



Full wwPDB EM Validation Report ⓘ

Mar 25, 2026 – 07:07 AM UTC

PDB ID : 3J8G / pdb_00003j8g
EMDB ID : EMD-6149
Title : Electron cryo-microscopy structure of EngA bound with the 50S ribosomal subunit
Authors : Zhang, X.; Yan, K.; Zhang, Y.; Li, N.; Ma, C.; Li, Z.; Zhang, Y.; Feng, B.; Liu, J.; Sun, Y.; Xu, Y.; Lei, J.; Gao, N.
Deposited on : 2014-10-24
Resolution : 5.00 Å (reported)
Based on initial models : 2WWQ, 2HJG

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

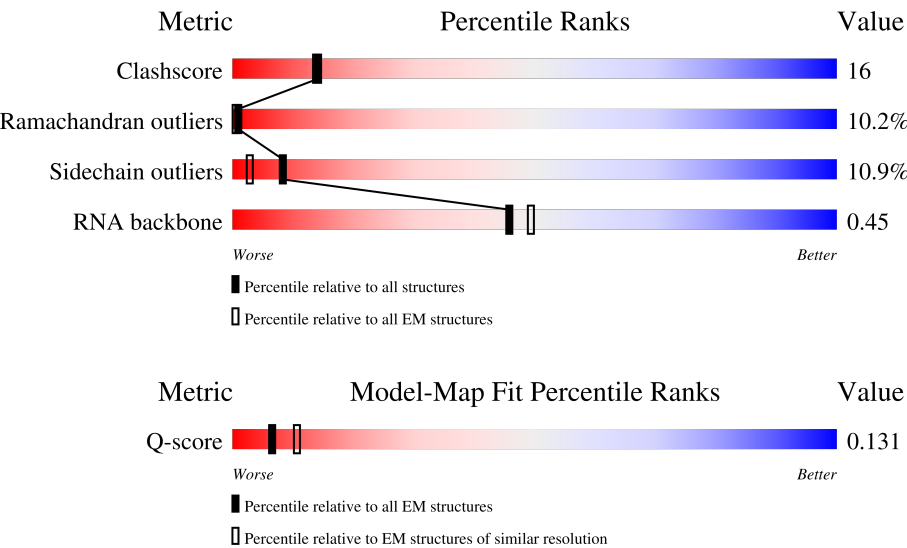
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh &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

1 Overall quality at a glance i

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

The reported resolution of this entry is 5.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	1057 (4.50 - 5.50)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	117	6% 23% 36% 38%
2	B	2903	9% 15% 37% 45%
3	0	78	51% 26% 49% 17% 8%

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Mol	Chain	Length	Quality of chain
4	K	123	
5	L	144	
6	1	63	
7	M	136	
8	N	127	
9	O	117	
10	P	115	
11	Q	118	
12	R	103	
13	S	110	
14	D	209	
15	T	100	
16	2	59	
17	U	104	
18	W	94	
19	X	490	
20	E	201	
21	Y	85	
22	3	57	
23	5	234	
24	6	46	
25	7	65	
26	8	38	
27	C	273	
28	F	179	

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Mol	Chain	Length	Quality of chain
29	G	177	20% 28% 46% 21%
30	H	149	85% 30% 52% 17%
31	I	142	94% 38% 49% 12%
32	J	142	38% 20% 49% 23% 8%

2 Entry composition

There are 32 unique types of molecules in this entry. The entry contains 94855 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	2874	Total	C	N	O	P	0	0
			61689	27523	11353	19941	2872		

- Molecule 3 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	0	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 4 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	K	121	Total	C	N	O	S	0	0
			931	582	179	164	6		

- Molecule 5 is a protein called 50S ribosomal protein L15.

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

- Molecule 6 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	1	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 7 is a protein called 50S ribosomal protein L16.

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

- Molecule 8 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	N	120	Total	C	N	O	S	0	0
			960	593	196	166	5		

- Molecule 9 is a protein called 50S ribosomal protein L18.

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

- Molecule 10 is a protein called 50S ribosomal protein L19.

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

- Molecule 11 is a protein called 50S ribosomal protein L20.

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

- Molecule 12 is a protein called 50S ribosomal protein L21.

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

- Molecule 13 is a protein called 50S ribosomal protein L22.

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

- Molecule 14 is a protein called 50S ribosomal protein L3.

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

- Molecule 15 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	T	93	Total	C	N	O	S	0	0
			738	466	139	131	2		

- Molecule 16 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	2	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 17 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	U	99	Total	C	N	O	S	0	0
			755	479	140	136			

- Molecule 18 is a protein called 50S ribosomal protein L25.

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

- Molecule 19 is a protein called GTPase Der.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	X	418	Total	C	N	O	S	0	0
			3280	2074	582	610	14		

- Molecule 20 is a protein called 50S ribosomal protein L4.

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

- Molecule 21 is a protein called 50S ribosomal protein L27.

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

- Molecule 22 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	3	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 23 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	5	234	Total	C	N	O	S	0	0
			1733	1081	315	330	7		

- Molecule 24 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	6	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 25 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	7	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 26 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	8	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	C	271	Total	C	N	O	S	0	0
			2082	1288	423	364	7		

- Molecule 28 is a protein called 50S ribosomal protein L5.

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

- Molecule 29 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	G	175	Total	C	N	O	S	0	0
			1316	827	242	245	2		

- Molecule 30 is a protein called 50S ribosomal protein L9.

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

- Molecule 31 is a protein called 50S ribosomal protein L11.

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

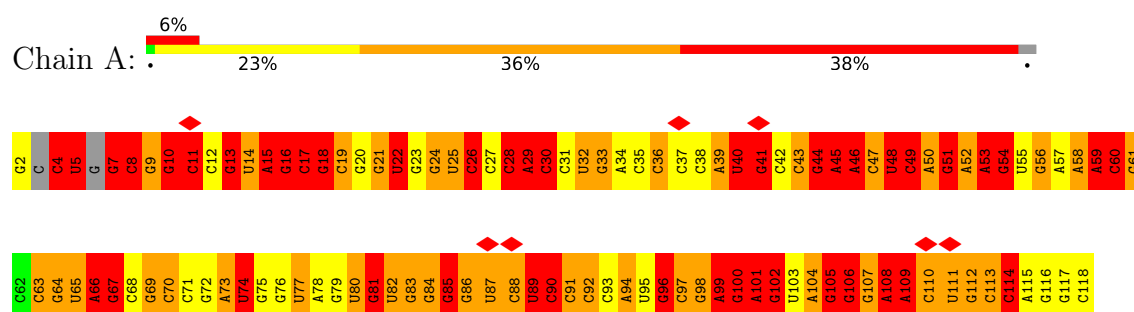
- Molecule 32 is a protein called 50S ribosomal protein L13.

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

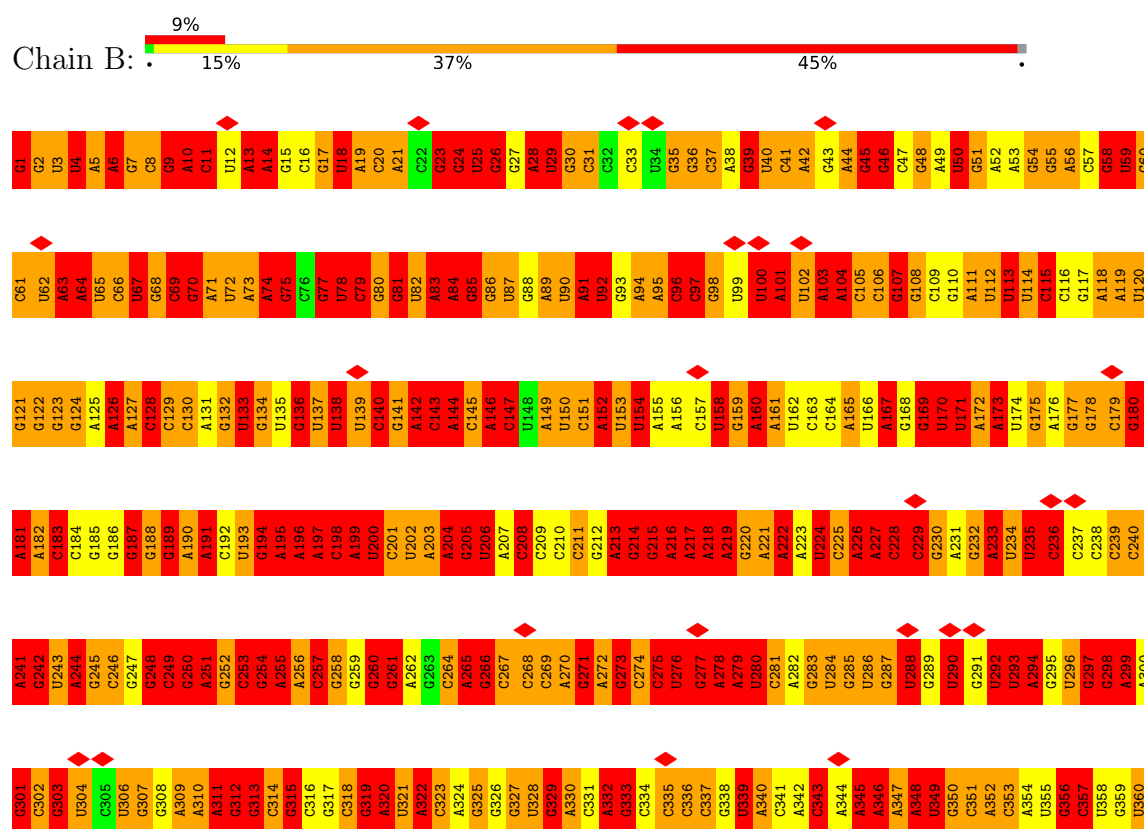
3 Residue-property plots

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

• Molecule 1: 5S rRNA



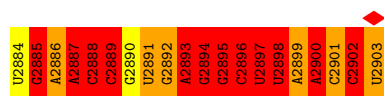
• Molecule 2: 23S rRNA



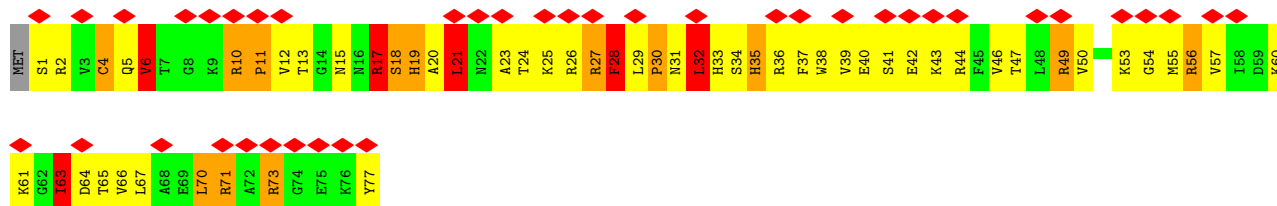
U1141	U1081	A1021	C961	C901	G841	A781	A721	A661	C601	A541	G481	C421	G361
A1142	U1082	G1022	G962	C902	U942	A782	A722	G662	A602	C542	A482	A422	A362
A1143	U1083	U1023	U963	C903	G843	A783	C723	G663	G603	G543	A483	A423	G363
A1144	A1084	G1024	G964	C904	A844	G784	U724	G664	G604	C544	C484	G424	C364
C1145	A1085	G1025	C965	A905	U945	G785	G725	U665	G605	U545	C485	G425	U365
C1146	A1086	G1026	G966	U906	U946	G786	G726	A666	U606	U546	C486	C426	C366
A1147	G1087	A1027	U967	G907	U947	C787	A727	U667	U607	A547	C487	U427	G367
U1148	A1088	A1028	C968	C908	C948	A788	G728	A668	A608	G548	A488	A428	A368
G1149	A1089	A1029	G969	A909	A949	A789	G729	G669	A609	G549	A489	A429	U369
C1150	C1030	C1030	U970	A910	U850	U790	A730	C670	C610	C550	A430	A370	A310
A1151	A1090	G1031	G971	A911	C851	C791	C731	A671	C611	C551	G431	U431	G371
C1152	C1032	A1032	A972	C912	U852	A792	C732	C672	G612	G552	A432	U432	G372
C1153	U1091	U1033	U973	U913	C853	A793	G733	C673	A613	G553	C433	U433	U373
G1154	G1093	G1034	G974	G914	C854	A794	A734	G674	A614	U554	A434	U434	A374
A1155	U1094	U1035	A975	C915	G855	C795	A735	A675	U615	U555	C435	G375	G375
A1156	U1094	G1036	G976	C916	G856	C796	C736	A676	A616	A556	C436	G376	G376
C1157	A1095	U1037	G977	A917	G857	G797	G737	A677	G617	C557	U437	G377	G377
C1158	A1096	G1038	G978	A918	G858	G798	G738	C678	G618	U558	C438	G378	C378
U1159	A1097	A1039	A979	U919	G859	G799	A739	C679	G619	U559	A439	G379	G379
G1160	A1098	A1040	A980	A920	U860	A800	C740	C680	G620	G560	C440	G380	G380
C1161	A1098	G1041	A981	C921	A861	G801	U741	G681	A621	C561	A501	G381	G381
G1162	G1099	G1042	C982	C922	G862	A802	A742	G682	G622	U562	A502	A442	C382
G1163	C1100	C1043	A983	G923	A863	U803	A743	U683	C623	C563	A503	A443	C383
C1164	U1101	G1044	A984	G924	G864	A804	U744	G684	C624	C564	A504	A444	C384
A1165	A1102	U1045	A985	A925	C865	G805	G745	A685	G625	C565	A505	A445	C385
G1166	A1103	A1046	C986	G926	A866	C806	U746	U686	A626	C566	A506	A446	C386
C1167	C1104	A1047	C987	A927	G867	U807	U747	C687	A627	U567	A507	A447	U387
G1168	G1105	A1048	A988	A928	U868	G808	G748	U688	G628	U568	A508	A448	G388
A1169	U1106	C1049	G989	U929	G869	G809	A749	A689	G629	U569	C509	U449	G389
C1170	G1107	A1050	A990	G930	U870	U810	A750	G690	G630	G570	C510	A449	U390
G1171	U1108	G1051	C991	U931	U871	U811	A751	C691	A631	U571	U511	G450	A391
C1172	U1109	C1052	C992	U932	G872	C812	A752	C692	A632	A572	G512	U451	U392
U1173	C1110	C1053	G993	A933	U873	U813	A753	A693	A633	G573	A513	G452	C393
U1174	A1111	A1054	C994	U934	G874	C814	U754	U694	C634	A574	A514	A453	C394
A1175	G1112	G1055	A995	C935	G875	C815	U755	G695	C635	A575	A515	A454	U395
U1176	C1113	U1056	G996	A936	C876	C816	A756	G696	G636	U576	A516	A455	G396
G1177	C1114	A1057	C997	C937	A877	G817	G757	G697	A637	U577	C517	C456	U397
C1178	G1115	U1058	C998	G938	A878	G818	C758	C698	G638	G578	G518	A457	C398
G1179	C1116	G1059	U999	G939	G879	A819	G759	A699	U639	G579	U519	G458	U399
U1180	C1117	A1060	A1000	G940	G880	A820	G760	G700	C640	U580	G520	U459	G400
G1181	U1118	U1061	A1001	A941	G881	A821	A761	U701	U641	C581	A460	A461	A401
U1182	C1119	G1062	G1002	G942	G882	C822	G762	U702	U642	U582	A462	C462	A402
G1183	G1120	U1063	A943	C944	G883	U824	A764	G704	A644	A583	C523	U403	U403
U1184	C1121	C1064	C1005	A945	U884	A825	C765	A705	C645	C584	G524	A404	A404
G1185	C1122	U1065	C1006	C946	C885	U826	U766	A706	U646	G585	G525	U464	U405
C1186	G1124	A1066	C1007	A947	A886	U827	U767	G707	U647	A586	A526	G465	G406
G1187	C1125	U1067	A1008	C948	U887	U828	G768	G708	G648	C587	C527	G467	G407
U1188	A1126	A1068	A1009	G949	U888	A829	U769	U709	G649	U588	A528	G468	G408
A1189	A1127	G1069	G1010	C950	C889	G830	G770	U710	C650	U589	A529	G469	G409
G1190	C1128	A1069	U1011	C951	C889	G831	G771	G711	G651	A590	G530	A470	G410
G1191	A1129	U1070	G952	C952	C890	A832	C772	G712	U652	U591	C531	A471	A412
C1192	U1130	A1071	G953	G953	G891	A833	C773	G713	U653	A592	A532	A472	C413
G1193	G1131	G1071	G954	G954	G891	G834	G774	U714	U654	U593	G533	G473	C414
A1194	U1132	C1072	U1015	U955	A892	C835	G775	A715	A655	U594	G534	G474	A415
G1195	A1133	A1073	G956	G956	C893	G836	G776	A716	G656	C595	G536	G475	U416
C1196	C1134	U1074	G957	C957	U894	C837	G777	A717	G657	U596	G537	G476	C417
G1197	U1135	G1075	U1018	U958	U895	C838	G778	C717	U658	G597	A538	A477	C418
U1198	G1136	C1076	U1019	U959	A896	C839	G779	C718	U659	A599	G539	A478	U419
G1199	G1137	A1077	A1020	A960	C897	C940	G780	U720	C660	G600	C540	A479	U420
C1200	G1138	U1078	A960	A960	C898	C941	G781	U721	C661	G601	C541	A480	C420

G1983	G1984	G1985	G1986	G1987	G1988	G1989	G1990	G1991	G1992	G1993	G1994	G1995	G1996	G1997	A1998	C1999	C2000	C2001	C2002	A2003	G2004	A2005	C2006	C2007	C2008	A2009	G2010	U2011	G2012	A2013	A2014	A2015	U2016	U2017	G2018	A2019	A2020	C2021	U2022	C2023	G2024	C2025	G2026	G2027	U2028	G2029	A2030	A2031	C2032	A2033	G2034	G2035	C2036	A2037	G2038	U2039	G2040	U2041	A2042			
U1923	C1924	C1925	U1926	G1927	A1928	G1929	G1930	U1931	A1932	G1933	C1934	G1935	A1936	A1937	A1938	U1939	U1940	C1941	C1942	U1943	U1944	G1945	U1946	C1947	G1948	G1949	G1950	U1951	A1952	A1953	G1954	U1955	U1956	C1957	G1958	G1959	A1960	C1961	C1962	U1963	G1964	C1965	A1966	G1967	G1968	A1969	U1970	U1971	G1972	C1973	C1974	G1975	U1976	A1977	A1978	U1979	G1980	U1981	U1982			
A1803	C1804	A1805	C1806	G1807	A1808	C1809	A1810	G1811	U1812	G1813	C1814	A1815	C1816	G1817	U1818	A1819	U1820	A1821	C1822	G1823	G1824	U1825	G1826	U1827	G1828	A1829	G1830	G1831	C1832	G1833	U1834	G1835	C1836	G1837	C1838	G1839	G1840	U1841	G1842	C1843	G1844	G1845	G1846	A1847	A1848	G1849	C1850	U1851	U1852	A1853	A1854	U1855	U	A	U	G	G	G				
G	U	A	U	C	G	C	C	A	A	G	C	C	A	G	G	C	U	C	U	G	A1885	U1886	C1887	G1888	A1889	C1890	G1891	C1892	G1893	C1894	U1895	C1896	A1897	U1898	A1899	A1900	A1901	C1902	G1903	G1904	G1905	C1906	G1907	C1908	C1909	U1910	U1911	A1912	A1913	C1914	U1915	A1916	U1917	A1918	A1919	C1920	G1921	G1922				
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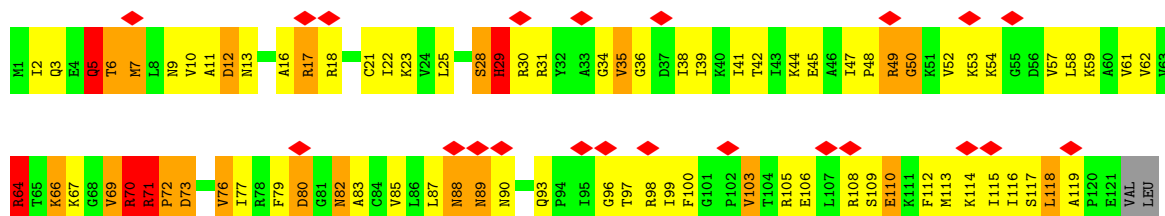
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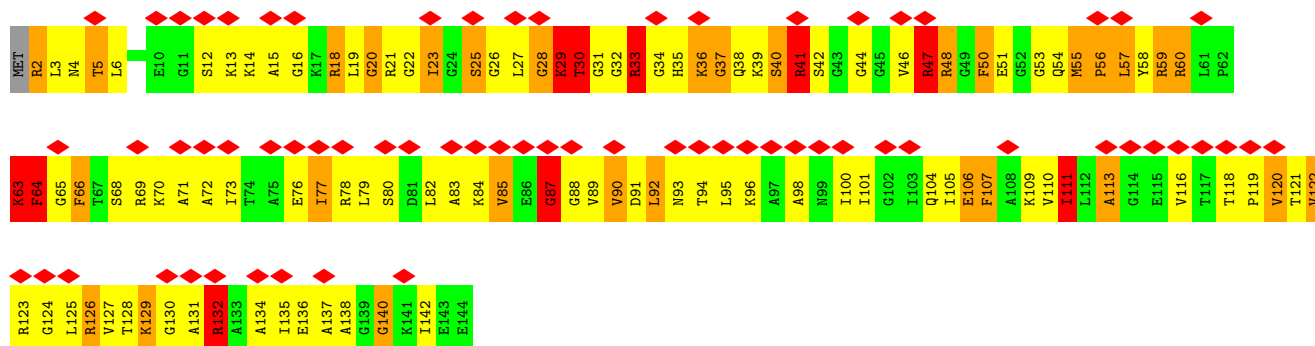
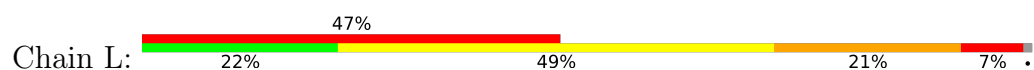
• Molecule 3: 50S ribosomal protein L28



• Molecule 4: 50S ribosomal protein L14



• Molecule 5: 50S ribosomal protein L15

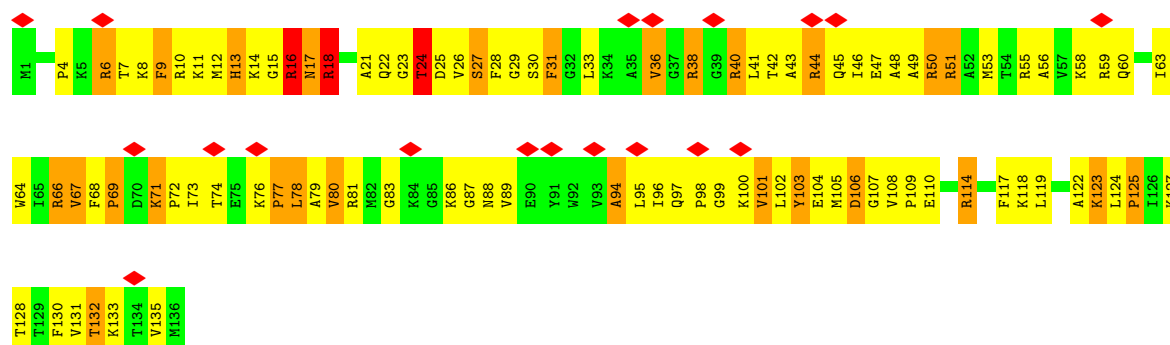


• Molecule 6: 50S ribosomal protein L29

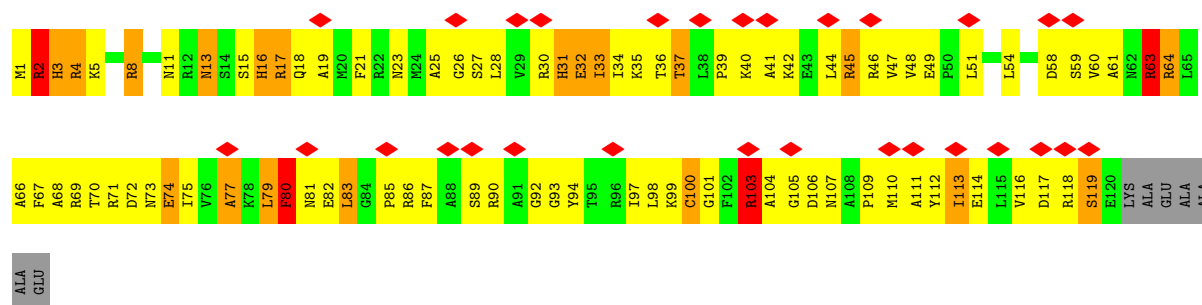




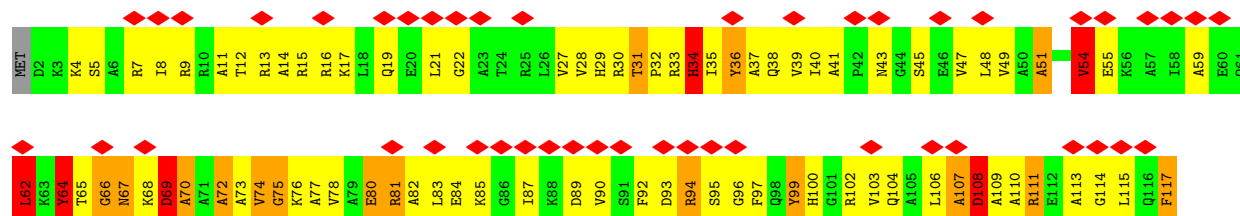
• Molecule 7: 50S ribosomal protein L16



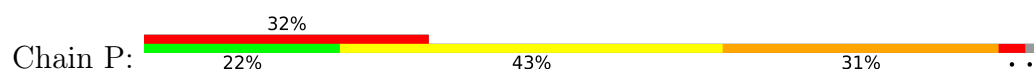
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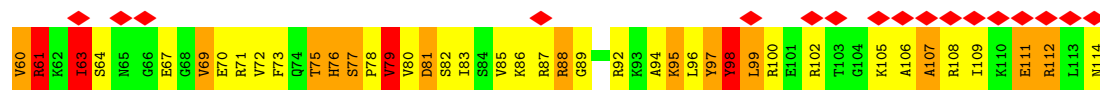


• Molecule 9: 50S ribosomal protein L18

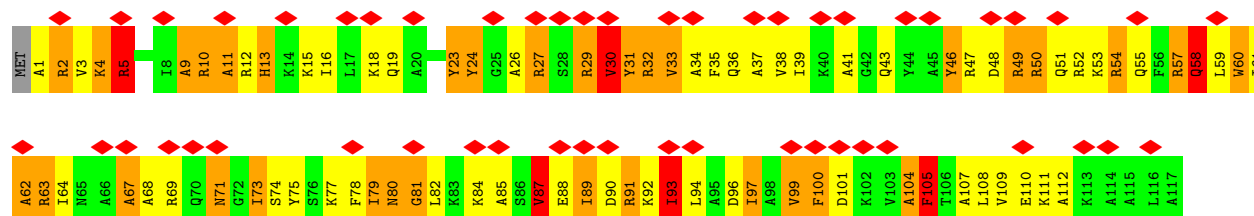
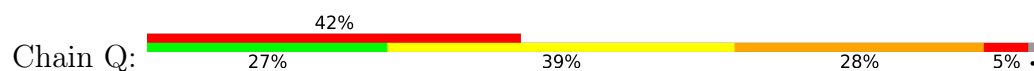


• Molecule 10: 50S ribosomal protein L19

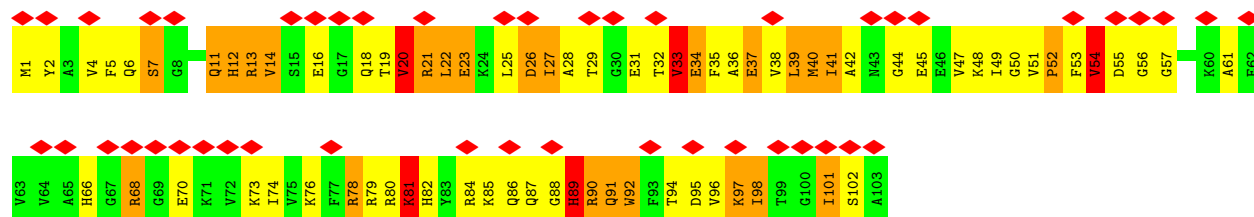




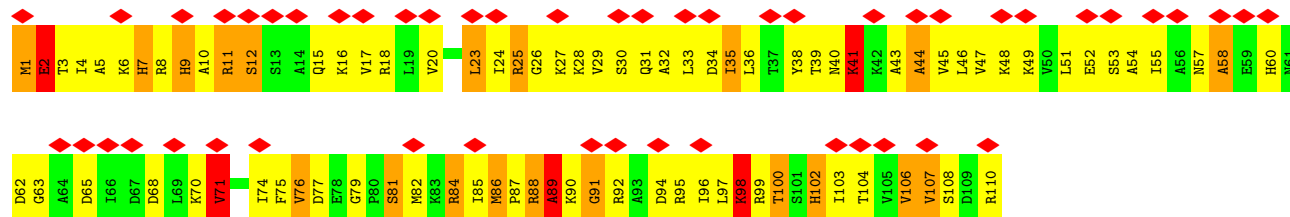
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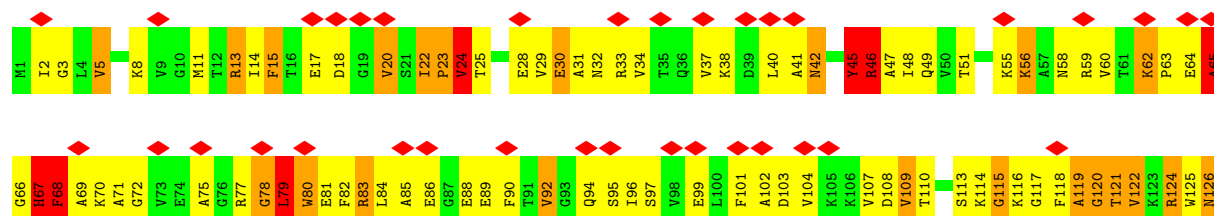
• Molecule 12: 50S ribosomal protein L21

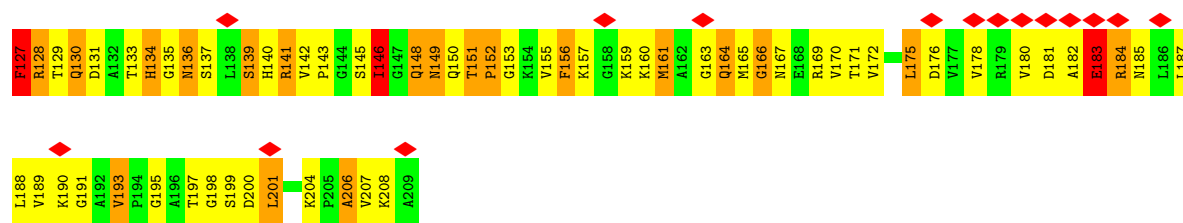


• Molecule 13: 50S ribosomal protein L22

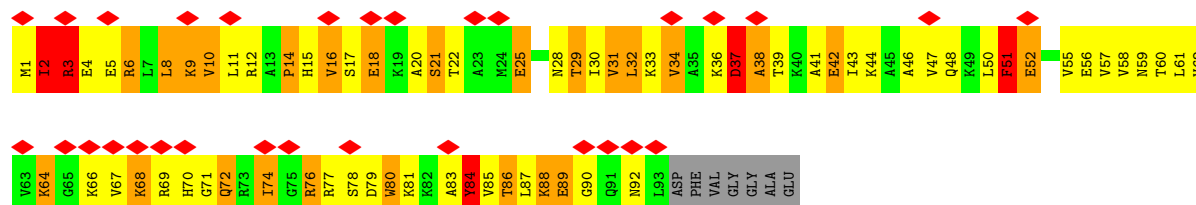
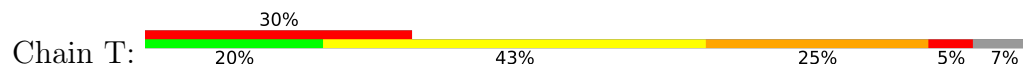


• Molecule 14: 50S ribosomal protein L3

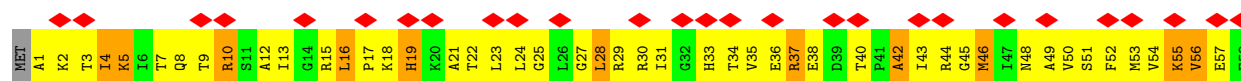




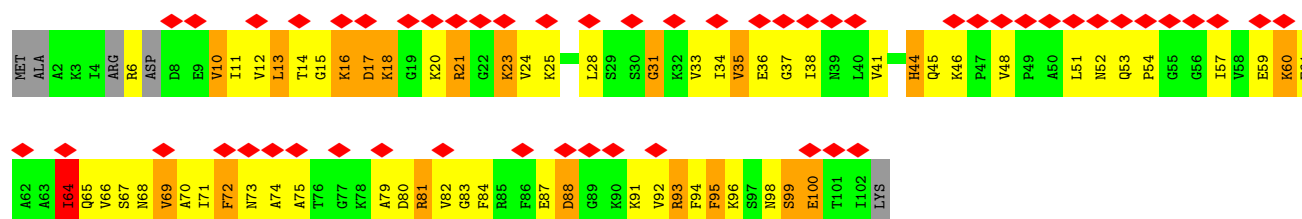
• Molecule 15: 50S ribosomal protein L23



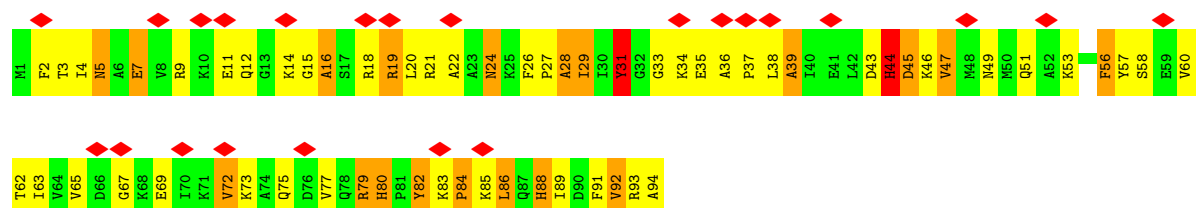
• Molecule 16: 50S ribosomal protein L30



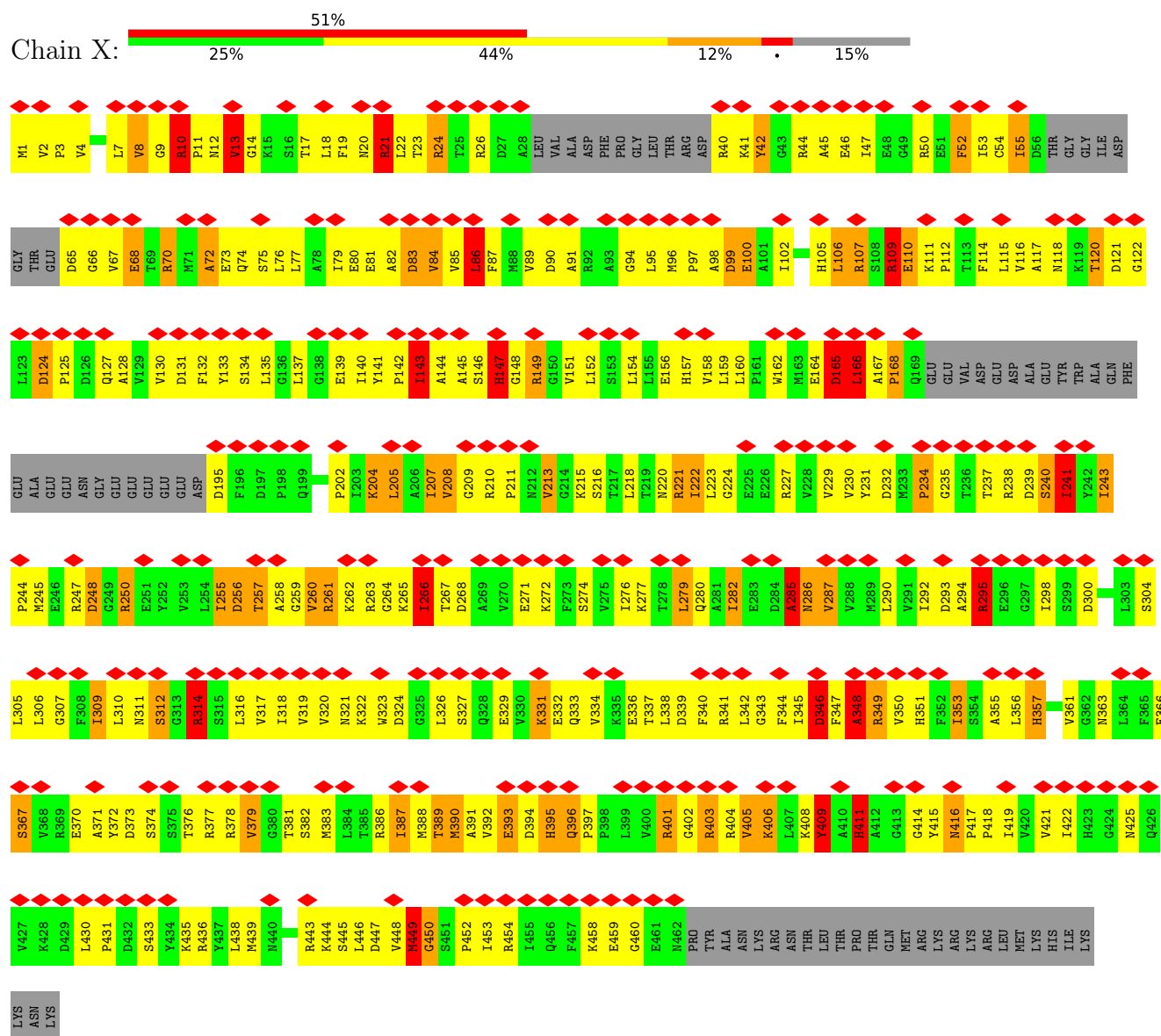
• Molecule 17: 50S ribosomal protein L24



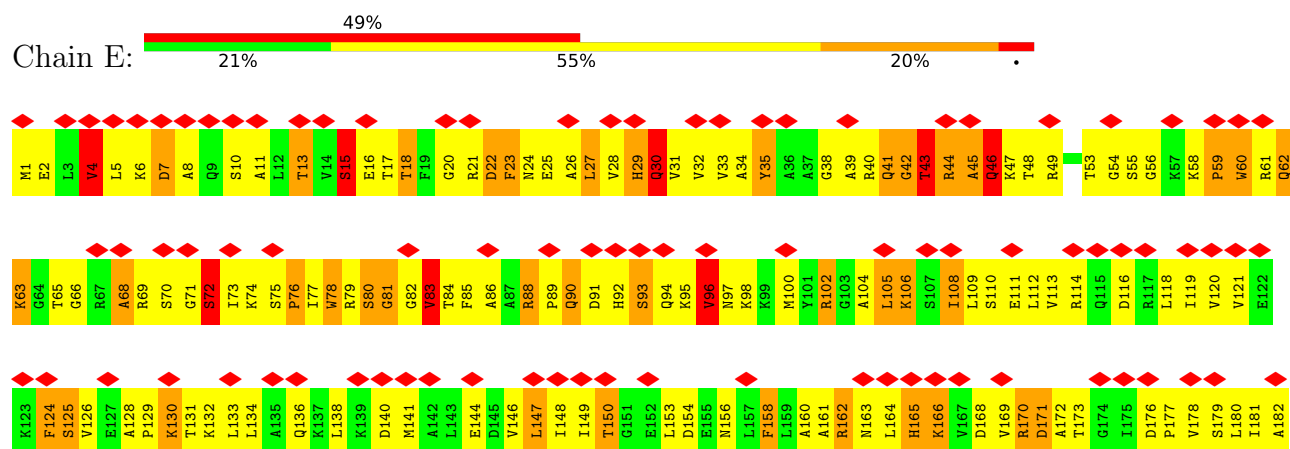
• Molecule 18: 50S ribosomal protein L25

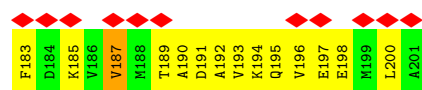


• Molecule 19: GTPase Der

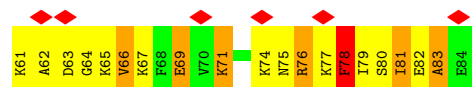
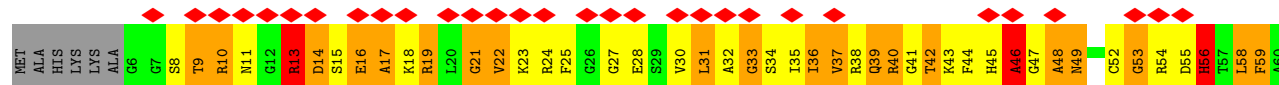
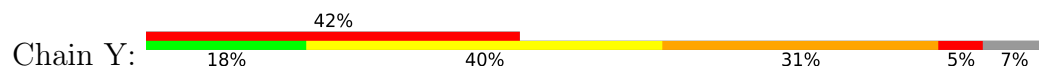


• Molecule 20: 50S ribosomal protein L4

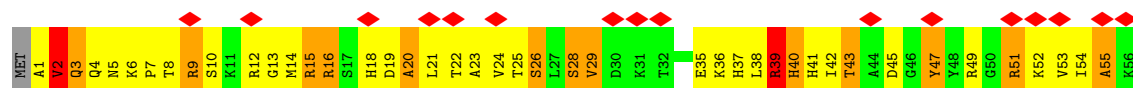
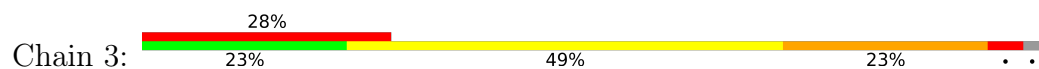




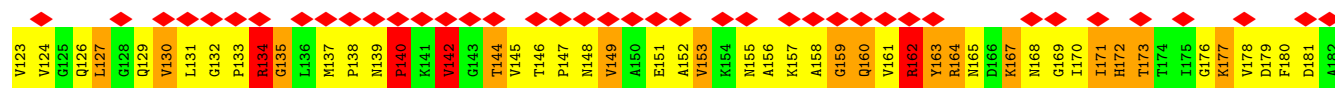
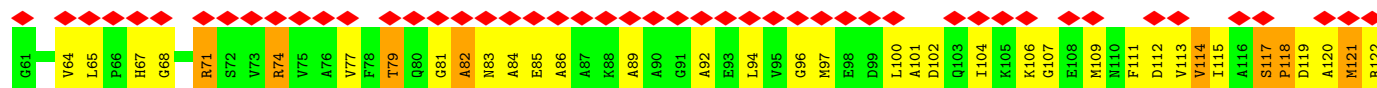
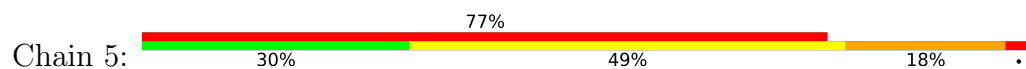
• Molecule 21: 50S ribosomal protein L27



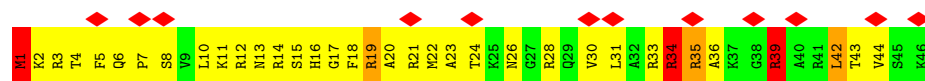
• Molecule 22: 50S ribosomal protein L32



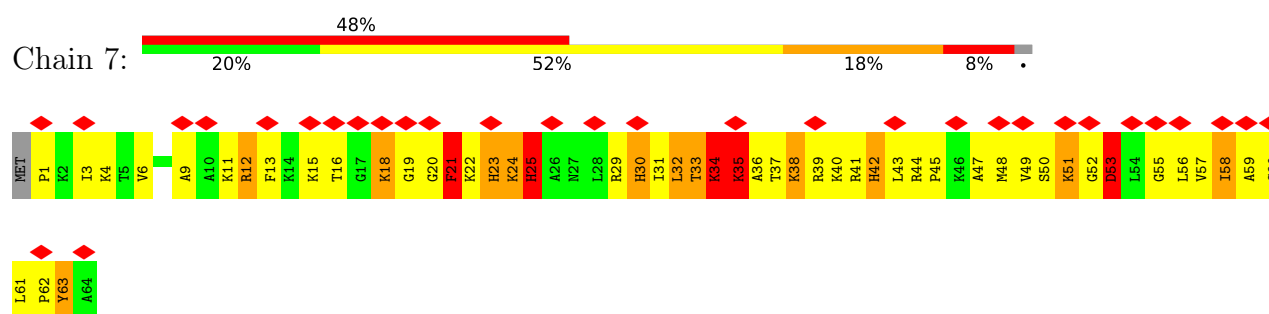
• Molecule 23: 50S ribosomal protein L1



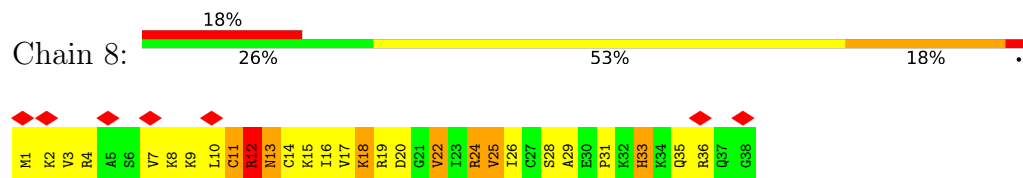
• Molecule 24: 50S ribosomal protein L34



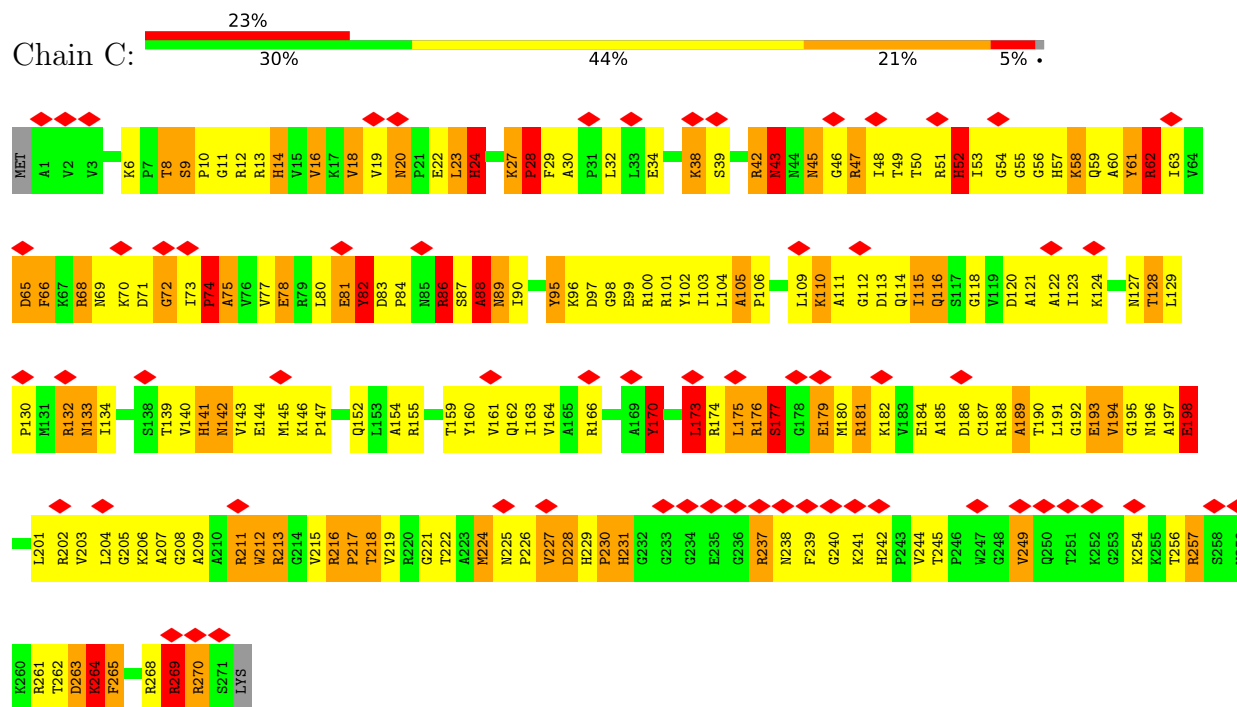
• Molecule 25: 50S ribosomal protein L35



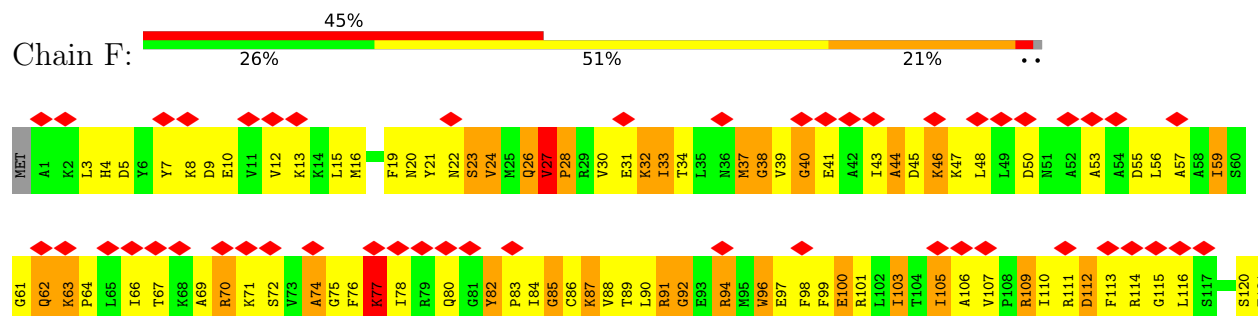
• Molecule 26: 50S ribosomal protein L36



• Molecule 27: 50S ribosomal protein L2

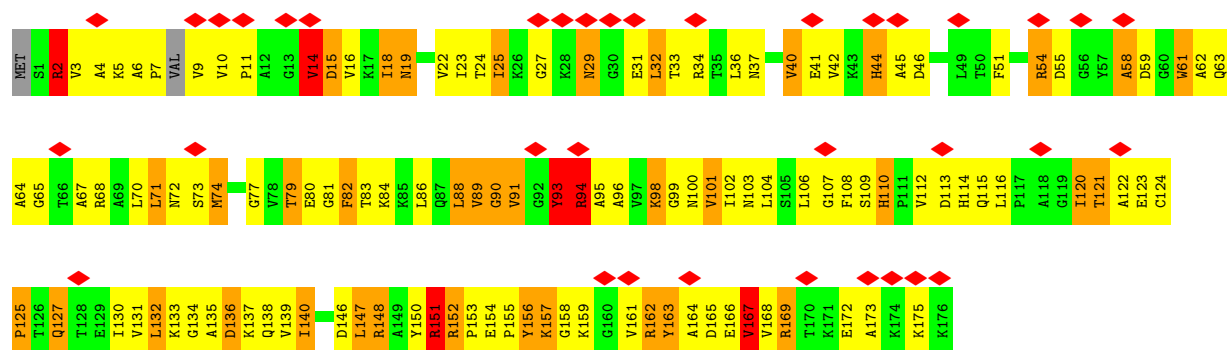


• Molecule 28: 50S ribosomal protein L5

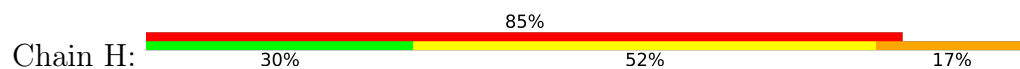




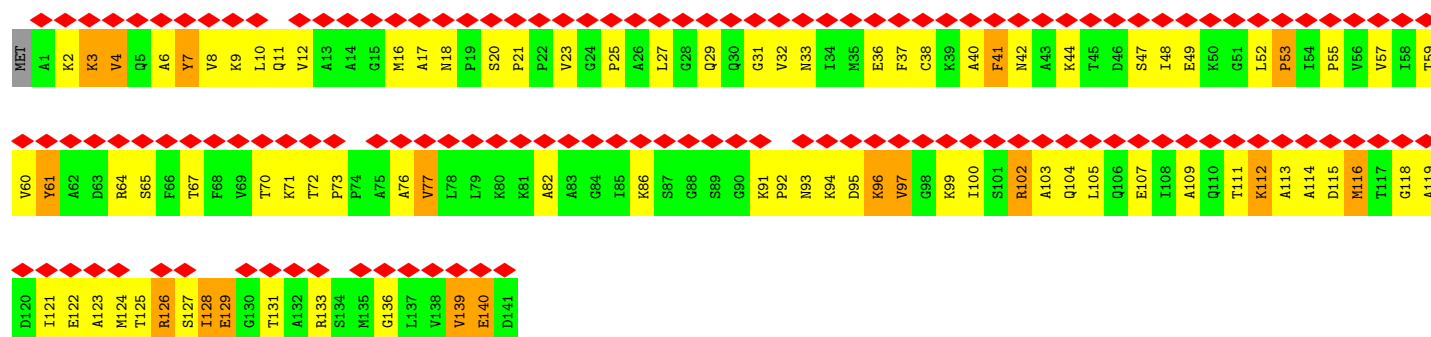
• Molecule 29: 50S ribosomal protein L6



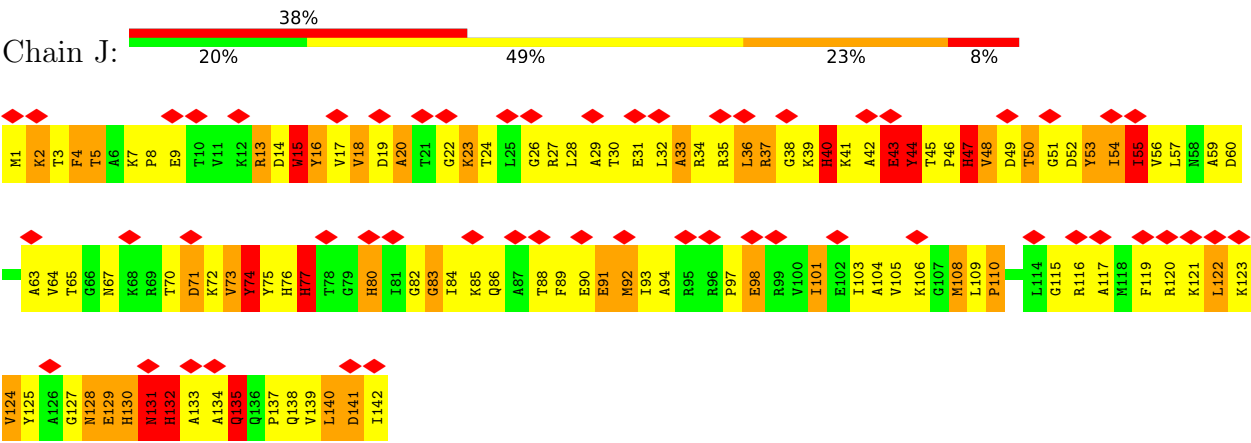
• Molecule 30: 50S ribosomal protein L9



• Molecule 31: 50S ribosomal protein L11



• Molecule 32: 50S ribosomal protein L13



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	189614	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	Not provided	
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	Not provided	
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI EAGLE (4k x 4k)	Depositor
Maximum map value	0.232	Depositor
Minimum map value	-0.093	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.013	Depositor
Recommended contour level	0.045	Depositor
Map size ($\text{\AA}$)	373.088, 373.088, 373.088	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.1659, 1.1659, 1.1659	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	A	2.17	83/2744 (3.0%)	1.96	140/4276 (3.3%)
2	B	2.22	2425/69092 (3.5%)	2.05	3683/107787 (3.4%)
3	O	2.62	44/635 (6.9%)	2.58	50/848 (5.9%)
4	K	2.36	36/940 (3.8%)	2.50	64/1258 (5.1%)
5	L	2.56	73/1054 (6.9%)	2.67	98/1403 (7.0%)
6	1	2.39	25/510 (4.9%)	2.52	34/677 (5.0%)
7	M	2.41	59/1093 (5.4%)	2.46	67/1460 (4.6%)
8	N	2.45	55/973 (5.7%)	2.58	82/1301 (6.3%)
9	O	2.56	63/902 (7.0%)	2.59	74/1209 (6.1%)
10	P	2.49	52/929 (5.6%)	2.55	74/1242 (6.0%)
11	Q	2.47	50/960 (5.2%)	2.77	80/1278 (6.3%)
12	R	2.48	46/829 (5.5%)	2.46	58/1107 (5.2%)
13	S	2.64	60/864 (6.9%)	2.55	59/1156 (5.1%)
14	D	2.51	94/1586 (5.9%)	2.61	131/2134 (6.1%)
15	T	2.65	53/744 (7.1%)	2.73	64/994 (6.4%)
16	2	2.59	25/453 (5.5%)	2.69	41/605 (6.8%)
17	U	2.33	32/761 (4.2%)	2.46	50/1013 (4.9%)
18	W	2.42	34/766 (4.4%)	2.53	57/1025 (5.6%)
19	X	2.34	145/3334 (4.3%)	2.54	266/4502 (5.9%)
20	E	2.52	92/1571 (5.9%)	2.58	127/2113 (6.0%)
21	Y	2.45	28/603 (4.6%)	2.67	54/797 (6.8%)
22	3	2.63	29/450 (6.4%)	2.64	34/599 (5.7%)
23	5	2.37	76/1748 (4.3%)	2.63	153/2355 (6.5%)
24	6	2.64	26/380 (6.8%)	2.54	28/498 (5.6%)
25	7	2.50	32/513 (6.2%)	2.66	45/676 (6.7%)
26	8	2.38	13/303 (4.3%)	2.45	15/397 (3.8%)
27	C	2.52	116/2121 (5.5%)	2.60	180/2852 (6.3%)
28	F	2.26	53/1444 (3.7%)	2.57	111/1937 (5.7%)
29	G	2.44	71/1335 (5.3%)	2.53	96/1803 (5.3%)
30	H	2.30	40/1122 (3.6%)	2.46	94/1515 (6.2%)
31	I	2.26	40/1046 (3.8%)	2.55	83/1410 (5.9%)
32	J	2.56	64/1152 (5.6%)	2.52	90/1551 (5.8%)
All	All	2.29	4134/102957 (4.0%)	2.20	6282/153778 (4.1%)

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	69
2	B	0	1764
3	O	0	5
4	K	0	4
5	L	0	10
6	1	0	6
7	M	0	9
8	N	0	4
9	O	0	5
10	P	0	7
11	Q	0	11
12	R	0	8
13	S	0	3
14	D	0	11
15	T	0	3
16	2	0	4
17	U	0	4
18	W	0	2
19	X	0	25
20	E	0	7
21	Y	0	6
22	3	0	4
23	5	0	7
24	6	0	3
25	7	0	3
26	8	0	1
27	C	0	11
28	F	0	6
29	G	0	9
30	H	0	9
31	I	0	3
32	J	0	9
All	All	0	2032

