	G	C1'-O4'-C4'	-7.17	104.16	109.90
34	i	1161	G	O4'-C1'-N9	7.17	113.93	108.20
34	i	1637	U	C1'-O4'-C4'	7.17	115.64	109.90
34	i	1693	C	C3'-C2'-C1'	7.17	107.23	101.50
34	i	53	C	C3'-C2'-C1'	7.17	107.23	101.50
34	i	364	G	O4'-C1'-N9	7.17	113.93	108.20
34	i	830	C	P-O3'-C3'	7.17	128.30	119.70
34	i	1116	U	N1-C1'-C2'	7.17	123.32	114.00
16	P	49	LEU	CA-C-N	7.16	132.95	117.20
34	i	510	A	C1'-O4'-C4'	-7.16	104.17	109.90
34	i	162	C	C4'-C3'-O3'	7.16	127.31	113.00
34	i	906	G	O4'-C1'-N9	7.16	113.92	108.20
11	K	35	LEU	N-CA-C	-7.15	91.69	111.00
34	i	49	C	N1-C1'-C2'	7.15	123.30	114.00
34	i	1656	A	C1'-O4'-C4'	-7.15	104.18	109.90
34	i	1781	G	O4'-C1'-N9	7.15	113.92	108.20
27	a	97	PRO	CA-CB-CG	7.15	118.38	104.80
34	i	1668	U	O4'-C1'-N1	7.15	113.92	108.20
34	i	1560	C	O4'-C1'-C2'	-7.14	98.66	105.80
34	i	227	A	C3'-C2'-C1'	7.14	107.21	101.50
34	i	1363	U	O4'-C1'-N1	7.14	113.91	108.20
34	i	299	G	P-O3'-C3'	7.14	128.26	119.70
34	i	1517	A	P-O3'-C3'	-7.14	111.14	119.70
34	i	1578	C	C3'-C2'-C1'	7.14	107.21	101.50
24	X	22	TRP	C-N-CA	-7.13	103.87	121.70
34	i	64	A	N9-C1'-C2'	-7.13	104.15	112.00
34	i	567	U	O4'-C1'-N1	7.13	113.91	108.20
34	i	1210	A	O4'-C1'-N9	7.13	113.90	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1326	G	C1'-O4'-C4'	-7.13	104.20	109.90
2	B	147	ASN	C-N-CA	-7.13	103.88	121.70
14	N	14	SER	CB-CA-C	-7.13	96.55	110.10
34	i	970	C	N1-C1'-C2'	7.13	123.27	114.00
34	i	1311	U	C3'-C2'-C1'	-7.13	95.80	101.50
34	i	53	C	C1'-O4'-C4'	7.13	115.60	109.90
34	i	1287	A	P-O3'-C3'	7.13	128.25	119.70
34	i	1452	G	C1'-O4'-C4'	-7.13	104.20	109.90
34	i	635	C	C3'-C2'-C1'	7.12	107.20	101.50
8	H	109	ARG	O-C-N	7.12	134.10	122.70
34	i	894	U	P-O5'-C5'	7.12	132.30	120.90
34	i	684	A	C1'-O4'-C4'	-7.12	104.20	109.90
34	i	60	A	O4'-C1'-C2'	7.12	114.01	107.60
34	i	58	C	N1-C1'-C2'	-7.12	104.17	112.00
34	i	1288	C	P-O5'-C5'	-7.11	109.52	120.90
34	i	145	G	O4'-C1'-C2'	7.11	114.00	107.60
34	i	1755	U	P-O5'-C5'	7.11	132.28	120.90
34	i	1634	G	C3'-C2'-C1'	7.11	107.19	101.50
34	i	91	A	O4'-C1'-N9	7.11	113.89	108.20
34	i	306	C	O4'-C1'-N1	7.10	113.88	108.20
34	i	834	G	O4'-C1'-N9	7.10	113.88	108.20
34	i	1019	A	N9-C1'-C2'	-7.10	104.19	112.00
34	i	241	A	O4'-C1'-C2'	-7.10	98.70	105.80
34	i	981	G	O4'-C1'-N9	7.09	113.88	108.20
34	i	997	A	C1'-O4'-C4'	7.09	115.58	109.90
34	i	410	G	C1'-O4'-C4'	-7.09	104.23	109.90
34	i	731	C	O4'-C1'-N1	7.09	113.87	108.20
34	i	545	A	O4'-C1'-C2'	-7.09	98.71	105.80
20	T	4	VAL	N-CA-CB	-7.09	95.91	111.50
19	S	93	GLY	CA-C-N	-7.09	101.61	117.20
34	i	1118	A	N9-C1'-C2'	-7.08	104.21	112.00
34	i	908	C	O4'-C1'-N1	7.08	113.86	108.20
10	J	164	PRO	N-CA-CB	-7.08	94.81	103.30
11	K	37	ASP	CB-CG-OD2	7.08	124.67	118.30
34	i	290	A	O4'-C1'-N9	7.07	113.86	108.20
15	O	145	GLY	N-CA-C	7.07	130.78	113.10
34	i	166	A	O4'-C1'-N9	7.07	113.86	108.20
34	i	262	G	P-O3'-C3'	7.07	128.18	119.70
34	i	956	U	C1'-O4'-C4'	-7.07	104.24	109.90
34	i	286	C	N1-C1'-C2'	7.06	123.18	114.00
34	i	1546	U	C3'-C2'-C1'	-7.06	95.85	101.50
34	i	167	G	N9-C1'-C2'	-7.05	104.24	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	860	A	O4'-C1'-N9	7.05	113.84	108.20
34	i	1671	U	P-O3'-C3'	-7.05	111.23	119.70
19	S	142	ARG	N-CA-CB	-7.05	97.91	110.60
34	i	518	A	N9-C1'-C2'	7.05	123.17	114.00
34	i	1339	U	O4'-C1'-N1	7.05	113.84	108.20
34	i	1661	C	O4'-C1'-N1	7.05	113.84	108.20
34	i	945	G	O4'-C1'-N9	7.05	113.84	108.20
34	i	1827	C	C3'-C2'-C1'	7.05	107.14	101.50
34	i	1858	U	P-O5'-C5'	7.05	132.18	120.90
34	i	1275	C	O4'-C1'-C2'	-7.04	98.76	105.80
34	i	1651	G	C1'-O4'-C4'	-7.04	104.27	109.90
34	i	1425	G	P-O5'-C5'	7.04	132.16	120.90
11	K	1	MET	N-CA-C	7.04	130.00	111.00
34	i	368	U	C4'-C3'-C2'	-7.04	95.56	102.60
34	i	899	A	C3'-C2'-C1'	-7.03	95.88	101.50
34	i	100	U	O4'-C1'-N1	7.03	113.82	108.20
34	i	279	G	O4'-C1'-N9	7.03	113.82	108.20
34	i	792	G	C3'-C2'-C1'	-7.03	95.88	101.50
34	i	1503	G	C1'-C2'-O2'	7.03	131.68	110.60
34	i	1852	G	O4'-C1'-N9	7.03	113.82	108.20
34	i	275	C	C3'-C2'-C1'	7.03	107.12	101.50
18	R	2	GLY	CA-C-N	7.02	132.65	117.20
34	i	1788	C	O4'-C1'-C2'	-7.02	98.78	105.80
34	i	389	C	O4'-C1'-C2'	-7.02	98.78	105.80
34	i	127	C	P-O3'-C3'	7.02	128.12	119.70
34	i	1438	U	O4'-C1'-N1	7.01	113.81	108.20
34	i	1837	G	C1'-O4'-C4'	-7.01	104.29	109.90
34	i	1738	G	C1'-O4'-C4'	-7.01	104.29	109.90
34	i	1128	C	O4'-C1'-N1	7.01	113.81	108.20
20	T	4	VAL	CA-C-N	7.00	132.61	117.20
34	i	369	C	C3'-C2'-C1'	7.00	107.10	101.50
34	i	409	G	O4'-C1'-C2'	-7.00	98.80	105.80
34	i	31	U	C1'-O4'-C4'	7.00	115.50	109.90
3	C	258	LEU	CB-CG-CD2	6.99	122.89	111.00
34	i	499	G	O4'-C1'-N9	6.99	113.80	108.20
20	T	82	ARG	NE-CZ-NH1	6.99	123.80	120.30
34	i	1693	C	P-O3'-C3'	6.99	128.09	119.70
34	i	342	U	O4'-C1'-N1	6.99	113.79	108.20
34	i	1042	U	O4'-C1'-N1	6.99	113.79	108.20
34	i	1118	A	C1'-O4'-C4'	6.99	115.49	109.90
4	D	83	SER	N-CA-CB	6.98	120.97	110.50
34	i	1093	G	C5'-C4'-O4'	6.98	117.47	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1373	U	O4'-C1'-N1	6.98	113.78	108.20
34	i	1783	G	O4'-C1'-C2'	-6.98	98.82	105.80
34	i	587	G	O4'-C1'-N9	6.97	113.78	108.20
32	f	148	TYR	N-CA-C	6.97	129.82	111.00
34	i	267	G	P-O3'-C3'	6.97	128.06	119.70
34	i	790	A	C3'-C2'-C1'	6.97	107.08	101.50
34	i	315	C	O4'-C1'-C2'	-6.97	98.83	105.80
34	i	1205	A	N9-C1'-C2'	-6.97	104.33	112.00
34	i	637	U	O4'-C1'-N1	6.97	113.77	108.20
34	i	839	C	O4'-C1'-N1	6.97	113.77	108.20
34	i	1053	C	O4'-C1'-N1	6.96	113.77	108.20
11	K	55	ARG	CB-CG-CD	6.96	129.70	111.60
34	i	1426	C	O4'-C1'-C2'	-6.96	98.84	105.80
34	i	877	G	C1'-O4'-C4'	-6.96	104.33	109.90
34	i	1105	C	C3'-C2'-C1'	-6.96	95.93	101.50
10	J	123	ILE	CB-CA-C	6.96	125.51	111.60
20	T	82	ARG	NE-CZ-NH2	6.96	123.78	120.30
34	i	597	U	N1-C1'-C2'	6.96	123.04	114.00
34	i	1405	A	O4'-C1'-C2'	-6.96	98.84	105.80
34	i	1584	A	N9-C1'-C2'	-6.96	104.35	112.00
34	i	636	G	O4'-C1'-N9	6.95	113.76	108.20
34	i	47	G	O4'-C1'-N9	6.95	113.76	108.20
34	i	465	C	C3'-C2'-C1'	6.95	107.06	101.50
34	i	1047	G	O4'-C1'-N9	6.95	113.76	108.20
34	i	1478	C	O4'-C1'-N1	6.95	113.76	108.20
20	T	82	ARG	NH1-CZ-NH2	-6.94	111.76	119.40
34	i	1052	U	P-O3'-C3'	-6.94	111.37	119.70
34	i	1328	A	C3'-C2'-C1'	6.94	107.05	101.50
28	b	79	PHE	N-CA-C	6.93	129.72	111.00
34	i	275	C	O4'-C1'-C2'	-6.93	98.87	105.80
34	i	1640	C	P-O3'-C3'	6.93	128.02	119.70
34	i	1329	U	N1-C1'-C2'	-6.92	104.38	112.00
34	i	1479	A	N9-C1'-C2'	-6.92	104.38	112.00
11	K	2	LEU	CA-CB-CG	-6.92	99.38	115.30
34	i	1693	C	O4'-C1'-C2'	-6.92	98.88	105.80
2	B	77	ASP	CB-CG-OD1	6.92	124.53	118.30
34	i	312	C	C3'-C2'-C1'	6.92	107.03	101.50
34	i	1402	G	N9-C1'-C2'	6.92	122.99	114.00
34	i	1503	G	C3'-C2'-C1'	-6.91	95.97	101.50
34	i	1542	C	C3'-C2'-C1'	6.91	107.03	101.50
34	i	1648	U	N1-C1'-C2'	-6.91	104.40	112.00
34	i	93	U	O4'-C1'-C2'	-6.91	98.89	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	729	C	O4'-C1'-C2'	-6.90	98.90	105.80
34	i	374	U	N1-C1'-C2'	6.90	122.97	114.00
24	X	128	VAL	N-CA-C	6.90	129.63	111.00
25	Y	31	GLY	N-CA-C	6.90	130.35	113.10
34	i	74	G	P-O3'-C3'	6.89	127.97	119.70
34	i	726	C	P-O3'-C3'	6.89	127.97	119.70
34	i	741	C	C3'-C2'-C1'	6.89	107.02	101.50
34	i	365	U	P-O5'-C5'	6.89	131.93	120.90
34	i	63	U	O4'-C1'-N1	6.89	113.71	108.20
34	i	571	U	P-O3'-C3'	-6.89	111.43	119.70
34	i	1545	G	P-O3'-C3'	6.89	127.96	119.70
34	i	769	C	P-O3'-C3'	6.88	127.96	119.70
18	R	123	THR	CB-CA-C	-6.88	93.02	111.60
34	i	862	U	C3'-C2'-C1'	-6.88	95.99	101.50
34	i	274	G	O4'-C1'-C2'	6.88	113.79	107.60
34	i	1497	C	O3'-P-O5'	-6.88	90.93	104.00
19	S	93	GLY	O-C-N	6.88	133.71	122.70
34	i	725	C	O4'-C1'-C2'	-6.88	98.92	105.80
11	K	2	LEU	N-CA-C	6.87	129.55	111.00
21	U	118	ASP	CB-CG-OD1	6.87	124.48	118.30
8	H	110	THR	CA-CB-CG2	6.87	122.02	112.40
34	i	1681	G	O4'-C1'-N9	6.87	113.69	108.20
34	i	1647	G	O4'-C1'-N9	6.87	113.69	108.20
34	i	507	C	N1-C1'-C2'	6.86	122.92	114.00
34	i	1533	C	O4'-C1'-C2'	-6.86	98.94	105.80
34	i	1199	G	O4'-C1'-C2'	6.86	113.77	107.60
34	i	1114	C	C1'-O4'-C4'	6.85	115.38	109.90
34	i	278	U	O4'-C1'-N1	-6.85	102.72	108.20
34	i	609	A	N9-C1'-C2'	-6.85	104.47	112.00
34	i	1777	C	C3'-C2'-C1'	6.84	106.97	101.50
34	i	900	A	C1'-O4'-C4'	-6.84	104.43	109.90
34	i	1847	C	C1'-O4'-C4'	-6.84	104.43	109.90
34	i	1171	G	C1'-O4'-C4'	-6.84	104.43	109.90
34	i	65	C	C1'-O4'-C4'	6.83	115.37	109.90
34	i	193	C	N1-C1'-C2'	6.83	122.88	114.00
34	i	369	C	P-O3'-C3'	6.83	127.90	119.70
3	C	105	GLN	N-CA-C	6.83	129.44	111.00
27	a	58	VAL	CG1-CB-CG2	-6.83	99.97	110.90
3	C	242	LYS	N-CA-C	6.83	129.43	111.00
34	i	1530	U	C4'-C3'-O3'	6.82	126.64	113.00
34	i	1633	G	C3'-C2'-C1'	6.82	106.96	101.50
34	i	1638	U	C3'-C2'-C1'	6.82	106.96	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1350	G	C2'-C3'-O3'	6.82	124.61	113.70
34	i	343	C	N1-C1'-C2'	6.82	122.86	114.00
34	i	377	C	N1-C1'-C2'	6.82	122.86	114.00
34	i	1642	A	C3'-C2'-C1'	-6.82	96.05	101.50
34	i	850	A	P-O5'-C5'	6.81	131.80	120.90
34	i	407	C	C3'-C2'-C1'	6.81	106.95	101.50
34	i	299	G	O4'-C1'-C2'	6.81	113.73	107.60
34	i	31	U	N1-C1'-C2'	-6.80	104.52	112.00
34	i	227	A	O4'-C1'-C2'	-6.80	99.00	105.80
34	i	509	A	O4'-C1'-C2'	-6.80	99.00	105.80
34	i	1038	A	O4'-C1'-N9	6.80	113.64	108.20
34	i	1573	U	C1'-O4'-C4'	6.80	115.34	109.90
13	M	13	ASP	CB-CG-OD1	-6.80	112.18	118.30
34	i	1782	A	O4'-C1'-N9	6.80	113.64	108.20
1	A	53	ARG	NE-CZ-NH1	-6.79	116.90	120.30
18	R	87	GLU	CB-CA-C	-6.79	96.81	110.40
34	i	1603	U	O4'-C1'-N1	6.79	113.64	108.20
31	e	122	THR	O-C-N	-6.79	111.83	122.70
33	g	159	ASN	C-N-CA	-6.79	104.72	121.70
34	i	15	U	O4'-C1'-N1	6.79	113.63	108.20
34	i	540	C	O3'-P-O5'	-6.79	91.10	104.00
34	i	1423	C	O4'-C1'-C2'	-6.79	99.01	105.80
34	i	1786	G	O4'-C1'-N9	6.79	113.63	108.20
34	i	1024	A	C5'-C4'-C3'	-6.79	105.14	116.00
6	F	37	ASP	N-CA-C	6.78	129.31	111.00
34	i	1167	G	O4'-C1'-C2'	-6.78	99.02	105.80
34	i	657	U	C1'-O4'-C4'	-6.78	104.47	109.90
34	i	989	G	O4'-C1'-N9	6.78	113.62	108.20
34	i	1859	C	C2'-C3'-O3'	-6.78	94.58	109.50
34	i	683	G	O4'-C4'-C3'	-6.78	97.22	104.00
34	i	318	U	O4'-C1'-N1	6.78	113.62	108.20
34	i	612	C	C1'-O4'-C4'	-6.78	104.48	109.90
34	i	1099	C	O4'-C1'-N1	6.78	113.62	108.20
34	i	41	G	C1'-O4'-C4'	-6.77	104.48	109.90
2	B	133	TYR	N-CA-CB	-6.77	98.42	110.60
21	U	48	LEU	CA-CB-CG	-6.77	99.73	115.30
34	i	1216	A	C1'-O4'-C4'	-6.77	104.48	109.90
34	i	321	C	O4'-C1'-C2'	-6.77	99.03	105.80
34	i	1251	G	N9-C1'-C2'	6.77	122.80	114.00
34	i	125	C	O3'-P-O5'	6.76	116.85	104.00
34	i	1831	G	O4'-C1'-N9	6.76	113.61	108.20
34	i	449	C	C5'-C4'-O4'	6.76	117.21	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1239	U	O4'-C1'-N1	6.76	113.60	108.20
34	i	1511	G	O4'-C1'-N9	6.75	113.60	108.20
34	i	1727	G	O4'-C1'-N9	6.75	113.60	108.20
34	i	1774	G	O3'-P-O5'	6.75	116.82	104.00
34	i	438	A	C3'-C2'-C1'	-6.75	96.10	101.50
34	i	1173	U	O4'-C1'-N1	6.74	113.59	108.20
34	i	312	C	P-O3'-C3'	6.74	127.79	119.70
34	i	978	G	O4'-C1'-N9	6.74	113.59	108.20
34	i	1857	A	C1'-O4'-C4'	6.74	115.29	109.90
34	i	1779	C	P-O3'-C3'	6.74	127.78	119.70
34	i	1418	G	N9-C1'-C2'	-6.73	104.59	112.00
34	i	1739	G	C1'-O4'-C4'	6.73	115.29	109.90
34	i	1277	G	O4'-C1'-N9	6.73	113.58	108.20
34	i	736	C	O4'-C1'-N1	6.72	113.58	108.20
34	i	845	A	O4'-C1'-N9	6.72	113.58	108.20
34	i	1778	G	N9-C1'-C2'	6.72	122.74	114.00
22	V	67	ASP	CB-CG-OD2	6.72	124.34	118.30
33	g	142	VAL	O-C-N	6.72	133.44	122.70
34	i	959	A	C3'-C2'-C1'	-6.72	96.13	101.50
34	i	550	A	O4'-C1'-N9	6.71	113.57	108.20
27	a	63	VAL	CB-CA-C	6.71	124.15	111.40
34	i	1652	G	C1'-O4'-C4'	-6.71	104.53	109.90
10	J	179	LYS	C-N-CA	6.71	138.47	121.70
34	i	622	C	C3'-C2'-C1'	6.71	106.86	101.50
34	i	1604	C	O4'-C1'-N1	6.71	113.56	108.20
10	J	144	ILE	CB-CA-C	6.71	125.01	111.60
34	i	1285	U	P-O3'-C3'	6.70	127.74	119.70
34	i	447	C	O4'-C1'-N1	6.70	113.56	108.20
34	i	920	G	O4'-C1'-N9	6.70	113.56	108.20
34	i	1775	A	C3'-C2'-C1'	6.70	106.86	101.50
34	i	373	G	C3'-C2'-C1'	6.69	106.86	101.50
34	i	1243	C	O4'-C1'-C2'	-6.69	99.11	105.80
7	G	157	VAL	CA-C-N	-6.69	102.48	117.20
23	W	2	VAL	C-N-CA	-6.69	104.97	121.70
34	i	432	C	N1-C1'-C2'	6.69	122.70	114.00
34	i	471	C	N1-C1'-C2'	6.68	122.69	114.00
34	i	512	A	P-O5'-C5'	6.68	131.59	120.90
34	i	1222	G	C1'-O4'-C4'	-6.68	104.55	109.90
6	F	130	ARG	N-CA-C	6.68	129.04	111.00
18	R	121	GLN	C-N-CD	-6.68	105.90	120.60
34	i	906	G	C1'-O4'-C4'	-6.68	104.56	109.90
19	S	16	LEU	CB-CG-CD2	-6.68	99.64	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	202	U	O4'-C1'-N1	6.68	113.54	108.20
2	B	41	ILE	CG1-CB-CG2	-6.68	96.71	111.40
34	i	1525	U	O4'-C1'-N1	6.68	113.54	108.20
34	i	243	C	P-O3'-C3'	6.67	127.71	119.70
34	i	1656	A	C3'-C2'-C1'	-6.67	96.16	101.50
34	i	421	G	O4'-C1'-N9	6.67	113.53	108.20
34	i	616	G	O4'-C1'-N9	-6.67	102.86	108.20
2	B	155	TYR	CB-CA-C	-6.67	97.07	110.40
11	K	89	ILE	CA-CB-CG1	-6.67	98.33	111.00
34	i	1673	A	C3'-C2'-C1'	-6.66	96.17	101.50
34	i	94	G	C1'-O4'-C4'	-6.66	104.57	109.90
34	i	158	A	O4'-C1'-N9	6.66	113.53	108.20
34	i	1280	A	O4'-C1'-C2'	-6.66	99.14	105.80
10	J	91	LYS	N-CA-C	-6.65	93.03	111.00
34	i	853	U	N1-C1'-C2'	6.65	122.65	114.00
34	i	876	G	C3'-C2'-C1'	-6.65	96.18	101.50
34	i	1455	G	N9-C1'-C2'	6.65	122.65	114.00
34	i	190	A	O4'-C1'-C2'	-6.65	99.15	105.80
34	i	1519	G	O4'-C1'-N9	6.65	113.52	108.20
34	i	307	G	P-O5'-C5'	6.64	131.53	120.90
34	i	1816	A	O3'-P-O5'	-6.64	91.37	104.00
34	i	548	G	C1'-O4'-C4'	-6.64	104.59	109.90
34	i	144	U	C1'-O4'-C4'	-6.64	104.59	109.90
34	i	1385	C	P-O5'-C5'	6.64	131.52	120.90
34	i	1754	G	N9-C1'-C2'	-6.64	104.70	112.00
34	i	983	A	P-O5'-C5'	-6.63	110.28	120.90
34	i	1088	G	O4'-C1'-N9	6.63	113.51	108.20
34	i	1251	G	P-O3'-C3'	-6.63	111.74	119.70
34	i	1861	U	P-O3'-C3'	6.63	127.66	119.70
34	i	553	G	O4'-C1'-C2'	-6.63	99.17	105.80
34	i	1284	U	O4'-C1'-N1	6.63	113.50	108.20
19	S	87	GLN	CA-C-N	6.63	131.78	117.20
35	l	100	ILE	N-CA-C	6.63	128.90	111.00
34	i	1859	C	P-O3'-C3'	-6.62	111.75	119.70
34	i	1664	G	O5'-P-OP2	6.62	118.64	110.70
11	K	42	ASN	CA-C-N	6.62	131.76	117.20
34	i	807	A	O4'-C1'-N9	6.62	113.49	108.20
34	i	1202	G	O4'-C1'-N9	6.62	113.49	108.20
34	i	437	A	C1'-O4'-C4'	6.61	115.19	109.90
34	i	1366	A	O4'-C1'-C2'	-6.61	99.19	105.80
34	i	1266	G	N9-C1'-C2'	-6.61	104.73	112.00
34	i	1639	C	P-O3'-C3'	6.61	127.63	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	V	64	GLU	N-CA-C	6.61	128.83	111.00
34	i	285	U	C3'-C2'-C1'	6.61	106.78	101.50
34	i	305	U	P-O3'-C3'	-6.61	111.77	119.70
33	g	160	SER	N-CA-C	6.60	128.83	111.00
34	i	534	G	C1'-O4'-C4'	6.60	115.18	109.90
34	i	70	G	O3'-P-O5'	-6.60	91.46	104.00
34	i	1071	C	C1'-O4'-C4'	-6.60	104.62	109.90
34	i	1541	G	O4'-C1'-N9	6.60	113.48	108.20
34	i	550	A	C3'-C2'-C1'	-6.60	96.22	101.50
34	i	1105	C	O4'-C1'-C2'	6.59	113.53	107.60
34	i	190	A	O3'-P-O5'	6.59	116.53	104.00
34	i	286	C	O4'-C1'-C2'	-6.59	99.21	105.80
34	i	1250	C	O4'-C1'-N1	6.59	113.47	108.20
34	i	1254	A	O4'-C1'-N9	6.59	113.47	108.20
34	i	272	C	O3'-P-O5'	6.59	116.52	104.00
33	g	274	VAL	CA-C-N	6.59	131.69	117.20
34	i	1082	G	P-O3'-C3'	6.59	127.60	119.70
34	i	1695	C	O4'-C1'-C2'	-6.58	99.22	105.80
34	i	1169	A	O4'-C1'-N9	6.58	113.47	108.20
16	P	36	LEU	N-CA-C	-6.58	93.23	111.00
34	i	1144	A	O4'-C1'-C2'	6.58	113.52	107.60
34	i	1682	C	C3'-C2'-C1'	6.58	106.77	101.50
11	K	42	ASN	CA-C-O	-6.58	106.29	120.10
34	i	1775	A	P-O5'-C5'	6.58	131.42	120.90
34	i	1819	A	C3'-C2'-C1'	-6.57	96.24	101.50
17	Q	18	THR	N-CA-C	-6.57	93.25	111.00
34	i	1550	U	O4'-C4'-C3'	-6.57	97.43	104.00
34	i	391	A	O4'-C1'-C2'	-6.57	99.23	105.80
34	i	40	A	C1'-O4'-C4'	6.57	115.15	109.90
34	i	728	U	C1'-O4'-C4'	-6.57	104.65	109.90
34	i	459	A	O4'-C1'-C2'	-6.56	99.24	105.80
34	i	957	G	O4'-C1'-N9	6.56	113.45	108.20
34	i	428	G	N9-C1'-C2'	-6.56	104.78	112.00
34	i	984	C	C3'-C2'-C1'	6.56	106.75	101.50
34	i	823	A	N9-C1'-C2'	6.55	122.52	114.00
34	i	164	A	N9-C1'-C2'	6.55	122.52	114.00
34	i	541	U	O4'-C1'-C2'	6.55	113.50	107.60
34	i	882	A	C3'-C2'-C1'	6.55	106.74	101.50
34	i	1387	C	O4'-C1'-N1	6.55	113.44	108.20
34	i	554	A	P-O3'-C3'	6.55	127.56	119.70
34	i	1490	U	C2'-C3'-O3'	6.55	124.18	113.70
34	i	1702	U	N1-C1'-C2'	6.55	122.51	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	208	G	P-O5'-C5'	6.54	131.37	120.90
34	i	1513	C	P-O3'-C3'	-6.54	111.85	119.70
34	i	62	G	C1'-O4'-C4'	-6.54	104.67	109.90
34	i	746	C	C1'-O4'-C4'	-6.54	104.67	109.90
34	i	1204	A	O4'-C1'-C2'	-6.54	99.26	105.80
15	O	43	HIS	N-CA-C	6.54	128.65	111.00
34	i	390	C	O4'-C1'-C2'	-6.54	99.26	105.80
34	i	611	C	C3'-C2'-C1'	6.54	106.73	101.50
34	i	685	G	O4'-C1'-C2'	-6.54	99.26	105.80
24	X	91	LEU	N-CA-C	-6.53	93.36	111.00
10	J	101	LYS	N-CA-C	6.53	128.64	111.00
34	i	1656	A	O4'-C1'-N9	6.53	113.42	108.20
34	i	538	C	N1-C1'-C2'	6.53	122.48	114.00
34	i	1816	A	C4'-C3'-O3'	-6.52	95.70	109.40
26	Z	115	GLY	CA-C-O	-6.52	108.86	120.60
34	i	192	U	P-O5'-C5'	6.52	131.34	120.90
34	i	1646	A	C1'-O4'-C4'	6.52	115.12	109.90
34	i	837	G	C5'-C4'-O4'	6.52	116.92	109.10
9	I	207	GLY	CA-C-O	-6.52	108.87	120.60
34	i	443	C	C3'-C2'-C1'	6.52	106.71	101.50
34	i	147	A	O4'-C1'-C2'	-6.51	99.28	105.80
34	i	1342	U	O4'-C1'-N1	6.51	113.41	108.20
26	Z	107	VAL	CA-CB-CG2	6.51	120.67	110.90
34	i	53	C	O4'-C1'-N1	6.51	113.41	108.20
34	i	1151	U	C3'-C2'-C1'	6.51	106.71	101.50
9	I	8	TRP	CB-CG-CD1	6.51	135.46	127.00
34	i	289	G	N9-C1'-C2'	-6.51	104.84	112.00
34	i	1790	G	O4'-C1'-N9	6.51	113.40	108.20
34	i	1347	G	O4'-C1'-N9	6.50	113.40	108.20
34	i	8	U	O4'-C1'-N1	6.50	113.40	108.20
34	i	1837	G	O4'-C1'-C2'	6.50	113.45	107.60
3	C	217	THR	C-N-CA	6.50	137.96	121.70
34	i	342	U	C5'-C4'-C3'	-6.50	105.60	116.00
34	i	82	G	C1'-O4'-C4'	6.50	115.10	109.90
34	i	1369	C	O4'-C1'-C2'	-6.50	99.30	105.80
34	i	211	U	O4'-C1'-N1	6.50	113.40	108.20
34	i	1154	G	N9-C1'-C2'	-6.50	104.86	112.00
34	i	1521	G	O4'-C1'-N9	6.49	113.39	108.20
34	i	1158	C	O4'-C1'-N1	6.49	113.39	108.20
34	i	340	C	C3'-C2'-C1'	6.49	106.69	101.50
34	i	1540	A	C5'-C4'-O4'	6.49	116.88	109.10
2	B	77	ASP	N-CA-C	6.49	128.51	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	729	C	C3'-C2'-C1'	6.49	106.69	101.50
27	a	96	THR	O-C-N	6.48	133.42	121.10
34	i	837	G	C2'-C3'-O3'	-6.48	95.24	109.50
34	i	282	G	N9-C1'-C2'	6.48	122.43	114.00
3	C	157	ASN	N-CA-C	6.48	128.50	111.00
34	i	486	C	O4'-C1'-C2'	-6.48	99.32	105.80
9	I	8	TRP	CG-CD2-CE3	-6.48	128.07	133.90
34	i	840	U	P-O3'-C3'	-6.48	111.93	119.70
34	i	1785	A	O4'-C1'-C2'	-6.48	99.32	105.80
34	i	1496	G	C1'-O4'-C4'	-6.47	104.72	109.90
21	U	70	CYS	O-C-N	-6.47	112.20	123.20
34	i	581	U	P-O3'-C3'	6.47	127.47	119.70
34	i	1861	U	O4'-C1'-C2'	-6.47	99.33	105.80
34	i	1376	C	N1-C1'-C2'	6.47	122.41	114.00
34	i	192	U	O4'-C1'-N1	6.46	113.37	108.20
34	i	947	C	N1-C1'-C2'	6.46	122.40	114.00
34	i	685	G	O3'-P-O5'	6.46	116.28	104.00
34	i	205	G	O4'-C1'-N9	6.46	113.37	108.20
34	i	236	C	O4'-C1'-N1	6.46	113.37	108.20
19	S	49	ASP	O-C-N	-6.46	112.37	122.70
34	i	1071	C	N1-C1'-C2'	6.45	122.39	114.00
34	i	962	U	O4'-C1'-N1	6.45	113.36	108.20
34	i	10	G	P-O3'-C3'	-6.45	111.96	119.70
34	i	79	A	O5'-C5'-C4'	6.45	123.96	111.70
34	i	903	G	C1'-O4'-C4'	-6.45	104.74	109.90
34	i	870	G	O4'-C1'-N9	6.45	113.36	108.20
34	i	274	G	C1'-O4'-C4'	-6.45	104.74	109.90
9	I	119	LEU	C-N-CD	-6.44	106.42	120.60
34	i	1214	C	C3'-C2'-C1'	6.44	106.65	101.50
34	i	1801	C	N1-C1'-C2'	6.44	122.37	114.00
34	i	1455	G	O4'-C1'-C2'	6.44	113.39	107.60
34	i	1353	A	O4'-C1'-N9	6.44	113.35	108.20
34	i	1467	C	C3'-C2'-C1'	6.44	106.65	101.50
34	i	155	G	C5'-C4'-C3'	6.44	126.30	116.00
34	i	1545	G	O4'-C1'-N9	6.44	113.35	108.20
10	J	188	GLY	CA-C-O	-6.43	109.02	120.60
11	K	46	MET	N-CA-CB	6.43	122.18	110.60
34	i	1656	A	N9-C1'-C2'	6.43	122.36	114.00
29	c	7	GLN	C-N-CD	-6.43	106.45	120.60
34	i	310	G	C4'-C3'-O3'	6.43	125.86	113.00
34	i	1284	U	N1-C1'-C2'	6.43	122.36	114.00
34	i	1377	G	N9-C1'-C2'	-6.43	104.93	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1390	G	C1'-O4'-C4'	-6.43	104.76	109.90
34	i	277	U	P-O3'-C3'	6.42	127.41	119.70
34	i	1361	G	C4'-C3'-O3'	-6.42	95.91	109.40
34	i	634	G	O4'-C1'-N9	6.42	113.34	108.20
34	i	1461	A	C1'-O4'-C4'	6.42	115.04	109.90
34	i	1537	C	O5'-C5'-C4'	6.42	123.90	111.70
26	Z	112	ASN	N-CA-CB	-6.42	99.04	110.60
33	g	284	PRO	N-CA-C	-6.42	95.41	112.10
34	i	1135	C	O4'-C1'-N1	6.42	113.34	108.20
34	i	1202	G	C1'-O4'-C4'	-6.42	104.77	109.90
34	i	1297	A	P-O3'-C3'	6.42	127.40	119.70
34	i	1384	A	O4'-C1'-N9	6.42	113.33	108.20
34	i	1422	U	O4'-C1'-N1	6.42	113.33	108.20
34	i	70	G	N9-C1'-C2'	-6.42	104.94	112.00
34	i	372	C	P-O3'-C3'	-6.42	112.00	119.70
34	i	1206	G	C3'-C2'-C1'	-6.42	96.37	101.50
3	C	83	LEU	C-N-CA	-6.41	108.84	122.30
22	V	81	GLN	O-C-N	-6.41	112.44	122.70
34	i	150	A	O4'-C1'-C2'	-6.41	99.39	105.80
34	i	523	A	C2'-C3'-O3'	6.41	123.96	113.70
34	i	1502	A	P-O3'-C3'	6.41	127.39	119.70
34	i	1510	G	N9-C1'-C2'	-6.41	104.95	112.00
34	i	974	G	O4'-C1'-N9	6.41	113.33	108.20
34	i	994	A	C1'-O4'-C4'	6.41	115.03	109.90
34	i	1521	G	N9-C1'-C2'	-6.41	104.95	112.00
34	i	1779	C	C1'-O4'-C4'	6.41	115.03	109.90
34	i	814	A	O4'-C1'-N9	6.41	113.33	108.20
34	i	1360	U	P-O3'-C3'	-6.40	112.02	119.70
25	Y	128	GLY	CA-C-O	-6.40	109.08	120.60
34	i	1807	A	C1'-O4'-C4'	-6.40	104.78	109.90
34	i	1794	A	C3'-C2'-C1'	6.40	106.62	101.50
34	i	1348	G	C3'-C2'-C1'	-6.40	96.38	101.50
34	i	401	G	O4'-C1'-N9	6.40	113.32	108.20
34	i	1089	A	O4'-C1'-N9	6.40	113.32	108.20
34	i	1202	G	N9-C1'-C2'	6.39	122.31	114.00
34	i	1337	C	O4'-C1'-C2'	-6.39	99.41	105.80
34	i	1377	G	C3'-C2'-C1'	-6.39	96.39	101.50
16	P	18	ARG	NE-CZ-NH1	6.39	123.49	120.30
34	i	1534	U	C1'-O4'-C4'	6.38	115.01	109.90
34	i	882	A	P-O3'-C3'	6.38	127.35	119.70
19	S	92	ASP	CB-CG-OD2	-6.37	112.56	118.30
34	i	1405	A	C1'-O4'-C4'	6.37	115.00	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	b	53	VAL	N-CA-C	-6.37	93.80	111.00
34	i	577	A	P-O3'-C3'	-6.37	112.06	119.70
2	B	233	GLY	CA-C-O	-6.36	109.14	120.60
34	i	639	U	O4'-C1'-N1	6.36	113.29	108.20
34	i	541	U	C1'-O4'-C4'	-6.36	104.81	109.90
34	i	1122	G	C1'-O4'-C4'	-6.36	104.81	109.90
34	i	1480	A	P-O3'-C3'	6.36	127.33	119.70
7	G	128	THR	N-CA-CB	-6.36	98.22	110.30
34	i	1232	G	P-O3'-C3'	6.36	127.33	119.70
34	i	749	C	C5'-C4'-C3'	6.36	126.17	116.00
34	i	752	C	O4'-C1'-N1	6.36	113.29	108.20
5	E	258	ALA	C-N-CA	-6.36	105.81	121.70
34	i	29	G	O4'-C1'-N9	6.36	113.28	108.20
34	i	752	C	C4'-C3'-C2'	-6.36	96.24	102.60
34	i	1515	G	O4'-C1'-N9	6.35	113.28	108.20
34	i	806	A	C3'-C2'-C1'	6.35	106.58	101.50
34	i	1151	U	P-O5'-C5'	6.35	131.06	120.90
5	E	263	GLY	CA-C-O	-6.35	109.17	120.60
18	R	99	ASP	C-N-CD	-6.35	106.64	120.60
34	i	9	U	O4'-C1'-N1	6.35	113.28	108.20
34	i	1594	U	P-O5'-C5'	6.35	131.06	120.90
19	S	92	ASP	N-CA-C	6.34	128.13	111.00
8	H	106	ARG	CD-NE-CZ	6.34	132.48	123.60
34	i	626	C	O4'-C1'-C2'	-6.34	99.46	105.80
34	i	1858	U	O4'-C1'-N1	6.34	113.27	108.20
10	J	162	ARG	N-CA-C	6.33	128.10	111.00
34	i	1039	G	C3'-C2'-C1'	6.33	106.57	101.50
34	i	62	G	N9-C1'-C2'	6.33	122.23	114.00
2	B	76	ASN	N-CA-C	6.33	128.09	111.00
34	i	794	G	C3'-C2'-C1'	6.33	106.56	101.50
34	i	1084	U	O4'-C1'-N1	6.33	113.26	108.20
34	i	1486	G	C3'-C2'-C1'	-6.33	96.44	101.50
22	V	47	ASN	N-CA-C	-6.32	93.92	111.00
34	i	1256	A	N9-C1'-C2'	6.32	122.22	114.00
34	i	1486	G	O4'-C1'-N9	6.32	113.26	108.20
16	P	18	ARG	N-CA-CB	6.32	121.97	110.60
34	i	341	G	N9-C1'-C2'	-6.32	105.05	112.00
34	i	1337	C	C3'-C2'-C1'	6.32	106.55	101.50
34	i	1339	U	C3'-C2'-C1'	6.32	106.55	101.50
34	i	887	G	N9-C1'-C2'	6.31	122.21	114.00
34	i	1411	C	O4'-C1'-N1	6.31	113.25	108.20
34	i	1196	A	O4'-C1'-N9	6.31	113.25	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	e	120	VAL	C-N-CD	-6.31	106.73	120.60
34	i	1207	G	N9-C1'-C2'	6.31	122.20	114.00
16	P	68	PRO	C-N-CD	-6.30	106.73	120.60
34	i	1404	U	P-O3'-C3'	6.30	127.26	119.70
34	i	190	A	C5'-C4'-C3'	-6.30	105.92	116.00
34	i	1111	U	O4'-C1'-C2'	6.30	113.27	107.60
34	i	1202	G	C3'-C2'-C1'	-6.30	96.46	101.50
34	i	38	A	C1'-O4'-C4'	6.30	114.94	109.90
34	i	341	G	O4'-C1'-N9	6.30	113.24	108.20
16	P	37	TYR	CB-CA-C	6.29	122.99	110.40
34	i	1774	G	N9-C1'-C2'	6.29	122.18	114.00
34	i	582	C	N1-C1'-C2'	-6.29	105.08	112.00
34	i	176	U	N1-C1'-C2'	6.29	122.17	114.00
34	i	205	G	C1'-O4'-C4'	-6.29	104.87	109.90
34	i	1425	G	O3'-P-O5'	-6.29	92.05	104.00
34	i	1436	C	N1-C1'-C2'	6.29	122.18	114.00
34	i	1015	C	C3'-C2'-C1'	6.29	106.53	101.50
34	i	825	C	P-O3'-C3'	6.29	127.24	119.70
34	i	1030	A	C1'-O4'-C4'	6.29	114.93	109.90
34	i	794	G	N9-C1'-C2'	6.28	122.17	114.00
34	i	1636	A	C3'-C2'-C1'	6.28	106.53	101.50
34	i	597	U	P-O3'-C3'	6.28	127.24	119.70
34	i	568	C	C3'-C2'-C1'	6.28	106.52	101.50
34	i	74	G	C4'-C3'-C2'	-6.28	96.33	102.60
34	i	1304	U	P-O3'-C3'	6.28	127.23	119.70
34	i	1489	C	N1-C1'-C2'	-6.28	105.10	112.00
34	i	635	C	O4'-C1'-C2'	-6.27	99.53	105.80
34	i	1076	A	P-O3'-C3'	6.27	127.23	119.70
34	i	1665	C	O4'-C1'-N1	6.27	113.22	108.20
34	i	313	C	O4'-C1'-N1	6.27	113.22	108.20
35	l	85	LEU	CA-CB-CG	-6.27	100.89	115.30
34	i	824	G	C1'-O4'-C4'	-6.27	104.89	109.90
34	i	1514	U	N1-C1'-C2'	-6.27	105.11	112.00
34	i	1519	G	O4'-C4'-C3'	-6.27	97.73	104.00
34	i	605	C	C1'-O4'-C4'	-6.26	104.89	109.90
34	i	678	U	P-O3'-C3'	6.26	127.22	119.70
34	i	1623	C	C1'-O4'-C4'	-6.26	104.89	109.90
34	i	831	C	P-O3'-C3'	6.26	127.22	119.70
34	i	1214	C	C1'-O4'-C4'	-6.26	104.89	109.90
7	G	173	ALA	C-N-CD	-6.26	106.83	120.60
34	i	796	U	C5'-C4'-C3'	-6.26	105.99	116.00
34	i	1784	A	N9-C1'-C2'	6.25	122.13	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	509	A	N9-C1'-C2'	-6.25	105.12	112.00
34	i	1167	G	C3'-C2'-C1'	-6.25	96.50	101.50
34	i	1495	U	O4'-C1'-N1	6.25	113.20	108.20
34	i	1657	U	O4'-C1'-N1	6.25	113.20	108.20
16	P	18	ARG	CB-CG-CD	6.25	127.86	111.60
34	i	424	G	C2'-C3'-O3'	6.25	123.70	113.70
34	i	733	G	O4'-C1'-C2'	-6.25	99.55	105.80
34	i	1729	G	C3'-C2'-C1'	6.25	106.50	101.50
15	O	102	GLY	C-N-CA	-6.25	106.08	121.70
34	i	1348	G	O4'-C1'-N9	6.25	113.20	108.20
1	A	186	ARG	C-N-CA	6.24	135.41	122.30
34	i	1487	G	O4'-C1'-N9	6.24	113.19	108.20
34	i	343	C	C4'-C3'-C2'	6.24	108.84	102.60
9	I	6	ASP	N-CA-CB	-6.24	99.37	110.60
34	i	489	G	C1'-O4'-C4'	-6.24	104.91	109.90
34	i	840	U	O4'-C1'-C2'	-6.24	99.56	105.80
34	i	220	C	O4'-C1'-N1	6.23	113.19	108.20
34	i	1610	U	C1'-O4'-C4'	-6.23	104.92	109.90
34	i	279	G	P-O5'-C5'	6.23	130.87	120.90
33	g	47	ARG	N-CA-C	-6.23	94.19	111.00
34	i	1587	C	C1'-O4'-C4'	-6.23	104.92	109.90
34	i	837	G	P-O3'-C3'	6.23	127.17	119.70
34	i	1364	U	O4'-C1'-N1	6.22	113.18	108.20
10	J	164	PRO	N-CD-CG	-6.22	93.86	103.20
34	i	522	C	P-O3'-C3'	6.22	127.17	119.70
34	i	542	G	C1'-O4'-C4'	-6.22	104.92	109.90
34	i	958	A	N9-C1'-C2'	-6.22	105.16	112.00
34	i	1654	U	O3'-P-O5'	6.22	115.82	104.00
3	C	258	LEU	CA-CB-CG	6.21	129.60	115.30
34	i	1135	C	P-O5'-C5'	-6.21	110.96	120.90
34	i	1533	C	P-O5'-C5'	-6.21	110.96	120.90
34	i	1849	G	O4'-C1'-C2'	6.21	113.19	107.60
34	i	109	U	C4'-C3'-O3'	-6.21	96.36	109.40
34	i	174	C	O4'-C1'-C2'	-6.21	99.59	105.80
34	i	493	C	O4'-C1'-C2'	-6.21	99.59	105.80
34	i	544	A	C1'-O4'-C4'	-6.21	104.94	109.90
34	i	424	G	O3'-P-O5'	-6.21	92.21	104.00
34	i	295	C	O3'-P-O5'	6.20	115.79	104.00
34	i	486	C	O4'-C1'-N1	6.20	113.16	108.20
34	i	792	G	C1'-O4'-C4'	-6.20	104.94	109.90