All (4134) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	J	57	LEU	CA-C	-18.93	1.40	1.52
20	E	165	HIS	N-CA	-17.39	1.31	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	L	106	GLU	CA-C	-12.69	1.37	1.52
20	E	197	GLU	N-CA	-12.58	1.31	1.46
16	2	31	ILE	CA-CB	-12.27	1.38	1.54
11	Q	54	ARG	CA-C	-12.22	1.36	1.52
19	X	435	LYS	CA-C	-12.15	1.37	1.52
16	2	9	THR	CA-C	-11.81	1.36	1.52
2	B	2010	G	C1'-N9	-11.46	1.30	1.48
12	R	20	VAL	CA-C	-11.38	1.39	1.52
13	S	74	ILE	CA-C	-11.23	1.38	1.52
2	B	743	A	C1'-N9	-11.22	1.31	1.48
6	1	24	GLU	N-CA	-11.22	1.36	1.46
9	O	45	SER	CA-C	-11.03	1.38	1.52
23	5	164	ARG	CD-NE	10.95	1.61	1.46
2	B	828	U	O3'-P	-10.84	1.44	1.61
3	0	29	LEU	CA-C	-10.76	1.40	1.52
2	B	705	A	C1'-N9	-10.74	1.31	1.48
2	B	1662	U	P-O5'	-10.71	1.43	1.59
32	J	56	VAL	CA-C	-10.71	1.40	1.52
2	B	2055	C	O3'-P	-10.66	1.45	1.61
2	B	969	G	C2'-C1'	-10.50	1.37	1.53
2	B	2612	C	O3'-P	-10.45	1.45	1.61
2	B	1137	G	O3'-P	-10.35	1.45	1.61
2	B	785	G	C1'-N9	-10.29	1.32	1.48
13	S	2	GLU	CA-C	-10.29	1.39	1.52
23	5	3	LYS	CA-C	-10.23	1.39	1.52
14	D	33	ARG	C-N	10.22	1.45	1.33
18	W	18	ARG	NE-CZ	10.22	1.44	1.33
2	B	927	A	O3'-P	-10.22	1.45	1.61
2	B	2060	A	O3'-P	-10.21	1.45	1.61
2	B	2516	A	C2'-C1'	-10.17	1.38	1.53
12	R	80	ARG	CA-C	-10.17	1.38	1.52
2	B	1293	C	O3'-P	-10.12	1.46	1.61
2	B	1385	A	O3'-P	-10.10	1.46	1.61
19	X	454	ARG	CA-C	-10.03	1.40	1.52
1	A	59	A	C1'-N9	-10.01	1.32	1.48
2	B	2366	A	C1'-N9	-10.00	1.32	1.48
20	E	105	LEU	CA-C	-9.98	1.42	1.53
19	X	46	GLU	CA-C	-9.97	1.40	1.52
27	C	197	ALA	CA-C	-9.93	1.42	1.53
3	0	38	TRP	CA-C	-9.93	1.40	1.52
2	B	650	C	P-O5'	-9.91	1.44	1.59
2	B	345	A	C2'-C1'	-9.87	1.38	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	7	19	GLY	CA-C	-9.84	1.38	1.51
24	6	5	PHE	CA-C	-9.83	1.40	1.52
2	B	496	G	C2'-C1'	-9.81	1.38	1.53
27	C	51	ARG	NE-CZ	9.80	1.43	1.33
2	B	1198	U	C2'-C1'	-9.70	1.38	1.53
2	B	2694	G	O3'-P	-9.70	1.46	1.61
2	B	2776	A	O3'-P	-9.69	1.46	1.61
2	B	1032	A	O3'-P	-9.68	1.46	1.61
13	S	30	SER	CA-C	-9.66	1.41	1.52
25	7	25	HIS	CB-CG	-9.60	1.36	1.50
14	D	95	SER	CA-C	-9.59	1.43	1.53
22	3	18	HIS	CA-C	-9.58	1.42	1.53
2	B	2042	A	C2'-C1'	-9.56	1.38	1.53
2	B	1781	U	C4'-C3'	-9.53	1.38	1.52
2	B	1127	A	O3'-P	-9.53	1.46	1.61
2	B	1718	G	C1'-N9	-9.45	1.33	1.48
14	D	23	PRO	CA-C	-9.45	1.41	1.52
15	T	52	GLU	N-CA	-9.44	1.35	1.46
27	C	161	VAL	N-CA	-9.42	1.35	1.46
2	B	2852	G	C1'-N9	-9.42	1.33	1.48
18	W	9	ARG	NE-CZ	9.42	1.43	1.33
2	B	821	A	C1'-N9	-9.41	1.32	1.47
2	B	198	C	P-O5'	-9.40	1.45	1.59
19	X	324	ASP	CA-C	-9.40	1.40	1.52
21	Y	10	ARG	CD-NE	9.39	1.59	1.46
23	5	64	VAL	CA-CB	-9.38	1.44	1.54
27	C	198	GLU	CA-C	-9.37	1.40	1.52
2	B	2259	U	O3'-P	-9.34	1.47	1.61
18	W	29	ILE	CA-C	-9.34	1.41	1.52
29	G	133	LYS	CA-C	-9.32	1.41	1.52
3	0	63	ILE	C-N	9.31	1.46	1.33
2	B	1528	A	C1'-N9	9.31	1.61	1.48
32	J	71	ASP	N-CA	-9.31	1.34	1.46
14	D	122	VAL	CA-C	-9.30	1.41	1.52
29	G	98	LYS	CA-C	-9.30	1.40	1.52
13	S	24	ILE	CA-CB	-9.28	1.43	1.54
2	B	489	G	O3'-P	-9.27	1.47	1.61
2	B	2336	A	P-O5'	-9.27	1.45	1.59
4	K	49	ARG	NE-CZ	9.26	1.43	1.33
32	J	101	ILE	CA-C	-9.26	1.41	1.52
29	G	84	LYS	CA-C	-9.23	1.41	1.52
2	B	1113	U	O3'-P	-9.18	1.47	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	L	47	ARG	NE-CZ	9.18	1.43	1.33
12	R	27	ILE	CA-C	-9.18	1.41	1.52
10	P	79	VAL	N-CA	-9.17	1.34	1.46
2	B	2093	G	C2'-C1'	-9.14	1.39	1.53
2	B	847	U	C2'-C1'	-9.14	1.39	1.53
7	M	47	GLU	CA-C	-9.13	1.41	1.52
2	B	2676	C	O3'-P	-9.12	1.47	1.61
2	B	2036	C	O3'-P	-9.11	1.47	1.61
20	E	21	ARG	NE-CZ	9.11	1.43	1.33
14	D	28	GLU	CA-C	-9.11	1.42	1.52
3	O	66	VAL	CA-CB	-9.06	1.43	1.54
2	B	2002	G	O4'-C1'	-9.05	1.28	1.41
17	U	67	SER	CA-C	-9.05	1.40	1.52
14	D	22	ILE	CA-C	-9.04	1.43	1.52
7	M	63	ILE	CA-C	-9.03	1.41	1.52
11	Q	80	ASN	CA-C	-9.03	1.43	1.53
2	B	1632	A	O3'-P	-9.00	1.47	1.61
2	B	495	G	O3'-P	-8.99	1.47	1.61
1	A	92	C	O3'-P	-8.99	1.47	1.61
2	B	673	C	C1'-N1	-8.96	1.35	1.48
2	B	2408	U	P-O5'	-8.94	1.46	1.59
2	B	748	G	O3'-P	-8.94	1.47	1.61
27	C	122	ALA	N-CA	-8.94	1.35	1.46
20	E	48	THR	CA-C	-8.94	1.41	1.52
2	B	1617	C	O3'-P	-8.92	1.47	1.61
2	B	2164	C	C4'-C3'	8.92	1.66	1.52
2	B	2894	G	P-O5'	-8.91	1.46	1.59
2	B	627	A	O3'-P	-8.88	1.47	1.61
25	7	39	ARG	CA-C	-8.88	1.41	1.52
2	B	1725	U	P-O5'	-8.88	1.46	1.59
2	B	125	A	O3'-P	-8.87	1.47	1.61
2	B	1653	G	C1'-N9	-8.87	1.33	1.47
2	B	2781	A	O3'-P	-8.87	1.47	1.61
2	B	2637	U	O3'-P	-8.86	1.47	1.61
23	5	113	VAL	CA-C	-8.85	1.42	1.52
2	B	398	C	C2'-C1'	-8.83	1.40	1.53
10	P	46	VAL	CA-C	-8.83	1.43	1.53
2	B	1137	G	C2'-C1'	-8.83	1.40	1.53
9	O	48	LEU	N-CA	-8.82	1.35	1.46
2	B	966	G	C2'-C1'	-8.82	1.40	1.53
2	B	1654	A	O3'-P	-8.82	1.48	1.61
2	B	2199	A	C5'-C4'	8.81	1.64	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	315	G	P-O5'	-8.81	1.46	1.59
2	B	1807	G	C2'-C1'	-8.81	1.40	1.53
2	B	1814	G	O3'-P	-8.79	1.48	1.61
2	B	2249	U	O3'-P	-8.78	1.48	1.61
2	B	348	A	C1'-N9	-8.78	1.34	1.48
5	L	76	GLU	C-N	8.78	1.45	1.33
2	B	1327	A	C5'-C4'	8.78	1.64	1.51
2	B	2444	G	P-O5'	-8.77	1.46	1.59
30	H	64	ALA	N-CA	-8.76	1.35	1.46
12	R	55	ASP	CA-C	-8.76	1.43	1.52
2	B	1616	A	C1'-N9	-8.75	1.33	1.47
2	B	2140	G	C2'-C1'	-8.75	1.40	1.53
30	H	121	VAL	CA-C	-8.74	1.43	1.52
2	B	2499	C	C1'-N1	-8.73	1.35	1.48
23	5	223	ALA	N-CA	-8.73	1.35	1.45
2	B	640	C	O3'-P	-8.72	1.48	1.61
31	I	40	ALA	N-CA	-8.72	1.36	1.46
2	B	66	C	C5'-C4'	8.70	1.64	1.51
22	3	6	LYS	CA-C	-8.69	1.41	1.52
7	M	96	ILE	CA-C	-8.69	1.42	1.52
15	T	21	SER	N-CA	-8.69	1.34	1.46
8	N	37	THR	CA-C	-8.68	1.41	1.52
2	B	1752	C	O3'-P	-8.68	1.48	1.61
1	A	101	A	P-O5'	-8.68	1.46	1.59
7	M	50	ARG	NE-CZ	8.68	1.42	1.33
27	C	182	LYS	CA-CB	8.68	1.65	1.53
2	B	1039	A	O3'-P	-8.66	1.48	1.61
2	B	1609	A	O3'-P	-8.65	1.48	1.61
30	H	34	GLY	CA-C	-8.65	1.39	1.51
27	C	122	ALA	CA-CB	-8.65	1.40	1.53
20	E	82	GLY	CA-C	-8.64	1.42	1.52
13	S	76	VAL	CA-C	-8.63	1.41	1.52
7	M	12	MET	N-CA	-8.62	1.40	1.46
2	B	1393	A	C4'-O4'	-8.61	1.32	1.45
17	U	6	ARG	NE-CZ	8.61	1.42	1.33
12	R	92	TRP	CA-C	-8.60	1.42	1.52
26	8	19	ARG	N-CA	-8.59	1.36	1.46
2	B	832	U	C5'-C4'	8.59	1.64	1.51
29	G	73	SER	CA-C	-8.57	1.40	1.52
29	G	51	PHE	CA-C	-8.56	1.42	1.52
2	B	2616	C	C2'-C1'	-8.54	1.40	1.53
18	W	73	LYS	CA-C	-8.54	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	T	38	ALA	CA-C	-8.54	1.41	1.52
2	B	2842	G	C1'-N9	-8.53	1.35	1.48
2	B	1493	C	C1'-N1	8.52	1.61	1.48
19	X	388	MET	CA-C	-8.52	1.41	1.52
32	J	15	TRP	CA-C	-8.51	1.42	1.52
12	R	14	VAL	CA-C	-8.50	1.43	1.52
16	2	25	GLY	CA-C	-8.50	1.41	1.52
14	D	146	ILE	CA-C	-8.50	1.42	1.52
2	B	1360	G	C1'-N9	-8.49	1.35	1.48
2	B	2105	U	C2'-C1'	-8.49	1.40	1.53
2	B	1459	G	C4'-C3'	-8.48	1.39	1.52
15	T	29	THR	C-N	8.48	1.38	1.33
22	3	3	GLN	N-CA	-8.48	1.34	1.45
32	J	92	MET	CA-CB	8.48	1.66	1.53
14	D	79	LEU	CA-C	-8.46	1.42	1.52
2	B	1184	U	O3'-P	-8.46	1.48	1.61
1	A	59	A	C2'-C1'	-8.46	1.40	1.53
19	X	159	LEU	CA-C	-8.46	1.41	1.52
2	B	64	A	C1'-N9	-8.45	1.35	1.48
2	B	2078	C	C2'-C1'	-8.43	1.40	1.53
23	5	131	LEU	N-CA	-8.43	1.35	1.46
2	B	2242	G	C1'-N9	-8.43	1.35	1.48
20	E	153	LEU	CA-C	-8.42	1.42	1.52
29	G	65	GLY	CA-C	-8.41	1.42	1.52
14	D	78	GLY	CA-C	-8.40	1.41	1.51
2	B	562	U	C1'-N1	-8.40	1.35	1.48
2	B	672	C	C1'-N1	-8.39	1.35	1.48
2	B	2604	U	C4'-O4'	-8.39	1.32	1.45
9	O	41	ALA	C-N	8.39	1.43	1.34
2	B	1549	A	C1'-N9	-8.36	1.35	1.48
27	C	110	LYS	CA-C	-8.36	1.43	1.53
20	E	146	VAL	N-CA	-8.35	1.35	1.46
2	B	2675	A	C1'-N9	-8.34	1.35	1.48
2	B	418	C	C2'-C1'	-8.34	1.40	1.53
2	B	1354	A	O3'-P	-8.34	1.48	1.61
2	B	2391	G	C2'-C1'	-8.33	1.40	1.53
2	B	2496	C	O3'-P	-8.33	1.48	1.61
2	B	2691	C	C2'-C1'	-8.32	1.40	1.53
25	7	61	LEU	CA-C	-8.32	1.42	1.52
2	B	1823	G	C2'-C1'	-8.31	1.40	1.53
5	L	15	ALA	CA-C	-8.31	1.41	1.52
2	B	1387	A	C4'-C3'	8.29	1.65	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	P	78	PRO	N-CD	-8.29	1.36	1.47
23	5	194	VAL	CA-C	-8.29	1.42	1.52
4	K	45	GLU	N-CA	-8.29	1.35	1.45
2	B	1607	C	C3'-C2'	-8.29	1.40	1.52
23	5	192	LEU	CA-C	-8.28	1.41	1.52
15	T	17	SER	CA-C	-8.28	1.42	1.52
1	A	85	G	C3'-C2'	-8.27	1.40	1.52
2	B	1699	G	O3'-P	-8.27	1.48	1.61
20	E	61	ARG	CD-NE	8.27	1.57	1.46
2	B	628	G	C2'-C1'	-8.26	1.41	1.53
27	C	72	GLY	C-N	8.25	1.40	1.33
2	B	1289	C	C4'-C3'	-8.24	1.40	1.52
2	B	2576	G	C4'-O4'	-8.24	1.33	1.45
27	C	128	THR	N-CA	-8.24	1.36	1.45
2	B	240	C	O3'-P	-8.22	1.48	1.61
2	B	1163	G	C1'-N9	-8.22	1.35	1.48
5	L	121	THR	CA-C	-8.22	1.41	1.52
25	7	11	LYS	CA-C	-8.22	1.41	1.52
2	B	1442	U	P-O5'	-8.22	1.47	1.59
2	B	251	A	O3'-P	-8.21	1.48	1.61
27	C	101	ARG	CD-NE	8.22	1.57	1.46
5	L	33	ARG	NE-CZ	8.21	1.42	1.33
2	B	448	U	P-O5'	-8.20	1.47	1.59
3	0	73	ARG	NE-CZ	8.20	1.42	1.33
2	B	2715	C	P-O5'	-8.20	1.47	1.59
13	S	6	LYS	CA-C	-8.20	1.42	1.52
2	B	762	U	O3'-P	-8.20	1.48	1.61
2	B	1426	G	C5'-C4'	8.20	1.63	1.51
10	P	107	ALA	N-CA	-8.19	1.35	1.46
20	E	40	ARG	CD-NE	8.19	1.57	1.46
14	D	83	ARG	CD-NE	8.19	1.57	1.46
9	O	11	ALA	CA-C	-8.18	1.41	1.52
2	B	141	G	O5'-C5'	8.18	1.54	1.42
2	B	1163	G	C2'-C1'	-8.18	1.41	1.53
5	L	40	SER	CA-C	-8.18	1.42	1.53
23	5	152	ALA	N-CA	-8.18	1.36	1.46
2	B	254	G	O3'-P	-8.17	1.48	1.61
2	B	385	C	P-O5'	-8.17	1.47	1.59
2	B	2832	U	O4'-C1'	-8.17	1.29	1.42
2	B	304	U	C3'-C2'	-8.16	1.40	1.52
21	Y	32	ALA	CA-C	-8.16	1.42	1.52
29	G	121	THR	CA-C	-8.15	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2896	C	C1'-N1	-8.14	1.36	1.48
2	B	1200	C	C2'-C1'	-8.14	1.41	1.53
2	B	318	C	C1'-N1	8.14	1.60	1.48
2	B	2799	A	C2'-C1'	-8.12	1.40	1.53
10	P	86	LYS	C-N	8.13	1.44	1.33
2	B	2062	A	C3'-C2'	-8.12	1.40	1.52
10	P	8	GLU	N-CA	-8.11	1.36	1.46
9	O	108	ASP	CA-C	-8.11	1.41	1.52
2	B	1188	U	P-O5'	-8.11	1.47	1.59
2	B	1263	U	C2'-C1'	-8.11	1.41	1.53
2	B	1289	C	C2'-C1'	-8.11	1.41	1.53
2	B	2239	G	O3'-P	-8.08	1.49	1.61
10	P	32	VAL	N-CA	-8.08	1.36	1.46
17	U	15	GLY	CA-C	-8.07	1.44	1.52
24	6	18	PHE	CA-C	-8.07	1.41	1.52
14	D	8	LYS	CA-C	-8.06	1.42	1.52
2	B	2899	A	P-O5'	-8.06	1.47	1.59
4	K	22	ILE	CA-C	-8.06	1.44	1.52
2	B	1660	G	C5'-C4'	8.05	1.63	1.51
19	X	401	ARG	CD-NE	8.04	1.57	1.46
29	G	120	ILE	CA-C	-8.04	1.42	1.52
2	B	820	A	O4'-C1'	-8.03	1.29	1.41
2	B	995	C	C4'-O4'	-8.03	1.33	1.45
2	B	827	U	O3'-P	-8.03	1.49	1.61
2	B	2581	G	C4'-C3'	-8.03	1.41	1.53
2	B	2732	G	P-O5'	-8.03	1.47	1.59
2	B	219	A	C1'-N9	-8.02	1.35	1.48
2	B	2450	A	C2'-C1'	-8.02	1.41	1.53
20	E	29	HIS	CB-CG	8.01	1.61	1.50
2	B	752	A	P-O5'	-8.01	1.47	1.59
2	B	2503	A	O3'-P	-8.01	1.49	1.61
2	B	822	G	C2'-O2'	-8.00	1.30	1.42
2	B	1381	G	P-O5'	-8.00	1.47	1.59
2	B	1463	C	C3'-C2'	-8.00	1.40	1.52
2	B	372	G	C3'-C2'	-8.00	1.41	1.52
19	X	82	ALA	CA-C	8.00	1.63	1.52
27	C	51	ARG	CD-NE	8.00	1.57	1.46
3	0	33	HIS	CE1-NE2	-7.99	1.24	1.32
13	S	18	ARG	N-CA	-7.99	1.36	1.46
2	B	1808	A	C2'-C1'	-7.99	1.41	1.53
29	G	102	ILE	CA-C	-7.97	1.42	1.52
19	X	363	ASN	CA-C	-7.97	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2219	U	C4'-C3'	7.97	1.64	1.52
16	2	30	ARG	CD-NE	7.97	1.57	1.46
2	B	2622	U	O4'-C1'	-7.96	1.29	1.41
15	T	74	ILE	C-N	7.96	1.45	1.33
19	X	411	HIS	CA-C	-7.95	1.42	1.52
29	G	86	LEU	CA-C	-7.95	1.46	1.53
8	N	86	ARG	CD-NE	7.94	1.57	1.46
2	B	1522	A	P-O5'	-7.93	1.47	1.59
2	B	1399	C	C2'-C1'	-7.93	1.41	1.53
2	B	1184	U	P-O5'	-7.92	1.47	1.59
2	B	436	C	P-O5'	-7.92	1.47	1.59
19	X	309	ILE	CA-C	-7.92	1.42	1.52
27	C	257	ARG	NE-CZ	7.91	1.41	1.33
2	B	849	A	C1'-N9	-7.91	1.36	1.48
2	B	118	A	O3'-P	-7.91	1.49	1.61
2	B	202	U	O3'-P	-7.91	1.49	1.61
11	Q	30	VAL	CA-C	-7.91	1.42	1.52
14	D	136	ASN	CA-C	-7.91	1.43	1.52
11	Q	85	ALA	CA-C	-7.90	1.42	1.52
8	N	89	SER	N-CA	-7.90	1.36	1.46
2	B	1472	C	O3'-P	-7.90	1.49	1.61
2	B	2618	G	C4'-O4'	-7.90	1.33	1.45
2	B	196	A	C5'-C4'	7.89	1.63	1.51
2	B	333	G	O3'-P	-7.89	1.49	1.61
2	B	621	A	C4'-O4'	-7.89	1.33	1.45
12	R	88	GLY	CA-C	-7.89	1.46	1.52
2	B	639	U	O3'-P	-7.89	1.49	1.61
2	B	1151	A	C2'-C1'	-7.89	1.41	1.53
2	B	2494	G	C2'-C1'	-7.88	1.41	1.53
2	B	2566	A	O3'-P	-7.88	1.49	1.61
11	Q	81	GLY	CA-C	-7.88	1.40	1.51
2	B	26	G	O3'-P	-7.87	1.49	1.61
2	B	97	C	C2'-O2'	-7.87	1.30	1.42
2	B	1186	G	O3'-P	-7.87	1.49	1.61
2	B	127	A	O3'-P	-7.86	1.49	1.61
2	B	1113	U	P-O5'	-7.86	1.48	1.59
12	R	39	LEU	N-CA	-7.86	1.37	1.46
14	D	41	ALA	CA-C	-7.85	1.41	1.52
2	B	2238	G	O3'-P	-7.85	1.49	1.61
5	L	21	ARG	NE-CZ	7.85	1.41	1.33
2	B	796	C	P-O5'	-7.84	1.48	1.59
3	0	2	ARG	NE-CZ	7.84	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	J	74	TYR	CA-C	-7.84	1.42	1.52
20	E	200	LEU	CA-C	-7.83	1.42	1.52
2	B	639	U	C2'-C1'	-7.83	1.41	1.53
2	B	424	G	O3'-P	-7.83	1.49	1.61
2	B	2354	C	C3'-C2'	-7.83	1.41	1.52
27	C	100	ARG	CD-NE	7.83	1.57	1.46
2	B	2083	G	O3'-P	-7.83	1.49	1.61
9	O	32	PRO	N-CA	-7.83	1.37	1.47
21	Y	56	HIS	CA-C	-7.83	1.42	1.52
31	I	59	THR	CA-C	-7.82	1.43	1.52
28	F	28	PRO	N-CA	-7.82	1.38	1.47
2	B	2402	U	C5'-C4'	7.81	1.63	1.51
2	B	2508	G	C2'-C1'	-7.81	1.41	1.53
9	O	81	ARG	CA-C	-7.81	1.42	1.52
1	A	113	C	P-O5'	-7.80	1.48	1.59
2	B	512	G	C1'-N9	-7.80	1.36	1.48
2	B	2403	C	C2'-C1'	-7.80	1.41	1.53
13	S	46	LEU	CA-C	-7.80	1.42	1.52
1	A	61	G	C1'-N9	-7.80	1.36	1.48
2	B	556	A	O4'-C1'	-7.79	1.29	1.41
2	B	2640	G	O3'-P	-7.79	1.49	1.61
20	E	7	ASP	N-CA	-7.79	1.37	1.46
29	G	165	ASP	N-CA	-7.79	1.37	1.46
2	B	1210	G	C2'-C1'	-7.78	1.41	1.53
2	B	990	A	C2'-C1'	-7.78	1.41	1.53
2	B	414	C	P-O5'	-7.78	1.48	1.59
2	B	2030	A	O3'-P	-7.77	1.49	1.61
2	B	1799	G	C2'-C1'	-7.77	1.41	1.53
2	B	2849	U	C5'-C4'	7.77	1.63	1.51
2	B	693	A	C2'-C1'	-7.76	1.41	1.53
2	B	1759	A	C1'-N9	-7.76	1.36	1.48
2	B	2185	U	C2'-C1'	-7.76	1.41	1.53
2	B	311	A	C1'-N9	7.75	1.58	1.47
2	B	1354	A	O4'-C1'	-7.75	1.30	1.41
32	J	89	PHE	CA-C	-7.75	1.42	1.52
2	B	572	A	C1'-N9	-7.74	1.36	1.48
2	B	1647	U	O4'-C1'	-7.74	1.30	1.42
2	B	2859	G	C5'-C4'	7.74	1.62	1.51
22	3	54	ILE	CA-CB	-7.74	1.44	1.54
29	G	124	CYS	CA-C	-7.74	1.43	1.52
2	B	2112	G	O5'-C5'	7.74	1.54	1.42
2	B	2056	G	O3'-P	-7.73	1.49	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1628	G	C2'-C1'	-7.73	1.41	1.53
2	B	2624	G	P-O5'	-7.73	1.48	1.59
2	B	26	G	C5'-C4'	7.73	1.62	1.51
2	B	377	G	C1'-N9	-7.72	1.36	1.48
9	O	94	ARG	CA-C	-7.72	1.42	1.52
28	F	74	ALA	CA-C	-7.72	1.42	1.52
2	B	1826	G	C2'-C1'	-7.72	1.41	1.53
2	B	939	G	P-O5'	-7.71	1.48	1.59
3	O	33	HIS	N-CA	-7.71	1.36	1.46
2	B	1008	A	C3'-C2'	7.71	1.64	1.52
29	G	131	VAL	CA-C	-7.71	1.42	1.52
3	O	35	HIS	ND1-CE1	7.71	1.40	1.32
2	B	585	G	P-O5'	-7.70	1.48	1.59
27	C	86	ARG	CA-C	-7.70	1.42	1.52
14	D	40	LEU	N-CA	-7.70	1.35	1.46
2	B	2227	A	C2'-C1'	-7.70	1.41	1.53
3	O	10	ARG	CA-C	-7.70	1.43	1.52
21	Y	63	ASP	N-CA	-7.70	1.37	1.46
2	B	481	G	O3'-P	-7.69	1.49	1.61
18	W	44	HIS	ND1-CE1	7.69	1.40	1.32
8	N	45	ARG	N-CA	-7.69	1.37	1.46
2	B	586	A	C3'-C2'	-7.68	1.41	1.52
20	E	34	ALA	CA-C	-7.68	1.42	1.52
2	B	78	U	C2'-C1'	-7.68	1.41	1.53
2	B	973	A	O4'-C1'	-7.68	1.30	1.42
2	B	1752	C	C2'-C1'	-7.67	1.41	1.53
2	B	1830	C	C2'-C1'	-7.67	1.41	1.53
19	X	137	LEU	CA-C	-7.67	1.43	1.52
32	J	129	GLU	CA-C	-7.67	1.43	1.52
2	B	1531	C	C2'-C1'	-7.67	1.41	1.53
5	L	126	ARG	CA-C	-7.67	1.42	1.53
21	Y	59	PHE	CA-C	-7.67	1.42	1.52
32	J	138	GLN	CA-C	-7.66	1.43	1.52
6	1	56	LEU	N-CA	-7.66	1.36	1.46
21	Y	8	SER	CA-C	-7.66	1.42	1.53
2	B	978	G	O3'-P	-7.65	1.49	1.61
7	M	130	PHE	CA-C	-7.65	1.42	1.52
2	B	519	U	O3'-P	-7.64	1.49	1.61
2	B	974	G	C2'-C1'	-7.64	1.41	1.53
2	B	1183	U	C2'-C1'	-7.64	1.41	1.53
32	J	29	ALA	N-CA	-7.64	1.36	1.46
9	O	74	VAL	CA-CB	7.64	1.63	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	D	204	LYS	N-CA	-7.63	1.40	1.46
2	B	461	C	C2'-C1'	-7.62	1.42	1.53
18	W	53	LYS	CA-C	-7.62	1.43	1.52
5	L	39	LYS	C-O	-7.62	1.15	1.24
2	B	2302	U	P-O5'	-7.61	1.48	1.59
2	B	91	A	C2'-C1'	-7.61	1.41	1.53
3	O	19	HIS	CA-C	-7.61	1.42	1.52
2	B	797	G	C2'-C1'	-7.60	1.42	1.53
13	S	43	ALA	CA-C	-7.59	1.42	1.52
2	B	1684	G	P-O5'	-7.59	1.48	1.59
18	W	9	ARG	CA-C	-7.59	1.43	1.53
2	B	2504	U	O3'-P	-7.59	1.49	1.61
2	B	2876	G	C2'-C1'	-7.58	1.42	1.53
20	E	149	ILE	CA-CB	-7.58	1.44	1.54
2	B	279	A	C2'-C1'	-7.58	1.42	1.53
2	B	200	U	C2'-C1'	-7.58	1.42	1.53
2	B	1140	C	C4'-O4'	-7.58	1.34	1.45
2	B	769	U	P-O5'	-7.58	1.48	1.59
2	B	2463	C	C1'-N1	-7.58	1.37	1.48
2	B	1977	A	C2'-C1'	-7.57	1.42	1.53
2	B	1310	G	C3'-C2'	-7.57	1.41	1.52
2	B	2882	A	C1'-N9	-7.57	1.36	1.48
2	B	402	A	C4'-O4'	-7.57	1.34	1.45
2	B	2099	U	C3'-O3'	7.57	1.53	1.42
2	B	191	A	O3'-P	-7.56	1.49	1.61
20	E	93	SER	C-N	7.56	1.42	1.33
2	B	1331	G	C4'-C3'	7.55	1.63	1.52
19	X	436	ARG	CA-C	-7.55	1.42	1.52
2	B	201	C	C3'-C2'	-7.55	1.41	1.52
18	W	35	GLU	N-CA	-7.55	1.37	1.46
2	B	2819	G	C2'-C1'	-7.55	1.42	1.53
10	P	105	LYS	C-N	7.55	1.43	1.33
2	B	1157	G	C1'-N9	-7.54	1.36	1.48
2	B	822	G	C1'-N9	-7.54	1.36	1.48
10	P	61	ARG	CD-NE	7.54	1.56	1.46
2	B	2495	G	C1'-N9	-7.54	1.36	1.48
19	X	143	ILE	CA-C	7.54	1.62	1.52
28	F	157	THR	N-CA	-7.54	1.36	1.45
2	B	1892	C	C5'-C4'	7.54	1.62	1.51
27	C	179	GLU	CA-CB	7.54	1.63	1.53
2	B	2124	G	C4'-C3'	7.53	1.63	1.52
8	N	49	GLU	N-CA	-7.53	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	5	139	ASN	CA-CB	7.53	1.65	1.53
2	B	1732	C	C1'-N1	7.53	1.58	1.47
27	C	81	GLU	N-CA	-7.53	1.37	1.46
2	B	496	G	C4'-C3'	-7.52	1.41	1.52
2	B	1651	G	O3'-P	-7.51	1.49	1.61
23	5	23	ILE	N-CA	-7.51	1.37	1.46
29	G	16	VAL	N-CA	-7.51	1.37	1.46
2	B	558	U	O4'-C1'	-7.51	1.30	1.41
2	B	2878	U	C2'-C1'	-7.51	1.42	1.53
2	B	499	U	C2'-C1'	-7.51	1.42	1.53
2	B	2008	C	C4'-O4'	-7.50	1.34	1.45
2	B	2019	A	C2'-C1'	-7.49	1.42	1.53
11	Q	58	GLN	CA-C	-7.49	1.45	1.52
2	B	100	U	C5'-C4'	7.48	1.62	1.51
2	B	1301	A	O3'-P	-7.48	1.50	1.61
2	B	1350	C	O3'-P	-7.48	1.50	1.61
2	B	499	U	C1'-N1	-7.47	1.37	1.48
2	B	2124	G	O3'-P	-7.47	1.50	1.61
5	L	137	ALA	CA-C	-7.47	1.45	1.53
2	B	1393	A	O4'-C1'	-7.47	1.30	1.41
2	B	1607	C	O5'-C5'	7.47	1.53	1.42
2	B	2202	U	O3'-P	-7.47	1.50	1.61
12	R	90	ARG	CA-C	-7.47	1.43	1.52
27	C	160	TYR	N-CA	-7.47	1.37	1.46
17	U	65	GLN	CA-C	-7.46	1.43	1.52
2	B	92	U	O4'-C1'	-7.46	1.30	1.42
2	B	776	G	C5'-C4'	7.46	1.62	1.51
2	B	391	A	P-O5'	-7.46	1.48	1.59
2	B	2305	U	P-O5'	-7.45	1.48	1.59
19	X	19	PHE	CA-C	-7.45	1.43	1.52
2	B	1789	A	C5'-C4'	7.45	1.62	1.51
2	B	1822	C	P-O5'	-7.45	1.48	1.59
19	X	122	GLY	CA-C	-7.45	1.43	1.52
2	B	1741	C	P-O5'	-7.45	1.48	1.59
2	B	2369	A	P-O5'	-7.44	1.48	1.59
19	X	306	LEU	C-N	7.44	1.43	1.33
2	B	1162	G	C2'-C1'	-7.44	1.42	1.53
14	D	167	ASN	CA-C	-7.44	1.44	1.53
28	F	46	LYS	CA-CB	7.44	1.65	1.53
23	5	227	ALA	N-CA	-7.43	1.39	1.46
2	B	14	A	O3'-P	-7.43	1.50	1.61
2	B	1240	U	O3'-P	-7.42	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	N	4	ARG	CA-C	-7.42	1.42	1.52
2	B	1037	G	C2'-C1'	-7.42	1.42	1.53
2	B	476	G	P-O5'	-7.42	1.48	1.59
13	S	40	ASN	N-CA	-7.42	1.37	1.45
2	B	2425	A	O3'-P	-7.41	1.50	1.61
23	5	215	SER	N-CA	-7.41	1.36	1.46
6	1	20	ASN	N-CA	-7.41	1.37	1.46
2	B	2248	C	C2'-C1'	-7.40	1.42	1.53
11	Q	12	ARG	CZ-NH2	7.40	1.43	1.33
2	B	1992	G	P-O5'	-7.40	1.48	1.59
27	C	176	ARG	CA-C	-7.40	1.42	1.52
2	B	2602	A	C1'-N9	7.39	1.58	1.47
2	B	2595	G	C2'-C1'	-7.39	1.42	1.53
27	C	256	THR	N-CA	-7.39	1.36	1.46
2	B	212	G	C2'-C1'	-7.38	1.42	1.53
2	B	2811	G	C1'-N9	-7.38	1.36	1.48
15	T	62	VAL	CA-CB	-7.38	1.46	1.54
1	A	90	C	C2'-C1'	-7.38	1.42	1.53
2	B	984	A	C1'-N9	-7.38	1.35	1.47
4	K	73	ASP	N-CA	-7.38	1.37	1.46
2	B	805	G	C3'-C2'	-7.38	1.41	1.52
2	B	2686	G	C3'-C2'	-7.38	1.41	1.52
2	B	2824	C	P-O5'	-7.38	1.48	1.59
31	I	18	ASN	CA-C	7.38	1.62	1.52
24	6	14	ARG	N-CA	-7.37	1.37	1.46
2	B	2069	G	C4'-C3'	-7.37	1.41	1.52
2	B	56	A	P-O5'	-7.37	1.48	1.59
4	K	16	ALA	CA-C	-7.37	1.43	1.52
2	B	2293	G	C2'-C1'	-7.37	1.42	1.53
27	C	124	LYS	CA-C	-7.37	1.44	1.52
29	G	103	ASN	CA-C	-7.37	1.43	1.52
2	B	2480	C	C4'-C3'	-7.36	1.41	1.52
27	C	207	ALA	CA-C	-7.36	1.42	1.52
2	B	1242	U	O3'-P	-7.35	1.50	1.61
2	B	2301	C	O3'-P	-7.35	1.50	1.61
28	F	66	ILE	CA-CB	-7.35	1.46	1.54
2	B	703	U	O3'-P	-7.35	1.50	1.61
26	8	29	ALA	N-CA	-7.35	1.37	1.46
31	I	38	CYS	C-N	7.35	1.44	1.33
2	B	572	A	O3'-P	-7.34	1.50	1.61
2	B	1174	U	C5'-C4'	7.34	1.62	1.51
2	B	650	C	O3'-P	-7.34	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1408	G	O3'-P	-7.34	1.50	1.61
2	B	1455	G	C2'-C1'	-7.34	1.42	1.53
28	F	145	VAL	C-N	7.34	1.44	1.33
11	Q	24	TYR	CA-C	-7.34	1.43	1.52
32	J	130	HIS	ND1-CE1	7.34	1.39	1.32
8	N	87	PHE	C-N	7.34	1.43	1.33
2	B	823	C	C4'-O4'	-7.34	1.34	1.45
19	X	345	ILE	CA-C	-7.34	1.43	1.52
27	C	202	ARG	CD-NE	7.34	1.56	1.46
2	B	465	G	C1'-N9	7.33	1.58	1.48
8	N	18	GLN	N-CA	-7.33	1.37	1.46
2	B	518	G	C2'-C1'	7.33	1.64	1.53
19	X	377	ARG	NE-CZ	7.33	1.41	1.33
15	T	90	GLY	N-CA	-7.33	1.35	1.45
2	B	2480	C	O3'-P	-7.33	1.50	1.61
27	C	77	VAL	CA-C	-7.33	1.44	1.52
2	B	1989	G	O3'-P	-7.32	1.50	1.61
2	B	297	G	C3'-C2'	-7.32	1.41	1.52
2	B	796	C	C2'-C1'	-7.32	1.42	1.53
2	B	2352	A	C4'-C3'	-7.31	1.41	1.52
2	B	194	G	P-O5'	-7.31	1.48	1.59
2	B	1120	G	C2'-C1'	-7.31	1.42	1.53
2	B	2082	A	C2'-C1'	-7.31	1.42	1.53
2	B	990	A	C4'-O4'	-7.31	1.34	1.45
12	R	91	GLN	CA-C	-7.30	1.45	1.53
2	B	839	U	O3'-P	-7.30	1.50	1.61
19	X	99	ASP	CA-C	-7.30	1.43	1.52
27	C	194	VAL	CA-C	-7.30	1.44	1.52
2	B	35	G	C2'-C1'	-7.29	1.42	1.53
2	B	1717	A	C2'-C1'	-7.29	1.42	1.53
2	B	2851	A	O3'-P	-7.29	1.50	1.61
7	M	53	MET	CA-C	-7.29	1.43	1.52
23	5	214	ILE	N-CA	7.29	1.54	1.46
2	B	821	A	O4'-C1'	-7.29	1.31	1.42
2	B	1327	A	C3'-C2'	-7.29	1.41	1.52
2	B	472	A	P-O5'	-7.28	1.48	1.59
7	M	48	ALA	CA-C	-7.28	1.43	1.52
14	D	201	LEU	N-CA	-7.28	1.37	1.46
2	B	794	A	C2'-C1'	-7.28	1.42	1.53
26	8	13	ASN	N-CA	-7.28	1.35	1.46
2	B	28	A	C5'-C4'	7.27	1.62	1.51
2	B	475	C	C2'-C1'	-7.27	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2764	A	C4'-O4'	-7.27	1.34	1.45
9	O	108	ASP	N-CA	-7.27	1.36	1.46
19	X	55	ILE	CA-C	-7.27	1.44	1.52
2	B	1611	C	O3'-P	-7.27	1.50	1.61
29	G	7	PRO	N-CD	-7.27	1.37	1.47
2	B	2576	G	C1'-N9	-7.27	1.36	1.47
2	B	2871	U	C3'-C2'	-7.26	1.41	1.52
2	B	2262	U	P-O5'	-7.26	1.48	1.59
29	G	55	ASP	CA-C	-7.26	1.44	1.52
2	B	839	U	P-O5'	-7.26	1.48	1.59
2	B	2372	U	O4'-C1'	-7.25	1.30	1.41
2	B	767	U	C2'-C1'	-7.25	1.42	1.53
2	B	1618	A	C5'-C4'	7.25	1.62	1.51
2	B	1673	G	C2'-C1'	-7.25	1.42	1.53
12	R	39	LEU	CA-C	-7.25	1.43	1.52
31	I	53	PRO	C-N	7.25	1.41	1.33
2	B	51	G	P-O5'	-7.24	1.48	1.59
2	B	1493	C	O3'-P	-7.24	1.50	1.61
3	0	2	ARG	CA-C	-7.24	1.43	1.52
16	2	2	LYS	CA-C	-7.24	1.43	1.53
2	B	2083	G	C2'-C1'	-7.24	1.42	1.53
2	B	127	A	O4'-C1'	-7.24	1.30	1.41
2	B	1012	U	O3'-P	-7.24	1.50	1.61
10	P	15	ASP	CA-C	-7.23	1.45	1.53
15	T	14	PRO	CA-C	-7.23	1.43	1.52
2	B	2452	C	C4'-C3'	7.23	1.63	1.52
2	B	2892	G	P-O5'	-7.23	1.49	1.59
12	R	76	LYS	CA-C	-7.23	1.44	1.52
2	B	144	A	C5'-C4'	7.23	1.62	1.51
27	C	51	ARG	CA-C	-7.22	1.43	1.53
18	W	93	ARG	CA-C	-7.22	1.44	1.52
19	X	262	LYS	CA-C	-7.21	1.43	1.52
2	B	2449	U	C2'-C1'	-7.21	1.42	1.53
19	X	329	GLU	CA-CB	7.21	1.62	1.53
31	I	133	ARG	NE-CZ	7.21	1.41	1.33
2	B	735	A	C2'-C1'	-7.21	1.42	1.53
29	G	2	ARG	CD-NE	7.21	1.56	1.46
2	B	2063	C	C2'-C1'	-7.21	1.42	1.53
2	B	763	G	O3'-P	-7.20	1.50	1.61
8	N	17	ARG	CA-C	-7.20	1.43	1.52
9	O	104	GLN	CA-C	-7.20	1.43	1.52
10	P	52	ARG	CD-NE	7.20	1.56	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	G	114	HIS	N-CA	-7.20	1.37	1.46
2	B	818	G	O3'-P	-7.20	1.50	1.61
2	B	1506	U	P-O5'	-7.20	1.49	1.59
8	N	101	GLY	CA-C	-7.20	1.42	1.52
2	B	2399	G	C1'-N9	-7.19	1.37	1.48
22	3	13	GLY	C-N	7.19	1.43	1.33
2	B	922	C	O3'-P	-7.19	1.50	1.61
2	B	1887	C	O4'-C1'	7.19	1.52	1.41
11	Q	52	ARG	CA-C	-7.19	1.44	1.52
2	B	1350	C	C4'-O4'	-7.19	1.34	1.45
27	C	189	ALA	N-CA	-7.19	1.36	1.46
2	B	1275	A	C5'-C4'	7.18	1.62	1.51
2	B	2187	U	O3'-P	-7.18	1.50	1.61
14	D	22	ILE	N-CA	-7.18	1.37	1.46
3	0	18	SER	N-CA	-7.18	1.36	1.45
2	B	639	U	P-O5'	-7.18	1.49	1.59
2	B	1287	A	O3'-P	-7.18	1.50	1.61
2	B	1538	G	C1'-N9	7.18	1.58	1.48
2	B	2294	G	O3'-P	-7.17	1.50	1.61
2	B	1226	A	C1'-N9	-7.17	1.37	1.48
29	G	169	ARG	CD-NE	7.17	1.56	1.46
2	B	2391	G	O3'-P	-7.17	1.50	1.61
12	R	22	LEU	CA-C	-7.17	1.43	1.52
1	A	54	G	C2'-C1'	-7.17	1.42	1.53
25	7	43	LEU	N-CA	-7.17	1.36	1.46
2	B	558	U	C2'-O2'	-7.16	1.31	1.42
2	B	1773	A	C3'-O3'	7.16	1.52	1.42
19	X	383	MET	CA-C	-7.16	1.43	1.52
2	B	2624	G	C1'-N9	-7.16	1.37	1.48
2	B	2347	C	C4'-C3'	-7.16	1.41	1.52
2	B	2606	C	C3'-C2'	-7.16	1.42	1.52
15	T	48	GLN	CA-CB	7.15	1.62	1.53
22	3	2	VAL	CA-CB	-7.15	1.44	1.54
1	A	7	G	O4'-C1'	-7.14	1.30	1.41
2	B	1893	C	C5'-C4'	7.14	1.61	1.51
25	7	31	ILE	CA-CB	-7.14	1.44	1.54
2	B	1692	U	C3'-O3'	7.14	1.52	1.42
7	M	38	ARG	CD-NE	7.14	1.56	1.46
1	A	5	U	O4'-C1'	-7.13	1.30	1.41
2	B	2057	G	O3'-P	-7.13	1.50	1.61
2	B	59	U	C4'-O4'	-7.13	1.34	1.45
10	P	48	ALA	CA-C	-7.13	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	I	57	VAL	CA-C	-7.12	1.43	1.52
2	B	2462	C	P-O5'	-7.12	1.49	1.59
2	B	387	U	C3'-C2'	-7.12	1.42	1.52
2	B	635	C	C3'-C2'	-7.12	1.42	1.52
2	B	2166	U	C1'-N1	7.12	1.59	1.48
23	5	94	LEU	N-CA	-7.12	1.37	1.46
2	B	545	U	C4'-C3'	-7.12	1.41	1.52
2	B	57	C	P-O5'	-7.12	1.49	1.59
2	B	761	A	O3'-P	-7.12	1.50	1.61
2	B	571	U	C3'-O3'	-7.12	1.32	1.43
3	0	56	ARG	N-CA	-7.12	1.37	1.46
30	H	4	ILE	CA-C	-7.12	1.44	1.52
2	B	56	A	C1'-N9	-7.11	1.37	1.48
2	B	2518	A	C2'-C1'	-7.11	1.42	1.53
9	O	9	ARG	CD-NE	7.11	1.56	1.46
29	G	104	LEU	CA-C	-7.11	1.43	1.52
2	B	2275	C	C5'-C4'	7.10	1.62	1.51
2	B	1803	A	C4'-O4'	-7.10	1.34	1.45
2	B	1052	C	C2'-C1'	-7.10	1.42	1.53
13	S	107	VAL	C-N	7.10	1.39	1.33
2	B	222	A	C1'-N9	-7.10	1.36	1.47
28	F	80	GLN	N-CA	-7.10	1.38	1.46
14	D	34	VAL	CA-C	-7.10	1.44	1.52
26	8	20	ASP	CA-C	-7.09	1.45	1.53
2	B	2618	G	O4'-C1'	-7.09	1.31	1.41
15	T	2	ILE	N-CA	-7.09	1.37	1.46
32	J	36	LEU	N-CA	-7.09	1.37	1.46
2	B	173	A	C1'-N9	-7.09	1.37	1.48
2	B	1141	U	C4'-C3'	-7.09	1.42	1.53
2	B	2243	U	O4'-C1'	-7.09	1.31	1.41
3	0	24	THR	N-CA	7.09	1.54	1.46
20	E	97	ASN	CA-C	-7.09	1.43	1.53
2	B	2489	U	C4'-C3'	7.08	1.63	1.52
16	2	15	ARG	CD-NE	7.08	1.56	1.46
2	B	1722	A	O3'-P	-7.08	1.50	1.61
2	B	2035	G	P-O5'	-7.08	1.49	1.59
2	B	2723	C	O3'-P	-7.08	1.50	1.61
2	B	2260	C	P-O5'	-7.08	1.49	1.59
2	B	672	C	P-O5'	-7.07	1.49	1.59
2	B	998	C	C3'-C2'	-7.07	1.42	1.52
2	B	1104	C	O4'-C1'	-7.07	1.31	1.41
2	B	1546	G	O3'-P	-7.07	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	2	43	ILE	CA-C	-7.07	1.44	1.52
21	Y	55	ASP	CA-C	-7.07	1.43	1.52
2	B	1682	G	O3'-P	-7.07	1.50	1.61
13	S	35	ILE	N-CA	-7.07	1.38	1.46
22	3	38	LEU	CA-CB	-7.07	1.43	1.53
2	B	2715	C	O3'-P	-7.06	1.50	1.61
27	C	24	HIS	CB-CG	-7.06	1.40	1.50
12	R	68	ARG	N-CA	-7.06	1.37	1.45
2	B	953	G	C2'-C1'	-7.06	1.42	1.53
2	B	1185	G	C2'-C1'	-7.06	1.42	1.53
15	T	80	TRP	CA-C	-7.06	1.44	1.52
2	B	972	A	O3'-P	-7.05	1.50	1.61
16	2	3	THR	CA-C	-7.05	1.44	1.52
9	O	82	ALA	N-CA	-7.05	1.37	1.46
15	T	67	VAL	CA-C	-7.05	1.44	1.53
27	C	95	TYR	CA-C	-7.05	1.43	1.53
2	B	123	G	C2'-C1'	-7.05	1.42	1.53
12	R	66	HIS	N-CA	-7.05	1.36	1.45
19	X	50	ARG	NE-CZ	7.05	1.40	1.33
21	Y	9	THR	N-CA	-7.05	1.37	1.46
2	B	246	C	O3'-P	-7.04	1.50	1.61
2	B	1623	G	P-O5'	-7.04	1.49	1.59
13	S	17	VAL	CA-C	-7.04	1.43	1.52
2	B	2488	G	C4'-O4'	-7.04	1.34	1.45
2	B	2680	U	C5'-C4'	-7.04	1.40	1.51
13	S	12	SER	CA-CB	7.04	1.65	1.53
2	B	1998	A	C1'-N9	-7.03	1.37	1.48
2	B	1903	G	C4'-C3'	-7.03	1.42	1.52
2	B	2822	G	O3'-P	-7.03	1.50	1.61
9	O	29	HIS	CA-C	-7.03	1.44	1.52
2	B	2784	U	O3'-P	-7.03	1.50	1.61
15	T	88	LYS	CA-C	-7.03	1.43	1.52
16	2	12	ALA	CA-C	-7.03	1.44	1.52
2	B	2467	C	O3'-P	-7.02	1.50	1.61
5	L	95	LEU	N-CA	-7.02	1.36	1.46
2	B	2442	C	P-O5'	-7.01	1.49	1.59
22	3	18	HIS	ND1-CE1	7.01	1.39	1.32
1	A	46	A	C1'-N9	-7.01	1.37	1.48
2	B	1988	G	C3'-C2'	-7.01	1.42	1.52
2	B	2536	G	C1'-N9	7.01	1.58	1.48
2	B	1178	C	C1'-N1	7.01	1.58	1.48
2	B	2277	G	C5'-C4'	-7.01	1.40	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	D	66	GLY	CA-C	-7.01	1.44	1.52
7	M	106	ASP	CA-C	-7.01	1.44	1.52
27	C	211	ARG	NE-CZ	7.01	1.40	1.33
13	S	36	LEU	CA-C	-7.00	1.43	1.52
2	B	1441	G	P-O5'	-7.00	1.49	1.59
13	S	20	VAL	N-CA	-7.00	1.37	1.46
2	B	645	C	C5'-C4'	7.00	1.61	1.51
2	B	2319	G	O3'-P	-7.00	1.50	1.61
7	M	27	SER	CA-C	-7.00	1.43	1.52
27	C	202	ARG	CA-C	-7.00	1.43	1.52
2	B	819	A	C3'-C2'	-7.00	1.42	1.52
2	B	1443	U	C2'-C1'	-7.00	1.42	1.53
8	N	103	ARG	N-CA	-7.00	1.36	1.46
3	O	36	ARG	NE-CZ	7.00	1.40	1.33
1	A	97	C	O3'-P	-6.99	1.50	1.61
2	B	2065	C	C4'-O4'	-6.99	1.35	1.45
4	K	116	ILE	CA-C	-6.99	1.43	1.52
2	B	2021	C	O3'-P	-6.99	1.50	1.61
2	B	85	G	C1'-N9	-6.98	1.37	1.48
2	B	159	G	N7-C5	-6.98	1.25	1.39
2	B	563	A	C1'-N9	-6.98	1.37	1.48
16	2	22	THR	CA-C	-6.98	1.43	1.52
2	B	2498	C	P-O5'	-6.98	1.49	1.59
31	I	67	THR	CA-C	-6.98	1.44	1.52
29	G	138	GLN	N-CA	-6.98	1.38	1.46
10	P	11	GLN	CA-C	-6.98	1.43	1.52
13	S	79	GLY	CA-C	-6.98	1.42	1.51
2	B	1199	U	C2'-C1'	-6.97	1.42	1.53
2	B	2865	U	O3'-P	-6.97	1.50	1.61
2	B	86	G	C4'-O4'	-6.97	1.35	1.45
2	B	1588	G	P-O5'	-6.97	1.49	1.59
2	B	366	C	O3'-P	-6.97	1.50	1.61
32	J	139	VAL	C-O	-6.97	1.16	1.24
2	B	1340	U	C5'-C4'	6.96	1.61	1.51
2	B	2837	A	O3'-P	-6.96	1.50	1.61
27	C	268	ARG	NE-CZ	6.96	1.40	1.33
2	B	508	A	C5'-C4'	6.96	1.61	1.51
2	B	2699	C	O3'-P	-6.96	1.50	1.61
24	6	20	ALA	CA-C	-6.96	1.43	1.52
2	B	2512	C	C3'-C2'	-6.95	1.42	1.52
2	B	2540	C	O3'-P	-6.95	1.50	1.61
2	B	818	G	C2'-C1'	-6.95	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	T	50	LEU	CA-C	-6.95	1.43	1.53
28	F	109	ARG	CA-C	-6.95	1.44	1.52
2	B	2062	A	C2'-C1'	-6.95	1.42	1.53
2	B	216	A	P-O5'	-6.95	1.49	1.59
2	B	1729	U	O3'-P	-6.95	1.50	1.61
1	A	98	G	O3'-P	-6.94	1.50	1.61
11	Q	77	LYS	CA-C	-6.94	1.44	1.52
2	B	2369	A	O3'-P	-6.94	1.50	1.61
8	N	25	ALA	N-CA	-6.94	1.38	1.46
5	L	41	ARG	CD-NE	6.94	1.55	1.46
5	L	93	ASN	N-CA	-6.94	1.36	1.46
2	B	740	C	C3'-O3'	6.94	1.52	1.42
2	B	2623	G	C1'-N9	-6.94	1.37	1.48
2	B	2811	G	C2'-C1'	-6.93	1.43	1.53
19	X	404	ARG	NE-CZ	6.93	1.40	1.33
2	B	80	G	C1'-N9	-6.93	1.37	1.48
27	C	68	ARG	CA-C	-6.93	1.44	1.53
2	B	1824	G	C2'-C1'	-6.92	1.43	1.53
2	B	2732	G	C4'-O4'	-6.92	1.35	1.45
2	B	995	C	C2'-C1'	-6.92	1.42	1.53
14	D	198	GLY	CA-C	-6.92	1.42	1.51
25	7	3	ILE	CA-C	-6.92	1.45	1.53
23	5	101	ALA	C-N	-6.92	1.25	1.33
2	B	1032	A	C2'-C1'	-6.92	1.43	1.53
2	B	2555	U	C5'-C4'	6.92	1.61	1.51
17	U	83	GLY	CA-C	-6.92	1.42	1.51
20	E	46	GLN	N-CA	-6.92	1.37	1.46
22	3	28	SER	N-CA	-6.92	1.38	1.46
2	B	2038	G	C1'-N9	-6.91	1.37	1.48
2	B	2703	C	C4'-O4'	-6.91	1.35	1.45
28	F	121	PHE	CA-C	-6.91	1.44	1.52
2	B	2421	G	C4'-O4'	-6.91	1.35	1.45
2	B	570	G	C2'-C1'	-6.91	1.43	1.53
2	B	1623	G	C1'-N9	-6.91	1.37	1.48
2	B	764	A	C3'-O3'	6.91	1.53	1.43
2	B	833	A	P-O5'	-6.91	1.49	1.59
2	B	1902	C	C4'-C3'	6.91	1.62	1.52
3	0	66	VAL	N-CA	-6.91	1.38	1.46
27	C	82	TYR	N-CA	-6.90	1.36	1.45
2	B	768	G	C2'-C1'	-6.90	1.43	1.53
2	B	1537	G	O5'-C5'	6.90	1.52	1.42
2	B	807	U	C4'-O4'	-6.90	1.35	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	448	U	O3'-P	-6.90	1.50	1.61
2	B	554	U	O3'-P	-6.89	1.50	1.61
11	Q	50	ARG	CA-C	-6.89	1.43	1.52
2	B	73	A	P-O5'	-6.89	1.49	1.59
2	B	2717	C	C3'-C2'	-6.89	1.42	1.52
15	T	58	VAL	N-CA	-6.89	1.37	1.46
2	B	1568	G	C1'-N9	-6.89	1.37	1.48
2	B	1841	U	O3'-P	-6.89	1.50	1.61
8	N	28	LEU	CA-CB	6.88	1.64	1.53
32	J	133	ALA	CA-C	-6.88	1.44	1.52
2	B	1326	U	C2'-C1'	-6.88	1.43	1.53
2	B	2394	C	O3'-P	-6.88	1.50	1.61
2	B	1491	G	C4'-O4'	6.88	1.55	1.45
2	B	419	U	C1'-N1	-6.88	1.38	1.48
6	1	32	ALA	CA-C	-6.88	1.43	1.52
2	B	405	U	C5'-C4'	6.87	1.61	1.51
2	B	2618	G	C1'-N9	-6.87	1.37	1.48
14	D	84	LEU	CA-C	-6.87	1.44	1.52
2	B	2020	A	C1'-N9	-6.86	1.37	1.48
10	P	98	TYR	CA-C	-6.86	1.43	1.52
30	H	56	ALA	N-CA	-6.86	1.37	1.46
12	R	26	ASP	CA-C	-6.86	1.44	1.52
2	B	1305	C	C5'-C4'	6.86	1.61	1.51
29	G	61	TRP	CA-C	-6.86	1.43	1.52
2	B	2186	G	C2-N3	6.86	1.46	1.32
28	F	147	ARG	CD-NE	6.86	1.55	1.46
2	B	1494	A	C5'-C4'	6.85	1.61	1.51
2	B	2452	C	O3'-P	-6.85	1.50	1.61
27	C	28	PRO	CA-C	-6.85	1.42	1.52
2	B	2248	C	O3'-P	-6.85	1.50	1.61
2	B	2197	U	C4'-O4'	-6.85	1.35	1.45
2	B	2719	G	C4'-C3'	-6.85	1.42	1.52
2	B	2057	G	P-O5'	-6.84	1.49	1.59
17	U	64	ILE	CA-C	6.84	1.61	1.52
2	B	2383	G	O3'-P	-6.84	1.50	1.61
13	S	110	ARG	NE-CZ	6.84	1.40	1.33
2	B	2109	U	C5'-C4'	6.84	1.61	1.51
15	T	58	VAL	CA-CB	-6.84	1.45	1.54
2	B	1217	U	C1'-N1	-6.83	1.38	1.48
2	B	982	C	C5'-C4'	6.83	1.61	1.51
2	B	1276	A	C2'-C1'	-6.83	1.43	1.53
14	D	72	GLY	CA-C	-6.83	1.42	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1562	U	O3'-P	-6.83	1.50	1.61
20	E	41	GLN	CA-C	-6.83	1.44	1.52
15	T	12	ARG	N-CA	-6.83	1.37	1.46
14	D	178	VAL	CA-C	-6.82	1.46	1.52
27	C	110	LYS	C-O	-6.82	1.16	1.24
2	B	2495	G	C2'-C1'	-6.82	1.43	1.53
16	2	12	ALA	N-CA	-6.82	1.38	1.46
30	H	50	ARG	NE-CZ	6.82	1.40	1.33
2	B	2178	C	C5'-C4'	6.82	1.61	1.51
2	B	2805	C	O3'-P	-6.82	1.50	1.61
2	B	159	G	C2'-C1'	-6.82	1.43	1.53
2	B	1948	G	P-O5'	-6.81	1.49	1.59
21	Y	30	VAL	C-O	-6.81	1.17	1.24
9	O	28	VAL	CA-C	6.81	1.61	1.52
2	B	749	A	P-O5'	-6.81	1.49	1.59
8	N	111	ALA	C-N	6.81	1.41	1.33
23	5	104	ILE	CA-CB	-6.81	1.46	1.54
2	B	1569	A	O3'-P	-6.81	1.50	1.61
2	B	899	A	C5'-C4'	6.81	1.61	1.51
2	B	2262	U	C3'-C2'	-6.81	1.42	1.52
11	Q	68	ALA	C-N	6.81	1.42	1.33
6	1	12	GLU	N-CA	-6.80	1.38	1.46
31	I	9	LYS	CA-C	-6.80	1.44	1.52
1	A	87	U	C1'-N1	6.80	1.57	1.47
21	Y	21	GLY	CA-C	-6.80	1.42	1.52
9	O	29	HIS	CD2-NE2	6.80	1.45	1.37
2	B	2345	G	C4'-C3'	6.79	1.63	1.53
2	B	2372	U	C5'-C4'	-6.79	1.41	1.51
2	B	2388	A	C5'-C4'	6.79	1.61	1.51
23	5	101	ALA	CA-C	-6.79	1.44	1.52
2	B	1267	U	O3'-P	-6.79	1.50	1.61
2	B	2347	C	P-O5'	-6.79	1.49	1.59
5	L	70	LYS	CA-C	-6.79	1.44	1.52
2	B	2511	U	C2'-C1'	-6.79	1.43	1.53
20	E	144	GLU	CA-C	-6.79	1.44	1.52
27	C	269	ARG	CD-NE	6.79	1.55	1.46
2	B	1933	G	C1'-N9	-6.79	1.37	1.48
2	B	1372	U	C3'-C2'	-6.79	1.42	1.52
14	D	166	GLY	CA-C	-6.78	1.42	1.51
29	G	94	ARG	CD-NE	6.78	1.55	1.46
5	L	116	VAL	C-N	6.78	1.43	1.33
2	B	462	C	C5'-C4'	-6.78	1.41	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1822	C	C2'-C1'	-6.78	1.43	1.53
2	B	1984	G	O3'-P	-6.78	1.50	1.61
22	3	29	VAL	N-CA	-6.78	1.38	1.46
13	S	23	LEU	CA-CB	6.78	1.63	1.53
19	X	323	TRP	CA-CB	6.77	1.62	1.53
2	B	1533	C	P-O5'	-6.77	1.49	1.59
2	B	2187	U	C2'-C1'	-6.77	1.43	1.53
27	C	73	ILE	CA-CB	6.77	1.62	1.54
29	G	4	ALA	CA-C	-6.77	1.43	1.52
2	B	517	C	C1'-N1	-6.77	1.38	1.48
13	S	95	ARG	CD-NE	6.77	1.55	1.46
29	G	40	VAL	CA-CB	-6.77	1.45	1.54
2	B	267	C	O3'-P	-6.77	1.51	1.61
23	5	221	GLY	N-CA	-6.77	1.37	1.45
2	B	563	A	C2'-C1'	-6.76	1.43	1.53
2	B	2053	G	O3'-P	-6.76	1.51	1.61
2	B	1699	G	P-O5'	-6.76	1.49	1.59
2	B	2653	U	C2'-C1'	-6.76	1.43	1.53
2	B	15	G	C5'-C4'	6.76	1.61	1.51
7	M	56	ALA	CA-C	-6.76	1.44	1.52
18	W	79	ARG	NE-CZ	6.75	1.40	1.33
6	1	38	GLN	CA-C	-6.75	1.43	1.52
2	B	1220	G	C5'-C4'	6.75	1.61	1.51
2	B	1460	U	C5'-C4'	6.75	1.61	1.51
4	K	10	VAL	CA-C	-6.75	1.44	1.52
2	B	1262	A	O3'-P	-6.75	1.51	1.61
9	O	7	ARG	NE-CZ	6.75	1.40	1.33
2	B	1427	A	C2'-C1'	-6.75	1.43	1.53
1	A	29	A	C4'-O4'	-6.75	1.35	1.45
2	B	2379	G	O3'-P	-6.74	1.51	1.61
3	0	67	LEU	N-CA	-6.74	1.37	1.46
2	B	2620	C	O3'-P	-6.74	1.51	1.61
32	J	16	TYR	CA-C	-6.74	1.44	1.52
2	B	1133	A	C4'-O4'	-6.74	1.35	1.45
2	B	335	C	O3'-P	-6.74	1.51	1.61
2	B	1539	U	O4'-C1'	6.73	1.51	1.41
28	F	124	ARG	NE-CZ	6.73	1.40	1.33
2	B	1303	G	C1'-N9	-6.73	1.37	1.48
2	B	2802	G	C5'-C4'	6.73	1.61	1.51
5	L	137	ALA	N-CA	-6.73	1.38	1.46
28	F	23	SER	CA-C	-6.73	1.44	1.52
28	F	33	ILE	CA-C	-6.73	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2605	U	C3'-C2'	-6.73	1.42	1.52
10	P	30	TRP	NE1-CE2	-6.72	1.30	1.37
2	B	772	C	C1'-N1	-6.72	1.38	1.48
2	B	854	C	C5'-C4'	6.72	1.61	1.51
2	B	1778	U	O3'-P	-6.72	1.51	1.61
15	T	43	ILE	CA-CB	-6.72	1.44	1.54
2	B	18	U	C3'-C2'	-6.72	1.42	1.52
2	B	1803	A	O3'-P	-6.72	1.51	1.61
2	B	531	C	C3'-C2'	-6.72	1.42	1.52
20	E	60	TRP	CA-C	-6.72	1.43	1.53
2	B	2461	A	C1'-N9	-6.71	1.37	1.48
13	S	31	GLN	CA-C	-6.71	1.43	1.52
32	J	41	LYS	CA-C	-6.71	1.43	1.53
27	C	146	LYS	N-CA	-6.71	1.37	1.45
2	B	1142	A	C2'-C1'	-6.71	1.43	1.53
2	B	1838	C	C1'-N1	-6.71	1.37	1.47
2	B	2690	U	C2'-C1'	-6.71	1.43	1.53
2	B	1112	G	O4'-C1'	-6.71	1.31	1.41
28	F	67	THR	CA-C	-6.71	1.44	1.52
2	B	2560	A	C3'-C2'	-6.71	1.42	1.52
32	J	65	THR	C-N	6.70	1.43	1.33
2	B	515	A	C1'-N9	-6.70	1.37	1.48
12	R	33	VAL	N-CA	-6.70	1.38	1.46
20	E	198	GLU	CA-C	-6.70	1.44	1.52
2	B	58	G	P-O5'	-6.70	1.49	1.59
2	B	294	A	C1'-N9	-6.70	1.38	1.48
2	B	468	G	C5'-C4'	6.70	1.61	1.51
30	H	74	ALA	CA-C	-6.70	1.43	1.52
27	C	244	VAL	CA-C	-6.70	1.44	1.52
19	X	120	THR	N-CA	-6.70	1.38	1.46
4	K	48	PRO	CA-CB	-6.69	1.43	1.53
27	C	155	ARG	NE-CZ	6.69	1.40	1.33
20	E	172	ALA	N-CA	-6.69	1.38	1.46
2	B	831	G	P-O5'	-6.69	1.49	1.59
10	P	61	ARG	NE-CZ	6.69	1.40	1.33
14	D	49	GLN	C-N	6.69	1.42	1.33
1	A	102	G	C1'-N9	-6.68	1.38	1.48
2	B	832	U	O3'-P	-6.68	1.51	1.61
2	B	1489	C	O3'-P	-6.68	1.51	1.61
2	B	2078	C	C4'-C3'	-6.68	1.42	1.52
2	B	1023	U	O3'-P	-6.68	1.51	1.61
21	Y	13	ARG	NE-CZ	6.68	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1610	A	C2'-C1'	-6.68	1.43	1.53
2	B	2526	G	C4'-C3'	6.68	1.62	1.52
2	B	1196	C	C2'-C1'	-6.68	1.43	1.53
14	D	97	SER	CA-C	-6.68	1.44	1.52
2	B	750	A	O3'-P	-6.67	1.51	1.61
30	H	47	PHE	CA-C	-6.67	1.44	1.52
2	B	302	C	C3'-C2'	-6.67	1.42	1.52
8	N	36	THR	C-N	6.67	1.42	1.33
2	B	2671	G	C2'-C1'	-6.67	1.43	1.53
30	H	60	GLU	C-N	6.67	1.42	1.33
2	B	438	G	O3'-P	-6.67	1.51	1.61
2	B	743	A	C2'-C1'	-6.67	1.43	1.53
2	B	947	A	O3'-P	-6.67	1.51	1.61
2	B	2692	G	C2'-C1'	-6.67	1.43	1.53
2	B	1665	A	O3'-P	-6.67	1.51	1.61
2	B	1813	G	C2'-C1'	-6.67	1.43	1.53
16	2	19	HIS	CD2-NE2	6.67	1.45	1.37
21	Y	54	ARG	NE-CZ	6.67	1.40	1.33
2	B	1531	C	O3'-P	-6.66	1.51	1.61
5	L	77	ILE	CA-CB	-6.66	1.44	1.54
2	B	2115	G	C2'-C1'	-6.66	1.43	1.53
2	B	2477	U	O3'-P	-6.66	1.51	1.61
25	7	58	ILE	CA-C	-6.66	1.45	1.53
2	B	298	G	P-O5'	6.66	1.69	1.59
2	B	769	U	O4'-C1'	-6.66	1.31	1.41
2	B	2384	U	P-O5'	-6.66	1.49	1.59
2	B	1179	G	O3'-P	-6.66	1.51	1.61
2	B	1355	G	O3'-P	-6.65	1.51	1.61
28	F	70	ARG	NE-CZ	6.65	1.40	1.33
2	B	2656	U	C2'-C1'	-6.65	1.43	1.53
2	B	849	A	C4'-C3'	-6.65	1.42	1.52
2	B	1408	G	C1'-N9	-6.65	1.38	1.48
2	B	2509	G	O3'-P	-6.65	1.51	1.61
8	N	2	ARG	NE-CZ	6.65	1.40	1.33
2	B	1542	U	C2'-C1'	-6.65	1.43	1.53
20	E	112	LEU	CA-C	-6.65	1.44	1.52
24	6	33	ARG	CD-NE	6.65	1.55	1.46
2	B	840	C	C1'-N1	-6.64	1.38	1.48
2	B	546	U	C5'-C4'	6.64	1.61	1.51
2	B	2699	C	P-O5'	-6.64	1.49	1.59
2	B	322	A	C3'-O3'	-6.64	1.33	1.43
31	I	3	LYS	CA-C	-6.64	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	10	G	O3'-P	-6.64	1.51	1.61
2	B	1568	G	C4'-C3'	-6.64	1.42	1.52
2	B	268	C	O3'-P	-6.63	1.51	1.61
2	B	797	G	C1'-N9	-6.63	1.38	1.48
2	B	1806	C	P-O5'	-6.63	1.49	1.59
2	B	2686	G	O3'-P	-6.63	1.51	1.61
9	O	35	ILE	C-N	6.63	1.43	1.33
2	B	2851	A	C5'-C4'	6.63	1.61	1.51
7	M	13	HIS	CB-CG	-6.63	1.40	1.50
2	B	187	G	C2'-C1'	-6.63	1.43	1.53
2	B	742	A	O3'-P	-6.63	1.51	1.61
14	D	92	VAL	N-CA	-6.63	1.38	1.46
32	J	104	ALA	CA-C	-6.63	1.44	1.52
2	B	831	G	C1'-N9	-6.63	1.38	1.48
2	B	1191	G	C1'-N9	-6.63	1.38	1.48
5	L	54	GLN	CA-C	-6.63	1.44	1.52
2	B	227	A	C4'-C3'	-6.62	1.43	1.53
2	B	964	C	P-O5'	-6.62	1.49	1.59
1	A	101	A	C3'-C2'	-6.62	1.42	1.52
2	B	41	C	O4'-C1'	-6.62	1.31	1.41
2	B	2393	U	O5'-C5'	-6.62	1.32	1.42
2	B	278	A	C3'-C2'	-6.62	1.42	1.52
2	B	33	C	O3'-P	-6.62	1.51	1.61
27	C	113	ASP	CA-C	-6.62	1.44	1.52
2	B	372	G	C5'-C4'	6.62	1.61	1.51
2	B	1234	U	O3'-P	-6.62	1.51	1.61
27	C	215	VAL	N-CA	-6.61	1.38	1.46
30	H	129	GLU	CA-C	-6.61	1.44	1.52
2	B	2368	C	C3'-O3'	6.61	1.52	1.42
2	B	2786	U	O3'-P	-6.61	1.51	1.61
31	I	136	GLY	C-N	6.61	1.42	1.33
32	J	70	THR	N-CA	6.61	1.54	1.46
2	B	517	C	O3'-P	-6.61	1.51	1.61
29	G	95	ALA	CA-C	-6.61	1.44	1.52
2	B	1997	C	C4'-C3'	-6.61	1.42	1.52
32	J	44	TYR	N-CA	-6.61	1.39	1.46
2	B	2033	A	C1'-N9	-6.61	1.37	1.47
30	H	43	ASN	CA-C	-6.61	1.43	1.52
2	B	2602	A	C3'-C2'	-6.60	1.43	1.52
14	D	77	ARG	NE-CZ	6.60	1.40	1.33
25	7	35	LYS	N-CA	-6.60	1.37	1.46
2	B	292	U	C5'-C4'	6.60	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	N	19	ALA	CA-C	-6.60	1.44	1.52
2	B	1491	G	O3'-P	-6.59	1.51	1.61
2	B	2083	G	C1'-N9	-6.59	1.38	1.48
2	B	2803	G	P-O5'	-6.59	1.49	1.59
2	B	920	A	C1'-N9	-6.59	1.38	1.48
2	B	1824	G	C1'-N9	-6.59	1.38	1.48
2	B	2815	C	P-O5'	-6.59	1.49	1.59
2	B	2593	U	C2'-C1'	-6.59	1.43	1.53
2	B	2521	C	C3'-C2'	-6.59	1.42	1.52
2	B	2589	A	O3'-P	-6.59	1.51	1.61
15	T	15	HIS	CG-ND1	6.59	1.45	1.38
2	B	1436	G	O3'-P	-6.59	1.51	1.61
2	B	796	C	O3'-P	-6.58	1.51	1.61
2	B	2531	A	P-O5'	-6.58	1.49	1.59
2	B	909	A	C1'-N9	-6.58	1.38	1.48
12	R	84	ARG	CD-NE	6.58	1.55	1.46
2	B	2626	C	C2'-C1'	-6.58	1.43	1.53
2	B	308	G	C2'-O2'	-6.58	1.32	1.42
2	B	728	G	C1'-N9	-6.58	1.37	1.47
2	B	2024	G	C1'-N9	-6.58	1.38	1.48
2	B	2025	C	P-O5'	-6.58	1.49	1.59
4	K	54	LYS	N-CA	-6.58	1.38	1.46
22	3	35	GLU	N-CA	-6.58	1.37	1.45
25	7	45	PRO	CA-C	-6.58	1.43	1.52
2	B	446	G	C1'-N9	-6.57	1.37	1.47
2	B	787	C	O3'-P	-6.57	1.51	1.61
2	B	1587	G	C5'-C4'	6.57	1.61	1.51
10	P	92	ARG	CD-NE	6.57	1.55	1.46
15	T	31	VAL	N-CA	6.57	1.53	1.46
23	5	32	GLU	CA-C	-6.57	1.44	1.52
2	B	464	U	C2'-C1'	-6.57	1.43	1.53
24	6	43	THR	CA-C	-6.57	1.44	1.52
2	B	2373	G	C4'-C3'	-6.57	1.42	1.52
2	B	822	G	C2'-C1'	-6.57	1.43	1.53
27	C	239	PHE	CA-C	-6.57	1.44	1.52
2	B	2787	C	C3'-C2'	-6.56	1.43	1.52
2	B	1311	G	P-O5'	-6.56	1.50	1.59
2	B	2616	C	C4'-C3'	6.56	1.62	1.52
16	2	48	ASN	CA-C	-6.56	1.44	1.52
2	B	2227	A	C4'-O4'	-6.56	1.35	1.45
2	B	2541	A	O3'-P	-6.56	1.51	1.61
2	B	212	G	P-O5'	-6.56	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2198	A	C1'-N9	-6.56	1.37	1.47
27	C	130	PRO	CA-C	-6.56	1.44	1.52
2	B	535	G	O3'-P	-6.56	1.51	1.61
15	T	48	GLN	N-CA	-6.56	1.39	1.46
20	E	49	ARG	N-CA	-6.56	1.38	1.46
2	B	210	C	C3'-O3'	6.55	1.51	1.42
2	B	2065	C	C2'-C1'	-6.55	1.43	1.53
20	E	89	PRO	N-CA	-6.55	1.39	1.47
2	B	1389	G	P-O5'	-6.55	1.50	1.59
9	O	69	ASP	CA-C	-6.55	1.44	1.52
2	B	2051	A	C1'-N9	-6.55	1.37	1.47
2	B	2411	A	C2'-C1'	-6.55	1.43	1.53
9	O	21	LEU	N-CA	-6.55	1.38	1.46
30	H	79	THR	N-CA	-6.55	1.38	1.46
2	B	386	G	O3'-P	-6.55	1.51	1.61
31	I	38	CYS	CA-CB	6.55	1.58	1.53
2	B	2431	U	O3'-P	-6.54	1.51	1.61
2	B	469	G	C4'-O4'	-6.54	1.35	1.45
28	F	148	VAL	CA-C	-6.54	1.44	1.52
14	D	170	VAL	CA-CB	-6.54	1.48	1.55
18	W	39	ALA	N-CA	-6.54	1.38	1.46
28	F	113	PHE	N-CA	-6.54	1.37	1.46
2	B	1571	A	C1'-N9	-6.54	1.38	1.48
2	B	1798	U	C3'-C2'	-6.54	1.43	1.52
28	F	27	VAL	CA-C	6.54	1.59	1.52
2	B	1447	C	C2'-C1'	-6.54	1.43	1.53
2	B	2870	C	C2'-C1'	-6.54	1.43	1.53
23	5	46	VAL	C-O	-6.54	1.17	1.24
27	C	101	ARG	CA-C	-6.54	1.44	1.52
32	J	93	ILE	N-CA	-6.54	1.37	1.46
2	B	1287	A	C4'-C3'	-6.54	1.42	1.52
2	B	787	C	C2'-C1'	-6.54	1.43	1.53
2	B	292	U	C1'-N1	6.53	1.58	1.48
2	B	587	C	C4'-C3'	-6.53	1.43	1.53
2	B	1254	A	C5'-C4'	6.53	1.61	1.51
2	B	2525	G	C4'-C3'	6.53	1.62	1.52
4	K	100	PHE	CA-C	-6.53	1.44	1.52
9	O	49	VAL	CA-C	-6.53	1.46	1.52
15	T	85	VAL	C-O	-6.53	1.17	1.24
19	X	107	ARG	CA-C	-6.53	1.44	1.52
2	B	1126	A	C2'-C1'	-6.53	1.43	1.53
2	B	977	G	O3'-P	-6.53	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	2	23	LEU	CA-C	-6.53	1.44	1.52
23	5	172	HIS	ND1-CE1	6.53	1.39	1.32
2	B	1619	G	O3'-P	-6.53	1.51	1.61
2	B	2298	A	O3'-P	-6.53	1.51	1.61
10	P	83	ILE	CA-C	-6.53	1.44	1.52
2	B	554	U	O4'-C1'	-6.53	1.31	1.41
2	B	629	G	C2'-C1'	-6.53	1.43	1.53
2	B	1352	U	O3'-P	-6.53	1.51	1.61
2	B	1775	U	C3'-C2'	-6.53	1.43	1.52
2	B	2270	A	C3'-C2'	-6.52	1.43	1.52
2	B	2447	G	O3'-P	-6.52	1.51	1.61
2	B	2476	A	C1'-N9	-6.52	1.38	1.48
17	U	10	VAL	CA-CB	-6.52	1.45	1.54
2	B	1030	C	C2'-C1'	-6.52	1.43	1.53
23	5	156	ALA	N-CA	-6.52	1.38	1.46
2	B	1983	G	C1'-N9	-6.52	1.38	1.48
2	B	1131	G	O3'-P	-6.52	1.51	1.61
2	B	1354	A	C4'-O4'	-6.52	1.35	1.45
2	B	2236	U	C3'-C2'	-6.52	1.43	1.52
10	P	71	ARG	CA-C	-6.52	1.44	1.52
12	R	74	ILE	CA-C	-6.52	1.44	1.52
2	B	2460	U	C3'-C2'	-6.52	1.43	1.52
18	W	7	GLU	CA-C	-6.52	1.44	1.52
19	X	247	ARG	CA-C	-6.52	1.44	1.52
2	B	1135	C	P-O5'	-6.51	1.50	1.59
2	B	78	U	P-O5'	-6.51	1.50	1.59
2	B	507	A	O4'-C1'	6.51	1.51	1.41
2	B	996	A	O3'-P	-6.51	1.51	1.61
2	B	2515	C	C2'-C1'	-6.51	1.43	1.53
2	B	554	U	P-O5'	-6.51	1.50	1.59
20	E	93	SER	CA-CB	6.51	1.64	1.53
23	5	64	VAL	C-N	6.51	1.41	1.33
2	B	1773	A	P-O5'	-6.50	1.50	1.59
12	R	34	GLU	CA-C	-6.50	1.44	1.52
12	R	37	GLU	CA-C	-6.50	1.44	1.52
17	U	45	GLN	CA-C	-6.50	1.44	1.52
2	B	1792	G	C1'-N9	-6.50	1.38	1.48
14	D	135	GLY	CA-C	-6.50	1.42	1.51
2	B	2675	A	O5'-C5'	6.50	1.52	1.42
23	5	9	ARG	C-N	6.50	1.41	1.34
2	B	123	G	C3'-C2'	-6.50	1.43	1.52
2	B	1047	G	C5'-C4'	6.50	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1930	G	C1'-N9	6.50	1.56	1.47
2	B	2633	G	P-O5'	-6.50	1.50	1.59
2	B	2743	U	O3'-P	-6.50	1.51	1.61
2	B	1299	G	P-O5'	-6.49	1.50	1.59
2	B	304	U	C2'-C1'	-6.49	1.43	1.53
2	B	156	A	C1'-N9	-6.49	1.38	1.48
2	B	1136	G	O3'-P	-6.49	1.51	1.61
2	B	576	U	O5'-C5'	6.49	1.52	1.42
2	B	1701	A	C2'-C1'	-6.49	1.43	1.53
2	B	2812	G	O3'-P	-6.49	1.51	1.61
6	1	2	LYS	CA-CB	6.49	1.64	1.53
2	B	516	C	C2'-C1'	-6.48	1.43	1.53
2	B	646	U	O3'-P	-6.48	1.51	1.61
2	B	1345	C	O3'-P	-6.48	1.51	1.61
19	X	382	SER	C-N	6.48	1.42	1.33
2	B	1812	U	O3'-P	-6.48	1.51	1.61
2	B	1005	C	C5'-C4'	6.48	1.60	1.51
2	B	1585	C	C2'-C1'	6.48	1.63	1.53
2	B	1808	A	C5'-C4'	6.47	1.61	1.51
2	B	2864	G	C2'-C1'	-6.47	1.43	1.53
28	F	153	ILE	CA-C	-6.47	1.44	1.52
2	B	943	A	C3'-C2'	-6.47	1.43	1.52
2	B	1282	U	O3'-P	-6.47	1.51	1.61
2	B	2110	G	C1'-N9	6.47	1.56	1.47
2	B	2508	G	P-O5'	-6.47	1.50	1.59
2	B	488	G	C2'-C1'	-6.46	1.43	1.53
27	C	20	ASN	C-N	6.46	1.40	1.33
2	B	222	A	P-O5'	-6.46	1.50	1.59
2	B	759	G	C2'-O2'	-6.46	1.32	1.42
2	B	250	G	O3'-P	-6.46	1.51	1.61
2	B	491	G	O3'-P	-6.46	1.51	1.61
2	B	899	A	C4'-O4'	6.46	1.55	1.45
29	G	36	LEU	CA-C	-6.46	1.44	1.52
1	A	25	U	O3'-P	-6.46	1.51	1.61
22	3	4	GLN	CA-C	-6.46	1.44	1.53
2	B	1390	U	C4'-O4'	-6.46	1.35	1.45
2	B	2542	A	O4'-C1'	-6.46	1.32	1.42
14	D	17	GLU	CA-C	-6.46	1.44	1.52
19	X	72	ALA	C-N	6.46	1.42	1.33
2	B	206	U	C2'-C1'	-6.46	1.43	1.53
2	B	215	G	C5'-C4'	6.46	1.61	1.51
7	M	131	VAL	CA-C	-6.46	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	627	A	C1'-N9	-6.46	1.37	1.47
2	B	910	A	O3'-P	-6.46	1.51	1.61
14	D	29	VAL	CA-CB	-6.46	1.45	1.54
2	B	894	U	O5'-C5'	-6.45	1.32	1.42
2	B	1425	G	P-O5'	-6.45	1.50	1.59
5	L	96	LYS	CA-C	-6.45	1.43	1.52
1	A	52	A	C3'-O3'	6.45	1.51	1.42
2	B	1744	A	C1'-N9	-6.45	1.38	1.48
19	X	235	GLY	C-N	6.45	1.42	1.33
20	E	62	GLN	N-CA	-6.45	1.37	1.46
27	C	241	LYS	CA-CB	6.45	1.64	1.53
2	B	1031	G	C2'-C1'	-6.45	1.43	1.53
2	B	1174	U	O4'-C1'	-6.45	1.32	1.42
2	B	1344	U	P-O5'	-6.45	1.50	1.59
13	S	97	LEU	C-N	6.45	1.43	1.33
2	B	945	A	C2'-C1'	-6.45	1.43	1.53
2	B	596	U	P-O5'	-6.45	1.50	1.59
2	B	1687	G	C4'-C3'	-6.44	1.42	1.52
2	B	2320	U	O3'-P	-6.44	1.51	1.61
7	M	76	LYS	CA-C	-6.44	1.46	1.53
2	B	609	A	C1'-N9	-6.44	1.38	1.48
2	B	712	G	C1'-N9	-6.44	1.38	1.48
2	B	1607	C	O4'-C1'	6.44	1.51	1.41
2	B	1949	G	C5'-C4'	6.44	1.60	1.51
2	B	713	G	O3'-P	-6.44	1.51	1.61
19	X	112	PRO	N-CA	-6.44	1.39	1.46
32	J	106	LYS	CA-C	-6.44	1.44	1.52
20	E	83	VAL	CA-C	-6.44	1.44	1.52
20	E	88	ARG	CA-C	-6.44	1.42	1.52
2	B	2021	C	C4'-O4'	-6.44	1.35	1.45
20	E	141	MET	CA-C	-6.44	1.43	1.52
2	B	530	G	O3'-P	-6.43	1.51	1.61
2	B	1275	A	O3'-P	-6.43	1.51	1.61
23	5	11	ILE	CA-CB	6.43	1.62	1.54
27	C	263	ASP	CA-CB	6.43	1.63	1.53
2	B	787	C	C1'-N1	-6.43	1.38	1.48
2	B	2080	A	C3'-C2'	-6.43	1.43	1.52
8	N	64	ARG	CD-NE	6.43	1.55	1.46
9	O	107	ALA	N-CA	-6.43	1.37	1.46
28	F	44	ALA	CA-C	-6.43	1.44	1.52
2	B	2019	A	O3'-P	-6.43	1.51	1.61
25	7	39	ARG	CD-NE	6.43	1.55	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	254	G	P-O5'	-6.43	1.50	1.59
2	B	2642	G	C3'-C2'	-6.42	1.43	1.52
19	X	168	PRO	N-CD	-6.42	1.38	1.47
2	B	960	A	C1'-N9	6.42	1.57	1.48
2	B	1532	A	O3'-P	-6.42	1.51	1.61
4	K	45	GLU	CA-C	-6.42	1.44	1.52
3	O	64	ASP	CA-C	-6.42	1.44	1.52
2	B	1201	U	C3'-C2'	-6.42	1.43	1.52
2	B	1527	G	P-O5'	-6.42	1.50	1.59
2	B	1999	C	O3'-P	-6.42	1.51	1.61
2	B	2587	A	O3'-P	-6.42	1.51	1.61
2	B	2792	A	C1'-N9	-6.42	1.38	1.48
20	E	77	ILE	CA-C	-6.42	1.44	1.52
5	L	140	GLY	CA-C	-6.42	1.43	1.52
32	J	2	LYS	CA-C	-6.42	1.44	1.52
1	A	100	G	O3'-P	-6.41	1.51	1.61
2	B	447	A	C1'-N9	6.41	1.56	1.47
2	B	1712	U	C5'-C4'	6.41	1.60	1.51
2	B	2755	C	O3'-P	-6.41	1.51	1.61
11	Q	4	LYS	N-CA	-6.41	1.38	1.46
29	G	127	GLN	C-N	6.41	1.42	1.33
2	B	2704	C	C2'-C1'	-6.41	1.43	1.53
17	U	34	ILE	CA-C	-6.41	1.44	1.52
17	U	46	LYS	CA-C	-6.41	1.44	1.53
2	B	1729	U	C1'-N1	6.41	1.58	1.48
29	G	153	PRO	CA-C	-6.41	1.43	1.52
2	B	1563	U	C2'-O2'	-6.41	1.32	1.42
1	A	86	G	O3'-P	-6.41	1.51	1.61
2	B	2040	G	C2'-C1'	-6.41	1.43	1.53
2	B	2474	U	C2'-C1'	-6.41	1.43	1.53
2	B	1399	C	C4'-O4'	-6.40	1.35	1.45
20	E	121	VAL	N-CA	-6.40	1.38	1.46
2	B	77	G	C4'-O4'	-6.40	1.35	1.45
2	B	503	A	O3'-P	-6.40	1.51	1.61
20	E	88	ARG	NE-CZ	6.40	1.40	1.33
2	B	2311	A	O3'-P	-6.40	1.51	1.61
12	R	33	VAL	CA-CB	-6.39	1.45	1.54
27	C	268	ARG	CZ-NH1	6.39	1.41	1.32
32	J	26	GLY	CA-C	-6.39	1.42	1.51
21	Y	76	ARG	NE-CZ	6.39	1.40	1.33
2	B	767	U	O3'-P	-6.39	1.51	1.61
2	B	2875	C	C3'-C2'	-6.39	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	T	9	LYS	N-CA	-6.39	1.38	1.46
19	X	147	HIS	CB-CG	6.39	1.59	1.50
2	B	376	G	C2'-C1'	-6.38	1.43	1.53
2	B	1674	G	N7-C5	-6.38	1.26	1.39
2	B	2053	G	C1'-N9	-6.38	1.38	1.48
2	B	2139	U	C4'-C3'	6.38	1.62	1.52
2	B	1218	G	O3'-P	-6.38	1.51	1.61
2	B	189	G	C2'-C1'	-6.38	1.43	1.53
8	N	2	ARG	CZ-NH2	6.38	1.41	1.33
2	B	1677	A	C1'-N9	-6.38	1.38	1.48
2	B	1192	G	C3'-O3'	6.38	1.51	1.42
2	B	895	U	O5'-C5'	6.38	1.52	1.42
32	J	94	ALA	CA-C	-6.38	1.44	1.52
2	B	685	A	O3'-P	-6.38	1.51	1.61
2	B	467	G	P-O5'	-6.37	1.50	1.59
2	B	347	A	C2'-C1'	-6.37	1.43	1.53
2	B	1676	A	C1'-N9	-6.37	1.38	1.48
28	F	140	ILE	CA-C	-6.37	1.44	1.52
2	B	1804	C	O3'-P	-6.37	1.51	1.61
21	Y	38	ARG	C-N	6.37	1.41	1.33
2	B	1336	A	C3'-C2'	-6.36	1.43	1.52
2	B	2061	G	O3'-P	-6.36	1.51	1.61
2	B	487	C	C2'-C1'	-6.36	1.43	1.53
2	B	1689	A	O5'-C5'	6.36	1.51	1.42
19	X	67	VAL	CA-C	-6.36	1.45	1.52
1	A	80	U	O3'-P	-6.36	1.51	1.61
2	B	1325	U	C2'-C1'	-6.36	1.43	1.53
2	B	2711	A	C4'-O4'	-6.36	1.36	1.45
5	L	13	LYS	CA-C	-6.36	1.44	1.52
10	P	61	ARG	CA-C	-6.36	1.45	1.52
2	B	1283	G	C1'-N9	-6.35	1.38	1.48
2	B	1123	C	C2'-C1'	-6.35	1.43	1.53
2	B	1328	A	C4'-O4'	-6.35	1.36	1.45
2	B	1511	G	O3'-P	-6.35	1.51	1.61
2	B	2383	G	P-O5'	-6.35	1.50	1.59
2	B	1391	U	C1'-N1	6.35	1.57	1.48
2	B	1416	G	C2'-C1'	-6.35	1.43	1.53
7	M	73	ILE	CA-C	-6.35	1.44	1.52
27	C	47	ARG	N-CA	-6.35	1.37	1.45
2	B	1820	U	C3'-C2'	-6.35	1.43	1.52
2	B	475	C	C3'-C2'	-6.34	1.43	1.52
12	R	21	ARG	CA-C	-6.34	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	G	98	LYS	N-CA	-6.34	1.38	1.46
32	J	104	ALA	C-N	6.34	1.41	1.34
19	X	318	ILE	N-CA	-6.34	1.38	1.46
11	Q	39	ILE	N-CA	-6.34	1.39	1.46
14	D	163	GLY	N-CA	-6.34	1.40	1.45
2	B	575	A	C2'-C1'	-6.34	1.43	1.53
18	W	36	ALA	CA-C	-6.33	1.44	1.53
2	B	241	A	C4'-O4'	-6.33	1.36	1.45
2	B	1256	G	P-O5'	-6.33	1.50	1.59
2	B	1579	A	C2'-C1'	-6.33	1.43	1.53
2	B	2054	A	C2'-C1'	-6.33	1.43	1.53
13	S	9	HIS	CB-CG	-6.33	1.41	1.50
2	B	1978	A	C2'-C1'	-6.33	1.43	1.53
2	B	2278	A	O3'-P	-6.33	1.51	1.61
2	B	1612	C	P-O5'	-6.33	1.50	1.59
2	B	2017	U	O3'-P	-6.33	1.51	1.61
9	O	89	ASP	N-CA	-6.33	1.38	1.46
2	B	500	G	O3'-P	-6.32	1.51	1.61
2	B	2261	C	C1'-N1	-6.32	1.39	1.48
24	6	3	ARG	N-CA	-6.32	1.37	1.45
2	B	640	C	C3'-C2'	-6.32	1.43	1.52
2	B	736	C	C2'-C1'	-6.32	1.43	1.53
4	K	22	ILE	N-CA	-6.32	1.40	1.46
25	7	42	HIS	CG-ND1	-6.32	1.31	1.38
2	B	878	A	O3'-P	-6.32	1.51	1.61
2	B	1109	C	P-O5'	-6.32	1.50	1.59
2	B	480	A	C5'-C4'	6.32	1.60	1.51
2	B	1995	U	O3'-P	-6.32	1.51	1.61
2	B	745	G	P-O5'	-6.31	1.50	1.59
1	A	97	C	P-O5'	-6.31	1.50	1.59
2	B	1712	U	C3'-C2'	-6.31	1.43	1.52
2	B	1791	A	C2'-C1'	-6.30	1.43	1.53
2	B	84	A	O3'-P	-6.30	1.51	1.61
23	5	122	ARG	NE-CZ	6.30	1.40	1.33
2	B	2697	G	C1'-N9	-6.30	1.38	1.48
2	B	934	U	O4'-C1'	6.30	1.51	1.41
19	X	348	ALA	N-CA	-6.30	1.38	1.46
19	X	353	ILE	CA-C	-6.30	1.44	1.52
24	6	39	ARG	CA-C	6.30	1.60	1.52
2	B	660	C	O3'-P	-6.29	1.51	1.61
8	N	17	ARG	NE-CZ	6.29	1.40	1.33
2	B	186	G	C2'-C1'	-6.29	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2424	C	P-O5'	-6.29	1.50	1.59
2	B	2839	G	O3'-P	-6.29	1.51	1.61
14	D	48	ILE	C-O	6.29	1.30	1.23
15	T	64	LYS	CA-C	6.29	1.61	1.53
21	Y	40	ARG	CA-C	-6.29	1.44	1.52
23	5	232	SER	CA-C	-6.29	1.44	1.52
2	B	567	U	C5'-C4'	6.29	1.60	1.51
2	B	646	U	C4'-C3'	-6.29	1.43	1.52
2	B	1072	C	C3'-O3'	6.29	1.51	1.42
2	B	1523	U	C2'-C1'	-6.29	1.44	1.53
27	C	86	ARG	CD-NE	6.29	1.55	1.46
29	G	93	TYR	C-N	6.29	1.42	1.33
2	B	754	U	C3'-O3'	-6.29	1.32	1.42
2	B	1721	G	O5'-C5'	-6.29	1.33	1.42
2	B	1777	U	P-O5'	-6.29	1.50	1.59
13	S	103	ILE	C-O	-6.29	1.17	1.24
4	K	28	SER	CA-C	-6.29	1.46	1.53
7	M	59	ARG	CD-NE	6.29	1.55	1.46
19	X	139	GLU	C-N	6.29	1.41	1.33
2	B	2529	G	C1'-N9	-6.28	1.38	1.48
31	I	36	GLU	C-O	-6.28	1.16	1.24
23	5	36	ALA	CA-C	-6.28	1.45	1.52
2	B	295	G	P-O5'	-6.28	1.50	1.59
2	B	572	A	C4'-O4'	-6.28	1.36	1.45
25	7	38	LYS	N-CA	-6.28	1.38	1.46
28	F	165	GLY	CA-C	-6.28	1.45	1.52
2	B	639	U	C1'-N1	-6.28	1.39	1.48
2	B	2230	G	O3'-P	-6.28	1.51	1.61
2	B	1585	C	O3'-P	-6.27	1.51	1.61
2	B	380	G	O3'-P	-6.27	1.51	1.61
2	B	488	G	O3'-P	-6.27	1.51	1.61
2	B	860	U	O3'-P	-6.27	1.51	1.61
2	B	1002	G	P-O5'	-6.27	1.50	1.59
2	B	2269	G	O5'-C5'	6.27	1.51	1.42
11	Q	16	ILE	CA-C	-6.27	1.45	1.52
1	A	112	G	C1'-N9	-6.27	1.38	1.48
31	I	126	ARG	CD-NE	6.27	1.55	1.46
1	A	93	C	O4'-C1'	-6.27	1.32	1.41
2	B	1253	A	C3'-C2'	-6.27	1.43	1.52
2	B	2417	C	C3'-C2'	-6.27	1.43	1.52
2	B	369	U	O3'-P	-6.26	1.51	1.61
2	B	1303	G	C2'-C1'	-6.26	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2378	A	O3'-P	-6.26	1.51	1.61
22	3	18	HIS	CA-CB	6.26	1.61	1.52
2	B	555	G	C4'-C3'	-6.26	1.43	1.52
2	B	1257	C	O3'-P	-6.26	1.51	1.61
2	B	218	A	O3'-P	-6.26	1.51	1.61
7	M	123	LYS	CA-C	-6.26	1.44	1.52
2	B	1694	C	C4'-O4'	-6.26	1.36	1.45
2	B	2397	G	C2'-C1'	-6.26	1.44	1.53
14	D	127	PHE	CA-C	-6.25	1.45	1.52
2	B	1152	C	C2'-C1'	-6.25	1.44	1.53
2	B	2499	C	O4'-C1'	-6.25	1.32	1.41
27	C	23	LEU	N-CA	-6.25	1.37	1.45
2	B	12	U	C5'-C4'	6.25	1.60	1.51
13	S	5	ALA	N-CA	-6.25	1.38	1.46
2	B	807	U	C2'-C1'	-6.25	1.44	1.53
2	B	2008	C	C2'-C1'	-6.25	1.44	1.53
2	B	181	A	C2'-C1'	-6.24	1.44	1.53
5	L	33	ARG	CA-C	-6.24	1.44	1.52
4	K	22	ILE	CA-CB	-6.24	1.47	1.54
6	1	41	HIS	ND1-CE1	6.24	1.38	1.32
10	P	37	LYS	CA-C	-6.24	1.44	1.52
25	7	23	HIS	N-CA	-6.24	1.37	1.45
27	C	38	LYS	CA-C	-6.24	1.44	1.52
2	B	1566	A	C2'-C1'	-6.24	1.43	1.53
2	B	2501	C	C4'-O4'	-6.24	1.36	1.45
2	B	1372	U	C2'-C1'	-6.24	1.44	1.53
2	B	788	A	C1'-N9	-6.23	1.37	1.47
1	A	51	G	C2'-C1'	-6.23	1.44	1.53
2	B	331	C	C2'-C1'	-6.23	1.43	1.53
2	B	770	G	N7-C5	-6.23	1.26	1.39
2	B	1830	C	O3'-P	-6.23	1.51	1.61
2	B	2189	U	C2'-C1'	-6.23	1.44	1.53
32	J	18	VAL	CA-C	-6.23	1.45	1.52
2	B	698	C	P-O5'	-6.23	1.50	1.59
2	B	763	G	C4'-C3'	-6.23	1.43	1.52
2	B	2774	C	P-O5'	-6.23	1.50	1.59
14	D	134	HIS	ND1-CE1	6.23	1.38	1.32
30	H	3	VAL	CA-C	-6.23	1.45	1.52
1	A	46	A	O4'-C1'	-6.23	1.32	1.41
2	B	2710	C	O3'-P	-6.23	1.51	1.61
23	5	96	GLY	C-N	6.23	1.42	1.33
23	5	158	ALA	CA-C	6.23	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	W	86	LEU	N-CA	-6.23	1.38	1.45
2	B	1590	A	C1'-N9	-6.22	1.38	1.48
2	B	2043	C	C3'-C2'	-6.22	1.43	1.52
2	B	2868	A	O3'-P	-6.22	1.51	1.61
20	E	40	ARG	C-N	6.22	1.42	1.33
2	B	895	U	O4'-C1'	-6.22	1.32	1.41
4	K	21	CYS	CA-CB	6.22	1.63	1.53
8	N	3	HIS	C-N	6.22	1.42	1.33
14	D	99	GLU	CA-C	-6.22	1.44	1.52
2	B	1078	U	O5'-C5'	6.22	1.51	1.42
2	B	2479	U	P-O5'	-6.22	1.50	1.59
2	B	2819	G	O3'-P	-6.22	1.51	1.61
9	O	106	LEU	N-CA	-6.22	1.38	1.46
11	Q	111	LYS	CA-C	-6.22	1.43	1.52
21	Y	34	SER	CA-C	-6.22	1.46	1.53
2	B	2877	G	C2'-C1'	-6.22	1.44	1.53
22	3	55	ALA	CA-C	-6.22	1.44	1.52
2	B	267	C	P-O5'	-6.21	1.50	1.59
2	B	2395	C	C2'-C1'	-6.21	1.44	1.53
2	B	2604	U	O5'-C5'	6.21	1.51	1.42
26	8	31	PRO	N-CA	-6.21	1.39	1.47
2	B	1240	U	C5'-C4'	6.21	1.60	1.51
2	B	479	A	C2'-C1'	-6.21	1.43	1.53
2	B	572	A	C2'-C1'	-6.21	1.44	1.53
2	B	2227	A	C3'-C2'	-6.21	1.43	1.52
2	B	670	A	O3'-P	-6.20	1.51	1.61
2	B	832	U	C2'-C1'	-6.20	1.44	1.53
2	B	2433	A	C2'-C1'	-6.20	1.44	1.53
11	Q	53	LYS	N-CA	-6.20	1.37	1.46
2	B	2750	A	P-O5'	-6.20	1.50	1.59
17	U	54	PRO	CA-C	-6.20	1.46	1.52
2	B	563	A	C4'-C3'	-6.20	1.43	1.52
2	B	793	A	P-O5'	6.20	1.69	1.59
2	B	1926	U	C4'-C3'	-6.20	1.43	1.52
2	B	367	G	C3'-O3'	6.20	1.51	1.42
3	0	27	ARG	C-N	6.20	1.42	1.33
14	D	11	MET	CA-C	-6.20	1.44	1.52
22	3	14	MET	CA-CB	6.20	1.62	1.53
11	Q	109	VAL	CA-C	-6.20	1.45	1.52
2	B	60	G	C4'-O4'	-6.20	1.36	1.45
2	B	749	A	C2'-C1'	-6.20	1.44	1.53
2	B	2573	C	O3'-P	-6.20	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	Q	5	ARG	NE-CZ	6.20	1.39	1.33
2	B	30	G	P-O5'	-6.19	1.50	1.59
19	X	97	PRO	CA-CB	6.19	1.62	1.53
2	B	170	U	C1'-N1	-6.19	1.39	1.48
2	B	945	A	P-O5'	-6.19	1.50	1.59
3	0	49	ARG	C-O	-6.19	1.16	1.24
4	K	12	ASP	CA-C	-6.19	1.44	1.52
22	3	47	TYR	CA-CB	6.19	1.64	1.53
1	A	24	G	O3'-P	-6.19	1.51	1.61
13	S	77	ASP	N-CA	-6.19	1.38	1.45
19	X	115	LEU	N-CA	-6.19	1.38	1.46
2	B	779	U	C2'-C1'	-6.18	1.44	1.53
2	B	2761	A	C2'-C1'	-6.18	1.44	1.53
29	G	109	SER	C-O	-6.18	1.16	1.24
32	J	40	HIS	ND1-CE1	6.18	1.38	1.32
2	B	2464	G	O3'-P	-6.18	1.51	1.61
11	Q	94	LEU	N-CA	-6.18	1.37	1.46
19	X	152	LEU	CA-C	-6.18	1.44	1.52
2	B	1114	C	C2'-C1'	-6.18	1.44	1.53
14	D	169	ARG	NE-CZ	6.18	1.39	1.33
20	E	60	TRP	NE1-CE2	-6.18	1.30	1.37
27	C	101	ARG	CZ-NH1	6.17	1.41	1.32
28	F	96	TRP	N-CA	-6.17	1.38	1.46
2	B	2065	C	O3'-P	-6.17	1.51	1.61
8	N	71	ARG	CD-NE	6.17	1.54	1.46
16	2	51	SER	CA-C	-6.17	1.44	1.52
2	B	1922	G	C5'-C4'	6.17	1.60	1.51
2	B	2154	A	O5'-C5'	6.17	1.51	1.42
2	B	2101	A	C2'-C1'	-6.17	1.44	1.53
2	B	104	A	C4'-C3'	6.16	1.61	1.52
2	B	1067	A	O5'-C5'	6.16	1.51	1.42
2	B	1388	G	C3'-O3'	6.16	1.51	1.42
2	B	2524	G	O3'-P	-6.16	1.51	1.61
6	1	28	LEU	CA-C	-6.16	1.44	1.52
14	D	128	ARG	C-N	6.16	1.42	1.33
2	B	79	C	C2'-C1'	-6.16	1.44	1.53
2	B	1335	C	C1'-N1	-6.16	1.39	1.48
14	D	18	ASP	CA-C	-6.16	1.44	1.52
2	B	659	G	O3'-P	-6.16	1.51	1.61
2	B	2173	A	C2'-C1'	-6.16	1.44	1.53
9	O	111	ARG	CD-NE	6.16	1.54	1.46
2	B	336	C	C3'-C2'	-6.16	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1929	G	C5'-C4'	6.16	1.60	1.51
3	0	23	ALA	N-CA	-6.16	1.39	1.46
5	L	28	GLY	N-CA	-6.16	1.40	1.46
11	Q	75	TYR	CZ-OH	6.16	1.50	1.38
2	B	872	U	O3'-P	-6.15	1.51	1.61
2	B	1002	G	O5'-C5'	-6.15	1.33	1.42
2	B	1198	U	C4'-C3'	-6.15	1.43	1.52
2	B	1779	U	C4'-C3'	-6.15	1.43	1.52
2	B	1447	C	C3'-C2'	-6.15	1.43	1.52
2	B	1483	G	C2'-C1'	-6.15	1.44	1.53
2	B	2385	C	C2'-C1'	-6.15	1.44	1.53
12	R	42	ALA	CA-C	-6.15	1.45	1.52
2	B	2708	G	C3'-C2'	-6.15	1.43	1.52
2	B	2833	U	O3'-P	-6.15	1.51	1.61
2	B	466	A	C2'-C1'	-6.15	1.44	1.53
2	B	1018	U	O3'-P	-6.15	1.51	1.61
2	B	2843	G	C1'-N9	-6.15	1.38	1.48
2	B	1963	U	C3'-C2'	6.15	1.61	1.52
2	B	1800	C	O3'-P	-6.14	1.51	1.61
21	Y	79	ILE	CA-C	-6.14	1.45	1.52
2	B	590	A	C2'-C1'	-6.14	1.44	1.53
2	B	1681	G	P-O5'	-6.14	1.50	1.59
2	B	2160	C	C3'-C2'	-6.14	1.43	1.52
10	P	5	LYS	CA-C	-6.14	1.44	1.52
2	B	1098	A	C1'-N9	6.14	1.57	1.48
2	B	1608	A	C4'-O4'	6.14	1.55	1.45
2	B	2228	G	C1'-N9	-6.14	1.38	1.48
2	B	1558	C	C4'-O4'	-6.14	1.36	1.45
2	B	1838	C	C5'-C4'	6.14	1.60	1.51
27	C	264	LYS	CA-C	-6.14	1.44	1.52
2	B	214	G	C2'-C1'	-6.14	1.44	1.53
2	B	1007	C	O3'-P	-6.14	1.51	1.61
2	B	1520	U	C1'-N1	-6.14	1.39	1.48
9	O	21	LEU	C-O	-6.14	1.17	1.24
12	R	86	GLN	CA-C	-6.14	1.45	1.52
29	G	18	ILE	CB-CG1	6.14	1.65	1.53
2	B	1069	A	C2'-O2'	-6.13	1.32	1.41
2	B	2718	G	C5'-C4'	6.13	1.60	1.51
2	B	2361	G	C2'-C1'	-6.13	1.44	1.53
9	O	13	ARG	CZ-NH1	6.13	1.41	1.32
24	6	30	VAL	N-CA	-6.13	1.39	1.46
2	B	406	G	P-O5'	-6.13	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	943	A	C4'-C3'	-6.13	1.43	1.52
2	B	2012	G	C1'-N9	-6.13	1.38	1.48
2	B	2437	G	C4'-O4'	-6.13	1.36	1.45
19	X	361	VAL	CA-CB	-6.13	1.47	1.54
2	B	53	A	C3'-O3'	-6.13	1.32	1.42
2	B	1963	U	O3'-P	-6.13	1.51	1.61
4	K	38	ILE	CA-CB	-6.13	1.46	1.54
9	O	80	GLU	N-CA	-6.13	1.38	1.46
2	B	2352	A	C2'-C1'	-6.12	1.44	1.53
19	X	40	ARG	NE-CZ	6.12	1.39	1.33
2	B	1844	C	C3'-O3'	6.12	1.51	1.42