34	i	1563	C	C1'-O4'-C4'	-6.20	104.94	109.90
31	e	120	VAL	CB-CA-C	-6.20	99.62	111.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	F	130	ARG	N-CA-CB	6.20	121.76	110.60
34	i	110	U	P-O3'-C3'	-6.20	112.26	119.70
34	i	940	A	C3'-C2'-C1'	6.20	106.46	101.50
9	I	178	ARG	CD-NE-CZ	6.20	132.28	123.60
34	i	1395	C	C5'-C4'-C3'	-6.20	106.09	116.00
34	i	1621	C	O4'-C1'-N1	6.20	113.16	108.20
19	S	82	TRP	CB-CA-C	-6.19	98.02	110.40
13	M	116	LYS	N-CA-C	6.19	127.70	111.00
34	i	209	C	P-O5'-C5'	6.19	130.80	120.90
34	i	741	C	O4'-C1'-C2'	-6.19	99.61	105.80
34	i	973	C	O4'-C1'-N1	6.19	113.15	108.20
34	i	1562	G	P-O3'-C3'	-6.19	112.28	119.70
6	F	46	ALA	C-N-CA	-6.18	106.24	121.70
34	i	1415	C	O4'-C1'-C2'	-6.18	99.62	105.80
34	i	1588	C	O4'-C1'-N1	6.18	113.15	108.20
34	i	1855	G	C1'-O4'-C4'	-6.18	104.95	109.90
34	i	1514	U	O4'-C1'-C2'	-6.18	99.62	105.80
34	i	730	C	C3'-C2'-C1'	6.18	106.44	101.50
34	i	1415	C	C3'-C2'-C1'	6.18	106.44	101.50
34	i	445	A	C3'-C2'-C1'	6.17	106.44	101.50
34	i	1187	C	O4'-C1'-N1	6.17	113.14	108.20
10	J	93	LYS	O-C-N	-6.17	112.82	122.70
12	L	152	LYS	CA-C-O	-6.17	107.14	120.10
19	S	9	PHE	C-N-CA	-6.17	106.27	121.70
34	i	549	G	N9-C1'-C2'	6.17	122.02	114.00
34	i	2	A	O4'-C1'-N9	6.17	113.14	108.20
34	i	272	C	O5'-P-OP1	-6.17	100.15	105.70
19	S	6	PRO	CA-C-O	-6.16	105.41	120.20
27	a	85	ARG	NE-CZ-NH2	6.16	123.38	120.30
34	i	903	G	C3'-C2'-C1'	-6.16	96.57	101.50
34	i	1445	G	P-O3'-C3'	6.16	127.09	119.70
15	O	143	LYS	CB-CA-C	-6.16	98.09	110.40
34	i	1066	A	N9-C1'-C2'	6.15	122.00	114.00
10	J	180	LYS	N-CA-C	6.15	127.61	111.00
34	i	1293	U	C1'-O4'-C4'	6.15	114.82	109.90
34	i	1118	A	C4'-C3'-C2'	-6.15	96.45	102.60
19	S	10	GLN	C-N-CA	6.15	137.07	121.70
33	g	50	THR	CB-CA-C	6.15	128.20	111.60
34	i	795	U	C1'-O4'-C4'	-6.15	104.98	109.90
34	i	1148	U	O4'-C1'-N1	6.14	113.12	108.20
34	i	1255	A	C1'-O4'-C4'	-6.14	104.98	109.90
34	i	1227	C	C3'-C2'-C1'	6.14	106.41	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1723	U	O4'-C1'-N1	6.14	113.11	108.20
34	i	1570	G	C4'-C3'-C2'	-6.14	96.46	102.60
10	J	145	PRO	N-CA-C	-6.14	96.14	112.10
12	L	102	PHE	N-CA-C	-6.13	94.44	111.00
34	i	201	G	O4'-C1'-C2'	-6.13	99.67	105.80
34	i	356	U	O4'-C1'-N1	6.13	113.10	108.20
34	i	395	G	C1'-O4'-C4'	-6.13	105.00	109.90
34	i	1462	G	O4'-C1'-N9	6.13	113.10	108.20
34	i	1181	C	N1-C1'-C2'	6.12	121.96	114.00
34	i	1796	C	O4'-C1'-N1	6.12	113.10	108.20
16	P	17	TYR	N-CA-CB	6.12	121.62	110.60
34	i	1663	U	C3'-C2'-C1'	-6.12	96.60	101.50
34	i	4	C	C1'-O4'-C4'	-6.12	105.01	109.90
34	i	685	G	C5'-C4'-C3'	6.12	125.78	116.00
34	i	1141	A	O4'-C1'-N9	6.12	113.09	108.20
6	F	41	VAL	N-CA-C	-6.11	94.49	111.00
11	K	40	VAL	C-N-CD	-6.11	107.15	120.60
34	i	126	G	O3'-P-O5'	6.11	115.61	104.00
34	i	1361	G	P-O5'-C5'	6.11	130.68	120.90
34	i	1425	G	OP1-P-O3'	6.11	118.64	105.20
34	i	854	A	C3'-C2'-C1'	6.11	106.39	101.50
4	D	4	GLN	CA-C-O	6.11	132.92	120.10
26	Z	104	ARG	CA-C-N	-6.11	103.77	117.20
34	i	1644	U	P-O3'-C3'	-6.11	112.37	119.70
34	i	1658	A	C3'-C2'-C1'	6.11	106.38	101.50
34	i	456	G	O4'-C1'-C2'	6.10	113.09	107.60
34	i	880	C	O4'-C1'-N1	6.10	113.08	108.20
31	e	121	PRO	CA-N-CD	-6.10	102.97	111.50
34	i	954	G	C3'-C2'-C1'	-6.10	96.62	101.50
34	i	210	G	P-O3'-C3'	-6.09	112.39	119.70
34	i	623	C	C3'-C2'-C1'	6.09	106.37	101.50
34	i	1489	C	O4'-C1'-N1	6.09	113.08	108.20
34	i	1300	U	C1'-O4'-C4'	-6.09	105.03	109.90
34	i	1486	G	O4'-C1'-C2'	6.09	113.08	107.60
11	K	89	ILE	CA-CB-CG2	6.09	123.07	110.90
34	i	1743	G	O5'-C5'-C4'	6.09	123.27	111.70
32	f	134	SER	O-C-N	6.08	132.43	122.70
34	i	410	G	O4'-C1'-N9	6.08	113.06	108.20
34	i	786	C	O4'-C1'-C2'	-6.08	99.72	105.80
34	i	1036	G	C3'-C2'-C1'	-6.08	96.64	101.50
34	i	1238	U	C1'-O4'-C4'	-6.08	105.04	109.90
9	I	29	LEU	C-N-CA	6.07	135.05	122.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	844	U	C1'-O4'-C4'	-6.07	105.05	109.90
34	i	1535	G	C1'-O4'-C4'	-6.07	105.05	109.90
34	i	1774	G	C3'-C2'-C1'	-6.07	96.65	101.50
33	g	15	ASN	C-N-CA	-6.07	109.56	122.30
34	i	24	C	O4'-C1'-N1	6.07	113.05	108.20
34	i	1431	C	C5'-C4'-C3'	6.06	125.70	116.00
12	L	151	THR	C-N-CA	6.06	136.85	121.70
34	i	1355	U	O4'-C1'-C2'	-6.06	99.74	105.80
34	i	986	A	C1'-O4'-C4'	-6.06	105.05	109.90
34	i	1050	G	C1'-O4'-C4'	-6.06	105.05	109.90
34	i	1391	C	O4'-C1'-N1	6.06	113.05	108.20
11	K	38	LYS	N-CA-C	-6.05	94.66	111.00
27	a	107	ALA	C-N-CD	6.05	141.11	128.40
34	i	410	G	O4'-C1'-C2'	6.05	113.05	107.60
34	i	960	A	N9-C1'-C2'	-6.05	105.34	112.00
34	i	1776	G	O4'-C4'-C3'	-6.05	97.95	104.00
34	i	272	C	O5'-P-OP2	-6.05	100.26	105.70
34	i	1186	A	C3'-C2'-C1'	6.05	106.34	101.50
34	i	973	C	O4'-C1'-C2'	-6.05	99.75	105.80
34	i	1300	U	O4'-C1'-N1	6.04	113.03	108.20
34	i	1543	G	C3'-C2'-C1'	-6.04	96.67	101.50
34	i	194	C	O4'-C1'-N1	6.04	113.03	108.20
34	i	352	C	N1-C1'-C2'	6.03	121.84	114.00
34	i	906	G	O4'-C1'-C2'	6.03	113.03	107.60
34	i	7	G	O4'-C1'-N9	6.03	113.03	108.20
34	i	584	A	P-O3'-C3'	6.03	126.94	119.70
34	i	1549	C	C2'-C3'-O3'	-6.03	96.23	109.50
2	B	151	ARG	C-N-CA	-6.03	106.63	121.70
12	L	150	GLY	N-CA-C	-6.03	98.03	113.10
25	Y	64	PHE	N-CA-CB	-6.03	99.75	110.60
25	Y	96	LEU	N-CA-CB	6.03	122.45	110.40
34	i	430	G	O4'-C1'-N9	6.03	113.02	108.20
34	i	460	G	O4'-C1'-N9	6.03	113.02	108.20
34	i	1571	G	C1'-O4'-C4'	-6.03	105.08	109.90
21	U	117	ALA	O-C-N	6.02	132.34	122.70
34	i	327	C	O4'-C1'-N1	6.02	113.02	108.20
34	i	1172	G	O4'-C1'-N9	6.02	113.02	108.20
34	i	1395	C	O4'-C1'-N1	6.02	113.02	108.20
16	P	49	LEU	C-N-CA	-6.02	106.65	121.70
16	P	130	ARG	NE-CZ-NH1	6.02	123.31	120.30
29	c	6	VAL	N-CA-C	6.02	127.26	111.00
34	i	1393	U	C3'-C2'-C1'	6.02	106.32	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	F	135	ARG	CB-CA-C	6.02	122.44	110.40
34	i	952	G	O4'-C1'-N9	6.02	113.01	108.20
34	i	1535	G	O4'-C1'-N9	6.02	113.01	108.20
3	C	262	HIS	CB-CA-C	-6.01	98.37	110.40
34	i	563	U	N1-C1'-C2'	6.01	121.82	114.00
34	i	853	U	P-O5'-C5'	-6.01	111.28	120.90
34	i	1112	C	O4'-C1'-C2'	6.01	113.01	107.60
34	i	1547	G	O4'-C1'-C2'	-6.01	99.79	105.80
34	i	924	G	O4'-C1'-N9	6.01	113.01	108.20
34	i	1433	C	N1-C1'-C2'	6.01	121.81	114.00
32	f	88	PRO	N-CA-C	-6.01	96.48	112.10
34	i	970	C	C1'-O4'-C4'	-6.01	105.09	109.90
34	i	830	C	C3'-C2'-C1'	-6.01	96.69	101.50
34	i	223	A	O4'-C1'-C2'	-6.01	99.79	105.80
34	i	193	C	C3'-C2'-C1'	6.00	106.30	101.50
9	I	132	GLU	CA-C-N	6.00	130.40	117.20
34	i	1118	A	C3'-C2'-C1'	6.00	106.30	101.50
34	i	1403	U	O4'-C1'-N1	6.00	113.00	108.20
34	i	848	G	O4'-C1'-N9	6.00	113.00	108.20
6	F	38	TYR	C-N-CA	-6.00	106.71	121.70
34	i	1678	C	C3'-C2'-C1'	6.00	106.30	101.50
34	i	1846	C	N1-C1'-C2'	6.00	121.80	114.00
9	I	55	TYR	CB-CG-CD1	6.00	124.60	121.00
34	i	623	C	N1-C1'-C2'	6.00	121.79	114.00
34	i	1742	C	C5'-C4'-O4'	6.00	116.29	109.10
16	P	121	ILE	O-C-N	-5.99	113.11	122.70
34	i	1694	A	P-O3'-C3'	-5.99	112.51	119.70
34	i	1705	C	C3'-C2'-C1'	5.99	106.29	101.50
34	i	858	A	C1'-O4'-C4'	-5.99	105.11	109.90
34	i	1547	G	P-O5'-C5'	5.99	130.48	120.90
26	Z	112	ASN	N-CA-C	5.99	127.16	111.00
34	i	1394	G	P-O3'-C3'	-5.99	112.52	119.70
34	i	1834	U	O4'-C1'-N1	5.99	112.99	108.20
21	U	109	GLY	N-CA-C	-5.98	98.14	113.10
34	i	1701	G	O4'-C1'-N9	5.98	112.98	108.20
34	i	1702	U	O4'-C1'-N1	5.98	112.99	108.20
34	i	1102	C	O4'-C1'-C2'	-5.98	99.82	105.80
34	i	872	C	C3'-C2'-C1'	5.98	106.28	101.50
34	i	684	A	P-O5'-C5'	5.98	130.46	120.90
11	K	41	PRO	N-CA-C	-5.98	96.56	112.10
11	K	90	VAL	N-CA-C	5.97	127.13	111.00
34	i	1416	G	N9-C1'-C2'	5.97	121.77	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	90	G	O4'-C1'-N9	5.97	112.98	108.20
25	Y	86	GLU	CA-C-N	5.97	133.82	117.10
34	i	367	G	O4'-C1'-N9	5.97	112.98	108.20
34	i	1440	U	O4'-C1'-N1	5.97	112.98	108.20
34	i	204	G	O4'-C1'-C2'	-5.97	99.83	105.80
33	g	213	ASP	CB-CG-OD2	-5.97	112.93	118.30
34	i	1400	U	N1-C1'-C2'	5.97	121.76	114.00
22	V	66	ASP	C-N-CA	-5.96	106.79	121.70
34	i	1087	C	O4'-C1'-C2'	-5.96	99.84	105.80
34	i	1431	C	C3'-C2'-C1'	5.96	106.27	101.50
34	i	1230	C	C1'-O4'-C4'	-5.96	105.13	109.90
18	R	88	VAL	C-N-CA	-5.96	106.80	121.70
34	i	1441	U	C4'-C3'-O3'	-5.96	96.89	109.40
34	i	1801	C	C1'-O4'-C4'	-5.96	105.13	109.90
34	i	546	U	C5'-C4'-C3'	5.95	125.53	116.00
34	i	192	U	O5'-C5'-C4'	-5.95	100.40	111.70
34	i	1441	U	P-O3'-C3'	-5.95	112.56	119.70
34	i	1114	C	C3'-C2'-C1'	-5.94	96.75	101.50
34	i	373	G	O4'-C1'-N9	5.94	112.95	108.20
34	i	292	A	O4'-C1'-N9	5.94	112.95	108.20
34	i	1204	A	C1'-O4'-C4'	5.94	114.65	109.90
34	i	1219	A	O4'-C1'-C2'	-5.94	99.86	105.80
34	i	743	U	O3'-P-O5'	-5.94	92.72	104.00
34	i	1121	C	O4'-C1'-N1	5.94	112.95	108.20
34	i	1138	G	C3'-C2'-C1'	-5.94	96.75	101.50
22	V	32	ILE	C-N-CD	5.93	140.86	128.40
34	i	278	U	P-O5'-C5'	5.93	130.40	120.90
34	i	1051	A	C3'-C2'-C1'	5.93	106.25	101.50
8	H	16	PRO	O-C-N	-5.93	113.21	122.70
34	i	959	A	P-O5'-C5'	-5.93	111.41	120.90
21	U	69	PRO	N-CA-C	-5.93	96.69	112.10
34	i	998	U	O4'-C1'-N1	5.93	112.94	108.20
34	i	1408	C	C4'-C3'-O3'	5.93	124.85	113.00
34	i	115	U	O4'-C1'-N1	5.92	112.94	108.20
34	i	1534	U	C3'-C2'-C1'	5.92	106.24	101.50
34	i	1199	G	C3'-C2'-C1'	-5.92	96.76	101.50
34	i	581	U	N1-C1'-C2'	5.92	121.70	114.00
34	i	793	C	P-O5'-C5'	5.92	130.37	120.90
34	i	163	U	O4'-C4'-C3'	-5.92	98.08	104.00
7	G	173	ALA	O-C-N	-5.91	109.86	121.10
34	i	1698	C	O4'-C1'-C2'	-5.91	99.89	105.80
34	i	21	U	O4'-C1'-C2'	-5.91	99.89	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1019	A	O4'-C1'-C2'	-5.91	99.89	105.80
34	i	1547	G	C1'-O4'-C4'	5.91	114.63	109.90
34	i	558	C	C3'-C2'-C1'	5.91	106.23	101.50
34	i	1434	A	C3'-C2'-C1'	5.91	106.23	101.50
34	i	1485	A	P-O3'-C3'	5.91	126.79	119.70
34	i	1558	G	C1'-O4'-C4'	-5.90	105.18	109.90
34	i	1698	C	C3'-C2'-C1'	5.90	106.22	101.50
34	i	1058	A	C3'-C2'-C1'	5.90	106.22	101.50
34	i	1343	U	O4'-C1'-C2'	-5.90	99.90	105.80
35	l	97	LEU	CA-CB-CG	5.90	128.87	115.30
34	i	54	A	N9-C1'-C2'	5.90	121.67	114.00
34	i	64	A	C3'-C2'-C1'	-5.90	96.78	101.50
34	i	1091	U	C1'-O4'-C4'	-5.90	105.18	109.90
34	i	1426	C	C1'-O4'-C4'	5.90	114.62	109.90
33	g	12	LYS	C-N-CA	5.89	134.68	122.30
34	i	603	C	C1'-O4'-C4'	5.89	114.61	109.90
34	i	1174	U	O4'-C1'-N1	5.89	112.92	108.20
34	i	617	U	O4'-C1'-C2'	-5.89	99.91	105.80
34	i	849	C	O4'-C1'-N1	5.89	112.92	108.20
34	i	1413	C	OP1-P-OP2	-5.89	110.76	119.60
21	U	68	THR	N-CA-CB	-5.89	99.11	110.30
34	i	163	U	O4'-C1'-N1	5.89	112.91	108.20
34	i	1303	U	N1-C1'-C2'	-5.89	105.52	112.00
34	i	1733	C	C3'-C2'-C1'	5.89	106.21	101.50
34	i	1605	G	O4'-C1'-N9	5.89	112.91	108.20
27	a	96	THR	CA-C-N	-5.89	100.61	117.10
34	i	1367	U	C3'-C2'-C1'	5.89	106.21	101.50
34	i	541	U	P-O3'-C3'	5.88	126.76	119.70
34	i	1022	C	O4'-C1'-C2'	-5.88	99.92	105.80
34	i	402	G	C3'-C2'-C1'	5.88	106.20	101.50
34	i	1428	U	N1-C1'-C2'	5.88	121.64	114.00
34	i	923	C	O4'-C1'-N1	5.88	112.90	108.20
34	i	1349	A	O3'-P-O5'	-5.88	92.83	104.00
1	A	193	HIS	C-N-CD	-5.88	107.67	120.60
34	i	1367	U	O4'-C1'-N1	5.88	112.90	108.20
34	i	1497	C	P-O3'-C3'	5.88	126.75	119.70
34	i	727	G	C5'-C4'-O4'	-5.87	102.05	109.10
34	i	1110	U	C1'-O4'-C4'	5.87	114.60	109.90
34	i	1282	G	C4'-C3'-O3'	-5.87	97.07	109.40
29	c	5	ARG	N-CA-C	5.87	126.84	111.00
34	i	1407	G	C3'-C2'-C1'	-5.87	96.81	101.50
34	i	1127	G	C5'-C4'-C3'	-5.86	106.63	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	544	A	O4'-C1'-C2'	5.86	112.87	107.60
34	i	139	C	C1'-O4'-C4'	5.86	114.58	109.90
34	i	946	C	C3'-C2'-C1'	5.86	106.18	101.50
28	b	53	VAL	C-N-CA	-5.85	107.07	121.70
34	i	1527	C	N1-C1'-C2'	5.85	121.61	114.00
34	i	528	U	C3'-C2'-C1'	5.85	106.18	101.50
34	i	730	C	O3'-P-O5'	5.85	115.11	104.00
34	i	392	C	O4'-C1'-C2'	-5.84	99.95	105.80
34	i	1318	G	O4'-C1'-N9	5.84	112.88	108.20
34	i	1532	A	C3'-C2'-C1'	5.84	106.17	101.50
34	i	1134	C	C4'-C3'-O3'	-5.84	97.13	109.40
1	A	10	MET	N-CA-C	5.84	126.76	111.00
34	i	788	C	N1-C1'-C2'	5.84	121.59	114.00
34	i	1380	C	O4'-C1'-N1	5.84	112.87	108.20
34	i	1471	G	O4'-C1'-N9	5.84	112.87	108.20
34	i	826	A	O4'-C1'-C2'	5.84	112.85	107.60
34	i	1345	G	N9-C1'-C2'	5.83	121.58	114.00
34	i	1577	C	N1-C1'-C2'	5.83	121.58	114.00
34	i	633	A	O4'-C1'-C2'	-5.83	99.97	105.80
34	i	1740	A	C4'-C3'-C2'	-5.83	96.77	102.60
33	g	159	ASN	O-C-N	-5.83	113.38	122.70
34	i	1732	G	C1'-O4'-C4'	-5.83	105.24	109.90
34	i	1065	U	P-O5'-C5'	-5.83	111.58	120.90
34	i	1251	G	C3'-C2'-C1'	-5.83	96.84	101.50
34	i	368	U	N1-C1'-C2'	5.82	121.57	114.00
34	i	98	C	N1-C1'-C2'	-5.82	105.60	112.00
34	i	119	U	O4'-C1'-N1	5.82	112.86	108.20
34	i	1100	G	O4'-C1'-N9	5.82	112.86	108.20
34	i	376	C	C1'-O4'-C4'	-5.82	105.25	109.90
34	i	875	C	O4'-C1'-N1	5.82	112.85	108.20
34	i	876	G	N9-C1'-C2'	-5.82	105.60	112.00
20	T	30	VAL	N-CA-C	5.82	126.70	111.00
34	i	215	U	C1'-O4'-C4'	-5.82	105.25	109.90
34	i	1845	A	C1'-O4'-C4'	5.81	114.55	109.90
34	i	340	C	C1'-O4'-C4'	5.81	114.55	109.90
34	i	1047	G	C3'-C2'-C1'	-5.81	96.85	101.50
34	i	1633	G	O4'-C1'-N9	-5.81	103.55	108.20
34	i	1663	U	P-O3'-C3'	5.81	126.67	119.70
8	H	192	PHE	N-CA-C	5.81	126.68	111.00
34	i	516	A	C3'-C2'-C1'	-5.81	96.86	101.50
34	i	730	C	N1-C1'-C2'	5.81	121.55	114.00
17	Q	146	ARG	CA-CB-CG	5.80	126.16	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	190	A	O5'-P-OP2	-5.80	100.48	105.70
34	i	1752	G	C1'-O4'-C4'	-5.80	105.26	109.90
34	i	172	U	O4'-C1'-C2'	-5.80	100.00	105.80
6	F	131	ALA	N-CA-C	5.80	126.65	111.00
34	i	55	U	O4'-C1'-N1	5.80	112.84	108.20
34	i	213	C	C3'-C2'-C1'	5.80	106.14	101.50
34	i	839	C	C3'-C2'-C1'	5.80	106.14	101.50
34	i	1142	C	C1'-O4'-C4'	-5.80	105.26	109.90
34	i	1459	U	P-O3'-C3'	-5.79	112.75	119.70
34	i	1501	U	C1'-O4'-C4'	5.79	114.53	109.90
34	i	1571	G	N9-C1'-C2'	5.79	121.53	114.00
34	i	610	G	C1'-O4'-C4'	5.79	114.53	109.90
34	i	1646	A	O4'-C1'-N9	5.79	112.83	108.20
34	i	652	G	C1'-O4'-C4'	-5.79	105.27	109.90
34	i	1542	C	N1-C1'-C2'	5.79	121.52	114.00
34	i	611	C	C1'-O4'-C4'	-5.79	105.27	109.90
34	i	190	A	C5'-C4'-O4'	5.78	116.04	109.10
34	i	1135	C	C4'-C3'-O3'	-5.78	97.26	109.40
20	T	4	VAL	O-C-N	-5.78	113.45	122.70
4	D	96	LEU	O-C-N	-5.78	113.45	122.70
13	M	99	LYS	N-CA-C	5.78	126.60	111.00
17	Q	17	LYS	O-C-N	-5.78	113.46	122.70
22	V	42	VAL	CB-CA-C	-5.78	100.43	111.40
24	X	98	ASP	N-CA-C	5.78	126.59	111.00
34	i	1417	A	O4'-C1'-N9	5.78	112.82	108.20
34	i	750	G	N9-C1'-C2'	5.77	121.51	114.00
34	i	103	A	O4'-C1'-C2'	5.77	112.80	107.60
34	i	1800	A	N9-C1'-C2'	5.77	121.50	114.00
5	E	170	THR	C-N-CA	5.77	136.12	121.70
34	i	1602	A	O4'-C1'-C2'	5.77	112.79	107.60
34	i	188	U	C1'-O4'-C4'	-5.76	105.29	109.90
34	i	784	G	C1'-O4'-C4'	-5.76	105.29	109.90
34	i	1274	A	P-O5'-C5'	5.76	130.12	120.90
34	i	1532	A	C5'-C4'-C3'	-5.76	106.78	116.00
7	G	155	GLN	C-N-CA	-5.76	107.30	121.70
34	i	1774	G	O4'-C1'-N9	5.76	112.81	108.20
12	L	151	THR	CB-CA-C	5.75	127.13	111.60
34	i	86	C	C3'-C2'-C1'	5.75	106.10	101.50
34	i	970	C	C3'-C2'-C1'	5.75	106.10	101.50
34	i	461	G	C5'-C4'-O4'	5.75	116.00	109.10
34	i	1414	C	N1-C1'-C2'	5.75	121.48	114.00
34	i	1771	G	P-O3'-C3'	-5.75	112.80	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	G	131	ARG	CG-CD-NE	5.75	123.88	111.80
34	i	1450	A	O4'-C1'-C2'	-5.75	100.05	105.80
34	i	77	A	O4'-C1'-N9	5.75	112.80	108.20
34	i	1262	C	N1-C1'-C2'	5.74	121.47	114.00
34	i	1790	G	C5'-C4'-O4'	5.74	115.99	109.10
3	C	241	TRP	C-N-CA	-5.74	107.34	121.70
34	i	332	C	O4'-C1'-N1	5.74	112.79	108.20
11	K	29	MET	C-N-CD	-5.74	107.97	120.60
34	i	539	C	O4'-C1'-N1	5.74	112.79	108.20
34	i	820	C	O4'-C1'-N1	5.74	112.79	108.20
34	i	1138	G	N9-C1'-C2'	-5.74	105.69	112.00
8	H	40	LEU	CA-CB-CG	-5.74	102.10	115.30
12	L	4	ILE	N-CA-C	-5.74	95.51	111.00
34	i	969	C	C3'-C2'-C1'	5.74	106.09	101.50
34	i	1437	U	O4'-C1'-C2'	-5.74	100.06	105.80
34	i	151	C	C3'-C2'-C1'	5.74	106.09	101.50
34	i	331	C	P-O3'-C3'	-5.74	112.82	119.70
34	i	1501	U	O4'-C1'-C2'	-5.74	100.06	105.80
34	i	597	U	C3'-C2'-C1'	5.73	106.09	101.50
34	i	897	G	O4'-C1'-N9	5.73	112.79	108.20
11	K	40	VAL	CB-CA-C	-5.73	100.51	111.40
34	i	884	U	P-O5'-C5'	5.73	130.07	120.90
34	i	625	G	C5'-C4'-C3'	5.73	125.17	116.00
34	i	987	G	C3'-C2'-C1'	-5.73	96.92	101.50
34	i	965	U	P-O3'-C3'	5.73	126.57	119.70
34	i	787	C	N1-C1'-C2'	5.72	121.44	114.00
34	i	290	A	N9-C1'-C2'	-5.72	105.70	112.00
34	i	1552	C	C2'-C3'-O3'	5.72	122.86	113.70
26	Z	104	ARG	N-CA-C	5.72	126.44	111.00
34	i	804	A	N9-C1'-C2'	5.72	121.43	114.00
34	i	1779	C	O4'-C1'-N1	5.72	112.77	108.20
26	Z	107	VAL	C-N-CA	5.71	135.98	121.70
34	i	114	G	C1'-O4'-C4'	5.71	114.47	109.90
34	i	314	U	C3'-C2'-C1'	-5.71	96.93	101.50
34	i	1672	U	C1'-O4'-C4'	5.71	114.47	109.90
34	i	832	G	C1'-O4'-C4'	5.71	114.47	109.90
34	i	1246	A	C1'-O4'-C4'	5.71	114.47	109.90
34	i	441	G	P-O5'-C5'	5.71	130.03	120.90
34	i	79	A	O3'-P-O5'	-5.70	93.17	104.00
34	i	1309	A	O4'-C1'-C2'	-5.70	100.10	105.80
11	K	41	PRO	CA-N-CD	-5.70	103.52	111.50
34	i	962	U	C5'-C4'-O4'	5.70	115.94	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	495	G	P-O3'-C3'	-5.70	112.86	119.70
34	i	818	U	O4'-C1'-N1	5.70	112.76	108.20
34	i	1168	U	N1-C1'-C2'	-5.70	105.73	112.00
34	i	225	C	C1'-O4'-C4'	-5.70	105.34	109.90
34	i	827	G	O4'-C1'-C2'	5.70	112.73	107.60
34	i	1515	G	C5'-C4'-C3'	5.70	125.11	116.00
21	U	108	PRO	CA-N-CD	-5.69	103.53	111.50
34	i	241	A	O4'-C1'-N9	5.69	112.75	108.20
34	i	1817	A	C5'-C4'-O4'	-5.69	102.27	109.10
34	i	141	A	C2'-C3'-O3'	5.69	122.80	113.70
34	i	176	U	O4'-C1'-N1	5.69	112.75	108.20
34	i	741	C	C5'-C4'-C3'	5.69	125.10	116.00
34	i	1057	U	O4'-C1'-N1	5.69	112.75	108.20
34	i	1144	A	C3'-C2'-C1'	-5.69	96.95	101.50
34	i	1842	U	O4'-C1'-N1	5.69	112.75	108.20
34	i	206	A	O3'-P-O5'	5.69	114.80	104.00
34	i	1411	C	C3'-C2'-C1'	5.69	106.05	101.50
34	i	1779	C	N1-C1'-C2'	-5.69	105.75	112.00
16	P	49	LEU	O-C-N	-5.68	113.60	122.70
34	i	1795	A	O4'-C1'-N9	5.68	112.75	108.20
34	i	148	U	O4'-C1'-N1	5.68	112.75	108.20
34	i	1078	A	C3'-C2'-C1'	5.68	106.05	101.50
34	i	277	U	N1-C1'-C2'	5.68	121.38	114.00
34	i	871	A	O4'-C1'-C2'	-5.68	100.12	105.80
34	i	1411	C	O4'-C1'-C2'	-5.68	100.12	105.80
34	i	1589	A	C5'-C4'-C3'	5.68	125.09	116.00
34	i	1467	C	O4'-C1'-C2'	-5.68	100.12	105.80
34	i	1587	C	C3'-C2'-C1'	5.68	106.04	101.50
34	i	645	A	C5'-C4'-O4'	5.67	115.91	109.10
34	i	763	U	P-O3'-C3'	5.67	126.51	119.70
34	i	1706	U	N1-C1'-C2'	5.67	121.38	114.00
34	i	856	G	N9-C1'-C2'	5.67	121.37	114.00
8	H	111	LYS	CA-CB-CG	5.67	125.87	113.40
34	i	274	G	N9-C1'-C2'	5.67	121.37	114.00
34	i	1361	G	P-O3'-C3'	-5.67	112.90	119.70
34	i	1587	C	N1-C1'-C2'	5.67	121.37	114.00
11	K	42	ASN	N-CA-C	-5.67	95.69	111.00
34	i	658	A	O4'-C1'-N9	5.67	112.73	108.20
34	i	1518	C	P-O5'-C5'	-5.67	111.83	120.90
34	i	143	U	C1'-O4'-C4'	-5.67	105.37	109.90
34	i	1227	C	O4'-C1'-N1	-5.67	103.67	108.20
34	i	1390	G	C2'-C3'-O3'	5.67	122.77	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	3	C	C1'-O4'-C4'	5.66	114.43	109.90
34	i	419	C	C3'-C2'-C1'	5.66	106.03	101.50
34	i	864	G	O4'-C1'-N9	-5.66	103.67	108.20
34	i	1220	G	N9-C1'-C2'	5.66	121.36	114.00
34	i	1327	C	C1'-O4'-C4'	-5.66	105.37	109.90
34	i	1753	G	C3'-C2'-C1'	-5.66	96.97	101.50
12	L	98	LYS	N-CA-C	-5.66	95.71	111.00
20	T	51	ASN	C-N-CA	5.66	135.85	121.70
34	i	386	U	O4'-C1'-N1	5.66	112.73	108.20
34	i	1471	G	C4'-C3'-C2'	-5.66	96.94	102.60
34	i	1608	G	C3'-C2'-C1'	-5.66	96.97	101.50
34	i	1013	U	C1'-O4'-C4'	5.66	114.43	109.90
34	i	1271	G	C5'-C4'-C3'	5.66	125.05	116.00
34	i	1323	G	C1'-O4'-C4'	-5.66	105.37	109.90
34	i	78	C	O4'-C1'-N1	5.66	112.72	108.20
34	i	504	U	N1-C1'-C2'	5.66	121.35	114.00
34	i	726	C	O4'-C1'-N1	5.66	112.72	108.20
34	i	789	G	C4'-C3'-C2'	-5.65	96.95	102.60
34	i	286	C	C3'-C2'-C1'	5.65	106.02	101.50
34	i	1045	A	P-O3'-C3'	5.65	126.48	119.70
5	E	151	ASP	CB-CA-C	5.65	121.70	110.40
34	i	1705	C	O4'-C1'-C2'	-5.65	100.15	105.80
34	i	895	U	O4'-C1'-N1	5.64	112.72	108.20
34	i	895	U	O4'-C1'-C2'	-5.64	100.16	105.80
34	i	958	A	O4'-C1'-C2'	-5.64	100.16	105.80
34	i	1646	A	O4'-C1'-C2'	-5.64	100.16	105.80
34	i	1020	A	O4'-C1'-N9	5.64	112.71	108.20
34	i	1390	G	N9-C1'-C2'	5.64	121.34	114.00
34	i	91	A	C1'-O4'-C4'	5.64	114.41	109.90
19	S	53	THR	CA-C-N	5.64	129.61	117.20
34	i	374	U	C1'-O4'-C4'	-5.64	105.39	109.90
34	i	750	G	O4'-C1'-C2'	5.64	112.67	107.60
34	i	1407	G	O4'-C1'-C2'	5.64	112.67	107.60
34	i	1692	A	N9-C1'-C2'	-5.64	105.80	112.00
34	i	1018	U	C1'-O4'-C4'	-5.63	105.39	109.90
34	i	1343	U	O4'-C1'-N1	5.63	112.70	108.20
34	i	1407	G	N9-C1'-C2'	5.63	121.32	114.00
34	i	225	C	C2'-C3'-O3'	5.63	122.71	113.70
20	T	45	LEU	O-C-N	-5.63	113.70	122.70
24	X	58	GLU	N-CA-C	5.63	126.19	111.00
34	i	397	G	P-O3'-C3'	5.63	126.45	119.70
34	i	780	G	O3'-P-O5'	-5.63	93.31	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	914	U	C1'-O4'-C4'	-5.63	105.40	109.90
34	i	1821	U	O4'-C1'-N1	5.63	112.70	108.20
31	e	100	LYS	N-CA-C	-5.62	95.81	111.00
34	i	1618	A	N9-C1'-C2'	-5.62	105.81	112.00
27	a	70	LYS	CD-CE-NZ	5.62	124.63	111.70
34	i	1413	C	C5'-C4'-C3'	5.62	124.99	116.00
34	i	648	U	O4'-C1'-N1	5.62	112.70	108.20
34	i	1283	A	N9-C1'-C2'	-5.62	105.82	112.00
34	i	1044	G	P-O5'-C5'	5.62	129.89	120.90
34	i	805	A	P-O3'-C3'	5.62	126.44	119.70
34	i	13	C	O4'-C1'-N1	5.62	112.69	108.20
34	i	817	G	C2'-C3'-O3'	5.62	122.69	113.70
34	i	469	C	C3'-C2'-C1'	5.61	105.99	101.50
34	i	1826	A	P-O5'-C5'	5.61	129.88	120.90
29	c	60	GLU	N-CA-C	-5.61	95.85	111.00
34	i	341	G	C4'-C3'-C2'	-5.61	96.99	102.60
34	i	434	G	C3'-C2'-C1'	-5.61	97.01	101.50
34	i	996	C	C3'-C2'-C1'	5.61	105.99	101.50
34	i	1639	C	C3'-C2'-C1'	5.61	105.99	101.50
34	i	1661	C	C3'-C2'-C1'	5.61	105.98	101.50
19	S	10	GLN	N-CA-C	5.60	126.13	111.00
34	i	516	A	C5'-C4'-C3'	5.60	124.97	116.00
34	i	621	U	O4'-C1'-N1	5.60	112.68	108.20
21	U	68	THR	CB-CA-C	5.60	126.73	111.60
34	i	1181	C	C3'-C2'-C1'	5.60	105.98	101.50
34	i	308	C	C3'-C2'-C1'	5.60	105.98	101.50
34	i	1042	U	O4'-C1'-C2'	-5.60	100.20	105.80
9	I	5	ARG	CA-C-N	5.60	129.51	117.20
34	i	1370	C	O4'-C1'-N1	5.60	112.68	108.20
34	i	1439	C	O4'-C1'-N1	5.60	112.68	108.20
34	i	549	G	C3'-C2'-C1'	-5.60	97.02	101.50
34	i	346	C	O4'-C1'-C2'	5.59	112.63	107.60
34	i	503	G	C1'-O4'-C4'	-5.59	105.42	109.90
34	i	676	U	P-O3'-C3'	-5.59	112.99	119.70
34	i	1198	U	C3'-C2'-C1'	5.59	105.97	101.50
34	i	822	A	P-O3'-C3'	-5.59	112.99	119.70
34	i	597	U	O4'-C1'-N1	5.59	112.67	108.20
34	i	1639	C	C1'-O4'-C4'	-5.59	105.43	109.90
34	i	171	A	C1'-O4'-C4'	5.59	114.37	109.90
34	i	927	C	C5'-C4'-O4'	5.59	115.80	109.10
33	g	294	ASP	N-CA-CB	-5.58	100.55	110.60
32	f	125	GLU	CB-CA-C	5.58	121.57	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	569	C	O4'-C1'-C2'	-5.58	100.22	105.80
34	i	1409	G	P-O3'-C3'	-5.58	113.00	119.70
34	i	1448	A	O4'-C1'-C2'	-5.58	100.22	105.80
6	F	47	LYS	CD-CE-NZ	-5.58	98.86	111.70
34	i	400	G	N9-C1'-C2'	-5.58	105.86	112.00
34	i	1819	A	C2'-C3'-O3'	5.58	122.63	113.70
24	X	37	LYS	N-CA-C	5.58	126.06	111.00
34	i	355	C	C3'-C2'-C1'	5.58	105.96	101.50
16	P	53	GLN	CB-CA-C	5.58	121.55	110.40
34	i	1240	U	P-O3'-C3'	5.58	126.39	119.70
34	i	58	C	C1'-O4'-C4'	5.57	114.36	109.90
34	i	1538	U	O4'-C1'-N1	5.57	112.66	108.20
34	i	437	A	O4'-C1'-N9	5.57	112.66	108.20
34	i	1561	G	N9-C1'-C2'	-5.57	105.87	112.00
34	i	1625	A	O4'-C1'-N9	5.57	112.66	108.20
8	H	105	THR	CB-CA-C	5.57	126.63	111.60
34	i	93	U	N1-C1'-C2'	-5.57	105.88	112.00
34	i	378	U	O4'-C1'-N1	5.57	112.65	108.20
34	i	1160	G	N9-C1'-C2'	5.57	121.24	114.00
34	i	86	C	O4'-C1'-N1	5.56	112.65	108.20
34	i	1494	A	O4'-C1'-C2'	5.56	112.61	107.60
4	D	3	VAL	C-N-CA	5.56	135.61	121.70
34	i	1458	U	O4'-C1'-N1	5.56	112.65	108.20
34	i	1705	C	O4'-C1'-N1	5.56	112.65	108.20
34	i	388	A	C1'-O4'-C4'	5.56	114.35	109.90
34	i	1079	A	C3'-C2'-C1'	5.56	105.95	101.50
34	i	1259	U	C3'-C2'-C1'	5.56	105.94	101.50
34	i	1280	A	C5'-C4'-O4'	5.56	115.77	109.10
34	i	1781	G	C3'-C2'-C1'	-5.56	97.05	101.50
34	i	230	C	O4'-C1'-C2'	-5.56	100.24	105.80
34	i	870	G	P-O3'-C3'	5.56	126.37	119.70
1	A	159	ILE	CA-CB-CG1	-5.55	100.45	111.00
33	g	143	GLN	N-CA-C	-5.55	96.00	111.00
34	i	235	C	O4'-C1'-C2'	-5.55	100.25	105.80
34	i	292	A	O4'-C1'-C2'	-5.55	100.25	105.80
34	i	329	A	P-O3'-C3'	-5.55	113.03	119.70
34	i	746	C	N1-C1'-C2'	5.55	121.22	114.00
34	i	1366	A	C1'-O4'-C4'	5.55	114.34	109.90
34	i	459	A	O4'-C1'-N9	5.55	112.64	108.20
34	i	734	C	C3'-C2'-C1'	5.55	105.94	101.50
21	U	70	CYS	CA-C-N	5.55	127.30	116.20
34	i	1219	A	C3'-C2'-C1'	5.55	105.94	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1143	C	O4'-C1'-N1	5.55	112.64	108.20
34	i	1854	A	P-O3'-C3'	-5.55	113.04	119.70
34	i	667	G	C1'-O4'-C4'	-5.54	105.46	109.90
34	i	1557	C	C3'-C2'-C1'	5.54	105.94	101.50
34	i	314	U	O4'-C1'-C2'	5.54	112.59	107.60
34	i	49	C	C1'-O4'-C4'	-5.54	105.47	109.90
32	f	148	TYR	C-N-CA	5.54	135.54	121.70
34	i	278	U	C3'-C2'-C1'	5.54	105.93	101.50
34	i	1106	G	O4'-C1'-C2'	-5.54	100.26	105.80
34	i	1740	A	C3'-C2'-C1'	-5.54	97.07	101.50
34	i	819	U	O4'-C1'-C2'	5.53	112.58	107.60
34	i	874	G	C1'-O4'-C4'	-5.53	105.47	109.90
34	i	1070	C	O4'-C1'-N1	5.53	112.63	108.20
9	I	105	ASP	CB-CA-C	5.53	121.46	110.40
34	i	964	U	O4'-C1'-N1	5.53	112.62	108.20
22	V	67	ASP	N-CA-CB	-5.53	100.65	110.60
15	O	103	ASN	N-CA-CB	5.53	120.55	110.60
16	P	36	LEU	C-N-CA	5.53	135.51	121.70
34	i	224	U	P-O5'-C5'	5.53	129.74	120.90
34	i	742	C	C4'-C3'-C2'	-5.53	97.07	102.60
34	i	536	G	O4'-C1'-N9	5.52	112.62	108.20
34	i	1063	C	C1'-O4'-C4'	-5.52	105.48	109.90
34	i	1667	U	C1'-O4'-C4'	-5.52	105.48	109.90
4	D	142	LEU	CB-CG-CD1	5.52	120.38	111.00
34	i	619	A	C1'-O4'-C4'	5.52	114.32	109.90
34	i	1166	A	C3'-C2'-C1'	-5.52	97.08	101.50
34	i	1191	A	N9-C1'-C2'	-5.52	105.93	112.00
17	Q	145	TYR	C-N-CA	5.52	135.49	121.70
34	i	586	U	O4'-C1'-N1	5.52	112.61	108.20
34	i	350	A	O4'-C1'-N9	5.52	112.61	108.20
34	i	1528	A	O4'-C1'-N9	5.51	112.61	108.20
34	i	1691	C	C3'-C2'-C1'	5.51	105.91	101.50
16	P	130	ARG	NE-CZ-NH2	-5.51	117.55	120.30
17	Q	6	PRO	CB-CA-C	-5.51	98.23	112.00
34	i	80	G	O4'-C1'-N9	5.51	112.61	108.20
34	i	101	U	O4'-C1'-N1	5.51	112.61	108.20
34	i	116	U	O4'-C1'-N1	5.51	112.61	108.20
34	i	949	C	P-O3'-C3'	-5.51	113.09	119.70
34	i	398	A	O4'-C1'-C2'	-5.51	100.29	105.80
34	i	606	A	C1'-O4'-C4'	-5.51	105.50	109.90
34	i	640	A	O4'-C1'-C2'	-5.51	100.29	105.80
34	i	396	U	N1-C1'-C2'	5.50	121.16	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	D	167	TYR	CA-CB-CG	-5.50	102.95	113.40
34	i	994	A	O4'-C1'-C2'	-5.50	100.30	105.80
34	i	1739	G	O4'-C1'-N9	5.50	112.60	108.20
34	i	15	U	O4'-C1'-C2'	-5.50	100.30	105.80
3	C	241	TRP	O-C-N	-5.50	113.90	122.70
34	i	226	A	O4'-C1'-N9	5.50	112.60	108.20
34	i	1460	C	C3'-C2'-C1'	5.50	105.90	101.50
34	i	560	C	C5'-C4'-O4'	5.50	115.69	109.10
34	i	1370	C	N1-C1'-C2'	5.49	121.14	114.00
34	i	675	A	O4'-C1'-N9	5.49	112.59	108.20
34	i	1556	A	O4'-C1'-C2'	-5.49	100.31	105.80
34	i	1152	U	O4'-C1'-N1	5.49	112.59	108.20
34	i	218	A	C3'-C2'-C1'	-5.49	97.11	101.50
34	i	508	G	O4'-C1'-N9	5.49	112.59	108.20
34	i	1446	G	C3'-C2'-C1'	-5.49	97.11	101.50
34	i	462	C	C3'-C2'-C1'	5.49	105.89	101.50
34	i	1382	A	O4'-C1'-C2'	-5.49	100.31	105.80
34	i	656	U	C3'-C2'-C1'	5.49	105.89	101.50
34	i	38	A	C5'-C4'-C3'	-5.48	107.23	116.00
34	i	125	C	C4'-C3'-O3'	5.48	123.97	113.00
19	S	81	ASP	CB-CG-OD2	5.48	123.23	118.30
34	i	536	G	O4'-C1'-C2'	-5.48	100.32	105.80
34	i	790	A	O4'-C1'-C2'	-5.48	100.32	105.80
34	i	1814	G	O4'-C1'-N9	5.47	112.58	108.20
34	i	1823	G	O4'-C1'-C2'	-5.47	100.33	105.80
34	i	489	G	P-O5'-C5'	-5.47	112.14	120.90
34	i	1432	C	O4'-C1'-C2'	-5.47	100.33	105.80
34	i	376	C	P-O5'-C5'	-5.47	112.15	120.90
34	i	1027	A	C5'-C4'-O4'	5.47	115.66	109.10
34	i	1279	C	C1'-O4'-C4'	-5.47	105.53	109.90
34	i	522	C	C4'-C3'-C2'	-5.46	97.14	102.60
34	i	1318	G	C1'-O4'-C4'	5.46	114.27	109.90
34	i	391	A	C3'-C2'-C1'	5.46	105.87	101.50
34	i	852	C	C1'-O4'-C4'	-5.46	105.53	109.90
34	i	57	U	C3'-C2'-C1'	5.46	105.87	101.50
34	i	456	G	C3'-C2'-C1'	-5.46	97.13	101.50
14	N	87	ASP	CB-CG-OD2	5.46	123.21	118.30
34	i	404	A	O4'-C1'-C2'	-5.46	100.34	105.80
34	i	1595	G	P-O3'-C3'	-5.46	113.15	119.70
34	i	440	C	O4'-C1'-N1	5.46	112.56	108.20
34	i	1716	U	O3'-P-O5'	5.46	114.36	104.00
22	V	28	ASP	CB-CG-OD2	5.45	123.21	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1110	U	O4'-C1'-C2'	-5.45	100.35	105.80
34	i	1313	U	O4'-C1'-N1	5.45	112.56	108.20
9	I	132	GLU	CA-C-O	-5.45	108.65	120.10
2	B	63	LYS	N-CA-C	5.45	125.72	111.00
34	i	1037	G	C3'-C2'-C1'	-5.45	97.14	101.50
34	i	1058	A	O4'-C1'-N9	5.45	112.56	108.20
34	i	1608	G	O4'-C1'-N9	5.45	112.56	108.20
34	i	1837	G	P-O3'-C3'	-5.45	113.16	119.70
34	i	229	A	O4'-C1'-N9	5.45	112.56	108.20
17	Q	18	THR	C-N-CA	5.44	135.31	121.70
34	i	101	U	O4'-C1'-C2'	-5.44	100.36	105.80
34	i	1823	G	C5'-C4'-O4'	5.44	115.63	109.10
34	i	516	A	O4'-C1'-N9	5.44	112.55	108.20
34	i	614	C	C5'-C4'-C3'	-5.44	107.30	116.00
19	S	89	ASP	CB-CA-C	-5.44	99.53	110.40
34	i	1123	C	O4'-C1'-N1	5.43	112.55	108.20
34	i	188	U	P-O3'-C3'	-5.43	113.18	119.70
34	i	1164	G	O4'-C1'-N9	5.43	112.54	108.20
34	i	1638	U	O4'-C1'-N1	5.43	112.54	108.20
34	i	443	C	N1-C1'-C2'	5.43	121.06	114.00
21	U	118	ASP	N-CA-C	-5.43	96.35	111.00
34	i	1274	A	O4'-C1'-N9	5.43	112.54	108.20
34	i	94	G	N9-C1'-C2'	5.42	121.05	114.00
34	i	1227	C	C1'-O4'-C4'	-5.42	105.56	109.90
34	i	332	C	O4'-C1'-C2'	-5.42	100.38	105.80
34	i	560	C	N1-C1'-C2'	5.42	121.04	114.00
29	c	36	ASP	CB-CG-OD2	5.42	123.17	118.30
34	i	297	C	O4'-C1'-N1	5.42	112.53	108.20
34	i	1848	U	N1-C1'-C2'	-5.42	106.04	112.00
34	i	1859	C	O4'-C1'-N1	5.42	112.53	108.20
34	i	820	C	N1-C1'-C2'	5.42	121.04	114.00
34	i	960	A	O4'-C1'-C2'	-5.42	100.39	105.80
34	i	1013	U	O4'-C1'-C2'	-5.42	100.39	105.80
34	i	1356	U	O4'-C1'-N1	5.41	112.53	108.20
34	i	1271	G	O4'-C1'-N9	5.41	112.53	108.20
34	i	1437	U	C1'-O4'-C4'	5.41	114.23	109.90
34	i	882	A	O3'-P-O5'	5.41	114.28	104.00
34	i	906	G	O5'-P-OP1	-5.41	100.83	105.70
34	i	1283	A	O4'-C1'-N9	5.41	112.53	108.20
34	i	40	A	N9-C1'-C2'	-5.41	106.05	112.00
34	i	139	C	C3'-C2'-C1'	5.41	105.83	101.50
34	i	462	C	P-O3'-C3'	5.40	126.18	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	918	A	N9-C1'-C2'	-5.40	106.06	112.00
34	i	1035	C	O4'-C1'-N1	5.40	112.52	108.20
34	i	1473	U	O4'-C1'-N1	5.40	112.52	108.20
34	i	1703	C	C3'-C2'-C1'	5.40	105.82	101.50
22	V	82	ASN	CB-CA-C	-5.40	99.60	110.40
34	i	71	G	C4'-C3'-O3'	5.40	123.80	113.00
34	i	323	G	C1'-O4'-C4'	-5.40	105.58	109.90
34	i	889	U	C1'-O4'-C4'	5.40	114.22	109.90
34	i	1374	A	O4'-C1'-C2'	-5.40	100.40	105.80
1	A	14	ASP	CB-CG-OD2	5.40	123.16	118.30
34	i	502	A	O4'-C1'-N9	5.40	112.52	108.20
34	i	540	C	C3'-C2'-C1'	5.40	105.82	101.50
34	i	642	U	C1'-O4'-C4'	5.40	114.22	109.90
34	i	1455	G	C3'-C2'-C1'	-5.40	97.18	101.50
34	i	276	U	P-O5'-C5'	-5.40	112.27	120.90
10	J	100	LEU	N-CA-C	5.39	125.56	111.00
34	i	859	U	O4'-C1'-C2'	5.39	112.46	107.60
34	i	901	C	O4'-C1'-N1	5.39	112.52	108.20
34	i	1122	G	O4'-C1'-N9	5.39	112.51	108.20
34	i	1708	C	N1-C1'-C2'	5.39	121.01	114.00
34	i	835	C	O3'-P-O5'	-5.39	93.76	104.00
34	i	929	G	C3'-C2'-C1'	-5.39	97.19	101.50
30	d	49	ASP	CB-CG-OD2	5.39	123.15	118.30
34	i	550	A	O5'-C5'-C4'	5.39	121.94	111.70
34	i	1094	C	O4'-C1'-N1	5.39	112.51	108.20
34	i	1695	C	O4'-C1'-N1	5.39	112.51	108.20
25	Y	53	ASP	CB-CG-OD2	5.39	123.15	118.30
34	i	682	G	C1'-O4'-C4'	-5.39	105.59	109.90
34	i	1229	G	O4'-C1'-N9	5.39	112.51	108.20
34	i	1423	C	O4'-C1'-N1	5.39	112.51	108.20
34	i	139	C	O4'-C1'-N1	5.38	112.51	108.20
34	i	1357	G	C3'-C2'-C1'	5.38	105.81	101.50
10	J	35	TYR	C-N-CA	5.38	133.60	122.30
28	b	34	ASP	CB-CG-OD2	5.38	123.14	118.30
34	i	76	U	N1-C1'-C2'	5.38	121.00	114.00
34	i	146	G	O4'-C1'-C2'	-5.38	100.42	105.80
34	i	745	U	O4'-C1'-C2'	-5.38	100.42	105.80
34	i	1209	C	N1-C1'-C2'	5.38	121.00	114.00
25	Y	62	THR	C-N-CA	-5.38	108.25	121.70
34	i	370	G	C1'-O4'-C4'	5.38	114.20	109.90
33	g	14	HIS	C-N-CA	-5.37	108.27	121.70
34	i	67	C	N1-C1'-C2'	-5.37	106.09	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	564	A	N9-C1'-C2'	5.37	120.99	114.00
34	i	727	G	N9-C1'-C2'	5.37	120.98	114.00
34	i	1607	G	C3'-C2'-C1'	-5.37	97.20	101.50
34	i	1819	A	C5'-C4'-O4'	5.37	115.55	109.10
6	F	46	ALA	O-C-N	-5.37	114.11	122.70
8	H	16	PRO	CA-N-CD	-5.37	103.98	111.50
10	J	104	ASP	CB-CG-OD2	5.37	123.13	118.30
34	i	534	G	O4'-C1'-C2'	-5.37	100.43	105.80
34	i	1233	C	C4'-C3'-C2'	-5.37	97.23	102.60
34	i	1832	U	O4'-C1'-N1	5.37	112.50	108.20
11	K	43	LEU	CB-CG-CD1	5.37	120.12	111.00
34	i	427	G	N9-C1'-C2'	5.37	120.97	114.00
18	R	89	SER	CA-C-O	-5.36	108.84	120.10
34	i	282	G	C1'-O4'-C4'	-5.36	105.61	109.90
34	i	1384	A	P-O3'-C3'	-5.36	113.27	119.70
6	F	21	GLY	N-CA-C	-5.36	99.70	113.10
34	i	78	C	C1'-O4'-C4'	-5.36	105.61	109.90
34	i	613	G	O4'-C1'-N9	5.36	112.49	108.20
16	P	71	GLU	CA-C-N	-5.36	105.41	117.20
34	i	1158	C	O4'-C1'-C2'	-5.36	100.44	105.80
34	i	1491	G	O4'-C1'-N9	5.36	112.49	108.20
34	i	1846	C	O4'-C1'-N1	5.36	112.49	108.20
34	i	66	G	O4'-C1'-C2'	5.36	112.42	107.60
15	O	129	ILE	CG1-CB-CG2	5.35	123.18	111.40
34	i	461	G	N9-C1'-C2'	-5.35	106.11	112.00
34	i	1256	A	O4'-C1'-N9	5.35	112.48	108.20
3	C	216	ALA	O-C-N	-5.35	114.14	122.70
34	i	685	G	C1'-O4'-C4'	5.35	114.18	109.90
34	i	1486	G	C1'-O4'-C4'	-5.35	105.62	109.90
34	i	1280	A	N9-C1'-C2'	5.35	120.96	114.00
34	i	1137	G	O4'-C1'-C2'	5.35	112.42	107.60
34	i	1535	G	P-O5'-C5'	-5.35	112.34	120.90
34	i	1557	C	P-O3'-C3'	5.35	126.12	119.70
14	N	151	ALA	CA-C-O	-5.35	108.87	120.10
17	Q	67	ASP	CB-CG-OD2	5.35	123.11	118.30
23	W	54	ASP	CB-CG-OD2	5.34	123.11	118.30
34	i	1053	C	P-O3'-C3'	-5.34	113.29	119.70
3	C	233	TYR	CA-CB-CG	-5.34	103.25	113.40
24	X	142	ARG	CA-C-O	-5.34	108.88	120.10
34	i	994	A	N9-C1'-C2'	-5.34	106.12	112.00
34	i	1129	A	O5'-C5'-C4'	-5.34	101.55	111.70
35	l	101	GLY	N-CA-C	5.34	126.45	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	H	16	PRO	C-N-CA	5.34	135.05	121.70
34	i	1267	C	N1-C1'-C2'	5.34	120.94	114.00
34	i	1635	A	N9-C1'-C2'	-5.34	106.13	112.00
22	V	24	ILE	CB-CA-C	-5.33	100.93	111.60
14	N	6	ALA	C-N-CD	5.33	139.60	128.40
4	D	193	ASP	C-N-CA	-5.33	99.61	122.00
14	N	110	ASP	CB-CG-OD2	5.33	123.10	118.30
34	i	462	C	N1-C1'-C2'	5.33	120.93	114.00
34	i	109	U	C2'-C3'-O3'	5.33	122.23	113.70
34	i	77	A	C5'-C4'-C3'	5.33	124.52	116.00
34	i	1624	C	O4'-C4'-C3'	-5.33	98.67	104.00
34	i	1326	G	O4'-C1'-C2'	5.33	112.39	107.60
34	i	84	A	C5'-C4'-O4'	5.33	115.49	109.10
34	i	1024	A	C4'-C3'-O3'	-5.33	98.22	109.40
34	i	1150	U	C4'-C3'-C2'	-5.33	97.28	102.60
34	i	1078	A	O4'-C1'-C2'	-5.32	100.48	105.80
34	i	396	U	O4'-C1'-N1	5.32	112.46	108.20
34	i	786	C	C3'-C2'-C1'	5.32	105.76	101.50
34	i	1127	G	O4'-C1'-C2'	-5.32	100.48	105.80
34	i	1341	G	O4'-C1'-C2'	-5.32	100.48	105.80
34	i	1618	A	C1'-O4'-C4'	5.32	114.16	109.90
5	E	170	THR	O-C-N	5.32	131.21	122.70
34	i	235	C	N1-C1'-C2'	5.32	120.91	114.00
34	i	1717	G	C5'-C4'-C3'	-5.32	107.49	116.00
16	P	82	ASP	CB-CG-OD2	5.32	123.08	118.30
33	g	314	ILE	CA-C-O	-5.32	108.94	120.10
34	i	102	A	C1'-O4'-C4'	-5.32	105.65	109.90
34	i	895	U	C3'-C2'-C1'	5.32	105.75	101.50
34	i	1301	C	N1-C1'-C2'	5.32	120.91	114.00
34	i	1695	C	N1-C1'-C2'	-5.32	106.15	112.00
34	i	1344	G	P-O3'-C3'	5.31	126.08	119.70
7	G	170	ARG	CA-C-N	-5.31	105.51	117.20
34	i	1037	G	N9-C1'-C2'	5.31	120.91	114.00
34	i	1851	G	O4'-C1'-C2'	5.31	112.38	107.60
5	E	88	ASP	CB-CG-OD2	5.31	123.08	118.30
34	i	868	A	O4'-C1'-C2'	5.31	112.38	107.60
34	i	1635	A	C3'-C2'-C1'	5.31	105.75	101.50
34	i	323	G	O4'-C1'-N9	5.31	112.45	108.20
34	i	729	C	C4'-C3'-C2'	-5.31	97.29	102.60
14	N	133	ARG	NE-CZ-NH1	5.31	122.95	120.30
34	i	725	C	C1'-O4'-C4'	5.31	114.14	109.90
12	L	158	PHE	CA-C-O	-5.30	108.96	120.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	e	95	LYS	C-N-CA	5.30	134.96	121.70
34	i	88	G	O4'-C1'-N9	5.30	112.44	108.20
34	i	509	A	C1'-O4'-C4'	5.30	114.14	109.90
34	i	1338	U	C3'-C2'-C1'	5.30	105.74	101.50
8	H	118	ARG	CB-CA-C	-5.30	99.79	110.40
2	B	108	ASP	CB-CG-OD2	5.30	123.07	118.30
8	H	56	GLY	N-CA-C	5.30	126.35	113.10
11	K	98	ARG	CA-C-O	-5.30	108.97	120.10
34	i	480	C	O4'-C1'-C2'	-5.30	100.50	105.80
34	i	748	G	O4'-C4'-C3'	-5.30	98.70	104.00
34	i	786	C	N1-C1'-C2'	5.30	120.89	114.00
34	i	971	G	O4'-C4'-C3'	-5.30	98.70	104.00
34	i	1348	G	N9-C1'-C2'	5.30	120.89	114.00
34	i	1820	G	O4'-C1'-N9	5.30	112.44	108.20
3	C	244	THR	N-CA-C	5.30	125.31	111.00
34	i	1130	G	O4'-C1'-N9	5.30	112.44	108.20
34	i	375	G	O4'-C1'-N9	5.30	112.44	108.20
15	O	46	ASP	CB-CG-OD2	5.30	123.07	118.30
24	X	114	ASP	CB-CG-OD2	5.30	123.07	118.30
1	A	209	GLU	CA-C-O	-5.29	108.98	120.10
1	A	53	ARG	CD-NE-CZ	-5.29	116.19	123.60
9	I	191	GLU	CB-CA-C	-5.29	99.81	110.40
13	M	132	LYS	CA-C-O	-5.29	108.98	120.10
34	i	313	C	C2'-C3'-O3'	5.29	122.17	113.70
34	i	746	C	C4'-C3'-C2'	-5.29	97.31	102.60
34	i	1003	C	O4'-C1'-C2'	-5.29	100.51	105.80
1	A	205	ARG	NE-CZ-NH1	5.29	122.94	120.30
34	i	988	A	C1'-O4'-C4'	-5.29	105.67	109.90
23	W	9	ASP	CB-CG-OD2	5.28	123.06	118.30
34	i	107	A	C1'-O4'-C4'	5.28	114.13	109.90
34	i	1221	U	O4'-C1'-N1	5.28	112.43	108.20
34	i	782	G	O4'-C1'-N9	5.28	112.43	108.20
34	i	1234	U	C3'-C2'-C1'	-5.28	97.27	101.50
34	i	1300	U	N1-C1'-C2'	5.28	120.87	114.00
34	i	1807	A	O4'-C1'-N9	5.28	112.43	108.20
7	G	57	ASP	CB-CG-OD2	5.28	123.05	118.30
10	J	95	ASP	CB-CG-OD2	5.28	123.05	118.30
34	i	416	A	C3'-C2'-C1'	5.28	105.72	101.50
28	b	3	LEU	CB-CG-CD2	5.28	119.97	111.00
34	i	25	A	O4'-C1'-N9	5.28	112.42	108.20
34	i	655	G	N9-C1'-C2'	5.28	120.86	114.00
5	E	73	ASP	CB-CG-OD2	5.28	123.05	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	O	39	ASP	CB-CG-OD2	5.28	123.05	118.30
14	N	32	ASP	CB-CG-OD2	5.27	123.05	118.30
34	i	84	A	P-O5'-C5'	-5.27	112.46	120.90
5	E	158	ASP	CB-CG-OD2	5.27	123.05	118.30
34	i	74	G	C1'-O4'-C4'	-5.27	105.68	109.90
34	i	550	A	C1'-O4'-C4'	-5.27	105.68	109.90
34	i	1036	G	O4'-C1'-C2'	5.27	112.34	107.60
34	i	120	U	C3'-C2'-C1'	5.27	105.72	101.50
34	i	516	A	C1'-O4'-C4'	-5.27	105.69	109.90
4	D	227	LYS	CA-C-O	-5.27	109.04	120.10
34	i	1331	G	N9-C1'-C2'	5.27	120.85	114.00
34	i	306	C	P-O5'-C5'	-5.27	112.47	120.90
34	i	542	G	O4'-C1'-C2'	5.27	112.34	107.60
34	i	103	A	P-O3'-C3'	5.26	126.02	119.70
10	J	137	VAL	C-N-CA	5.26	134.85	121.70
34	i	69	C	O4'-C1'-N1	5.26	112.41	108.20
34	i	1298	G	C2'-C3'-O3'	-5.26	97.93	109.50
3	C	263	THR	CA-C-O	-5.26	109.06	120.10
34	i	911	G	O4'-C1'-C2'	5.26	112.33	107.60
5	E	143	ASP	CB-CG-OD2	5.26	123.03	118.30
5	E	163	ASP	CB-CG-OD2	5.25	123.03	118.30
34	i	459	A	C1'-O4'-C4'	5.25	114.10	109.90
10	J	124	HIS	N-CA-C	-5.25	96.82	111.00
34	i	923	C	C3'-C2'-C1'	5.25	105.70	101.50
15	O	67	ASP	CB-CG-OD2	5.25	123.02	118.30
34	i	1539	C	O4'-C1'-C2'	-5.25	100.55	105.80
34	i	178	C	N1-C1'-C2'	5.25	120.82	114.00
4	D	93	THR	C-N-CA	5.25	134.81	121.70
34	i	308	C	O4'-C1'-C2'	-5.24	100.56	105.80
34	i	1544	U	N1-C1'-C2'	5.24	120.82	114.00
8	H	194	LEU	CA-C-O	-5.24	109.09	120.10
31	e	133	SER	CA-C-O	-5.24	109.09	120.10
34	i	346	C	C3'-C2'-C1'	-5.24	97.31	101.50
1	A	130	ASP	CB-CG-OD2	5.24	123.02	118.30
34	i	378	U	N1-C1'-C2'	5.24	120.81	114.00
34	i	783	G	O3'-P-O5'	5.24	113.96	104.00
34	i	850	A	P-O3'-C3'	5.24	125.99	119.70
34	i	1048	A	C3'-C2'-C1'	5.24	105.69	101.50
34	i	1217	G	C3'-C2'-C1'	-5.24	97.31	101.50
18	R	94	GLU	N-CA-C	-5.24	96.86	111.00
30	d	56	ASP	CA-C-O	-5.24	109.10	120.10
34	i	1039	G	O4'-C1'-N9	5.24	112.39	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1479	A	C4'-C3'-C2'	-5.24	97.36	102.60
34	i	1482	A	O5'-C5'-C4'	-5.24	101.75	111.70
34	i	530	U	N1-C1'-C2'	-5.23	106.24	112.00
23	W	130	PHE	CA-C-O	-5.23	109.11	120.10
29	c	68	LEU	CA-C-O	-5.23	109.11	120.10
34	i	554	A	N9-C1'-C2'	-5.23	106.24	112.00
34	i	919	G	O4'-C1'-N9	5.23	112.39	108.20
34	i	1308	G	N9-C1'-C2'	5.23	120.80	114.00
14	N	31	ASP	CB-CG-OD2	5.23	123.01	118.30
21	U	90	ASP	CB-CG-OD2	5.23	123.01	118.30
25	Y	80	ASP	CB-CG-OD2	5.23	123.01	118.30
34	i	652	G	C3'-C2'-C1'	5.23	105.69	101.50
34	i	660	A	C1'-O4'-C4'	5.23	114.08	109.90
34	i	1018	U	P-O3'-C3'	5.23	125.98	119.70
34	i	1737	C	N1-C1'-C2'	5.23	120.80	114.00
34	i	1461	A	C3'-C2'-C1'	5.23	105.68	101.50
34	i	65	C	O4'-C1'-C2'	-5.23	100.57	105.80
34	i	71	G	C2'-C3'-O3'	-5.23	98.00	109.50
34	i	1419	C	O4'-C1'-N1	5.23	112.38	108.20
34	i	1424	G	C3'-C2'-C1'	-5.23	97.32	101.50
34	i	32	U	C5'-C4'-O4'	5.22	115.37	109.10
34	i	165	G	N9-C1'-C2'	-5.22	106.25	112.00
34	i	209	C	C3'-C2'-C1'	5.22	105.68	101.50
34	i	895	U	P-O5'-C5'	5.22	129.26	120.90
34	i	1201	C	O4'-C1'-N1	5.22	112.38	108.20
34	i	1833	U	C5'-C4'-O4'	5.22	115.37	109.10
6	F	204	ARG	CA-C-O	-5.22	109.13	120.10
16	P	27	ASP	CB-CG-OD2	5.22	123.00	118.30
17	Q	110	ASP	CB-CG-OD2	5.22	123.00	118.30
33	g	213	ASP	CB-CG-OD1	5.22	123.00	118.30
34	i	189	G	O5'-C5'-C4'	5.22	121.62	111.70
10	J	152	ASP	CB-CG-OD2	5.22	123.00	118.30
23	W	80	ASP	CB-CG-OD2	5.22	123.00	118.30
34	i	551	A	C2'-C3'-O3'	5.22	122.05	113.70
34	i	1397	A	N9-C1'-C2'	-5.22	106.26	112.00
34	i	516	A	O4'-C1'-C2'	5.22	112.30	107.60
6	F	43	GLU	N-CA-C	-5.22	96.91	111.00
26	Z	52	LYS	N-CA-C	-5.22	96.91	111.00
34	i	1340	A	P-O3'-C3'	5.22	125.96	119.70
19	S	104	ASP	CB-CG-OD2	5.21	122.99	118.30
27	a	52	ASP	CB-CG-OD2	5.21	122.99	118.30
34	i	142	C	O4'-C1'-C2'	5.21	112.29	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	I	133	GLU	CA-C-N	5.21	128.67	117.20
34	i	1130	G	C5'-C4'-O4'	5.21	115.36	109.10
34	i	1602	A	C1'-O4'-C4'	-5.21	105.73	109.90
34	i	1714	A	C3'-C2'-C1'	5.21	105.67	101.50
2	B	60	ASP	CB-CG-OD2	5.21	122.99	118.30
7	G	151	ASP	CB-CG-OD2	5.21	122.99	118.30
12	L	18	GLN	C-N-CA	-5.21	108.68	121.70
16	P	21	ASP	CB-CG-OD2	5.21	122.99	118.30
24	X	139	GLU	CB-CA-C	5.21	120.82	110.40
34	i	382	A	C5'-C4'-O4'	5.21	115.35	109.10
34	i	1208	G	O4'-C1'-N9	5.21	112.37	108.20
34	i	1255	A	C5'-C4'-O4'	5.21	115.35	109.10
34	i	1308	G	C3'-C2'-C1'	5.21	105.67	101.50
34	i	1645	A	P-O5'-C5'	-5.21	112.56	120.90
34	i	932	G	O4'-C1'-N9	5.21	112.36	108.20
1	A	53	ARG	CB-CG-CD	-5.20	98.07	111.60
34	i	317	G	C5'-C4'-O4'	5.20	115.34	109.10
34	i	1858	U	C5'-C4'-O4'	5.20	115.34	109.10
34	i	540	C	O4'-C1'-C2'	-5.20	100.60	105.80
34	i	608	C	C1'-O4'-C4'	5.20	114.06	109.90
34	i	1119	C	O4'-C1'-N1	5.20	112.36	108.20
7	G	39	ASP	CB-CG-OD2	5.20	122.98	118.30
18	R	110	ASP	CB-CG-OD2	5.20	122.98	118.30
34	i	33	G	C5'-C4'-O4'	5.20	115.34	109.10
34	i	271	G	OP1-P-O3'	5.20	116.64	105.20
34	i	783	G	O4'-C1'-C2'	-5.20	100.60	105.80
34	i	599	U	O4'-C1'-C2'	-5.20	100.60	105.80
34	i	795	U	C4'-C3'-C2'	-5.20	97.40	102.60
34	i	1161	G	C5'-C4'-O4'	5.20	115.34	109.10
34	i	1683	C	C5'-C4'-O4'	5.20	115.34	109.10
1	A	53	ARG	N-CA-CB	-5.20	101.25	110.60
14	N	108	ASP	CB-CG-OD2	5.20	122.97	118.30
15	O	80	ASP	CB-CG-OD2	5.20	122.98	118.30
34	i	750	G	C1'-O4'-C4'	-5.20	105.74	109.90
2	B	196	ASP	CB-CG-OD2	5.19	122.97	118.30
34	i	201	G	C1'-O4'-C4'	5.19	114.06	109.90
34	i	1688	G	O4'-C1'-C2'	5.19	112.28	107.60
24	X	115	ILE	C-N-CD	-5.19	109.18	120.60
34	i	22	A	O4'-C1'-N9	5.19	112.35	108.20
34	i	621	U	N1-C1'-C2'	5.19	120.75	114.00
34	i	1165	G	C1'-O4'-C4'	-5.19	105.75	109.90
34	i	1379	A	O4'-C1'-N9	5.19	112.35	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1651	G	C3'-C2'-C1'	-5.19	97.35	101.50
19	S	110	ASP	CB-CG-OD2	5.19	122.97	118.30
32	f	152	LYS	CA-C-O	-5.19	109.20	120.10
34	i	906	G	C3'-C2'-C1'	-5.19	97.35	101.50
16	P	71	GLU	C-N-CA	5.19	134.67	121.70
19	S	62	ASP	CB-CG-OD2	5.19	122.97	118.30
34	i	22	A	C1'-O4'-C4'	5.19	114.05	109.90
18	R	25	GLY	O-C-N	5.19	131.00	122.70
34	i	458	A	P-O5'-C5'	-5.19	112.60	120.90
34	i	1408	C	O5'-P-OP1	5.19	116.92	110.70
19	S	16	LEU	CA-C-N	-5.18	105.80	117.20
34	i	549	G	O4'-C4'-C3'	-5.18	98.82	104.00
23	W	2	VAL	O-C-N	-5.18	114.41	122.70
29	c	54	ASP	CB-CG-OD2	5.18	122.96	118.30
34	i	207	U	N1-C1'-C2'	5.18	120.74	114.00
34	i	1306	U	O4'-C1'-N1	5.18	112.34	108.20
34	i	370	G	O4'-C1'-N9	5.18	112.34	108.20
34	i	729	C	O4'-C1'-N1	5.18	112.34	108.20
5	E	104	ASP	CB-CG-OD2	5.18	122.96	118.30
34	i	22	A	O4'-C1'-C2'	-5.18	100.62	105.80
34	i	581	U	O4'-C1'-C2'	5.18	112.26	107.60
34	i	1603	U	N1-C1'-C2'	5.18	120.73	114.00
21	U	27	ARG	O-C-N	-5.18	114.42	122.70
28	b	52	THR	O-C-N	5.18	130.98	122.70
34	i	503	G	O4'-C1'-C2'	5.18	112.26	107.60
34	i	682	G	O4'-C1'-C2'	5.18	112.26	107.60
20	T	144	LYS	CA-C-O	-5.17	109.23	120.10
34	i	1001	G	O4'-C1'-C2'	5.17	112.26	107.60
24	X	138	LYS	O-C-N	-5.17	114.42	122.70
34	i	1335	U	C5'-C4'-O4'	5.17	115.31	109.10
5	E	21	ASP	CB-CG-OD2	5.17	122.95	118.30
32	f	137	ASP	CB-CG-OD2	5.17	122.95	118.30
34	i	410	G	P-O3'-C3'	-5.17	113.50	119.70
34	i	1862	U	O4'-C1'-N1	5.17	112.33	108.20
34	i	1560	C	O4'-C1'-N1	5.17	112.33	108.20
16	P	51	ARG	N-CA-C	5.16	124.94	111.00
34	i	1246	A	O4'-C1'-C2'	-5.16	100.64	105.80
5	E	258	ALA	O-C-N	-5.16	114.44	122.70
10	J	26	ASP	CB-CG-OD2	5.16	122.95	118.30
10	J	91	LYS	CA-C-N	5.16	128.56	117.20
34	i	1493	G	C3'-C2'-C1'	5.16	105.63	101.50
5	E	164	LEU	C-N-CA	-5.16	108.80	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	411	G	O4'-C1'-C2'	5.16	112.25	107.60
34	i	1137	G	P-O5'-C5'	5.16	129.16	120.90
28	b	84	HIS	CA-C-O	-5.16	109.27	120.10
34	i	1021	U	C1'-O4'-C4'	5.16	114.03	109.90
34	i	1580	U	O4'-C1'-N1	5.16	112.33	108.20
34	i	1645	A	C1'-O4'-C4'	5.16	114.03	109.90
34	i	1823	G	C3'-C2'-C1'	5.16	105.63	101.50
15	O	131	ASP	CB-CG-OD2	5.16	122.94	118.30
23	W	55	ASP	CB-CG-OD2	5.16	122.94	118.30
34	i	1006	G	N9-C1'-C2'	-5.16	106.33	112.00
34	i	1090	C	N1-C1'-C2'	5.16	120.70	114.00
34	i	1513	C	O4'-C4'-C3'	-5.16	98.84	104.00
34	i	1645	A	O4'-C1'-C2'	-5.16	100.64	105.80
34	i	1579	G	C3'-C2'-C1'	5.15	105.62	101.50
34	i	216	U	C3'-C2'-C1'	5.15	105.62	101.50
34	i	1323	G	N9-C1'-C2'	5.15	120.70	114.00
5	E	253	ASP	CB-CG-OD2	5.15	122.94	118.30
16	P	37	TYR	CA-CB-CG	5.15	123.19	113.40
34	i	1246	A	N9-C1'-C2'	-5.15	106.33	112.00
34	i	1784	A	C1'-O4'-C4'	-5.15	105.78	109.90
34	i	109	U	P-O3'-C3'	-5.15	113.52	119.70
34	i	624	A	C3'-C2'-C1'	5.15	105.62	101.50
24	X	88	ASP	CB-CG-OD2	5.14	122.93	118.30
34	i	1051	A	C1'-O4'-C4'	5.14	114.02	109.90
34	i	1427	G	N9-C1'-C2'	5.14	120.69	114.00
34	i	1614	A	P-O3'-C3'	5.14	125.87	119.70
34	i	1742	C	C5'-C4'-C3'	5.14	124.23	116.00
34	i	1765	G	P-O3'-C3'	5.14	125.87	119.70
34	i	15	U	C1'-O4'-C4'	5.14	114.01	109.90
34	i	742	C	O4'-C1'-N1	5.14	112.31	108.20
1	A	126	ASP	CB-CG-OD2	5.14	122.93	118.30
12	L	24	LEU	C-N-CA	5.14	134.55	121.70
34	i	1416	G	O4'-C1'-C2'	5.14	112.23	107.60
18	R	101	ASP	CB-CG-OD2	5.14	122.92	118.30
26	Z	50	PHE	CB-CA-C	-5.14	100.12	110.40
26	Z	104	ARG	CB-CA-C	-5.14	100.12	110.40
34	i	231	C	O4'-C1'-N1	5.14	112.31	108.20
34	i	235	C	O4'-C1'-N1	5.14	112.31	108.20
34	i	1656	A	O4'-C1'-C2'	5.14	112.22	107.60
34	i	125	C	C5'-C4'-O4'	-5.14	102.94	109.10
34	i	1328	A	N9-C1'-C2'	-5.14	106.35	112.00
24	X	126	ALA	N-CA-C	-5.13	97.14	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	596	G	P-O3'-C3'	5.13	125.86	119.70
34	i	819	U	C3'-C2'-C1'	-5.13	97.39	101.50
16	P	28	MET	CA-C-N	-5.13	105.92	117.20
34	i	410	G	C4'-C3'-C2'	-5.13	97.47	102.60
34	i	581	U	C1'-O4'-C4'	-5.13	105.80	109.90
34	i	1302	U	O4'-C1'-N1	5.13	112.30	108.20
10	J	158	ASP	CB-CG-OD2	5.13	122.91	118.30
16	P	23	ASP	CB-CG-OD2	5.13	122.91	118.30
9	I	8	TRP	CE3-CZ3-CH2	5.12	126.84	121.20
25	Y	29	HIS	C-N-CD	-5.12	109.32	120.60
34	i	799	C	C3'-C2'-C1'	5.12	105.60	101.50
34	i	859	U	N1-C1'-C2'	5.12	120.66	114.00
34	i	880	C	C3'-C2'-C1'	5.12	105.60	101.50
34	i	888	U	O4'-C1'-N1	5.12	112.30	108.20
34	i	1501	U	C3'-C2'-C1'	5.12	105.60	101.50
34	i	1611	U	C3'-C2'-C1'	5.12	105.60	101.50
34	i	750	G	O4'-C1'-N9	5.12	112.30	108.20
34	i	1186	A	O4'-C1'-N9	5.12	112.30	108.20
34	i	136	C	C5'-C4'-C3'	5.12	124.19	116.00
2	B	104	ASP	CB-CG-OD2	5.12	122.91	118.30
34	i	318	U	C5'-C4'-C3'	5.12	124.19	116.00
34	i	1555	U	C4'-C3'-C2'	-5.12	97.48	102.60
34	i	603	C	O4'-C1'-C2'	-5.12	100.69	105.80
34	i	1235	U	O3'-P-O5'	5.12	113.72	104.00
34	i	1270	G	N9-C1'-C2'	5.12	120.65	114.00
34	i	1473	U	C1'-O4'-C4'	-5.12	105.81	109.90
34	i	984	C	O4'-C1'-N1	-5.11	104.11	108.20
34	i	1133	U	O4'-C1'-N1	5.11	112.29	108.20
34	i	1730	A	N9-C1'-C2'	5.11	120.64	114.00
34	i	125	C	P-O3'-C3'	5.11	125.83	119.70
34	i	896	C	P-O5'-C5'	5.11	129.08	120.90
34	i	1280	A	C5'-C4'-C3'	-5.11	107.82	116.00
34	i	1558	G	O4'-C1'-C2'	5.11	112.20	107.60
35	l	59	LEU	CA-CB-CG	5.11	127.05	115.30
34	i	1453	U	P-O3'-C3'	-5.11	113.57	119.70
11	K	43	LEU	N-CA-C	-5.11	97.22	111.00
34	i	660	A	P-O3'-C3'	5.11	125.83	119.70
34	i	1262	C	C1'-O4'-C4'	-5.11	105.82	109.90
34	i	1375	A	C5'-C4'-C3'	-5.11	107.83	116.00
33	g	12	LYS	CB-CA-C	-5.10	100.19	110.40
34	i	677	C	P-O3'-C3'	5.10	125.82	119.70
34	i	911	G	C3'-C2'-C1'	-5.10	97.42	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1423	C	C3'-C2'-C1'	5.10	105.58	101.50
34	i	1541	G	C3'-C2'-C1'	-5.10	97.42	101.50
2	B	191	ASP	CB-CG-OD2	5.10	122.89	118.30
34	i	1019	A	O4'-C1'-N9	5.10	112.28	108.20
34	i	1272	A	C1'-O4'-C4'	5.10	113.98	109.90
1	A	151	ASP	CB-CG-OD2	5.10	122.89	118.30
34	i	419	C	N1-C1'-C2'	5.10	120.63	114.00
34	i	1334	G	C4'-C3'-C2'	-5.10	97.50	102.60
34	i	1776	G	O5'-C5'-C4'	5.10	121.38	111.70
34	i	1742	C	C4'-C3'-O3'	-5.10	98.70	109.40
4	D	52	ALA	O-C-N	-5.09	114.55	122.70
10	J	89	GLU	N-CA-CB	-5.09	101.43	110.60
34	i	740	G	O3'-P-O5'	-5.09	94.32	104.00
34	i	1490	U	C3'-C2'-C1'	-5.09	97.42	101.50
34	i	832	G	N9-C1'-C2'	-5.09	106.40	112.00
2	B	32	ASP	CB-CG-OD2	5.09	122.88	118.30
32	f	134	SER	CA-C-N	-5.09	106.00	117.20
34	i	73	C	P-O3'-C3'	-5.09	113.59	119.70
34	i	455	A	O3'-P-O5'	-5.09	94.33	104.00
34	i	753	C	O4'-C4'-C3'	-5.09	98.91	104.00
34	i	1078	A	C1'-O4'-C4'	5.09	113.97	109.90
34	i	1328	A	C4'-C3'-C2'	-5.09	97.51	102.60
34	i	1562	G	O4'-C4'-C3'	-5.09	98.91	104.00
34	i	1106	G	C1'-O4'-C4'	5.09	113.97	109.90
34	i	1470	A	O3'-P-O5'	5.09	113.67	104.00
9	I	55	TYR	CB-CG-CD2	-5.09	117.95	121.00
34	i	1267	C	O4'-C1'-C2'	-5.09	100.71	105.80
5	E	59	ASP	CB-CG-OD2	5.09	122.88	118.30
34	i	830	C	O4'-C1'-N1	5.09	112.27	108.20
34	i	1629	A	O4'-C1'-N9	5.09	112.27	108.20
8	H	191	GLU	C-N-CA	-5.08	108.99	121.70
34	i	428	G	C1'-O4'-C4'	5.08	113.97	109.90
2	B	152	LYS	CB-CA-C	5.08	120.57	110.40
25	Y	3	ASP	CB-CG-OD2	5.08	122.88	118.30
34	i	689	G	N9-C1'-C2'	5.08	120.61	114.00
34	i	839	C	C5'-C4'-O4'	5.08	115.20	109.10
11	K	55	ARG	CD-NE-CZ	5.08	130.71	123.60
34	i	1551	A	C5'-C4'-C3'	-5.08	107.87	116.00
34	i	1658	A	O4'-C1'-C2'	-5.08	100.72	105.80
5	E	237	SER	N-CA-CB	-5.08	102.88	110.50
34	i	71	G	N9-C1'-C2'	-5.08	106.41	112.00
34	i	871	A	C3'-C2'-C1'	5.08	105.56	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	1609	A	O4'-C1'-N9	5.08	112.26	108.20
7	G	180	VAL	N-CA-CB	-5.08	100.33	111.50
34	i	77	A	C4'-C3'-C2'	-5.08	97.52	102.60
34	i	916	A	P-O3'-C3'	5.08	125.79	119.70
34	i	376	C	C5'-C4'-C3'	-5.07	107.88	116.00
34	i	753	C	C3'-C2'-C1'	5.07	105.56	101.50
34	i	1298	G	C5'-C4'-O4'	5.07	115.19	109.10
34	i	1663	U	C4'-C3'-C2'	-5.07	97.53	102.60
34	i	43	U	C5'-C4'-O4'	5.07	115.18	109.10
34	i	1361	G	O4'-C1'-N9	5.07	112.25	108.20
34	i	1483	A	C4'-C3'-O3'	-5.07	98.76	109.40
10	J	85	GLY	CA-C-N	-5.07	106.05	117.20
32	f	106	TYR	N-CA-C	-5.07	97.32	111.00
34	i	610	G	O4'-C1'-C2'	-5.07	100.73	105.80
34	i	629	C	O4'-C1'-N1	5.07	112.25	108.20
34	i	79	A	C1'-O4'-C4'	5.06	113.95	109.90
34	i	586	U	P-O3'-C3'	5.06	125.78	119.70
34	i	596	G	O4'-C1'-C2'	5.06	112.16	107.60
34	i	638	A	C1'-O4'-C4'	-5.06	105.85	109.90
21	U	48	LEU	CB-CG-CD2	-5.06	102.40	111.00
24	X	19	ASP	CB-CG-OD2	5.06	122.85	118.30
31	e	118	ASN	N-CA-C	5.06	124.66	111.00
34	i	539	C	C3'-C2'-C1'	5.06	105.55	101.50
34	i	1248	C	P-O3'-C3'	-5.06	113.63	119.70
22	V	66	ASP	CB-CG-OD2	5.06	122.85	118.30
34	i	1711	C	N1-C1'-C2'	5.06	120.57	114.00
21	U	103	SER	O-C-N	-5.06	114.61	122.70
34	i	13	C	C3'-C2'-C1'	5.06	105.55	101.50
34	i	1023	A	O3'-P-O5'	5.06	113.61	104.00
13	M	43	ASP	CB-CG-OD2	5.05	122.85	118.30
34	i	321	C	N1-C1'-C2'	-5.05	106.44	112.00
29	c	37	ASP	CB-CG-OD2	5.05	122.85	118.30
30	d	6	LEU	N-CA-C	-5.05	97.37	111.00
34	i	1452	G	N9-C1'-C2'	5.05	120.56	114.00
5	E	129	ILE	CA-C-N	-5.04	106.11	117.20
17	Q	31	LEU	C-N-CA	5.04	134.31	121.70
34	i	88	G	O4'-C1'-C2'	5.04	112.14	107.60
3	C	98	GLN	N-CA-C	5.04	124.61	111.00
5	E	93	ASP	CB-CG-OD2	5.04	122.84	118.30
34	i	72	C	P-O5'-C5'	5.04	128.97	120.90
34	i	292	A	N9-C1'-C2'	-5.04	106.45	112.00
34	i	439	A	O4'-C1'-N9	5.04	112.23	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	l	67	PHE	N-CA-C	-5.04	97.39	111.00
1	A	193	HIS	N-CA-C	5.04	124.60	111.00
32	f	86	THR	N-CA-C	-5.04	97.39	111.00
34	i	124	U	O3'-P-O5'	-5.04	94.43	104.00
34	i	933	C	O4'-C1'-N1	5.04	112.23	108.20
34	i	1568	G	O4'-C1'-N9	5.04	112.23	108.20
34	i	180	G	O3'-P-O5'	5.03	113.56	104.00
34	i	279	G	C1'-O4'-C4'	5.03	113.93	109.90
34	i	657	U	C3'-C2'-C1'	5.03	105.53	101.50
34	i	677	C	N1-C1'-C2'	5.03	120.54	114.00
34	i	1753	G	C1'-O4'-C4'	-5.03	105.88	109.90
34	i	8	U	O4'-C1'-C2'	-5.03	100.77	105.80
34	i	1157	U	N1-C1'-C2'	-5.03	106.47	112.00
25	Y	34	THR	N-CA-C	5.03	124.58	111.00
34	i	160	U	O4'-C1'-N1	5.03	112.22	108.20
34	i	1442	A	C4'-C3'-O3'	5.03	123.05	113.00
26	Z	56	ASP	CB-CG-OD2	5.03	122.82	118.30
34	i	1367	U	O4'-C1'-C2'	-5.03	100.77	105.80
34	i	1333	C	C2'-C3'-O3'	5.02	121.74	113.70
34	i	1568	G	C4'-C3'-C2'	-5.02	97.58	102.60
21	U	52	GLY	C-N-CD	-5.02	109.56	120.60
34	i	309	A	O4'-C1'-N9	5.02	112.21	108.20
34	i	825	C	O5'-P-OP1	5.02	116.72	110.70
14	N	82	PRO	CA-C-N	-5.01	106.17	117.20
34	i	645	A	C3'-C2'-C1'	5.01	105.51	101.50
34	i	1573	U	C5'-C4'-O4'	5.01	115.12	109.10
34	i	1386	U	N1-C1'-C2'	5.01	120.52	114.00
10	J	188	GLY	N-CA-C	5.01	125.63	113.10
34	i	1540	A	O4'-C1'-N9	5.01	112.21	108.20
7	G	103	ASP	CB-CG-OD2	5.01	122.81	118.30
34	i	1021	U	N1-C1'-C2'	-5.01	106.49	112.00
34	i	1346	U	O4'-C1'-C2'	-5.01	100.79	105.80
34	i	1400	U	C3'-C2'-C1'	5.01	105.51	101.50
34	i	1385	C	O5'-P-OP2	-5.01	101.19	105.70
34	i	1575	A	O4'-C1'-N9	5.01	112.21	108.20
34	i	1014	U	O4'-C1'-N1	5.00	112.20	108.20
23	W	85	ASP	CB-CG-OD2	5.00	122.80	118.30
34	i	78	C	O4'-C1'-C2'	-5.00	100.80	105.80
34	i	994	A	C3'-C2'-C1'	5.00	105.50	101.50
34	i	1009	U	O4'-C1'-N1	5.00	112.20	108.20
34	i	1036	G	C1'-O4'-C4'	-5.00	105.90	109.90
34	i	1343	U	C3'-C2'-C1'	5.00	105.50	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	I	178	ARG	NE-CZ-NH2	-5.00	117.80	120.30
25	Y	103	SER	C-N-CA	5.00	134.20	121.70
34	i	1320	G	C3'-C2'-C1'	5.00	105.50	101.50