2	B	2770	G	O3'-P	-6.12	1.51	1.61
2	B	2392	A	P-O5'	-6.12	1.50	1.59
10	P	35	SER	CA-C	-6.12	1.45	1.53
23	5	47	ASN	N-CA	-6.12	1.38	1.46
2	B	663	G	O3'-P	-6.12	1.51	1.61
2	B	1778	U	C2'-C1'	-6.12	1.44	1.53
2	B	2120	G	O3'-P	-6.12	1.51	1.61
15	T	77	ARG	CA-C	-6.12	1.44	1.53
28	F	160	LYS	C-N	6.12	1.41	1.33
2	B	2442	C	C4'-O4'	-6.12	1.36	1.45
2	B	2696	U	O3'-P	-6.12	1.51	1.61
11	Q	34	ALA	CA-C	-6.12	1.45	1.53
2	B	58	G	C4'-C3'	-6.12	1.43	1.52
23	5	156	ALA	CA-C	-6.12	1.45	1.52
2	B	1420	A	C2'-C1'	-6.12	1.43	1.53
18	W	62	THR	CA-CB	-6.12	1.44	1.53
2	B	587	C	C2'-C1'	-6.11	1.43	1.53
2	B	1926	U	C1'-N1	6.11	1.57	1.48
6	1	36	GLN	C-N	6.11	1.41	1.33
14	D	165	MET	C-O	6.11	1.31	1.23
8	N	70	THR	N-CA	-6.11	1.38	1.46
13	S	34	ASP	CA-C	-6.11	1.45	1.52
23	5	112	ASP	N-CA	-6.11	1.39	1.46
2	B	2121	G	O3'-P	-6.11	1.51	1.61
2	B	2680	U	C2'-C1'	-6.11	1.44	1.53
2	B	332	A	C3'-C2'	-6.11	1.43	1.52
2	B	981	A	P-O5'	-6.11	1.50	1.59
2	B	1629	U	C3'-C2'	-6.11	1.43	1.52
2	B	2307	G	O3'-P	-6.11	1.51	1.61
2	B	2686	G	C1'-N9	-6.11	1.38	1.48
5	L	13	LYS	N-CA	-6.11	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	637	A	C2'-O2'	-6.10	1.32	1.41
2	B	655	A	O3'-P	-6.10	1.51	1.61
2	B	2299	U	C1'-N1	-6.10	1.39	1.48
2	B	2738	A	C1'-N9	-6.10	1.38	1.48
2	B	935	C	C1'-N1	-6.10	1.39	1.48
2	B	1804	C	O4'-C1'	-6.10	1.32	1.41
2	B	1828	G	C5'-C4'	6.10	1.60	1.51
2	B	2792	A	C3'-C2'	-6.10	1.43	1.52
7	M	110	GLU	CA-CB	-6.10	1.43	1.53
17	U	95	PHE	N-CA	-6.10	1.38	1.46
2	B	2502	G	C2'-O2'	-6.10	1.33	1.42
2	B	422	A	O3'-P	-6.10	1.52	1.61
2	B	673	C	C5'-C4'	-6.10	1.42	1.51
2	B	2508	G	O3'-P	-6.10	1.52	1.61
2	B	687	C	C2'-C1'	-6.09	1.44	1.53
2	B	2850	A	C1'-N9	-6.09	1.38	1.48
2	B	1048	A	O3'-P	-6.09	1.52	1.61
2	B	2187	U	C5'-C4'	6.09	1.60	1.51
19	X	262	LYS	CA-CB	6.09	1.61	1.53
2	B	894	U	O3'-P	-6.09	1.52	1.61
2	B	1169	A	P-O5'	-6.09	1.50	1.59
2	B	1227	G	C2'-C1'	-6.09	1.44	1.53
24	6	15	SER	N-CA	-6.09	1.38	1.46
2	B	1626	A	N7-C5	-6.09	1.27	1.39
2	B	2081	U	P-O5'	-6.09	1.50	1.59
7	M	12	MET	CA-C	-6.09	1.50	1.53
7	M	24	THR	C-N	6.09	1.41	1.33
19	X	276	ILE	CA-C	-6.09	1.45	1.52
2	B	1533	C	C2'-C1'	-6.09	1.44	1.53
27	C	237	ARG	CD-NE	6.09	1.54	1.46
2	B	4	U	C2'-C1'	6.09	1.62	1.53
2	B	629	G	O3'-P	-6.09	1.52	1.61
2	B	1797	G	C3'-C2'	-6.09	1.43	1.52
32	J	55	ILE	CA-C	-6.09	1.44	1.52
14	D	55	LYS	CA-CB	6.08	1.61	1.54
2	B	480	A	C3'-O3'	-6.08	1.33	1.42
2	B	1028	A	C2'-C1'	-6.08	1.44	1.53
6	1	11	VAL	CA-C	-6.08	1.45	1.52
23	5	197	LYS	CA-C	-6.08	1.45	1.52
2	B	132	G	O3'-P	-6.08	1.52	1.61
8	N	39	PRO	CA-C	-6.08	1.44	1.52
15	T	61	LEU	CA-C	-6.08	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2046	G	O4'-C1'	-6.08	1.32	1.41
12	R	32	THR	N-CA	6.08	1.54	1.46
23	5	126	GLN	N-CA	-6.08	1.38	1.46
2	B	2625	G	P-O5'	-6.08	1.50	1.59
2	B	98	G	C2'-C1'	-6.08	1.44	1.53
2	B	667	U	O3'-P	-6.08	1.52	1.61
2	B	1688	U	C5'-C4'	6.07	1.60	1.51
2	B	2767	C	P-O5'	-6.07	1.50	1.59
13	S	55	ILE	CA-CB	-6.07	1.47	1.54
14	D	83	ARG	N-CA	-6.07	1.38	1.46
2	B	303	G	C1'-N9	-6.07	1.38	1.48
12	R	48	LYS	CA-C	-6.07	1.45	1.52
19	X	120	THR	CA-C	-6.07	1.45	1.52
22	3	53	VAL	N-CA	-6.07	1.38	1.46
2	B	1768	C	C4'-C3'	6.07	1.61	1.52
2	B	2086	U	P-O5'	-6.07	1.50	1.59
2	B	2178	C	C4'-C3'	6.07	1.61	1.52
2	B	916	G	O3'-P	-6.07	1.52	1.61
2	B	971	G	C1'-N9	-6.07	1.38	1.48
2	B	268	C	C5'-C4'	-6.06	1.42	1.51
2	B	474	G	P-O5'	-6.06	1.50	1.59
2	B	497	A	C1'-N9	-6.06	1.38	1.48
2	B	2610	C	C3'-C2'	-6.06	1.43	1.52
9	O	9	ARG	NE-CZ	6.06	1.39	1.33
14	D	64	GLU	CA-C	-6.06	1.46	1.53
9	O	115	LEU	CA-C	-6.06	1.44	1.52
17	U	33	VAL	CA-C	-6.06	1.45	1.52
2	B	253	C	P-O5'	-6.06	1.50	1.59
2	B	810	U	O4'-C1'	-6.06	1.32	1.41
2	B	1485	U	C2'-C1'	-6.06	1.44	1.53
2	B	1801	A	P-O5'	-6.06	1.50	1.59
2	B	2256	G	O4'-C1'	-6.06	1.32	1.41
7	M	14	LYS	CA-C	-6.06	1.45	1.52
10	P	109	ILE	N-CA	-6.06	1.38	1.46
32	J	125	TYR	CA-C	-6.06	1.45	1.52
22	3	22	THR	CA-C	-6.06	1.45	1.53
2	B	13	A	O3'-P	-6.05	1.52	1.61
2	B	2455	G	C1'-N9	6.05	1.57	1.48
19	X	304	SER	CA-C	-6.05	1.45	1.52
30	H	9	VAL	CA-CB	-6.05	1.49	1.55
11	Q	35	PHE	N-CA	-6.05	1.39	1.46
2	B	410	G	C1'-N9	-6.05	1.38	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1401	G	O3'-P	-6.05	1.52	1.61
5	L	132	ARG	NE-CZ	6.05	1.39	1.33
2	B	224	U	P-O5'	-6.05	1.50	1.59
2	B	2184	A	P-O5'	-6.05	1.50	1.59
2	B	262	A	O4'-C1'	-6.05	1.32	1.41
2	B	2318	G	C4'-C3'	-6.05	1.43	1.52
10	P	3	ILE	N-CA	-6.05	1.39	1.46
1	A	15	A	C2'-C1'	-6.05	1.44	1.53
4	K	76	VAL	CA-C	-6.05	1.45	1.52
30	H	116	ARG	NE-CZ	6.05	1.39	1.33
2	B	178	G	O3'-P	-6.04	1.52	1.61
2	B	1185	G	P-O5'	-6.04	1.50	1.59
2	B	2019	A	C1'-N9	-6.04	1.38	1.48
5	L	23	ILE	CA-C	-6.04	1.44	1.52
1	A	29	A	O4'-C1'	-6.04	1.32	1.41
2	B	409	G	C3'-C2'	-6.04	1.43	1.52
2	B	828	U	C2'-C1'	-6.04	1.44	1.53
2	B	1813	G	C4'-C3'	6.04	1.61	1.52
2	B	2329	U	O3'-P	-6.04	1.52	1.61
2	B	2732	G	C2'-C1'	6.04	1.62	1.53
2	B	1349	C	C1'-N1	-6.04	1.39	1.48
9	O	27	VAL	C-N	-6.04	1.25	1.33
23	5	26	ALA	CA-CB	6.04	1.62	1.53
2	B	2271	G	C1'-N9	-6.03	1.38	1.48
4	K	85	VAL	CA-C	-6.03	1.45	1.52
17	U	81	ARG	C-N	6.03	1.41	1.33
19	X	405	VAL	N-CA	-6.03	1.38	1.46
2	B	1118	C	C3'-C2'	-6.03	1.43	1.52
2	B	1301	A	C2'-C1'	-6.03	1.44	1.53
2	B	784	G	C2'-C1'	-6.03	1.44	1.53
2	B	1281	G	O3'-P	-6.03	1.52	1.61
2	B	1376	C	O5'-C5'	6.03	1.51	1.42
2	B	1390	U	O3'-P	-6.03	1.52	1.61
2	B	2320	U	O5'-C5'	6.03	1.51	1.42
2	B	2358	A	C2'-C1'	-6.03	1.44	1.53
2	B	527	C	P-O5'	-6.03	1.50	1.59
10	P	85	VAL	N-CA	-6.03	1.38	1.46
13	S	30	SER	C-N	-6.03	1.23	1.33
23	5	45	ALA	CA-C	-6.03	1.45	1.53
2	B	2685	G	C1'-N9	-6.02	1.39	1.48
23	5	56	ASP	CA-C	-6.02	1.44	1.52
31	I	64	ARG	CD-NE	6.02	1.54	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	2	18	LYS	CA-C	-6.02	1.44	1.52
20	E	29	HIS	CE1-NE2	6.02	1.38	1.32
2	B	785	G	C5'-C4'	6.02	1.60	1.51
2	B	2404	U	C2'-C1'	-6.02	1.44	1.53
25	7	25	HIS	CA-C	-6.02	1.45	1.52
2	B	87	U	O3'-P	-6.01	1.52	1.61
2	B	913	U	O4'-C1'	-6.01	1.32	1.42
2	B	1158	C	O3'-P	-6.01	1.52	1.61
4	K	42	THR	CA-C	-6.01	1.45	1.52
2	B	1790	C	O3'-P	-6.01	1.52	1.61
2	B	2573	C	C4'-O4'	-6.01	1.36	1.45
20	E	26	ALA	C-N	6.01	1.41	1.33
29	G	165	ASP	C-O	-6.01	1.17	1.24
2	B	1268	A	C5'-C4'	6.01	1.60	1.51
2	B	2780	G	O3'-P	-6.01	1.52	1.61
3	0	20	ALA	CA-C	-6.01	1.45	1.52
10	P	60	VAL	C-O	-6.01	1.18	1.24
18	W	4	ILE	CA-C	-6.01	1.45	1.52
2	B	545	U	C1'-N1	6.01	1.57	1.48
2	B	1913	A	C3'-C2'	6.01	1.61	1.52
8	N	23	ASN	CA-C	-6.01	1.45	1.52
19	X	438	LEU	N-CA	-6.01	1.39	1.46
2	B	529	A	C2'-C1'	-6.01	1.44	1.53
2	B	1460	U	C4'-C3'	6.01	1.61	1.52
2	B	1887	C	C1'-N1	6.01	1.57	1.48
3	0	6	VAL	N-CA	-6.01	1.38	1.46
2	B	351	C	O4'-C1'	-6.00	1.32	1.41
2	B	1795	C	C4'-O4'	-6.00	1.36	1.45
14	D	155	VAL	N-CA	-6.00	1.38	1.46
27	C	14	HIS	CA-C	-6.00	1.46	1.53
27	C	164	VAL	CA-CB	-6.00	1.47	1.54
29	G	86	LEU	N-CA	-6.00	1.38	1.47
2	B	576	U	O4'-C1'	-6.00	1.32	1.41
2	B	2637	U	P-O5'	-6.00	1.50	1.59
2	B	241	A	O4'-C1'	-6.00	1.32	1.42
2	B	1313	U	O5'-C5'	6.00	1.51	1.42
2	B	1619	G	C4'-O4'	-6.00	1.36	1.45
7	M	16	ARG	CD-NE	6.00	1.54	1.46
2	B	1364	G	O4'-C1'	-6.00	1.32	1.41
2	B	1517	G	C2'-C1'	-6.00	1.44	1.53
23	5	140	PRO	C-O	-6.00	1.16	1.24
28	F	82	TYR	CA-CB	6.00	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	145	C	C4'-O4'	5.99	1.54	1.45
2	B	2216	G	C5'-C4'	5.99	1.60	1.51
2	B	2279	G	C1'-N9	-5.99	1.39	1.48
25	7	22	LYS	N-CA	-5.99	1.38	1.46
28	F	152	ASP	CA-C	-5.99	1.45	1.52
1	A	111	U	C4'-C3'	5.99	1.61	1.52
2	B	440	C	C4'-C3'	-5.99	1.43	1.52
1	A	98	G	C3'-C2'	-5.99	1.43	1.52
2	B	2151	U	P-O5'	-5.99	1.50	1.59
7	M	69	PRO	CA-CB	-5.99	1.45	1.53
2	B	118	A	C4'-C3'	-5.99	1.43	1.52
4	K	25	LEU	N-CA	-5.99	1.38	1.45
27	C	90	ILE	CA-C	-5.99	1.47	1.52
2	B	2678	C	P-O5'	-5.99	1.50	1.59
19	X	314	ARG	NE-CZ	5.99	1.39	1.33
1	A	66	A	C1'-N9	-5.99	1.39	1.48
1	A	81	G	C5'-C4'	5.99	1.60	1.51
1	A	115	A	C3'-C2'	5.98	1.61	1.52
14	D	157	LYS	CA-CB	5.98	1.60	1.52
32	J	65	THR	CA-C	-5.98	1.45	1.52
2	B	1156	A	C1'-N9	-5.98	1.38	1.47
2	B	1225	G	C2'-C1'	-5.98	1.44	1.53
2	B	1347	A	O4'-C1'	-5.98	1.32	1.41
2	B	1818	U	O3'-P	-5.98	1.52	1.61
2	B	672	C	C2'-C1'	-5.98	1.44	1.53
2	B	1169	A	C4'-C3'	-5.98	1.43	1.52
2	B	1423	G	C3'-C2'	-5.98	1.43	1.52
25	7	44	ARG	CZ-NH2	5.98	1.41	1.33
2	B	1336	A	P-O5'	-5.98	1.50	1.59
20	E	68	ALA	CA-C	-5.98	1.44	1.52
2	B	24	G	O3'-P	-5.98	1.52	1.61
2	B	535	G	C1'-N9	-5.98	1.39	1.48
2	B	2428	G	C2'-C1'	-5.98	1.44	1.53
2	B	2749	A	O3'-P	-5.98	1.52	1.61
14	D	137	SER	N-CA	-5.97	1.40	1.46
2	B	1500	G	C2'-O2'	-5.97	1.33	1.42
2	B	2122	U	C5'-C4'	5.97	1.60	1.51
13	S	77	ASP	CA-C	-5.97	1.45	1.52
2	B	299	A	C2'-C1'	-5.97	1.44	1.53
7	M	7	THR	CA-C	-5.97	1.45	1.52
2	B	755	U	C2'-C1'	-5.97	1.44	1.53
20	E	110	SER	CA-CB	5.97	1.63	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	690	G	O3'-P	-5.97	1.52	1.61
2	B	2049	G	C2'-C1'	-5.97	1.44	1.53
30	H	46	PHE	N-CA	-5.97	1.39	1.46
2	B	511	U	P-O5'	-5.96	1.50	1.59
18	W	20	LEU	CA-C	-5.96	1.45	1.52
2	B	387	U	O3'-P	-5.96	1.52	1.61
2	B	2295	C	O4'-C1'	5.96	1.50	1.41
2	B	2565	A	O3'-P	-5.96	1.52	1.61
9	O	100	HIS	CD2-NE2	-5.96	1.31	1.37
20	E	104	ALA	C-O	-5.96	1.17	1.24
2	B	1986	C	O3'-P	-5.96	1.52	1.61
2	B	2743	U	C5'-C4'	5.96	1.60	1.51
27	C	226	PRO	N-CD	-5.96	1.39	1.47
2	B	692	C	C1'-N1	5.96	1.57	1.48
2	B	990	A	C1'-N9	-5.96	1.39	1.48
2	B	2685	G	C3'-O3'	5.96	1.51	1.42
29	G	123	GLU	CA-C	-5.96	1.45	1.52
2	B	50	U	C2'-C1'	-5.96	1.44	1.53
2	B	66	C	C1'-N1	5.96	1.57	1.48
2	B	193	U	C4'-O4'	-5.96	1.36	1.45
2	B	401	A	C3'-O3'	-5.96	1.33	1.42
2	B	1570	A	C1'-N9	-5.96	1.39	1.48
2	B	2861	U	P-O5'	5.96	1.68	1.59
28	F	124	ARG	N-CA	-5.96	1.38	1.46
2	B	1399	C	C4'-C3'	-5.96	1.43	1.52
20	E	100	MET	N-CA	-5.96	1.38	1.46
2	B	1428	C	C5'-C4'	5.95	1.60	1.51
2	B	1641	A	N7-C5	-5.95	1.27	1.39
10	P	34	GLY	C-N	5.95	1.42	1.33
19	X	406	LYS	CA-C	-5.95	1.44	1.52
2	B	10	A	C1'-N9	-5.95	1.39	1.48
2	B	385	C	C3'-C2'	-5.95	1.43	1.52
2	B	551	G	C2'-O2'	-5.95	1.33	1.42
19	X	81	GLU	CA-C	-5.95	1.44	1.52
2	B	690	G	C1'-N9	-5.95	1.39	1.48
2	B	1467	U	C2'-C1'	-5.95	1.44	1.53
2	B	1489	C	C5'-C4'	5.95	1.60	1.51
2	B	1584	U	C5'-C4'	5.95	1.60	1.51
5	L	37	GLY	CA-C	-5.95	1.43	1.51
13	S	58	ALA	N-CA	-5.95	1.38	1.46
19	X	337	THR	N-CA	-5.95	1.39	1.46
19	X	387	ILE	C-N	5.95	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	128	C	O3'-P	-5.95	1.52	1.61
17	U	59	GLU	N-CA	-5.95	1.38	1.46
18	W	58	SER	CA-CB	-5.95	1.45	1.54
2	B	1272	A	C4'-C3'	5.95	1.62	1.53
2	B	2419	U	C1'-N1	-5.95	1.39	1.48
10	P	82	SER	CA-C	-5.95	1.45	1.52
19	X	406	LYS	CA-CB	5.95	1.63	1.53
2	B	735	A	C1'-N9	-5.94	1.39	1.48
2	B	208	C	C4'-O4'	-5.94	1.36	1.45
2	B	617	G	C2'-C1'	-5.94	1.44	1.53
2	B	1307	A	C5'-C4'	5.94	1.60	1.51
7	M	119	LEU	CA-C	-5.94	1.45	1.52
9	O	76	LYS	N-CA	-5.94	1.39	1.46
9	O	113	ALA	CA-C	-5.94	1.44	1.52
30	H	19	VAL	CA-C	-5.94	1.45	1.52
2	B	2220	U	O3'-P	-5.94	1.52	1.61
23	5	19	LYS	CA-CB	-5.94	1.45	1.53
2	B	2421	G	C3'-C2'	-5.93	1.43	1.52
12	R	87	GLN	N-CA	-5.93	1.39	1.46
29	G	10	VAL	CA-C	-5.93	1.48	1.52
2	B	36	G	C2'-C1'	-5.93	1.44	1.53
2	B	147	C	P-O5'	-5.93	1.50	1.59
2	B	780	G	P-O5'	-5.93	1.50	1.59
2	B	1098	A	O5'-C5'	5.93	1.51	1.42
19	X	75	SER	N-CA	-5.93	1.39	1.46
19	X	227	ARG	CD-NE	5.93	1.54	1.46
2	B	963	U	C2'-C1'	-5.93	1.44	1.53
2	B	1287	A	C4'-O4'	-5.93	1.36	1.45
23	5	17	ALA	C-N	5.93	1.41	1.33
24	6	4	THR	N-CA	-5.93	1.39	1.46
2	B	474	G	C1'-N9	-5.93	1.38	1.47
2	B	1171	G	C3'-C2'	5.93	1.61	1.52
2	B	1673	G	O4'-C1'	-5.93	1.33	1.42
2	B	1795	C	O4'-C1'	-5.93	1.32	1.41
2	B	2228	G	O5'-C5'	5.93	1.51	1.42
2	B	1061	U	C4'-O4'	-5.93	1.36	1.45
2	B	2110	G	O4'-C1'	-5.93	1.33	1.42
29	G	33	THR	CA-CB	-5.93	1.45	1.53
2	B	1118	C	C4-C5	-5.92	1.31	1.43
6	1	19	LEU	CA-CB	5.92	1.62	1.53
13	S	107	VAL	CA-C	-5.92	1.46	1.52
30	H	135	HIS	CA-CB	5.92	1.63	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1479	G	C2'-C1'	-5.92	1.44	1.53
2	B	2541	A	C4'-C3'	-5.92	1.43	1.52
19	X	298	ILE	CA-C	-5.92	1.45	1.52
22	3	15	ARG	N-CA	-5.92	1.38	1.46
14	D	3	GLY	CA-C	-5.92	1.45	1.52
2	B	630	G	O3'-P	-5.92	1.52	1.61
26	8	25	VAL	CA-C	-5.92	1.45	1.52
6	1	11	VAL	CA-CB	-5.92	1.47	1.54
9	O	82	ALA	CA-C	5.92	1.60	1.52
2	B	438	G	C2'-C1'	-5.91	1.44	1.53
2	B	2002	G	C1'-N9	-5.91	1.39	1.48
14	D	159	LYS	N-CA	-5.91	1.38	1.46
2	B	2444	G	O3'-P	-5.91	1.52	1.61
2	B	1060	U	C4'-O4'	-5.91	1.36	1.45
2	B	2227	A	O5'-C5'	5.91	1.51	1.42
19	X	149	ARG	CZ-NH1	5.91	1.41	1.32
29	G	91	VAL	CA-C	-5.91	1.45	1.52
2	B	914	G	C5'-C4'	5.91	1.60	1.51
2	B	1173	U	C2'-C1'	-5.91	1.44	1.53
2	B	1224	U	C1'-N1	5.91	1.57	1.48
2	B	1497	U	C5'-C4'	5.91	1.60	1.51
2	B	2604	U	C2'-C1'	-5.91	1.44	1.53
11	Q	34	ALA	C-O	-5.91	1.17	1.24
2	B	30	G	C2'-C1'	-5.91	1.44	1.53
2	B	95	A	C2'-C1'	-5.91	1.44	1.53
2	B	901	C	C1'-N1	-5.91	1.39	1.48
2	B	1914	C	P-O5'	5.91	1.68	1.59
2	B	820	A	P-O5'	-5.90	1.50	1.59
2	B	2142	A	C5'-C4'	5.90	1.60	1.51
7	M	40	ARG	CA-C	-5.90	1.45	1.52
2	B	252	G	C2'-C1'	-5.90	1.44	1.53
25	7	60	CYS	N-CA	-5.90	1.38	1.46
2	B	1713	A	C2'-C1'	-5.90	1.44	1.53
2	B	2625	G	O3'-P	-5.90	1.52	1.61
2	B	1640	A	C1'-N9	5.90	1.56	1.48
2	B	1790	C	C3'-C2'	-5.90	1.44	1.52
8	N	54	LEU	CA-CB	-5.90	1.43	1.53
2	B	335	C	C2'-C1'	-5.90	1.44	1.53
2	B	516	C	P-O5'	-5.90	1.50	1.59
2	B	872	U	O4'-C1'	5.90	1.50	1.41
2	B	1475	G	P-O5'	-5.89	1.50	1.59
2	B	1804	C	C2'-C1'	-5.89	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2286	G	C2'-C1'	-5.89	1.44	1.53
32	J	36	LEU	CA-C	-5.89	1.44	1.52
2	B	507	A	P-O5'	-5.89	1.50	1.59
2	B	2748	A	C2'-C1'	-5.89	1.44	1.53
2	B	1327	A	O5'-C5'	5.89	1.51	1.42
7	M	98	PRO	N-CA	-5.89	1.39	1.47
2	B	325	G	C2'-C1'	-5.89	1.44	1.53
14	D	140	HIS	ND1-CE1	5.89	1.38	1.32
32	J	34	ARG	NE-CZ	5.89	1.39	1.33
2	B	208	C	C4'-C3'	-5.89	1.43	1.52
2	B	487	C	O3'-P	-5.89	1.52	1.61
2	B	532	A	C1'-N9	-5.89	1.38	1.47
2	B	566	U	C2'-C1'	-5.89	1.44	1.53
2	B	2744	G	C2'-C1'	-5.89	1.44	1.53
3	O	30	PRO	CA-CB	5.89	1.62	1.53
19	X	106	LEU	N-CA	-5.89	1.39	1.46
2	B	999	U	C1'-N1	-5.88	1.39	1.48
2	B	1589	U	C2'-C1'	-5.88	1.44	1.53
2	B	2679	A	O3'-P	-5.88	1.52	1.61
5	L	107	PHE	CA-C	-5.88	1.45	1.52
2	B	362	A	C2'-C1'	-5.88	1.44	1.53
2	B	1189	A	C2'-C1'	-5.88	1.44	1.53
2	B	1243	C	O5'-C5'	5.88	1.51	1.42
2	B	2809	A	P-O5'	-5.88	1.50	1.59
8	N	105	GLY	CA-C	-5.88	1.43	1.51
20	E	94	GLN	CA-C	-5.88	1.45	1.52
2	B	73	A	C1'-N9	-5.88	1.39	1.48
2	B	1826	G	P-O5'	-5.88	1.50	1.59
2	B	1853	A	C2'-C1'	-5.88	1.44	1.53
2	B	254	G	C3'-C2'	-5.88	1.44	1.52
2	B	352	A	O5'-C5'	-5.88	1.33	1.42
2	B	775	G	C2'-C1'	-5.88	1.44	1.53
2	B	2032	G	O3'-P	-5.88	1.52	1.61
2	B	2617	U	O3'-P	-5.88	1.52	1.61
13	S	49	LYS	CA-C	-5.88	1.45	1.52
2	B	138	U	P-O5'	-5.88	1.50	1.59
2	B	270	A	C4'-C3'	-5.88	1.43	1.52
2	B	408	G	O3'-P	-5.88	1.52	1.61
2	B	1959	G	C2'-C1'	-5.88	1.44	1.53
5	L	29	LYS	CA-C	-5.88	1.44	1.52
28	F	27	VAL	N-CA	-5.88	1.39	1.46
2	B	2066	C	C5'-C4'	5.88	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	L	59	ARG	CZ-NH2	5.88	1.41	1.33
32	J	123	LYS	CA-C	-5.88	1.45	1.52
2	B	765	C	O3'-P	-5.87	1.52	1.61
19	X	292	ILE	C-N	5.87	1.41	1.33
20	E	73	ILE	CA-CB	-5.87	1.45	1.54
29	G	136	ASP	N-CA	-5.87	1.38	1.46
2	B	386	G	C3'-C2'	-5.87	1.44	1.52
5	L	58	TYR	C-N	5.87	1.41	1.33
10	P	40	GLN	CA-C	-5.87	1.45	1.52
20	E	10	SER	CA-CB	5.87	1.63	1.53
29	G	134	GLY	C-O	-5.87	1.19	1.23
27	C	204	LEU	CA-C	-5.87	1.47	1.53
2	B	2478	A	C2'-C1'	-5.87	1.44	1.53
17	U	79	ALA	CA-C	-5.87	1.46	1.53
32	J	117	ALA	CA-C	-5.87	1.44	1.52
23	5	58	ASN	CA-C	-5.87	1.46	1.53
2	B	20	C	O4'-C1'	-5.87	1.32	1.41
2	B	2479	U	C2'-C1'	-5.87	1.44	1.53
2	B	2836	U	O3'-P	-5.87	1.52	1.61
8	N	58	ASP	CA-C	-5.87	1.45	1.52
14	D	51	THR	C-N	5.87	1.42	1.33
2	B	46	G	N7-C5	-5.86	1.27	1.39
2	B	1011	G	C2'-O2'	-5.86	1.32	1.41
2	B	2636	C	C2'-C1'	-5.86	1.44	1.53
2	B	2005	A	C5'-C4'	5.86	1.60	1.51
8	N	79	LEU	N-CA	-5.86	1.38	1.45
2	B	1283	G	O3'-P	-5.86	1.52	1.61
2	B	2756	U	C2'-C1'	-5.86	1.44	1.53
6	1	19	LEU	CA-C	-5.86	1.45	1.52
27	C	205	GLY	CA-C	-5.86	1.44	1.52
31	I	103	ALA	CA-C	-5.86	1.45	1.52
25	7	48	MET	CA-C	-5.86	1.45	1.53
29	G	122	ALA	CA-C	-5.86	1.45	1.52
2	B	2146	C	C4'-C3'	5.86	1.61	1.52
17	U	11	ILE	CA-CB	-5.86	1.46	1.54
27	C	211	ARG	CD-NE	5.86	1.54	1.46
29	G	114	HIS	ND1-CE1	5.86	1.38	1.32
2	B	552	U	P-O5'	-5.85	1.50	1.59
1	A	104	A	O3'-P	-5.85	1.52	1.61
2	B	752	A	C2'-C1'	-5.85	1.44	1.53
2	B	2067	G	C4'-C3'	5.85	1.61	1.53
2	B	709	U	C2'-C1'	-5.85	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	121	G	C2'-C1'	-5.85	1.44	1.53
2	B	458	G	C4'-O4'	5.85	1.54	1.45
2	B	843	G	O3'-P	-5.85	1.52	1.61
2	B	1189	A	C1'-N9	-5.85	1.39	1.48
2	B	1775	U	C1'-N1	5.85	1.57	1.48
2	B	2529	G	C4'-C3'	-5.85	1.43	1.52
14	D	69	ALA	CA-C	-5.85	1.45	1.52
2	B	27	G	P-O5'	-5.84	1.50	1.59
2	B	374	A	C1'-N9	-5.84	1.39	1.48
2	B	2014	A	C1'-N9	-5.84	1.39	1.48
28	F	147	ARG	CZ-NH2	5.84	1.41	1.33
2	B	1753	G	C3'-C2'	-5.84	1.44	1.52
10	P	56	SER	CA-C	-5.84	1.45	1.52
1	A	66	A	N7-C5	-5.84	1.27	1.39
2	B	340	A	O3'-P	-5.84	1.52	1.61
2	B	1242	U	C4'-C3'	-5.84	1.43	1.52
14	D	171	THR	CA-C	-5.84	1.45	1.52
32	J	48	VAL	CA-CB	-5.84	1.46	1.54
5	L	90	VAL	CA-C	-5.84	1.45	1.52
28	F	63	LYS	CA-C	-5.84	1.46	1.53
2	B	453	A	O3'-P	-5.84	1.52	1.61
2	B	1901	A	O5'-C5'	5.84	1.51	1.42
1	A	103	U	C5'-C4'	5.83	1.60	1.51
2	B	1529	G	P-O5'	-5.83	1.50	1.59
19	X	454	ARG	NE-CZ	5.83	1.39	1.33
14	D	46	ARG	CA-C	-5.83	1.45	1.53
2	B	2249	U	P-O5'	-5.83	1.51	1.59
27	C	269	ARG	NE-CZ	5.83	1.39	1.33
2	B	2189	U	C3'-O3'	5.83	1.50	1.42
2	B	248	G	C5'-C4'	5.83	1.59	1.51
2	B	1144	A	C2'-C1'	-5.83	1.44	1.53
2	B	2582	G	P-O5'	-5.83	1.51	1.59
2	B	2754	U	C1'-N1	-5.83	1.39	1.48
12	R	61	ALA	N-CA	-5.83	1.38	1.46
2	B	1061	U	C5'-C4'	5.83	1.60	1.51
2	B	2283	C	P-O5'	-5.83	1.51	1.59
2	B	2100	G	C3'-O3'	5.83	1.50	1.42
2	B	2310	C	P-O5'	-5.83	1.51	1.59
2	B	2882	A	C4'-O4'	-5.83	1.36	1.45
2	B	67	U	C3'-C2'	-5.82	1.44	1.52
2	B	1921	G	C5'-C4'	5.82	1.59	1.51
2	B	2871	U	O3'-P	-5.82	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	Q	88	GLU	N-CA	-5.82	1.38	1.46
29	G	25	ILE	N-CA	-5.82	1.36	1.45
32	J	124	VAL	CA-C	-5.82	1.45	1.52
2	B	1509	A	C4'-C3'	5.82	1.61	1.53
8	N	15	SER	N-CA	-5.82	1.39	1.46
20	E	47	LYS	C-N	5.82	1.41	1.33
2	B	1616	A	C2'-C1'	-5.82	1.44	1.53
2	B	2706	A	C4'-C3'	5.82	1.61	1.52
14	D	88	GLU	N-CA	-5.82	1.38	1.45
24	6	36	ALA	CA-C	-5.82	1.44	1.52
14	D	172	VAL	CA-C	-5.82	1.45	1.52
31	I	127	SER	C-O	-5.82	1.17	1.24
2	B	431	U	O3'-P	-5.82	1.52	1.61
2	B	735	A	O3'-P	-5.82	1.52	1.61
2	B	1269	A	O3'-P	-5.82	1.52	1.61
2	B	2829	A	C2'-C1'	-5.82	1.44	1.53
3	0	12	VAL	CA-C	-5.82	1.45	1.52
7	M	28	PHE	CA-C	-5.82	1.44	1.52
17	U	92	VAL	CA-C	-5.82	1.45	1.52
19	X	74	GLN	CA-C	-5.82	1.45	1.52
19	X	334	VAL	CA-C	-5.82	1.45	1.52
2	B	2521	C	O3'-P	-5.82	1.52	1.61
9	O	73	ALA	CA-C	-5.82	1.45	1.52
14	D	141	ARG	CZ-NH2	5.82	1.41	1.33
2	B	277	G	C4'-O4'	-5.81	1.36	1.45
2	B	331	C	O3'-P	-5.81	1.52	1.61
2	B	481	G	C1'-N9	-5.81	1.38	1.47
2	B	1322	A	C2'-C1'	-5.81	1.44	1.53
2	B	2181	U	C4'-O4'	-5.81	1.36	1.45
2	B	218	A	C4'-C3'	-5.81	1.43	1.52
2	B	2466	C	C2'-C1'	-5.81	1.44	1.53
13	S	16	LYS	CA-C	-5.81	1.45	1.52
2	B	1123	C	O3'-P	-5.81	1.52	1.61
3	0	43	LYS	N-CA	-5.81	1.38	1.46
2	B	114	U	P-O5'	-5.81	1.51	1.59
2	B	286	U	C3'-C2'	-5.81	1.44	1.52
2	B	1216	G	C4'-O4'	-5.81	1.36	1.45
9	O	70	ALA	C-N	5.81	1.41	1.33
9	O	102	ARG	N-CA	-5.81	1.38	1.46
29	G	151	ARG	NE-CZ	5.81	1.39	1.33
2	B	1163	G	C4'-C3'	-5.81	1.43	1.52
2	B	2168	G	C2'-C1'	-5.81	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2487	G	O3'-P	-5.81	1.52	1.61
19	X	453	ILE	CA-C	-5.81	1.46	1.52
2	B	629	G	C1'-N9	-5.80	1.39	1.48
2	B	1630	A	P-O5'	-5.80	1.51	1.59
27	C	102	TYR	CA-C	-5.80	1.45	1.52
2	B	1258	U	O3'-P	-5.80	1.52	1.61
2	B	1426	G	O3'-P	-5.80	1.52	1.61
9	O	30	ARG	C-N	5.80	1.41	1.33
15	T	41	ALA	CA-C	-5.80	1.44	1.52
2	B	172	A	C2'-C1'	-5.80	1.44	1.53
2	B	2250	G	C2'-C1'	-5.80	1.44	1.53
2	B	2388	A	C2'-C1'	-5.80	1.44	1.53
2	B	2475	C	C1'-N1	5.80	1.57	1.48
4	K	57	VAL	CA-C	-5.80	1.45	1.52
29	G	71	LEU	CA-C	-5.80	1.45	1.52
9	O	62	LEU	CA-C	-5.80	1.45	1.52
2	B	638	G	O4'-C1'	-5.80	1.32	1.41
2	B	2373	G	O5'-C5'	5.80	1.51	1.42
2	B	2712	C	C5'-C4'	5.80	1.60	1.51
13	S	54	ALA	CA-C	-5.80	1.45	1.52
29	G	152	ARG	NE-CZ	5.80	1.39	1.33
2	B	119	A	C5'-C4'	5.79	1.60	1.51
2	B	2710	C	C2'-C1'	-5.79	1.44	1.53
8	N	41	ALA	CA-C	-5.79	1.45	1.52
2	B	410	G	P-O5'	-5.79	1.51	1.59
2	B	925	A	C3'-C2'	-5.79	1.44	1.52
30	H	146	VAL	CA-CB	-5.79	1.46	1.54
2	B	309	A	C3'-O3'	5.79	1.50	1.42
2	B	947	A	C2'-C1'	-5.79	1.44	1.53
2	B	986	C	P-O5'	-5.79	1.51	1.59
2	B	1733	G	O3'-P	-5.79	1.52	1.61
32	J	132	HIS	CB-CG	5.79	1.58	1.50
2	B	695	G	C5'-C4'	5.79	1.59	1.51
2	B	1427	A	O3'-P	-5.79	1.52	1.61
2	B	1536	C	C5'-C4'	5.79	1.60	1.51
1	A	83	G	C2'-C1'	-5.79	1.44	1.53
13	S	82	MET	CA-CB	5.79	1.60	1.53
22	3	12	ARG	NE-CZ	5.79	1.39	1.33
25	7	51	LYS	CA-C	-5.79	1.45	1.52
2	B	2485	G	P-O5'	-5.78	1.51	1.59
21	Y	41	GLY	N-CA	-5.78	1.37	1.45
2	B	912	C	O3'-P	-5.78	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1625	C	O5'-C5'	5.78	1.51	1.42
2	B	1896	G	O4'-C1'	-5.78	1.32	1.41
2	B	1968	G	C3'-C2'	-5.78	1.44	1.52
19	X	266	ILE	C-N	5.78	1.41	1.33
2	B	1517	G	O3'-P	-5.78	1.52	1.61
2	B	1772	A	C2'-C1'	-5.78	1.44	1.53
2	B	1775	U	P-O5'	-5.78	1.51	1.59
2	B	2601	C	C2'-C1'	-5.78	1.44	1.53
13	S	68	ASP	N-CA	-5.78	1.38	1.46
16	2	44	ARG	NE-CZ	5.78	1.39	1.33
2	B	135	U	P-O5'	-5.78	1.51	1.59
5	L	2	ARG	CZ-NH2	5.78	1.41	1.33
2	B	1247	A	C3'-O3'	-5.78	1.34	1.43
2	B	2309	A	P-O5'	5.78	1.68	1.59
17	U	75	ALA	C-N	-5.78	1.25	1.33
2	B	2410	G	C2'-C1'	-5.78	1.44	1.53
6	1	38	GLN	N-CA	-5.78	1.38	1.46
27	C	10	PRO	CA-CB	-5.78	1.46	1.53
2	B	301	G	C2'-C1'	-5.77	1.44	1.53
2	B	455	C	C3'-C2'	-5.77	1.44	1.52
2	B	1107	G	C1'-N9	-5.77	1.39	1.48
2	B	2419	U	C4'-O4'	-5.77	1.36	1.45
31	I	125	THR	C-N	5.77	1.41	1.34
2	B	1824	G	O3'-P	-5.77	1.52	1.61
14	D	18	ASP	C-O	-5.77	1.17	1.24
2	B	2427	C	C5'-C4'	5.77	1.59	1.51
16	2	8	GLN	CG-CD	5.77	1.66	1.52
2	B	715	A	C5'-C4'	5.77	1.59	1.51
2	B	1570	A	C3'-C2'	-5.77	1.44	1.52
2	B	1913	A	C5'-C4'	5.77	1.59	1.51
2	B	2400	G	C5'-C4'	5.77	1.59	1.51
2	B	614	A	C3'-C2'	-5.77	1.44	1.52
12	R	98	ILE	CA-C	-5.77	1.45	1.52
27	C	269	ARG	CZ-NH2	5.77	1.41	1.33
2	B	1566	A	O3'-P	-5.76	1.52	1.61
10	P	4	ILE	CA-C	-5.76	1.45	1.53
14	D	175	LEU	CA-C	-5.76	1.45	1.52
32	J	122	LEU	CA-C	-5.76	1.45	1.52
1	A	94	A	P-O5'	-5.76	1.51	1.59
1	A	66	A	C3'-C2'	5.76	1.61	1.52
2	B	362	A	C5'-C4'	5.76	1.59	1.51
2	B	971	G	C2'-C1'	-5.76	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1634	A	O5'-C5'	5.76	1.51	1.42
2	B	1722	A	C4'-O4'	-5.76	1.36	1.45
2	B	1803	A	P-O5'	-5.76	1.51	1.59
25	7	56	LEU	CA-C	-5.76	1.44	1.52
30	H	69	ALA	C-N	5.76	1.41	1.33
2	B	133	U	C4'-O4'	-5.76	1.36	1.45
2	B	326	G	C1'-N9	-5.76	1.39	1.48
2	B	1444	G	P-O5'	-5.76	1.51	1.59
25	7	39	ARG	CZ-NH2	5.76	1.41	1.33
2	B	1791	A	O3'-P	-5.75	1.52	1.61
2	B	1909	C	C5'-C4'	5.75	1.59	1.51
2	B	2052	A	C1'-N9	-5.75	1.39	1.48
2	B	2330	G	C1'-N9	-5.75	1.39	1.48
2	B	2553	G	C5'-C4'	5.75	1.59	1.51
2	B	2155	U	O4'-C1'	5.75	1.50	1.41
7	M	117	PHE	N-CA	-5.75	1.39	1.46
31	I	25	PRO	C-N	5.75	1.41	1.33
2	B	735	A	P-O5'	-5.75	1.51	1.59
2	B	1828	G	P-O5'	-5.75	1.51	1.59
32	J	54	ILE	CA-C	-5.75	1.45	1.52
1	A	13	G	P-O5'	-5.75	1.51	1.59
29	G	116	LEU	N-CA	-5.75	1.37	1.45
2	B	1170	C	C2'-C1'	-5.75	1.44	1.53
2	B	2343	U	C1'-N1	-5.75	1.39	1.48
2	B	654	A	C1'-N9	5.75	1.55	1.47
2	B	1387	A	C1'-N9	5.75	1.56	1.48
2	B	753	A	P-O5'	-5.74	1.51	1.59
3	O	50	VAL	CA-C	-5.74	1.45	1.52
19	X	389	THR	CA-C	-5.74	1.45	1.52
2	B	2384	U	O3'-P	-5.74	1.52	1.61
31	I	71	LYS	N-CA	5.74	1.52	1.45
2	B	905	A	C1'-N9	-5.74	1.39	1.48
2	B	1050	A	P-O5'	-5.74	1.51	1.59
2	B	1264	A	C1'-N9	-5.74	1.39	1.48
2	B	1289	C	C4'-O4'	-5.74	1.36	1.45
10	P	95	LYS	N-CA	-5.74	1.38	1.46
13	S	90	LYS	C-N	-5.74	1.27	1.33
2	B	850	U	C4'-O4'	-5.74	1.36	1.45
2	B	1582	C	O3'-P	-5.74	1.52	1.61
2	B	1739	A	C2'-C1'	-5.74	1.44	1.53
2	B	2040	G	C6-N1	5.74	1.51	1.39
2	B	2244	U	O4'-C1'	-5.74	1.33	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2879	A	O3'-P	-5.74	1.52	1.61
19	X	422	ILE	CA-CB	-5.74	1.47	1.54
22	3	35	GLU	CA-C	-5.74	1.45	1.52
2	B	257	C	C3'-C2'	-5.74	1.44	1.52
2	B	771	G	C1'-N9	-5.74	1.39	1.48
2	B	2184	A	O3'-P	5.74	1.69	1.61
2	B	2275	C	C2'-C1'	-5.74	1.44	1.53
2	B	2341	G	C2'-C1'	-5.74	1.44	1.53
2	B	2372	U	O3'-P	-5.74	1.52	1.61
2	B	2502	G	O4'-C1'	-5.74	1.33	1.41
20	E	149	ILE	N-CA	-5.74	1.39	1.46
2	B	2802	G	C4'-O4'	-5.73	1.36	1.45
2	B	1307	A	C3'-O3'	5.73	1.50	1.42
2	B	2004	G	P-O5'	-5.73	1.51	1.59
10	P	55	HIS	CG-ND1	-5.73	1.31	1.38
2	B	48	G	C5'-C4'	-5.73	1.42	1.51
2	B	275	C	C2'-C1'	-5.73	1.44	1.53
3	0	65	THR	CA-C	-5.73	1.45	1.52
8	N	69	ARG	NE-CZ	5.73	1.39	1.33
2	B	1078	U	C5'-C4'	5.73	1.59	1.51
2	B	92	U	C5'-C4'	5.73	1.59	1.51
2	B	560	C	C1'-N1	-5.73	1.39	1.48
6	1	49	ASP	CA-C	-5.73	1.45	1.52
9	O	30	ARG	CZ-NH2	5.73	1.40	1.33
21	Y	22	VAL	CA-C	-5.73	1.45	1.52
2	B	1166	G	C3'-C2'	-5.72	1.44	1.52
2	B	217	A	P-O5'	-5.72	1.51	1.59
2	B	759	G	C2'-C1'	-5.72	1.44	1.53
2	B	773	U	C4'-O4'	-5.72	1.36	1.45
2	B	943	A	C1'-N9	-5.72	1.39	1.48
32	J	92	MET	C-N	5.72	1.40	1.33
2	B	1234	U	C2'-C1'	-5.72	1.44	1.53
2	B	608	A	P-O5'	-5.72	1.51	1.59
19	X	268	ASP	CA-C	-5.72	1.44	1.53
19	X	271	GLU	N-CA	5.72	1.53	1.46
11	Q	37	ALA	CA-C	-5.72	1.45	1.52
2	B	490	C	O3'-P	-5.72	1.52	1.61
2	B	540	C	C3'-C2'	-5.72	1.44	1.52
4	K	18	ARG	CZ-NH2	5.72	1.40	1.33
19	X	105	HIS	C-O	-5.72	1.17	1.24
2	B	917	A	P-O5'	-5.71	1.51	1.59
2	B	1336	A	O3'-P	-5.71	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2031	A	P-O5'	-5.71	1.51	1.59
2	B	2240	U	C1'-N1	5.71	1.57	1.48
23	5	74	ARG	CD-NE	5.71	1.54	1.46
30	H	27	ARG	CZ-NH1	5.71	1.40	1.32
2	B	1077	A	C3'-O3'	5.71	1.50	1.42
2	B	2096	C	C5'-C4'	-5.71	1.42	1.51
1	A	80	U	C4'-C3'	-5.71	1.44	1.52
1	A	84	G	P-O5'	-5.71	1.51	1.59
2	B	622	G	O3'-P	-5.71	1.52	1.61
2	B	1212	G	O3'-P	-5.71	1.52	1.61
2	B	1440	U	C2'-C1'	-5.71	1.44	1.53
2	B	1854	A	C1'-N9	5.71	1.56	1.48
2	B	515	A	O3'-P	-5.71	1.52	1.61
2	B	828	U	C4'-O4'	-5.71	1.37	1.45
2	B	1062	G	C2'-C1'	-5.71	1.44	1.53
2	B	1589	U	O3'-P	-5.71	1.52	1.61
2	B	1646	C	C3'-O3'	5.71	1.50	1.42
2	B	2600	A	C5'-C4'	5.71	1.59	1.51
30	H	128	HIS	CG-CD2	-5.71	1.29	1.35
1	A	86	G	C2'-C1'	-5.71	1.44	1.53
2	B	1123	C	C4'-C3'	-5.71	1.44	1.52
2	B	1293	C	C3'-C2'	-5.71	1.44	1.52
10	P	94	ALA	CA-C	-5.71	1.45	1.53
20	E	29	HIS	ND1-CE1	5.71	1.38	1.32
2	B	522	A	C2'-C1'	-5.71	1.44	1.53
2	B	1330	C	P-O5'	-5.71	1.51	1.59
2	B	731	C	C2'-C1'	-5.70	1.44	1.53
17	U	88	ASP	CA-CB	5.70	1.63	1.53
30	H	23	ALA	CA-C	-5.70	1.45	1.52
2	B	1383	A	C2'-C1'	-5.70	1.44	1.53
2	B	170	U	C2'-C1'	5.70	1.61	1.53
2	B	628	G	C2'-O2'	-5.70	1.33	1.42
2	B	941	A	O3'-P	-5.70	1.52	1.61
2	B	1068	G	O5'-C5'	5.70	1.51	1.42
2	B	2118	U	C4'-O4'	-5.70	1.37	1.45
7	M	55	ARG	CD-NE	5.70	1.54	1.46
2	B	45	G	O5'-C5'	-5.70	1.33	1.42
2	B	917	A	C4'-C3'	-5.70	1.44	1.52
2	B	1573	G	C2'-C1'	-5.70	1.44	1.53
2	B	2630	G	C1'-N9	-5.70	1.39	1.48
2	B	1451	C	C2'-C1'	-5.70	1.44	1.53
2	B	2653	U	C4'-C3'	-5.70	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	T	17	SER	N-CA	-5.70	1.39	1.46
2	B	1461	C	C4'-C3'	5.69	1.61	1.52
2	B	245	G	C3'-C2'	-5.69	1.44	1.52
2	B	1068	G	C6-N1	5.69	1.50	1.39
27	C	74	PRO	CA-C	5.69	1.60	1.52
2	B	570	G	P-O5'	-5.69	1.51	1.59
2	B	840	C	P-O5'	5.69	1.68	1.59
2	B	1384	A	C1'-N9	-5.69	1.39	1.48
2	B	1700	A	O3'-P	-5.69	1.52	1.61
27	C	240	GLY	C-N	5.69	1.41	1.33
2	B	2179	C	C5'-C4'	5.69	1.59	1.51
20	E	86	ALA	CA-C	-5.69	1.45	1.52
26	8	9	LYS	CA-C	-5.69	1.45	1.53
2	B	98	G	O5'-C5'	5.69	1.50	1.42
2	B	210	C	O3'-P	-5.69	1.52	1.61
2	B	921	C	C2'-C1'	-5.69	1.44	1.53
2	B	1665	A	P-O5'	-5.69	1.51	1.59
19	X	311	ASN	CA-C	-5.69	1.45	1.52
19	X	395	HIS	ND1-CE1	5.69	1.38	1.32
23	5	146	THR	N-CA	-5.69	1.41	1.46
28	F	26	GLN	N-CA	-5.69	1.38	1.46
2	B	1424	G	C1'-N9	-5.68	1.39	1.48
2	B	2188	U	C4'-O4'	5.68	1.54	1.45
2	B	2347	C	C2'-C1'	-5.68	1.44	1.53
2	B	2677	G	C1'-N9	-5.68	1.39	1.48
2	B	2867	G	C2'-C1'	-5.68	1.44	1.53
2	B	871	U	O3'-P	-5.68	1.52	1.61
2	B	1019	U	O3'-P	-5.68	1.52	1.61
2	B	2336	A	C6-N6	5.68	1.45	1.33
2	B	1192	G	P-O5'	-5.68	1.51	1.59
7	M	105	MET	CA-C	-5.68	1.46	1.52
30	H	39	ALA	CA-C	-5.68	1.46	1.52
19	X	395	HIS	CD2-NE2	5.68	1.44	1.37
2	B	319	G	C4'-C3'	5.68	1.61	1.52
2	B	1848	A	C4'-C3'	5.68	1.61	1.52
2	B	1470	A	C4'-C3'	-5.67	1.44	1.52
2	B	2172	U	O3'-P	-5.67	1.52	1.61
2	B	1551	A	C4'-C3'	-5.67	1.44	1.52
2	B	2037	A	O3'-P	-5.67	1.52	1.61
2	B	901	C	O3'-P	-5.67	1.52	1.61
2	B	1130	U	C2'-C1'	-5.67	1.44	1.53
2	B	1501	G	C2'-C1'	-5.67	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	1	20	ASN	C-O	-5.67	1.17	1.24
2	B	66	C	C3'-C2'	-5.67	1.44	1.52
2	B	292	U	C2'-C1'	-5.67	1.44	1.53
2	B	480	A	C4'-C3'	-5.67	1.44	1.52
2	B	2613	U	C2'-C1'	-5.67	1.44	1.53
10	P	99	LEU	CA-C	-5.67	1.45	1.52
12	R	84	ARG	CA-C	-5.67	1.45	1.52
19	X	215	LYS	N-CA	-5.67	1.39	1.46
2	B	979	A	O3'-P	-5.67	1.52	1.61
2	B	1321	A	C6-N6	5.67	1.45	1.33
2	B	1359	A	C2'-C1'	-5.67	1.44	1.53
2	B	1666	G	C1'-N9	-5.67	1.39	1.48
2	B	2849	U	O3'-P	-5.67	1.52	1.61
7	M	69	PRO	CA-C	-5.67	1.45	1.52
2	B	44	A	C3'-C2'	-5.67	1.44	1.52
2	B	200	U	O3'-P	-5.66	1.52	1.61
2	B	431	U	C2'-C1'	-5.66	1.44	1.53
2	B	1969	A	C2'-C1'	-5.66	1.44	1.53
11	Q	41	ALA	CA-C	-5.66	1.45	1.52
18	W	83	LYS	CA-C	-5.66	1.45	1.52
20	E	79	ARG	CA-C	-5.66	1.45	1.52
2	B	1520	U	O5'-C5'	-5.66	1.33	1.42
2	B	1792	G	C2'-C1'	-5.66	1.44	1.53
19	X	392	VAL	CA-C	-5.66	1.45	1.52
30	H	22	LYS	CA-C	-5.66	1.45	1.52
2	B	914	G	C2-N3	5.66	1.44	1.32
2	B	1315	C	C2'-O2'	-5.66	1.33	1.42
2	B	2343	U	C2'-C1'	-5.66	1.44	1.53
2	B	2623	G	O3'-P	-5.66	1.52	1.61
6	1	61	ALA	CA-C	-5.66	1.46	1.53
7	M	72	PRO	N-CA	-5.66	1.40	1.47
1	A	90	C	C5'-C4'	5.66	1.59	1.51
2	B	337	C	C2'-C1'	-5.66	1.44	1.53
2	B	1999	C	C2'-C1'	-5.66	1.44	1.53
11	Q	24	TYR	CA-CB	5.66	1.63	1.53
3	0	46	VAL	CA-C	-5.66	1.45	1.52
2	B	1324	G	C4'-C3'	-5.66	1.44	1.53
2	B	2467	C	C2'-C1'	-5.66	1.44	1.53
2	B	306	U	C3'-C2'	-5.65	1.44	1.52
2	B	565	C	C2'-C1'	-5.65	1.44	1.53
25	7	29	ARG	CA-C	-5.65	1.45	1.52
2	B	408	G	C3'-C2'	-5.65	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	758	C	O3'-P	-5.65	1.52	1.61
2	B	2759	G	C4'-C3'	-5.65	1.44	1.52
19	X	257	THR	CA-C	5.65	1.60	1.52
19	X	436	ARG	CD-NE	5.65	1.54	1.46
28	F	43	ILE	CA-C	5.65	1.59	1.52
2	B	558	U	P-O5'	-5.65	1.51	1.59
2	B	1431	A	C1'-N9	-5.65	1.39	1.48
2	B	2235	G	C4'-O4'	-5.65	1.37	1.45
2	B	2739	U	C3'-C2'	-5.65	1.44	1.52
28	F	59	ILE	CA-C	-5.65	1.45	1.52
29	G	96	ALA	CA-C	-5.65	1.45	1.52
2	B	836	G	C2'-C1'	-5.65	1.44	1.53
20	E	44	ARG	NE-CZ	5.65	1.39	1.33
2	B	311	A	P-O5'	-5.65	1.51	1.59
2	B	471	A	O3'-P	-5.65	1.52	1.61
2	B	1835	G	C4'-C3'	5.65	1.61	1.52
13	S	29	VAL	CA-CB	-5.65	1.48	1.54
27	C	61	TYR	CA-C	-5.65	1.45	1.53
2	B	143	C	O3'-P	-5.64	1.52	1.61
2	B	2575	C	P-O5'	-5.64	1.51	1.59
7	M	38	ARG	NE-CZ	5.64	1.39	1.33
2	B	204	A	C2'-C1'	-5.64	1.44	1.53
7	M	51	ARG	CD-NE	5.64	1.54	1.46
14	D	191	GLY	N-CA	-5.64	1.38	1.45
2	B	1983	G	C2'-C1'	-5.64	1.44	1.53
20	E	129	PRO	N-CA	-5.64	1.40	1.47
27	C	23	LEU	CA-C	-5.64	1.45	1.52
2	B	1095	A	O3'-P	-5.64	1.52	1.61
2	B	1406	U	O4'-C1'	-5.64	1.33	1.41
2	B	1793	C	C4'-O4'	5.64	1.54	1.45
2	B	1943	U	C1'-N1	5.64	1.55	1.47
13	S	25	ARG	CZ-NH2	5.64	1.40	1.33
12	R	90	ARG	NE-CZ	5.64	1.39	1.33
2	B	1978	A	N9-C8	-5.64	1.26	1.37
2	B	2117	A	C3'-C2'	5.64	1.61	1.52
2	B	2459	A	O4'-C1'	5.64	1.50	1.41
1	A	96	G	C5'-C4'	5.63	1.59	1.51
2	B	312	G	C5'-C4'	5.63	1.59	1.51
2	B	435	C	C4'-C3'	5.63	1.61	1.52
2	B	2091	C	O3'-P	-5.63	1.52	1.61
4	K	39	ILE	N-CA	-5.63	1.39	1.46
10	P	92	ARG	NE-CZ	5.63	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	T	41	ALA	N-CA	-5.63	1.39	1.46
27	C	181	ARG	CD-NE	5.63	1.54	1.46
2	B	948	C	C2'-C1'	-5.63	1.45	1.53
2	B	1377	G	O3'-P	-5.63	1.52	1.61
2	B	2729	G	C2'-C1'	-5.63	1.45	1.53
24	6	14	ARG	CZ-NH1	5.63	1.40	1.32
2	B	925	A	P-O5'	-5.63	1.51	1.59
2	B	1568	G	P-O5'	-5.63	1.51	1.59
15	T	6	ARG	NE-CZ	5.63	1.39	1.33
19	X	21	ARG	CZ-NH2	5.63	1.40	1.33
24	6	36	ALA	N-CA	-5.63	1.38	1.46
2	B	1405	U	C4'-O4'	-5.63	1.37	1.45
2	B	2452	C	C5'-C4'	5.63	1.59	1.51
2	B	1776	G	C3'-O3'	5.62	1.50	1.42
2	B	2778	A	C1'-N9	5.62	1.55	1.47
2	B	1504	A	P-O5'	-5.62	1.51	1.59
20	E	187	VAL	C-O	-5.62	1.18	1.24
27	C	170	TYR	CA-C	-5.62	1.45	1.52
2	B	264	C	C5'-C4'	5.62	1.59	1.51
2	B	2156	G	C5'-C4'	5.62	1.59	1.51
23	5	82	ALA	CA-C	-5.62	1.45	1.52
2	B	2185	U	C3'-C2'	5.62	1.61	1.52
2	B	2693	G	C3'-C2'	-5.62	1.44	1.52
20	E	28	VAL	CA-C	-5.62	1.45	1.52
32	J	20	ALA	C-N	-5.62	1.25	1.33
2	B	2739	U	C4'-C3'	-5.62	1.44	1.52
4	K	77	ILE	N-CA	-5.62	1.39	1.46
7	M	114	ARG	CA-C	-5.62	1.45	1.52
8	N	42	LYS	CA-CB	5.62	1.62	1.53
2	B	1446	C	C2'-C1'	-5.62	1.45	1.53
2	B	1822	C	C4'-O4'	-5.62	1.37	1.45
2	B	2142	A	P-O5'	-5.62	1.51	1.59
18	W	12	GLN	N-CA	-5.62	1.38	1.45
20	E	71	GLY	N-CA	-5.62	1.40	1.45
2	B	520	G	C2'-C1'	-5.62	1.45	1.53
2	B	543	G	C5'-C4'	5.62	1.59	1.51
2	B	662	G	C3'-O3'	5.62	1.50	1.42
2	B	662	G	C5'-C4'	5.62	1.59	1.51
2	B	2100	G	C5'-C4'	5.62	1.59	1.51
2	B	2707	U	C4'-C3'	5.61	1.60	1.52
3	0	35	HIS	CG-ND1	-5.61	1.32	1.38
2	B	158	U	C4'-C3'	-5.61	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2801	G	C5'-C4'	5.61	1.59	1.51
1	A	4	C	C3'-O3'	5.61	1.50	1.42
2	B	77	G	C2'-C1'	-5.61	1.45	1.53
2	B	1731	G	C5'-C4'	-5.61	1.43	1.51
19	X	99	ASP	N-CA	-5.61	1.39	1.46
2	B	119	A	C2'-C1'	-5.61	1.44	1.53
2	B	869	G	C2'-C1'	-5.61	1.45	1.53
5	L	90	VAL	CA-CB	-5.61	1.47	1.53
2	B	1170	C	C4-C5	5.61	1.54	1.43
2	B	1631	G	O4'-C1'	-5.61	1.33	1.41
2	B	1641	A	N9-C4	-5.61	1.26	1.37
2	B	2456	C	C3'-C2'	-5.61	1.44	1.52
2	B	2746	U	P-O5'	-5.61	1.51	1.59
2	B	2799	A	P-O5'	-5.61	1.51	1.59
2	B	1754	A	N9-C4	-5.61	1.26	1.37
2	B	2731	G	C1'-N9	-5.61	1.39	1.48
2	B	2743	U	C4'-C3'	5.61	1.60	1.52
2	B	2822	G	C3'-C2'	-5.61	1.44	1.52
7	M	18	ARG	NE-CZ	5.61	1.39	1.33
27	C	96	LYS	C-N	5.61	1.41	1.33
2	B	615	U	O3'-P	-5.60	1.52	1.61
2	B	2697	G	C2'-C1'	-5.60	1.45	1.53
11	Q	49	ARG	NE-CZ	5.60	1.39	1.33
2	B	788	A	C3'-O3'	-5.60	1.34	1.43
2	B	2602	A	C2'-C1'	-5.60	1.44	1.53
5	L	70	LYS	C-O	-5.60	1.17	1.24
28	F	166	ARG	NE-CZ	5.60	1.39	1.33
30	H	109	GLU	CA-C	-5.60	1.45	1.52
2	B	1610	A	C4'-C3'	-5.60	1.44	1.53
2	B	2513	A	O3'-P	-5.60	1.52	1.61
1	A	47	C	C3'-O3'	-5.60	1.33	1.42
2	B	2093	G	N7-C5	-5.60	1.28	1.39
2	B	1379	U	C4'-C3'	5.60	1.60	1.52
2	B	2698	U	O4'-C1'	-5.60	1.33	1.41
5	L	82	LEU	CA-C	-5.60	1.44	1.52
8	N	27	SER	N-CA	-5.60	1.39	1.46
19	X	70	ARG	NE-CZ	5.60	1.39	1.33
19	X	397	PRO	CA-C	-5.60	1.47	1.52
23	5	170	ILE	CA-CB	-5.60	1.47	1.54
1	A	70	C	O5'-C5'	5.60	1.50	1.42
30	H	90	LEU	N-CA	-5.60	1.39	1.46
2	B	901	C	C4'-C3'	5.59	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2361	G	C1'-N9	-5.59	1.39	1.48
2	B	2677	G	P-O5'	5.59	1.68	1.59
2	B	2847	U	O4'-C1'	-5.59	1.33	1.41
27	C	53	ILE	CA-C	-5.59	1.46	1.52
2	B	497	A	O3'-P	-5.59	1.52	1.61
2	B	1718	G	C4'-O4'	-5.59	1.37	1.45
20	E	132	LYS	N-CA	-5.59	1.39	1.46
24	6	19	ARG	NE-CZ	5.59	1.39	1.33
2	B	841	G	C2'-C1'	-5.59	1.45	1.53
2	B	2845	U	O3'-P	-5.59	1.52	1.61
20	E	1	MET	C-N	5.59	1.41	1.33
2	B	745	G	O4'-C1'	-5.59	1.33	1.41
2	B	1804	C	P-O5'	-5.59	1.51	1.59
2	B	2031	A	O3'-P	-5.59	1.52	1.61
2	B	2900	A	C1'-N9	-5.59	1.39	1.48
13	S	99	ARG	NE-CZ	5.59	1.39	1.33
30	H	89	LYS	C-N	-5.59	1.25	1.33
2	B	313	G	N7-C5	-5.59	1.28	1.39
2	B	605	G	C2'-O2'	-5.59	1.34	1.42
2	B	762	U	C2'-C1'	-5.59	1.44	1.53
12	R	37	GLU	N-CA	-5.59	1.40	1.46
28	F	122	ASP	CA-C	-5.59	1.45	1.53
2	B	2708	G	C1'-N9	-5.58	1.39	1.48
2	B	977	G	P-O5'	-5.58	1.51	1.59
2	B	2655	G	O5'-C5'	5.58	1.51	1.42
7	M	55	ARG	CZ-NH1	5.58	1.40	1.32
2	B	455	C	C3'-O3'	-5.58	1.33	1.42
2	B	1315	C	O3'-P	-5.58	1.52	1.61
2	B	2873	A	C2'-C1'	-5.58	1.44	1.53
7	M	25	ASP	CA-CB	-5.58	1.43	1.53
14	D	62	LYS	C-N	-5.58	1.27	1.34
2	B	2018	G	O4'-C1'	-5.58	1.33	1.41
2	B	2048	G	C1'-N9	-5.58	1.39	1.48
5	L	94	THR	CB-OG1	-5.58	1.34	1.43
32	J	84	ILE	C-O	-5.58	1.18	1.24
2	B	860	U	P-O5'	-5.58	1.51	1.59
2	B	2448	A	C5'-C4'	5.58	1.59	1.51
2	B	2783	U	C3'-C2'	5.58	1.61	1.52
20	E	120	VAL	N-CA	-5.58	1.39	1.46
5	L	63	LYS	CA-C	-5.58	1.45	1.52
9	O	35	ILE	N-CA	-5.58	1.39	1.46
15	T	60	THR	CA-C	-5.58	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	52	A	P-O5'	-5.57	1.51	1.59
2	B	2721	A	P-O5'	-5.57	1.51	1.59
2	B	1482	G	C2'-C1'	-5.57	1.45	1.53
28	F	40	GLY	CA-C	-5.57	1.44	1.51
2	B	1619	G	C4'-C3'	-5.57	1.44	1.52
2	B	2090	A	C1'-N9	-5.57	1.39	1.48
2	B	1322	A	N9-C4	-5.57	1.26	1.37
2	B	2242	G	C4'-O4'	-5.57	1.37	1.45
19	X	241	ILE	C-N	5.57	1.41	1.33
25	7	41	ARG	CA-C	-5.57	1.45	1.52
2	B	2145	C	C3'-O3'	-5.57	1.33	1.42
2	B	2292	U	C5'-C4'	5.57	1.59	1.51
5	L	111	ILE	CA-CB	5.57	1.63	1.54
10	P	67	GLU	C-N	5.57	1.38	1.33
21	Y	71	LYS	CA-C	-5.57	1.46	1.52
2	B	566	U	C2'-O2'	-5.56	1.34	1.42
2	B	1179	G	C4'-C3'	-5.56	1.44	1.52
27	C	170	TYR	N-CA	5.56	1.53	1.46
2	B	856	G	P-O5'	-5.56	1.51	1.59
2	B	1627	G	C4'-C3'	-5.56	1.44	1.52
13	S	85	ILE	CA-C	-5.56	1.46	1.52
20	E	162	ARG	CA-C	-5.56	1.45	1.52
2	B	1254	A	O5'-C5'	5.56	1.50	1.42
17	U	23	LYS	C-N	5.56	1.40	1.33
21	Y	17	ALA	C-N	5.56	1.40	1.33
2	B	490	C	C2'-C1'	-5.56	1.44	1.53
10	P	38	ARG	NE-CZ	5.56	1.39	1.33
20	E	189	THR	N-CA	5.56	1.52	1.45
2	B	673	C	C4'-C3'	-5.56	1.44	1.52
2	B	808	G	P-O5'	-5.56	1.51	1.59
2	B	872	U	C4'-C3'	-5.56	1.44	1.52
2	B	1990	C	C2'-C1'	-5.56	1.45	1.53
2	B	2174	C	P-O5'	-5.56	1.51	1.59
5	L	36	LYS	C-N	5.56	1.41	1.33
2	B	1110	G	C2'-C1'	-5.55	1.44	1.53
2	B	1453	A	C5'-C4'	5.55	1.59	1.51
2	B	2396	G	O5'-C5'	5.55	1.50	1.42
21	Y	19	ARG	CA-C	-5.55	1.46	1.53
2	B	1612	C	O4'-C1'	-5.55	1.33	1.41
19	X	227	ARG	NE-CZ	5.55	1.39	1.33
19	X	52	PHE	CA-C	-5.55	1.45	1.52
19	X	221	ARG	CD-NE	5.55	1.54	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	E	125	SER	CA-CB	5.55	1.62	1.53
23	5	149	VAL	N-CA	5.55	1.53	1.46
26	8	18	LYS	CA-C	-5.55	1.46	1.52
2	B	1982	U	C2'-C1'	-5.55	1.45	1.53
4	K	69	VAL	CA-C	-5.55	1.46	1.52
12	R	96	VAL	N-CA	-5.55	1.39	1.46
2	B	1510	G	C3'-C2'	-5.55	1.44	1.52
2	B	1658	C	C2'-C1'	-5.55	1.45	1.53
2	B	2627	G	C2'-C1'	-5.55	1.45	1.53
2	B	2843	G	C4'-C3'	-5.55	1.44	1.52
24	6	34	ARG	NE-CZ	5.54	1.39	1.33
2	B	6	A	C2'-C1'	-5.54	1.45	1.53
18	W	16	ALA	C-N	5.54	1.41	1.33
19	X	158	VAL	N-CA	-5.54	1.40	1.46
25	7	39	ARG	NE-CZ	5.54	1.39	1.33
2	B	2265	U	C2'-C1'	-5.54	1.45	1.53
2	B	1339	G	O3'-P	5.54	1.69	1.61
2	B	1605	C	O3'-P	-5.54	1.52	1.61
2	B	685	A	P-O5'	-5.54	1.51	1.59
2	B	876	C	C4'-O4'	-5.54	1.37	1.45
14	D	81	GLU	C-N	5.54	1.41	1.33
14	D	128	ARG	CZ-NH1	5.54	1.40	1.32
27	C	78	GLU	N-CA	-5.54	1.39	1.46
29	G	89	VAL	CA-CB	-5.54	1.47	1.54
3	0	36	ARG	N-CA	-5.54	1.39	1.46
2	B	1211	C	O4'-C1'	-5.54	1.33	1.42
10	P	80	VAL	C-O	5.54	1.29	1.23
2	B	819	A	C4'-O4'	-5.53	1.37	1.45
2	B	921	C	O4'-C1'	5.53	1.50	1.41
14	D	108	ASP	CA-C	-5.53	1.45	1.52
19	X	105	HIS	CA-CB	5.53	1.61	1.53
10	P	77	SER	CA-C	-5.53	1.45	1.52
2	B	1097	U	C2'-C1'	-5.53	1.45	1.53
2	B	772	C	C2'-C1'	-5.53	1.45	1.53
2	B	1623	G	C3'-C2'	-5.53	1.44	1.52
2	B	1653	G	O3'-P	-5.53	1.52	1.61
2	B	1819	A	O3'-P	-5.53	1.52	1.61
5	L	84	LYS	CA-C	-5.53	1.44	1.52
2	B	1960	A	C6-N6	5.53	1.45	1.33
2	B	2005	A	N7-C5	-5.53	1.28	1.39
12	R	13	ARG	NE-CZ	5.53	1.39	1.33
2	B	64	A	C4'-O4'	-5.52	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	461	C	O3'-P	-5.52	1.52	1.61
2	B	849	A	C2'-O2'	-5.52	1.34	1.42
2	B	1659	G	C4'-C3'	-5.52	1.44	1.52
9	O	19	GLN	N-CA	-5.52	1.39	1.46
2	B	1539	U	O3'-P	5.52	1.69	1.61
10	P	108	ARG	NE-CZ	5.52	1.39	1.33
20	E	35	TYR	N-CA	-5.52	1.39	1.46
20	E	18	THR	N-CA	-5.52	1.42	1.47
2	B	978	G	C5-C6	-5.52	1.31	1.42
18	W	11	GLU	N-CA	-5.52	1.39	1.45
2	B	551	G	C2'-C1'	-5.51	1.45	1.53
2	B	1656	C	C2'-C1'	-5.51	1.45	1.53
3	O	42	GLU	C-N	5.51	1.40	1.33
27	C	74	PRO	C-N	5.51	1.41	1.33
27	C	206	LYS	N-CA	-5.51	1.39	1.46
2	B	946	C	O5'-C5'	5.51	1.50	1.42
2	B	1110	G	P-O5'	-5.51	1.51	1.59
2	B	1456	G	O4'-C1'	5.51	1.50	1.41
2	B	1805	A	C4'-C3'	-5.51	1.44	1.52
2	B	2242	G	O5'-C5'	5.51	1.50	1.42
2	B	2454	G	C3'-C2'	-5.51	1.44	1.52
18	W	63	ILE	CA-CB	5.51	1.60	1.53
2	B	1143	A	O3'-P	-5.51	1.52	1.61
2	B	2579	C	C4'-C3'	-5.51	1.44	1.52
14	D	208	LYS	N-CA	-5.51	1.39	1.46
19	X	372	TYR	N-CA	-5.51	1.39	1.46
2	B	627	A	C2'-C1'	-5.51	1.44	1.53
2	B	2705	A	P-O5'	-5.51	1.51	1.59
5	L	127	VAL	CA-CB	-5.51	1.47	1.55
14	D	183	GLU	N-CA	-5.51	1.39	1.46
27	C	237	ARG	NE-CZ	5.51	1.39	1.33
32	J	18	VAL	N-CA	-5.51	1.39	1.46
2	B	408	G	C1'-N9	-5.51	1.39	1.48
2	B	599	A	C1'-N9	-5.51	1.39	1.48
2	B	673	C	C2'-O2'	-5.51	1.34	1.42
2	B	944	C	C2'-O2'	-5.51	1.34	1.42
2	B	2445	G	O3'-P	-5.51	1.52	1.61
2	B	612	G	C3'-C2'	-5.50	1.44	1.52
2	B	723	C	N3-C4	5.50	1.44	1.33
2	B	801	G	C2'-C1'	-5.50	1.44	1.53
2	B	873	C	C1'-N1	-5.50	1.40	1.48
2	B	960	A	O3'-P	-5.50	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1221	C	C5'-C4'	5.50	1.59	1.51
2	B	1912	A	C5'-C4'	5.50	1.59	1.51
17	U	20	LYS	CA-C	5.50	1.59	1.52
23	5	97	MET	CG-SD	5.50	1.94	1.80
2	B	232	G	P-O5'	-5.50	1.51	1.59
2	B	1615	C	P-O5'	-5.50	1.51	1.59
2	B	629	G	C5'-C4'	-5.50	1.43	1.51
2	B	701	G	O3'-P	-5.50	1.52	1.61
2	B	2086	U	C3'-C2'	-5.50	1.44	1.52
2	B	2225	A	C1'-N9	-5.50	1.38	1.47
2	B	172	A	C4'-O4'	5.50	1.53	1.45
2	B	1165	A	C1'-N9	-5.50	1.39	1.48
2	B	1385	A	C2'-C1'	-5.50	1.44	1.53
19	X	26	ARG	CZ-NH2	5.50	1.40	1.33
32	J	33	ALA	CA-C	-5.50	1.45	1.52
2	B	728	G	C4'-O4'	5.50	1.54	1.45
2	B	1581	G	C5'-C4'	5.50	1.59	1.51
2	B	2702	G	O3'-P	-5.50	1.52	1.61
2	B	2706	A	C3'-C2'	-5.50	1.44	1.52
2	B	2901	C	C5'-C4'	5.50	1.59	1.51
6	1	7	ARG	CZ-NH1	5.50	1.40	1.32
2	B	686	U	C3'-C2'	-5.50	1.44	1.52
2	B	196	A	C1'-N9	-5.49	1.38	1.47
2	B	2101	A	C4'-C3'	5.49	1.60	1.52
2	B	2797	U	C3'-O3'	5.49	1.50	1.42
2	B	386	G	C1'-N9	-5.49	1.38	1.47
2	B	1494	A	C4'-O4'	5.49	1.53	1.45
2	B	1668	A	C5'-C4'	5.49	1.59	1.51
1	A	84	G	C2'-O2'	-5.49	1.34	1.42
2	B	1414	C	C3'-C2'	-5.49	1.44	1.52
2	B	1813	G	O4'-C1'	5.49	1.49	1.41
2	B	2092	U	O4'-C1'	5.49	1.50	1.42
1	A	89	U	C5'-C4'	5.49	1.59	1.51
2	B	366	C	C5'-C4'	5.49	1.59	1.51
8	N	32	GLU	N-CA	-5.49	1.39	1.46
29	G	79	THR	C-N	5.49	1.41	1.33
2	B	2354	C	P-O5'	-5.49	1.51	1.59
2	B	265	A	C2'-C1'	-5.49	1.45	1.53
2	B	504	A	C4'-C3'	5.49	1.61	1.53
2	B	764	A	C1'-N9	-5.49	1.38	1.47
2	B	1329	U	C4'-C3'	-5.48	1.45	1.53
2	B	2060	A	C4'-O4'	-5.48	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2162	G	C2'-C1'	-5.48	1.45	1.53
13	S	81	SER	CA-C	-5.48	1.45	1.52
29	G	110	HIS	CB-CG	5.48	1.57	1.50
1	A	60	C	P-O5'	-5.48	1.51	1.59
2	B	213	A	C1'-N9	-5.48	1.39	1.48
2	B	1261	C	C1'-N1	-5.48	1.40	1.48
2	B	1952	A	O4'-C1'	-5.48	1.33	1.41
2	B	2654	A	C2'-C1'	-5.48	1.44	1.53
1	A	15	A	C3'-C2'	-5.48	1.44	1.52
2	B	106	C	O4'-C1'	5.48	1.49	1.41
2	B	455	C	O3'-P	-5.48	1.52	1.61
2	B	1564	C	C1'-N1	-5.48	1.40	1.48
3	O	26	ARG	NE-CZ	5.48	1.39	1.33
2	B	1756	G	C1'-N9	-5.48	1.39	1.48
8	N	8	ARG	NE-CZ	5.48	1.39	1.33
13	S	52	GLU	CA-C	-5.48	1.46	1.53
2	B	314	C	C2'-C1'	-5.47	1.45	1.53
2	B	1740	G	C1'-N9	-5.47	1.39	1.48
7	M	125	PRO	N-CA	-5.47	1.40	1.47
10	P	78	PRO	C-O	-5.47	1.17	1.23
27	C	80	LEU	N-CA	-5.47	1.39	1.45
29	G	67	ALA	CA-C	-5.47	1.45	1.52
2	B	1247	A	O3'-P	-5.47	1.52	1.61
2	B	2069	G	O3'-P	-5.47	1.52	1.61
8	N	45	ARG	C-O	-5.47	1.17	1.24
2	B	1600	C	O3'-P	-5.47	1.52	1.61
9	O	64	TYR	N-CA	-5.47	1.38	1.45
2	B	37	C	C2'-C1'	-5.47	1.45	1.53
2	B	103	A	O3'-P	-5.47	1.52	1.61
2	B	402	A	C5'-C4'	5.47	1.59	1.51
13	S	3	THR	CA-C	-5.47	1.46	1.52
17	U	21	ARG	CA-C	5.47	1.58	1.52
2	B	2724	U	C4'-O4'	-5.47	1.37	1.45
4	K	115	ILE	N-CA	-5.47	1.39	1.46
24	6	15	SER	CA-C	-5.47	1.46	1.53
28	F	110	ILE	CA-C	-5.47	1.45	1.52
2	B	750	A	C4'-O4'	-5.46	1.37	1.45
2	B	1138	G	P-O5'	-5.46	1.51	1.59
2	B	1402	U	C4'-C3'	5.46	1.60	1.52
2	B	1689	A	C4'-O4'	-5.46	1.37	1.45
5	L	48	ARG	CA-C	-5.46	1.46	1.52
32	J	47	HIS	N-CA	-5.46	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1215	G	C3'-C2'	-5.46	1.44	1.52
2	B	227	A	P-O5'	-5.46	1.51	1.59
2	B	1544	A	O4'-C1'	5.46	1.49	1.41
2	B	1909	C	C3'-O3'	5.46	1.50	1.42
2	B	2613	U	C5'-C4'	5.46	1.59	1.51
2	B	2840	C	C2'-C1'	-5.46	1.45	1.53
2	B	118	A	C3'-C2'	-5.46	1.44	1.52
2	B	1273	U	C3'-O3'	5.46	1.50	1.42
2	B	2861	U	C2-N3	5.46	1.48	1.37
2	B	839	U	C1'-N1	-5.46	1.40	1.48
2	B	853	C	C2'-C1'	-5.46	1.45	1.53
2	B	1075	C	C4'-C3'	5.46	1.60	1.52
2	B	2288	A	C4'-O4'	-5.46	1.37	1.45
2	B	2897	U	C4'-C3'	5.46	1.60	1.52
14	D	178	VAL	N-CA	-5.46	1.40	1.46
15	T	15	HIS	CA-C	-5.46	1.46	1.52
19	X	213	VAL	CA-C	-5.46	1.46	1.52
27	C	128	THR	CA-C	-5.46	1.46	1.52
2	B	363	G	C4'-O4'	-5.46	1.37	1.45
2	B	603	A	C3'-C2'	-5.46	1.44	1.52
9	O	80	GLU	CA-C	-5.46	1.45	1.52
31	I	7	TYR	N-CA	-5.46	1.39	1.46
2	B	61	C	C1'-N1	-5.45	1.40	1.48
2	B	606	U	O5'-C5'	5.45	1.50	1.42
2	B	933	A	O3'-P	-5.45	1.52	1.61
2	B	1332	G	C5'-C4'	5.45	1.59	1.51
2	B	2551	C	P-O5'	-5.45	1.51	1.59
5	L	53	GLY	N-CA	-5.45	1.37	1.45
31	I	8	VAL	CA-C	-5.45	1.47	1.52
2	B	2328	A	C1'-N9	-5.45	1.39	1.48
2	B	2550	G	C2'-C1'	-5.45	1.45	1.53
2	B	953	G	O3'-P	-5.45	1.52	1.61
19	X	90	ASP	CA-C	-5.45	1.45	1.53
2	B	200	U	C3'-C2'	-5.45	1.44	1.52
2	B	785	G	C2'-C1'	-5.45	1.45	1.53
2	B	874	G	C1'-N9	-5.45	1.39	1.48
2	B	2395	C	C1'-N1	-5.45	1.40	1.48
2	B	2038	G	C2'-C1'	-5.45	1.45	1.53
2	B	2841	C	C2'-C1'	-5.45	1.45	1.53
19	X	86	LEU	N-CA	-5.44	1.39	1.46
1	A	93	C	P-O5'	-5.44	1.51	1.59
2	B	1636	U	C4'-C3'	5.44	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1914	C	O4'-C1'	5.44	1.49	1.41
14	D	24	VAL	CA-CB	-5.44	1.47	1.55
24	6	11	LYS	CA-C	-5.44	1.45	1.52
30	H	118	PRO	CA-CB	5.44	1.61	1.53
2	B	1006	C	C2'-C1'	-5.44	1.45	1.53
4	K	108	ARG	NE-CZ	5.44	1.39	1.33
2	B	2098	U	P-O5'	-5.44	1.51	1.59
2	B	2242	G	O4'-C1'	-5.44	1.33	1.41
1	A	61	G	C2'-O2'	-5.44	1.34	1.42
2	B	2620	C	P-O5'	-5.44	1.51	1.59
2	B	1955	U	O5'-C5'	5.43	1.51	1.42
2	B	2094	A	P-O5'	-5.43	1.51	1.59
19	X	290	LEU	C-N	5.43	1.42	1.33
26	8	4	ARG	CZ-NH2	5.43	1.40	1.33
2	B	60	G	O3'-P	-5.43	1.53	1.61
7	M	71	LYS	N-CA	-5.43	1.38	1.46
10	P	88	ARG	NE-CZ	5.43	1.39	1.33
15	T	38	ALA	C-N	5.43	1.41	1.33
22	3	16	ARG	CA-C	5.43	1.60	1.52
27	C	147	PRO	N-CA	-5.43	1.40	1.47
2	B	2848	G	O3'-P	-5.43	1.53	1.61
23	5	101	ALA	C-O	-5.43	1.17	1.24
2	B	524	G	O3'-P	-5.43	1.53	1.61
2	B	697	G	C4'-C3'	-5.43	1.44	1.52
2	B	2608	G	O3'-P	-5.43	1.53	1.61
2	B	2658	C	O3'-P	-5.43	1.53	1.61
2	B	2790	U	O3'-P	-5.43	1.53	1.61
7	M	59	ARG	N-CA	-5.43	1.39	1.46
9	O	74	VAL	C-O	-5.43	1.16	1.24
2	B	378	C	O3'-P	-5.43	1.53	1.61
2	B	2115	G	O3'-P	-5.43	1.53	1.61
9	O	47	VAL	CA-C	-5.43	1.46	1.52
18	W	21	ARG	CA-C	-5.43	1.45	1.52
16	2	57	GLU	CA-C	-5.43	1.46	1.52
2	B	1406	U	C4'-C3'	-5.42	1.44	1.52
2	B	1424	G	O3'-P	-5.42	1.53	1.61
2	B	1713	A	C5'-C4'	5.42	1.59	1.51
2	B	1999	C	C4'-C3'	-5.42	1.44	1.52
2	B	2685	G	C2'-O2'	-5.42	1.34	1.42
14	D	68	PHE	C-O	-5.42	1.17	1.24
15	T	59	ASN	CA-C	-5.42	1.46	1.52
2	B	1542	U	O5'-C5'	5.42	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1815	A	C5'-C4'	5.42	1.59	1.51
2	B	1887	C	C5'-C4'	5.42	1.59	1.51
2	B	2741	A	C2'-C1'	-5.42	1.45	1.53
2	B	129	C	O4'-C1'	5.42	1.49	1.41
2	B	914	G	O3'-P	-5.42	1.53	1.61
2	B	1551	A	P-O5'	-5.42	1.51	1.59
2	B	1779	U	C2'-C1'	-5.42	1.45	1.53
14	D	143	PRO	N-CD	-5.42	1.40	1.47
31	I	109	ALA	CA-C	-5.42	1.45	1.52
2	B	1535	A	O3'-P	-5.42	1.53	1.61
2	B	1998	A	C3'-C2'	-5.42	1.44	1.52
12	R	68	ARG	CD-NE	5.42	1.53	1.46
2	B	772	C	O5'-C5'	5.42	1.50	1.42
2	B	898	C	O3'-P	-5.42	1.53	1.61
2	B	2301	C	C5'-C4'	5.42	1.59	1.51
2	B	2627	G	O3'-P	-5.42	1.53	1.61
9	O	43	ASN	N-CA	-5.42	1.38	1.46
27	C	242	HIS	N-CA	-5.42	1.38	1.46
2	B	951	C	O3'-P	-5.42	1.53	1.61
8	N	86	ARG	CZ-NH1	5.42	1.40	1.32
23	5	233	VAL	CA-C	-5.42	1.45	1.52
27	C	115	ILE	CA-C	-5.42	1.46	1.52
2	B	1267	U	C4'-C3'	-5.42	1.44	1.52
5	L	116	VAL	CA-C	-5.42	1.45	1.52
2	B	1246	A	C3'-O3'	-5.41	1.34	1.42
2	B	1369	G	P-O5'	-5.41	1.51	1.59
2	B	2795	C	C1'-N1	5.41	1.56	1.48
2	B	759	G	C1'-N9	-5.41	1.39	1.48
20	E	108	ILE	CA-C	-5.41	1.44	1.52
27	C	57	HIS	CB-CG	-5.41	1.42	1.50
2	B	1950	G	O3'-P	-5.41	1.53	1.61
2	B	2608	G	O5'-C5'	5.41	1.50	1.42
2	B	2842	G	C3'-O3'	5.41	1.50	1.42
2	B	1544	A	C2'-C1'	-5.41	1.45	1.53
2	B	2455	G	C2'-C1'	-5.41	1.45	1.53
2	B	2632	A	C1'-N9	-5.41	1.39	1.48
13	S	90	LYS	CA-C	-5.41	1.45	1.53
2	B	1081	U	C4'-O4'	5.41	1.53	1.45
2	B	35	G	C3'-O3'	5.41	1.50	1.42
2	B	2276	G	C2'-C1'	-5.41	1.45	1.53
2	B	2617	U	C2'-O2'	-5.41	1.34	1.42
29	G	99	GLY	N-CA	-5.41	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1194	A	O3'-P	-5.40	1.53	1.61
2	B	2058	A	O3'-P	-5.40	1.53	1.61
2	B	2079	U	O3'-P	-5.40	1.53	1.61
2	B	1250	G	O5'-C5'	-5.40	1.34	1.42
2	B	1591	A	C1'-N9	-5.40	1.39	1.48
2	B	2443	C	P-O5'	-5.40	1.51	1.59
2	B	2493	U	C3'-C2'	-5.40	1.44	1.52
20	E	144	GLU	N-CA	-5.40	1.40	1.46
2	B	863	A	C3'-O3'	5.40	1.50	1.42
2	B	893	C	C5'-C4'	5.40	1.59	1.51
2	B	905	A	C2'-C1'	-5.40	1.45	1.53
2	B	2214	C	C1'-N1	-5.40	1.40	1.48
31	I	91	LYS	N-CA	-5.40	1.38	1.46
2	B	1355	G	C1'-N9	-5.40	1.39	1.48
19	X	94	GLY	C-N	5.40	1.40	1.33
2	B	1010	A	N9-C4	-5.40	1.27	1.37
2	B	1377	G	C1'-N9	-5.40	1.39	1.48
2	B	1703	G	C4'-O4'	-5.40	1.37	1.45
2	B	2885	G	C4'-O4'	-5.40	1.37	1.45
2	B	639	U	C4'-C3'	-5.40	1.44	1.52
2	B	656	G	C2'-C1'	-5.40	1.45	1.53
2	B	940	G	C2'-O2'	-5.40	1.34	1.42
2	B	952	G	C4'-C3'	-5.40	1.44	1.52
2	B	1493	C	C4-N4	5.40	1.44	1.33
2	B	1498	C	C3'-O3'	5.40	1.50	1.42
2	B	374	A	O3'-P	-5.39	1.53	1.61
2	B	641	U	C3'-C2'	-5.39	1.44	1.52
4	K	70	ARG	CA-C	-5.39	1.45	1.52
19	X	22	LEU	CB-CG	5.39	1.64	1.53
29	G	34	ARG	N-CA	-5.39	1.39	1.46
2	B	2672	U	C4'-C3'	-5.39	1.44	1.52
13	S	84	ARG	C-N	5.39	1.41	1.33
13	S	106	VAL	N-CA	-5.39	1.39	1.46
2	B	2602	A	C2'-O2'	5.39	1.49	1.41
18	W	86	LEU	CA-C	-5.39	1.45	1.53
2	B	433	C	O3'-P	-5.39	1.53	1.61
2	B	814	C	C5'-C4'	5.39	1.59	1.51
2	B	1378	A	C4'-O4'	-5.39	1.37	1.45
2	B	1835	G	O3'-P	-5.39	1.53	1.61
2	B	2104	C	P-O5'	-5.39	1.51	1.59
2	B	1647	U	O3'-P	-5.39	1.53	1.61
2	B	273	G	C1'-N9	-5.39	1.39	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	284	U	C5'-C4'	5.39	1.59	1.51
2	B	723	C	O3'-P	-5.39	1.53	1.61
2	B	1808	A	C4'-O4'	-5.39	1.37	1.45
11	Q	4	LYS	CA-C	-5.39	1.45	1.52
31	I	127	SER	C-N	5.39	1.40	1.33
2	B	2478	A	C4'-C3'	-5.38	1.44	1.52
2	B	2689	U	O3'-P	-5.38	1.53	1.61
10	P	24	THR	N-CA	-5.38	1.40	1.46
12	R	73	LYS	CA-CB	5.38	1.60	1.53
1	A	11	C	C3'-O3'	5.38	1.50	1.42
3	0	10	ARG	CD-NE	5.38	1.53	1.46
16	2	21	ALA	C-O	-5.38	1.17	1.24
16	2	44	ARG	CA-C	-5.38	1.45	1.52
2	B	151	C	O3'-P	-5.38	1.53	1.61
2	B	1026	G	C1'-N9	-5.38	1.38	1.47
2	B	1207	C	C1'-N1	5.38	1.56	1.48
2	B	2723	C	C4'-C3'	5.38	1.60	1.52
4	K	6	THR	CA-C	-5.38	1.45	1.52
11	Q	92	LYS	N-CA	5.38	1.53	1.46
27	C	238	ASN	CA-CB	5.38	1.61	1.53
29	G	3	VAL	CA-C	-5.38	1.44	1.52
2	B	1274	A	C5'-C4'	-5.38	1.43	1.51
2	B	1275	A	C1'-N9	-5.38	1.39	1.48
2	B	1129	A	C4'-O4'	-5.38	1.37	1.45
2	B	1642	G	C1'-N9	-5.38	1.39	1.48
2	B	2525	G	O3'-P	-5.38	1.53	1.61
5	L	94	THR	CA-C	-5.38	1.45	1.52
14	D	150	GLN	CA-C	-5.38	1.45	1.52
22	3	9	ARG	N-CA	-5.38	1.39	1.46
2	B	376	G	C1'-N9	-5.38	1.39	1.48
2	B	1144	A	C4'-O4'	-5.38	1.37	1.45
2	B	2530	A	C2'-C1'	-5.38	1.45	1.53
23	5	187	GLU	C-N	5.38	1.40	1.33
2	B	60	G	P-O5'	-5.37	1.51	1.59
2	B	133	U	C2'-C1'	-5.37	1.45	1.53
2	B	1404	C	C2'-C1'	-5.37	1.45	1.53
2	B	2707	U	C3'-C2'	-5.37	1.44	1.52
2	B	2819	G	C1'-N9	-5.37	1.39	1.48
14	D	5	VAL	CA-CB	-5.37	1.47	1.54
27	C	77	VAL	CA-CB	5.37	1.60	1.54
2	B	739	A	C4'-O4'	5.37	1.53	1.45
2	B	2389	G	C4'-C3'	-5.37	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2639	A	N7-C5	-5.37	1.28	1.39
9	O	113	ALA	N-CA	-5.37	1.39	1.46
27	C	216	ARG	C-O	-5.37	1.16	1.24
2	B	2862	G	C5'-C4'	5.37	1.59	1.51
9	O	109	ALA	CA-C	-5.37	1.45	1.52
20	E	72	SER	C-N	5.37	1.39	1.34
2	B	2258	C	C3'-C2'	-5.37	1.44	1.52
25	7	30	HIS	ND1-CE1	5.37	1.38	1.32
2	B	108	G	O3'-P	-5.37	1.53	1.61
2	B	158	U	C2'-C1'	-5.37	1.45	1.53
2	B	600	G	C2-N3	5.37	1.43	1.32
2	B	1211	C	O5'-C5'	5.37	1.50	1.42
2	B	1427	A	C4'-O4'	-5.37	1.37	1.45
9	O	31	THR	C-N	-5.37	1.28	1.34
17	U	70	ALA	CA-C	-5.37	1.45	1.52
30	H	97	ARG	N-CA	-5.37	1.39	1.46
2	B	992	C	C5'-C4'	5.36	1.59	1.51
2	B	1817	G	C2'-C1'	-5.36	1.45	1.53
2	B	2622	U	C2'-C1'	-5.36	1.45	1.53
9	O	110	ALA	CA-C	-5.36	1.46	1.52
24	6	28	ARG	CD-NE	5.36	1.53	1.46
2	B	2776	A	C3'-O3'	-5.36	1.35	1.43
2	B	1312	U	C2'-O2'	-5.36	1.33	1.41
3	0	50	VAL	N-CA	-5.36	1.40	1.46
5	L	34	GLY	C-N	5.36	1.40	1.33
8	N	15	SER	CA-C	-5.36	1.45	1.52
17	U	72	PHE	C-N	5.36	1.41	1.33
23	5	185	LEU	CA-C	-5.36	1.46	1.52
27	C	89	ASN	C-N	5.36	1.38	1.33
2	B	1814	G	C2'-C1'	-5.36	1.45	1.53
2	B	962	G	N7-C5	-5.36	1.28	1.39
2	B	1419	A	C2'-C1'	-5.36	1.45	1.53
2	B	2284	A	C2'-C1'	-5.36	1.45	1.53
2	B	2639	A	O3'-P	-5.36	1.53	1.61
29	G	165	ASP	C-N	5.36	1.41	1.33
2	B	16	C	O3'-P	-5.36	1.53	1.61
2	B	761	A	O5'-C5'	5.36	1.50	1.42
2	B	1422	G	C1'-N9	-5.36	1.40	1.48
2	B	2821	A	N7-C5	-5.36	1.28	1.39
19	X	8	VAL	N-CA	-5.36	1.40	1.46
20	E	162	ARG	C-O	-5.36	1.18	1.24
20	E	168	ASP	C-N	5.36	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	5	33	LEU	CA-C	-5.36	1.45	1.52
2	B	110	G	C4'-C3'	5.35	1.60	1.52
2	B	570	G	C4'-O4'	-5.35	1.37	1.45
2	B	625	G	C2-N3	5.35	1.43	1.32
20	E	104	ALA	CA-C	-5.35	1.46	1.52
2	B	755	U	P-O5'	-5.35	1.51	1.59
2	B	1310	G	O3'-P	-5.35	1.53	1.61
2	B	1429	G	C5'-C4'	5.35	1.59	1.51
2	B	2135	A	C5'-C4'	5.35	1.59	1.51
9	O	54	VAL	CA-C	-5.35	1.46	1.52
2	B	1821	A	P-O5'	-5.35	1.51	1.59
2	B	1998	A	P-O5'	-5.35	1.51	1.59
2	B	2386	A	P-O5'	-5.35	1.51	1.59
18	W	60	VAL	N-CA	-5.35	1.39	1.46
20	E	119	ILE	CB-CG1	5.35	1.64	1.53
20	E	178	VAL	C-N	5.35	1.41	1.33
23	5	97	MET	N-CA	-5.35	1.39	1.46
28	F	137	PHE	CG-CD1	5.35	1.50	1.38
2	B	2234	G	C5'-C4'	5.35	1.59	1.51
5	L	14	LYS	CA-C	-5.35	1.46	1.52
12	R	70	GLU	N-CA	-5.35	1.39	1.46
18	W	38	LEU	CA-C	-5.35	1.46	1.52
27	C	173	LEU	N-CA	-5.35	1.39	1.45
2	B	1989	G	P-O5'	-5.35	1.51	1.59
5	L	5	THR	CA-CB	5.35	1.62	1.53
8	N	26	GLY	CA-C	-5.35	1.45	1.52
8	N	90	ARG	CD-NE	5.35	1.53	1.46
2	B	507	A	O5'-C5'	5.34	1.50	1.42
2	B	950	G	C2'-C1'	-5.34	1.45	1.53
2	B	2143	C	P-O5'	-5.34	1.51	1.59
15	T	37	ASP	N-CA	-5.34	1.39	1.46
19	X	394	ASP	N-CA	-5.34	1.39	1.46
27	C	166	ARG	CA-CB	5.34	1.61	1.53
2	B	187	G	O3'-P	-5.34	1.53	1.61
14	D	5	VAL	C-N	5.34	1.41	1.33
4	K	3	GLN	CA-C	-5.34	1.45	1.52
5	L	87	GLY	C-O	-5.34	1.19	1.23
2	B	376	G	P-O5'	-5.34	1.51	1.59
5	L	85	VAL	CA-C	-5.34	1.44	1.52
11	Q	55	GLN	N-CA	-5.34	1.39	1.46
19	X	137	LEU	N-CA	-5.34	1.39	1.45
2	B	233	A	O3'-P	-5.33	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2015	A	P-O5'	-5.33	1.51	1.59
5	L	124	GLY	N-CA	-5.33	1.37	1.45
2	B	31	C	O4'-C1'	-5.33	1.33	1.41
2	B	142	A	P-O5'	-5.33	1.51	1.59
2	B	775	G	C4'-C3'	5.33	1.61	1.53
2	B	2622	U	C4'-O4'	-5.33	1.37	1.45
7	M	76	LYS	CA-CB	5.33	1.61	1.53
20	E	40	ARG	CZ-NH1	5.33	1.40	1.32
2	B	673	C	C4'-O4'	-5.33	1.37	1.45
2	B	1707	G	C3'-C2'	-5.33	1.44	1.52
2	B	2546	U	O3'-P	-5.33	1.53	1.61
2	B	2692	G	C3'-O3'	5.33	1.50	1.42
2	B	2879	A	O4'-C1'	-5.33	1.33	1.42
19	X	261	ARG	CD-NE	5.33	1.53	1.46
2	B	921	C	C4'-O4'	-5.33	1.37	1.45
2	B	2215	C	C5'-C4'	5.33	1.59	1.51
4	K	110	GLU	N-CA	-5.33	1.39	1.46
19	X	98	ALA	C-N	5.33	1.41	1.33
5	L	76	GLU	N-CA	-5.33	1.40	1.46
2	B	454	A	P-O5'	-5.33	1.51	1.59
2	B	954	G	C4'-C3'	5.33	1.60	1.52
2	B	1964	G	C2'-C1'	-5.33	1.45	1.53
2	B	2716	C	C2'-C1'	-5.33	1.45	1.53
2	B	2768	U	C3'-C2'	-5.33	1.44	1.52
25	7	40	LYS	N-CA	-5.33	1.40	1.46
27	C	62	ARG	CA-C	-5.33	1.46	1.52
1	A	83	G	O3'-P	-5.32	1.53	1.61
2	B	48	G	C1'-N9	-5.32	1.40	1.48
2	B	2323	G	C2'-C1'	-5.32	1.45	1.53
23	5	101	ALA	N-CA	-5.32	1.40	1.46
24	6	12	ARG	CZ-NH2	5.32	1.40	1.33
2	B	952	G	C1'-N9	5.32	1.55	1.48
2	B	2395	C	O3'-P	-5.32	1.53	1.61
1	A	31	C	O3'-P	-5.32	1.53	1.61
1	A	35	C	C1'-N1	5.32	1.56	1.48
2	B	790	U	C4'-C3'	-5.32	1.44	1.52
2	B	1065	U	P-O5'	-5.32	1.51	1.59
2	B	1493	C	C4'-C3'	-5.32	1.44	1.52
2	B	1834	U	O3'-P	-5.32	1.53	1.61
20	E	17	THR	C-O	5.32	1.30	1.23
20	E	23	PHE	CA-CB	5.32	1.59	1.53
20	E	70	SER	CA-CB	5.32	1.63	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	7	61	LEU	N-CA	-5.32	1.38	1.46
2	B	326	G	C2'-C1'	-5.32	1.45	1.53
2	B	521	U	O3'-P	-5.32	1.53	1.61
2	B	1561	C	C1'-N1	-5.32	1.40	1.48
2	B	2285	C	C2'-C1'	-5.32	1.45	1.53
2	B	2470	G	C2'-C1'	-5.32	1.45	1.53
2	B	2803	G	C2'-C1'	-5.32	1.45	1.53
28	F	72	SER	C-N	5.32	1.39	1.33
28	F	111	ARG	CD-NE	5.32	1.53	1.46
29	G	44	HIS	N-CA	-5.32	1.39	1.45
2	B	476	G	O3'-P	-5.32	1.53	1.61
2	B	1272	A	C1'-N9	-5.32	1.39	1.47
2	B	1303	G	O3'-P	-5.32	1.53	1.61
2	B	1700	A	C3'-C2'	-5.32	1.44	1.52
2	B	2611	C	C4'-C3'	5.32	1.60	1.52
2	B	2620	C	C4'-O4'	-5.32	1.37	1.45
14	D	94	GLN	C-N	5.31	1.40	1.33
29	G	23	ILE	CA-CB	5.31	1.60	1.53
2	B	226	A	C2'-C1'	-5.31	1.45	1.53
2	B	757	G	C3'-C2'	-5.31	1.44	1.52
2	B	1013	C	O3'-P	-5.31	1.53	1.61
2	B	1833	C	O5'-C5'	5.31	1.50	1.42
19	X	318	ILE	C-O	-5.31	1.18	1.24
22	3	20	ALA	N-CA	-5.31	1.39	1.46
2	B	1435	G	O3'-P	-5.31	1.53	1.61
2	B	531	C	O4'-C1'	5.31	1.50	1.42
2	B	1148	U	O3'-P	-5.31	1.53	1.61
2	B	2461	A	P-O5'	-5.31	1.51	1.59
5	L	128	THR	CA-C	-5.31	1.45	1.53
14	D	139	SER	N-CA	-5.31	1.39	1.46
20	E	55	SER	C-O	-5.31	1.17	1.24
1	A	110	C	C5'-C4'	5.31	1.59	1.51
2	B	1407	G	P-O5'	-5.31	1.51	1.59
2	B	2540	C	C5'-C4'	5.31	1.59	1.51
13	S	43	ALA	N-CA	-5.31	1.39	1.46
19	X	250	ARG	CZ-NH2	5.31	1.40	1.33
30	H	31	VAL	N-CA	-5.31	1.40	1.46
32	J	27	ARG	NE-CZ	5.31	1.38	1.33
2	B	244	A	P-O5'	-5.30	1.51	1.59
2	B	577	G	C1'-N9	-5.30	1.40	1.48
2	B	894	U	C5'-C4'	5.30	1.59	1.51
2	B	2231	U	C1'-N1	-5.30	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2782	G	O4'-C1'	-5.30	1.33	1.41
2	B	167	A	C5'-C4'	5.30	1.59	1.51
2	B	872	U	C2'-C1'	-5.30	1.45	1.53
2	B	913	U	C5'-C4'	-5.30	1.43	1.51
2	B	1122	G	C5'-C4'	5.30	1.59	1.51
5	L	57	LEU	C-O	-5.30	1.17	1.24
32	J	115	GLY	CA-C	-5.30	1.44	1.51
10	P	102	ARG	CD-NE	5.30	1.53	1.46
19	X	350	VAL	CA-C	-5.30	1.46	1.52
20	E	53	THR	N-CA	-5.30	1.39	1.46
8	N	118	ARG	NE-CZ	5.30	1.38	1.33
16	2	16	LEU	CA-CB	5.30	1.61	1.53
19	X	125	PRO	CA-C	5.30	1.57	1.52
11	Q	29	ARG	NE-CZ	5.30	1.38	1.33
2	B	170	U	P-O5'	-5.30	1.51	1.59
2	B	402	A	C2'-C1'	-5.30	1.45	1.53
2	B	698	C	C4'-O4'	-5.30	1.37	1.45
2	B	1725	U	C2'-O2'	-5.30	1.34	1.42
2	B	2434	A	C5'-C4'	5.30	1.59	1.51
2	B	2728	U	C2'-C1'	-5.30	1.45	1.53
11	Q	93	ILE	C-O	-5.30	1.18	1.24
17	U	17	ASP	C-N	5.30	1.41	1.33
2	B	290	U	C4'-C3'	-5.29	1.44	1.52
2	B	554	U	C4'-C3'	-5.29	1.44	1.52
2	B	2777	G	C3'-C2'	-5.29	1.44	1.52
13	S	52	GLU	N-CA	-5.29	1.39	1.46
29	G	132	LEU	CA-C	-5.29	1.45	1.52
2	B	352	A	C2'-C1'	-5.29	1.45	1.53
2	B	1809	A	O4'-C1'	-5.29	1.33	1.41
2	B	595	C	O4'-C1'	5.29	1.49	1.41
2	B	815	C	P-O5'	-5.29	1.51	1.59
2	B	1089	A	C4'-O4'	-5.29	1.38	1.45
2	B	2593	U	C1'-N1	-5.29	1.40	1.48
2	B	2700	A	C1'-N9	-5.29	1.40	1.48
2	B	2821	A	O3'-P	-5.29	1.53	1.61
12	R	29	THR	N-CA	-5.29	1.39	1.46
12	R	70	GLU	CA-C	-5.29	1.46	1.52
18	W	85	LYS	C-N	5.29	1.40	1.33
19	X	75	SER	CA-C	-5.29	1.46	1.52
2	B	711	G	C3'-O3'	5.29	1.50	1.42
2	B	1821	A	O3'-P	-5.29	1.53	1.61
2	B	1822	C	C1'-N1	-5.29	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2350	C	C2'-C1'	-5.29	1.45	1.53
11	Q	10	ARG	CZ-NH1	5.29	1.40	1.32
19	X	40	ARG	C-N	5.29	1.41	1.33
21	Y	48	ALA	CA-C	-5.29	1.45	1.52
28	F	132	ARG	CD-NE	5.29	1.53	1.46
2	B	2608	G	C5'-C4'	5.29	1.59	1.51
2	B	339	U	C4'-O4'	-5.29	1.37	1.45
2	B	676	A	P-O5'	-5.29	1.51	1.59
5	L	31	GLY	CA-C	-5.29	1.44	1.51
19	X	109	ARG	CD-NE	5.29	1.53	1.46
23	5	192	LEU	C-N	5.29	1.41	1.33
27	C	109	LEU	CA-C	-5.29	1.46	1.52
27	C	132	ARG	N-CA	5.29	1.53	1.46
31	I	139	VAL	C-N	5.29	1.41	1.33
32	J	116	ARG	NE-CZ	5.29	1.38	1.33
2	B	391	A	C4'-C3'	-5.28	1.44	1.52
2	B	657	U	C1'-N1	-5.28	1.40	1.48
2	B	2012	G	C4'-O4'	-5.28	1.37	1.45
2	B	2747	G	O3'-P	-5.28	1.53	1.61
28	F	120	SER	N-CA	-5.28	1.39	1.46
2	B	672	C	O3'-P	-5.28	1.53	1.61
1	A	7	G	O3'-P	-5.28	1.53	1.61
2	B	52	A	O3'-P	-5.28	1.53	1.61
2	B	213	A	C2'-C1'	-5.28	1.45	1.53
2	B	492	A	O5'-C5'	5.28	1.50	1.42
2	B	657	U	C4'-O4'	-5.28	1.37	1.45
2	B	775	G	O3'-P	-5.28	1.53	1.61
2	B	1544	A	C3'-C2'	-5.28	1.44	1.52