All (13) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
3	C	157	ASN	CA
5	E	171	ASP	CA
10	J	138	ARG	CA
18	R	3	ARG	CA
19	S	92	ASP	CA
20	T	93	SER	CA
25	Y	86	GLU	CA
34	i	544	A	C1'
34	i	794	G	C4'
34	i	835	C	C1'
34	i	1151	U	C1'
34	i	1414	C	C1'
34	i	1503	G	C1'

All (183) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	146	ALA	Mainchain
1	A	185	MET	Mainchain
1	A	192	GLU	Mainchain,Peptide
1	A	199	PRO	Mainchain
1	A	206	ASP	Mainchain,Peptide
1	A	23	THR	Mainchain
1	A	4	ALA	Peptide
1	A	63	ARG	Sidechain
1	A	97	THR	Mainchain
2	B	146	CYS	Peptide
2	B	56	LYS	Mainchain
2	B	75	GLN	Peptide
2	B	76	ASN	Peptide
3	C	157	ASN	Peptide
3	C	160	GLY	Mainchain
3	C	241	TRP	Mainchain
3	C	97	VAL	Mainchain,Peptide
4	D	144	GLY	Peptide

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Mol	Chain	Res	Type	Group
4	D	190	LEU	Mainchain
4	D	3	VAL	Mainchain,Peptide
4	D	96	LEU	Mainchain
5	E	1	MET	Peptide
5	E	129	ILE	Peptide
6	F	43	GLU	Peptide
6	F	44	LYS	Peptide
6	F	79	HIS	Peptide
7	G	155	GLN	Mainchain
8	H	105	THR	Peptide
8	H	108	SER	Peptide
8	H	109	ARG	Sidechain
8	H	113	LYS	Mainchain
8	H	118	ARG	Sidechain
8	H	16	PRO	Peptide
8	H	17	ASP	Peptide
8	H	190	PRO	Peptide
8	H	193	GLN	Peptide
8	H	53	VAL	Peptide
9	I	123	ARG	Mainchain
9	I	129	LEU	Mainchain
9	I	131	PRO	Mainchain
9	I	155	ASN	Peptide
9	I	190	LEU	Mainchain
9	I	2	GLY	Mainchain
9	I	3	ILE	Peptide
9	I	55	TYR	Sidechain
10	J	146	SER	Mainchain
10	J	16	PRO	Peptide
10	J	161	LEU	Mainchain,Peptide
10	J	162	ARG	Peptide
10	J	164	PRO	Mainchain
10	J	165	TYR	Peptide
10	J	85	GLY	Mainchain
10	J	90	GLY	Peptide
10	J	91	LYS	Mainchain
10	J	92	MET	Peptide
11	K	29	MET	Peptide
11	K	30	PRO	Peptide
11	K	37	ASP	Peptide
11	K	43	LEU	Peptide
11	K	55	ARG	Sidechain