2	B	2315	G	C2'-C1'	-5.28	1.45	1.53
30	H	110	VAL	N-CA	-5.28	1.39	1.46
2	B	1267	U	O5'-C5'	5.28	1.50	1.42
22	3	52	LYS	CA-C	-5.28	1.46	1.52
2	B	747	U	C3'-C2'	-5.28	1.44	1.52
2	B	1906	G	C2-N3	5.28	1.43	1.32
6	1	44	LYS	N-CA	-5.28	1.40	1.46
9	O	15	ARG	CA-C	-5.28	1.45	1.52
19	X	68	GLU	CA-C	-5.28	1.46	1.52
2	B	2182	U	O4'-C1'	5.27	1.49	1.41
19	X	416	ASN	C-N	5.27	1.39	1.33
23	5	162	ARG	CD-NE	5.27	1.53	1.46
2	B	1191	G	O3'-P	-5.27	1.53	1.61
2	B	2098	U	C2'-C1'	-5.27	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2185	U	C1'-N1	-5.27	1.40	1.48
2	B	2352	A	O3'-P	-5.27	1.53	1.61
22	3	9	ARG	NE-CZ	5.27	1.38	1.33
27	C	52	HIS	CG-ND1	-5.27	1.32	1.38
27	C	164	VAL	C-O	-5.27	1.18	1.23
2	B	617	G	C3'-O3'	5.27	1.50	1.42
2	B	2408	U	C3'-C2'	-5.27	1.44	1.52
1	A	57	A	C2'-O2'	-5.27	1.34	1.42
2	B	2135	A	C3'-C2'	5.27	1.60	1.52
2	B	2464	G	C2'-C1'	-5.27	1.45	1.53
2	B	2840	C	C4-N4	5.27	1.44	1.33
23	5	4	LEU	CA-C	-5.27	1.45	1.52
31	I	41	PHE	N-CA	5.27	1.52	1.46
2	B	682	G	C2'-C1'	-5.27	1.45	1.53
2	B	852	U	C3'-O3'	5.27	1.50	1.42
2	B	856	G	C3'-C2'	-5.27	1.44	1.52
2	B	2298	A	C2'-C1'	-5.27	1.45	1.53
2	B	2656	U	C2'-O2'	-5.27	1.34	1.42
2	B	2817	U	C2'-C1'	-5.27	1.45	1.53
13	S	82	MET	CA-C	-5.27	1.46	1.52
13	S	88	ARG	NE-CZ	5.27	1.38	1.33
14	D	82	PHE	CA-C	-5.27	1.47	1.53
20	E	183	PHE	CA-C	-5.27	1.46	1.52
2	B	916	G	C1'-N9	-5.26	1.40	1.48
2	B	1308	A	N9-C8	-5.26	1.27	1.37
2	B	1476	U	P-O5'	-5.26	1.51	1.59
2	B	1574	C	C1'-N1	-5.26	1.40	1.48
2	B	1900	A	C3'-C2'	5.26	1.60	1.52
2	B	2043	C	C2'-C1'	-5.26	1.45	1.53
2	B	2059	A	C4'-C3'	5.26	1.60	1.52
2	B	2368	C	O3'-P	-5.26	1.53	1.61
2	B	2409	G	C3'-C2'	-5.26	1.44	1.52
13	S	18	ARG	CA-C	-5.26	1.45	1.52
14	D	24	VAL	N-CA	-5.26	1.40	1.46
19	X	393	GLU	CA-C	-5.26	1.46	1.52
2	B	1551	A	C2'-C1'	-5.26	1.45	1.53
14	D	126	ASN	CA-C	-5.26	1.46	1.52
2	B	1545	A	O3'-P	-5.26	1.53	1.61
2	B	1665	A	C1'-N9	-5.26	1.40	1.48
2	B	1923	U	C1'-N1	5.26	1.56	1.48
2	B	2541	A	C2'-C1'	-5.26	1.45	1.53
32	J	67	ASN	N-CA	-5.26	1.42	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	14	U	P-O5'	-5.26	1.51	1.59
1	A	109	A	C4'-O4'	-5.26	1.37	1.45
2	B	50	U	O4'-C1'	5.26	1.49	1.41
2	B	362	A	C2'-O2'	-5.26	1.34	1.42
2	B	2269	G	C4'-C3'	-5.26	1.44	1.52
7	M	103	TYR	CA-C	-5.26	1.45	1.53
7	M	132	THR	N-CA	5.26	1.52	1.46
15	T	30	ILE	CA-CB	-5.26	1.51	1.55
2	B	1952	A	O5'-C5'	5.26	1.50	1.42
19	X	371	ALA	CA-C	-5.26	1.46	1.52
21	Y	49	ASN	CA-C	-5.26	1.45	1.52
2	B	10	A	C5'-C4'	5.26	1.59	1.51
2	B	1234	U	O5'-C5'	-5.26	1.34	1.42
2	B	1955	U	C2'-C1'	-5.26	1.45	1.53
2	B	2107	G	C2'-C1'	-5.26	1.45	1.53
3	O	36	ARG	C-N	5.26	1.40	1.33
3	O	53	LYS	N-CA	-5.26	1.39	1.46
28	F	9	ASP	CA-C	-5.26	1.45	1.52
2	B	2493	U	O3'-P	-5.25	1.53	1.61
2	B	2644	G	O3'-P	-5.25	1.53	1.61
17	U	84	PHE	CA-C	-5.25	1.46	1.52
2	B	295	G	C2'-C1'	-5.25	1.45	1.53
2	B	1943	U	C2-N3	5.25	1.48	1.37
2	B	2662	A	C1'-N9	5.25	1.55	1.48
2	B	2735	G	C3'-O3'	5.25	1.50	1.42
9	O	85	LYS	N-CA	-5.25	1.39	1.46
23	5	53	ARG	CZ-NH1	5.25	1.40	1.32
27	C	222	THR	C-O	-5.25	1.17	1.24
31	I	20	SER	C-N	5.25	1.39	1.33
2	B	130	C	O3'-P	-5.25	1.53	1.61
2	B	1895	C	O5'-C5'	-5.25	1.34	1.42
2	B	2377	A	C1'-N9	-5.25	1.40	1.48
7	M	11	LYS	C-N	5.25	1.37	1.33
14	D	96	ILE	C-O	-5.25	1.19	1.24
2	B	1602	U	C2'-C1'	-5.25	1.45	1.53
7	M	49	ALA	C-O	-5.25	1.17	1.24
31	I	100	ILE	C-N	5.25	1.40	1.33
2	B	1781	U	C4-C5	5.25	1.54	1.43
2	B	2297	A	O3'-P	-5.25	1.53	1.61
19	X	403	ARG	NE-CZ	5.25	1.38	1.33
1	A	88	C	C4'-C3'	5.25	1.60	1.52
2	B	643	A	C1'-N9	-5.25	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	652	U	C5'-C4'	5.25	1.59	1.51
2	B	1983	G	N7-C5	-5.25	1.28	1.39
2	B	2678	C	O3'-P	-5.25	1.53	1.61
10	P	73	PHE	CA-C	-5.25	1.46	1.52
13	S	44	ALA	CA-C	-5.25	1.46	1.52
27	C	116	GLN	C-N	5.24	1.41	1.33
23	5	162	ARG	NE-CZ	5.24	1.38	1.33
2	B	336	C	C3'-O3'	-5.24	1.34	1.42
2	B	633	A	P-O5'	-5.24	1.51	1.59
2	B	745	G	C4'-C3'	-5.24	1.44	1.52
29	G	107	GLY	N-CA	-5.24	1.37	1.45
2	B	331	C	C1'-N1	5.24	1.55	1.47
2	B	727	A	C1'-N9	-5.24	1.40	1.48
8	N	2	ARG	CA-C	-5.24	1.46	1.52
8	N	11	ASN	C-N	5.24	1.41	1.33
15	T	2	ILE	CA-C	-5.24	1.46	1.52
31	I	82	ALA	N-CA	5.24	1.52	1.46
2	B	2391	G	C3'-O3'	5.24	1.51	1.43
19	X	207	ILE	N-CA	-5.24	1.39	1.46
23	5	147	PRO	N-CA	-5.24	1.41	1.47
28	F	96	TRP	CA-C	-5.24	1.45	1.52
2	B	395	U	C2'-C1'	-5.24	1.45	1.53
2	B	2460	U	C4-C5	5.24	1.54	1.43
2	B	2750	A	C4'-O4'	-5.24	1.38	1.45
8	N	45	ARG	CZ-NH2	5.24	1.40	1.33
21	Y	39	GLN	C-N	5.24	1.41	1.33
30	H	145	ASN	CA-C	-5.24	1.46	1.53
2	B	1580	A	O4'-C1'	5.23	1.49	1.41
2	B	2351	G	C1'-N9	-5.23	1.40	1.48
20	E	108	ILE	C-O	-5.23	1.17	1.24
2	B	897	C	C2'-O2'	-5.23	1.34	1.42
2	B	1802	A	C1'-N9	-5.23	1.40	1.48
2	B	1820	U	C2'-C1'	-5.23	1.45	1.53
2	B	2087	G	C3'-C2'	5.23	1.60	1.52
15	T	76	ARG	NE-CZ	5.23	1.38	1.33
26	8	33	HIS	N-CA	-5.23	1.39	1.46
27	C	230	PRO	N-CD	5.23	1.55	1.47
2	B	78	U	C3'-C2'	-5.23	1.45	1.52
2	B	320	A	C2'-C1'	-5.23	1.45	1.53
2	B	1190	G	C2'-C1'	-5.23	1.45	1.53
2	B	1345	C	O4'-C1'	5.23	1.49	1.41
2	B	1348	C	C4'-O4'	-5.23	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2576	G	P-O5'	-5.23	1.51	1.59
3	0	18	SER	CA-C	-5.23	1.46	1.52
5	L	109	LYS	CA-C	5.23	1.58	1.52
21	Y	13	ARG	CD-NE	5.23	1.53	1.46
2	B	367	G	P-O5'	-5.23	1.51	1.59
2	B	2021	C	C1'-N1	-5.23	1.40	1.48
2	B	2497	A	O4'-C1'	-5.23	1.34	1.42
1	A	40	U	O4'-C1'	-5.23	1.34	1.42
2	B	525	U	C3'-C2'	-5.23	1.45	1.52
15	T	34	VAL	CA-CB	-5.23	1.48	1.54
2	B	356	G	O4'-C1'	-5.23	1.33	1.41
19	X	447	ASP	N-CA	-5.23	1.39	1.46
2	B	226	A	O3'-P	-5.22	1.53	1.61
2	B	320	A	C1'-N9	-5.22	1.40	1.48
2	B	1290	C	P-O5'	5.22	1.67	1.59
2	B	1610	A	O4'-C1'	-5.22	1.34	1.42
2	B	1110	G	C4'-O4'	-5.22	1.38	1.45
2	B	2597	G	P-O5'	-5.22	1.51	1.59
12	R	12	HIS	CG-ND1	5.22	1.44	1.38
14	D	37	VAL	C-O	-5.22	1.18	1.23
22	3	10	SER	N-CA	-5.22	1.40	1.46
2	B	1243	C	O3'-P	-5.22	1.53	1.61
3	0	10	ARG	C-N	-5.22	1.26	1.33
19	X	209	GLY	N-CA	-5.22	1.40	1.45
28	F	137	PHE	N-CA	-5.22	1.38	1.46
2	B	33	C	C1'-N1	5.22	1.55	1.47
2	B	1135	C	C1'-N1	-5.22	1.40	1.48
2	B	2232	C	C4'-C3'	5.22	1.60	1.52
2	B	2378	A	C2'-C1'	-5.22	1.45	1.53
18	W	11	GLU	CA-C	-5.22	1.46	1.52
19	X	122	GLY	N-CA	-5.22	1.40	1.46
19	X	312	SER	CA-C	-5.22	1.45	1.52
2	B	1363	C	O3'-P	-5.22	1.53	1.61
2	B	2439	A	C3'-C2'	5.22	1.60	1.52
15	T	51	PHE	CA-C	-5.22	1.45	1.52
2	B	784	G	P-O5'	-5.21	1.51	1.59
2	B	1182	G	C2'-C1'	-5.21	1.45	1.53
5	L	88	GLY	C-O	-5.21	1.17	1.23
23	5	107	GLY	C-N	5.21	1.40	1.33
2	B	506	G	C2'-C1'	-5.21	1.45	1.53
2	B	692	C	O5'-C5'	5.21	1.50	1.42
2	B	1659	G	C5'-C4'	5.21	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	T	68	LYS	CA-CB	5.21	1.59	1.54
2	B	11	C	C2'-C1'	5.21	1.61	1.53
2	B	272	A	C6-N6	5.21	1.44	1.33
2	B	1837	C	O3'-P	-5.21	1.53	1.61
2	B	1946	U	C2'-C1'	-5.21	1.45	1.53
2	B	2076	U	C3'-C2'	-5.21	1.45	1.52
7	M	99	GLY	C-N	5.21	1.40	1.33
19	X	244	PRO	N-CD	-5.21	1.40	1.47
2	B	455	C	C4'-C3'	-5.21	1.44	1.52
13	S	25	ARG	CD-NE	5.21	1.53	1.46
2	B	453	A	C5'-C4'	5.21	1.59	1.51
2	B	1258	U	O5'-C5'	5.21	1.50	1.42
2	B	1277	G	C3'-C2'	-5.21	1.45	1.52
2	B	1854	A	O4'-C1'	-5.21	1.33	1.41
2	B	2152	G	O3'-P	-5.21	1.53	1.61
2	B	2204	G	C5'-C4'	5.21	1.59	1.51
2	B	2386	A	O5'-C5'	-5.21	1.34	1.42
2	B	1516	G	C4'-O4'	5.21	1.53	1.45
2	B	2874	C	C4'-O4'	-5.21	1.37	1.45
2	B	902	C	C1'-N1	-5.21	1.40	1.48
12	R	50	GLY	C-N	5.21	1.39	1.33
2	B	1665	A	C2'-C1'	-5.20	1.45	1.53
2	B	2853	C	C5'-C4'	5.20	1.59	1.51
25	7	55	GLY	CA-C	-5.20	1.44	1.51
27	C	52	HIS	CB-CG	5.20	1.57	1.50
28	F	59	ILE	N-CA	-5.20	1.39	1.46
2	B	1500	G	C2'-C1'	-5.20	1.45	1.53
19	X	433	SER	N-CA	-5.20	1.40	1.46
2	B	725	G	P-O5'	-5.20	1.51	1.59
2	B	733	G	P-O5'	-5.20	1.51	1.59
2	B	907	G	O3'-P	-5.20	1.53	1.61
2	B	2014	A	O3'-P	-5.20	1.53	1.61
2	B	2718	G	C1'-N9	-5.20	1.40	1.48
8	N	82	GLU	CA-C	-5.20	1.47	1.52
24	6	2	LYS	CA-C	-5.20	1.46	1.53
31	I	86	LYS	CA-C	-5.20	1.46	1.52
11	Q	12	ARG	N-CA	-5.20	1.39	1.46
2	B	567	U	O4'-C1'	-5.20	1.33	1.41
2	B	586	A	C4'-O4'	-5.20	1.37	1.45
2	B	765	C	C5'-C4'	5.20	1.59	1.51
2	B	1713	A	O4'-C1'	5.20	1.49	1.42
20	E	150	THR	CA-CB	5.20	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	7	1	PRO	N-CA	5.20	1.54	1.47
2	B	42	A	C4'-C3'	5.20	1.60	1.52
2	B	1745	A	C2'-C1'	-5.20	1.45	1.53
2	B	2523	G	O4'-C1'	-5.20	1.33	1.41
11	Q	31	TYR	CA-C	-5.20	1.46	1.52
15	T	15	HIS	CD2-NE2	5.20	1.43	1.37
16	2	44	ARG	CZ-NH1	5.20	1.40	1.32
2	B	121	G	C4'-O4'	-5.19	1.37	1.45
2	B	863	A	P-O5'	-5.19	1.51	1.59
2	B	1156	A	C4'-O4'	-5.19	1.38	1.45
2	B	1402	U	P-O5'	-5.19	1.51	1.59
2	B	1505	A	C2'-O2'	-5.19	1.34	1.42
10	P	26	GLU	N-CA	-5.19	1.40	1.46
17	U	20	LYS	N-CA	-5.19	1.39	1.46
2	B	1733	G	O5'-C5'	5.19	1.50	1.42
2	B	2094	A	O3'-P	-5.19	1.53	1.61
2	B	2819	G	P-O5'	-5.19	1.51	1.59
27	C	98	GLY	N-CA	-5.19	1.37	1.45
2	B	206	U	C5'-C4'	5.19	1.59	1.51
2	B	1266	G	O4'-C1'	-5.19	1.34	1.42
2	B	1347	A	C2'-C1'	-5.19	1.45	1.53
2	B	1650	A	P-O5'	-5.19	1.51	1.59
8	N	61	ALA	C-O	-5.19	1.18	1.24
2	B	318	C	P-O5'	-5.19	1.51	1.59
2	B	1568	G	C4'-O4'	-5.19	1.37	1.45
20	E	136	GLN	C-N	5.19	1.40	1.33
1	A	49	C	O3'-P	-5.19	1.53	1.61
2	B	811	U	O3'-P	-5.19	1.53	1.61
2	B	885	C	C4'-O4'	5.19	1.53	1.45
2	B	1354	A	O5'-C5'	5.19	1.50	1.42
2	B	2659	G	C2'-C1'	-5.19	1.45	1.53
2	B	94	A	O4'-C1'	-5.18	1.33	1.41
2	B	1151	A	C1'-N9	-5.18	1.40	1.48
2	B	2767	C	C4'-O4'	5.18	1.53	1.45
19	X	208	VAL	CA-C	-5.18	1.46	1.52
20	E	102	ARG	NE-CZ	5.18	1.38	1.33
30	H	132	PHE	N-CA	-5.18	1.40	1.46
2	B	707	G	C2'-C1'	-5.18	1.45	1.53
2	B	1571	A	N3-C4	-5.18	1.24	1.34
19	X	117	ALA	N-CA	-5.18	1.40	1.46
2	B	2478	A	C4'-O4'	-5.18	1.37	1.45
29	G	68	ARG	CZ-NH2	5.18	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	989	G	O3'-P	-5.18	1.53	1.61
2	B	2599	G	O4'-C1'	5.18	1.49	1.41
12	R	87	GLN	C-N	5.18	1.36	1.33
27	C	228	ASP	CA-CB	5.18	1.61	1.53
2	B	1777	U	C3'-C2'	-5.18	1.45	1.52
2	B	2242	G	O3'-P	-5.18	1.53	1.61
14	D	70	LYS	N-CA	-5.18	1.39	1.46
15	T	36	LYS	CA-C	-5.18	1.46	1.52
27	C	101	ARG	C-O	-5.18	1.17	1.23
2	B	113	U	C4'-C3'	-5.18	1.44	1.52
2	B	203	A	C2'-C1'	-5.18	1.45	1.53
2	B	2300	C	P-O5'	-5.18	1.51	1.59
19	X	20	ASN	N-CA	5.18	1.52	1.46
29	G	161	VAL	C-O	-5.18	1.19	1.24
2	B	399	U	C4'-O4'	-5.17	1.37	1.45
2	B	462	C	O3'-P	-5.17	1.53	1.61
2	B	1054	A	C3'-C2'	-5.17	1.45	1.52
2	B	1271	G	P-O5'	-5.17	1.51	1.59
2	B	2621	G	C4'-C3'	-5.17	1.44	1.52
5	L	60	ARG	CD-NE	5.17	1.53	1.46
6	1	31	GLN	CA-C	-5.17	1.46	1.52
17	U	68	ASN	C-N	5.17	1.40	1.33
18	W	61	LEU	N-CA	-5.17	1.40	1.45
24	6	26	ASN	N-CA	-5.17	1.40	1.46
27	C	209	ALA	N-CA	-5.17	1.39	1.46
2	B	1226	A	N7-C5	-5.17	1.28	1.39
2	B	1360	G	N9-C4	-5.17	1.27	1.38
19	X	454	ARG	C-N	5.17	1.41	1.33
28	F	74	ALA	N-CA	-5.17	1.39	1.46
14	D	152	PRO	N-CA	-5.17	1.40	1.47
21	Y	15	SER	CA-C	-5.17	1.46	1.52
22	3	14	MET	CA-C	-5.17	1.46	1.52
2	B	49	A	N7-C5	-5.17	1.28	1.39
2	B	184	C	P-O5'	-5.17	1.51	1.59
2	B	381	G	C2'-O2'	-5.17	1.34	1.42
2	B	1124	G	C2'-C1'	-5.17	1.45	1.53
4	K	112	PHE	N-CA	-5.17	1.41	1.46
5	L	130	GLY	CA-C	-5.17	1.44	1.51
6	1	22	LEU	CA-C	-5.17	1.46	1.52
32	J	83	GLY	N-CA	-5.17	1.37	1.45
2	B	409	G	O3'-P	-5.17	1.53	1.61
2	B	463	G	P-O5'	-5.17	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1094	U	C1'-N1	5.17	1.56	1.48
2	B	1762	A	C5'-C4'	5.17	1.59	1.51
11	Q	63	ARG	CA-C	-5.17	1.45	1.52
2	B	944	C	C3'-C2'	-5.17	1.45	1.52
22	3	19	ASP	CA-C	-5.17	1.46	1.52
2	B	810	U	C5'-C4'	-5.16	1.43	1.51
2	B	831	G	C3'-O3'	5.16	1.49	1.42
2	B	954	G	C2'-C1'	-5.16	1.45	1.53
2	B	1629	U	C4'-O4'	-5.16	1.37	1.45
2	B	1805	A	C3'-O3'	5.16	1.49	1.42
2	B	2071	A	C4'-C3'	5.16	1.60	1.52
32	J	121	LYS	CA-C	-5.16	1.45	1.52
2	B	498	G	O3'-P	-5.16	1.53	1.61
2	B	764	A	C5'-C4'	5.16	1.59	1.51
2	B	646	U	C2'-C1'	-5.16	1.45	1.53
2	B	911	A	C1'-N9	-5.16	1.40	1.48
2	B	1596	A	C6-N1	5.16	1.45	1.35
2	B	1605	C	C2'-C1'	-5.16	1.45	1.53
2	B	2468	A	C2'-C1'	-5.16	1.45	1.53
2	B	2601	C	C4-N4	5.16	1.44	1.33
2	B	2752	C	O3'-P	-5.16	1.53	1.61
19	X	24	ARG	CD-NE	5.16	1.53	1.46
32	J	120	ARG	NE-CZ	5.16	1.38	1.33
2	B	243	U	C4'-C3'	-5.16	1.44	1.52
2	B	508	A	P-O5'	5.16	1.67	1.59
2	B	1146	C	P-O5'	-5.16	1.52	1.59
7	M	33	LEU	CA-CB	5.16	1.61	1.53
28	F	147	ARG	C-N	5.16	1.40	1.33
2	B	2541	A	C1'-N9	-5.16	1.40	1.48
14	D	86	GLU	CA-C	-5.16	1.46	1.52
29	G	108	PHE	C-N	5.16	1.40	1.33
2	B	1299	G	O3'-P	-5.16	1.53	1.61
2	B	1914	C	C5'-C4'	5.16	1.58	1.51
7	M	59	ARG	NE-CZ	5.16	1.38	1.33
19	X	392	VAL	CA-CB	5.16	1.61	1.54
2	B	82	U	C1'-N1	-5.15	1.40	1.48
4	K	106	GLU	CA-CB	5.15	1.62	1.53
2	B	828	U	O4'-C1'	-5.15	1.34	1.42
2	B	1597	A	P-O5'	-5.15	1.52	1.59
2	B	1822	C	O4'-C1'	-5.15	1.33	1.41
2	B	2395	C	O5'-C5'	5.15	1.50	1.42
5	L	129	LYS	N-CA	-5.15	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	M	133	LYS	N-CA	-5.15	1.39	1.45
13	S	11	ARG	NE-CZ	5.15	1.38	1.33
2	B	346	A	C2'-C1'	-5.15	1.45	1.53
2	B	1690	A	C5'-C4'	5.15	1.58	1.51
3	O	73	ARG	CD-NE	5.15	1.53	1.46
8	N	5	LYS	CA-C	-5.15	1.46	1.52
8	N	69	ARG	CZ-NH2	5.15	1.40	1.33
29	G	54	ARG	NE-CZ	5.15	1.38	1.33
2	B	2542	A	C5'-C4'	5.15	1.59	1.51
10	P	100	ARG	N-CA	-5.15	1.40	1.46
11	Q	43	GLN	N-CA	-5.15	1.40	1.46
2	B	373	U	C4'-C3'	5.15	1.60	1.52
2	B	1061	U	C2'-C1'	-5.15	1.45	1.53
2	B	2025	C	C2'-C1'	-5.15	1.45	1.53
13	S	86	MET	CA-C	-5.15	1.47	1.52
2	B	436	C	C2'-C1'	-5.14	1.45	1.53
2	B	568	U	C2'-C1'	-5.14	1.45	1.53
2	B	1026	G	C4'-C3'	5.14	1.60	1.53
2	B	1839	G	C5'-C4'	5.14	1.58	1.51
2	B	797	G	C2'-O2'	-5.14	1.34	1.42
6	1	43	LEU	N-CA	-5.14	1.40	1.46
11	Q	50	ARG	N-CA	-5.14	1.39	1.46
11	Q	79	ILE	C-O	-5.14	1.18	1.24
19	X	403	ARG	CA-C	-5.14	1.46	1.52
20	E	30	GLN	N-CA	-5.14	1.39	1.46
28	F	82	TYR	CA-C	-5.14	1.46	1.52
2	B	1389	G	C4'-C3'	-5.14	1.44	1.52
9	O	114	GLY	N-CA	-5.14	1.38	1.45
1	A	32	U	O4'-C1'	-5.14	1.33	1.41
2	B	1024	G	C2'-O2'	-5.14	1.34	1.42
2	B	1263	U	P-O5'	-5.14	1.52	1.59
2	B	1421	G	C1'-N9	-5.14	1.40	1.48
2	B	1716	U	C1'-N1	5.14	1.56	1.48
2	B	2198	A	C2'-C1'	-5.14	1.45	1.53
3	O	54	GLY	CA-C	-5.14	1.45	1.52
5	L	123	ARG	NE-CZ	5.14	1.38	1.33
17	U	25	LYS	C-N	5.14	1.39	1.33
20	E	69	ARG	CA-C	-5.14	1.45	1.52
23	5	122	ARG	CA-C	-5.14	1.45	1.52
2	B	409	G	C2-N3	5.14	1.43	1.32
2	B	1582	C	C5'-C4'	-5.14	1.43	1.51
2	B	2072	C	O3'-P	-5.14	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	T	50	LEU	CB-CG	5.14	1.63	1.53
19	X	202	PRO	CA-CB	-5.14	1.48	1.54
29	G	101	VAL	C-N	5.14	1.40	1.33
32	J	94	ALA	N-CA	-5.14	1.40	1.46
2	B	623	C	C4'-O4'	5.14	1.53	1.45
2	B	1157	G	C3'-C2'	-5.14	1.45	1.52
2	B	1333	G	O3'-P	-5.14	1.53	1.61
2	B	1903	G	C3'-O3'	5.14	1.49	1.42
5	L	64	PHE	N-CA	5.14	1.52	1.46
14	D	142	VAL	N-CA	-5.14	1.40	1.46
27	C	257	ARG	N-CA	-5.14	1.39	1.46
31	I	95	ASP	CA-C	-5.14	1.46	1.52
2	B	632	A	C3'-C2'	-5.13	1.45	1.52
2	B	826	U	O3'-P	-5.13	1.53	1.61
2	B	1286	A	C3'-C2'	-5.13	1.45	1.52
2	B	1330	C	C1'-N1	5.13	1.56	1.48
2	B	2205	A	O3'-P	-5.13	1.53	1.61
2	B	2701	U	C3'-C2'	-5.13	1.45	1.52
2	B	2878	U	C4'-C3'	-5.13	1.44	1.52
24	6	1	MET	CA-C	-5.13	1.42	1.52
2	B	1787	A	C4'-C3'	-5.13	1.44	1.52
11	Q	47	ARG	CD-NE	5.13	1.53	1.46
2	B	744	U	C1'-N1	-5.13	1.40	1.48
2	B	1357	C	C5'-C4'	5.13	1.58	1.51
2	B	2145	C	C5'-C4'	5.13	1.58	1.51
2	B	2237	G	C2'-C1'	5.13	1.61	1.53
15	T	33	LYS	CA-C	-5.13	1.45	1.52
19	X	378	ARG	C-N	5.13	1.40	1.33
31	I	123	ALA	CA-C	-5.13	1.46	1.52
2	B	1801	A	O5'-C5'	5.13	1.50	1.42
19	X	114	PHE	CA-C	-5.13	1.46	1.52
23	5	209	ILE	N-CA	-5.13	1.40	1.46
2	B	205	G	P-O5'	-5.13	1.52	1.59
2	B	1011	G	C3'-O3'	-5.13	1.35	1.43
2	B	1996	C	C2-N3	5.13	1.46	1.35
2	B	2031	A	C4'-O4'	-5.13	1.38	1.45
2	B	2304	G	C3'-O3'	5.13	1.49	1.42
2	B	2672	U	P-O5'	-5.13	1.52	1.59
9	O	4	LYS	N-CA	-5.13	1.40	1.46
1	A	20	G	P-O5'	-5.13	1.52	1.59
2	B	1165	A	O3'-P	-5.13	1.53	1.61
2	B	2331	G	C5'-C4'	5.13	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	L	73	ILE	CA-CB	-5.13	1.47	1.54
19	X	389	THR	C-N	5.13	1.40	1.33
2	B	1794	A	C4'-C3'	-5.12	1.44	1.52
2	B	2319	G	P-O5'	-5.12	1.52	1.59
4	K	98	ARG	CD-NE	5.12	1.53	1.46
7	M	15	GLY	CA-C	-5.12	1.45	1.51
2	B	557	C	C3'-C2'	-5.12	1.45	1.52
2	B	1265	A	C2'-C1'	-5.12	1.45	1.53
2	B	1849	G	P-O5'	-5.12	1.52	1.59
2	B	2598	A	C1'-N9	5.12	1.55	1.48
4	K	31	ARG	NE-CZ	5.12	1.38	1.33
14	D	153	GLY	CA-C	-5.12	1.43	1.51
19	X	390	MET	CA-CB	5.12	1.61	1.53
2	B	981	A	O4'-C1'	-5.12	1.34	1.42
2	B	1043	C	C3'-C2'	-5.12	1.45	1.52
2	B	1615	C	O3'-P	-5.12	1.53	1.61
2	B	2086	U	C4'-O4'	-5.12	1.37	1.45
2	B	2180	U	C5'-C4'	5.12	1.58	1.51
3	0	21	LEU	CA-C	-5.12	1.46	1.52
28	F	32	LYS	CA-C	-5.12	1.46	1.52
1	A	28	C	O4'-C1'	-5.12	1.33	1.41
2	B	191	A	O4'-C1'	-5.12	1.33	1.41
20	E	49	ARG	NE-CZ	5.12	1.38	1.33
2	B	28	A	N9-C8	-5.12	1.27	1.37
2	B	419	U	O3'-P	-5.12	1.53	1.61
2	B	428	A	C5'-C4'	-5.12	1.43	1.51
2	B	536	G	C5'-C4'	5.12	1.58	1.51
2	B	774	G	C4'-C3'	5.12	1.60	1.53
2	B	1560	G	O3'-P	-5.12	1.53	1.61
2	B	2370	G	C4'-C3'	-5.12	1.44	1.52
14	D	149	ASN	CA-C	-5.12	1.46	1.52
2	B	206	U	N3-C4	5.12	1.48	1.38
19	X	443	ARG	CD-NE	5.12	1.53	1.46
27	C	143	VAL	N-CA	-5.12	1.39	1.46
2	B	1125	G	N7-C5	-5.12	1.29	1.39
2	B	2453	A	C4'-O4'	-5.12	1.37	1.45
2	B	2889	C	C3'-O3'	-5.12	1.34	1.42
5	L	83	ALA	CA-C	-5.12	1.45	1.52
11	Q	47	ARG	CZ-NH1	5.12	1.40	1.32
26	8	3	VAL	N-CA	-5.12	1.40	1.46
2	B	465	G	O3'-P	-5.11	1.53	1.61
2	B	1178	C	C5'-C4'	5.11	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1529	G	C2-N3	5.11	1.43	1.32
2	B	1683	U	O4'-C1'	5.11	1.49	1.41
2	B	1826	G	C4'-C3'	-5.11	1.44	1.52
5	L	44	GLY	C-N	5.11	1.40	1.33
5	L	78	ARG	NE-CZ	5.11	1.38	1.33
11	Q	91	ARG	CD-NE	5.11	1.53	1.46
14	D	77	ARG	C-N	5.11	1.38	1.33
20	E	162	ARG	NE-CZ	5.11	1.38	1.33
2	B	203	A	N7-C5	-5.11	1.29	1.39
2	B	2159	G	C2-N3	5.11	1.43	1.32
15	T	10	VAL	CA-C	-5.11	1.45	1.52
2	B	2830	C	C4'-C3'	5.11	1.60	1.52
2	B	2880	C	O3'-P	-5.11	1.53	1.61
7	M	64	TRP	CD2-CE3	-5.11	1.32	1.40
13	S	6	LYS	N-CA	-5.11	1.39	1.45
19	X	83	ASP	CA-C	-5.11	1.46	1.53
32	J	30	THR	C-N	-5.11	1.26	1.33
1	A	93	C	C4-C5	-5.11	1.32	1.43
24	6	16	HIS	CD2-NE2	-5.11	1.32	1.37
2	B	2077	A	P-O5'	-5.11	1.52	1.59
2	B	2247	A	P-O5'	-5.11	1.52	1.59
19	X	204	LYS	CA-CB	5.11	1.61	1.53
23	5	169	GLY	C-O	-5.11	1.18	1.23
29	G	45	ALA	CA-CB	5.11	1.62	1.53
2	B	479	A	P-O5'	-5.11	1.52	1.59
2	B	1186	G	C2'-C1'	-5.11	1.45	1.53
2	B	1583	A	O5'-C5'	5.11	1.50	1.42
2	B	1763	G	P-O5'	-5.11	1.52	1.59
2	B	2719	G	P-O5'	-5.11	1.52	1.59
9	O	35	ILE	CA-CB	-5.11	1.48	1.54
19	X	130	VAL	CA-C	5.11	1.59	1.52
27	C	48	ILE	C-N	5.11	1.40	1.33
2	B	676	A	C4'-O4'	5.10	1.53	1.45
2	B	746	U	C4'-C3'	5.10	1.60	1.52
2	B	2570	G	O3'-P	-5.10	1.53	1.61
2	B	267	C	C5'-C4'	5.10	1.58	1.51
2	B	518	G	O3'-P	-5.10	1.53	1.61
2	B	1310	G	P-O5'	-5.10	1.52	1.59
2	B	1965	C	C5'-C4'	5.10	1.58	1.51
2	B	2461	A	O5'-C5'	5.10	1.50	1.42
25	7	56	LEU	CB-CG	5.10	1.63	1.53
2	B	2785	C	C2'-C1'	-5.10	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	E	170	ARG	CD-NE	5.10	1.53	1.46
27	C	181	ARG	CZ-NH2	5.10	1.40	1.33
31	I	55	PRO	CA-CB	5.10	1.61	1.53
2	B	431	U	P-O5'	-5.10	1.52	1.59
2	B	1168	G	C2'-C1'	-5.10	1.45	1.53
10	P	9	GLN	N-CA	-5.10	1.40	1.46
1	A	114	C	C4'-C3'	-5.10	1.45	1.52
2	B	975	A	O3'-P	-5.10	1.53	1.61
2	B	1314	C	C4'-O4'	-5.10	1.38	1.45
2	B	1470	A	O3'-P	-5.10	1.53	1.61
17	U	80	ASP	CA-C	-5.10	1.47	1.53
26	8	4	ARG	CA-C	-5.10	1.46	1.53
2	B	85	G	O3'-P	-5.10	1.53	1.61
2	B	296	U	O3'-P	-5.10	1.53	1.61
7	M	66	ARG	CD-NE	5.10	1.53	1.46
10	P	7	LEU	C-N	-5.10	1.27	1.33
2	B	644	A	C2'-C1'	-5.09	1.45	1.53
2	B	1275	A	C2'-C1'	-5.09	1.45	1.53
19	X	154	LEU	CA-C	-5.09	1.46	1.52
21	Y	30	VAL	CA-C	-5.09	1.46	1.52
23	5	8	MET	CA-CB	-5.09	1.45	1.53
31	I	41	PHE	C-N	5.09	1.40	1.33
32	J	141	ASP	N-CA	-5.09	1.39	1.46
2	B	211	C	C2'-C1'	-5.09	1.45	1.53
2	B	599	A	C2'-O2'	-5.09	1.34	1.42
2	B	1376	C	O3'-P	-5.09	1.53	1.61
9	O	70	ALA	C-O	-5.09	1.17	1.24
19	X	134	SER	C-N	5.09	1.41	1.33
28	F	69	ALA	CA-C	5.09	1.59	1.53
31	I	133	ARG	CD-NE	5.09	1.53	1.46
2	B	160	A	N7-C5	-5.09	1.29	1.39
2	B	339	U	C3'-C2'	-5.09	1.45	1.52
2	B	623	C	C5'-C4'	5.09	1.58	1.51
2	B	1443	U	C5'-C4'	5.09	1.58	1.51
2	B	1620	G	P-O5'	-5.09	1.52	1.59
2	B	2280	G	P-O5'	-5.09	1.52	1.59
15	T	76	ARG	CD-NE	5.09	1.53	1.46
23	5	59	VAL	CA-CB	-5.09	1.48	1.54
32	J	108	MET	CA-C	-5.09	1.46	1.52
2	B	374	A	N3-C4	-5.09	1.24	1.34
2	B	1434	A	C4'-O4'	-5.09	1.38	1.45
2	B	1439	A	O3'-P	-5.09	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1984	G	O5'-C5'	5.09	1.50	1.42
27	C	229	HIS	CG-CD2	5.09	1.41	1.35
32	J	55	ILE	C-N	-5.09	1.27	1.33
2	B	215	G	P-O5'	-5.09	1.52	1.59
2	B	984	A	O4'-C1'	-5.09	1.34	1.42
2	B	1431	A	O3'-P	-5.09	1.53	1.61
2	B	1753	G	C3'-O3'	-5.09	1.34	1.42
5	L	84	LYS	N-CA	-5.09	1.40	1.46
6	1	41	HIS	CD2-NE2	-5.09	1.32	1.37
8	N	119	SER	CA-C	-5.09	1.46	1.52
5	L	131	ALA	N-CA	-5.08	1.40	1.46
8	N	61	ALA	CA-C	-5.08	1.46	1.52
2	B	1286	A	C2'-C1'	-5.08	1.45	1.53
5	L	6	LEU	N-CA	5.08	1.52	1.46
5	L	58	TYR	CA-C	-5.08	1.45	1.52
26	8	31	PRO	CA-C	-5.08	1.46	1.52
2	B	583	G	O3'-P	-5.08	1.53	1.61
2	B	743	A	P-O5'	-5.08	1.52	1.59
2	B	1351	C	O3'-P	-5.08	1.53	1.61
2	B	1599	U	O3'-P	-5.08	1.53	1.61
12	R	90	ARG	CD-NE	5.08	1.53	1.46
13	S	38	TYR	C-O	-5.08	1.18	1.24
23	5	209	ILE	C-O	-5.08	1.17	1.23
2	B	220	G	O3'-P	-5.08	1.53	1.61
8	N	46	ARG	CD-NE	5.08	1.53	1.46
2	B	501	A	O4'-C1'	-5.08	1.34	1.41
2	B	746	U	P-O5'	-5.08	1.52	1.59
2	B	859	G	C3'-O3'	5.08	1.50	1.43
2	B	1033	U	C5'-C4'	-5.08	1.43	1.51
2	B	2723	C	C3'-O3'	-5.08	1.34	1.42
11	Q	11	ALA	N-CA	-5.08	1.39	1.46
20	E	74	LYS	CA-CB	5.08	1.59	1.52
20	E	91	ASP	CA-C	5.08	1.58	1.52
27	C	192	GLY	CA-C	-5.08	1.45	1.52
31	I	114	ALA	N-CA	-5.08	1.40	1.46
2	B	2366	A	N9-C8	-5.08	1.27	1.37
11	Q	112	ALA	N-CA	-5.08	1.39	1.46
2	B	383	C	C5'-C4'	-5.08	1.43	1.51
2	B	1677	A	N7-C5	-5.08	1.29	1.39
2	B	2061	G	O4'-C1'	-5.08	1.34	1.42
2	B	2393	U	P-O5'	-5.08	1.52	1.59
2	B	2895	G	C2'-C1'	-5.08	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	P	88	ARG	CD-NE	5.08	1.53	1.46
18	W	18	ARG	CD-NE	5.08	1.53	1.46
31	I	122	GLU	CA-C	5.08	1.59	1.52
1	A	31	C	C3'-C2'	-5.07	1.45	1.52
2	B	680	C	C5'-C4'	5.07	1.58	1.51
2	B	987	C	P-O5'	-5.07	1.52	1.59
2	B	1096	A	C5'-C4'	5.07	1.58	1.51
2	B	1241	A	C4'-O4'	-5.07	1.38	1.45
2	B	2729	G	C4'-C3'	-5.07	1.45	1.52
23	5	9	ARG	CZ-NH2	5.07	1.40	1.33
23	5	33	LEU	CA-CB	5.07	1.62	1.53
32	J	50	THR	C-N	5.07	1.41	1.33
2	B	529	A	N9-C4	-5.07	1.27	1.37
11	Q	77	LYS	C-O	-5.07	1.18	1.24
2	B	1191	G	P-O5'	-5.07	1.52	1.59
2	B	1205	A	P-O5'	-5.07	1.52	1.59
2	B	1602	U	C2-N3	5.07	1.47	1.37
2	B	1652	A	C1'-N9	-5.07	1.40	1.48
2	B	1217	U	N3-C4	5.07	1.48	1.38
2	B	1521	G	O3'-P	-5.07	1.53	1.61
2	B	2050	C	O4'-C1'	-5.07	1.34	1.41
27	C	217	PRO	N-CA	-5.07	1.40	1.47
30	H	14	SER	N-CA	-5.07	1.39	1.46
31	I	12	VAL	CA-C	-5.07	1.46	1.52
2	B	839	U	C2'-C1'	-5.07	1.45	1.53
2	B	1961	C	C4'-O4'	-5.07	1.38	1.45
2	B	2815	C	C1'-N1	5.07	1.56	1.48
15	T	18	GLU	N-CA	-5.07	1.39	1.46
15	T	47	VAL	C-N	5.07	1.40	1.33
2	B	1109	C	C1'-N1	-5.06	1.40	1.48
2	B	212	G	C4'-C3'	-5.06	1.45	1.52
2	B	556	A	P-O5'	-5.06	1.52	1.59
2	B	793	A	O4'-C1'	-5.06	1.34	1.42
2	B	1364	G	C5'-C4'	5.06	1.58	1.51
2	B	1691	C	C4'-C3'	5.06	1.60	1.52
2	B	2057	G	O5'-C5'	-5.06	1.34	1.42
2	B	2068	U	C5'-C4'	5.06	1.58	1.51
2	B	2525	G	C2'-C1'	-5.06	1.45	1.53
18	W	12	GLN	CA-C	-5.06	1.46	1.52
7	M	78	LEU	C-N	5.06	1.40	1.33
2	B	472	A	O3'-P	-5.06	1.53	1.61
2	B	530	G	N9-C8	-5.06	1.27	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2593	U	C2'-O2'	-5.06	1.34	1.42
2	B	2600	A	N9-C8	-5.06	1.27	1.37
29	G	19	ASN	C-N	5.06	1.40	1.33
29	G	90	GLY	CA-C	-5.06	1.44	1.51
2	B	1927	A	C5'-C4'	5.06	1.58	1.51
2	B	2407	A	P-O5'	-5.06	1.52	1.59
2	B	2681	C	O4'-C1'	-5.06	1.34	1.42
2	B	2724	U	O3'-P	-5.06	1.53	1.61
2	B	2801	G	O3'-P	-5.06	1.53	1.61
5	L	121	THR	CB-OG1	-5.06	1.35	1.43
9	O	34	HIS	CA-C	-5.06	1.46	1.52
14	D	32	ASN	CA-C	-5.06	1.46	1.52
29	G	116	LEU	C-O	-5.06	1.17	1.23
1	A	83	G	C4'-C3'	-5.06	1.45	1.52
2	B	541	A	C3'-C2'	-5.06	1.45	1.52
2	B	1689	A	C6-N6	5.06	1.44	1.33
2	B	2643	G	C5'-C4'	5.06	1.58	1.51
12	R	7	SER	N-CA	-5.06	1.39	1.46
14	D	151	THR	N-CA	-5.06	1.41	1.46
18	W	46	LYS	C-O	-5.06	1.18	1.24
1	A	18	G	P-O5'	-5.05	1.52	1.59
2	B	1237	A	C1'-N9	-5.05	1.40	1.48
2	B	1512	C	C3'-C2'	-5.05	1.45	1.52
2	B	2029	G	C3'-O3'	5.05	1.49	1.42
2	B	737	C	O4'-C1'	5.05	1.49	1.41
2	B	2572	A	C3'-C2'	5.05	1.60	1.52
2	B	2756	U	P-O5'	-5.05	1.52	1.59
8	N	81	ASN	N-CA	-5.05	1.40	1.46
20	E	75	SER	CA-CB	5.05	1.61	1.53
30	H	73	ASN	CA-CB	5.05	1.61	1.53
1	A	81	G	C3'-C2'	-5.05	1.45	1.52
2	B	847	U	O4'-C1'	-5.05	1.34	1.41
15	T	5	GLU	CA-C	-5.05	1.46	1.52
15	T	55	VAL	CA-CB	-5.05	1.46	1.54
19	X	151	VAL	CA-CB	-5.05	1.47	1.54
24	6	31	LEU	C-N	-5.05	1.27	1.33
27	C	12	ARG	N-CA	-5.05	1.40	1.46
27	C	170	TYR	C-N	5.05	1.40	1.33
32	J	43	GLU	CA-CB	5.05	1.62	1.53
2	B	213	A	O5'-C5'	5.05	1.50	1.42
2	B	1820	U	C4'-C3'	-5.05	1.45	1.53
23	5	138	PRO	N-CA	-5.05	1.40	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	180	G	C1'-N9	-5.05	1.40	1.48
2	B	821	A	C2'-C1'	-5.05	1.45	1.53
2	B	1204	A	C2'-C1'	-5.05	1.45	1.53
2	B	1372	U	P-O5'	-5.05	1.52	1.59
20	E	85	PHE	CA-C	-5.05	1.46	1.52
30	H	5	LEU	N-CA	-5.05	1.39	1.46
2	B	28	A	C3'-O3'	5.04	1.49	1.42
2	B	1114	C	O3'-P	-5.04	1.53	1.61
2	B	1231	U	C3'-C2'	-5.04	1.45	1.52
2	B	1559	U	C5'-C4'	5.04	1.58	1.51
2	B	1729	U	P-O5'	-5.04	1.52	1.59
2	B	2650	U	C3'-C2'	-5.04	1.45	1.52
2	B	2781	A	C1'-N9	5.04	1.55	1.48
23	5	134	ARG	CZ-NH2	5.04	1.40	1.33
2	B	277	G	C2-N3	5.04	1.42	1.32
2	B	1315	C	P-O5'	-5.04	1.52	1.59
2	B	1703	G	C3'-C2'	-5.04	1.45	1.52
2	B	2327	A	C5'-C4'	5.04	1.58	1.51
2	B	2323	G	C1'-N9	-5.04	1.40	1.48
2	B	284	U	O5'-C5'	5.04	1.50	1.42
2	B	824	U	O4'-C1'	5.04	1.49	1.41
2	B	892	A	O3'-P	-5.04	1.53	1.61
7	M	72	PRO	C-O	-5.04	1.17	1.24
12	R	23	GLU	N-CA	-5.04	1.39	1.46
2	B	73	A	C2'-O2'	-5.04	1.34	1.42
2	B	631	A	C3'-C2'	-5.04	1.45	1.52
2	B	767	U	C3'-C2'	-5.04	1.45	1.52
2	B	2411	A	P-O5'	-5.04	1.52	1.59
2	B	2769	U	O3'-P	-5.04	1.53	1.61
2	B	2804	U	C1'-N1	5.04	1.56	1.48
1	A	54	G	O3'-P	-5.03	1.53	1.61
1	A	89	U	C1'-N1	-5.03	1.39	1.47
2	B	1407	G	C4'-C3'	-5.03	1.45	1.52
2	B	2453	A	C3'-C2'	-5.03	1.45	1.52
2	B	2578	G	N7-C5	-5.03	1.29	1.39
2	B	2826	A	N9-C4	-5.03	1.27	1.37
2	B	1730	C	O5'-C5'	5.03	1.50	1.42
2	B	2721	A	O4'-C1'	5.03	1.49	1.41
2	B	2899	A	O4'-C1'	-5.03	1.34	1.41
8	N	47	VAL	CA-C	-5.03	1.46	1.52
2	B	138	U	O3'-P	-5.03	1.53	1.61
2	B	647	G	C4'-C3'	-5.03	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1159	U	C3'-C2'	-5.03	1.45	1.52
2	B	1394	U	C5'-C4'	-5.03	1.43	1.51
2	B	1535	A	C3'-C2'	5.03	1.60	1.52
7	M	11	LYS	CA-C	-5.03	1.46	1.52
9	O	34	HIS	CB-CG	5.03	1.57	1.50
14	D	5	VAL	C-O	-5.03	1.18	1.24
2	B	343	C	C2'-O2'	-5.03	1.34	1.42
2	B	1060	U	O3'-P	-5.03	1.53	1.61
2	B	1162	G	C4'-C3'	-5.03	1.45	1.52
2	B	1612	C	C4'-O4'	-5.03	1.38	1.45
2	B	2041	U	C5'-C4'	5.03	1.58	1.51
2	B	2650	U	O3'-P	-5.03	1.53	1.61
11	Q	32	ARG	NE-CZ	5.03	1.38	1.33
14	D	48	ILE	CA-C	-5.03	1.46	1.52
19	X	421	VAL	N-CA	-5.03	1.40	1.46
30	H	71	LYS	N-CA	-5.03	1.39	1.46
30	H	140	ALA	N-CA	-5.03	1.39	1.46
32	J	3	THR	C-O	-5.03	1.17	1.23
1	A	69	G	P-O5'	-5.03	1.52	1.59
2	B	1292	G	C2'-C1'	-5.03	1.45	1.53
2	B	1430	G	P-O5'	-5.03	1.52	1.59
2	B	1477	A	C5'-C4'	5.03	1.58	1.51
2	B	1664	A	O3'-P	-5.03	1.53	1.61
2	B	2079	U	C4'-O4'	-5.03	1.38	1.45
2	B	2576	G	C5'-C4'	-5.03	1.43	1.51
2	B	2705	A	O3'-P	-5.03	1.53	1.61
11	Q	52	ARG	CZ-NH1	5.03	1.39	1.32
16	2	42	ALA	CA-C	-5.03	1.46	1.52
16	2	45	GLY	N-CA	-5.03	1.38	1.45
19	X	151	VAL	C-N	5.03	1.40	1.33
19	X	450	GLY	C-O	-5.03	1.18	1.23
2	B	70	G	C2'-C1'	-5.02	1.45	1.53
1	A	28	C	C4'-C3'	-5.02	1.45	1.52
2	B	673	C	O4'-C1'	-5.02	1.34	1.41
2	B	843	G	C5'-C4'	5.02	1.58	1.51
2	B	2386	A	C4'-O4'	-5.02	1.38	1.45
2	B	2697	G	O4'-C1'	-5.02	1.34	1.41
8	N	40	LYS	CA-CB	-5.02	1.45	1.53
13	S	10	ALA	CA-C	-5.02	1.46	1.52
11	Q	75	TYR	N-CA	-5.02	1.40	1.46
2	B	1224	U	N1-C2	5.02	1.48	1.38
2	B	2405	G	C4'-C3'	-5.02	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2449	U	P-O5'	-5.02	1.52	1.59
2	B	2572	A	C5'-C4'	5.02	1.58	1.51
23	5	123	VAL	CA-C	-5.02	1.47	1.52
23	5	226	GLN	CA-C	-5.02	1.46	1.52
30	H	95	GLY	C-N	5.02	1.40	1.33
32	J	125	TYR	CZ-OH	5.02	1.48	1.38
2	B	23	G	C2'-C1'	-5.02	1.45	1.53
2	B	473	G	O3'-P	-5.02	1.53	1.61
2	B	499	U	C3'-C2'	-5.02	1.45	1.52
2	B	1163	G	P-O5'	-5.02	1.52	1.59
2	B	1436	G	N9-C4	-5.02	1.27	1.38
3	0	10	ARG	NE-CZ	5.02	1.38	1.33
14	D	120	GLY	C-N	5.02	1.40	1.33
23	5	67	HIS	CG-CD2	5.02	1.41	1.35
2	B	1697	G	C5'-C4'	5.02	1.58	1.51
2	B	1931	U	C4'-C3'	-5.02	1.45	1.52
2	B	54	G	P-O5'	-5.01	1.52	1.59
2	B	313	G	C2'-C1'	-5.01	1.45	1.53
2	B	2693	G	C1'-N9	-5.01	1.40	1.48
2	B	2777	G	C1'-N9	-5.01	1.40	1.48
9	O	97	PHE	CA-C	-5.01	1.46	1.52
2	B	1020	A	C5'-C4'	5.01	1.58	1.51
2	B	1785	A	O3'-P	-5.01	1.53	1.61
2	B	2303	G	C3'-C2'	-5.01	1.45	1.52
2	B	2341	G	O4'-C1'	5.01	1.49	1.41
2	B	2817	U	O3'-P	-5.01	1.53	1.61
24	6	12	ARG	CZ-NH1	5.01	1.39	1.32
2	B	343	C	O3'-P	-5.01	1.53	1.61
2	B	370	G	P-O5'	-5.01	1.52	1.59
2	B	862	G	C4'-O4'	5.01	1.53	1.45
2	B	1007	C	O5'-C5'	5.01	1.50	1.42
2	B	1190	G	O3'-P	-5.01	1.53	1.61
6	1	55	THR	CA-C	-5.01	1.46	1.52
20	E	59	PRO	CA-C	-5.01	1.45	1.52
27	C	115	ILE	N-CA	-5.01	1.40	1.46
28	F	97	GLU	N-CA	-5.01	1.39	1.46
32	J	128	ASN	CA-CB	5.01	1.61	1.53
2	B	1572	A	C5'-C4'	5.01	1.58	1.51
9	O	67	ASN	CA-CB	5.01	1.59	1.53
18	W	88	HIS	ND1-CE1	5.01	1.37	1.32
2	B	1961	C	C5'-C4'	-5.01	1.43	1.51
28	F	116	LEU	CA-CB	5.01	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	I	103	ALA	N-CA	-5.01	1.40	1.46
2	B	194	G	O4'-C1'	5.01	1.49	1.41
2	B	1434	A	C3'-O3'	5.01	1.49	1.42
15	T	28	ASN	CA-C	-5.01	1.46	1.52
2	B	136	G	O4'-C1'	-5.00	1.34	1.41
2	B	1282	U	O4'-C1'	-5.00	1.34	1.41
2	B	576	U	P-O5'	-5.00	1.52	1.59
2	B	1140	C	C3'-C2'	-5.00	1.45	1.52
2	B	1771	C	C2'-C1'	-5.00	1.45	1.53
2	B	2198	A	C5'-C4'	5.00	1.58	1.51
2	B	2220	U	C3'-C2'	-5.00	1.45	1.52
2	B	2382	G	O3'-P	-5.00	1.53	1.61
2	B	2491	U	O3'-P	-5.00	1.53	1.61
2	B	2644	G	C4'-C3'	-5.00	1.45	1.52
7	M	51	ARG	C-N	-5.00	1.27	1.33
17	U	92	VAL	CA-CB	-5.00	1.48	1.54

All (6282) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	T	25	GLU	N-CA-C	-18.98	92.99	114.62
11	Q	35	PHE	N-CA-C	-17.07	90.87	112.72
2	B	680	C	C5'-C4'-C3'	16.81	141.22	116.00
2	B	471	A	P-O3'-C3'	16.42	144.82	120.20
19	X	272	LYS	N-CA-C	15.92	128.10	111.07
2	B	2272	U	P-O5'-C5'	15.71	144.47	120.90
2	B	2615	U	P-O5'-C5'	14.25	142.28	120.90
11	Q	58	GLN	N-CA-C	-14.18	94.07	112.93
21	Y	56	HIS	CA-CB-CG	-14.12	99.68	113.80
5	L	106	GLU	N-CA-C	-14.08	98.56	114.62
2	B	2572	A	P-O5'-C5'	13.87	141.70	120.90
11	Q	37	ALA	N-CA-C	-13.86	94.49	111.40
2	B	455	C	P-O3'-C3'	13.82	140.93	120.20
2	B	1532	A	C5'-C4'-C3'	-13.71	95.43	116.00
2	B	322	A	P-O3'-C3'	13.62	140.63	120.20
2	B	1634	A	C5'-C4'-C3'	-13.59	94.82	115.20
2	B	2145	C	P-O3'-C3'	13.52	140.47	120.20
2	B	890	C	P-O3'-C3'	13.50	140.45	120.20
2	B	1256	G	P-O5'-C5'	13.47	141.10	120.90
27	C	45	ASN	N-CA-C	-13.42	85.26	108.20
20	E	85	PHE	CA-CB-CG	-13.38	100.42	113.80
29	G	61	TRP	N-CA-C	-13.30	97.06	113.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1637	A	P-O5'-C5'	13.24	140.76	120.90
2	B	2760	C	C5'-C4'-C3'	-13.21	96.18	116.00
2	B	2212	A	P-O3'-C3'	13.11	139.86	120.20
2	B	2471	A	P-O5'-C5'	12.96	140.34	120.90
2	B	2311	A	P-O3'-C3'	12.92	139.58	120.20
2	B	1899	A	P-O3'-C3'	12.87	139.51	120.20
2	B	1930	G	P-O3'-C3'	12.63	139.15	120.20
2	B	2283	C	P-O5'-C5'	12.61	139.81	120.90
2	B	898	C	P-O3'-C3'	12.60	139.11	120.20
2	B	1610	A	C5'-C4'-C3'	-12.48	96.49	115.20
25	7	59	ALA	N-CA-C	-12.46	97.70	113.16
2	B	2238	G	P-O5'-C5'	12.43	139.54	120.90
2	B	1714	U	P-O3'-C3'	12.38	138.77	120.20
9	O	74	VAL	N-CA-C	-12.33	101.06	112.90
19	X	132	PHE	CA-CB-CG	-12.31	101.48	113.80
2	B	1234	U	P-O5'-C5'	12.29	139.33	120.90
2	B	796	C	C2'-C3'-O3'	12.27	127.90	109.50
23	5	67	HIS	CA-CB-CG	-12.21	101.59	113.80
14	D	178	VAL	N-CA-C	-12.06	101.99	112.12
2	B	1524	G	P-O5'-C5'	11.97	138.86	120.90
2	B	981	A	O4'-C4'-C3'	-11.85	94.25	106.10
6	1	16	THR	N-CA-C	-11.81	98.59	113.23
4	K	66	LYS	N-CA-C	-11.80	98.86	113.97
2	B	1923	U	P-O5'-C5'	11.79	138.59	120.90
31	I	21	PRO	CA-C-N	11.77	131.53	119.64
31	I	21	PRO	C-N-CA	11.77	131.53	119.64
2	B	2614	A	O3'-P-O5'	-11.69	86.47	104.00
2	B	2109	U	C5'-C4'-C3'	11.65	133.47	116.00
2	B	2168	G	C5'-C4'-C3'	-11.58	98.62	116.00
21	Y	79	ILE	N-CA-C	-11.56	91.77	108.53
11	Q	48	ASP	CA-CB-CG	-11.49	101.11	112.60
2	B	2576	G	O5'-C5'-C4'	-11.45	94.52	111.70
2	B	864	G	P-O5'-C5'	11.42	138.03	120.90
14	D	149	ASN	CA-C-N	11.37	135.51	120.28
14	D	149	ASN	C-N-CA	11.37	135.51	120.28
2	B	2320	U	P-O3'-C3'	11.36	137.23	120.20
2	B	198	C	P-O5'-C5'	11.34	137.91	120.90
19	X	260	VAL	O-C-N	11.34	132.87	121.87
2	B	2705	A	O4'-C4'-C3'	-11.27	92.73	104.00
1	A	52	A	P-O5'-C5'	11.27	137.80	120.90
2	B	899	A	C5'-C4'-C3'	11.26	132.88	116.00
2	B	2723	C	C5'-C4'-C3'	11.18	132.78	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	C	14	HIS	CA-CB-CG	-11.14	102.66	113.80
2	B	2093	G	C4'-C3'-C2'	-11.13	91.47	102.60
21	Y	77	LYS	N-CA-C	-11.12	100.74	114.75
7	M	68	PHE	CA-CB-CG	11.09	124.89	113.80
19	X	7	LEU	CA-C-N	11.09	134.53	122.11
19	X	7	LEU	C-N-CA	11.09	134.53	122.11
2	B	1322	A	C5'-C4'-C3'	11.09	132.63	116.00
2	B	606	U	P-O3'-C3'	11.07	136.80	120.20
27	C	22	GLU	CB-CA-C	-11.06	95.77	111.14
2	B	1273	U	P-O3'-C3'	-11.05	103.62	120.20
2	B	1586	A	C5'-C4'-C3'	11.01	132.52	116.00
22	3	6	LYS	O-C-N	-10.97	112.02	121.35
2	B	2442	C	C4'-C3'-O3'	-10.96	96.56	113.00
2	B	333	G	O3'-P-O5'	-10.96	87.56	104.00
2	B	827	U	P-O3'-C3'	10.95	136.63	120.20
20	E	111	GLU	N-CA-C	-10.94	98.63	113.18
2	B	511	U	P-O5'-C5'	10.94	137.30	120.90
2	B	1393	A	C5'-C4'-C3'	10.91	132.37	116.00
28	F	171	ALA	N-CA-C	-10.89	97.28	113.61
10	P	3	ILE	N-CA-C	-10.87	100.70	113.42
28	F	154	THR	N-CA-C	-10.86	91.94	109.76
2	B	1346	G	P-O5'-C5'	10.86	137.19	120.90
2	B	2093	G	P-O3'-C3'	10.86	136.49	120.20
2	B	2425	A	P-O3'-C3'	10.85	136.48	120.20
22	3	18	HIS	CA-CB-CG	-10.78	103.02	113.80
2	B	2173	A	P-O3'-C3'	10.77	136.35	120.20
27	C	8	THR	N-CA-C	-10.77	100.89	114.56
2	B	1324	G	C4'-C3'-C2'	10.69	113.28	102.60
2	B	2121	G	P-O3'-C3'	10.68	136.22	120.20
2	B	2832	U	O4'-C1'-C2'	-10.67	95.13	105.80
2	B	2040	G	O5'-C5'-C4'	-10.60	95.60	111.50
2	B	2439	A	P-O5'-C5'	10.60	136.80	120.90
2	B	1498	C	C5'-C4'-C3'	10.60	131.90	116.00
2	B	832	U	C5'-C4'-C3'	10.58	131.87	116.00
2	B	2816	G	P-O5'-C5'	-10.57	105.05	120.90
2	B	1543	G	C4'-C3'-O3'	-10.55	97.17	113.00
2	B	1056	G	P-O5'-C5'	10.52	136.68	120.90
2	B	1949	G	O5'-C5'-C4'	-10.51	95.73	111.50
6	1	26	PHE	CA-C-N	10.50	134.09	120.44
6	1	26	PHE	C-N-CA	10.50	134.09	120.44
20	E	116	ASP	CA-CB-CG	-10.47	102.13	112.60
2	B	1772	A	C4'-C3'-O3'	-10.44	97.34	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1344	U	O4'-C1'-C2'	10.43	116.22	105.80
8	N	60	VAL	N-CA-C	-10.41	100.55	111.58
28	F	76	PHE	N-CA-C	-10.39	100.33	113.43
2	B	2578	G	C5'-C4'-C3'	-10.37	100.45	116.00
2	B	1332	G	C5'-C4'-C3'	10.36	130.73	115.20
2	B	2849	U	O4'-C4'-C3'	-10.34	95.76	106.10
2	B	613	A	P-O5'-C5'	-10.32	105.41	120.90
2	B	912	C	P-O5'-C5'	10.32	136.38	120.90
2	B	772	C	C5'-C4'-C3'	10.31	131.47	116.00
2	B	2547	A	C5'-C4'-C3'	10.31	131.46	116.00
2	B	67	U	O5'-C5'-C4'	-10.30	96.04	111.50
2	B	2173	A	C5'-C4'-C3'	10.30	131.46	116.00
2	B	1177	G	P-O5'-C5'	10.30	136.35	120.90
2	B	669	G	O3'-P-O5'	-10.27	88.60	104.00
2	B	1806	C	C5'-C4'-C3'	10.20	131.30	116.00
2	B	2157	G	C5'-C4'-C3'	10.20	131.29	116.00
2	B	2693	G	P-O5'-C5'	10.19	136.18	120.90
2	B	558	U	C5'-C4'-C3'	10.16	131.24	116.00
23	5	83	ASN	CA-CB-CG	-10.16	102.44	112.60
2	B	2067	G	P-O5'-C5'	10.16	136.13	120.90
2	B	609	A	C5'-C4'-C3'	10.15	131.22	116.00
2	B	374	A	C5'-C4'-C3'	-10.13	100.81	116.00
2	B	1212	G	P-O5'-C5'	10.11	136.06	120.90
2	B	2550	G	P-O5'-C5'	10.10	136.04	120.90
19	X	94	GLY	CA-C-N	10.08	135.97	120.75
19	X	94	GLY	C-N-CA	10.08	135.97	120.75
29	G	154	GLU	CA-C-O	-10.07	110.77	120.94
2	B	1680	U	P-O5'-C5'	-10.06	105.81	120.90
19	X	306	LEU	CA-C-N	10.05	131.14	119.98
19	X	306	LEU	C-N-CA	10.05	131.14	119.98
2	B	974	G	P-O3'-C3'	10.04	135.26	120.20
2	B	2267	A	O3'-P-O5'	-10.04	88.95	104.00
2	B	675	A	C5'-C4'-C3'	-10.02	100.97	116.00
2	B	1179	G	C5'-C4'-C3'	-10.02	100.97	116.00
19	X	257	THR	N-CA-C	10.02	128.04	114.12
2	B	1369	G	P-O5'-C5'	10.00	135.90	120.90
2	B	2110	G	C2'-C3'-O3'	10.00	124.50	109.50
28	F	19	PHE	CA-CB-CG	-9.99	103.81	113.80
2	B	1798	U	C5'-C4'-C3'	9.96	130.94	116.00
2	B	410	G	P-O5'-C5'	9.96	135.84	120.90
2	B	686	U	P-O5'-C5'	9.94	135.80	120.90
30	H	98	ASP	CA-CB-CG	9.93	122.53	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2282	G	P-O3'-C3'	9.93	135.09	120.20
13	S	31	GLN	N-CA-C	-9.93	101.73	114.04
2	B	1665	A	C4'-C3'-C2'	-9.92	92.68	102.60
14	D	200	ASP	CA-CB-CG	-9.92	102.68	112.60
8	N	81	ASN	N-CA-C	9.91	123.32	111.33
2	B	2570	G	C5'-C4'-C3'	-9.90	101.14	116.00
2	B	2440	C	C5'-C4'-C3'	9.90	130.85	116.00
32	J	55	ILE	N-CA-C	-9.87	93.16	107.77
2	B	1391	U	P-O3'-C3'	-9.87	105.40	120.20
31	I	102	ARG	CA-C-N	9.87	133.50	120.28
31	I	102	ARG	C-N-CA	9.87	133.50	120.28
2	B	1531	C	P-O3'-C3'	9.86	135.00	120.20
2	B	1964	G	P-O3'-C3'	9.86	134.99	120.20
2	B	1775	U	O5'-C5'-C4'	-9.85	96.73	111.50
2	B	1656	C	C5'-C4'-C3'	-9.84	101.24	116.00
2	B	943	A	C5'-C4'-C3'	-9.84	101.24	116.00
2	B	2756	U	P-O5'-C5'	9.84	135.65	120.90
2	B	920	A	C5'-C4'-C3'	9.83	130.75	116.00
32	J	119	PHE	CA-CB-CG	-9.83	103.97	113.80
2	B	2704	C	P-O3'-C3'	9.83	134.94	120.20
2	B	410	G	O3'-P-O5'	-9.83	89.26	104.00
20	E	165	HIS	CB-CG-CD2	-9.78	118.49	131.20
2	B	1561	C	C4'-C3'-O3'	-9.77	98.35	113.00
23	5	102	ASP	CA-C-N	9.77	133.76	120.38
23	5	102	ASP	C-N-CA	9.77	133.76	120.38
2	B	912	C	C4'-C3'-O3'	-9.76	98.36	113.00
2	B	1773	A	O5'-C5'-C4'	-9.75	96.87	111.50
9	O	54	VAL	N-CA-C	-9.75	103.62	113.47
20	E	108	ILE	CA-C-N	9.74	133.10	120.44
20	E	108	ILE	C-N-CA	9.74	133.10	120.44
27	C	16	VAL	N-CA-C	-9.73	94.48	108.11
2	B	1825	U	O5'-C5'-C4'	-9.73	96.91	111.50
2	B	1730	C	P-O3'-C3'	9.72	134.78	120.20
2	B	2677	G	C5'-C4'-C3'	9.71	130.57	116.00
24	6	15	SER	N-CA-C	-9.69	98.09	112.04
28	F	177	ARG	N-CA-C	-9.68	92.64	108.41
32	J	4	PHE	CA-CB-CG	-9.67	104.13	113.80
2	B	205	G	O4'-C1'-C2'	-9.66	96.14	105.80
14	D	146	ILE	N-CA-C	-9.66	101.45	110.53
11	Q	64	ILE	N-CA-C	-9.66	100.77	110.62
2	B	24	G	P-O5'-C5'	-9.65	106.43	120.90
2	B	737	C	C5'-C4'-C3'	9.64	130.47	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	280	U	P-O3'-C3'	9.63	134.65	120.20
2	B	267	C	C5'-C4'-C3'	-9.63	101.56	116.00
25	7	30	HIS	CA-CB-CG	-9.63	104.17	113.80
28	F	107	VAL	CA-C-N	9.62	131.87	119.84
28	F	107	VAL	C-N-CA	9.62	131.87	119.84
2	B	2039	U	C5'-C4'-C3'	9.62	130.43	116.00
11	Q	37	ALA	N-CA-CB	9.62	124.37	110.13
29	G	165	ASP	CA-CB-CG	-9.62	102.98	112.60
2	B	573	U	C5'-C4'-C3'	-9.62	100.78	115.20
2	B	1419	A	O4'-C4'-C3'	-9.59	96.51	106.10
8	N	80	PHE	N-CA-CB	9.59	126.70	110.49
14	D	69	ALA	N-CA-C	9.59	121.73	111.28
2	B	1722	A	C5'-C4'-C3'	-9.59	101.62	116.00
2	B	975	A	P-O5'-C5'	-9.58	106.53	120.90
2	B	548	G	P-O3'-C3'	9.58	134.57	120.20
2	B	833	A	C5'-C4'-C3'	-9.58	101.63	116.00
13	S	68	ASP	CA-CB-CG	-9.57	103.03	112.60
11	Q	13	HIS	N-CA-C	-9.57	100.17	112.23
29	G	34	ARG	N-CA-C	-9.56	102.12	113.88
10	P	47	ILE	N-CA-C	-9.55	103.10	112.17
2	B	1007	C	P-O5'-C5'	-9.55	106.58	120.90
16	2	22	THR	CA-C-N	9.52	133.04	120.28
16	2	22	THR	C-N-CA	9.52	133.04	120.28
2	B	930	G	P-O3'-C3'	9.51	134.47	120.20
2	B	2430	A	O3'-P-O5'	9.50	118.25	104.00
2	B	2809	A	P-O3'-C3'	-9.50	105.95	120.20
2	B	1608	A	O3'-P-O5'	-9.48	89.77	104.00
2	B	2743	U	P-O3'-C3'	9.47	134.41	120.20
2	B	1529	G	C5'-C4'-C3'	-9.47	101.80	116.00
2	B	1460	U	P-O5'-C5'	9.47	135.10	120.90
2	B	1271	G	O4'-C4'-C3'	-9.46	96.64	106.10
2	B	1778	U	P-O5'-C5'	9.44	135.06	120.90
2	B	415	A	C5'-C4'-C3'	9.43	130.15	116.00
2	B	1895	C	P-O5'-C5'	9.41	135.02	120.90
2	B	1379	U	P-O3'-C3'	9.40	134.31	120.20
2	B	1417	C	P-O5'-C5'	9.39	134.99	120.90
11	Q	78	PHE	CA-CB-CG	-9.39	104.41	113.80
2	B	1136	G	P-O5'-C5'	-9.38	106.83	120.90
31	I	140	GLU	N-CA-C	-9.38	100.72	113.30
2	B	589	U	P-O3'-C3'	-9.38	106.14	120.20
2	B	2166	U	C3'-C2'-C1'	9.38	110.68	101.30
2	B	612	G	O3'-P-O5'	-9.37	89.95	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1706	C	C5'-C4'-C3'	-9.37	101.15	115.20
2	B	2227	A	C5'-C4'-C3'	9.36	130.04	116.00
2	B	670	A	P-O3'-C3'	9.36	134.23	120.20
8	N	21	PHE	N-CA-C	-9.35	99.45	112.45
2	B	2747	G	C5'-C4'-C3'	-9.34	101.99	116.00
28	F	126	ASN	CA-CB-CG	9.33	121.93	112.60
2	B	413	C	C5'-C4'-C3'	-9.33	102.01	116.00
2	B	763	G	P-O3'-C3'	-9.33	106.21	120.20
2	B	879	G	C5'-C4'-C3'	-9.33	102.01	116.00
2	B	2006	C	C5'-C4'-C3'	9.31	129.97	116.00
23	5	83	ASN	N-CA-C	-9.31	102.11	112.72
2	B	1256	G	O5'-C5'-C4'	-9.30	97.55	111.50
10	P	19	PHE	CA-CB-CG	-9.30	104.50	113.80
4	K	113	MET	CA-C-N	9.30	133.12	120.38
4	K	113	MET	C-N-CA	9.30	133.12	120.38
2	B	2022	U	P-O3'-C3'	9.30	134.14	120.20
2	B	41	C	C5'-C4'-C3'	9.29	129.94	116.00
2	B	1676	A	P-O3'-C3'	9.29	134.13	120.20
2	B	2422	C	O4'-C1'-N1	9.28	122.42	108.50
2	B	786	C	P-O3'-C3'	-9.28	106.28	120.20
2	B	1995	U	C5'-C4'-C3'	9.27	129.91	116.00
13	S	7	HIS	CA-CB-CG	-9.27	104.53	113.80
1	A	92	C	C3'-C2'-C1'	-9.26	92.04	101.30
19	X	52	PHE	CA-CB-CG	-9.26	104.54	113.80
2	B	1419	A	C4'-C3'-C2'	9.25	111.85	102.60
32	J	139	VAL	CA-C-O	-9.25	110.50	121.04
2	B	1095	A	P-O3'-C3'	9.24	134.06	120.20
5	L	91	ASP	CA-C-N	9.23	132.65	120.28
5	L	91	ASP	C-N-CA	9.23	132.65	120.28
12	R	91	GLN	CB-CG-CD	-9.23	96.91	112.60
2	B	2569	G	P-O5'-C5'	-9.22	107.07	120.90
2	B	989	G	P-O5'-C5'	-9.18	107.12	120.90
18	W	3	THR	N-CA-C	-9.18	93.45	109.06
2	B	2442	C	C5'-C4'-C3'	-9.18	102.24	116.00
20	E	166	LYS	N-CA-C	-9.16	101.41	112.59
2	B	684	G	P-O3'-C3'	9.16	133.94	120.20
17	U	25	LYS	N-CA-C	9.15	120.86	111.07
2	B	319	G	O4'-C4'-C3'	-9.14	94.86	104.00
2	B	2272	U	C2'-C3'-O3'	9.14	123.22	109.50
2	B	2354	C	C5'-C4'-C3'	-9.13	102.30	116.00
2	B	644	A	C5'-C4'-C3'	9.13	129.70	116.00
28	F	66	ILE	CA-C-O	-9.13	111.32	121.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2615	U	C5'-C4'-C3'	9.13	129.69	116.00
16	2	24	LEU	CA-C-N	9.12	131.54	120.14
16	2	24	LEU	C-N-CA	9.12	131.54	120.14
25	7	21	PHE	CA-C-O	-9.12	111.10	121.40
2	B	2361	G	O4'-C1'-N9	9.11	122.17	108.50
2	B	2425	A	P-O5'-C5'	-9.11	107.24	120.90
13	S	40	ASN	CA-CB-CG	-9.09	103.51	112.60
2	B	2430	A	P-O3'-C3'	9.05	133.78	120.20
23	5	176	GLY	CA-C-O	9.05	130.12	120.97
2	B	1123	C	C5'-C4'-C3'	9.05	129.58	116.00
2	B	2848	G	P-O3'-C3'	9.05	133.78	120.20
18	W	33	GLY	N-CA-C	-9.05	102.94	112.08
27	C	63	ILE	N-CA-C	-9.05	95.14	108.54
2	B	2248	C	C5'-C4'-C3'	-9.05	102.43	116.00
2	B	2272	U	C4'-C3'-C2'	9.04	111.64	102.60
16	2	42	ALA	N-CA-C	9.04	120.91	111.14
2	B	1326	U	O4'-C4'-C3'	-9.04	94.96	104.00
2	B	1777	U	C5'-C4'-C3'	-9.04	102.44	116.00
2	B	375	G	C4'-C3'-O3'	-9.02	99.47	113.00
2	B	2434	A	P-O3'-C3'	-9.02	106.67	120.20
20	E	88	ARG	O-C-N	-9.02	114.65	121.14
28	F	137	PHE	CA-CB-CG	-9.02	104.78	113.80
11	Q	38	VAL	CA-CB-CG2	-9.01	95.08	110.40
30	H	63	ALA	CA-C-N	9.00	132.69	120.54
30	H	63	ALA	C-N-CA	9.00	132.69	120.54
32	J	32	LEU	N-CA-C	-9.00	101.42	111.14
2	B	2449	U	O3'-P-O5'	-8.98	90.52	104.00
2	B	773	U	O4'-C4'-C3'	8.97	112.97	104.00
2	B	2388	A	C5'-C4'-C3'	8.97	128.66	115.20
7	M	9	PHE	CA-CB-CG	-8.96	104.84	113.80
5	L	4	ASN	N-CA-C	-8.96	101.90	112.92
2	B	1963	U	P-O5'-C5'	8.95	134.32	120.90
2	B	990	A	C4'-C3'-O3'	-8.95	99.58	113.00
2	B	1894	C	P-O5'-C5'	8.95	134.32	120.90
30	H	115	VAL	N-CA-C	-8.95	96.54	108.35
28	F	62	GLN	CA-C-N	8.94	134.28	120.60
28	F	62	GLN	C-N-CA	8.94	134.28	120.60
2	B	2704	C	P-O5'-C5'	-8.93	107.50	120.90
8	N	70	THR	CA-C-N	8.93	136.84	120.95
8	N	70	THR	C-N-CA	8.93	136.84	120.95
2	B	2063	C	C1'-O4'-C4'	-8.92	100.98	109.90
2	B	2157	G	O5'-C5'-C4'	8.92	124.88	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	I	99	LYS	N-CA-C	-8.92	95.40	109.23
2	B	839	U	O5'-C5'-C4'	-8.92	98.13	111.50
2	B	502	A	C5'-C4'-C3'	-8.90	102.64	116.00
2	B	627	A	P-O3'-C3'	8.90	133.55	120.20
19	X	114	PHE	CA-CB-CG	-8.90	104.90	113.80
10	P	15	ASP	CA-CB-CG	-8.90	103.70	112.60
2	B	806	C	C5'-C4'-C3'	-8.89	102.66	116.00
2	B	652	U	C5'-C4'-C3'	-8.89	102.67	116.00
27	C	66	PHE	CA-CB-CG	-8.89	104.91	113.80
23	5	186	LYS	CA-C-N	8.88	132.55	120.38
23	5	186	LYS	C-N-CA	8.88	132.55	120.38
1	A	20	G	C4'-C3'-C2'	-8.88	93.72	102.60
2	B	1051	G	P-O5'-C5'	-8.88	107.58	120.90
2	B	620	G	C2'-C3'-O3'	8.87	122.80	109.50
2	B	1198	U	C4'-C3'-C2'	8.87	111.47	102.60
6	1	35	GLY	N-CA-C	-8.86	104.15	114.69
19	X	367	SER	CA-C-O	8.86	129.94	120.55
18	W	58	SER	N-CA-C	-8.86	102.21	113.72
25	7	25	HIS	CE1-NE2-CD2	-8.86	100.14	109.00
27	C	146	LYS	O-C-N	-8.86	115.59	121.88
11	Q	112	ALA	N-CA-C	-8.85	102.05	113.12
2	B	1972	G	P-O5'-C5'	8.84	134.16	120.90
2	B	2874	C	P-O5'-C5'	-8.84	107.63	120.90
30	H	8	LYS	CA-C-O	8.83	129.79	120.70
20	E	81	GLY	CA-C-N	8.82	129.74	119.94
20	E	81	GLY	C-N-CA	8.82	129.74	119.94
27	C	227	VAL	N-CA-CB	8.82	120.30	110.51
32	J	40	HIS	CB-CG-CD2	-8.82	119.74	131.20
2	B	725	G	P-O3'-C3'	8.81	133.41	120.20
19	X	232	ASP	CA-CB-CG	-8.80	103.80	112.60
2	B	1838	C	P-O3'-C3'	8.80	133.40	120.20
2	B	1383	A	C4'-C3'-C2'	-8.79	93.81	102.60
2	B	1698	A	P-O5'-C5'	-8.78	107.73	120.90
2	B	846	U	C1'-O4'-C4'	-8.78	100.92	109.70
2	B	1494	A	C5'-C4'-C3'	8.78	129.16	116.00
14	D	116	LYS	N-CA-C	-8.76	102.17	113.12
2	B	2197	U	P-O5'-C5'	8.76	134.04	120.90
2	B	180	G	P-O5'-C5'	-8.76	107.77	120.90
2	B	2282	G	C2'-C3'-O3'	8.75	122.63	109.50
2	B	2796	U	P-O3'-C3'	8.75	133.33	120.20
9	O	17	LYS	CA-C-N	8.75	132.00	120.28
9	O	17	LYS	C-N-CA	8.75	132.00	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	H	108	VAL	N-CA-C	-8.74	95.13	107.80
2	B	74	A	P-O5'-C5'	-8.73	107.81	120.90
23	5	129	GLN	N-CA-C	-8.73	98.33	111.34
2	B	1633	G	P-O3'-C3'	8.72	133.28	120.20
2	B	1506	U	P-O5'-C5'	8.71	133.97	120.90
2	B	1310	G	C4'-C3'-C2'	8.71	111.31	102.60
2	B	1349	C	C4'-C3'-C2'	8.70	111.30	102.60
20	E	33	VAL	CA-C-O	8.69	129.86	120.47
1	A	30	C	O4'-C1'-N1	8.69	121.54	108.50
14	D	103	ASP	CA-CB-CG	-8.68	103.92	112.60
2	B	2603	G	O5'-C5'-C4'	-8.68	98.48	111.50
32	J	50	THR	N-CA-C	-8.68	101.45	114.64
2	B	585	G	O5'-C5'-C4'	-8.67	98.50	111.50
2	B	2250	G	P-O5'-C5'	-8.67	107.90	120.90
4	K	61	VAL	N-CA-C	-8.66	95.98	108.11
1	A	4	C	O4'-C1'-N1	8.66	121.48	108.50
2	B	1764	C	O5'-C5'-C4'	-8.65	98.52	111.50
2	B	2764	A	P-O3'-C3'	8.65	133.18	120.20
5	L	69	ARG	CA-C-N	8.64	131.85	120.28
5	L	69	ARG	C-N-CA	8.64	131.85	120.28
2	B	1553	A	O5'-C5'-C4'	8.62	124.43	111.50
14	D	189	VAL	CA-C-O	-8.62	114.87	121.68
5	L	118	THR	CA-C-N	8.62	128.69	119.90
5	L	118	THR	C-N-CA	8.62	128.69	119.90
2	B	968	C	P-O3'-C3'	-8.62	107.28	120.20
2	B	1216	G	P-O3'-C3'	-8.62	107.28	120.20
3	0	37	PHE	CA-CB-CG	-8.61	105.19	113.80
2	B	1828	G	P-O3'-C3'	8.60	133.11	120.20
11	Q	39	ILE	N-CA-C	8.60	118.64	110.30
2	B	1852	U	P-O5'-C5'	-8.60	108.00	120.90
2	B	135	U	C5'-C4'-C3'	-8.60	103.11	116.00
2	B	2354	C	O5'-C5'-C4'	-8.60	98.60	111.50
2	B	2168	G	P-O5'-C5'	8.59	133.79	120.90
28	F	37	MET	CA-C-N	-8.59	114.82	122.47
28	F	37	MET	C-N-CA	-8.59	114.82	122.47
2	B	1354	A	C5'-C4'-C3'	8.59	128.89	116.00
28	F	114	ARG	NE-CZ-NH2	8.59	126.93	119.20
2	B	778	G	P-O3'-C3'	8.58	133.08	120.20
2	B	2221	G	O5'-C5'-C4'	-8.58	98.63	111.50
2	B	2597	G	P-O5'-C5'	8.58	133.77	120.90
2	B	1923	U	O3'-P-O5'	8.58	116.86	104.00
18	W	20	LEU	O-C-N	8.57	131.00	122.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	414	C	P-O5'-C5'	8.56	133.75	120.90
23	5	120	ALA	N-CA-C	8.56	121.38	111.11
14	D	131	ASP	CA-C-N	8.55	132.09	120.54
14	D	131	ASP	C-N-CA	8.55	132.09	120.54
2	B	401	A	O4'-C1'-N9	8.55	121.33	108.50
25	7	12	ARG	NE-CZ-NH2	8.54	126.89	119.20
2	B	2587	A	C5'-C4'-C3'	8.54	128.80	116.00
2	B	585	G	O3'-P-O5'	-8.53	91.21	104.00
2	B	955	U	C1'-C2'-O2'	8.50	121.16	108.40
2	B	672	C	O4'-C1'-C2'	8.50	116.10	107.60
19	X	311	ASN	CA-CB-CG	-8.50	104.10	112.60
2	B	2198	A	C5'-C4'-C3'	-8.50	102.45	115.20
2	B	839	U	P-O5'-C5'	8.49	133.63	120.90
2	B	831	G	O5'-C5'-C4'	-8.48	98.78	111.50
2	B	893	C	C5'-C4'-C3'	-8.48	103.28	116.00
2	B	261	G	P-O5'-C5'	8.47	133.61	120.90
9	O	62	LEU	CA-C-N	8.47	131.98	120.54
9	O	62	LEU	C-N-CA	8.47	131.98	120.54
2	B	2266	A	C5'-C4'-O4'	8.47	121.80	109.10
2	B	1041	G	P-O3'-C3'	-8.46	107.50	120.20
2	B	1677	A	P-O3'-C3'	8.46	132.90	120.20
9	O	92	PHE	N-CA-C	-8.46	96.30	109.76
2	B	516	C	O5'-C5'-C4'	-8.46	98.81	111.50
18	W	18	ARG	NE-CZ-NH2	-8.46	111.58	119.20
27	C	70	LYS	CA-C-N	8.46	131.44	120.44
27	C	70	LYS	C-N-CA	8.46	131.44	120.44
2	B	565	C	C4'-C3'-C2'	8.46	111.06	102.60
22	3	52	LYS	N-CA-C	-8.46	96.47	109.24
2	B	265	A	O4'-C1'-N9	8.45	121.18	108.50
2	B	596	U	P-O5'-C5'	8.45	133.58	120.90
2	B	2063	C	P-O5'-C5'	8.45	133.58	120.90
2	B	199	A	P-O5'-C5'	8.45	133.57	120.90
2	B	1645	G	C4'-C3'-C2'	8.44	111.04	102.60
2	B	1099	G	C5'-C4'-C3'	-8.44	103.34	116.00
2	B	2388	A	O4'-C1'-C2'	-8.44	97.36	105.80
2	B	1302	A	O3'-P-O5'	-8.44	91.34	104.00
12	R	54	VAL	CA-C-N	8.44	133.16	120.17
12	R	54	VAL	C-N-CA	8.44	133.16	120.17
7	M	123	LYS	N-CA-C	-8.43	92.85	110.80
10	P	100	ARG	N-CA-CB	8.42	122.62	110.16
11	Q	71	ASN	CA-CB-CG	-8.41	104.19	112.60
8	N	45	ARG	N-CA-C	-8.41	102.11	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	O	51	ALA	O-C-N	-8.40	115.14	123.46
30	H	6	LEU	N-CA-C	-8.39	103.56	113.88
2	B	363	G	C5'-C4'-C3'	-8.39	103.41	116.00
2	B	2167	U	O3'-P-O5'	8.39	116.58	104.00
2	B	175	G	O3'-P-O5'	8.39	116.58	104.00
28	F	5	ASP	N-CA-C	-8.39	102.22	111.36
2	B	1329	U	C3'-C2'-O2'	-8.38	102.03	114.60
2	B	894	U	P-O5'-C5'	8.38	133.47	120.90
2	B	2254	C	C4'-C3'-O3'	-8.38	100.43	113.00
26	8	20	ASP	CA-CB-CG	-8.37	104.23	112.60
2	B	1185	G	C5'-C4'-C3'	8.37	128.56	116.00
32	J	125	TYR	N-CA-C	-8.37	95.85	108.99
10	P	17	PRO	CA-C-O	-8.37	111.69	121.98
2	B	810	U	O3'-P-O5'	8.36	116.54	104.00
2	B	989	G	O4'-C1'-C2'	-8.36	97.44	105.80
2	B	1630	A	P-O5'-C5'	8.36	133.44	120.90
14	D	193	VAL	CA-C-N	8.36	128.42	119.90
14	D	193	VAL	C-N-CA	8.36	128.42	119.90
32	J	76	HIS	CA-CB-CG	-8.36	105.44	113.80
15	T	62	VAL	CA-C-N	8.35	134.21	123.10
15	T	62	VAL	C-N-CA	8.35	134.21	123.10
9	O	75	GLY	N-CA-C	-8.35	102.08	112.77
2	B	842	U	C5'-C4'-C3'	8.35	128.52	116.00
3	O	73	ARG	N-CA-C	-8.35	102.11	112.88
2	B	1358	G	P-O3'-C3'	8.34	132.72	120.20
2	B	456	C	C5'-C4'-C3'	-8.33	102.70	115.20
2	B	2576	G	P-O3'-C3'	-8.33	107.70	120.20
1	A	36	C	P-O5'-C5'	8.33	133.39	120.90
2	B	1513	U	P-O3'-C3'	8.33	132.69	120.20
21	Y	45	HIS	CE1-NE2-CD2	-8.33	100.67	109.00
2	B	2003	A	P-O3'-C3'	8.32	132.68	120.20
23	5	148	ASN	N-CA-C	-8.32	95.92	108.99
2	B	612	G	C5'-C4'-C3'	-8.32	103.52	116.00
2	B	2849	U	C1'-O4'-C4'	8.31	118.01	109.70
2	B	773	U	C5'-C4'-C3'	-8.30	103.54	116.00
5	L	66	PHE	CA-CB-CG	-8.31	105.49	113.80
2	B	1896	G	P-O5'-C5'	8.30	133.36	120.90
9	O	70	ALA	N-CA-C	-8.30	102.87	113.16
2	B	363	G	P-O5'-C5'	8.30	133.34	120.90
5	L	120	VAL	O-C-N	-8.30	113.96	122.75
24	6	26	ASN	CA-CB-CG	-8.29	104.31	112.60
2	B	1758	U	P-O3'-C3'	-8.29	107.76	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2183	A	O5'-C5'-C4'	-8.29	99.07	111.50
8	N	8	ARG	CA-C-N	8.29	131.21	120.44
8	N	8	ARG	C-N-CA	8.29	131.21	120.44
31	I	107	GLU	CA-C-O	-8.29	111.64	120.42
9	O	29	HIS	ND1-CE1-NE2	8.28	116.68	108.40
20	E	69	ARG	N-CA-C	-8.28	100.20	111.55
2	B	1582	C	O4'-C4'-C3'	-8.28	95.72	104.00
2	B	1213	A	O5'-C5'-C4'	-8.28	99.08	111.50
14	D	183	GLU	N-CA-C	-8.27	102.75	112.92
18	W	47	VAL	CA-C-N	8.27	131.36	120.28
18	W	47	VAL	C-N-CA	8.27	131.36	120.28
2	B	2580	U	C4'-C3'-O3'	-8.27	100.60	113.00
27	C	129	LEU	N-CA-CB	8.27	119.81	111.29
2	B	692	C	O4'-C1'-N1	8.27	120.90	108.50
2	B	1029	A	C4'-C3'-O3'	-8.26	100.61	113.00
14	D	102	ALA	N-CA-C	-8.26	103.10	113.02
23	5	68	GLY	CA-C-N	8.26	133.91	120.94
23	5	68	GLY	C-N-CA	8.26	133.91	120.94
8	N	82	GLU	N-CA-C	-8.26	102.15	112.72
2	B	1308	A	P-O5'-C5'	-8.26	108.52	120.90
2	B	583	G	C5'-C4'-C3'	8.25	128.37	116.00
2	B	2096	C	C4'-C3'-C2'	-8.25	94.35	102.60
11	Q	55	GLN	N-CA-C	-8.25	103.00	113.23
2	B	2677	G	C4'-C3'-C2'	8.24	110.84	102.60
2	B	410	G	P-O3'-C3'	8.24	132.56	120.20
27	C	69	ASN	CA-CB-CG	-8.24	104.36	112.60
2	B	605	G	C4'-C3'-O3'	-8.23	100.65	113.00
2	B	1103	A	P-O5'-C5'	8.23	133.25	120.90
2	B	2529	G	O4'-C4'-C3'	8.23	112.23	104.00
28	F	103	ILE	N-CA-C	-8.23	103.21	111.77
2	B	696	G	C5'-C4'-C3'	8.23	128.34	116.00
1	A	101	A	O5'-C5'-C4'	-8.22	99.17	111.50
2	B	2361	G	C4'-C3'-O3'	-8.22	100.67	113.00
6	1	53	VAL	O-C-N	8.22	129.97	121.91
2	B	1128	G	O4'-C1'-C2'	-8.22	97.58	105.80
32	J	31	GLU	N-CA-C	-8.22	103.45	113.97
19	X	11	PRO	CA-C-O	-8.21	107.43	119.18
2	B	2208	C	C4'-C3'-O3'	-8.21	100.68	113.00
8	N	77	ALA	N-CA-C	-8.21	101.04	112.45
2	B	294	A	C5'-C4'-C3'	8.21	128.31	116.00
2	B	1656	C	C4'-C3'-C2'	-8.20	94.40	102.60
2	B	2425	A	C5'-C4'-C3'	-8.20	102.90	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2449	U	C3'-C2'-C1'	8.20	109.70	101.50
2	B	2618	G	P-O5'-C5'	-8.20	108.60	120.90
28	F	129	MET	CA-C-N	8.19	130.13	121.45
28	F	129	MET	C-N-CA	8.19	130.13	121.45
2	B	288	U	C4'-C3'-C2'	-8.19	94.41	102.60
2	B	1176	U	C5'-C4'-C3'	-8.19	103.72	116.00
2	B	1610	A	O5'-C5'-C4'	-8.19	99.42	111.70
2	B	2181	U	P-O3'-C3'	8.19	132.48	120.20
2	B	2824	C	C5'-C4'-C3'	-8.19	103.72	116.00
2	B	982	C	P-O5'-C5'	-8.19	108.62	120.90
2	B	1282	U	P-O3'-C3'	8.19	132.48	120.20
2	B	891	G	C1'-O4'-C4'	-8.18	101.72	109.90
2	B	574	A	O4'-C4'-C3'	-8.18	97.92	106.10
2	B	796	C	O5'-C5'-C4'	-8.18	99.43	111.70
14	D	65	ALA	CA-C-N	8.18	129.02	119.94
14	D	65	ALA	C-N-CA	8.18	129.02	119.94
2	B	823	C	P-O5'-C5'	-8.18	108.64	120.90
14	D	126	ASN	CA-CB-CG	-8.18	104.42	112.60
2	B	345	A	O5'-C5'-C4'	-8.17	99.44	111.70
2	B	2425	A	C2'-C3'-O3'	8.17	121.76	109.50
2	B	2610	C	P-O3'-C3'	8.17	132.46	120.20
2	B	1296	G	P-O3'-C3'	-8.17	107.94	120.20
2	B	2397	G	O4'-C4'-C3'	-8.17	95.83	104.00
2	B	1998	A	C4'-C3'-C2'	8.16	110.76	102.60
2	B	534	U	C4'-C3'-O3'	-8.16	100.77	113.00
2	B	555	G	O4'-C1'-C2'	-8.16	99.44	107.60
2	B	1305	C	C5'-C4'-C3'	8.16	128.24	116.00
11	Q	93	ILE	O-C-N	-8.15	113.97	121.87
2	B	1268	A	C5'-C4'-C3'	8.13	128.20	116.00
14	D	128	ARG	CA-C-N	8.13	137.07	121.54
14	D	128	ARG	C-N-CA	8.13	137.07	121.54
2	B	375	G	C5'-C4'-C3'	-8.12	103.82	116.00
7	M	22	GLN	N-CA-CB	8.12	122.94	109.94
2	B	1786	A	O5'-C5'-C4'	-8.12	99.52	111.70
18	W	75	GLN	OE1-CD-NE2	-8.12	114.48	122.60
2	B	421	C	C5'-C4'-C3'	-8.11	103.03	115.20
30	H	46	PHE	CA-C-N	8.11	130.98	120.44
30	H	46	PHE	C-N-CA	8.11	130.98	120.44
15	T	59	ASN	CA-CB-CG	-8.10	104.50	112.60
2	B	402	A	P-O5'-C5'	-8.09	108.76	120.90
2	B	644	A	P-O3'-C3'	-8.09	108.06	120.20
2	B	1710	G	P-O5'-C5'	-8.09	108.77	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2785	C	P-O5'-C5'	8.09	133.04	120.90
2	B	937	C	P-O3'-C3'	-8.09	108.07	120.20
1	A	105	G	O4'-C1'-C2'	-8.08	99.52	107.60
2	B	778	G	C5'-C4'-C3'	8.08	128.12	116.00
2	B	1510	G	C5'-C4'-C3'	8.08	128.12	116.00
2	B	56	A	C4'-C3'-O3'	-8.07	100.89	113.00
15	T	42	GLU	N-CA-C	-8.07	103.41	113.18
19	X	332	GLU	N-CA-C	-8.07	102.90	114.12
27	C	42	ARG	CA-C-N	8.07	136.95	121.54
27	C	42	ARG	C-N-CA	8.07	136.95	121.54
2	B	713	G	O5'-C5'-C4'	-8.07	99.40	111.50
2	B	1333	G	P-O5'-C5'	8.07	133.00	120.90
28	F	113	PHE	CA-C-O	8.07	132.05	120.51
2	B	592	A	C5'-C4'-C3'	8.06	128.09	116.00
2	B	2011	U	C3'-C2'-C1'	8.06	109.36	101.30
2	B	672	C	P-O5'-C5'	8.06	132.99	120.90
2	B	2575	C	C2'-C3'-O3'	8.06	121.58	109.50
2	B	1582	C	C4'-C3'-O3'	-8.05	100.92	113.00
29	G	59	ASP	CA-C-O	8.05	130.60	121.58
2	B	2292	U	C5'-C4'-C3'	8.05	128.08	116.00
2	B	806	C	P-O5'-C5'	8.05	132.97	120.90
20	E	172	ALA	N-CA-CB	-8.05	98.29	110.12
30	H	77	THR	N-CA-C	-8.05	98.55	110.06
10	P	80	VAL	CB-CA-C	-8.05	103.58	111.30
2	B	606	U	P-O5'-C5'	-8.04	108.83	120.90
11	Q	110	GLU	CA-C-O	-8.04	112.37	120.82
2	B	846	U	O4'-C1'-N1	8.04	120.26	108.20
2	B	1525	A	O5'-C5'-C4'	-8.04	99.44	111.50
7	M	122	ALA	N-CA-CB	8.04	124.08	110.49
2	B	686	U	O3'-P-O5'	-8.04	91.95	104.00
2	B	2798	U	P-O5'-C5'	8.04	132.95	120.90
3	O	44	ARG	N-CA-C	-8.03	97.53	108.38
2	B	1956	U	P-O5'-C5'	8.03	132.95	120.90
2	B	1854	A	O4'-C4'-C3'	-8.03	95.97	104.00
2	B	2174	C	C4'-C3'-C2'	-8.03	94.57	102.60
19	X	261	ARG	N-CA-C	-8.03	93.70	110.80
1	A	24	G	O4'-C4'-C3'	-8.03	98.07	106.10
2	B	2034	U	P-O5'-C5'	8.03	132.94	120.90
2	B	1402	U	C4'-C3'-C2'	-8.02	94.58	102.60
2	B	2699	C	C4'-C3'-O3'	-8.02	100.97	113.00
2	B	1657	U	O4'-C1'-N1	8.02	120.53	108.50
27	C	52	HIS	ND1-CE1-NE2	8.02	116.42	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	L	30	THR	N-CA-C	-8.02	93.72	110.80
2	B	1009	A	C4'-C3'-O3'	-8.01	100.98	113.00
9	O	29	HIS	CE1-NE2-CD2	-8.01	100.99	109.00
2	B	1429	G	P-O5'-C5'	8.01	132.91	120.90
14	D	59	ARG	NE-CZ-NH1	-8.01	113.49	121.50
2	B	828	U	C2'-C3'-O3'	8.01	121.51	109.50
2	B	743	A	P-O3'-C3'	-8.00	108.20	120.20
2	B	2602	A	O4'-C4'-C3'	-8.00	98.10	106.10
13	S	32	ALA	N-CA-C	-8.00	102.64	111.36
2	B	2547	A	O4'-C4'-C3'	-7.99	96.01	104.00
2	B	2101	A	C5'-C4'-C3'	7.99	127.98	116.00
2	B	2456	C	C3'-C2'-C1'	-7.98	93.32	101.30
2	B	376	G	O3'-P-O5'	-7.98	92.03	104.00
28	F	24	VAL	N-CA-C	-7.98	101.27	113.16
2	B	1997	C	C5'-C4'-C3'	-7.97	104.04	116.00
2	B	1107	G	P-O3'-C3'	7.97	132.16	120.20
2	B	2173	A	O5'-C5'-C4'	7.97	123.45	111.50
32	J	119	PHE	CA-C-N	7.97	130.96	120.28
32	J	119	PHE	C-N-CA	7.97	130.96	120.28
32	J	13	ARG	N-CA-C	-7.97	95.42	108.41
2	B	972	A	O3'-P-O5'	-7.96	92.06	104.00
2	B	2354	C	C4'-C3'-O3'	-7.96	101.06	113.00
4	K	119	ALA	CA-C-N	7.96	127.89	119.85
4	K	119	ALA	C-N-CA	7.96	127.89	119.85
19	X	90	ASP	CA-C-N	7.96	131.16	120.65
19	X	90	ASP	C-N-CA	7.96	131.16	120.65
31	I	21	PRO	CA-C-O	-7.95	109.03	120.56
2	B	1653	G	P-O3'-C3'	7.95	132.12	120.20
10	P	114	ASN	OD1-CG-ND2	7.95	130.55	122.60
23	5	51	ASP	CA-C-N	7.95	136.72	121.54
23	5	51	ASP	C-N-CA	7.95	136.72	121.54
2	B	2785	C	O4'-C1'-N1	7.94	120.41	108.50
17	U	35	VAL	N-CA-C	-7.94	97.02	108.53
2	B	1833	C	C4'-C3'-O3'	7.94	124.91	113.00
8	N	13	ASN	OD1-CG-ND2	-7.94	114.66	122.60
23	5	167	LYS	N-CA-C	7.94	127.71	110.80
2	B	1665	A	C5'-C4'-C3'	-7.93	104.10	116.00
2	B	2562	U	O4'-C1'-N1	7.93	120.40	108.50
19	X	99	ASP	CA-CB-CG	7.93	120.53	112.60
2	B	49	A	C5'-C4'-C3'	-7.93	103.30	115.20
2	B	974	G	C4'-C3'-C2'	-7.93	94.67	102.60
29	G	79	THR	N-CA-C	-7.93	93.90	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2456	C	C4'-C3'-O3'	-7.93	101.10	113.00
27	C	265	PHE	CA-CB-CG	-7.93	105.87	113.80
2	B	1659	G	O4'-C1'-N9	7.93	120.39	108.50
2	B	2151	U	C5'-C4'-C3'	-7.93	104.11	116.00
15	T	8	LEU	CA-C-N	7.93	136.68	121.54
15	T	8	LEU	C-N-CA	7.93	136.68	121.54
2	B	251	A	P-O5'-C5'	7.92	132.79	120.90
2	B	145	C	O4'-C4'-C3'	-7.92	96.08	104.00
2	B	644	A	O4'-C4'-C3'	-7.92	96.08	104.00
17	U	57	ILE	CA-C-N	-7.92	112.89	123.10
17	U	57	ILE	C-N-CA	-7.92	112.89	123.10
7	M	45	GLN	OE1-CD-NE2	7.92	130.51	122.60
2	B	1371	G	P-O3'-C3'	-7.91	108.33	120.20
3	O	31	ASN	CA-C-N	7.91	132.69	120.75
3	O	31	ASN	C-N-CA	7.91	132.69	120.75
2	B	688	U	C4'-C3'-C2'	7.91	110.50	102.60
2	B	131	A	O4'-C4'-C3'	-7.90	96.10	104.00
2	B	2632	A	P-O3'-C3'	7.90	132.06	120.20
2	B	2791	G	P-O5'-C5'	-7.90	109.05	120.90
2	B	1482	G	O5'-C5'-C4'	-7.90	99.65	111.50
2	B	1992	G	P-O5'-C5'	7.89	132.74	120.90
20	E	165	HIS	CB-CG-ND1	7.89	134.54	122.70
2	B	1657	U	O4'-C4'-C3'	-7.89	96.11	104.00
2	B	2153	C	O5'-C5'-C4'	7.89	123.53	111.70
11	Q	47	ARG	NE-CZ-NH1	-7.89	113.61	121.50
2	B	218	A	P-O3'-C3'	7.87	132.01	120.20
2	B	1350	C	P-O5'-C5'	-7.87	109.09	120.90
7	M	80	VAL	N-CA-C	-7.87	92.97	109.34
2	B	1392	A	C2'-C3'-O3'	7.87	125.50	113.70
2	B	1536	C	P-O3'-C3'	7.87	132.00	120.20
2	B	1653	G	O4'-C4'-C3'	-7.86	98.24	106.10
2	B	2007	U	P-O5'-C5'	-7.85	109.12	120.90
2	B	2295	C	O4'-C1'-N1	7.85	120.28	108.50
31	I	48	ILE	N-CA-C	-7.85	97.18	108.17
2	B	2571	U	C5'-C4'-C3'	7.85	127.77	116.00
3	O	49	ARG	NE-CZ-NH1	-7.85	113.65	121.50
2	B	844	A	P-O5'-C5'	7.84	132.67	120.90
2	B	1386	C	C4'-C3'-C2'	-7.84	94.76	102.60
2	B	1903	G	P-O5'-C5'	7.84	132.66	120.90
2	B	2123	G	P-O5'-C5'	-7.84	109.14	120.90
2	B	2574	G	P-O3'-C3'	7.84	131.96	120.20
32	J	132	HIS	N-CA-CB	7.84	123.74	110.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1129	A	C2'-C3'-O3'	7.84	121.26	109.50
15	T	46	ALA	N-CA-C	-7.84	102.26	112.68
2	B	275	C	P-O5'-C5'	-7.83	109.15	120.90
2	B	1450	G	C4'-C3'-C2'	7.83	110.43	102.60
28	F	31	GLU	CA-C-N	7.83	136.50	121.54
28	F	31	GLU	C-N-CA	7.83	136.50	121.54
2	B	1	G	C4'-C3'-C2'	-7.83	94.77	102.60
2	B	1349	C	P-O5'-C5'	7.83	132.64	120.90
28	F	175	PRO	N-CA-C	-7.83	103.70	114.27
2	B	1534	U	P-O5'-C5'	-7.83	109.16	120.90
17	U	20	LYS	N-CA-C	7.83	120.41	110.24
30	H	10	ALA	O-C-N	-7.83	114.72	123.48
28	F	172	PHE	N-CA-C	-7.82	102.65	112.90
4	K	71	ARG	NE-CZ-NH2	-7.82	112.16	119.20
12	R	21	ARG	N-CA-C	-7.82	96.15	108.90
2	B	2231	U	C5'-C4'-C3'	7.82	127.72	116.00
2	B	1830	C	C5'-C4'-C3'	-7.81	104.28	116.00
17	U	74	ALA	N-CA-C	7.81	119.88	111.36
15	T	38	ALA	CA-C-N	7.81	136.45	121.54
15	T	38	ALA	C-N-CA	7.81	136.45	121.54
20	E	182	ALA	N-CA-C	7.81	120.88	111.82
2	B	2141	G	C4'-C3'-C2'	-7.80	94.80	102.60
2	B	1030	C	P-O5'-C5'	7.80	132.60	120.90
25	7	25	HIS	ND1-CE1-NE2	7.80	116.20	108.40
2	B	425	G	C5'-C4'-C3'	7.80	127.70	116.00
1	A	15	A	C1'-O4'-C4'	-7.79	101.91	109.70
2	B	496	G	C4'-C3'-O3'	-7.79	101.31	113.00
29	G	64	ALA	N-CA-C	-7.79	101.62	112.45
2	B	2617	U	O5'-C5'-C4'	-7.79	99.82	111.50
20	E	191	ASP	CA-CB-CG	-7.79	104.81	112.60
23	5	34	ALA	N-CA-C	-7.79	99.00	110.52
2	B	1473	G	P-O3'-C3'	-7.78	108.52	120.20
2	B	2613	U	P-O3'-C3'	7.78	131.87	120.20
2	B	1665	A	O4'-C4'-C3'	7.78	111.78	104.00
2	B	1721	G	P-O5'-C5'	7.78	132.57	120.90
2	B	783	A	C3'-C2'-C1'	7.78	109.08	101.30
2	B	1765	U	P-O3'-C3'	-7.77	108.54	120.20
2	B	2456	C	C1'-O4'-C4'	-7.77	102.13	109.90
2	B	1624	U	C4'-C3'-O3'	-7.77	101.34	113.00
2	B	1779	U	C1'-O4'-C4'	-7.77	102.13	109.90
2	B	2178	C	P-O3'-C3'	7.77	131.86	120.20
2	B	2347	C	P-O5'-C5'	7.77	132.56	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	P	106	ALA	N-CA-C	-7.77	103.79	112.57
18	W	35	GLU	CA-C-N	7.77	133.46	121.03
18	W	35	GLU	C-N-CA	7.77	133.46	121.03
2	B	1823	G	O4'-C4'-C3'	-7.76	96.24	104.00
2	B	1022	G	O3'-P-O5'	-7.76	92.36	104.00
2	B	390	U	P-O5'-C5'	-7.76	109.27	120.90
2	B	1217	U	O3'-P-O5'	7.75	115.63	104.00
2	B	1888	G	O3'-P-O5'	-7.75	92.37	104.00
2	B	1902	C	C5'-C4'-C3'	-7.75	104.37	116.00
19	X	450	GLY	CA-C-N	7.75	133.26	120.86
19	X	450	GLY	C-N-CA	7.75	133.26	120.86
27	C	256	THR	N-CA-C	-7.75	96.49	108.42
2	B	1678	A	P-O3'-C3'	7.75	131.82	120.20
2	B	405	U	O4'-C1'-N1	7.74	120.11	108.50
2	B	2053	G	P-O3'-C3'	-7.74	108.58	120.20
2	B	2649	C	P-O3'-C3'	-7.74	108.59	120.20
2	B	2384	U	P-O3'-C3'	7.74	131.81	120.20
2	B	2512	C	O3'-P-O5'	7.74	115.61	104.00
2	B	542	C	C5'-C4'-C3'	-7.74	104.40	116.00
2	B	2051	A	C5'-C4'-C3'	-7.74	103.60	115.20
20	E	172	ALA	N-CA-C	7.73	119.71	111.28
27	C	216	ARG	N-CA-C	-7.73	98.41	109.62
2	B	2894	G	P-O5'-C5'	7.73	132.49	120.90
24	6	35	ARG	N-CA-C	-7.73	102.94	111.36
19	X	19	PHE	N-CA-CB	7.73	121.48	110.12
2	B	82	U	P-O3'-C3'	7.73	131.79	120.20
13	S	79	GLY	O-C-N	7.72	129.49	121.77
2	B	1665	A	C1'-O4'-C4'	-7.72	102.18	109.90
2	B	2614	A	P-O5'-C5'	-7.72	109.33	120.90
2	B	746	U	P-O5'-C5'	7.71	132.47	120.90
2	B	2715	C	C5'-C4'-C3'	-7.71	104.43	116.00
2	B	857	G	P-O5'-C5'	7.71	132.47	120.90
30	H	120	GLY	CA-C-N	7.71	133.73	123.17
30	H	120	GLY	C-N-CA	7.71	133.73	123.17
2	B	31	C	C4'-C3'-O3'	-7.71	101.44	113.00
20	E	6	LYS	N-CA-C	-7.71	103.90	113.38
2	B	751	A	P-O3'-C3'	-7.71	108.64	120.20
2	B	1383	A	C5'-C4'-C3'	7.70	126.75	115.20
2	B	205	G	C4'-C3'-C2'	-7.70	94.90	102.60
2	B	986	C	O5'-C5'-C4'	-7.70	99.95	111.50
2	B	2335	A	C5'-C4'-C3'	-7.70	104.45	116.00
16	2	46	MET	N-CA-CB	7.70	121.17	110.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2611	C	C4'-C3'-C2'	-7.70	94.91	102.60
19	X	91	ALA	N-CA-CB	7.70	121.14	109.91
2	B	1055	G	P-O5'-C5'	7.69	132.44	120.90
2	B	1893	C	C5'-C4'-C3'	7.69	127.54	116.00
7	M	31	PHE	CA-CB-CG	-7.69	106.11	113.80
7	M	100	LYS	CA-C-N	-7.69	112.75	122.37
7	M	100	LYS	C-N-CA	-7.69	112.75	122.37
29	G	93	TYR	N-CA-C	-7.69	101.76	112.45
28	F	156	THR	CB-CA-C	7.69	125.72	110.42
2	B	700	G	P-O5'-C5'	-7.69	109.37	120.90
2	B	1826	G	O3'-P-O5'	7.69	115.53	104.00
2	B	686	U	O5'-C5'-C4'	-7.68	100.17	111.70
23	5	100	LEU	N-CA-C	-7.68	103.70	113.23
11	Q	18	LYS	CA-C-N	-7.68	109.86	122.54
11	Q	18	LYS	C-N-CA	-7.68	109.86	122.54
2	B	2830	C	O4'-C1'-N1	7.68	120.02	108.50
2	B	1834	U	O4'-C4'-C3'	-7.68	96.32	104.00
2	B	2236	U	P-O3'-C3'	7.67	131.71	120.20
2	B	1353	A	P-O5'-C5'	-7.67	109.39	120.90
2	B	562	U	C4'-C3'-C2'	7.67	110.27	102.60
19	X	411	HIS	CA-CB-CG	7.67	121.47	113.80
2	B	1271	G	C5'-C4'-O4'	7.66	120.59	109.10
10	P	100	ARG	NE-CZ-NH2	7.66	126.09	119.20
15	T	41	ALA	N-CA-CB	7.66	122.10	110.30
2	B	2063	C	P-O3'-C3'	-7.66	108.71	120.20
2	B	2758	A	C4'-C3'-C2'	-7.66	94.94	102.60
22	3	37	HIS	CE1-NE2-CD2	-7.66	101.34	109.00
2	B	577	G	P-O5'-C5'	-7.66	109.42	120.90
2	B	2501	C	O4'-C4'-C3'	-7.66	98.44	106.10
23	5	203	GLN	OE1-CD-NE2	7.66	130.26	122.60
2	B	199	A	P-O3'-C3'	-7.66	108.72	120.20
15	T	20	ALA	N-CA-C	-7.66	103.24	112.58
15	T	89	GLU	CA-C-N	7.66	129.71	120.14
15	T	89	GLU	C-N-CA	7.66	129.71	120.14
1	A	14	U	P-O5'-C5'	7.65	132.38	120.90
2	B	2224	G	O5'-C5'-C4'	-7.65	100.02	111.50
2	B	2499	C	C4'-C3'-O3'	-7.65	101.52	113.00
2	B	1099	G	P-O5'-C5'	7.65	132.38	120.90
2	B	1307	A	O5'-C5'-C4'	-7.64	100.04	111.50
2	B	846	U	P-O5'-C5'	7.64	132.36	120.90
5	L	127	VAL	N-CA-C	-7.63	97.50	108.42
2	B	746	U	O4'-C1'-N1	7.63	119.95	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	115	A	O4'-C1'-N9	7.63	119.94	108.50
14	D	145	SER	N-CA-C	-7.63	97.89	110.17
1	A	17	C	P-O5'-C5'	-7.62	109.48	120.90
2	B	959	A	C4'-C3'-O3'	-7.62	101.58	113.00
2	B	1023	U	O4'-C1'-N1	7.61	119.92	108.50
4	K	44	LYS	N-CA-C	-7.61	104.52	113.88
2	B	445	C	C4'-C3'-O3'	-7.61	101.59	113.00
2	B	1615	C	O3'-P-O5'	-7.61	92.59	104.00
2	B	2454	G	O4'-C1'-C2'	-7.61	99.99	107.60
2	B	714	U	C4'-C3'-O3'	-7.61	101.59	113.00
2	B	439	A	P-O5'-C5'	7.60	132.30	120.90
27	C	142	ASN	CA-CB-CG	-7.60	105.00	112.60
1	A	46	A	C4'-C3'-C2'	-7.60	95.00	102.60
2	B	392	U	O3'-P-O5'	-7.60	92.60	104.00
2	B	1427	A	C5'-C4'-C3'	7.60	126.60	115.20
2	B	2265	U	C5'-C4'-C3'	7.60	127.39	116.00
2	B	2575	C	O5'-C5'-C4'	-7.60	100.30	111.70
6	1	30	MET	CG-SD-CE	-7.60	84.19	100.90
13	S	40	ASN	O-C-N	7.59	131.83	123.10
15	T	15	HIS	ND1-CE1-NE2	7.59	115.99	108.40
2	B	2420	C	O3'-P-O5'	7.59	115.39	104.00
1	A	26	C	C4'-C3'-C2'	-7.58	95.02	102.60
2	B	589	U	C4'-C3'-O3'	-7.58	101.62	113.00
2	B	1097	U	P-O5'-C5'	7.58	132.27	120.90
1	A	92	C	P-O3'-C3'	7.58	131.57	120.20
2	B	1509	A	C4'-C3'-C2'	-7.58	95.02	102.60
2	B	2895	G	C4'-C3'-C2'	-7.58	95.02	102.60
19	X	17	THR	N-CA-C	-7.58	102.96	111.07
2	B	724	U	O4'-C1'-N1	7.58	119.86	108.50
2	B	2038	G	P-O5'-C5'	-7.58	109.54	120.90
19	X	444	LYS	N-CA-C	7.58	119.32	111.14
2	B	2047	C	P-O3'-C3'	-7.57	108.84	120.20
2	B	1135	C	O4'-C1'-N1	7.57	119.86	108.50
2	B	1789	A	O5'-C5'-C4'	-7.57	100.14	111.50
2	B	2422	C	O4'-C4'-C3'	-7.57	96.43	104.00
32	J	70	THR	CA-CB-OG1	7.57	120.95	109.60
2	B	2035	G	O4'-C1'-N9	7.57	119.55	108.20
2	B	958	U	P-O5'-C5'	7.57	132.25	120.90
2	B	982	C	P-O3'-C3'	7.57	131.55	120.20
27	C	103	ILE	CA-C-N	7.57	130.75	120.38
27	C	103	ILE	C-N-CA	7.57	130.75	120.38
2	B	2302	U	P-O5'-C5'	7.55	132.23	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	295	ARG	N-CA-CB	7.55	123.26	110.49
2	B	2268	A	P-O5'-C5'	-7.55	109.57	120.90
31	I	113	ALA	CA-C-N	7.55	130.73	120.38
31	I	113	ALA	C-N-CA	7.55	130.73	120.38
2	B	1101	U	P-O5'-C5'	-7.55	109.58	120.90
21	Y	31	LEU	N-CA-C	-7.55	98.44	110.14
2	B	606	U	C5'-C4'-C3'	-7.55	104.68	116.00
2	B	405	U	C4'-C3'-C2'	-7.55	95.05	102.60
4	K	85	VAL	CA-C-O	-7.55	112.47	120.39
5	L	3	LEU	N-CA-C	-7.54	103.66	113.17
2	B	1906	G	C3'-C2'-C1'	7.54	108.84	101.30
5	L	84	LYS	N-CA-C	-7.54	101.99	112.25
2	B	1546	G	O4'-C4'-C3'	-7.54	96.46	104.00
31	I	53	PRO	CA-C-O	-7.54	112.84	121.36
2	B	2118	U	C2'-C3'-O3'	7.54	120.81	109.50
2	B	2748	A	C5'-C4'-C3'	-7.54	104.69	116.00
10	P	31	VAL	O-C-N	7.54	129.30	121.91
29	G	32	LEU	CA-C-N	7.54	133.81	123.11
29	G	32	LEU	C-N-CA	7.54	133.81	123.11
14	D	136	ASN	CA-CB-CG	-7.54	105.06	112.60
2	B	2242	G	C5'-C4'-C3'	7.53	127.30	116.00
27	C	227	VAL	CA-C-O	-7.53	113.44	121.27
2	B	2566	A	P-O3'-C3'	7.53	131.50	120.20
19	X	366	GLU	N-CA-CB	-7.53	99.02	110.16
2	B	531	C	P-O3'-C3'	-7.53	108.91	120.20
2	B	1670	C	O4'-C1'-N1	7.53	119.79	108.50
2	B	2860	A	O5'-C5'-C4'	-7.53	100.21	111.50
22	3	19	ASP	CA-CB-CG	-7.52	105.08	112.60
2	B	630	G	P-O5'-C5'	-7.52	109.62	120.90
2	B	1020	A	P-O5'-C5'	-7.52	109.62	120.90
2	B	2280	G	P-O5'-C5'	7.52	132.18	120.90
17	U	48	VAL	N-CA-C	-7.52	98.66	107.61
2	B	2385	C	O4'-C1'-N1	7.52	119.78	108.50
23	5	189	LEU	O-C-N	7.52	129.81	122.07
2	B	1773	A	C4'-C3'-C2'	-7.51	95.09	102.60
2	B	1646	C	P-O3'-C3'	-7.51	108.93	120.20
2	B	2445	G	C4'-C3'-O3'	-7.51	101.73	113.00
2	B	2119	A	C2'-C3'-O3'	7.51	120.77	109.50
2	B	2049	G	O5'-C5'-C4'	-7.51	100.24	111.50
2	B	134	G	O3'-P-O5'	-7.50	92.74	104.00
2	B	878	A	C5'-C4'-C3'	-7.50	104.74	116.00
2	B	1816	C	C4'-C3'-C2'	7.50	110.10	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1460	U	P-O3'-C3'	7.50	131.45	120.20
2	B	2636	C	O4'-C1'-N1	7.50	119.75	108.50
23	5	156	ALA	CA-C-N	7.50	130.33	120.28
23	5	156	ALA	C-N-CA	7.50	130.33	120.28
2	B	2057	G	P-O3'-C3'	-7.50	108.95	120.20
2	B	2615	U	C4'-C3'-C2'	7.50	110.10	102.60
2	B	268	C	C5'-C4'-C3'	-7.50	104.76	116.00
2	B	1310	G	P-O5'-C5'	7.49	132.14	120.90
2	B	1607	C	O4'-C1'-C2'	-7.49	100.11	107.60
28	F	55	ASP	CA-C-O	-7.49	112.48	120.42
2	B	1247	A	O5'-C5'-C4'	-7.49	100.46	111.70
2	B	2328	A	C5'-C4'-C3'	7.49	127.23	116.00
28	F	37	MET	N-CA-C	-7.48	96.21	108.41
2	B	602	A	C4'-C3'-C2'	-7.48	95.12	102.60
14	D	42	ASN	N-CA-C	-7.48	102.39	113.61
2	B	804	A	O4'-C1'-N9	7.48	119.72	108.50
2	B	1519	G	C5'-C4'-C3'	-7.48	104.78	116.00
2	B	1197	G	O4'-C1'-N9	7.48	119.72	108.50
2	B	1462	C	P-O5'-C5'	-7.47	109.69	120.90
2	B	278	A	C1'-O4'-C4'	-7.47	102.43	109.90
2	B	1017	G	C3'-C2'-C1'	7.47	108.77	101.30
2	B	1677	A	C2'-C3'-O3'	7.47	124.91	113.70
2	B	2116	G	O4'-C1'-C2'	-7.47	100.13	107.60
4	K	49	ARG	N-CA-C	-7.47	97.09	108.67
2	B	1657	U	C3'-C2'-C1'	-7.47	93.83	101.30
2	B	2349	G	P-O5'-C5'	7.47	132.10	120.90
2	B	2128	G	P-O3'-C3'	-7.46	109.00	120.20
7	M	128	THR	CA-CB-OG1	7.46	120.80	109.60
20	E	38	GLY	N-CA-C	-7.46	102.86	115.62
29	G	138	GLN	OE1-CD-NE2	7.46	130.06	122.60
2	B	2307	G	O5'-C5'-C4'	-7.46	100.51	111.70
19	X	425	ASN	CA-CB-CG	-7.46	105.14	112.60
27	C	189	ALA	N-CA-C	-7.46	94.92	110.80
19	X	243	ILE	CA-C-O	7.46	128.02	119.89
2	B	446	G	O5'-C5'-C4'	-7.45	100.52	111.70
9	O	35	ILE	N-CA-C	-7.45	97.39	108.12
2	B	502	A	C1'-O4'-C4'	7.45	117.35	109.90
7	M	44	ARG	N-CA-C	-7.45	103.45	112.54
2	B	1184	U	P-O5'-C5'	7.45	132.07	120.90
2	B	1601	G	O5'-C5'-C4'	-7.45	100.33	111.50
2	B	2718	G	C5'-C4'-C3'	7.45	127.17	116.00
2	B	2864	G	C5'-C4'-C3'	7.45	127.17	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2206	C	C5'-C4'-C3'	7.44	127.17	116.00
2	B	371	A	O5'-C5'-C4'	-7.44	100.54	111.70
2	B	1122	G	P-O3'-C3'	-7.44	109.04	120.20
16	2	30	ARG	N-CA-C	-7.44	98.83	110.36
29	G	152	ARG	CA-C-N	7.44	129.14	119.84
29	G	152	ARG	C-N-CA	7.44	129.14	119.84
2	B	1482	G	C5'-C4'-C3'	-7.44	104.84	116.00
23	5	119	ASP	N-CA-C	7.44	120.84	111.69
2	B	1616	A	P-O3'-C3'	7.44	131.36	120.20
2	B	2457	U	O4'-C1'-N1	7.44	119.66	108.50
2	B	2464	G	C5'-C4'-C3'	7.44	127.16	116.00
21	Y	67	LYS	O-C-N	7.44	130.52	122.34
16	2	12	ALA	CA-C-O	-7.44	113.04	120.70
2	B	2832	U	O4'-C4'-C3'	-7.43	98.67	106.10
25	7	13	PHE	CA-CB-CG	-7.43	106.36	113.80
2	B	49	A	O4'-C1'-C2'	-7.43	98.37	105.80
2	B	51	G	O5'-C5'-C4'	-7.43	100.55	111.70
6	1	34	SER	CA-C-O	7.43	128.04	119.35
2	B	588	U	P-O5'-C5'	7.43	132.04	120.90
2	B	2058	A	O4'-C4'-C3'	-7.43	98.67	106.10
2	B	1886	U	C1'-O4'-C4'	-7.42	102.47	109.90
23	5	156	ALA	CB-CA-C	-7.42	99.17	110.90
2	B	2832	U	P-O5'-C5'	7.42	132.03	120.90
27	C	209	ALA	CA-C-O	7.42	128.51	119.97
2	B	2258	C	P-O5'-C5'	-7.42	109.77	120.90
2	B	2405	G	C4'-C3'-O3'	-7.42	101.87	113.00
9	O	43	ASN	CA-C-O	7.42	128.03	119.35
10	P	51	ASN	CA-CB-CG	7.42	120.02	112.60
2	B	2155	U	C5'-C4'-O4'	7.42	120.93	109.80
11	Q	16	ILE	CA-C-N	7.42	130.96	120.28
11	Q	16	ILE	C-N-CA	7.42	130.96	120.28
2	B	1393	A	P-O5'-C5'	-7.42	109.78	120.90
2	B	1522	A	C3'-C2'-O2'	-7.42	103.47	114.60
2	B	2799	A	P-O3'-C3'	7.42	131.32	120.20
7	M	28	PHE	CA-C-N	7.42	127.87	122.16
7	M	28	PHE	C-N-CA	7.42	127.87	122.16
20	E	147	LEU	N-CA-C	-7.42	103.07	112.93
25	7	25	HIS	CA-CB-CG	-7.42	106.39	113.80
32	J	80	HIS	CA-C-O	-7.42	113.26	121.05
18	W	49	ASN	CA-CB-CG	-7.41	105.19	112.60
18	W	51	GLN	CA-C-N	7.41	130.82	120.29
18	W	51	GLN	C-N-CA	7.41	130.82	120.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	0	12	VAL	CA-C-N	7.41	135.70	121.54
3	0	12	VAL	C-N-CA	7.41	135.70	121.54
2	B	816	C	C4'-C3'-O3'	-7.41	101.88	113.00
21	Y	8	SER	O-C-N	7.41	131.77	122.65
2	B	543	G	O4'-C1'-C2'	7.41	115.01	107.60
2	B	1976	U	O3'-P-O5'	-7.41	92.89	104.00
14	D	201	LEU	N-CA-CB	7.41	123.00	110.71
2	B	2061	G	C3'-C2'-C1'	7.40	108.90	101.50
2	B	2687	U	P-O5'-C5'	-7.40	109.80	120.90
2	B	189	G	O5'-C5'-C4'	-7.40	100.40	111.50