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Mol	Chain	Res	Type	Group
11	K	70	TYR	Sidechain
11	K	86	PRO	Peptide
11	K	89	ILE	Mainchain
11	K	90	VAL	Mainchain
11	K	92	ALA	Peptide
11	K	97	SER	Peptide
12	L	147	LYS	Peptide
12	L	149	ALA	Mainchain
12	L	152	LYS	Mainchain
12	L	18	GLN	Peptide
12	L	26	GLY	Peptide
12	L	27	GLU	Peptide
12	L	97	ARG	Peptide
13	M	98	GLY	Peptide
14	N	13	GLN	Peptide
14	N	14	SER	Peptide
14	N	18	TYR	Peptide
14	N	82	PRO	Peptide
15	O	138	ASP	Peptide
16	P	17	TYR	Sidechain,Peptide
16	P	18	ARG	Sidechain
16	P	27	ASP	Peptide
16	P	36	LEU	Peptide
16	P	37	TYR	Peptide
16	P	38	SER	Peptide
16	P	48	GLY	Mainchain,Peptide
16	P	50	ARG	Peptide
17	Q	146	ARG	Sidechain
17	Q	31	LEU	Peptide
17	Q	43	GLU	Peptide
17	Q	47	LEU	Peptide
18	R	1	MET	Mainchain
18	R	122	PRO	Peptide
18	R	88	VAL	Mainchain,Peptide
18	R	89	SER	Peptide
19	S	10	GLN	Peptide
19	S	141	ARG	Mainchain
19	S	15	VAL	Peptide
19	S	40	TYR	Sidechain,Mainchain
19	S	8	LYS	Peptide
19	S	87	GLN	Mainchain
19	S	9	PHE	Peptide

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Mol	Chain	Res	Type	Group
19	S	93	GLY	Peptide
19	S	94	LYS	Peptide
20	T	142	LYS	Mainchain,Peptide
20	T	4	VAL	Mainchain,Peptide
20	T	42	HIS	Sidechain
20	T	82	ARG	Sidechain
21	U	104	ILE	Mainchain
21	U	105	SER	Mainchain
21	U	108	PRO	Peptide
21	U	46	LYS	Peptide
21	U	50	VAL	Peptide
21	U	68	THR	Peptide
21	U	70	CYS	Mainchain
21	U	93	SER	Mainchain
22	V	25	GLY	Peptide
22	V	48	GLY	Mainchain,Peptide
22	V	49	GLN	Peptide
22	V	61	ARG	Sidechain
22	V	63	GLY	Mainchain
22	V	81	GLN	Mainchain,Peptide
22	V	9	VAL	Peptide
23	W	2	VAL	Mainchain
23	W	84	LYS	Peptide
24	X	1	MET	Peptide
24	X	127	ASN	Peptide
24	X	23	HIS	Mainchain
24	X	42	GLY	Peptide
25	Y	103	SER	Peptide
25	Y	32	LYS	Peptide
25	Y	33	ALA	Peptide
25	Y	34	THR	Peptide
25	Y	85	ASN	Peptide
25	Y	86	GLU	Mainchain
26	Z	101	SER	Mainchain
26	Z	104	ARG	Sidechain,Mainchain
26	Z	41	ARG	Peptide
26	Z	93	SER	Peptide
26	Z	95	GLY	Peptide
27	a	96	THR	Mainchain,Peptide
28	b	2	PRO	Mainchain
28	b	36	LYS	Peptide
28	b	37	CYS	Mainchain

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Mol	Chain	Res	Type	Group
31	e	93	VAL	Mainchain
31	e	94	ALA	Mainchain,Peptide
31	e	96	GLN	Mainchain
31	e	97	GLU	Peptide
32	f	102	VAL	Peptide
32	f	105	TYR	Peptide
32	f	135	HIS	Mainchain
32	f	148	TYR	Peptide
32	f	84	SER	Peptide
32	f	90	LYS	Peptide
33	g	12	LYS	Peptide
33	g	142	VAL	Mainchain
33	g	148	SER	Mainchain
33	g	158	PRO	Peptide
33	g	159	ASN	Mainchain,Peptide
33	g	160	SER	Peptide
33	g	192	THR	Peptide
33	g	273	GLU	Peptide
33	g	283	PRO	Peptide
33	g	47	ARG	Peptide
33	g	59	LEU	Mainchain
33	g	60	ARG	Peptide

5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

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 X-ray entries followed by that with respect to entries of similar resolution.

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	A	206/295 (70%)	156 (76%)	23 (11%)	27 (13%)	0	4
2	B	213/264 (81%)	174 (82%)	24 (11%)	15 (7%)	1	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	C	224/278 (81%)	200 (89%)	13 (6%)	11 (5%)	2	20
4	D	225/243 (93%)	180 (80%)	23 (10%)	22 (10%)	0	9
5	E	261/263 (99%)	210 (80%)	27 (10%)	24 (9%)	1	11
6	F	189/204 (93%)	162 (86%)	15 (8%)	12 (6%)	1	17
7	G	235/249 (94%)	202 (86%)	18 (8%)	15 (6%)	1	16
8	H	188/194 (97%)	146 (78%)	11 (6%)	31 (16%)	0	3
9	I	204/208 (98%)	169 (83%)	13 (6%)	22 (11%)	0	8
10	J	180/194 (93%)	138 (77%)	18 (10%)	24 (13%)	0	4
11	K	96/165 (58%)	67 (70%)	11 (12%)	18 (19%)	0	2
12	L	156/158 (99%)	132 (85%)	10 (6%)	14 (9%)	1	11
13	M	122/132 (92%)	85 (70%)	16 (13%)	21 (17%)	0	3
14	N	148/151 (98%)	124 (84%)	18 (12%)	6 (4%)	3	22
15	O	134/151 (89%)	101 (75%)	14 (10%)	19 (14%)	0	4
16	P	125/145 (86%)	92 (74%)	16 (13%)	17 (14%)	0	4
17	Q	139/146 (95%)	109 (78%)	20 (14%)	10 (7%)	1	14
18	R	124/135 (92%)	96 (77%)	14 (11%)	14 (11%)	0	7
19	S	135/152 (89%)	107 (79%)	19 (14%)	9 (7%)	1	15
20	T	139/145 (96%)	119 (86%)	10 (7%)	10 (7%)	1	14
21	U	102/119 (86%)	76 (74%)	10 (10%)	16 (16%)	0	3
22	V	80/83 (96%)	55 (69%)	11 (14%)	14 (18%)	0	2
23	W	127/130 (98%)	111 (87%)	14 (11%)	2 (2%)	9	44
24	X	140/143 (98%)	121 (86%)	11 (8%)	8 (6%)	1	18
25	Y	124/133 (93%)	91 (73%)	15 (12%)	18 (14%)	0	4
26	Z	73/125 (58%)	52 (71%)	12 (16%)	9 (12%)	0	5
27	a	105/115 (91%)	72 (69%)	14 (13%)	19 (18%)	0	3
28	b	82/84 (98%)	57 (70%)	14 (17%)	11 (13%)	0	4
29	c	62/69 (90%)	44 (71%)	13 (21%)	5 (8%)	1	12
30	d	51/56 (91%)	46 (90%)	3 (6%)	2 (4%)	3	23
31	e	57/133 (43%)	37 (65%)	7 (12%)	13 (23%)	0	2
32	f	69/156 (44%)	38 (55%)	13 (19%)	18 (26%)	0	1
33	g	311/317 (98%)	271 (87%)	23 (7%)	17 (6%)	2	19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	l	82/113 (73%)	49 (60%)	22 (27%)	11 (13%)	0	4
36	n	80/144 (56%)	61 (76%)	15 (19%)	4 (5%)	2	20
All	All	4988/5792 (86%)	3950 (79%)	530 (11%)	508 (10%)	0	9

All (508) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	9	GLN
1	A	31	ASP
1	A	45	GLY
1	A	103	PHE
1	A	164	ASN
1	A	165	ASN
1	A	188	THR
1	A	192	GLU
1	A	203	PHE
1	A	207	PRO
2	B	27	LYS
2	B	77	ASP
2	B	78	GLU
2	B	106	THR
2	B	154	SER
2	B	179	ASN
2	B	206	PRO
2	B	210	VAL
3	C	102	GLN
3	C	104	GLY
3	C	117	ASP
3	C	218	LEU
3	C	260	LYS
4	D	2	ALA
4	D	4	GLN
4	D	93	THR
4	D	98	ALA
4	D	202	LYS
4	D	205	PRO
4	D	213	PRO
4	D	214	LYS
4	D	216	GLU
4	D	220	THR
4	D	221	THR

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Mol	Chain	Res	Type
4	D	222	PRO
4	D	223	ILE
4	D	226	GLN
5	E	12	VAL
5	E	24	THR
5	E	76	VAL
5	E	95	THR
5	E	163	ASP
5	E	196	THR
5	E	260	GLN
5	E	261	SER
6	F	43	GLU
6	F	44	LYS
6	F	54	GLY
6	F	202	SER
6	F	203	ASN
7	G	20	ASP
7	G	154	ARG
7	G	164	LYS
7	G	174	PRO
7	G	175	LYS
7	G	180	VAL
7	G	181	THR
8	H	15	LYS
8	H	16	PRO
8	H	33	ASN
8	H	35	ASP
8	H	66	VAL
8	H	88	SER
8	H	108	SER
8	H	109	ARG
8	H	110	THR
8	H	116	ARG
8	H	135	PHE
8	H	137	SER
8	H	138	GLU
8	H	160	LYS
8	H	190	PRO
9	I	8	TRP
9	I	120	PRO
9	I	124	LYS
9	I	131	PRO

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Mol	Chain	Res	Type
9	I	133	GLU
9	I	139	LYS
9	I	140	LYS
9	I	142	SER
9	I	143	LYS
9	I	145	ILE
9	I	153	LYS
9	I	154	LYS
9	I	158	ILE
9	I	206	LYS
10	J	19	PRO
10	J	22	LYS
10	J	36	GLY
10	J	110	LEU
10	J	111	GLN
10	J	118	GLY
10	J	119	LEU
10	J	122	SER
10	J	138	ARG
10	J	161	LEU
10	J	163	SER
10	J	169	ARG
10	J	170	PRO
10	J	172	ARG
11	K	2	LEU
11	K	3	MET
11	K	30	PRO
11	K	35	LEU
11	K	39	ASN
11	K	40	VAL
11	K	41	PRO
11	K	44	HIS
11	K	63	ALA
11	K	88	GLU
11	K	89	ILE
12	L	5	GLN
12	L	6	THR
12	L	7	GLU
12	L	20	LYS
12	L	23	VAL
12	L	147	LYS
12	L	152	LYS

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Mol	Chain	Res	Type
12	L	153	LYS
13	M	12	MET
13	M	15	ASN
13	M	44	LYS
13	M	72	HIS
13	M	77	ILE
13	M	78	LYS
13	M	79	VAL
13	M	81	ASP
13	M	89	VAL
13	M	96	ARG
13	M	100	PRO
13	M	116	LYS
13	M	117	GLU
14	N	22	VAL
15	O	23	GLU
15	O	52	THR
15	O	53	ILE
15	O	64	ALA
15	O	104	ARG
15	O	137	SER
15	O	138	ASP
15	O	139	SER
15	O	140	THR
16	P	6	GLN
16	P	11	THR
16	P	12	PHE
16	P	37	TYR
16	P	38	SER
16	P	68	PRO
16	P	69	PRO
16	P	71	GLU
16	P	73	PRO
16	P	75	VAL
16	P	125	PRO
16	P	126	VAL
16	P	127	LYS
17	Q	19	ALA
17	Q	61	GLU
17	Q	62	ARG
17	Q	117	ARG
17	Q	119	LEU

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Mol	Chain	Res	Type
17	Q	141	TYR
18	R	88	VAL
18	R	89	SER
18	R	100	PRO
18	R	101	ASP
18	R	121	GLN
18	R	123	THR
19	S	11	HIS
19	S	53	THR
19	S	59	LEU
19	S	90	VAL
20	T	5	THR
20	T	31	PRO
20	T	32	GLU
20	T	33	TRP
20	T	34	VAL
20	T	96	SER
20	T	143	LYS
21	U	51	LYS
21	U	94	PRO
21	U	95	SER
21	U	107	GLU
21	U	118	ASP
22	V	4	ASN
22	V	10	ASP
22	V	42	VAL
22	V	43	THR
22	V	44	GLY
22	V	50	SER
22	V	65	SER
22	V	78	ILE
24	X	3	LYS
24	X	4	CYS
25	Y	6	THR
25	Y	30	PRO
25	Y	34	THR
25	Y	86	GLU
25	Y	87	PRO
25	Y	100	LYS
25	Y	104	ARG
25	Y	120	THR
26	Z	93	SER

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Mol	Chain	Res	Type
26	Z	104	ARG
26	Z	108	ILE
26	Z	113	THR
27	a	28	CYS
27	a	46	GLU
27	a	47	ALA
27	a	58	VAL
27	a	59	PHE
27	a	61	ALA
27	a	63	VAL
27	a	64	LEU
27	a	98	PRO
27	a	99	PRO
27	a	103	PRO
28	b	62	VAL
28	b	63	LEU
28	b	64	CYS
29	c	8	PRO
29	c	67	ARG
30	d	8	TRP
31	e	76	VAL
31	e	78	GLY
31	e	81	ALA
31	e	98	LYS
31	e	119	VAL
31	e	121	PRO
31	e	126	LYS
32	f	84	SER
32	f	85	TYR
32	f	86	THR
32	f	91	ASN
32	f	102	VAL
32	f	106	TYR
32	f	110	GLU
32	f	128	ALA
33	g	3	GLU
33	g	48	ASP
33	g	52	TYR
33	g	96	THR
33	g	282	GLU
33	g	283	PRO
35	l	34	ARG

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Mol	Chain	Res	Type
35	l	96	PHE
36	n	71	ILE
36	n	83	ASP
1	A	7	VAL
1	A	96	ALA
1	A	112	ILE
1	A	140	VAL
1	A	159	ILE
1	A	186	ARG
1	A	190	SER
1	A	191	ARG
2	B	93	GLY
2	B	209	ASP
3	C	43	LYS
3	C	246	PHE
4	D	78	GLY
4	D	194	PRO
4	D	201	LYS
4	D	208	VAL
5	E	104	ASP
5	E	164	LEU
6	F	21	GLY
6	F	32	ASP
6	F	41	VAL
6	F	79	HIS
7	G	26	THR
7	G	146	ASN
7	G	153	VAL
8	H	11	PRO
8	H	17	ASP
8	H	38	ALA
8	H	41	ARG
8	H	76	GLN
8	H	100	ILE
8	H	112	ASN
8	H	120	ARG
8	H	159	ASP
8	H	193	GLN
9	I	22	HIS
9	I	192	GLY
10	J	106	LEU
10	J	120	ALA

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Mol	Chain	Res	Type
10	J	124	HIS
10	J	135	ILE
10	J	148	ILE
11	K	34	GLU
11	K	91	PRO
12	L	4	ILE
12	L	21	LYS
12	L	22	ARG
12	L	57	ASP
13	M	45	ARG
14	N	68	GLY
15	O	54	CYS
15	O	56	VAL
16	P	54	HIS
17	Q	32	ILE
17	Q	100	VAL
18	R	93	GLN
18	R	112	GLY
18	R	125	GLY
19	S	17	ASN
19	S	31	THR
19	S	140	GLY
20	T	142	LYS
21	U	74	SER
21	U	98	VAL
22	V	6	GLY
22	V	33	PRO
22	V	48	GLY
23	W	66	THR
24	X	59	ALA
25	Y	95	GLY
25	Y	99	LYS
25	Y	119	GLY
26	Z	53	ALA
27	a	35	ALA
28	b	2	PRO
28	b	38	PRO
28	b	81	ARG
31	e	77	HIS
31	e	104	GLY
31	e	124	GLY
32	f	98	VAL

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Mol	Chain	Res	Type
32	f	127	GLY
32	f	148	TYR
33	g	49	GLU
33	g	60	ARG
33	g	144	ASP
33	g	159	ASN
33	g	171	ASP
33	g	281	ALA
33	g	295	GLY
35	l	50	ILE
35	l	56	LYS
35	l	59	LEU
36	n	111	GLU
1	A	11	LYS
1	A	30	LEU
1	A	194	PRO
1	A	205	ARG
2	B	56	LYS
2	B	82	ARG
4	D	218	LEU
5	E	25	SER
5	E	168	LYS
5	E	194	VAL
5	E	205	PHE
7	G	69	THR
8	H	18	GLU
8	H	117	PRO
8	H	150	GLY
9	I	105	ASP
9	I	106	SER
9	I	144	LYS
10	J	91	LYS
11	K	28	HIS
11	K	87	PRO
13	M	91	LEU
14	N	28	LEU
15	O	32	HIS
16	P	17	TYR
16	P	39	ALA
18	R	86	PRO
18	R	122	PRO
20	T	29	LYS

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Mol	Chain	Res	Type
21	U	70	CYS
21	U	93	SER
21	U	110	VAL
24	X	92	ASN
25	Y	5	VAL
25	Y	53	ASP
25	Y	60	PHE
25	Y	63	HIS
27	a	13	LYS
27	a	97	PRO
27	a	102	ARG
27	a	107	ALA
28	b	7	LEU
29	c	65	ALA
31	e	127	LYS
31	e	129	PRO
32	f	137	ASP
32	f	138	ARG
33	g	84	ASP
33	g	255	SER
33	g	285	GLN
35	l	39	ASN
35	l	65	LYS
36	n	34	GLU
1	A	104	THR
2	B	224	GLU
3	C	244	THR
3	C	249	SER
5	E	30	ARG
5	E	119	ALA
5	E	189	LEU
6	F	37	ASP
7	G	33	ALA
7	G	122	PRO
10	J	151	LEU
10	J	162	ARG
11	K	95	ARG
12	L	119	ASP
13	M	29	ASP
13	M	113	ASP
15	O	17	LEU
15	O	83	GLN

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Mol	Chain	Res	Type
16	P	50	ARG
18	R	95	ILE
19	S	12	ILE
20	T	46	ALA
21	U	50	VAL
21	U	116	ILE
22	V	79	VAL
24	X	9	THR
24	X	129	SER
25	Y	102	THR
25	Y	121	ALA
26	Z	111	ARG
26	Z	114	LYS
27	a	62	TYR
28	b	24	LEU
29	c	63	ARG
32	f	145	CYS
33	g	37	ASP
35	l	105	ASP
1	A	23	THR
3	C	164	THR
4	D	80	PRO
5	E	73	ASP
5	E	90	ILE
5	E	134	LYS
5	E	213	ALA
9	I	52	ASN
9	I	59	ARG
11	K	38	LYS
11	K	67	PHE
12	L	2	ALA
13	M	59	PRO
13	M	94	ILE
13	M	95	ASP
14	N	3	ARG
14	N	138	ASN
15	O	22	ALA
15	O	38	ASN
17	Q	43	GLU
18	R	99	ASP
19	S	7	GLU
21	U	26	SER

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Mol	Chain	Res	Type
21	U	117	ALA
23	W	67	GLY
24	X	78	GLY
24	X	99	GLU
25	Y	51	THR
26	Z	62	VAL
26	Z	78	LYS
27	a	105	GLY
28	b	10	PRO
29	c	39	SER
31	e	97	GLU
32	f	93	HIS
32	f	94	LYS
32	f	147	THR
35	l	41	ARG
1	A	110	ASN
6	F	46	ALA
6	F	183	GLY
7	G	68	LEU
7	G	165	GLU
8	H	170	VAL
10	J	68	PRO
10	J	116	LYS
14	N	60	VAL
15	O	24	GLY
15	O	136	PRO
22	V	9	VAL
32	f	87	THR
4	D	63	GLY
9	I	119	LEU
21	U	104	ILE
22	V	77	GLY
2	B	24	PRO
5	E	152	PRO
8	H	10	LYS
35	l	49	GLY
1	A	95	GLY
1	A	98	PRO
3	C	161	LYS
5	E	195	ILE
5	E	231	GLY
15	O	62	VAL

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Mol	Chain	Res	Type
17	Q	42	ILE
27	a	96	THR
28	b	37	CYS
30	d	11	PRO
8	H	93	VAL
13	M	30	GLY
28	b	9	HIS
2	B	21	VAL
4	D	200	PRO
18	R	15	VAL
21	U	29	VAL
35	l	77	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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	A	174/244 (71%)	140 (80%)	34 (20%)	1	8
2	B	196/231 (85%)	155 (79%)	41 (21%)	1	6
3	C	187/215 (87%)	147 (79%)	40 (21%)	1	6
4	D	190/202 (94%)	144 (76%)	46 (24%)	0	4
5	E	225/225 (100%)	173 (77%)	52 (23%)	1	4
6	F	161/170 (95%)	117 (73%)	44 (27%)	0	3
7	G	207/218 (95%)	158 (76%)	49 (24%)	1	4
8	H	170/174 (98%)	124 (73%)	46 (27%)	0	3
9	I	177/179 (99%)	142 (80%)	35 (20%)	1	8
10	J	157/168 (94%)	128 (82%)	29 (18%)	1	9
11	K	89/136 (65%)	61 (68%)	28 (32%)	0	2
12	L	142/142 (100%)	105 (74%)	37 (26%)	0	3
13	M	102/108 (94%)	79 (78%)	23 (22%)	1	5
14	N	130/131 (99%)	103 (79%)	27 (21%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	O	106/119 (89%)	87 (82%)	19 (18%)	2	10
16	P	116/130 (89%)	84 (72%)	32 (28%)	0	3
17	Q	117/121 (97%)	89 (76%)	28 (24%)	0	4
18	R	114/121 (94%)	90 (79%)	24 (21%)	1	6
19	S	119/132 (90%)	95 (80%)	24 (20%)	1	7
20	T	113/116 (97%)	87 (77%)	26 (23%)	1	4
21	U	94/107 (88%)	74 (79%)	20 (21%)	1	6
22	V	67/68 (98%)	50 (75%)	17 (25%)	0	3
23	W	112/113 (99%)	98 (88%)	14 (12%)	4	19
24	X	114/115 (99%)	91 (80%)	23 (20%)	1	7
25	Y	108/115 (94%)	85 (79%)	23 (21%)	1	6
26	Z	66/103 (64%)	53 (80%)	13 (20%)	1	8
27	a	91/99 (92%)	76 (84%)	15 (16%)	2	12
28	b	76/76 (100%)	63 (83%)	13 (17%)	2	11
29	c	57/62 (92%)	46 (81%)	11 (19%)	1	8
30	d	47/49 (96%)	35 (74%)	12 (26%)	0	3
31	e	48/106 (45%)	25 (52%)	23 (48%)	0	0
32	f	64/140 (46%)	43 (67%)	21 (33%)	0	2
33	g	272/275 (99%)	223 (82%)	49 (18%)	1	10
35	l	74/96 (77%)	56 (76%)	18 (24%)	0	4
36	n	66/123 (54%)	47 (71%)	19 (29%)	0	2
All	All	4348/4929 (88%)	3373 (78%)	975 (22%)	1	5

All (975) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	5	LEU
1	A	7	VAL
1	A	10	MET
1	A	12	GLU
1	A	13	GLU
1	A	17	LYS
1	A	19	LEU
1	A	25	LEU
1	A	36	GLN

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Mol	Chain	Res	Type
1	A	40	LYS
1	A	42	LYS
1	A	44	ASP
1	A	52	LYS
1	A	58	LEU
1	A	63	ARG
1	A	73	ASP
1	A	88	LEU
1	A	89	LYS
1	A	102	ARG
1	A	117	ARG
1	A	128	ARG
1	A	139	TYR
1	A	147	LEU
1	A	159	ILE
1	A	169	HIS
1	A	181	GLU
1	A	186	ARG
1	A	188	THR
1	A	191	ARG
1	A	195	TRP
1	A	196	GLU
1	A	198	MET
1	A	204	TYR
1	A	207	PRO
2	B	19	LYS
2	B	20	LYS
2	B	21	VAL
2	B	22	VAL
2	B	34	LYS
2	B	41	ILE
2	B	48	LEU
2	B	52	THR
2	B	55	THR
2	B	56	LYS
2	B	75	GLN
2	B	78	GLU
2	B	82	ARG
2	B	83	LYS
2	B	89	GLU
2	B	94	LYS
2	B	115	LYS

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Mol	Chain	Res	Type
2	B	116	LYS
2	B	131	ASP
2	B	138	PHE
2	B	144	LYS
2	B	148	ASN
2	B	150	ILE
2	B	151	ARG
2	B	158	HIS
2	B	162	ARG
2	B	165	ARG
2	B	166	LYS
2	B	172	MET
2	B	181	LEU
2	B	182	LYS
2	B	195	LYS
2	B	208	HIS
2	B	211	PHE
2	B	213	ARG
2	B	214	LYS
2	B	219	LYS
2	B	222	LYS
2	B	223	PHE
2	B	227	LYS
2	B	229	MET
3	C	43	LYS
3	C	48	VAL
3	C	49	THR
3	C	50	LYS
3	C	51	LEU
3	C	56	LYS
3	C	58	MET
3	C	59	LYS
3	C	61	LYS
3	C	79	ILE
3	C	89	ASP
3	C	95	MET
3	C	99	LYS
3	C	100	GLN
3	C	101	THR
3	C	105	GLN
3	C	119	ASN
3	C	127	LYS

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Mol	Chain	Res	Type
3	C	131	GLU
3	C	145	LEU
3	C	151	ARG
3	C	152	ARG
3	C	157	ASN
3	C	158	LYS
3	C	168	LYS
3	C	169	VAL
3	C	196	LYS
3	C	197	LYS
3	C	201	MET
3	C	221	PHE
3	C	223	LYS
3	C	235	TYR
3	C	242	LYS
3	C	244	THR
3	C	246	PHE
3	C	247	THR
3	C	248	LYS
3	C	252	GLN
3	C	256	ASP
3	C	260	LYS
4	D	8	LYS
4	D	10	LYS
4	D	18	LYS
4	D	21	LEU
4	D	27	ARG
4	D	31	GLU
4	D	35	SER
4	D	44	THR
4	D	56	GLN
4	D	64	ARG
4	D	67	ARG
4	D	74	GLN
4	D	76	ARG
4	D	79	PHE
4	D	89	GLU
4	D	90	LYS
4	D	94	ARG
4	D	97	CYS
4	D	103	GLU
4	D	113	LEU

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Mol	Chain	Res	Type
4	D	120	TYR
4	D	127	MET
4	D	129	SER
4	D	146	ARG
4	D	151	LYS
4	D	156	LEU
4	D	157	MET
4	D	158	ILE
4	D	176	LEU
4	D	177	LEU
4	D	178	ARG
4	D	187	LYS
4	D	190	LEU
4	D	192	TRP
4	D	198	ILE
4	D	202	LYS
4	D	206	ASP
4	D	207	HIS
4	D	211	VAL
4	D	212	GLU
4	D	214	LYS
4	D	215	ASP
4	D	216	GLU
4	D	218	LEU
4	D	220	THR
4	D	226	GLN
5	E	1	MET
5	E	6	LYS
5	E	7	LYS
5	E	9	LEU
5	E	10	LYS
5	E	38	LEU
5	E	39	ARG
5	E	48	LEU
5	E	49	ARG
5	E	56	LEU
5	E	65	CYS
5	E	67	GLN
5	E	68	ARG
5	E	77	ARG
5	E	94	LYS
5	E	97	GLU

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Mol	Chain	Res	Type
5	E	106	LYS
5	E	118	GLU
5	E	120	LYS
5	E	122	LYS
5	E	123	LEU
5	E	125	LYS
5	E	128	LYS
5	E	130	PHE
5	E	133	THR
5	E	136	ILE
5	E	145	ARG
5	E	147	ILE
5	E	148	ARG
5	E	151	ASP
5	E	153	LEU
5	E	164	LEU
5	E	165	GLU
5	E	168	LYS
5	E	174	LYS
5	E	175	PHE
5	E	180	LEU
5	E	181	CYS
5	E	198	ARG
5	E	200	ARG
5	E	202	PRO
5	E	211	LYS
5	E	212	ASP
5	E	221	ARG
5	E	222	LEU
5	E	237	SER
5	E	240	ARG
5	E	242	LYS
5	E	245	ARG
5	E	246	LEU
5	E	259	LYS
5	E	260	GLN
6	F	18	LYS
6	F	29	GLN
6	F	36	GLN
6	F	37	ASP
6	F	38	TYR
6	F	41	VAL

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Mol	Chain	Res	Type
6	F	42	LYS
6	F	43	GLU
6	F	44	LYS
6	F	47	LYS
6	F	49	LEU
6	F	60	ARG
6	F	62	ARG
6	F	63	LYS
6	F	65	GLN
6	F	71	ARG
6	F	76	MET
6	F	78	MET
6	F	85	LYS
6	F	88	MET
6	F	91	ARG
6	F	94	LYS
6	F	98	GLU
6	F	110	GLN
6	F	116	ILE
6	F	122	ARG
6	F	125	SER
6	F	127	ARG
6	F	128	ILE
6	F	130	ARG
6	F	136	ARG
6	F	145	ARG
6	F	164	ARG
6	F	167	LYS
6	F	173	LEU
6	F	175	ASP
6	F	177	LEU
6	F	182	LYS
6	F	186	ASN
6	F	190	ILE
6	F	192	LYS
6	F	195	GLU
6	F	202	SER
6	F	204	ARG
7	G	1	MET
7	G	2	LYS
7	G	13	GLN
7	G	17	GLU

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Mol	Chain	Res	Type
7	G	19	ASP
7	G	29	GLU
7	G	30	LYS
7	G	31	ARG
7	G	32	MET
7	G	44	GLU
7	G	58	LYS
7	G	64	LYS
7	G	74	ARG
7	G	76	LEU
7	G	77	LEU
7	G	79	LYS
7	G	88	ARG
7	G	94	ARG
7	G	98	ARG
7	G	115	LYS
7	G	116	LYS
7	G	120	ASP
7	G	121	ILE
7	G	126	ASP
7	G	127	THR
7	G	128	THR
7	G	131	ARG
7	G	133	LEU
7	G	137	ARG
7	G	142	ARG
7	G	143	LYS
7	G	145	PHE
7	G	150	GLU
7	G	158	VAL
7	G	159	ARG
7	G	164	LYS
7	G	168	LYS
7	G	170	ARG
7	G	172	LYS
7	G	175	LYS
7	G	179	LEU
7	G	180	VAL
7	G	191	ARG
7	G	196	LYS
7	G	198	ARG
7	G	218	LYS

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Mol	Chain	Res	Type
7	G	219	GLU
7	G	224	ARG
7	G	233	ARG
8	H	9	VAL
8	H	10	LYS
8	H	11	PRO
8	H	14	GLU
8	H	15	LYS
8	H	16	PRO
8	H	17	ASP
8	H	23	ILE
8	H	32	MET
8	H	34	SER
8	H	36	LEU
8	H	37	LYS
8	H	40	LEU
8	H	57	ARG
8	H	58	LYS
8	H	61	ILE
8	H	69	LEU
8	H	72	PHE
8	H	74	LYS
8	H	78	ARG
8	H	81	ARG
8	H	82	GLU
8	H	85	LYS
8	H	87	PHE
8	H	93	VAL
8	H	99	ARG
8	H	105	THR
8	H	107	LYS
8	H	109	ARG
8	H	111	LYS
8	H	112	ASN
8	H	113	LYS
8	H	116	ARG
8	H	118	ARG
8	H	120	ARG
8	H	122	LEU
8	H	131	GLU
8	H	143	ARG
8	H	145	ARG

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Mol	Chain	Res	Type
8	H	157	HIS
8	H	158	LEU
8	H	160	LYS
8	H	163	GLN
8	H	179	LYS
8	H	185	VAL
8	H	193	GLN
9	I	3	ILE
9	I	5	ARG
9	I	6	ASP
9	I	13	LYS
9	I	19	LYS
9	I	23	LYS
9	I	25	ARG
9	I	37	LYS
9	I	41	ARG
9	I	49	ARG
9	I	56	ARG
9	I	70	GLU
9	I	74	ARG
9	I	100	CYS
9	I	110	ARG
9	I	117	TYR
9	I	119	LEU
9	I	123	ARG
9	I	124	LYS
9	I	125	LYS
9	I	140	LYS
9	I	141	ARG
9	I	143	LYS
9	I	144	LYS
9	I	148	LYS
9	I	150	ASP
9	I	154	LYS
9	I	155	ASN
9	I	158	ILE
9	I	161	LEU
9	I	167	GLN
9	I	191	GLU
9	I	202	ILE
9	I	205	ARG
9	I	206	LYS

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Mol	Chain	Res	Type
10	J	8	VAL
10	J	10	ARG
10	J	17	ARG
10	J	18	ARG
10	J	29	LEU
10	J	38	ARG
10	J	42	GLU
10	J	50	LEU
10	J	58	ARG
10	J	66	LYS
10	J	69	ARG
10	J	79	ARG
10	J	89	GLU
10	J	93	LYS
10	J	101	LYS
10	J	108	ARG
10	J	109	ARG
10	J	110	LEU
10	J	119	LEU
10	J	121	LYS
10	J	127	ARG
10	J	139	LYS
10	J	143	ASN
10	J	162	ARG
10	J	165	TYR
10	J	172	ARG
10	J	174	LYS
10	J	176	LYS
10	J	180	LYS
11	K	1	MET
11	K	2	LEU
11	K	3	MET
11	K	5	LYS
11	K	13	GLU
11	K	16	PHE
11	K	17	LYS
11	K	20	VAL
11	K	31	LYS
11	K	34	GLU
11	K	35	LEU
11	K	37	ASP
11	K	38	LYS

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Mol	Chain	Res	Type
11	K	43	LEU
11	K	53	LYS
11	K	55	ARG
11	K	65	ARG
11	K	66	HIS
11	K	69	TRP
11	K	74	GLU
11	K	84	HIS
11	K	85	LEU
11	K	89	ILE
11	K	93	THR
11	K	94	LEU
11	K	95	ARG
11	K	96	ARG
11	K	98	ARG
12	L	1	MET
12	L	4	ILE
12	L	7	GLU
12	L	8	ARG
12	L	12	LYS
12	L	15	THR
12	L	18	GLN
12	L	20	LYS
12	L	22	ARG
12	L	25	LEU
12	L	30	LYS
12	L	40	ILE
12	L	49	GLU
12	L	56	ILE
12	L	69	ARG
12	L	71	ARG
12	L	79	LYS
12	L	80	MET
12	L	82	MET
12	L	83	GLN
12	L	89	ARG
12	L	97	ARG
12	L	99	TYR
12	L	100	ASN
12	L	101	ARG
12	L	102	PHE
12	L	105	ARG

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Mol	Chain	Res	Type
12	L	118	ARG
12	L	121	GLN
12	L	136	LYS
12	L	147	LYS
12	L	151	THR
12	L	153	LYS
12	L	155	PHE
12	L	156	GLN
12	L	157	LYS
12	L	158	PHE
13	M	12	MET
13	M	13	ASP
13	M	18	LEU
13	M	20	GLU
13	M	26	LEU
13	M	28	HIS
13	M	33	ARG
13	M	36	ARG
13	M	40	LYS
13	M	43	ASP
13	M	45	ARG
13	M	71	GLU
13	M	76	LEU
13	M	77	ILE
13	M	78	LYS
13	M	83	LYS
13	M	85	LEU
13	M	91	LEU
13	M	94	ILE
13	M	101	ARG
13	M	102	LYS
13	M	127	TYR
13	M	128	PHE
14	N	3	ARG
14	N	9	LYS
14	N	16	LEU
14	N	21	SER
14	N	27	LYS
14	N	49	GLN
14	N	50	ILE
14	N	53	ILE
14	N	56	ASP

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Mol	Chain	Res	Type
14	N	64	ARG
14	N	73	ARG
14	N	76	LYS
14	N	78	LYS
14	N	80	LEU
14	N	94	LYS
14	N	104	ARG
14	N	107	LYS
14	N	112	LYS
14	N	114	ARG
14	N	119	GLU
14	N	121	ARG
14	N	125	LEU
14	N	130	LYS
14	N	133	ARG
14	N	134	VAL
14	N	141	TYR
14	N	142	GLU
15	O	23	GLU
15	O	25	GLU
15	O	28	PHE
15	O	34	PHE
15	O	65	ASP
15	O	66	ARG
15	O	72	TYR
15	O	90	ILE
15	O	103	ASN
15	O	116	LEU
15	O	117	ARG
15	O	121	ARG
15	O	125	LYS
15	O	128	ARG
15	O	129	ILE
15	O	138	ASP
15	O	141	ARG
15	O	146	ARG
15	O	150	ARG
16	P	5	GLU
16	P	6	GLN
16	P	7	LYS
16	P	10	ARG
16	P	12	PHE

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Mol	Chain	Res	Type
16	P	13	ARG
16	P	14	LYS
16	P	15	PHE
16	P	17	TYR
16	P	34	MET
16	P	40	ARG
16	P	41	GLN
16	P	43	ARG
16	P	50	ARG
16	P	51	ARG
16	P	52	LYS
16	P	61	ARG
16	P	64	LYS
16	P	71	GLU
16	P	72	LYS
16	P	74	GLU
16	P	84	ILE
16	P	86	LEU
16	P	88	GLU
16	P	89	MET
16	P	100	LYS
16	P	104	GLN
16	P	110	GLU
16	P	111	MET
16	P	122	THR
16	P	124	LYS
16	P	127	LYS
17	Q	6	PRO
17	Q	7	LEU
17	Q	13	PHE
17	Q	17	LYS
17	Q	20	THR
17	Q	24	HIS
17	Q	26	LYS
17	Q	33	LYS
17	Q	37	ARG
17	Q	41	MET
17	Q	56	LEU
17	Q	62	ARG
17	Q	73	LYS
17	Q	101	ASP
17	Q	102	GLU

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Mol	Chain	Res	Type
17	Q	105	LYS
17	Q	107	GLU
17	Q	115	TYR
17	Q	117	ARG
17	Q	120	LEU
17	Q	126	ARG
17	Q	130	LYS
17	Q	131	LYS
17	Q	135	PRO
17	Q	140	ARG
17	Q	142	GLN
17	Q	145	TYR
17	Q	146	ARG
18	R	1	MET
18	R	8	THR
18	R	26	ASN
18	R	32	LYS
18	R	47	ARG
18	R	59	LYS
18	R	63	ARG
18	R	69	ILE
18	R	78	ARG
18	R	83	ASN
18	R	87	GLU
18	R	88	VAL
18	R	89	SER
18	R	91	LEU
18	R	93	GLN
18	R	94	GLU
18	R	95	ILE
18	R	103	LYS
18	R	105	MET
18	R	111	PHE
18	R	118	GLN
18	R	120	THR
18	R	121	GLN
18	R	123	THR
19	S	7	GLU
19	S	8	LYS
19	S	9	PHE
19	S	11	HIS
19	S	12	ILE

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Mol	Chain	Res	Type
19	S	17	ASN
19	S	34	LYS
19	S	36	VAL
19	S	39	ARG
19	S	59	LEU
19	S	63	GLU
19	S	71	MET
19	S	78	LYS
19	S	86	ARG
19	S	87	GLN
19	S	92	ASP
19	S	94	LYS
19	S	118	ARG
19	S	125	HIS
19	S	130	ARG
19	S	132	ARG
19	S	134	GLN
19	S	137	LYS
19	S	142	ARG
20	T	11	GLN
20	T	16	ARG
20	T	21	PHE
20	T	23	LYS
20	T	28	LEU
20	T	29	LYS
20	T	38	LYS
20	T	41	LYS
20	T	42	HIS
20	T	44	GLU
20	T	62	ARG
20	T	64	LEU
20	T	67	ARG
20	T	83	GLN
20	T	84	ARG
20	T	88	MET
20	T	91	HIS
20	T	93	SER
20	T	94	ARG
20	T	97	LYS
20	T	102	ARG
20	T	121	ARG
20	T	130	ASP

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Mol	Chain	Res	Type
20	T	133	ARG
20	T	143	LYS
20	T	144	LYS
21	U	19	ARG
21	U	20	ILE
21	U	21	ARG
21	U	24	LEU
21	U	33	GLU
21	U	44	LYS
21	U	47	ASN
21	U	48	LEU
21	U	49	LYS
21	U	51	LYS
21	U	62	ARG
21	U	68	THR
21	U	72	GLU
21	U	75	LYS
21	U	85	HIS
21	U	87	ARG
21	U	104	ILE
21	U	106	ILE
21	U	108	PRO
21	U	111	GLU
22	V	1	MET
22	V	7	GLU
22	V	16	LYS
22	V	24	ILE
22	V	31	SER
22	V	32	ILE
22	V	40	ASP
22	V	41	LYS
22	V	43	THR
22	V	45	ARG
22	V	49	GLN
22	V	51	LYS
22	V	52	THR
22	V	61	ARG
22	V	64	GLU
22	V	74	LYS
22	V	78	ILE
23	W	3	ARG
23	W	4	MET

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Mol	Chain	Res	Type
23	W	18	GLU
23	W	20	ARG
23	W	23	ARG
23	W	52	ILE
23	W	64	ASN
23	W	84	LYS
23	W	98	GLN
23	W	103	VAL
23	W	114	GLU
23	W	124	LYS
23	W	128	PHE
23	W	129	PHE
24	X	1	MET
24	X	3	LYS
24	X	5	ARG
24	X	7	LEU
24	X	12	LYS
24	X	21	LYS
24	X	29	LYS
24	X	37	LYS
24	X	67	ARG
24	X	68	LYS
24	X	71	ARG
24	X	75	ILE
24	X	80	LYS
24	X	91	LEU
24	X	98	ASP
24	X	101	LEU
24	X	107	ARG
24	X	108	LYS
24	X	110	HIS
24	X	115	ILE
24	X	135	LYS
24	X	141	PRO
24	X	142	ARG
25	Y	16	ARG
25	Y	20	ARG
25	Y	21	LYS
25	Y	23	MET
25	Y	29	HIS
25	Y	32	LYS
25	Y	35	VAL

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Mol	Chain	Res	Type
25	Y	46	LYS
25	Y	58	PHE
25	Y	61	ARG
25	Y	64	PHE
25	Y	68	LYS
25	Y	93	ARG
25	Y	96	LEU
25	Y	97	TYR
25	Y	98	GLU
25	Y	99	LYS
25	Y	100	LYS
25	Y	101	LYS
25	Y	102	THR
25	Y	111	LYS
25	Y	118	ARG
25	Y	122	LYS
26	Z	44	LEU
26	Z	50	PHE
26	Z	52	LYS
26	Z	65	TYR
26	Z	85	ARG
26	Z	91	LEU
26	Z	94	LYS
26	Z	102	LYS
26	Z	103	HIS
26	Z	104	ARG
26	Z	107	VAL
26	Z	112	ASN
26	Z	114	LYS
27	a	10	ARG
27	a	15	ARG
27	a	26	CYS
27	a	38	LYS
27	a	41	ILE
27	a	44	ILE
27	a	50	VAL
27	a	51	ARG
27	a	60	ASP
27	a	63	VAL
27	a	70	LYS
27	a	82	LYS
27	a	85	ARG

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Mol	Chain	Res	Type
27	a	94	ASP
27	a	95	ARG
28	b	3	LEU
28	b	5	LYS
28	b	16	LYS
28	b	20	LYS
28	b	23	ARG
28	b	26	GLN
28	b	41	TYR
28	b	42	LYS
28	b	49	HIS
28	b	51	GLN
28	b	53	VAL
28	b	83	GLN
28	b	84	HIS
29	c	5	ARG
29	c	7	GLN
29	c	13	ARG
29	c	35	MET
29	c	42	ILE
29	c	47	LYS
29	c	51	ARG
29	c	62	GLU
29	c	63	ARG
29	c	67	ARG
29	c	68	LEU
30	d	7	TYR
30	d	10	HIS
30	d	16	GLN
30	d	19	ARG
30	d	27	ARG
30	d	30	LEU
30	d	33	LYS
30	d	39	CYS
30	d	44	ARG
30	d	46	TYR
30	d	53	ILE
30	d	56	ASP
31	e	76	VAL
31	e	80	LEU
31	e	85	LYS
31	e	87	ARG

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Mol	Chain	Res	Type
31	e	92	LYS
31	e	95	LYS
31	e	97	GLU
31	e	98	LYS
31	e	99	LYS
31	e	100	LYS
31	e	103	THR
31	e	105	ARG
31	e	108	ARG
31	e	110	MET
31	e	114	ARG
31	e	115	ARG
31	e	118	ASN
31	e	120	VAL
31	e	122	THR
31	e	123	PHE
31	e	125	LYS
31	e	126	LYS
31	e	127	LYS
32	f	86	THR
32	f	88	PRO
32	f	89	LYS
32	f	90	LYS
32	f	94	LYS
32	f	95	ARG
32	f	96	LYS
32	f	97	LYS
32	f	104	LYS
32	f	109	ASP
32	f	110	GLU
32	f	111	ASN
32	f	113	LYS
32	f	116	ARG
32	f	118	ARG
32	f	121	CYS
32	f	130	VAL
32	f	135	HIS
32	f	136	PHE
32	f	139	HIS
32	f	150	PHE
33	g	2	THR
33	g	8	ARG

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Mol	Chain	Res	Type
33	g	24	THR
33	g	25	PRO
33	g	36	ARG
33	g	42	MET
33	g	44	LYS
33	g	47	ARG
33	g	50	THR
33	g	51	ASN
33	g	57	ARG
33	g	60	ARG
33	g	64	HIS
33	g	68	ASP
33	g	74	ASP
33	g	76	GLN
33	g	87	LEU
33	g	88	ARG
33	g	91	ASP
33	g	93	THR
33	g	100	ARG
33	g	118	ARG
33	g	119	GLN
33	g	131	LEU
33	g	139	LYS
33	g	140	TYR
33	g	143	GLN
33	g	145	GLU
33	g	146	SER
33	g	149	GLU
33	g	156	PHE
33	g	161	SER
33	g	175	LYS
33	g	183	LYS
33	g	185	LYS
33	g	192	THR
33	g	203	ASP
33	g	225	LYS
33	g	246	TYR
33	g	259	TRP
33	g	264	LYS
33	g	271	LYS
33	g	275	ILE
33	g	276	SER

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Mol	Chain	Res	Type
33	g	277	THR
33	g	279	SER
33	g	280	LYS
33	g	289	LEU
33	g	294	ASP
35	l	29	ASP
35	l	32	HIS
35	l	34	ARG
35	l	38	ARG
35	l	43	THR
35	l	46	THR
35	l	55	ASP
35	l	57	LYS
35	l	58	LYS
35	l	60	VAL
35	l	70	ASN
35	l	72	THR
35	l	78	GLU
35	l	85	LEU
35	l	89	GLN
35	l	93	ILE
35	l	100	ILE
35	l	109	LYS
36	n	34	GLU
36	n	35	TYR
36	n	39	ILE
36	n	42	LEU
36	n	48	GLU
36	n	62	ARG
36	n	66	ARG
36	n	69	VAL
36	n	71	ILE
36	n	74	SER
36	n	78	LEU
36	n	81	LEU
36	n	83	ASP
36	n	85	GLN
36	n	95	TYR
36	n	101	ARG
36	n	102	SER
36	n	103	LEU
36	n	109	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (116) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	50	ASN
1	A	81	ASN
1	A	141	ASN
1	A	165	ASN
1	A	169	HIS
2	B	75	GLN
2	B	76	ASN
2	B	101	HIS
2	B	118	GLN
2	B	124	HIS
2	B	147	ASN
2	B	148	ASN
2	B	179	ASN
2	B	186	ASN
2	B	202	GLN
2	B	232	HIS
3	C	157	ASN
4	D	74	GLN
4	D	179	GLN
4	D	226	GLN
5	E	50	ASN
5	E	98	ASN
5	E	142	HIS
5	E	188	ASN
5	E	209	HIS
6	F	29	GLN
6	F	65	GLN
6	F	83	ASN
6	F	186	ASN
7	G	56	ASN
7	G	65	GLN
7	G	81	HIS
7	G	177	GLN
8	H	12	ASN
8	H	73	GLN
8	H	163	GLN
8	H	168	HIS
9	I	22	HIS
9	I	84	ASN
9	I	99	ASN
9	I	165	GLN

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Mol	Chain	Res	Type
11	K	7	ASN
11	K	28	HIS
11	K	39	ASN
11	K	44	HIS
11	K	50	GLN
11	K	66	HIS
12	L	18	GLN
12	L	19	ASN
12	L	65	ASN
12	L	121	GLN
12	L	156	GLN
13	M	19	GLN
13	M	28	HIS
13	M	75	ASN
13	M	82	ASN
14	N	5	HIS
14	N	62	GLN
14	N	101	HIS
14	N	123	HIS
15	O	20	GLN
16	P	41	GLN
16	P	53	GLN
16	P	79	HIS
16	P	103	ASN
16	P	114	HIS
16	P	128	HIS
17	Q	80	GLN
18	R	74	GLN
18	R	121	GLN
19	S	11	HIS
19	S	42	HIS
19	S	87	GLN
20	T	11	GLN
20	T	42	HIS
20	T	63	HIS
20	T	83	GLN
20	T	85	ASN
20	T	126	GLN
20	T	128	GLN
21	U	18	HIS
21	U	47	ASN
22	V	47	ASN

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Mol	Chain	Res	Type
22	V	76	HIS
23	W	15	ASN
23	W	44	HIS
23	W	64	ASN
23	W	98	GLN
24	X	39	ASN
24	X	46	HIS
25	Y	29	HIS
25	Y	85	ASN
25	Y	89	HIS
25	Y	94	HIS
26	Z	103	HIS
28	b	49	HIS
28	b	83	GLN
28	b	84	HIS
29	c	26	GLN
30	d	26	ASN
30	d	28	HIS
32	f	151	ASN
33	g	20	GLN
33	g	64	HIS
33	g	76	GLN
33	g	119	GLN
33	g	143	GLN
33	g	162	ASN
33	g	226	HIS
33	g	237	ASN
35	l	36	GLN
35	l	70	ASN
35	l	84	GLN
35	l	89	GLN
36	n	87	ASN
36	n	112	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
34	i	1735/1863 (93%)	503 (28%)	0

All (503) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
34	i	2	A
34	i	3	C
34	i	4	C
34	i	8	U
34	i	16	G
34	i	25	A
34	i	26	U
34	i	32	U
34	i	33	G
34	i	41	G
34	i	44	U
34	i	45	A
34	i	46	A
34	i	50	A
34	i	56	G
34	i	59	U
34	i	66	G
34	i	67	C
34	i	68	A
34	i	70	G
34	i	72	C
34	i	73	C
34	i	74	G
34	i	75	G
34	i	76	U
34	i	77	A
34	i	78	C
34	i	79	A
34	i	80	G
34	i	99	A
34	i	103	A
34	i	113	G
34	i	126	G
34	i	139	C
34	i	140	U
34	i	141	A
34	i	142	C
34	i	143	U
34	i	147	A
34	i	148	U
34	i	155	G
34	i	160	U
34	i	161	U

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Mol	Chain	Res	Type
34	i	162	C
34	i	170	A
34	i	176	U
34	i	182	C
34	i	183	G
34	i	187	C
34	i	188	U
34	i	189	G
34	i	190	A
34	i	191	C
34	i	197	U
34	i	198	U
34	i	199	G
34	i	203	G
34	i	205	G
34	i	206	A
34	i	212	G
34	i	213	C
34	i	223	A
34	i	224	U
34	i	225	C
34	i	226	A
34	i	229	A
34	i	230	C
34	i	232	A
34	i	233	A
34	i	234	C
34	i	235	C
34	i	238	G
34	i	273	G
34	i	275	C
34	i	276	U
34	i	277	U
34	i	278	U
34	i	279	G
34	i	286	C
34	i	287	U
34	i	298	G
34	i	299	G
34	i	300	G
34	i	303	G
34	i	304	A

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Mol	Chain	Res	Type
34	i	307	G
34	i	309	A
34	i	311	C
34	i	313	C
34	i	314	U
34	i	315	C
34	i	316	C
34	i	317	G
34	i	318	U
34	i	320	G
34	i	322	G
34	i	326	A
34	i	332	C
34	i	337	G
34	i	339	A
34	i	346	C
34	i	352	C
34	i	354	A
34	i	357	U
34	i	359	C
34	i	375	G
34	i	376	C
34	i	379	A
34	i	382	A
34	i	390	C
34	i	397	G
34	i	398	A
34	i	399	C
34	i	416	A
34	i	438	A
34	i	440	C
34	i	442	G
34	i	449	C
34	i	454	A
34	i	456	G
34	i	460	G
34	i	461	G
34	i	462	C
34	i	463	A
34	i	464	G
34	i	466	A
34	i	472	G

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Mol	Chain	Res	Type
34	i	477	U
34	i	482	C
34	i	484	C
34	i	486	C
34	i	515	A
34	i	521	A
34	i	522	C
34	i	523	A
34	i	525	G
34	i	537	G
34	i	539	C
34	i	541	U
34	i	542	G
34	i	543	U
34	i	546	U
34	i	547	U
34	i	549	G
34	i	550	A
34	i	554	A
34	i	555	G
34	i	566	A
34	i	574	A
34	i	576	G
34	i	578	G
34	i	580	A
34	i	581	U
34	i	582	C
34	i	583	C
34	i	586	U
34	i	590	G
34	i	595	A
34	i	596	G
34	i	597	U
34	i	598	C
34	i	600	G
34	i	604	G
34	i	609	A
34	i	610	G
34	i	618	A
34	i	619	A
34	i	624	A
34	i	631	A

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Mol	Chain	Res	Type
34	i	632	U
34	i	633	A
34	i	634	G
34	i	645	A
34	i	658	A
34	i	659	A
34	i	660	A
34	i	661	A
34	i	662	A
34	i	669	A
34	i	678	U
34	i	679	U
34	i	683	G
34	i	684	A
34	i	685	G
34	i	686	G
34	i	687	G
34	i	689	G
34	i	691	G
34	i	725	C
34	i	727	G
34	i	728	U
34	i	729	C
34	i	730	C
34	i	731	C
34	i	734	C
34	i	735	C
34	i	736	C
34	i	740	G
34	i	743	U
34	i	744	C
34	i	747	G
34	i	748	G
34	i	749	C
34	i	750	G
34	i	751	C
34	i	784	G
34	i	787	C
34	i	793	C
34	i	794	G
34	i	795	U
34	i	806	A

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Mol	Chain	Res	Type
34	i	807	A
34	i	808	A
34	i	814	A
34	i	817	G
34	i	818	U
34	i	826	A
34	i	827	G
34	i	830	C
34	i	831	C
34	i	832	G
34	i	833	A
34	i	834	G
34	i	835	C
34	i	836	C
34	i	838	C
34	i	839	C
34	i	841	G
34	i	843	A
34	i	849	C
34	i	860	A
34	i	864	G
34	i	865	A
34	i	866	A
34	i	867	U
34	i	869	G
34	i	870	G
34	i	871	A
34	i	872	C
34	i	873	C
34	i	874	G
34	i	877	G
34	i	882	A
34	i	883	U
34	i	884	U
34	i	886	U
34	i	890	G
34	i	891	G
34	i	893	U
34	i	899	A
34	i	900	A
34	i	907	C
34	i	909	A

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Mol	Chain	Res	Type
34	i	910	U
34	i	916	A
34	i	917	G
34	i	929	G
34	i	947	C
34	i	951	A
34	i	962	U
34	i	965	U
34	i	966	G
34	i	967	G
34	i	972	G
34	i	974	G
34	i	986	A
34	i	988	A
34	i	995	G
34	i	997	A
34	i	1004	A
34	i	1013	U
34	i	1019	A
34	i	1021	U
34	i	1027	A
34	i	1035	C
34	i	1041	U
34	i	1045	A
34	i	1046	A
34	i	1047	G
34	i	1048	A
34	i	1050	G
34	i	1056	A
34	i	1057	U
34	i	1058	A
34	i	1068	U
34	i	1069	U
34	i	1073	A
34	i	1074	C
34	i	1079	A
34	i	1092	G
34	i	1093	G
34	i	1105	C
34	i	1106	G
34	i	1107	U
34	i	1111	U

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Mol	Chain	Res	Type
34	i	1112	C
34	i	1113	C
34	i	1114	C
34	i	1116	U
34	i	1119	C
34	i	1127	G
34	i	1132	U
34	i	1134	C
34	i	1136	G
34	i	1137	G
34	i	1139	A
34	i	1144	A
34	i	1145	A
34	i	1146	A
34	i	1149	C
34	i	1150	U
34	i	1151	U
34	i	1153	G
34	i	1154	G
34	i	1157	U
34	i	1162	G
34	i	1164	G
34	i	1199	G
34	i	1202	G
34	i	1204	A
34	i	1205	A
34	i	1208	G
34	i	1210	A
34	i	1211	C
34	i	1212	C
34	i	1213	A
34	i	1217	G
34	i	1220	G
34	i	1232	G
34	i	1233	C
34	i	1238	U
34	i	1241	G
34	i	1247	A
34	i	1249	A
34	i	1250	C
34	i	1252	G
34	i	1253	G

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Mol	Chain	Res	Type
34	i	1255	A
34	i	1256	A
34	i	1259	U
34	i	1260	C
34	i	1270	G
34	i	1271	G
34	i	1272	A
34	i	1274	A
34	i	1279	C
34	i	1280	A
34	i	1281	G
34	i	1296	U
34	i	1297	A
34	i	1299	C
34	i	1303	U
34	i	1304	U
34	i	1310	U
34	i	1311	U
34	i	1312	C
34	i	1313	U
34	i	1320	G
34	i	1325	U
34	i	1338	U
34	i	1339	U
34	i	1344	G
34	i	1354	U
34	i	1367	U
34	i	1368	U
34	i	1369	C
34	i	1374	A
34	i	1390	G
34	i	1391	C
34	i	1392	A
34	i	1393	U
34	i	1394	G
34	i	1397	A
34	i	1398	A
34	i	1400	U
34	i	1402	G
34	i	1403	U
34	i	1405	A
34	i	1406	C

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Mol	Chain	Res	Type
34	i	1408	C
34	i	1413	C
34	i	1414	C
34	i	1415	C
34	i	1422	U
34	i	1426	C
34	i	1431	C
34	i	1433	C
34	i	1445	G
34	i	1448	A
34	i	1450	A
34	i	1452	G
34	i	1455	G
34	i	1458	U
34	i	1461	A
34	i	1470	A
34	i	1471	G
34	i	1472	A
34	i	1473	U
34	i	1474	U
34	i	1485	A
34	i	1486	G
34	i	1489	C
34	i	1490	U
34	i	1491	G
34	i	1504	A
34	i	1506	G
34	i	1507	U
34	i	1508	C
34	i	1511	G
34	i	1514	U
34	i	1515	G
34	i	1516	C
34	i	1519	G
34	i	1528	A
34	i	1530	U
34	i	1532	A
34	i	1535	G
34	i	1539	C
34	i	1540	A
34	i	1545	G
34	i	1546	U

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Mol	Chain	Res	Type
34	i	1547	G
34	i	1548	C
34	i	1549	C
34	i	1551	A
34	i	1552	C
34	i	1553	C
34	i	1558	G
34	i	1559	C
34	i	1565	G
34	i	1573	U
34	i	1575	A
34	i	1577	C
34	i	1580	U
34	i	1582	G
34	i	1583	A
34	i	1593	G
34	i	1594	U
34	i	1595	G
34	i	1597	U
34	i	1599	G
34	i	1616	U
34	i	1617	U
34	i	1618	A
34	i	1627	G
34	i	1628	A
34	i	1632	A
34	i	1633	G
34	i	1634	G
34	i	1643	G
34	i	1649	G
34	i	1652	G
34	i	1660	G
34	i	1675	G
34	i	1683	C
34	i	1690	A
34	i	1694	A
34	i	1696	C
34	i	1697	G
34	i	1716	U
34	i	1717	G
34	i	1722	G
34	i	1724	U

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Mol	Chain	Res	Type
34	i	1741	U
34	i	1743	G
34	i	1745	C
34	i	1747	C
34	i	1748	G
34	i	1749	C
34	i	1750	C
34	i	1751	G
34	i	1755	U
34	i	1774	G
34	i	1775	A
34	i	1776	G
34	i	1777	C
34	i	1778	G
34	i	1779	C
34	i	1780	U
34	i	1790	G
34	i	1792	C
34	i	1799	G
34	i	1818	A
34	i	1819	A
34	i	1820	G
34	i	1822	C
34	i	1823	G
34	i	1825	A
34	i	1826	A
34	i	1829	A
34	i	1832	U
34	i	1833	U
34	i	1843	G
34	i	1845	A
34	i	1846	C
34	i	1852	G
34	i	1855	G
34	i	1856	G
34	i	1857	A
34	i	1858	U
34	i	1859	C
34	i	1861	U
34	i	1863	A

There are no RNA pucker outliers to report.

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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
34	i	13
10	J	3
4	D	2
7	G	1
31	e	1
9	I	1
3	C	1
21	U	1
18	R	1
35	l	1
19	S	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	i	787:C	O3'	788:C	P	14.28
1	i	744:C	O3'	745:U	P	13.18
1	i	326:A	O3'	327:C	P	7.96
1	i	309:A	O3'	310:G	P	7.21
1	i	1826:A	O3'	1827:C	P	6.13
1	i	209:C	O3'	210:G	P	5.61

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	i	1698:C	O3'	1699:C	P	4.65
1	i	1206:G	O3'	1207:G	P	3.66
1	i	304:A	O3'	305:U	P	3.31
1	i	183:G	O3'	184:G	P	2.94
1	i	550:A	O3'	551:A	P	2.80
1	l	112:GLY	C	113:PHE	N	2.79
1	i	515:A	O3'	516:A	P	2.53
1	i	1683:C	O3'	1684:C	P	2.26
1	D	5:ILE	C	6:SER	N	1.82
1	e	95:LYS	C	96:GLN	N	1.76
1	J	118:GLY	C	119:LEU	N	1.73
1	I	43:ILE	C	44:HIS	N	1.67
1	J	146:SER	C	147:PHE	N	1.61
1	U	93:SER	C	94:PRO	N	1.61
1	D	4:GLN	C	5:ILE	N	1.20
1	C	93:LYS	C	94:ILE	N	1.17
1	G	130:PRO	C	131:ARG	N	1.16
1	R	1:MET	C	2:GLY	N	1.13
1	S	40:TYR	C	41:ALA	N	1.09
1	J	85:GLY	C	86:VAL	N	0.95

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	208/295 (70%)	0.22	18 (8%) 10 12	209, 304, 369, 385	0
2	B	215/264 (81%)	2.66	107 (49%) 0 1	170, 238, 290, 301	0
3	C	226/278 (81%)	0.86	38 (16%) 1 4	113, 192, 306, 337	0
4	D	227/243 (93%)	5.52	168 (74%) 0 0	186, 248, 328, 357	0
5	E	263/263 (100%)	1.92	80 (30%) 0 2	98, 185, 238, 251	0
6	F	191/204 (93%)	2.18	93 (48%) 0 1	228, 288, 316, 326	0
7	G	237/249 (95%)	0.28	21 (8%) 9 12	126, 225, 339, 361	0
8	H	190/194 (97%)	0.95	43 (22%) 0 2	177, 322, 371, 383	0
9	I	206/208 (99%)	2.74	93 (45%) 0 1	80, 224, 300, 314	0
10	J	182/194 (93%)	1.17	44 (24%) 0 2	119, 186, 238, 281	0
11	K	98/165 (59%)	4.72	65 (66%) 0 0	256, 329, 366, 374	0
12	L	158/158 (100%)	1.88	58 (36%) 0 1	89, 163, 283, 295	0
13	M	124/132 (93%)	0.21	9 (7%) 15 16	295, 428, 439, 441	0
14	N	150/151 (99%)	0.76	24 (16%) 1 5	111, 167, 276, 299	0
15	O	136/151 (90%)	0.91	23 (16%) 1 4	119, 235, 306, 339	0
16	P	127/145 (87%)	1.16	38 (29%) 0 2	274, 351, 387, 394	0
17	Q	141/146 (96%)	1.90	55 (39%) 0 1	198, 305, 333, 340	0
18	R	126/135 (93%)	0.73	23 (18%) 1 4	208, 271, 378, 382	0
19	S	137/152 (90%)	1.07	35 (25%) 0 2	253, 328, 349, 358	0
20	T	141/145 (97%)	-0.06	0 100 100	273, 331, 358, 363	0
21	U	104/119 (87%)	6.95	95 (91%) 0 0	197, 304, 340, 357	0
22	V	82/83 (98%)	0.44	12 (14%) 2 6	196, 246, 356, 365	0
23	W	129/130 (99%)	4.12	93 (72%) 0 0	116, 169, 214, 229	0
24	X	142/143 (99%)	4.54	97 (68%) 0 0	74, 101, 124, 133	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	Y	126/133 (94%)	0.58	14 (11%) 5 9	134, 185, 219, 236	0
26	Z	75/125 (60%)	4.04	63 (84%) 0 0	295, 323, 347, 353	0
27	a	107/115 (93%)	2.29	44 (41%) 0 1	115, 166, 278, 294	0
28	b	84/84 (100%)	1.17	18 (21%) 0 3	186, 244, 315, 338	0
29	c	64/69 (92%)	1.62	19 (29%) 0 2	210, 264, 310, 317	0
30	d	53/56 (94%)	5.19	41 (77%) 0 0	215, 248, 337, 357	0
31	e	59/133 (44%)	0.25	8 (13%) 3 6	112, 169, 214, 226	0
32	f	71/156 (45%)	-0.61	3 (4%) 36 33	243, 417, 429, 432	0
33	g	313/317 (98%)	0.28	20 (6%) 19 19	282, 330, 361, 377	0
34	i	1840/1863 (98%)	1.06	335 (18%) 1 4	70, 205, 399, 456	0
35	l	85/113 (75%)	2.96	53 (62%) 0 0	270, 272, 274, 274	0
36	n	82/144 (56%)	2.44	39 (47%) 0 1	257, 260, 262, 263	0
All	All	6899/7655 (90%)	1.62	1989 (28%) 0 2	70, 246, 379, 456	0

All (1989) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
34	i	721	C	30.0
34	i	722	C	27.1
34	i	720	A	27.0
34	i	250	G	26.6
21	U	36	CYS	26.5
34	i	761	G	23.0
4	D	15	GLY	22.9
4	D	52	ALA	22.7
4	D	71	ALA	21.8
24	X	83	ALA	21.5
34	i	249	C	21.2
34	i	697	G	21.1
11	K	19	GLY	19.6
21	U	40	ILE	19.1
21	U	37	ALA	18.9
4	D	70	THR	18.8
24	X	69	CYS	18.6
34	i	694	G	18.6
11	K	63	ALA	18.5
4	D	12	VAL	18.2
2	B	215	VAL	18.0

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Mol	Chain	Res	Type	RSRZ
21	U	42	GLY	17.2
34	i	696	G	17.2
11	K	20	VAL	17.1
21	U	82	MET	17.0
30	d	51	GLY	17.0
11	K	93	THR	16.7
34	i	252	C	16.5
11	K	21	MET	16.5
8	H	193	GLN	16.5
21	U	43	ALA	16.4
34	i	762	C	16.2
21	U	61	LEU	16.1
34	i	763	U	16.0
28	b	2	PRO	16.0
21	U	32	LEU	16.0
34	i	251	C	15.9
4	D	66	ILE	15.7
21	U	84	ILE	15.6
4	D	13	ALA	15.5
21	U	65	THR	15.5
4	D	189	MET	15.5
17	Q	123	ASP	15.5
4	D	20	GLU	15.2
4	D	19	ALA	15.1
4	D	67	ARG	15.1
24	X	111	ALA	15.0
4	D	68	GLU	15.0
4	D	63	GLY	14.9
4	D	74	GLN	14.9
21	U	64	THR	14.7
11	K	64	TRP	14.7
34	i	693	A	14.6
24	X	118	VAL	14.5
4	D	33	GLY	14.4
9	I	102	VAL	14.2
30	d	34	TYR	14.1
5	E	18	TRP	14.1
28	b	3	LEU	14.0
4	D	85	GLU	13.9
23	W	129	PHE	13.8
30	d	30	LEU	13.8
4	D	8	LYS	13.6

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Mol	Chain	Res	Type	RSRZ
21	U	101	ILE	13.6
11	K	15	LEU	13.4
21	U	25	THR	13.3
4	D	58	VAL	13.2
9	I	80	ASP	13.2
4	D	55	THR	13.2
4	D	36	GLY	13.0
4	D	188	ILE	13.0
4	D	32	ASP	13.0
2	B	103	MET	12.8
10	J	98	LEU	12.8
30	d	37	ASN	12.7
30	d	31	ILE	12.7
9	I	173	ALA	12.6
4	D	53	THR	12.5
24	X	70	VAL	12.4
12	L	21	LYS	12.4
34	i	698	G	12.4
34	i	1762	A	12.4
4	D	134	CYS	12.3
11	K	71	LEU	12.3
24	X	115	ILE	12.3
4	D	60	GLY	12.3
34	i	692	U	12.3
23	W	103	VAL	12.3
21	U	26	SER	12.2
2	B	100	PHE	12.2
4	D	50	ILE	12.1
2	B	217	MET	12.1
9	I	101	ILE	12.1
4	D	95	GLY	12.0
34	i	764	C	11.9
4	D	64	ARG	11.8
21	U	39	LEU	11.7
30	d	47	ALA	11.7
26	Z	107	VAL	11.7
30	d	35	GLY	11.6
5	E	70	ILE	11.5
4	D	84	VAL	11.5
9	I	162	LEU	11.5
27	a	37	LYS	11.4
21	U	66	ARG	11.4

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Mol	Chain	Res	Type	RSRZ
4	D	34	TYR	11.3
9	I	171	LEU	11.3
24	X	82	THR	11.3
9	I	84	ASN	11.3
4	D	133	GLY	11.2
21	U	85	HIS	11.2
34	i	768	G	11.2
9	I	190	LEU	11.2
9	I	189	VAL	11.2
4	D	86	LEU	11.1
23	W	127	GLY	11.0
24	X	44	ALA	11.0
5	E	69	PHE	11.0
23	W	9	ASP	10.9
24	X	85	VAL	10.9
34	i	723	G	10.9
35	l	102	LEU	10.9
24	X	122	VAL	10.9
9	I	83	TYR	10.8
23	W	100	GLY	10.7
34	i	1550	U	10.7
21	U	35	VAL	10.6
4	D	98	ALA	10.6
8	H	191	GLU	10.6
27	a	35	ALA	10.6
11	K	67	PHE	10.6
27	a	36	ILE	10.5
34	i	1763	C	10.5
4	D	75	LYS	10.5
9	I	81	VAL	10.5
2	B	214	LYS	10.4
11	K	22	VAL	10.4
34	i	1551	A	10.4
11	K	62	PHE	10.4
5	E	46	ILE	10.4
11	K	66	HIS	10.4
24	X	41	PHE	10.3
4	D	16	ILE	10.3
2	B	101	HIS	10.3
11	K	68	TYR	10.3
4	D	186	VAL	10.3
5	E	78	ALA	10.2

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Mol	Chain	Res	Type	RSRZ
11	K	65	ARG	10.2
21	U	23	THR	10.2
30	d	52	PHE	10.1
30	d	29	GLY	10.0
4	D	72	VAL	10.0
4	D	11	PHE	9.9
34	i	1549	C	9.9
9	I	169	GLY	9.9
21	U	81	GLN	9.8
11	K	69	TRP	9.8
24	X	102	VAL	9.8
24	X	84	PHE	9.8
34	i	767	A	9.8
5	E	15	PRO	9.7
21	U	24	LEU	9.7
4	D	57	ASN	9.7
34	i	695	C	9.7
27	a	84	VAL	9.6
9	I	158	ILE	9.6
34	i	1252	G	9.6
21	U	21	ARG	9.6
2	B	102	GLY	9.6
4	D	47	GLU	9.6
24	X	100	VAL	9.5
4	D	88	ALA	9.5
4	D	131	ALA	9.4
2	B	223	PHE	9.4
5	E	14	ALA	9.3
11	K	18	GLU	9.3
2	B	213	ARG	9.3
21	U	59	LYS	9.3
21	U	90	ASP	9.3
4	D	49	ILE	9.2
24	X	43	GLY	9.2
9	I	172	LEU	9.2
4	D	7	LYS	9.2
26	Z	69	THR	9.2
30	d	50	ILE	9.1
36	n	35	TYR	9.1
4	D	97	CYS	9.1
10	J	95	ASP	9.1
4	D	48	ILE	9.1

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Mol	Chain	Res	Type	RSRZ
23	W	102	ILE	9.1
13	M	9	GLY	9.1
9	I	104	ILE	9.1
27	a	72	HIS	9.0
11	K	92	ALA	9.0
23	W	101	PHE	9.0
9	I	78	ILE	8.9
5	E	77	ARG	8.9
4	D	102	ALA	8.9
21	U	78	ASP	8.9
28	b	4	ALA	8.9
24	X	42	GLY	8.8
23	W	128	PHE	8.8
6	F	53	ALA	8.8
24	X	67	ARG	8.8
34	i	719	C	8.8
24	X	81	ILE	8.8
9	I	95	THR	8.8
21	U	50	VAL	8.8
5	E	60	GLU	8.8
11	K	72	THR	8.8
24	X	72	VAL	8.8
4	D	22	ASN	8.8
35	l	101	GLY	8.8
10	J	97	ILE	8.7
5	E	45	ILE	8.7
4	D	101	GLN	8.7
4	D	190	LEU	8.7
6	F	40	ALA	8.7
9	I	38	ILE	8.6
24	X	130	LEU	8.6
23	W	112	ASP	8.6
9	I	166	PHE	8.5
9	I	165	GLN	8.5
5	E	79	ASP	8.5
4	D	24	PHE	8.5
4	D	83	SER	8.5
6	F	68	ILE	8.4
35	l	103	ALA	8.4
5	E	72	ILE	8.4
5	E	50	ASN	8.4
24	X	40	PRO	8.4

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Mol	Chain	Res	Type	RSRZ
4	D	46	THR	8.3
2	B	221	PRO	8.3
4	D	100	ALA	8.3
6	F	39	ILE	8.3
4	D	65	ARG	8.3
26	Z	77	LEU	8.3
2	B	224	GLU	8.3
6	F	69	VAL	8.3
27	a	70	LYS	8.3
21	U	102	THR	8.3
29	c	65	ALA	8.2
9	I	170	LYS	8.2
30	d	36	LEU	8.2
23	W	111	MET	8.2
11	K	61	GLN	8.2
21	U	97	ILE	8.2
25	Y	17	LEU	8.1
2	B	121	ILE	8.1
11	K	11	ILE	8.1
11	K	25	LYS	8.1
12	L	28	THR	8.1
23	W	104	LEU	8.1
5	E	43	PRO	8.1
16	P	87	PRO	8.1
24	X	47	ALA	8.1
23	W	94	LEU	8.1
28	b	24	LEU	8.0
36	n	79	VAL	8.0
21	U	62	ARG	8.0
30	d	20	SER	8.0
4	D	29	LEU	8.0
2	B	220	LYS	8.0
21	U	22	ILE	8.0
11	K	70	TYR	8.0
21	U	60	THR	8.0
5	E	64	ILE	8.0
2	B	136	HIS	7.9
35	l	97	LEU	7.9
23	W	27	ILE	7.9
21	U	38	ASP	7.9
9	I	105	ASP	7.9
4	D	25	LEU	7.9

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Mol	Chain	Res	Type	RSRZ
21	U	89	ILE	7.9
4	D	73	VAL	7.9
4	D	35	SER	7.8
5	E	65	CYS	7.8
4	D	14	ASP	7.8
24	X	123	VAL	7.8
2	B	122	GLU	7.8
11	K	23	ALA	7.8
9	I	122	GLY	7.8
24	X	103	ALA	7.8
2	B	104	ASP	7.8
11	K	60	GLU	7.8
24	X	54	LYS	7.8
11	K	91	PRO	7.7
5	E	54	TYR	7.7
23	W	37	PHE	7.7
5	E	44	LEU	7.7
21	U	91	LEU	7.7
5	E	17	HIS	7.7
18	R	41	ILE	7.7
21	U	33	GLU	7.7
21	U	98	VAL	7.7
5	E	80	ILE	7.7
24	X	45	SER	7.6
2	B	216	LYS	7.6
4	D	136	VAL	7.6
17	Q	124	PRO	7.6
24	X	55	VAL	7.6
30	d	38	MET	7.6
23	W	10	ALA	7.6
4	D	76	ARG	7.6
9	I	174	CYS	7.6
23	W	72	CYS	7.6
21	U	63	ILE	7.6
23	W	124	LYS	7.6
21	U	83	ARG	7.6
5	E	90	ILE	7.5
21	U	87	ARG	7.5
4	D	10	LYS	7.5
7	G	153	VAL	7.5
21	U	44	LYS	7.5
5	E	71	LYS	7.5

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Mol	Chain	Res	Type	RSRZ
34	i	1419	C	7.5
24	X	46	HIS	7.4
23	W	105	THR	7.4
4	D	9	ARG	7.4
23	W	34	ILE	7.4
4	D	208	VAL	7.4
11	K	58	VAL	7.4
24	X	117	GLY	7.4
10	J	94	LEU	7.4
21	U	88	LEU	7.4
34	i	253	G	7.4
4	D	191	PRO	7.3
23	W	110	ILE	7.3
34	i	1757	G	7.3
24	X	112	VAL	7.3
26	Z	109	TYR	7.3
2	B	135	LEU	7.3
26	Z	70	PRO	7.3
4	D	17	PHE	7.3
24	X	49	GLY	7.3
30	d	46	TYR	7.2
9	I	96	LEU	7.2
6	F	32	ASP	7.2
34	i	1389	G	7.2
2	B	137	LEU	7.2
23	W	73	GLY	7.2
24	X	68	LYS	7.2
26	Z	73	VAL	7.2
24	X	116	PRO	7.2
12	L	22	ARG	7.2
2	B	99	ASN	7.2
12	L	142	VAL	7.2
27	a	69	VAL	7.2
18	R	39	ALA	7.2
4	D	135	GLU	7.2
21	U	19	ARG	7.2
24	X	119	ARG	7.2
21	U	105	SER	7.2
11	K	26	ASP	7.1
21	U	110	VAL	7.1
4	D	21	LEU	7.1
9	I	79	ILE	7.1

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Mol	Chain	Res	Type	RSRZ
4	D	69	LEU	7.1
34	i	739	U	7.1
21	U	117	ALA	7.1
6	F	106	GLU	7.1
5	E	42	LEU	7.1
36	n	76	ILE	7.1
4	D	184	ILE	7.0
26	Z	67	LEU	7.0
6	F	54	GLY	7.0
4	D	210	ILE	7.0
5	E	55	ALA	7.0
9	I	198	TYR	7.0
30	d	22	ARG	7.0
4	D	59	LEU	7.0
8	H	194	LEU	7.0
9	I	191	GLU	7.0
11	K	24	LYS	7.0
21	U	111	GLU	7.0
2	B	212	VAL	7.0
23	W	130	PHE	7.0
2	B	138	PHE	6.9
8	H	143	ARG	6.9
2	B	225	LEU	6.9
21	U	58	THR	6.9
23	W	69	LEU	6.9
24	X	124	LYS	6.9
5	E	82	TYR	6.9
5	E	73	ASP	6.9
9	I	100	CYS	6.9
6	F	41	VAL	6.9
12	L	20	LYS	6.9
24	X	101	LEU	6.8
27	a	39	PHE	6.8
4	D	168	VAL	6.8
21	U	20	ILE	6.8
23	W	61	ILE	6.8
4	D	45	ARG	6.8
34	i	1858	U	6.8
34	i	580	A	6.8
26	Z	87	ALA	6.8
5	E	47	PHE	6.8
35	l	55	ASP	6.8

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Mol	Chain	Res	Type	RSRZ
23	W	25	VAL	6.7
21	U	103	SER	6.7
8	H	192	PHE	6.7
11	K	42	ASN	6.7
6	F	67	PRO	6.7
21	U	49	LYS	6.7
24	X	10	ALA	6.7
24	X	71	ARG	6.7
2	B	124	HIS	6.7
12	L	143	LEU	6.7
2	B	139	CYS	6.7
30	d	33	LYS	6.7
26	Z	68	ILE	6.6
9	I	103	LEU	6.6
6	F	64	ALA	6.6
34	i	261	G	6.6
5	E	92	ILE	6.6
5	E	67	GLN	6.6
23	W	125	ILE	6.6
15	O	130	GLU	6.6
24	X	76	LYS	6.6
36	n	36	ALA	6.6
30	d	23	VAL	6.6
34	i	863	G	6.6
4	D	23	GLU	6.6
9	I	155	ASN	6.6
34	i	473	C	6.5
24	X	94	ILE	6.5
27	a	7	ASN	6.5
5	E	61	VAL	6.5
24	X	74	LEU	6.5
24	X	120	PHE	6.5
2	B	89	GLU	6.5
17	Q	54	PRO	6.5
23	W	29	PRO	6.5
24	X	56	GLY	6.4
34	i	1387	C	6.4
21	U	56	MET	6.4
30	d	19	ARG	6.4
17	Q	55	VAL	6.4
17	Q	108	ILE	6.4
4	D	126	ILE	6.4

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Mol	Chain	Res	Type	RSRZ
4	D	171	ALA	6.4
21	U	113	GLU	6.3
23	W	8	ALA	6.3
4	D	132	LYS	6.3
9	I	159	SER	6.3
21	U	100	GLN	6.3
5	E	91	SER	6.3
23	W	6	VAL	6.3
23	W	126	LEU	6.3
23	W	123	GLY	6.3
16	P	110	GLU	6.3
24	X	86	PRO	6.3
12	L	101	ARG	6.3
5	E	20	LEU	6.3
23	W	76	SER	6.3
21	U	27	ARG	6.3
30	d	28	HIS	6.3
36	n	108	GLU	6.3
15	O	108	PRO	6.3
10	J	16	PRO	6.2
23	W	40	VAL	6.2
1	A	209	GLU	6.2
34	i	1863	A	6.2
34	i	1552	C	6.2
11	K	49	MET	6.2
24	X	51	VAL	6.2
9	I	163	GLU	6.2
27	a	71	LEU	6.2
34	i	1756	C	6.2
24	X	79	LYS	6.2
21	U	80	PHE	6.2
12	L	141	ASN	6.1
23	W	35	VAL	6.1
11	K	14	LEU	6.1
4	D	26	THR	6.1
11	K	29	MET	6.1
17	Q	111	ILE	6.1
6	F	104	THR	6.1
17	Q	92	LEU	6.1
9	I	124	LYS	6.1
35	l	48	GLN	6.1
4	D	18	LYS	6.1

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Mol	Chain	Res	Type	RSRZ
6	F	105	GLY	6.1
30	d	27	ARG	6.1
4	D	157	MET	6.1
21	U	86	LYS	6.1
36	n	34	GLU	6.1
14	N	146	ALA	6.1
4	D	51	LEU	6.1
2	B	140	VAL	6.1
24	X	98	ASP	6.1
27	a	79	ILE	6.1
34	i	1548	C	6.1
35	l	31	ILE	6.1
9	I	106	SER	6.1
34	i	9	U	6.1
26	Z	66	LYS	6.0
4	D	103	GLU	6.0
11	K	32	HIS	6.0
15	O	113	GLN	6.0
34	i	1861	U	6.0
12	L	75	GLY	6.0
30	d	40	ARG	6.0
5	E	51	LYS	6.0
2	B	68	GLU	6.0
10	J	87	LEU	6.0
35	l	76	HIS	6.0
35	l	54	TYR	6.0
4	D	87	TYR	6.0
21	U	77	TRP	6.0
2	B	84	PHE	6.0
21	U	76	THR	6.0
35	l	52	ASP	6.0
30	d	43	PHE	6.0
6	F	66	CYS	5.9
4	D	6	SER	5.9
26	Z	88	LEU	5.9
23	W	38	LEU	5.9
4	D	158	ILE	5.9
18	R	16	ILE	5.9
26	Z	71	ALA	5.9
17	Q	60	LYS	5.9
5	E	97	GLU	5.9
4	D	209	SER	5.9

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Mol	Chain	Res	Type	RSRZ
34	i	260	G	5.9
4	D	77	PHE	5.8
6	F	30	ILE	5.8
23	W	53	ILE	5.8
15	O	131	ASP	5.8
36	n	78	LEU	5.8
5	E	48	LEU	5.8
34	i	733	G	5.8
34	i	1153	G	5.8
17	Q	129	SER	5.8
5	E	57	THR	5.8
7	G	152	ASP	5.8
2	B	83	LYS	5.8
35	l	59	LEU	5.8
11	K	75	GLY	5.8
21	U	112	VAL	5.8
4	D	137	VAL	5.7
34	i	418	U	5.7
4	D	28	GLU	5.7
23	W	33	VAL	5.7
4	D	30	ALA	5.7
34	i	1386	U	5.7
3	C	151	ARG	5.7
34	i	1388	U	5.7
9	I	156	ALA	5.7
12	L	103	GLU	5.7
5	E	52	LEU	5.7
26	Z	110	THR	5.7
24	X	48	LYS	5.7
4	D	79	PHE	5.7
19	S	118	ARG	5.6
5	E	63	LYS	5.6
34	i	1761	C	5.6
4	D	96	LEU	5.6
26	Z	72	VAL	5.6
26	Z	74	SER	5.6
11	K	46	MET	5.6
35	l	79	TYR	5.6
6	F	49	LEU	5.6
34	i	1860	A	5.6
26	Z	113	THR	5.6
2	B	105	LEU	5.6

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Mol	Chain	Res	Type	RSRZ
27	a	40	VAL	5.6
34	i	1390	G	5.6
18	R	35	CYS	5.6
18	R	12	ALA	5.5
2	B	126	ASP	5.5
6	F	15	PRO	5.5
4	D	206	ASP	5.5
23	W	81	VAL	5.5
11	K	57	TYR	5.5
12	L	128	VAL	5.5
24	X	114	ASP	5.5
23	W	39	THR	5.5
26	Z	65	TYR	5.5
12	L	19	ASN	5.5
21	U	92	HIS	5.5
4	D	42	THR	5.5
24	X	96	GLU	5.5
23	W	77	PRO	5.5
34	i	760	U	5.5
36	n	77	ILE	5.5
21	U	46	LYS	5.5
4	D	37	VAL	5.5
4	D	218	LEU	5.5
35	l	32	HIS	5.5
27	a	78	ALA	5.5
12	L	126	VAL	5.4
10	J	100	LEU	5.4
15	O	112	ALA	5.4
24	X	99	GLU	5.4
24	X	78	GLY	5.4
34	i	691	G	5.4
26	Z	75	GLU	5.4
8	H	155	LYS	5.4
10	J	86	VAL	5.4
5	E	19	MET	5.4
28	b	12	PRO	5.4
26	Z	84	ALA	5.4
24	X	104	GLY	5.4
26	Z	58	LEU	5.4
6	F	93	VAL	5.4
12	L	117	PHE	5.4
24	X	53	GLU	5.4

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Mol	Chain	Res	Type	RSRZ
34	i	1181	C	5.4
17	Q	110	ASP	5.4
21	U	79	ARG	5.4
35	l	46	THR	5.4
5	E	74	GLY	5.4
23	W	99	PHE	5.4
7	G	41	LEU	5.4
4	D	119	CYS	5.3
36	n	71	ILE	5.3
21	U	31	SER	5.3
27	a	38	LYS	5.3
23	W	95	PRO	5.3
30	d	21	CYS	5.3
4	D	220	THR	5.3
35	l	74	ILE	5.3
17	Q	58	LEU	5.3
12	L	77	VAL	5.3
35	l	73	VAL	5.3
25	Y	85	ASN	5.3
2	B	123	ALA	5.3
6	F	29	GLN	5.3
2	B	141	GLY	5.3
24	X	97	ASN	5.3
34	i	1699	C	5.3
34	i	1859	C	5.3
4	D	99	ILE	5.3
12	L	152	LYS	5.3
11	K	95	ARG	5.3
2	B	81	PHE	5.3
23	W	7	LEU	5.3
35	l	51	ALA	5.3
6	F	112	LEU	5.2
23	W	90	GLN	5.2
26	Z	99	LEU	5.2
6	F	50	PRO	5.2
19	S	71	MET	5.2
24	X	121	LYS	5.2
5	E	76	VAL	5.2
10	J	104	ASP	5.2
34	i	248	C	5.2
21	U	115	THR	5.2
2	B	85	LYS	5.2

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Mol	Chain	Res	Type	RSRZ
5	E	58	GLY	5.2
34	i	1764	G	5.2
12	L	114	SER	5.1
26	Z	76	ARG	5.1
29	c	45	ASN	5.1
10	J	102	ILE	5.1
6	F	72	LEU	5.1
23	W	74	VAL	5.1
4	D	187	LYS	5.1
12	L	127	THR	5.1
21	U	48	LEU	5.1
26	Z	86	ALA	5.1
34	i	1197	U	5.1
35	l	53	ASP	5.1
24	X	105	PHE	5.1
34	i	1433	C	5.1
24	X	73	GLN	5.1
9	I	85	ALA	5.1
21	U	118	ASP	5.1
12	L	116	CYS	5.1
15	O	96	LYS	5.1
12	L	111	VAL	5.1
24	X	125	VAL	5.1
5	E	109	PHE	5.0
4	D	38	GLU	5.0
9	I	194	GLU	5.0
26	Z	78	LYS	5.0
19	S	48	ALA	5.0
19	S	123	LEU	5.0
4	D	167	TYR	5.0
5	E	59	ASP	5.0
17	Q	88	ILE	5.0
24	X	52	LEU	5.0
4	D	122	VAL	5.0
19	S	67	VAL	5.0
18	R	8	THR	5.0
3	C	42	ASP	5.0
18	R	38	ILE	5.0
34	i	1172	G	5.0
24	X	91	LEU	5.0
35	l	50	ILE	5.0
23	W	51	GLU	5.0

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Mol	Chain	Res	Type	RSRZ
17	Q	59	GLY	5.0
35	I	81	GLU	5.0
23	W	113	HIS	5.0
34	i	1818	A	5.0
23	W	75	ILE	5.0
28	b	1	MET	5.0
28	b	25	VAL	5.0
9	I	61	ASP	4.9
7	G	80	GLY	4.9
4	D	91	VAL	4.9
9	I	121	LEU	4.9
26	Z	50	PHE	4.9
4	D	89	GLU	4.9
34	i	276	U	4.9
34	i	1690	A	4.9
5	E	261	SER	4.9
26	Z	101	SER	4.9
34	i	397	G	4.9
16	P	5	GLU	4.9
12	L	112	HIS	4.9
9	I	67	TRP	4.9
6	F	109	LEU	4.9
17	Q	62	ARG	4.9
36	n	91	VAL	4.9
6	F	33	ILE	4.8
4	D	118	ALA	4.8
3	C	232	THR	4.8
17	Q	61	GLU	4.8
23	W	46	TYR	4.8
12	L	5	GLN	4.8
4	D	61	GLU	4.8
10	J	91	LYS	4.8
11	K	12	TYR	4.8
26	Z	59	CYS	4.8
34	i	1493	G	4.8
6	F	47	LYS	4.8
6	F	16	ASP	4.8
23	W	86	LEU	4.8
19	S	128	GLY	4.8
7	G	156	TYR	4.8
36	n	80	GLY	4.8
2	B	60	ASP	4.8

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Mol	Chain	Res	Type	RSRZ
9	I	82	VAL	4.7
4	D	123	LEU	4.7
30	d	49	ASP	4.7
8	H	154	ILE	4.7
24	X	39	ASN	4.7
23	W	22	LYS	4.7
27	a	11	ALA	4.7
6	F	31	ASN	4.7
34	i	864	G	4.7
2	B	181	LEU	4.7
9	I	128	LYS	4.7
34	i	877	G	4.7
34	i	1167	G	4.7
2	B	69	VAL	4.7
2	B	125	VAL	4.7
16	P	109	PRO	4.7
24	X	57	VAL	4.7
10	J	93	LYS	4.7
4	D	54	ARG	4.7
23	W	30	CYS	4.7
35	l	34	ARG	4.7
12	L	29	GLY	4.7
5	E	49	ARG	4.7
26	Z	97	ILE	4.6
34	i	1862	U	4.6
35	l	56	LYS	4.6
26	Z	108	ILE	4.6
34	i	12	U	4.6
23	W	24	GLN	4.6
34	i	1180	G	4.6
21	U	51	LYS	4.6
35	l	33	ILE	4.6
5	E	62	LYS	4.6
26	Z	112	ASN	4.6
34	i	1353	A	4.6
10	J	90	GLY	4.6
6	F	52	SER	4.6
27	a	24	THR	4.6
26	Z	114	LYS	4.6
34	i	507	C	4.6
6	F	107	ASN	4.6
16	P	125	PRO	4.6

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Mol	Chain	Res	Type	RSRZ
9	I	195	LEU	4.6
15	O	95	ILE	4.6
34	i	862	U	4.6
27	a	67	LEU	4.6
23	W	62	VAL	4.6
5	E	13	ALA	4.6
26	Z	61	GLU	4.6
2	B	90	ASP	4.6
34	i	1475	G	4.6
21	U	18	HIS	4.6
36	n	33	GLN	4.6
17	Q	117	ARG	4.6
34	i	28	U	4.6
34	i	1196	A	4.6
23	W	93	LEU	4.6
2	B	82	ARG	4.5
24	X	110	HIS	4.5
27	a	75	VAL	4.5
9	I	39	GLY	4.5
13	M	99	LYS	4.5
34	i	1693	C	4.5
9	I	93	THR	4.5
2	B	86	LEU	4.5
2	B	92	GLN	4.5
6	F	56	TYR	4.5
24	X	113	GLY	4.5
24	X	126	ALA	4.5
9	I	185	ALA	4.5
26	Z	95	GLY	4.5
34	i	1025	G	4.5
34	i	1076	A	4.5
30	d	56	ASP	4.5
12	L	27	GLU	4.5
12	L	88	ILE	4.5
34	i	777	C	4.5
34	i	662	A	4.5
34	i	876	G	4.4
9	I	62	VAL	4.4
12	L	94	HIS	4.4
34	i	1352	G	4.4
33	g	144	ASP	4.4
15	O	97	LEU	4.4

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Mol	Chain	Res	Type	RSRZ
30	d	44	ARG	4.4
10	J	96	TYR	4.4
21	U	109	GLY	4.4
34	i	351	U	4.4
5	E	84	ALA	4.4
34	i	492	C	4.4
15	O	106	LYS	4.4
26	Z	98	LYS	4.4
9	I	175	ILE	4.4
35	l	100	ILE	4.4
23	W	80	ASP	4.4
15	O	107	THR	4.4
6	F	65	GLN	4.4
11	K	79	LEU	4.4
17	Q	52	LEU	4.4
27	a	9	GLY	4.4
34	i	795	U	4.4
4	D	216	GLU	4.4
8	H	142	LYS	4.3
23	W	13	SER	4.3
30	d	18	SER	4.3
13	M	98	GLY	4.3
34	i	10	G	4.3
4	D	205	PRO	4.3
2	B	133	TYR	4.3
34	i	690	C	4.3
24	X	50	ILE	4.3
10	J	106	LEU	4.3
21	U	95	SER	4.3
5	E	89	VAL	4.3
26	Z	62	VAL	4.3
4	D	105	LEU	4.3
4	D	94	ARG	4.3
6	F	14	THR	4.3
3	C	185	ARG	4.3
16	P	11	THR	4.3
35	l	82	VAL	4.3
4	D	104	SER	4.3
3	C	84	GLY	4.3
9	I	37	LYS	4.3
34	i	133	C	4.2
26	Z	92	LEU	4.2

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Mol	Chain	Res	Type	RSRZ
36	n	59	CYS	4.2
5	E	66	MET	4.2
7	G	78	SER	4.2
18	R	40	ILE	4.2
2	B	78	GLU	4.2
26	Z	91	LEU	4.2
23	W	26	LEU	4.2
17	Q	115	TYR	4.2
19	S	117	ILE	4.2
34	i	765	U	4.2
6	F	63	LYS	4.2
4	D	221	THR	4.2
6	F	37	ASP	4.2
34	i	796	U	4.2
28	b	8	LEU	4.2
4	D	185	LYS	4.2
2	B	164	ILE	4.2
34	i	778	C	4.2
24	X	35	ALA	4.1
35	l	111	HIS	4.1
5	E	95	THR	4.1
5	E	12	VAL	4.1
34	i	1355	U	4.1
9	I	94	LYS	4.1
28	b	16	LYS	4.1
27	a	30	VAL	4.1
19	S	125	HIS	4.1
1	A	153	PRO	4.1
16	P	33	LEU	4.1
16	P	71	GLU	4.1
33	g	161	SER	4.1
34	i	26	U	4.1
24	X	127	ASN	4.1
9	I	168	GLN	4.1
9	I	125	LYS	4.1
35	l	36	GLN	4.1
23	W	41	MET	4.1
1	A	33	GLN	4.1
34	i	679	U	4.1
4	D	78	GLY	4.1
6	F	113	VAL	4.1
23	W	70	ASN	4.1

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Mol	Chain	Res	Type	RSRZ
8	H	186	ASN	4.1
27	a	45	VAL	4.1
18	R	43	SER	4.1
8	H	188	GLU	4.1
34	i	1182	U	4.1
35	l	57	LYS	4.0
34	i	1171	G	4.0
4	D	138	VAL	4.0
23	W	14	ILE	4.0
4	D	173	ARG	4.0
22	V	64	GLU	4.0
4	D	152	PHE	4.0
3	C	235	TYR	4.0
35	l	112	GLY	4.0
7	G	81	HIS	4.0
30	d	17	GLY	4.0
23	W	31	SER	4.0
34	i	1024	A	4.0
21	U	47	ASN	4.0
5	E	68	ARG	4.0
34	i	11	A	4.0
11	K	59	LYS	4.0
36	n	52	PHE	4.0
9	I	91	VAL	4.0
34	i	277	U	4.0
11	K	76	ILE	4.0
16	P	108	LYS	4.0
21	U	29	VAL	4.0
34	i	983	A	4.0
1	A	158	ASP	4.0
24	X	66	ILE	4.0
34	i	659	A	4.0
15	O	116	LEU	4.0
19	S	127	TRP	4.0
16	P	10	ARG	4.0
21	U	41	ARG	4.0
27	a	73	TYR	4.0
35	l	30	TYR	4.0
9	I	120	PRO	4.0
10	J	78	LEU	4.0
24	X	90	CYS	4.0
2	B	59	SER	4.0

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Mol	Chain	Res	Type	RSRZ
24	X	6	GLY	4.0
24	X	129	SER	4.0
3	C	211	ALA	3.9
22	V	10	ASP	3.9
14	N	122	ILE	3.9
19	S	68	ILE	3.9
2	B	211	PHE	3.9
12	L	10	TYR	3.9
9	I	87	ASN	3.9
17	Q	114	GLN	3.9
29	c	64	GLU	3.9
4	D	219	PRO	3.9
35	l	77	PRO	3.9
16	P	106	GLU	3.9
6	F	97	PHE	3.9
23	W	60	LYS	3.9
18	R	47	ARG	3.9
4	D	82	GLY	3.9
9	I	126	GLY	3.9
9	I	17	LYS	3.9
23	W	21	GLY	3.9
17	Q	109	LYS	3.9
27	a	10	ARG	3.9
34	i	688	U	3.9
34	i	859	U	3.9
34	i	1173	U	3.9
18	R	13	ALA	3.9
29	c	35	MET	3.9
34	i	388	A	3.9
34	i	1105	C	3.9
23	W	79	PHE	3.9
16	P	105	VAL	3.9
11	K	45	VAL	3.9
34	i	1198	U	3.9
26	Z	79	ILE	3.9
19	S	64	VAL	3.9
30	d	25	SER	3.9
27	a	44	ILE	3.9
17	Q	112	LEU	3.9
34	i	1194	G	3.9
9	I	127	ALA	3.9
14	N	126	ALA	3.9

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Mol	Chain	Res	Type	RSRZ
5	E	56	LEU	3.9
23	W	67	GLY	3.9
28	b	23	ARG	3.9
34	i	1658	A	3.9
24	X	80	LYS	3.8
23	W	89	TRP	3.8
2	B	87	ILE	3.8
34	i	682	G	3.8
7	G	158	VAL	3.8
9	I	90	LEU	3.8
9	I	129	LEU	3.8
17	Q	53	GLU	3.8
1	A	134	LEU	3.8
12	L	47	PRO	3.8
19	S	119	ALA	3.8
34	i	353	A	3.8
36	n	94	LYS	3.8
35	l	60	VAL	3.8
34	i	134	C	3.8
34	i	1698	C	3.8
5	E	101	LEU	3.8
16	P	4	VAL	3.8
35	l	47	VAL	3.8
17	Q	131	LYS	3.8
2	B	168	MET	3.8
4	D	199	GLY	3.8
2	B	218	LEU	3.8
34	i	7	G	3.8
34	i	1420	G	3.8
5	E	111	VAL	3.8
34	i	758	G	3.8
34	i	27	A	3.8
3	C	167	CYS	3.8
34	i	1359	C	3.8
2	B	227	LYS	3.8
5	E	11	ARG	3.8
34	i	725	C	3.8
12	L	9	ALA	3.8
2	B	120	MET	3.8
17	Q	51	LEU	3.8
19	S	63	GLU	3.8
17	Q	107	GLU	3.8

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Mol	Chain	Res	Type	RSRZ
17	Q	57	LEU	3.8
24	X	75	ILE	3.7
26	Z	100	VAL	3.7
35	l	98	VAL	3.7
36	n	93	LEU	3.7
2	B	64	GLY	3.7
24	X	128	VAL	3.7
9	I	70	GLU	3.7
16	P	112	ILE	3.7
23	W	18	GLU	3.7
26	Z	64	ASN	3.7
34	i	867	U	3.7
15	O	129	ILE	3.7
3	C	38	GLY	3.7
34	i	1477	G	3.7
8	H	165	ASN	3.7
34	i	1174	U	3.7
34	i	13	C	3.7
36	n	111	GLU	3.7
10	J	92	MET	3.7
26	Z	96	LEU	3.7
23	W	36	ARG	3.7
2	B	222	LYS	3.7
5	E	110	ALA	3.7
23	W	11	LEU	3.7
17	Q	15	ARG	3.7
34	i	745	U	3.7
26	Z	111	ARG	3.7
2	B	63	LYS	3.7
11	K	30	PRO	3.7
11	K	78	TYR	3.7
34	i	25	A	3.7
10	J	57	ALA	3.7
4	D	41	VAL	3.7
17	Q	50	LYS	3.7
35	l	49	GLY	3.7
17	Q	16	LYS	3.7
34	i	658	A	3.7
34	i	660	A	3.7
4	D	27	ARG	3.7
24	X	93	PHE	3.7
36	n	37	GLN	3.7

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Mol	Chain	Res	Type	RSRZ
2	B	80	ALA	3.7
8	H	153	LEU	3.7
9	I	60	LEU	3.6
34	i	766	U	3.6
17	Q	39	LEU	3.6
27	a	33	ASP	3.6
8	H	189	PHE	3.6
5	E	16	LYS	3.6
27	a	41	ILE	3.6
34	i	689	G	3.6
9	I	188	TYR	3.6
30	d	32	ARG	3.6
27	a	21	ILE	3.6
34	i	757	C	3.6
16	P	36	LEU	3.6
4	D	215	ASP	3.6
35	l	80	GLY	3.6
34	i	1193	G	3.6
4	D	40	ARG	3.6
4	D	80	PRO	3.6
34	i	1183	G	3.6
34	i	1765	G	3.6
36	n	86	ASP	3.6
34	i	861	A	3.6
12	L	124	ASP	3.6
23	W	106	THR	3.6
29	c	17	VAL	3.6
5	E	204	SER	3.6
26	Z	102	LYS	3.6
2	B	226	GLY	3.6
2	B	106	THR	3.6
35	l	107	GLN	3.6
22	V	34	MET	3.6
36	n	92	ILE	3.6
4	D	196	GLY	3.6
7	G	155	GLN	3.6
17	Q	47	LEU	3.5
34	i	1175	G	3.5
23	W	78	ARG	3.5
2	B	127	VAL	3.5
21	U	57	PRO	3.5
36	n	81	LEU	3.5

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Mol	Chain	Res	Type	RSRZ
34	i	310	G	3.5
34	i	987	G	3.5
9	I	76	THR	3.5
12	L	113	LEU	3.5
19	S	116	LYS	3.5
29	c	36	ASP	3.5
34	i	1354	U	3.5
23	W	50	PHE	3.5
11	K	35	LEU	3.5
34	i	1485	A	3.5
23	W	5	ASN	3.5
6	F	116	ILE	3.5
27	a	34	LYS	3.5
27	a	22	ARG	3.5
19	S	6	PRO	3.5
7	G	45	TRP	3.5
27	a	74	CYS	3.5
18	R	11	LYS	3.5
10	J	99	GLY	3.5
29	c	29	GLN	3.5
8	H	144	ILE	3.5
5	E	81	THR	3.5
12	L	86	ILE	3.5
17	Q	63	PHE	3.5
36	n	89	ALA	3.5
6	F	46	ALA	3.5
9	I	59	ARG	3.5
16	P	114	HIS	3.5
8	H	190	PRO	3.5
21	U	114	VAL	3.5
17	Q	91	ALA	3.5
4	D	44	THR	3.5
34	i	685	G	3.5
9	I	197	PHE	3.5
6	F	183	GLY	3.5
27	a	68	TYR	3.5
34	i	1575	A	3.5
17	Q	56	LEU	3.5
23	W	52	ILE	3.5
28	b	15	GLU	3.5
30	d	42	CYS	3.5
17	Q	122	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
6	F	135	ARG	3.4
2	B	110	MET	3.4
6	F	194	ASP	3.4
18	R	37	GLU	3.4
23	W	63	VAL	3.4
34	i	734	C	3.4
21	U	71	GLY	3.4
36	n	112	HIS	3.4
36	n	95	TYR	3.4
34	i	8	U	3.4
2	B	88	THR	3.4
12	L	73	LEU	3.4
6	F	130	ARG	3.4
17	Q	89	SER	3.4
14	N	88	LEU	3.4
3	C	150	VAL	3.4
22	V	19	ALA	3.4
15	O	109	GLY	3.4
30	d	16	GLN	3.4
21	U	67	LYS	3.4
22	V	82	ASN	3.4
4	D	169	ASP	3.4
29	c	30	VAL	3.4
34	i	1086	C	3.4
12	L	109	MET	3.4
10	J	74	GLY	3.4
6	F	62	ARG	3.4
21	U	54	VAL	3.4
34	i	1350	G	3.4
3	C	156	GLY	3.4
24	X	133	LEU	3.4
17	Q	85	ARG	3.3
8	H	92	VAL	3.3
16	P	113	GLY	3.3
35	l	108	LEU	3.3
16	P	111	MET	3.3
12	L	62	PHE	3.3
34	i	724	C	3.3
10	J	105	PHE	3.3
6	F	192	LYS	3.3
30	d	55	LEU	3.3
6	F	110	GLN	3.3

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Mol	Chain	Res	Type	RSRZ
34	i	1026	A	3.3
34	i	1351	C	3.3
6	F	185	SER	3.3
21	U	93	SER	3.3
26	Z	83	LEU	3.3
24	X	107	ARG	3.3
3	C	89	ASP	3.3
10	J	19	PRO	3.3
2	B	109	LYS	3.3
16	P	129	GLY	3.3
23	W	122	GLY	3.3
7	G	157	VAL	3.3
34	i	1089	A	3.3
34	i	1831	G	3.3
17	Q	104	SER	3.3
25	Y	99	LYS	3.3
36	n	57	ARG	3.3
34	i	1654	U	3.3
27	a	2	THR	3.3
2	B	46	LYS	3.3
15	O	132	VAL	3.3
30	d	13	LYS	3.3
34	i	39	A	3.3
9	I	202	ILE	3.3
23	W	23	ARG	3.3
34	i	1179	A	3.3
12	L	155	PHE	3.3
4	D	62	LYS	3.3
11	K	53	LYS	3.3
34	i	1159	C	3.3
34	i	1734	C	3.3
24	X	77	ASN	3.3
7	G	18	VAL	3.3
6	F	42	LYS	3.3
4	D	129	SER	3.3
17	Q	82	TYR	3.3
4	D	175	VAL	3.3
26	Z	56	ASP	3.3
34	i	1344	G	3.2
9	I	164	GLU	3.2
11	K	13	GLU	3.2
6	F	28	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
17	Q	106	LYS	3.2
18	R	15	VAL	3.2
4	D	130	GLY	3.2
12	L	96	ILE	3.2
24	X	141	PRO	3.2
34	i	1082	G	3.2
24	X	87	ASN	3.2
33	g	76	GLN	3.2
4	D	217	ILE	3.2
9	I	167	GLN	3.2
34	i	1083	A	3.2
9	I	40	PRO	3.2
31	e	79	SER	3.2
18	R	32	LYS	3.2
34	i	1476	A	3.2
31	e	76	VAL	3.2
36	n	106	TYR	3.2
15	O	94	HIS	3.2
26	Z	89	GLN	3.2
26	Z	51	ASP	3.2
2	B	182	LYS	3.2
8	H	145	ARG	3.2
23	W	85	ASP	3.2
26	Z	45	ASN	3.2
35	l	105	ASP	3.2
4	D	121	GLY	3.2
34	i	1154	G	3.2
35	l	93	ILE	3.2
24	X	9	THR	3.2
4	D	39	VAL	3.2
30	d	39	CYS	3.2
34	i	282	G	3.2
34	i	730	C	3.2
3	C	152	ARG	3.2
31	e	77	HIS	3.2
27	a	86	ASN	3.2
6	F	45	TYR	3.2
11	K	16	PHE	3.2
16	P	104	GLN	3.2
1	A	159	ILE	3.2
6	F	195	GLU	3.2
30	d	26	ASN	3.2

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Mol	Chain	Res	Type	RSRZ
16	P	17	TYR	3.2
12	L	18	GLN	3.2
17	Q	93	VAL	3.2
34	i	508	G	3.1
35	l	110	VAL	3.1
6	F	27	ASP	3.1
4	D	156	LEU	3.1
26	Z	63	PRO	3.1
2	B	45	GLY	3.1
8	H	187	PHE	3.1
14	N	85	PRO	3.1
36	n	83	ASP	3.1
34	i	16	G	3.1
19	S	129	LEU	3.1
4	D	93	THR	3.1
21	U	94	PRO	3.1
2	B	111	CYS	3.1
34	i	224	U	3.1
34	i	472	G	3.1
9	I	77	ARG	3.1
19	S	115	LYS	3.1
14	N	28	LEU	3.1
29	c	43	ILE	3.1
34	i	387	G	3.1
34	i	1696	C	3.1
23	W	96	SER	3.1
16	P	20	VAL	3.1
3	C	168	LYS	3.1
10	J	15	THR	3.1
16	P	15	PHE	3.1
36	n	90	ASP	3.1
34	i	1087	C	3.1
14	N	66	VAL	3.1
7	G	150	GLU	3.1
3	C	178	VAL	3.1
9	I	160	SER	3.1
23	W	32	LYS	3.1
34	i	657	U	3.1
3	C	180	LEU	3.1
24	X	109	GLY	3.1
6	F	134	VAL	3.1
12	L	23	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
34	i	1088	G	3.1
26	Z	57	LYS	3.1
23	W	97	ARG	3.1
4	D	211	VAL	3.1
2	B	188	LEU	3.1
9	I	161	LEU	3.1
14	N	133	ARG	3.1
1	A	157	VAL	3.1
34	i	309	A	3.1
8	H	62	ILE	3.0
34	i	50	A	3.0
34	i	1190	A	3.0
6	F	20	PHE	3.0
9	I	133	GLU	3.0
34	i	781	C	3.0
21	U	96	GLU	3.0
34	i	773	G	3.0
34	i	736	C	3.0
34	i	1075	C	3.0
12	L	11	GLN	3.0
33	g	143	GLN	3.0
6	F	25	THR	3.0
11	K	41	PRO	3.0
34	i	687	G	3.0
34	i	1689	U	3.0
5	E	75	LYS	3.0
10	J	89	GLU	3.0
23	W	71	LYS	3.0
34	i	1195	A	3.0
1	A	207	PRO	3.0
21	U	45	GLU	3.0
34	i	684	A	3.0
34	i	1474	U	3.0
8	H	166	VAL	3.0
23	W	92	ASN	3.0
31	e	122	THR	3.0
1	A	127	PRO	3.0
10	J	77	LEU	3.0
34	i	776	U	3.0
5	E	88	ASP	3.0
34	i	1160	G	3.0
34	i	638	A	3.0

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Mol	Chain	Res	Type	RSRZ
2	B	67	PHE	3.0
6	F	48	TYR	3.0
3	C	114	ALA	3.0
26	Z	47	LEU	3.0
23	W	121	THR	3.0
11	K	56	GLY	3.0
22	V	65	SER	3.0
34	i	1077	U	3.0
6	F	35	LEU	2.9
24	X	138	LYS	2.9
34	i	661	A	2.9
34	i	1385	C	2.9
9	I	97	VAL	2.9
36	n	61	ILE	2.9
6	F	18	LYS	2.9
6	F	133	THR	2.9
34	i	139	C	2.9
34	i	229	A	2.9
34	i	653	C	2.9
24	X	139	GLU	2.9
36	n	88	LYS	2.9
2	B	186	ASN	2.9
8	H	184	ASP	2.9
9	I	154	LYS	2.9
17	Q	96	TYR	2.9
24	X	134	TYR	2.9
34	i	913	U	2.9
35	l	35	ILE	2.9
34	i	452	C	2.9
34	i	113	G	2.9
6	F	117	ILE	2.9
7	G	36	VAL	2.9
34	i	350	A	2.9
4	D	125	PHE	2.9
4	D	204	LEU	2.9
12	L	12	LYS	2.9
34	i	1735	C	2.9
3	C	51	LEU	2.9
34	i	354	A	2.9
34	i	130	G	2.9
34	i	780	G	2.9
34	i	974	G	2.9

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Mol	Chain	Res	Type	RSRZ
17	Q	116	ASP	2.9
5	E	99	PHE	2.9
35	l	83	ILE	2.9
6	F	70	GLU	2.9
8	H	93	VAL	2.9
13	M	130	CYS	2.9
4	D	4	GLN	2.9
4	D	31	GLU	2.9
11	K	98	ARG	2.9
14	N	114	ARG	2.9
2	B	190	PRO	2.9
34	i	524	G	2.9
11	K	34	GLU	2.9
27	a	29	CYS	2.9
6	F	114	ASN	2.9
17	Q	130	LYS	2.8
11	K	74	GLU	2.8
17	Q	32	ILE	2.8
16	P	24	GLN	2.8
30	d	45	GLN	2.8
34	i	1203	G	2.8
10	J	18	ARG	2.8
10	J	103	GLU	2.8
22	V	20	SER	2.8
30	d	12	ARG	2.8
24	X	59	ALA	2.8
21	U	68	THR	2.8
12	L	74	SER	2.8
4	D	207	HIS	2.8
34	i	132	U	2.8
3	C	204	ILE	2.8
34	i	646	G	2.8
23	W	91	ASN	2.8
4	D	200	PRO	2.8
35	l	29	ASP	2.8
6	F	34	SER	2.8
5	E	203	GLY	2.8
6	F	154	LEU	2.8
19	S	49	ASP	2.8
3	C	41	GLY	2.8
5	E	31	PRO	2.8
10	J	28	GLU	2.8

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Mol	Chain	Res	Type	RSRZ
10	J	81	LEU	2.8
6	F	101	HIS	2.8
34	i	772	A	2.8
34	i	402	G	2.8
22	V	62	MET	2.8
23	W	28	ARG	2.8
7	G	79	LYS	2.8
26	Z	54	THR	2.8
2	B	98	THR	2.8
9	I	36	THR	2.8
8	H	185	VAL	2.8
15	O	25	GLU	2.8
8	H	152	ARG	2.8
17	Q	78	VAL	2.8
1	A	145	ILE	2.8
5	E	10	LYS	2.8
4	D	183	GLY	2.8
25	Y	18	LEU	2.8
17	Q	48	GLN	2.8
6	F	44	LYS	2.8
34	i	3	C	2.8
34	i	1400	U	2.8
1	A	208	GLU	2.7
7	G	151	ASP	2.7
17	Q	103	ALA	2.7
25	Y	128	GLY	2.7
30	d	54	LYS	2.7
16	P	88	GLU	2.7
2	B	43	ASN	2.7
2	B	107	ARG	2.7
34	i	893	U	2.7
2	B	191	ASP	2.7
6	F	118	ASN	2.7
34	i	254	G	2.7
34	i	24	C	2.7
25	Y	72	PHE	2.7
3	C	229	ILE	2.7
15	O	29	GLY	2.7
33	g	75	GLY	2.7
34	i	732	C	2.7
18	R	46	LEU	2.7
36	n	109	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
8	H	162	GLN	2.7
29	c	11	LEU	2.7
10	J	17	ARG	2.7
34	i	655	G	2.7
12	L	50	ALA	2.7
18	R	14	ARG	2.7
24	X	11	ARG	2.7
3	C	209	THR	2.7
14	N	63	VAL	2.7
21	U	75	LYS	2.7
10	J	61	LEU	2.7
14	N	105	ASN	2.7
34	i	1199	G	2.7
21	U	108	PRO	2.7
27	a	46	GLU	2.7
34	i	1192	A	2.7
11	K	31	LYS	2.7
29	c	44	ARG	2.7
24	X	33	GLY	2.7
3	C	169	VAL	2.7
14	N	36	GLN	2.7
2	B	172	MET	2.7
34	i	1697	G	2.7
36	n	75	ASP	2.7
3	C	166	ARG	2.7
11	K	97	SER	2.7
25	Y	70	THR	2.7
26	Z	52	LYS	2.7
12	L	26	GLY	2.7
4	D	2	ALA	2.7
8	H	94	PHE	2.7
31	e	81	ALA	2.7
18	R	42	PRO	2.7
2	B	32	ASP	2.7
13	M	129	LYS	2.7
2	B	134	LEU	2.7
10	J	188	GLY	2.7
19	S	122	GLY	2.7
34	i	1830	G	2.7
6	F	26	ASP	2.7
8	H	164	ASN	2.7
24	X	36	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
34	i	726	C	2.7
34	i	735	C	2.7
12	L	129	GLY	2.7
5	E	83	PRO	2.7
21	U	69	PRO	2.7
8	H	61	ILE	2.7
9	I	69	SER	2.7
32	f	84	SER	2.7
34	i	1700	C	2.7
2	B	185	VAL	2.6
3	C	199	LEU	2.6
9	I	199	LEU	2.6
19	S	50	ILE	2.6
2	B	93	GLY	2.6
6	F	21	GLY	2.6
24	X	5	ARG	2.6
13	M	100	PRO	2.6
36	n	113	ALA	2.6
2	B	219	LYS	2.6
27	a	83	VAL	2.6
33	g	146	SER	2.6
34	i	727	G	2.6
36	n	105	ALA	2.6
12	L	46	THR	2.6
35	l	75	GLU	2.6
9	I	65	PHE	2.6
11	K	39	ASN	2.6
21	U	104	ILE	2.6
8	H	169	LYS	2.6
34	i	230	C	2.6
12	L	149	ALA	2.6
12	L	102	PHE	2.6
10	J	24	ARG	2.6
34	i	1031	A	2.6
34	i	1158	C	2.6
14	N	92	ILE	2.6
26	Z	43	LYS	2.6
2	B	39	PHE	2.6
33	g	145	GLU	2.6
8	H	167	GLU	2.6
1	A	3	GLY	2.6
6	F	147	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
8	H	161	ALA	2.6
29	c	12	ALA	2.6
26	Z	49	LEU	2.6
34	i	855	G	2.6
15	O	105	THR	2.6
31	e	98	LYS	2.6
9	I	187	GLY	2.6
34	i	879	U	2.6
28	b	54	VAL	2.6
34	i	1023	A	2.6
2	B	95	ASN	2.6
16	P	70	MET	2.6
25	Y	71	GLY	2.6
29	c	27	CYS	2.6
34	i	729	C	2.6
14	N	141	TYR	2.6
16	P	21	ASP	2.6
35	l	104	LYS	2.6
35	l	109	LYS	2.6
34	i	1208	G	2.6
36	n	87	ASN	2.6
12	L	115	PRO	2.6
19	S	45	LEU	2.6
2	B	91	VAL	2.6
2	B	47	THR	2.6
10	J	118	GLY	2.6
8	H	156	VAL	2.5
34	i	663	G	2.5
14	N	118	ILE	2.5
11	K	33	PRO	2.5
34	i	1005	A	2.5
34	i	1755	U	2.5
34	i	1836	C	2.5
26	Z	90	GLU	2.5
8	H	160	LYS	2.5
34	i	1685	U	2.5
34	i	474	A	2.5
16	P	25	LEU	2.5
4	D	174	HIS	2.5
34	i	1399	C	2.5
4	D	154	ASP	2.5
19	S	44	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
25	Y	106	GLN	2.5
9	I	32	PRO	2.5
34	i	1078	A	2.5
6	F	108	PRO	2.5
34	i	686	G	2.5
34	i	1855	G	2.5
28	b	5	LYS	2.5
34	i	1655	C	2.5
6	F	139	VAL	2.5
4	D	163	PRO	2.5
34	i	996	C	2.5
6	F	119	SER	2.5
33	g	71	ILE	2.5
6	F	124	ASP	2.5
7	G	19	ASP	2.5
34	i	212	G	2.5
4	D	170	THR	2.5
27	a	27	ALA	2.5
31	e	80	LEU	2.5
22	V	66	ASP	2.5
28	b	27	SER	2.5
2	B	113	MET	2.5
6	F	103	LEU	2.5
34	i	1085	G	2.5
5	E	85	GLY	2.5
2	B	66	VAL	2.5
21	U	53	PRO	2.5
3	C	87	LEU	2.5
10	J	54	ARG	2.5
27	a	5	ARG	2.5
3	C	237	THR	2.5
6	F	71	ARG	2.5
21	U	34	LYS	2.5
34	i	1030	A	2.5
3	C	155	TRP	2.5
2	B	167	LYS	2.5
1	A	144	THR	2.5
9	I	109	TYR	2.5
3	C	165	VAL	2.5
34	i	1692	A	2.5
5	E	238	LEU	2.5
23	W	17	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
9	I	192	GLY	2.4
23	W	87	GLU	2.4
9	I	86	SER	2.4
21	U	28	ASN	2.4
26	Z	106	GLN	2.4
12	L	120	VAL	2.4
2	B	189	ILE	2.4
27	a	31	PRO	2.4
19	S	111	LEU	2.4
6	F	190	ILE	2.4
24	X	38	ALA	2.4
26	Z	115	GLY	2.4
9	I	35	ASN	2.4
2	B	61	GLY	2.4
8	H	163	GLN	2.4
22	V	68	SER	2.4
29	c	15	THR	2.4
10	J	73	GLU	2.4
15	O	31	CYS	2.4
2	B	79	VAL	2.4
28	b	13	GLU	2.4
34	i	728	U	2.4
34	i	1663	U	2.4
34	i	42	A	2.4
11	K	77	GLN	2.4
33	g	148	SER	2.4
34	i	583	C	2.4
34	i	1827	C	2.4
19	S	47	LYS	2.4
2	B	165	ARG	2.4
2	B	228	LEU	2.4
14	N	115	LEU	2.4
8	H	168	HIS	2.4
10	J	62	THR	2.4
34	i	525	G	2.4
34	i	666	C	2.4
24	X	95	GLU	2.4
3	C	236	LEU	2.4
10	J	186	GLY	2.4
34	i	1484	C	2.4
34	i	1704	G	2.4
5	E	182	MET	2.4

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Mol	Chain	Res	Type	RSRZ
8	H	112	ASN	2.4
16	P	37	TYR	2.4
17	Q	113	ILE	2.4
26	Z	48	VAL	2.4
34	i	1362	G	2.4
5	E	102	ILE	2.4
14	N	59	GLY	2.4
9	I	157	LYS	2.4
1	A	155	ARG	2.4
2	B	71	LEU	2.4
1	A	61	ALA	2.4
14	N	37	ILE	2.4
35	l	94	CYS	2.4
6	F	189	ALA	2.4
19	S	124	ARG	2.4
15	O	127	GLY	2.4
10	J	101	LYS	2.3
13	M	116	LYS	2.3
34	i	259	G	2.4
34	i	1220	G	2.4
16	P	23	ASP	2.3
33	g	107	ASP	2.3
8	H	50	GLU	2.3
13	M	131	LYS	2.3
36	n	107	GLY	2.3
6	F	17	ILE	2.3
34	i	656	U	2.3
6	F	90	VAL	2.3
19	S	126	PHE	2.3
6	F	43	GLU	2.3
7	G	16	ILE	2.3
10	J	187	ALA	2.3
34	i	669	A	2.3
36	n	84	TYR	2.3
6	F	36	GLN	2.3
6	F	193	LYS	2.3
13	M	80	ASP	2.3
4	D	106	ARG	2.3
6	F	191	LYS	2.3
34	i	673	G	2.3
14	N	95	ALA	2.3
19	S	65	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
12	L	145	VAL	2.3
34	i	1084	U	2.3
25	Y	98	GLU	2.3
6	F	100	ILE	2.3
29	c	63	ARG	2.3
34	i	1201	C	2.3
34	i	1327	C	2.3
34	i	1432	C	2.3
34	i	1691	C	2.3
1	A	154	LEU	2.3
34	i	1837	G	2.3
35	l	61	LYS	2.3
17	Q	81	ILE	2.3
2	B	65	ARG	2.3
6	F	55	ARG	2.3
19	S	74	PRO	2.3
12	L	24	LEU	2.3
12	L	61	PRO	2.3
24	X	34	THR	2.3
21	U	52	GLY	2.3
23	W	44	HIS	2.3
34	i	403	G	2.3
10	J	31	LEU	2.3
15	O	47	LEU	2.3
27	a	65	PRO	2.3
2	B	229	MET	2.3
34	i	451	U	2.3
34	i	1442	A	2.3
7	G	27	PHE	2.3
33	g	162	ASN	2.3
16	P	86	LEU	2.3
34	i	775	G	2.3
12	L	68	ILE	2.3
27	a	95	ARG	2.3
11	K	40	VAL	2.3
9	I	99	ASN	2.3
8	H	146	VAL	2.3
27	a	97	PRO	2.3
34	i	1812	A	2.2
2	B	58	ALA	2.2
5	E	93	ASP	2.2
34	i	1081	C	2.2

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Mol	Chain	Res	Type	RSRZ
34	i	799	C	2.2
7	G	154	ARG	2.2
17	Q	105	LYS	2.2
23	W	54	ASP	2.2
24	X	140	ARG	2.2
34	i	1754	G	2.2
28	b	7	LEU	2.2
17	Q	125	ARG	2.2
34	i	1824	U	2.2
34	i	129	C	2.2
11	K	73	ASN	2.2
3	C	79	ILE	2.2
5	E	41	CYS	2.2
16	P	85	ILE	2.2
2	B	119	THR	2.2
2	B	184	VAL	2.2
29	c	19	GLY	2.2
3	C	162	PRO	2.2
21	U	99	LYS	2.2
27	a	66	LYS	2.2
18	R	29	HIS	2.2
34	i	731	C	2.2
9	I	63	GLY	2.2
2	B	161	VAL	2.2
18	R	36	GLU	2.2
34	i	1856	G	2.2
33	g	77	PHE	2.2
34	i	654	A	2.2
8	H	170	VAL	2.2
11	K	36	ALA	2.2
34	i	1358	U	2.2
36	n	103	LEU	2.2
23	W	12	LYS	2.2
34	i	1029	G	2.2
14	N	125	LEU	2.2
34	i	352	C	2.2
16	P	119	PHE	2.2
33	g	186	THR	2.2
16	P	14	LYS	2.2
33	g	30	MET	2.2
6	F	129	GLY	2.2
33	g	187	ASN	2.2

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Mol	Chain	Res	Type	RSRZ
34	i	535	A	2.2
4	D	90	LYS	2.2
7	G	50	VAL	2.2
34	i	637	U	2.2
34	i	878	U	2.2
4	D	193	ASP	2.2
5	E	151	ASP	2.2
6	F	96	ALA	2.2
10	J	119	LEU	2.2
24	X	58	GLU	2.2
25	Y	73	GLY	2.2
3	C	73	ILE	2.2
4	D	127	MET	2.2
19	S	8	LYS	2.2
34	i	1483	A	2.2
34	i	1758	G	2.2
15	O	46	ASP	2.2
35	l	99	GLU	2.2
35	l	37	GLN	2.2
14	N	84	LEU	2.2
33	g	125	ARG	2.2
4	D	56	GLN	2.2
3	C	85	ALA	2.2
3	C	210	SER	2.2
6	F	38	TYR	2.2
9	I	116	HIS	2.2
28	b	11	SER	2.2
34	i	808	A	2.2
34	i	921	G	2.2
34	i	1163	G	2.2
36	n	60	HIS	2.2
8	H	60	ILE	2.2
11	K	28	HIS	2.2
9	I	42	ARG	2.2
17	Q	84	ILE	2.2
19	S	15	VAL	2.2
35	l	84	GLN	2.2
25	Y	86	GLU	2.1
4	D	43	PRO	2.1
5	E	21	ASP	2.1
30	d	53	ILE	2.1
34	i	1752	G	2.1

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Mol	Chain	Res	Type	RSRZ
34	i	1770	G	2.1
18	R	24	LEU	2.1
15	O	33	ILE	2.1
17	Q	68	ILE	2.1
21	U	106	ILE	2.1
29	c	37	ASP	2.1
21	U	107	GLU	2.1
34	i	645	A	2.1
4	D	5	ILE	2.1
33	g	13	GLY	2.1
5	E	262	SER	2.1
34	i	1384	A	2.1
4	D	81	GLU	2.1
19	S	79	ILE	2.1
34	i	536	G	2.1
33	g	126	ASP	2.1
4	D	212	GLU	2.1
31	e	97	GLU	2.1
34	i	1134	C	2.1
2	B	132	GLY	2.1
34	i	912	A	2.1
2	B	210	VAL	2.1
16	P	12	PHE	2.1
25	Y	84	LYS	2.1
32	f	83	LYS	2.1
34	i	2	A	2.1
4	D	162	ASP	2.1
30	d	15	GLY	2.1
3	C	216	ALA	2.1
11	K	48	ALA	2.1
29	c	61	SER	2.1
33	g	22	ALA	2.1
34	i	349	U	2.1
34	i	1580	U	2.1
17	Q	135	PRO	2.1
22	V	67	ASP	2.1
2	B	57	ILE	2.1
14	N	129	TYR	2.1
26	Z	55	TYR	2.1
6	F	111	VAL	2.1
28	b	53	VAL	2.1
34	i	29	G	2.1

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Mol	Chain	Res	Type	RSRZ
34	i	771	G	2.1
34	i	1857	A	2.1
6	F	61	PHE	2.1
1	A	160	ALA	2.1
26	Z	60	LYS	2.1
2	B	108	ASP	2.1
14	N	135	LEU	2.1
26	Z	105	ALA	2.1
34	i	6	G	2.1
34	i	537	G	2.1
34	i	1001	G	2.1
34	i	1443	G	2.1
6	F	126	THR	2.1
12	L	4	ILE	2.1
19	S	95	TYR	2.1
34	i	1200	A	2.1
34	i	875	C	2.1
34	i	1209	C	2.1
16	P	13	ARG	2.1
26	Z	85	ARG	2.1
1	A	123	VAL	2.1
2	B	166	LYS	2.1
5	E	23	LEU	2.1
14	N	33	VAL	2.1
18	R	9	VAL	2.1
10	J	21	GLU	2.1
34	i	613	G	2.1
34	i	1162	G	2.1
34	i	934	A	2.1
19	S	59	LEU	2.1
12	L	100	ASN	2.1
3	C	198	LEU	2.0
34	i	997	A	2.0
8	H	157	HIS	2.0
18	R	33	ARG	2.0
32	f	86	THR	2.0
33	g	78	ALA	2.0
34	i	183	G	2.0
34	i	1146	A	2.0
34	i	1482	A	2.0
34	i	1070	C	2.0
34	i	1759	C	2.0

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Mol	Chain	Res	Type	RSRZ
4	D	92	ALA	2.0
16	P	107	ILE	2.0
3	C	39	LYS	2.0
10	J	56	ALA	2.0
22	V	59	ILE	2.0
34	i	1205	A	2.0
34	i	740	G	2.0
12	L	99	TYR	2.0
16	P	19	GLY	2.0
19	S	113	ARG	2.0
21	U	70	CYS	2.0
23	W	109	GLY	2.0
35	l	58	LYS	2.0
8	H	151	SER	2.0
19	S	46	ARG	2.0
34	i	1372	A	2.0
34	i	268	G	2.0
34	i	779	C	2.0
34	i	1361	G	2.0
4	D	107	TYR	2.0
9	I	201	LYS	2.0
25	Y	96	LEU	2.0
27	a	12	LYS	2.0
8	H	172	THR	2.0
6	F	184	SER	2.0
5	E	219	ALA	2.0
34	i	860	A	2.0
11	K	17	LYS	2.0
34	i	1695	C	2.0
4	D	213	PRO	2.0
11	K	44	HIS	2.0
2	B	70	SER	2.0
6	F	173	LEU	2.0
12	L	121	GLN	2.0
34	i	1	U	2.0
29	c	66	ARG	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.