8	N	44	LEU	CA-C-N	7.40	130.19	120.28
8	N	44	LEU	C-N-CA	7.40	130.19	120.28
2	B	735	A	O4'-C1'-C2'	7.39	114.99	107.60
2	B	2368	C	O4'-C4'-C3'	-7.39	96.61	104.00
2	B	2635	A	O4'-C4'-C3'	-7.39	96.61	104.00
2	B	1728	C	O4'-C1'-N1	7.39	119.59	108.50
1	A	100	G	C4'-C3'-C2'	7.39	109.99	102.60
2	B	172	A	O4'-C4'-C3'	-7.39	96.61	104.00
2	B	714	U	O4'-C1'-C2'	-7.39	100.21	107.60
2	B	457	A	C5'-C4'-O4'	7.39	120.18	109.10
2	B	1184	U	C5'-C4'-C3'	-7.39	104.92	116.00
2	B	796	C	C1'-O4'-C4'	-7.38	102.32	109.70
2	B	2309	A	P-O3'-C3'	-7.38	109.13	120.20
12	R	102	SER	N-CA-C	-7.38	101.53	113.19
2	B	1445	G	P-O3'-C3'	-7.38	109.14	120.20
2	B	1699	G	O4'-C1'-C2'	-7.38	98.42	105.80
2	B	1734	G	C5'-C4'-C3'	7.38	127.06	116.00
2	B	1888	G	C5'-C4'-C3'	7.38	127.06	116.00
2	B	2620	C	O5'-C5'-C4'	-7.38	100.44	111.50
2	B	1361	G	C5'-C4'-O4'	7.38	120.86	109.80
2	B	2871	U	C4'-C3'-O3'	-7.37	101.94	113.00
3	0	47	THR	CB-CA-C	-7.37	99.81	110.06
12	R	55	ASP	N-CA-C	-7.37	101.33	113.50
2	B	1534	U	O4'-C1'-N1	7.37	119.55	108.50
2	B	2584	U	C4'-C3'-C2'	7.37	109.97	102.60
21	Y	45	HIS	ND1-CE1-NE2	7.37	115.77	108.40
29	G	163	TYR	CB-CG-CD1	-7.37	109.75	120.80
2	B	2832	U	O4'-C1'-N1	7.37	119.25	108.20
2	B	1594	U	P-O5'-C5'	7.36	131.94	120.90
2	B	1820	U	C1'-O4'-C4'	-7.36	102.34	109.70
10	P	60	VAL	O-C-N	-7.36	115.23	123.18
12	R	55	ASP	CA-C-O	7.36	126.53	118.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	5	24	ASN	N-CA-CB	7.36	121.05	110.16
2	B	299	A	O4'-C4'-C3'	-7.36	96.64	104.00
2	B	2307	G	C5'-C4'-C3'	-7.36	104.17	115.20
2	B	2002	G	P-O5'-C5'	-7.36	109.87	120.90
2	B	2525	G	C3'-C2'-C1'	7.36	108.66	101.30
27	C	141	HIS	CE1-NE2-CD2	-7.36	101.64	109.00
31	I	76	ALA	CA-C-N	7.36	129.83	120.56
31	I	76	ALA	C-N-CA	7.36	129.83	120.56
2	B	1110	G	O4'-C1'-C2'	7.35	113.15	105.80
5	L	104	GLN	OE1-CD-NE2	7.35	129.95	122.60
19	X	386	ARG	CD-NE-CZ	-7.35	114.11	124.40
28	F	144	LYS	CA-C-N	7.35	135.19	121.97
28	F	144	LYS	C-N-CA	7.35	135.19	121.97
2	B	1527	G	O3'-P-O5'	-7.34	92.98	104.00
13	S	65	ASP	CA-CB-CG	-7.34	105.26	112.60
2	B	1385	A	P-O3'-C3'	7.34	131.22	120.20
11	Q	109	VAL	N-CA-CB	7.34	120.53	110.54
32	J	2	LYS	N-CA-C	-7.34	95.16	110.80
20	E	163	ASN	N-CA-C	-7.34	97.72	109.76
20	E	180	LEU	N-CA-C	-7.34	102.30	111.11
14	D	146	ILE	CA-CB-CG1	7.34	122.88	110.40
2	B	507	A	O3'-P-O5'	-7.33	93.00	104.00
19	X	259	GLY	CA-C-N	7.33	130.51	120.46
19	X	259	GLY	C-N-CA	7.33	130.51	120.46
2	B	1126	A	C5'-C4'-C3'	-7.33	104.20	115.20
2	B	1764	C	C4'-C3'-O3'	-7.33	102.00	113.00
2	B	1974	C	O4'-C1'-N1	7.33	119.50	108.50
19	X	395	HIS	CA-C-O	-7.33	114.42	121.02
30	H	91	PHE	CA-CB-CG	7.33	121.13	113.80
2	B	396	G	C4'-C3'-O3'	-7.33	102.00	113.00
2	B	1134	A	C2'-C3'-O3'	7.33	120.49	109.50
2	B	2629	U	C4'-C3'-C2'	7.33	109.93	102.60
30	H	40	THR	N-CA-C	-7.33	97.58	108.79
2	B	2525	G	C4'-C3'-C2'	-7.32	95.28	102.60
27	C	88	ALA	CA-C-N	7.32	135.53	121.54
27	C	88	ALA	C-N-CA	7.32	135.53	121.54
2	B	493	G	O4'-C4'-C3'	-7.32	96.68	104.00
13	S	62	ASP	CA-CB-CG	7.32	119.92	112.60
22	3	12	ARG	CD-NE-CZ	-7.31	114.16	124.40
2	B	989	G	C4'-C3'-C2'	-7.31	95.29	102.60
2	B	2732	G	O4'-C1'-C2'	-7.31	100.29	107.60
2	B	1671	U	C4'-C3'-C2'	-7.30	95.30	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	I	29	GLN	CA-C-N	7.30	129.93	120.44
31	I	29	GLN	C-N-CA	7.30	129.93	120.44
20	E	118	LEU	N-CA-C	-7.30	97.31	109.07
2	B	722	A	O3'-P-O5'	-7.30	93.05	104.00
2	B	237	C	O4'-C1'-N1	7.30	119.44	108.50
19	X	305	LEU	N-CA-CB	7.30	120.59	110.01
9	O	14	ALA	N-CA-C	7.29	118.88	111.07
2	B	2178	C	O3'-P-O5'	7.29	114.94	104.00
2	B	2766	A	P-O3'-C3'	-7.29	109.26	120.20
10	P	69	VAL	N-CA-C	-7.29	94.57	107.18
29	G	114	HIS	CA-CB-CG	-7.29	106.51	113.80
2	B	209	C	C4'-C3'-O3'	-7.29	102.07	113.00
2	B	1389	G	C1'-O4'-C4'	-7.29	102.61	109.90
2	B	1805	A	O5'-C5'-C4'	-7.29	100.57	111.50
28	F	142	TYR	N-CA-C	-7.28	103.38	114.16
2	B	196	A	C4'-C3'-C2'	7.28	109.88	102.60
4	K	9	ASN	N-CA-C	-7.28	99.14	110.42
4	K	58	LEU	CA-C-N	7.28	134.34	121.75
4	K	58	LEU	C-N-CA	7.28	134.34	121.75
2	B	2447	G	C5'-C4'-C3'	-7.27	104.29	115.20
4	K	98	ARG	CA-C-N	7.27	131.83	120.34
4	K	98	ARG	C-N-CA	7.27	131.83	120.34
27	C	78	GLU	N-CA-C	-7.27	101.70	111.96
30	H	86	ASP	N-CA-C	-7.27	103.40	114.16
2	B	1272	A	C5'-C4'-O4'	7.27	120.00	109.10
24	6	23	ALA	CA-C-N	7.27	135.42	121.54
24	6	23	ALA	C-N-CA	7.27	135.42	121.54
29	G	82	PHE	CA-C-N	7.27	135.42	121.54
29	G	82	PHE	C-N-CA	7.27	135.42	121.54
2	B	2119	A	P-O3'-C3'	7.27	131.10	120.20
2	B	2278	A	C5'-C4'-O4'	7.26	120.69	109.80
2	B	12	U	C5'-C4'-C3'	7.26	126.89	116.00
2	B	105	C	O4'-C1'-N1	7.26	119.39	108.50
2	B	448	U	P-O3'-C3'	7.26	131.09	120.20
3	0	26	ARG	CA-C-O	-7.26	110.13	120.51
2	B	902	C	O4'-C1'-N1	7.26	119.39	108.50
19	X	260	VAL	CB-CA-C	-7.25	102.35	112.14
23	5	49	GLY	O-C-N	7.25	129.77	122.88
2	B	45	G	C4'-C3'-C2'	7.25	109.85	102.60
9	O	8	ILE	N-CA-CB	7.25	119.04	110.55
14	D	58	ASN	CA-CB-CG	-7.25	105.35	112.60
2	B	602	A	O4'-C4'-C3'	7.25	111.25	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1143	A	P-O5'-C5'	7.25	131.77	120.90
2	B	1240	U	P-O5'-C5'	7.25	131.77	120.90
2	B	568	U	P-O5'-C5'	7.25	131.77	120.90
2	B	2176	A	O5'-C5'-C4'	-7.25	100.63	111.50
28	F	120	SER	N-CA-CB	7.24	122.85	110.68
2	B	1530	G	O3'-P-O5'	-7.24	93.14	104.00
2	B	92	U	O3'-P-O5'	-7.24	93.14	104.00
2	B	566	U	C1'-O4'-C4'	-7.24	102.66	109.90
2	B	1841	U	O4'-C1'-N1	7.24	119.36	108.50
2	B	2185	U	O4'-C1'-N1	7.24	119.36	108.50
32	J	26	GLY	N-CA-C	-7.24	96.02	113.18
5	L	55	MET	CA-C-O	-7.24	112.64	120.17
14	D	114	LYS	O-C-N	7.24	129.62	122.09
2	B	1982	U	P-O5'-C5'	7.23	131.75	120.90
3	0	61	LYS	N-CA-C	-7.23	104.44	113.55
2	B	1992	G	O4'-C4'-C3'	-7.23	98.87	106.10
2	B	2393	U	O4'-C1'-N1	7.23	119.34	108.50
13	S	57	ASN	CB-CA-C	-7.23	97.07	109.65
2	B	2488	G	C4'-C3'-O3'	-7.23	102.16	113.00
2	B	1324	G	O4'-C4'-C3'	-7.22	98.88	106.10
28	F	46	LYS	N-CA-CB	7.22	121.17	110.33
2	B	238	C	P-O3'-C3'	-7.22	109.37	120.20
31	I	73	PRO	CA-C-N	7.22	127.26	119.89
31	I	73	PRO	C-N-CA	7.22	127.26	119.89
1	A	88	C	P-O5'-C5'	7.22	131.73	120.90
2	B	2499	C	P-O5'-C5'	7.22	131.73	120.90
28	F	148	VAL	N-CA-CB	7.22	123.14	111.23
2	B	2099	U	O4'-C4'-C3'	-7.22	96.78	104.00
6	1	8	GLU	N-CA-C	-7.22	99.13	109.96
2	B	2375	G	P-O3'-C3'	7.22	131.03	120.20
5	L	55	MET	CA-C-N	7.21	128.86	119.84
5	L	55	MET	C-N-CA	7.21	128.86	119.84
2	B	287	G	P-O5'-C5'	-7.21	110.08	120.90
2	B	1274	A	C4'-C3'-O3'	-7.21	102.18	113.00
2	B	2043	C	P-O5'-C5'	7.21	131.72	120.90
2	B	2681	C	C4'-C3'-C2'	-7.21	95.39	102.60
2	B	1320	C	P-O3'-C3'	7.21	131.01	120.20
23	5	16	ASP	CA-CB-CG	-7.21	105.39	112.60
23	5	137	MET	CA-C-O	-7.21	113.71	120.34
2	B	2278	A	C4'-C3'-C2'	7.21	109.81	102.60
4	K	88	ASN	CA-C-N	7.20	130.25	120.38
4	K	88	ASN	C-N-CA	7.20	130.25	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	884	U	C4'-C3'-C2'	-7.20	95.40	102.60
2	B	1803	A	P-O3'-C3'	7.20	131.00	120.20
2	B	1855	U	P-O5'-C5'	7.20	131.70	120.90
2	B	157	C	O4'-C1'-N1	7.20	119.30	108.50
1	A	66	A	P-O3'-C3'	7.20	130.99	120.20
2	B	700	G	O5'-C5'-C4'	-7.20	100.71	111.50
2	B	878	A	P-O5'-C5'	7.20	131.69	120.90
2	B	2448	A	O4'-C4'-C3'	-7.20	98.91	106.10
2	B	2071	A	C5'-C4'-C3'	7.19	126.79	116.00
2	B	2430	A	C5'-C4'-O4'	-7.19	99.01	109.80
7	M	55	ARG	NE-CZ-NH2	7.19	125.67	119.20
2	B	419	U	P-O3'-C3'	-7.19	109.41	120.20
2	B	2243	U	O5'-C5'-C4'	-7.19	100.72	111.50
2	B	2058	A	O3'-P-O5'	-7.19	93.22	104.00
2	B	265	A	O4'-C4'-C3'	-7.19	96.81	104.00
2	B	321	U	P-O5'-C5'	7.19	131.68	120.90
19	X	256	ASP	CA-CB-CG	7.19	119.79	112.60
2	B	1281	G	P-O3'-C3'	7.18	130.98	120.20
2	B	2274	A	C5'-C4'-C3'	7.18	126.78	116.00
2	B	2446	G	P-O5'-C5'	-7.18	110.12	120.90
2	B	2692	G	P-O5'-C5'	-7.18	110.12	120.90
2	B	1320	C	C5'-C4'-C3'	7.18	125.97	115.20
32	J	97	PRO	CA-C-N	7.18	130.86	120.38
32	J	97	PRO	C-N-CA	7.18	130.86	120.38
2	B	677	A	C5'-C4'-C3'	7.18	126.76	116.00
2	B	1791	A	C4'-C3'-C2'	7.18	109.78	102.60
5	L	60	ARG	N-CA-C	-7.18	102.33	113.02
11	Q	47	ARG	CA-C-O	7.18	128.34	120.80
2	B	2827	C	O5'-C5'-C4'	-7.17	100.74	111.50
10	P	42	PHE	CA-CB-CG	-7.17	106.62	113.80
2	B	926	G	C5'-C4'-C3'	-7.17	105.24	116.00
2	B	1116	G	P-O5'-C5'	-7.17	110.14	120.90
2	B	293	U	C4'-C3'-O3'	-7.17	102.25	113.00
2	B	100	U	P-O3'-C3'	7.17	130.95	120.20
2	B	770	G	C5'-C4'-C3'	7.16	126.75	116.00
15	T	77	ARG	N-CA-C	-7.16	100.88	110.55
2	B	1270	C	O3'-P-O5'	-7.16	93.26	104.00
2	B	1272	A	O4'-C1'-N9	7.16	118.94	108.20
10	P	55	HIS	CE1-NE2-CD2	-7.16	101.84	109.00
1	A	38	C	O4'-C1'-N1	7.16	119.24	108.50
2	B	407	G	O5'-C5'-C4'	-7.16	100.76	111.50
2	B	1255	U	C1'-O4'-C4'	-7.16	102.74	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2007	U	O5'-C5'-C4'	-7.16	100.77	111.50
2	B	2816	G	O5'-C5'-C4'	-7.15	100.78	111.50
2	B	2088	A	P-O5'-C5'	-7.15	110.18	120.90
2	B	2551	C	O4'-C1'-N1	7.15	119.22	108.50
2	B	755	U	P-O5'-C5'	7.15	131.62	120.90
2	B	1821	A	C5'-C4'-C3'	7.15	126.72	116.00
2	B	2160	C	P-O5'-C5'	-7.15	110.18	120.90
32	J	116	ARG	N-CA-C	-7.15	104.59	113.38
27	C	62	ARG	CD-NE-CZ	-7.15	114.40	124.40
2	B	1074	G	P-O5'-C5'	7.14	131.62	120.90
2	B	131	A	C5'-C4'-C3'	7.14	126.71	116.00
2	B	526	A	C4'-C3'-O3'	-7.14	102.28	113.00
2	B	35	G	O4'-C1'-N9	7.14	119.21	108.50
2	B	2540	C	O4'-C1'-N1	7.14	119.21	108.50
25	7	63	TYR	N-CA-C	-7.14	97.60	108.67
28	F	89	THR	CB-CA-C	7.14	121.52	109.75
2	B	2748	A	C5'-C4'-O4'	7.13	120.50	109.80
2	B	1160	G	O4'-C4'-C3'	-7.13	96.87	104.00
2	B	2819	G	O3'-P-O5'	-7.13	93.30	104.00
2	B	1554	U	P-O5'-C5'	-7.13	110.21	120.90
2	B	2329	U	C5'-C4'-C3'	7.13	126.69	116.00
2	B	1457	U	P-O3'-C3'	7.12	130.89	120.20
2	B	2177	C	P-O5'-C5'	-7.12	110.22	120.90
17	U	33	VAL	CA-C-O	-7.12	114.41	121.67
2	B	1251	C	P-O3'-C3'	-7.12	109.52	120.20
5	L	29	LYS	N-CA-CB	7.12	122.53	110.49
28	F	152	ASP	CA-CB-CG	-7.12	105.48	112.60
2	B	235	U	C4'-C3'-O3'	-7.12	102.32	113.00
2	B	1298	C	O4'-C1'-N1	7.12	119.18	108.50
2	B	466	A	P-O5'-C5'	-7.12	110.22	120.90
2	B	661	A	C4'-C3'-O3'	-7.12	102.33	113.00
2	B	29	U	O5'-C5'-C4'	-7.12	100.83	111.50
2	B	722	A	C4'-C3'-O3'	-7.12	102.33	113.00
2	B	1481	U	O4'-C1'-N1	7.12	119.17	108.50
2	B	1163	G	C4'-C3'-C2'	7.11	109.71	102.60
2	B	1975	G	C5'-C4'-C3'	-7.11	105.33	116.00
27	C	144	GLU	N-CA-C	-7.11	99.26	109.29
19	X	431	PRO	N-CA-C	-7.11	99.89	111.77
2	B	73	A	C5'-C4'-C3'	-7.11	105.34	116.00
2	B	2166	U	C4'-C3'-C2'	-7.11	95.49	102.60
2	B	701	G	P-O5'-C5'	-7.11	110.24	120.90
2	B	178	G	C5'-C4'-C3'	7.11	126.66	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	205	G	O5'-C5'-C4'	7.11	122.36	111.70
2	B	575	A	C4'-C3'-C2'	-7.11	95.50	102.60
2	B	613	A	C4'-C3'-C2'	-7.11	95.50	102.60
23	5	129	GLN	CB-CG-CD	7.10	124.68	112.60
2	B	69	C	C4'-C3'-O3'	-7.10	102.35	113.00
2	B	976	G	C1'-O4'-C4'	-7.10	102.80	109.90
2	B	2402	U	C5'-C4'-C3'	7.10	125.86	115.20
12	R	18	GLN	O-C-N	-7.10	114.41	122.93
28	F	170	ALA	N-CA-C	-7.10	104.22	113.17
25	7	9	ALA	N-CA-C	7.10	119.92	111.33
2	B	1741	C	C1'-C2'-O2'	7.10	119.05	108.40
11	Q	47	ARG	NE-CZ-NH2	7.10	125.59	119.20
2	B	1002	G	P-O5'-C5'	7.10	131.55	120.90
14	D	64	GLU	O-C-N	-7.10	113.84	122.71
9	O	54	VAL	N-CA-CB	7.10	120.77	112.33
15	T	66	LYS	CA-C-O	-7.09	112.81	121.11
23	5	164	ARG	N-CA-C	7.09	119.17	108.46
2	B	510	C	C4'-C3'-O3'	-7.09	102.36	113.00
2	B	1459	G	P-O3'-C3'	7.09	130.84	120.20
2	B	1976	U	O4'-C1'-N1	7.09	119.14	108.50
21	Y	10	ARG	CD-NE-CZ	-7.09	114.47	124.40
2	B	899	A	N9-C1'-C2'	-7.09	101.36	112.00
2	B	1221	C	C5'-C4'-C3'	7.09	126.64	116.00
2	B	1637	A	P-O3'-C3'	-7.09	109.56	120.20
2	B	1736	U	P-O3'-C3'	-7.09	109.56	120.20
10	P	111	GLU	CA-C-N	7.09	129.78	120.28
10	P	111	GLU	C-N-CA	7.09	129.78	120.28
23	5	146	THR	N-CA-C	-7.09	98.73	109.30
2	B	238	C	O5'-C5'-C4'	-7.09	100.87	111.50
2	B	951	C	P-O5'-C5'	-7.08	110.27	120.90
2	B	1655	A	O4'-C4'-C3'	-7.08	96.92	104.00
10	P	59	THR	N-CA-C	-7.08	98.58	109.14
2	B	1703	G	C5'-C4'-C3'	-7.08	105.38	116.00
2	B	2695	U	O5'-C5'-C4'	-7.08	100.88	111.50
28	F	4	HIS	CE1-NE2-CD2	-7.08	101.92	109.00
31	I	44	LYS	N-CA-C	-7.08	103.69	114.16
2	B	1100	C	C4'-C3'-C2'	-7.08	95.52	102.60
2	B	1125	G	P-O3'-C3'	7.08	130.81	120.20
2	B	1850	G	P-O5'-C5'	7.08	131.51	120.90
5	L	123	ARG	O-C-N	-7.08	114.73	123.36
19	X	146	SER	N-CA-C	-7.07	101.60	112.99
27	C	23	LEU	N-CA-C	-7.07	98.56	109.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	4	C	P-O3'-C3'	-7.07	109.59	120.20
2	B	991	C	P-O5'-C5'	-7.07	110.30	120.90
2	B	2245	U	C1'-C2'-O2'	7.07	119.01	108.40
6	1	49	ASP	N-CA-C	-7.07	106.56	114.62
2	B	775	G	O3'-P-O5'	-7.07	93.40	104.00
2	B	2290	G	C5'-C4'-C3'	-7.07	105.40	116.00
2	B	1776	G	C4'-C3'-O3'	-7.07	102.40	113.00
2	B	1737	G	C1'-O4'-C4'	7.06	116.96	109.90
23	5	171	ILE	CA-C-O	7.06	128.94	120.74
2	B	1405	U	P-O5'-C5'	-7.06	110.31	120.90
2	B	1813	G	O5'-C5'-C4'	-7.06	100.91	111.50
5	L	28	GLY	CA-C-N	7.06	135.03	121.54
5	L	28	GLY	C-N-CA	7.06	135.03	121.54
5	L	83	ALA	N-CA-C	-7.06	103.33	112.23
20	E	23	PHE	N-CA-C	-7.06	94.62	107.75
2	B	1748	C	C5'-C4'-C3'	-7.06	105.41	116.00
2	B	809	G	O4'-C1'-N9	7.05	119.08	108.50
2	B	2336	A	P-O5'-C5'	7.05	131.48	120.90
17	U	28	LEU	N-CA-CB	7.05	122.14	110.85
19	X	248	ASP	N-CA-C	-7.05	104.62	113.23
2	B	1920	C	O4'-C4'-C3'	7.05	111.05	104.00
2	B	2479	U	P-O3'-C3'	-7.05	109.62	120.20
20	E	124	PHE	CA-C-N	7.05	135.01	121.54
20	E	124	PHE	C-N-CA	7.05	135.01	121.54
2	B	533	G	P-O5'-C5'	-7.05	110.33	120.90
10	P	112	ARG	NE-CZ-NH2	-7.05	112.86	119.20
11	Q	2	ARG	CA-C-N	7.05	134.66	121.97
11	Q	2	ARG	C-N-CA	7.05	134.66	121.97
2	B	135	U	C2'-C3'-O3'	7.05	124.27	113.70
2	B	1474	U	C5'-C4'-C3'	7.04	126.56	116.00
2	B	2556	C	P-O3'-C3'	-7.04	109.64	120.20
17	U	66	VAL	N-CA-C	7.04	117.13	110.30
1	A	114	C	O4'-C1'-N1	7.04	119.06	108.50
31	I	40	ALA	CA-C-N	7.04	129.71	120.28
31	I	40	ALA	C-N-CA	7.04	129.71	120.28
2	B	642	U	O4'-C4'-C3'	-7.04	96.96	104.00
2	B	874	G	O4'-C1'-N9	7.04	119.06	108.50
2	B	1331	G	C5'-C4'-C3'	-7.04	105.44	116.00
2	B	1752	C	O4'-C1'-N1	7.04	119.06	108.50
2	B	1252	G	P-O3'-C3'	-7.04	109.65	120.20
2	B	1611	C	O5'-C5'-C4'	7.03	122.05	111.50
2	B	2848	G	C3'-C2'-C1'	-7.03	94.47	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	L	87	GLY	CA-C-O	-7.03	115.47	121.66
10	P	102	ARG	N-CA-C	-7.03	103.87	113.30
2	B	83	A	P-O3'-C3'	7.03	130.75	120.20
2	B	954	G	C5'-C4'-C3'	7.03	126.55	116.00
2	B	1248	G	P-O5'-C5'	7.03	131.45	120.90
2	B	1497	U	P-O5'-C5'	7.03	131.45	120.90
2	B	2639	A	P-O5'-C5'	-7.03	110.36	120.90
31	I	41	PHE	N-CA-C	-7.03	103.62	111.28
2	B	1269	A	O4'-C4'-C3'	7.03	111.03	104.00
23	5	180	PHE	CA-CB-CG	-7.03	106.77	113.80
27	C	196	ASN	CA-CB-CG	-7.03	105.57	112.60
2	B	512	G	C4'-C3'-O3'	-7.03	102.46	113.00
2	B	608	A	O4'-C4'-C3'	-7.03	96.97	104.00
2	B	987	C	O4'-C1'-N1	7.03	119.04	108.50
2	B	1322	A	O4'-C4'-C3'	-7.03	96.97	104.00
2	B	1383	A	C2'-C3'-O3'	7.03	120.04	109.50
2	B	1453	A	P-O3'-C3'	-7.03	109.66	120.20
5	L	85	VAL	CA-C-N	7.03	132.80	122.82
5	L	85	VAL	C-N-CA	7.03	132.80	122.82
16	2	33	HIS	CE1-NE2-CD2	-7.03	101.97	109.00
2	B	373	U	P-O5'-C5'	7.02	131.43	120.90
2	B	1457	U	C5'-C4'-C3'	-7.02	105.47	116.00
19	X	381	THR	N-CA-C	-7.02	103.70	111.36
2	B	1002	G	C4'-C3'-C2'	-7.02	95.58	102.60
2	B	2671	G	C5'-C4'-C3'	7.02	126.53	116.00
4	K	50	GLY	CA-C-N	7.02	134.95	121.54
4	K	50	GLY	C-N-CA	7.02	134.95	121.54
2	B	212	G	O5'-C5'-C4'	-7.02	100.98	111.50
2	B	693	A	C4'-C3'-C2'	-7.01	95.58	102.60
4	K	115	ILE	N-CA-C	-7.01	103.63	110.72
10	P	106	ALA	CA-C-N	7.01	134.94	121.54
10	P	106	ALA	C-N-CA	7.01	134.94	121.54
16	2	33	HIS	CG-CD2-NE2	7.01	114.21	107.20
28	F	80	GLN	CA-C-O	7.01	128.44	119.95
2	B	473	G	C5'-C4'-C3'	7.01	126.52	116.00
5	L	80	SER	N-CA-C	-7.01	104.73	112.72
20	E	140	ASP	N-CA-CB	7.01	121.14	110.28
31	I	47	SER	N-CA-C	-7.01	104.88	113.50
2	B	2168	G	P-O3'-C3'	-7.01	109.69	120.20
2	B	1325	U	P-O3'-C3'	-7.01	109.69	120.20
4	K	16	ALA	CA-C-N	7.01	134.92	121.54
4	K	16	ALA	C-N-CA	7.01	134.92	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	U	21	ARG	NE-CZ-NH2	7.01	125.51	119.20
20	E	15	SER	N-CA-CB	7.00	122.33	110.49
2	B	1302	A	O4'-C1'-C2'	-7.00	98.80	105.80
2	B	1725	U	O5'-C5'-C4'	-7.00	101.00	111.50
2	B	2251	G	C3'-C2'-C1'	-7.00	94.30	101.30
2	B	2652	C	O4'-C1'-N1	7.00	119.00	108.50
20	E	92	HIS	CA-CB-CG	-7.00	106.80	113.80
21	Y	41	GLY	CA-C-N	7.00	134.91	121.54
21	Y	41	GLY	C-N-CA	7.00	134.91	121.54
2	B	2737	G	C5'-C4'-C3'	-7.00	105.50	116.00
2	B	2864	G	O4'-C4'-C3'	-7.00	97.00	104.00
11	Q	96	ASP	CA-CB-CG	-7.00	105.60	112.60
19	X	324	ASP	N-CA-C	-7.00	105.01	113.97
20	E	194	LYS	CA-C-O	-7.00	113.13	120.55
2	B	2446	G	O4'-C4'-C3'	7.00	111.00	104.00
4	K	59	LYS	N-CA-C	-7.00	98.44	109.07
2	B	1460	U	C1'-O4'-C4'	-7.00	102.91	109.90
1	A	15	A	P-O5'-C5'	-6.99	110.41	120.90
2	B	354	A	O5'-C5'-C4'	-6.99	101.01	111.50
2	B	712	G	C5'-C4'-C3'	6.99	126.49	116.00
2	B	1416	G	O3'-P-O5'	-6.99	93.51	104.00
2	B	1785	A	P-O5'-C5'	-6.99	110.42	120.90
4	K	71	ARG	CA-C-N	6.99	129.35	120.89
4	K	71	ARG	C-N-CA	6.99	129.35	120.89
2	B	206	U	O4'-C1'-N1	6.99	118.98	108.50
2	B	270	A	O3'-P-O5'	-6.99	93.52	104.00
2	B	605	G	O5'-C5'-C4'	-6.99	101.02	111.50
2	B	1601	G	C4'-C3'-O3'	-6.99	102.52	113.00
2	B	2040	G	O4'-C1'-C2'	6.99	114.59	107.60
27	C	189	ALA	CA-C-N	6.98	133.06	122.65
27	C	189	ALA	C-N-CA	6.98	133.06	122.65
2	B	820	A	O5'-C5'-C4'	-6.98	101.03	111.50
2	B	2050	C	C4'-C3'-O3'	-6.98	102.53	113.00
2	B	2720	U	P-O5'-C5'	-6.98	110.43	120.90
19	X	417	PRO	N-CA-C	-6.98	102.18	110.70
30	H	128	HIS	CE1-NE2-CD2	-6.98	102.02	109.00
2	B	761	A	O4'-C4'-C3'	6.98	110.98	104.00
2	B	1765	U	O5'-C5'-C4'	-6.98	101.03	111.50
13	S	89	ALA	CA-C-N	6.98	132.52	122.40
13	S	89	ALA	C-N-CA	6.98	132.52	122.40
2	B	2170	A	O4'-C1'-C2'	-6.98	98.82	105.80
2	B	2815	C	O5'-C5'-C4'	-6.98	101.04	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	821	A	C1'-O4'-C4'	-6.97	102.72	109.70
2	B	1140	C	C3'-C2'-C1'	-6.97	94.33	101.30
2	B	2405	G	O3'-P-O5'	-6.97	93.54	104.00
2	B	309	A	O3'-P-O5'	6.97	114.45	104.00
2	B	2079	U	P-O3'-C3'	6.97	130.65	120.20
2	B	2170	A	P-O5'-C5'	-6.97	110.45	120.90
2	B	728	G	P-O3'-C3'	6.97	130.65	120.20
2	B	1055	G	P-O3'-C3'	6.97	130.65	120.20
2	B	531	C	O4'-C1'-N1	6.96	118.65	108.20
2	B	1784	A	O4'-C4'-C3'	-6.96	99.14	106.10
19	X	322	LYS	N-CA-CB	6.96	122.26	110.49
31	I	60	VAL	O-C-N	6.96	130.31	122.93
20	E	106	LYS	N-CA-C	-6.96	95.97	110.80
2	B	1520	U	O4'-C1'-N1	6.96	118.94	108.50
12	R	89	HIS	CB-CG-CD2	-6.96	122.15	131.20
1	A	27	C	P-O5'-C5'	6.96	131.34	120.90
2	B	981	A	O3'-P-O5'	-6.96	93.56	104.00
19	X	425	ASN	CA-C-N	6.96	134.83	121.54
19	X	425	ASN	C-N-CA	6.96	134.83	121.54
2	B	2697	G	P-O5'-C5'	-6.96	110.46	120.90
24	6	22	MET	N-CA-C	-6.96	104.10	112.59
2	B	1518	C	C4'-C3'-O3'	-6.96	102.57	113.00
1	A	53	A	C5'-C4'-C3'	6.95	126.43	116.00
2	B	1269	A	O5'-C5'-C4'	-6.95	101.07	111.50
14	D	113	SER	N-CA-CB	6.95	120.18	110.17
2	B	2299	U	C5'-C4'-C3'	-6.95	105.57	116.00
17	U	87	GLU	CA-C-O	-6.95	113.00	121.06
2	B	410	G	C5'-C4'-C3'	6.95	126.42	116.00
2	B	467	G	O4'-C1'-N9	6.95	118.92	108.50
32	J	60	ASP	N-CA-C	-6.95	103.48	112.23
2	B	2278	A	C5'-C4'-C3'	-6.95	105.58	116.00
2	B	2339	C	C4'-C3'-C2'	-6.95	95.65	102.60
2	B	72	U	P-O3'-C3'	-6.94	109.78	120.20
2	B	212	G	C1'-C2'-O2'	6.94	118.82	108.40
2	B	2279	G	O5'-C5'-C4'	-6.94	101.08	111.50
2	B	534	U	O3'-P-O5'	-6.94	93.59	104.00
27	C	98	GLY	N-CA-C	-6.94	105.64	115.43
2	B	571	U	P-O3'-C3'	6.94	130.61	120.20
2	B	1171	G	O4'-C1'-C2'	-6.94	100.66	107.60
2	B	1375	U	O4'-C1'-N1	6.94	118.91	108.50
28	F	83	PRO	N-CA-CB	6.94	109.79	103.34
2	B	1652	A	O5'-C5'-C4'	-6.94	101.10	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	255	A	O5'-C5'-C4'	-6.93	101.10	111.50
2	B	2027	G	C5'-C4'-C3'	-6.93	105.60	116.00
19	X	110	GLU	N-CA-CB	6.93	122.21	110.49
2	B	1124	G	P-O3'-C3'	-6.93	109.80	120.20
2	B	1424	G	O4'-C1'-N9	6.93	118.90	108.50
18	W	35	GLU	N-CA-C	-6.93	96.75	108.26
2	B	1427	A	O3'-P-O5'	6.93	114.39	104.00
2	B	68	G	C4'-C3'-O3'	-6.93	102.61	113.00
2	B	1611	C	C5'-C4'-C3'	-6.93	105.61	116.00
2	B	2406	A	P-O3'-C3'	6.93	130.59	120.20
2	B	97	C	C5'-C4'-C3'	-6.93	105.61	116.00
2	B	1722	A	C4'-C3'-O3'	-6.93	102.61	113.00
15	T	47	VAL	N-CA-C	-6.93	103.65	113.07
28	F	27	VAL	N-CA-CB	6.93	120.91	111.21
2	B	2580	U	P-O5'-C5'	6.92	131.29	120.90
5	L	20	GLY	CA-C-N	6.92	133.61	122.32
5	L	20	GLY	C-N-CA	6.92	133.61	122.32
2	B	2432	A	P-O3'-C3'	-6.92	109.81	120.20
2	B	2121	G	P-O5'-C5'	6.92	131.28	120.90
2	B	2170	A	C4'-C3'-C2'	-6.92	95.68	102.60
2	B	2028	U	O4'-C4'-C3'	6.92	110.92	104.00
5	L	46	VAL	N-CA-C	-6.92	99.22	108.35
2	B	1644	C	C5'-C4'-C3'	-6.91	105.63	116.00
2	B	1769	U	C4'-C3'-C2'	6.91	109.51	102.60
2	B	2340	A	P-O5'-C5'	-6.91	110.53	120.90
2	B	1756	G	P-O3'-C3'	-6.91	109.83	120.20
17	U	28	LEU	CA-C-N	6.91	129.42	120.44
17	U	28	LEU	C-N-CA	6.91	129.42	120.44
7	M	26	VAL	CA-C-O	-6.91	114.47	121.59
21	Y	65	LYS	N-CA-C	-6.91	99.05	110.17
1	A	61	G	O4'-C1'-N9	6.91	118.86	108.50
2	B	895	U	O4'-C4'-C3'	-6.91	97.09	104.00
2	B	1004	U	P-O3'-C3'	-6.91	109.84	120.20
2	B	2269	G	P-O5'-C5'	-6.91	110.54	120.90
2	B	2408	U	P-O5'-C5'	6.91	131.26	120.90
2	B	1577	C	C4'-C3'-C2'	-6.91	95.69	102.60
30	H	43	ASN	CA-CB-CG	6.91	119.51	112.60
2	B	1741	C	C1'-O4'-C4'	-6.90	103.00	109.90
2	B	2568	U	O4'-C1'-N1	6.90	118.86	108.50
5	L	88	GLY	CA-C-N	6.90	131.75	123.19
5	L	88	GLY	C-N-CA	6.90	131.75	123.19
2	B	396	G	C5'-C4'-C3'	-6.90	105.65	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	271	GLU	CA-C-N	6.90	129.41	120.44
19	X	271	GLU	C-N-CA	6.90	129.41	120.44
2	B	594	U	P-O5'-C5'	6.90	131.25	120.90
2	B	2583	G	P-O5'-C5'	6.90	131.25	120.90
22	3	37	HIS	ND1-CE1-NE2	6.90	115.30	108.40
29	G	71	LEU	N-CA-C	-6.90	103.84	111.36
2	B	323	C	P-O3'-C3'	-6.89	109.86	120.20
2	B	1675	C	P-O5'-C5'	-6.89	110.56	120.90
2	B	2512	C	C3'-C2'-C1'	-6.89	94.41	101.30
19	X	324	ASP	CA-CB-CG	-6.89	105.71	112.60
24	6	16	HIS	N-CA-C	-6.89	96.82	108.26
2	B	957	C	C5'-C4'-O4'	6.89	119.43	109.10
2	B	2793	C	C5'-C4'-C3'	-6.89	105.67	116.00
2	B	1417	C	O4'-C1'-C2'	-6.88	100.72	107.60
2	B	1757	A	C1'-O4'-C4'	-6.88	103.02	109.90
2	B	2095	A	C4'-C3'-O3'	-6.88	102.67	113.00
9	O	31	THR	N-CA-C	-6.88	98.36	109.58
25	7	51	LYS	N-CA-CB	6.88	122.12	110.49
2	B	1818	U	C3'-C2'-C1'	-6.88	94.62	101.50
2	B	2578	G	O3'-P-O5'	-6.88	93.68	104.00
2	B	2619	C	C5'-C4'-C3'	-6.88	105.68	116.00
2	B	1352	U	C4'-C3'-C2'	6.88	109.48	102.60
2	B	2064	C	P-O5'-C5'	-6.88	110.58	120.90
17	U	46	LYS	CA-C-O	-6.88	114.41	120.19
2	B	1739	A	C4'-C3'-C2'	-6.88	95.72	102.60
2	B	2817	U	C4'-C3'-C2'	6.88	109.47	102.60
2	B	2043	C	C4'-C3'-C2'	6.87	109.47	102.60
2	B	1613	G	C5'-C4'-C3'	6.87	126.31	116.00
2	B	2496	C	C2'-C3'-O3'	6.87	124.01	113.70
2	B	2706	A	C5'-C4'-C3'	6.87	126.31	116.00
5	L	14	LYS	N-CA-C	-6.87	96.85	108.26
2	B	1350	C	C5'-C4'-C3'	6.87	126.31	116.00
10	P	58	PHE	O-C-N	-6.87	114.30	122.96
2	B	692	C	O4'-C1'-C2'	-6.87	100.73	107.60
2	B	1549	A	C5'-C4'-C3'	-6.87	105.70	116.00
2	B	2685	G	P-O5'-C5'	-6.87	110.60	120.90
29	G	137	LYS	CA-C-N	6.87	129.97	120.63
29	G	137	LYS	C-N-CA	6.87	129.97	120.63
2	B	320	A	P-O3'-C3'	6.87	130.50	120.20
2	B	2312	U	C4'-C3'-O3'	-6.87	102.70	113.00
2	B	2396	G	C5'-C4'-C3'	-6.86	105.70	116.00
11	Q	15	LYS	CA-C-N	6.86	129.21	120.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	Q	15	LYS	C-N-CA	6.86	129.21	120.56
14	D	63	PRO	N-CA-CB	6.86	111.13	103.44
19	X	139	GLU	CA-C-N	6.86	131.68	122.90
19	X	139	GLU	C-N-CA	6.86	131.68	122.90
31	I	21	PRO	N-CA-C	6.86	119.07	110.70
2	B	517	C	C5'-C4'-C3'	6.86	126.29	116.00
2	B	1306	C	C5'-C4'-C3'	6.86	126.29	116.00
2	B	1347	A	C5'-C4'-C3'	6.86	126.29	116.00
2	B	2348	U	C4'-C3'-O3'	-6.86	102.71	113.00
8	N	23	ASN	CA-C-N	6.86	130.15	120.28
8	N	23	ASN	C-N-CA	6.86	130.15	120.28
30	H	9	VAL	N-CA-CB	6.86	121.13	111.05
2	B	965	C	O4'-C1'-N1	6.86	118.78	108.50
19	X	45	ALA	CA-C-O	-6.86	112.79	120.54
2	B	855	G	C4'-C3'-C2'	6.85	109.45	102.60
7	M	8	LYS	O-C-N	-6.85	113.00	122.46
5	L	18	ARG	NE-CZ-NH2	6.85	125.37	119.20
2	B	205	G	O3'-P-O5'	-6.85	93.72	104.00
2	B	1508	A	C3'-C2'-C1'	-6.85	94.65	101.50
2	B	1603	A	C5'-C4'-C3'	6.85	126.27	116.00
8	N	83	LEU	N-CA-C	-6.85	98.05	108.67
30	H	93	SER	CA-C-N	6.85	129.94	120.49
30	H	93	SER	C-N-CA	6.85	129.94	120.49
2	B	1038	G	P-O3'-C3'	-6.85	109.93	120.20
19	X	435	LYS	N-CA-C	-6.84	103.75	111.07
27	C	229	HIS	ND1-CE1-NE2	6.84	115.24	108.40
2	B	1826	G	C1'-O4'-C4'	-6.84	103.06	109.90
8	N	109	PRO	O-C-N	6.84	130.88	123.01
3	0	53	LYS	CA-C-N	6.84	128.69	120.14
3	0	53	LYS	C-N-CA	6.84	128.69	120.14
22	3	51	ARG	CA-C-N	6.84	133.29	122.21
22	3	51	ARG	C-N-CA	6.84	133.29	122.21
2	B	408	G	C5'-C4'-C3'	-6.84	105.74	116.00
2	B	1340	U	O4'-C1'-C2'	-6.84	98.96	105.80
2	B	1753	G	O4'-C1'-N9	6.84	118.75	108.50
2	B	1775	U	C4'-C3'-C2'	-6.84	95.76	102.60
19	X	397	PRO	CA-C-O	-6.84	110.65	120.56
20	E	92	HIS	N-CA-C	-6.84	98.63	109.23
27	C	263	ASP	O-C-N	6.84	129.37	122.12
2	B	772	C	C4'-C3'-O3'	-6.83	102.75	113.00
2	B	2765	A	C4'-C3'-C2'	6.83	109.43	102.60
21	Y	61	LYS	N-CA-C	-6.83	105.07	113.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	459	U	C4'-C3'-O3'	-6.83	102.75	113.00
2	B	1217	U	C4'-C3'-C2'	6.83	109.43	102.60
2	B	1963	U	O4'-C1'-N1	6.83	118.75	108.50
2	B	2755	C	C4'-C3'-O3'	-6.83	102.75	113.00
19	X	130	VAL	N-CA-C	6.83	116.98	110.42
2	B	975	A	C4'-C3'-C2'	-6.83	95.77	102.60
10	P	92	ARG	O-C-N	6.83	129.46	122.09
23	5	147	PRO	CA-C-N	6.83	133.93	121.85
23	5	147	PRO	C-N-CA	6.83	133.93	121.85
2	B	637	A	C3'-C2'-C1'	-6.82	94.68	101.50
2	B	962	G	P-O3'-C3'	-6.82	109.96	120.20
2	B	1568	G	C4'-C3'-O3'	-6.82	102.76	113.00
2	B	2251	G	P-O3'-C3'	6.82	130.43	120.20
2	B	2178	C	C4'-C3'-C2'	-6.82	95.78	102.60
8	N	104	ALA	CA-C-O	6.82	127.84	119.79
2	B	287	G	C4'-C3'-O3'	-6.82	102.77	113.00
2	B	1619	G	O4'-C4'-C3'	6.82	110.82	104.00
2	B	90	U	O4'-C1'-N1	6.82	118.73	108.50
2	B	635	C	O4'-C1'-N1	6.82	118.73	108.50
2	B	1523	U	O4'-C1'-N1	6.82	118.72	108.50
2	B	779	U	C3'-C2'-C1'	6.82	108.11	101.30
2	B	1830	C	C4'-C3'-O3'	-6.82	102.78	113.00
4	K	70	ARG	CD-NE-CZ	-6.81	114.86	124.40
2	B	1235	G	P-O5'-C5'	6.81	131.12	120.90
2	B	2543	G	P-O3'-C3'	6.81	130.42	120.20
27	C	161	VAL	CA-C-N	6.81	132.80	122.65
27	C	161	VAL	C-N-CA	6.81	132.80	122.65
2	B	467	G	O4'-C4'-C3'	-6.81	97.19	104.00
2	B	1351	C	O5'-C5'-C4'	-6.81	101.29	111.50
5	L	78	ARG	CA-C-N	6.81	130.08	120.28
5	L	78	ARG	C-N-CA	6.81	130.08	120.28
2	B	1616	A	C2'-C3'-O3'	6.81	119.71	109.50
2	B	2125	G	C5'-C4'-C3'	6.80	126.20	116.00
9	O	107	ALA	N-CA-CB	6.80	121.99	110.49
20	E	18	THR	CA-C-O	6.80	127.63	118.38
2	B	92	U	C2'-C3'-O3'	6.80	119.70	109.50
2	B	1118	C	C1'-O4'-C4'	-6.80	103.10	109.90
2	B	1634	A	P-O5'-C5'	-6.80	110.70	120.90
3	0	31	ASN	CA-CB-CG	6.80	119.40	112.60
7	M	47	GLU	CA-C-N	6.80	129.39	120.28
7	M	47	GLU	C-N-CA	6.80	129.39	120.28
2	B	128	C	O4'-C1'-N1	6.80	118.69	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	983	A	P-O3'-C3'	6.80	130.40	120.20
2	B	2681	C	O5'-C5'-C4'	-6.80	101.51	111.70
13	S	68	ASP	N-CA-CB	6.80	121.98	110.49
2	B	90	U	C5'-C4'-C3'	6.79	126.19	116.00
2	B	2452	C	C5'-C4'-C3'	6.79	126.19	116.00
7	M	101	VAL	N-CA-CB	6.79	118.75	111.00
2	B	436	C	O5'-C5'-C4'	-6.79	101.31	111.50
19	X	166	LEU	N-CA-CB	6.79	121.97	110.49
2	B	1782	U	C2'-C3'-O3'	6.79	119.69	109.50
2	B	82	U	C5'-C4'-C3'	6.79	126.18	116.00
2	B	2003	A	C4'-C3'-C2'	6.79	109.39	102.60
14	D	184	ARG	N-CA-C	-6.79	103.96	111.36
19	X	44	ARG	CA-C-N	6.79	131.76	122.19
19	X	44	ARG	C-N-CA	6.79	131.76	122.19
2	B	184	C	O3'-P-O5'	-6.79	93.82	104.00
19	X	241	ILE	CA-C-N	6.79	133.92	121.70
19	X	241	ILE	C-N-CA	6.79	133.92	121.70
2	B	2505	G	C5'-C4'-C3'	-6.79	105.82	116.00
23	5	176	GLY	O-C-N	-6.79	117.43	123.88
2	B	1200	C	C5'-C4'-C3'	6.78	126.17	116.00
5	L	93	ASN	N-CA-C	-6.78	104.75	113.16
2	B	370	G	C5'-C4'-C3'	-6.78	105.03	115.20
10	P	9	GLN	OE1-CD-NE2	6.78	129.38	122.60
8	N	103	ARG	N-CA-C	-6.78	98.57	109.96
22	3	26	SER	CA-C-N	6.78	130.46	120.90
22	3	26	SER	C-N-CA	6.78	130.46	120.90
2	B	1324	G	C5'-C4'-C3'	-6.78	105.03	115.20
30	H	93	SER	N-CA-C	-6.78	103.69	112.23
14	D	15	PHE	CA-CB-CG	-6.78	107.02	113.80
20	E	97	ASN	N-CA-CB	6.78	120.05	110.36
30	H	30	LEU	N-CA-C	-6.78	103.82	111.14
2	B	648	G	C4'-C3'-C2'	-6.78	95.82	102.60
2	B	2202	U	P-O3'-C3'	6.78	130.36	120.20
2	B	2610	C	C5'-C4'-C3'	6.78	125.36	115.20
2	B	2632	A	O5'-C5'-C4'	-6.78	101.34	111.50
19	X	105	HIS	CA-CB-CG	6.78	120.58	113.80
22	3	41	HIS	ND1-CE1-NE2	6.78	115.18	108.40
17	U	94	PHE	N-CA-CB	6.77	122.59	111.62
12	R	31	GLU	N-CA-CB	6.77	121.93	110.49
2	B	431	U	O5'-C5'-C4'	-6.77	101.35	111.50
28	F	85	GLY	O-C-N	-6.77	118.74	123.95
2	B	1597	A	O5'-C5'-C4'	-6.77	101.35	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	G	150	TYR	CA-CB-CG	-6.77	101.72	113.90
30	H	43	ASN	N-CA-C	6.77	119.52	111.33
2	B	796	C	P-O3'-C3'	6.76	130.35	120.20
2	B	903	C	P-O3'-C3'	-6.76	110.06	120.20
2	B	1769	U	O4'-C1'-N1	6.76	118.64	108.50
27	C	216	ARG	CA-C-N	6.76	128.30	119.84
27	C	216	ARG	C-N-CA	6.76	128.30	119.84
2	B	2296	U	C4'-C3'-O3'	6.76	119.54	109.40
19	X	260	VAL	CA-C-N	6.76	134.45	121.54
19	X	260	VAL	C-N-CA	6.76	134.45	121.54
2	B	1000	A	O4'-C1'-N9	6.76	118.64	108.50
19	X	295	ARG	NE-CZ-NH2	6.76	125.28	119.20
12	R	54	VAL	O-C-N	6.76	130.97	122.52
27	C	90	ILE	CA-C-O	-6.76	116.34	121.68
2	B	2448	A	O5'-C5'-C4'	6.75	121.83	111.70
1	A	113	C	O4'-C1'-N1	6.75	118.63	108.50
2	B	527	C	O4'-C1'-C2'	-6.75	99.05	105.80
2	B	1691	C	C4'-C3'-O3'	-6.75	102.87	113.00
15	T	84	TYR	N-CA-CB	6.75	120.88	109.87
32	J	110	PRO	O-C-N	-6.75	113.53	122.64
2	B	2601	C	C4'-C3'-O3'	6.75	119.52	109.40
3	O	24	THR	CA-C-O	-6.75	114.06	121.28
31	I	67	THR	O-C-N	-6.75	115.00	123.17
2	B	858	G	P-O5'-C5'	-6.75	110.78	120.90
2	B	1649	G	C4'-C3'-O3'	-6.75	102.88	113.00
2	B	2331	G	O4'-C4'-C3'	-6.75	97.25	104.00
2	B	2337	G	O3'-P-O5'	-6.75	93.88	104.00
15	T	29	THR	CA-C-N	6.75	128.72	121.97
15	T	29	THR	C-N-CA	6.75	128.72	121.97
2	B	1581	G	P-O3'-C3'	-6.74	110.08	120.20
2	B	1818	U	C1'-O4'-C4'	-6.74	102.96	109.70
2	B	2505	G	O4'-C1'-N9	6.74	118.61	108.50
11	Q	84	LYS	N-CA-C	-6.74	103.95	111.71
25	7	9	ALA	O-C-N	6.74	129.27	122.12
2	B	39	G	C4'-C3'-O3'	-6.74	102.89	113.00
2	B	1912	A	O4'-C4'-C3'	-6.74	97.26	104.00
2	B	2265	U	O5'-C5'-C4'	-6.74	101.39	111.50
3	O	29	LEU	N-CA-C	6.74	118.14	109.65
8	N	15	SER	CA-C-N	6.74	129.86	120.29
8	N	15	SER	C-N-CA	6.74	129.86	120.29
5	L	55	MET	O-C-N	-6.73	114.36	121.30
2	B	1255	U	C4'-C3'-O3'	-6.73	102.90	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1464	G	P-O3'-C3'	-6.73	110.10	120.20
2	B	2696	U	O4'-C1'-N1	6.73	118.59	108.50
14	D	80	TRP	N-CA-C	-6.73	98.84	109.07
8	N	4	ARG	CD-NE-CZ	-6.73	114.98	124.40
2	B	268	C	O5'-C5'-C4'	-6.73	101.41	111.50
2	B	567	U	O4'-C4'-C3'	-6.73	97.27	104.00
2	B	745	G	O5'-C5'-C4'	-6.73	101.41	111.50
2	B	2063	C	O4'-C4'-C3'	-6.73	97.27	104.00
2	B	2578	G	O4'-C1'-N9	6.73	118.59	108.50
2	B	2831	G	P-O5'-C5'	-6.73	110.81	120.90
2	B	2605	U	P-O3'-C3'	-6.73	110.11	120.20
23	5	106	LYS	N-CA-C	6.72	118.69	111.36
2	B	875	G	O3'-P-O5'	6.72	114.08	104.00
2	B	903	C	C1'-C2'-O2'	6.72	118.48	108.40
2	B	700	G	N9-C1'-C2'	-6.72	101.92	112.00
2	B	2833	U	C3'-C2'-C1'	6.72	108.22	101.50
2	B	1832	C	O4'-C4'-C3'	-6.72	97.28	104.00
2	B	2806	C	C5'-C4'-C3'	6.72	126.08	116.00
18	W	26	PHE	CA-C-N	6.72	128.24	119.84
18	W	26	PHE	C-N-CA	6.72	128.24	119.84
2	B	629	G	O4'-C1'-C2'	6.72	114.32	107.60
2	B	850	U	C4'-C3'-O3'	-6.72	102.92	113.00
2	B	1223	G	C4'-C3'-O3'	-6.71	102.93	113.00
2	B	2647	U	O4'-C1'-N1	6.71	118.57	108.50
4	K	64	ARG	N-CA-C	-6.71	96.50	110.80
2	B	280	U	O4'-C1'-N1	6.71	118.57	108.50
2	B	97	C	O4'-C4'-C3'	6.71	110.71	104.00
2	B	517	C	P-O5'-C5'	-6.71	110.83	120.90
14	D	5	VAL	N-CA-C	-6.71	97.95	107.75
2	B	2392	A	O5'-C5'-C4'	-6.71	101.44	111.50
2	B	220	G	P-O5'-C5'	6.71	130.96	120.90
2	B	329	G	O3'-P-O5'	-6.71	93.94	104.00
2	B	654	A	P-O3'-C3'	6.71	130.26	120.20
2	B	964	C	O5'-C5'-C4'	-6.70	101.44	111.50
2	B	2874	C	C4'-C3'-O3'	-6.70	102.94	113.00
21	Y	58	LEU	N-CA-C	-6.70	98.28	109.07
2	B	2286	G	O4'-C4'-C3'	-6.70	99.40	106.10
27	C	142	ASN	N-CA-CB	6.70	121.81	110.49
2	B	2766	A	O4'-C1'-C2'	-6.70	100.90	107.60
2	B	713	G	C4'-C3'-O3'	-6.70	102.95	113.00
13	S	57	ASN	N-CA-C	-6.70	105.14	113.38
2	B	2604	U	C4'-C3'-C2'	-6.70	95.90	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	255	A	C5'-C4'-C3'	-6.69	105.96	116.00
2	B	327	G	C4'-C3'-C2'	-6.69	95.91	102.60
2	B	1640	A	P-O5'-C5'	-6.69	110.86	120.90
3	0	17	ARG	N-CA-C	6.69	125.06	110.80
4	K	66	LYS	CA-C-N	6.69	129.92	120.28
4	K	66	LYS	C-N-CA	6.69	129.92	120.28
7	M	97	GLN	CA-C-N	6.69	128.21	119.84
7	M	97	GLN	C-N-CA	6.69	128.21	119.84
23	5	3	LYS	N-CA-C	6.69	118.66	111.36
3	0	71	ARG	N-CA-C	-6.69	103.91	111.14
12	R	89	HIS	ND1-CE1-NE2	6.69	115.09	108.40
21	Y	35	ILE	CA-C-N	6.69	134.01	121.97
21	Y	35	ILE	C-N-CA	6.69	134.01	121.97
2	B	2333	A	C5'-C4'-O4'	6.69	119.13	109.10
2	B	2735	G	C5'-C4'-C3'	6.69	126.03	116.00
2	B	1086	A	P-O3'-C3'	-6.69	110.17	120.20
25	7	63	TYR	CA-CB-CG	-6.69	101.86	113.90
1	A	8	C	C3'-C2'-O2'	6.69	120.73	110.70
2	B	589	U	O5'-C5'-C4'	6.69	121.53	111.50
20	E	18	THR	N-CA-C	-6.69	103.85	113.21
2	B	2218	G	P-O5'-C5'	-6.68	110.87	120.90
8	N	110	MET	CA-C-N	6.68	134.31	121.54
8	N	110	MET	C-N-CA	6.68	134.31	121.54
17	U	73	ASN	CA-CB-CG	-6.68	105.92	112.60
2	B	940	G	O3'-P-O5'	6.68	114.02	104.00
8	N	31	HIS	CE1-NE2-CD2	-6.68	102.32	109.00
21	Y	65	LYS	CA-C-N	6.68	130.20	120.91
21	Y	65	LYS	C-N-CA	6.68	130.20	120.91
2	B	1250	G	P-O3'-C3'	-6.68	110.18	120.20
10	P	80	VAL	N-CA-C	-6.68	106.49	111.90
8	N	72	ASP	CA-C-N	6.68	129.23	120.28
8	N	72	ASP	C-N-CA	6.68	129.23	120.28
9	O	7	ARG	CA-C-N	6.68	128.97	120.56
9	O	7	ARG	C-N-CA	6.68	128.97	120.56
9	O	11	ALA	CA-C-O	6.68	127.08	119.27
2	B	1363	C	P-O5'-C5'	-6.67	110.89	120.90
17	U	68	ASN	N-CA-C	-6.67	104.50	114.64
19	X	286	ASN	O-C-N	-6.67	114.14	122.35
19	X	263	ARG	N-CA-C	-6.67	102.49	113.50
21	Y	43	LYS	N-CA-C	-6.67	95.88	107.49
29	G	102	ILE	N-CA-CB	6.67	119.02	111.21
2	B	1057	A	O4'-C4'-C3'	-6.67	97.33	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1606	C	O4'-C1'-N1	6.67	118.50	108.50
2	B	2295	C	O5'-C5'-C4'	-6.67	101.50	111.50
5	L	110	VAL	CA-C-N	6.67	130.01	122.48
5	L	110	VAL	C-N-CA	6.67	130.01	122.48
2	B	1334	G	C3'-C2'-C1'	-6.67	94.63	101.30
3	0	2	ARG	NE-CZ-NH1	-6.67	114.83	121.50
23	5	118	PRO	N-CA-C	6.67	126.20	112.47
15	T	56	GLU	CA-C-N	6.66	133.96	121.97
15	T	56	GLU	C-N-CA	6.66	133.96	121.97
18	W	80	HIS	CE1-NE2-CD2	-6.66	102.34	109.00
2	B	110	G	C4'-C3'-C2'	-6.66	95.94	102.60
2	B	2796	U	C3'-C2'-C1'	6.66	107.96	101.30
7	M	110	GLU	CA-C-O	6.66	127.48	120.42
23	5	18	THR	N-CA-CB	6.66	122.26	111.74
2	B	1623	G	C4'-C3'-C2'	6.66	109.26	102.60
2	B	554	U	C4'-C3'-O3'	-6.66	103.02	113.00
29	G	68	ARG	NE-CZ-NH2	-6.65	113.21	119.20
2	B	125	A	P-O3'-C3'	6.65	130.18	120.20
2	B	526	A	O5'-C5'-C4'	-6.65	101.52	111.50
2	B	1355	G	O4'-C1'-N9	6.65	118.48	108.50
2	B	1673	G	C2'-C3'-O3'	6.65	119.48	109.50
10	P	40	GLN	OE1-CD-NE2	-6.65	115.95	122.60
2	B	97	C	P-O3'-C3'	-6.65	110.22	120.20
2	B	1008	A	O3'-P-O5'	-6.65	94.02	104.00
2	B	1057	A	O4'-C1'-N9	6.65	118.47	108.50
2	B	2112	G	O4'-C1'-C2'	-6.65	100.95	107.60
7	M	102	LEU	N-CA-CB	6.65	120.51	110.14
13	S	57	ASN	N-CA-CB	6.65	120.44	110.53
28	F	96	TRP	N-CA-C	-6.65	105.30	113.41
2	B	2419	U	P-O5'-C5'	6.65	130.87	120.90
2	B	1715	G	C2'-C3'-O3'	6.64	119.47	109.50
4	K	23	LYS	CA-C-N	6.64	130.80	122.43
4	K	23	LYS	C-N-CA	6.64	130.80	122.43
5	L	38	GLN	N-CA-C	-6.64	104.99	113.23
8	N	87	PHE	N-CA-C	-6.64	96.65	110.80
15	T	43	ILE	N-CA-C	-6.64	102.98	112.35
2	B	973	A	C5'-C4'-C3'	-6.64	105.24	115.20
2	B	2586	U	C5'-C4'-C3'	-6.64	106.04	116.00
2	B	2761	A	C5'-C4'-C3'	6.64	125.96	116.00
29	G	84	LYS	CA-C-O	6.64	128.42	121.31
2	B	560	C	P-O5'-C5'	-6.64	110.94	120.90
2	B	2167	U	C5'-C4'-C3'	-6.64	106.04	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2246	G	O5'-C5'-C4'	-6.64	101.54	111.50
2	B	2287	A	O5'-C5'-C4'	-6.64	101.74	111.70
2	B	2450	A	C4'-C3'-O3'	-6.64	103.04	113.00
6	1	30	MET	N-CA-C	-6.64	103.52	111.69
13	S	36	LEU	N-CA-CB	6.64	119.88	110.12
14	D	128	ARG	N-CA-C	-6.64	98.38	108.67
2	B	161	A	C5'-C4'-C3'	6.64	125.96	116.00
4	K	67	LYS	CA-C-N	6.64	131.69	122.06
4	K	67	LYS	C-N-CA	6.64	131.69	122.06
2	B	197	A	P-O5'-C5'	6.64	130.85	120.90
2	B	912	C	O4'-C4'-C3'	-6.63	97.37	104.00
2	B	2129	C	O4'-C1'-C2'	-6.63	99.17	105.80
20	E	131	THR	CA-C-N	6.63	129.71	120.29
20	E	131	THR	C-N-CA	6.63	129.71	120.29
28	F	94	ARG	NE-CZ-NH1	6.63	128.13	121.50
1	A	68	C	O4'-C1'-N1	6.63	118.45	108.50
2	B	1061	U	P-O5'-C5'	-6.63	110.95	120.90
2	B	1545	A	C1'-O4'-C4'	-6.63	103.27	109.90
2	B	2003	A	C5'-C4'-C3'	6.63	125.95	116.00
2	B	2514	U	O5'-C5'-C4'	-6.63	101.55	111.50
27	C	195	GLY	CA-C-N	6.63	131.55	122.07
27	C	195	GLY	C-N-CA	6.63	131.55	122.07
31	I	52	LEU	CB-CA-C	-6.63	98.93	108.88
19	X	314	ARG	NE-CZ-NH2	6.63	125.17	119.20
30	H	25	TYR	N-CA-CB	-6.63	100.79	110.53
23	5	144	THR	CA-C-O	6.63	127.47	119.78
28	F	176	PHE	CB-CA-C	-6.63	107.14	115.89
2	B	170	U	O4'-C1'-N1	6.62	118.44	108.50
2	B	1530	G	P-O5'-C5'	-6.62	110.96	120.90
11	Q	12	ARG	N-CA-CB	6.62	120.86	110.46
25	7	44	ARG	N-CA-C	6.62	124.45	109.81
4	K	9	ASN	N-CA-CB	6.62	120.89	110.56
2	B	142	A	P-O3'-C3'	-6.62	110.27	120.20
2	B	1357	C	C3'-C2'-C1'	6.62	107.92	101.30
2	B	1426	G	O5'-C5'-C4'	-6.62	101.57	111.50
2	B	2108	A	C2'-C3'-O3'	6.62	123.63	113.70
2	B	1610	A	C5'-C4'-O4'	6.62	119.02	109.10
2	B	1895	C	C1'-O4'-C4'	6.62	116.52	109.90
2	B	2621	G	P-O3'-C3'	-6.62	110.28	120.20
27	C	191	LEU	N-CA-CB	6.61	119.76	110.04
31	I	94	LYS	N-CA-C	-6.61	104.37	114.16
2	B	1527	G	C5'-C4'-C3'	-6.61	106.08	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	321	ASN	CA-C-N	6.61	134.16	121.54
19	X	321	ASN	C-N-CA	6.61	134.16	121.54
2	B	337	C	O4'-C1'-N1	6.61	118.41	108.50
2	B	606	U	C4'-C3'-O3'	-6.61	103.09	113.00
19	X	23	THR	N-CA-CB	6.61	120.64	110.60
26	8	14	CYS	O-C-N	-6.61	115.50	123.10
2	B	2233	U	O5'-C5'-C4'	-6.61	101.59	111.50
2	B	362	A	P-O5'-C5'	6.60	130.81	120.90
2	B	1993	U	P-O5'-C5'	6.60	130.81	120.90
14	D	183	GLU	CA-C-N	6.60	129.67	120.29
14	D	183	GLU	C-N-CA	6.60	129.67	120.29
1	A	60	C	O5'-C5'-C4'	-6.60	101.59	111.50
3	0	35	HIS	CE1-NE2-CD2	-6.60	102.40	109.00
11	Q	105	PHE	CA-CB-CG	-6.60	107.20	113.80
20	E	35	TYR	CA-C-O	-6.60	113.55	120.55
1	A	20	G	C3'-C2'-C1'	6.60	107.90	101.30
14	D	77	ARG	NE-CZ-NH2	6.60	125.14	119.20
20	E	98	LYS	N-CA-C	-6.60	104.49	112.54
2	B	2799	A	O4'-C1'-C2'	-6.59	99.21	105.80
8	N	36	THR	CA-C-N	6.59	130.12	120.82
8	N	36	THR	C-N-CA	6.59	130.12	120.82
2	B	944	C	O5'-C5'-C4'	-6.59	101.62	111.50
2	B	1098	A	P-O5'-C5'	-6.59	111.02	120.90
10	P	98	TYR	CA-C-N	6.59	129.00	120.44
10	P	98	TYR	C-N-CA	6.59	129.00	120.44
2	B	604	G	C4'-C3'-O3'	-6.59	103.12	113.00
5	L	134	ALA	O-C-N	6.59	131.05	122.42
2	B	1460	U	O5'-C5'-C4'	6.59	121.38	111.50
23	5	101	ALA	O-C-N	6.59	128.85	122.07
2	B	2816	G	C4'-C3'-O3'	-6.58	103.13	113.00
26	8	24	ARG	O-C-N	6.58	130.48	122.84
2	B	2332	C	O3'-P-O5'	-6.58	94.13	104.00
6	1	3	ALA	CA-C-N	6.58	129.94	120.79
6	1	3	ALA	C-N-CA	6.58	129.94	120.79
15	T	72	GLN	N-CA-C	-6.58	96.78	110.80
2	B	1493	C	O4'-C1'-N1	6.58	118.37	108.50
2	B	325	G	P-O5'-C5'	6.58	130.77	120.90
2	B	1133	A	O3'-P-O5'	-6.58	94.13	104.00
2	B	1170	C	O3'-P-O5'	-6.58	94.13	104.00
2	B	1907	G	C5'-C4'-C3'	-6.58	106.14	116.00
1	A	48	U	O4'-C4'-C3'	-6.58	97.42	104.00
2	B	398	C	O4'-C4'-C3'	-6.58	97.42	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	345	ILE	N-CA-CB	6.58	118.50	111.00
2	B	421	C	P-O3'-C3'	6.57	130.06	120.20
2	B	1364	G	C4'-C3'-C2'	6.57	109.17	102.60
2	B	1783	A	O4'-C4'-C3'	-6.57	97.43	104.00
15	T	17	SER	N-CA-C	-6.57	99.00	108.60
2	B	1797	G	P-O5'-C5'	6.57	130.76	120.90
23	5	85	GLU	N-CA-C	-6.57	104.74	112.89
2	B	1481	U	C5'-C4'-C3'	-6.57	106.15	116.00
2	B	978	G	C4'-C3'-O3'	-6.57	103.15	113.00
2	B	2717	C	O4'-C1'-N1	6.57	118.35	108.50
6	1	41	HIS	ND1-CE1-NE2	6.57	114.97	108.40
11	Q	78	PHE	N-CA-C	6.57	119.03	111.02
14	D	197	THR	N-CA-C	-6.57	97.84	108.41
2	B	822	G	C4'-C3'-C2'	6.57	109.17	102.60
2	B	1301	A	O3'-P-O5'	6.57	113.85	104.00
2	B	2403	C	C4'-C3'-O3'	-6.56	103.15	113.00
2	B	2451	A	O3'-P-O5'	-6.56	94.15	104.00
4	K	18	ARG	CA-C-N	6.56	133.78	121.97
4	K	18	ARG	C-N-CA	6.56	133.78	121.97
28	F	7	TYR	CB-CG-CD2	6.56	130.65	120.80
15	T	16	VAL	O-C-N	-6.56	114.37	122.57
2	B	479	A	P-O5'-C5'	6.56	130.74	120.90
9	O	8	ILE	CA-C-N	6.56	129.07	120.28
9	O	8	ILE	C-N-CA	6.56	129.07	120.28
2	B	1580	A	O5'-C5'-C4'	-6.56	101.66	111.50
15	T	15	HIS	CA-C-N	6.56	133.78	121.97
15	T	15	HIS	C-N-CA	6.56	133.78	121.97
2	B	1104	C	C4'-C3'-C2'	-6.56	96.04	102.60
2	B	1479	G	O5'-C5'-C4'	-6.56	101.66	111.50
2	B	90	U	O5'-C5'-C4'	-6.56	101.67	111.50
11	Q	63	ARG	CD-NE-CZ	-6.56	115.22	124.40
2	B	40	U	C1'-O4'-C4'	6.55	116.45	109.90
2	B	2896	C	O5'-C5'-C4'	-6.55	101.67	111.50
20	E	96	VAL	N-CA-CB	6.55	122.05	111.23
2	B	271	G	C3'-C2'-C1'	-6.55	94.95	101.50
20	E	24	ASN	CB-CA-C	6.55	122.32	111.31
1	A	113	C	P-O5'-C5'	6.55	130.73	120.90
1	A	64	G	C5'-C4'-C3'	6.55	125.82	116.00
1	A	98	G	C4'-C3'-O3'	-6.55	103.18	113.00
2	B	2057	G	P-O5'-C5'	6.55	130.72	120.90
2	B	2449	U	P-O3'-C3'	6.55	130.03	120.20
2	B	1458	U	P-O3'-C3'	6.55	130.02	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1993	U	C4'-C3'-O3'	-6.55	103.18	113.00
12	R	86	GLN	N-CA-C	-6.54	97.74	108.41
32	J	140	LEU	N-CA-C	-6.54	99.12	109.07
2	B	2247	A	C5'-C4'-C3'	-6.54	106.19	116.00
2	B	1271	G	O4'-C1'-N9	6.54	118.01	108.20
2	B	2269	G	C3'-C2'-C1'	-6.54	94.76	101.30
2	B	2553	G	C1'-O4'-C4'	-6.54	103.36	109.90
2	B	242	G	C2'-C3'-O3'	6.54	119.31	109.50
2	B	1275	A	P-O5'-C5'	6.54	130.71	120.90
14	D	48	ILE	CA-C-O	-6.54	115.16	121.63
2	B	2653	U	O4'-C4'-C3'	-6.54	97.46	104.00
23	5	132	GLY	N-CA-C	-6.54	99.00	112.34
7	M	43	ALA	CA-C-O	6.54	124.54	119.18
2	B	103	A	C5'-C4'-C3'	-6.54	106.20	116.00
2	B	1163	G	C5'-C4'-C3'	6.54	125.80	116.00
2	B	1645	G	C4'-C3'-O3'	-6.54	103.20	113.00
2	B	2024	G	C5'-C4'-C3'	-6.54	106.20	116.00
2	B	856	G	C3'-C2'-O2'	6.53	120.50	110.70
2	B	1062	G	O4'-C4'-C3'	-6.53	97.47	104.00
20	E	176	ASP	O-C-N	-6.53	115.23	121.57
25	7	29	ARG	N-CA-C	-6.53	99.06	108.60
1	A	70	C	O3'-P-O5'	-6.53	94.20	104.00
2	B	177	G	P-O5'-C5'	-6.53	111.10	120.90
2	B	59	U	P-O3'-C3'	6.53	130.00	120.20
2	B	950	G	C5'-C4'-C3'	6.53	125.80	116.00
2	B	680	C	O4'-C1'-N1	6.53	118.29	108.50
23	5	168	ASN	CA-CB-CG	-6.53	106.07	112.60
2	B	2146	C	O4'-C4'-C3'	-6.52	97.48	104.00
2	B	108	G	C5'-C4'-C3'	6.52	125.78	116.00
2	B	931	U	C2'-C3'-O3'	6.52	119.28	109.50
2	B	2425	A	C5'-C4'-O4'	6.52	118.88	109.10
32	J	89	PHE	CA-CB-CG	-6.52	107.28	113.80
2	B	527	C	O3'-P-O5'	-6.52	94.22	104.00
2	B	2161	C	C5'-C4'-C3'	6.52	125.78	116.00
2	B	2794	C	O4'-C1'-N1	6.52	118.28	108.50
1	A	69	G	C5'-C4'-C3'	-6.52	106.22	116.00
2	B	516	C	C5'-C4'-C3'	-6.52	106.22	116.00
18	W	24	ASN	N-CA-C	-6.52	96.92	110.80
9	O	115	LEU	N-CA-CB	6.52	119.56	109.85
2	B	816	C	C3'-C2'-C1'	-6.51	94.78	101.30
2	B	2761	A	O4'-C4'-C3'	-6.51	97.49	104.00
2	B	2791	G	O5'-C5'-C4'	-6.51	101.73	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	Q	13	HIS	CA-CB-CG	-6.51	107.28	113.80
1	A	97	C	C5'-C4'-C3'	6.51	125.77	116.00
2	B	1531	C	O3'-P-O5'	-6.51	94.23	104.00
9	O	19	GLN	OE1-CD-NE2	6.51	129.11	122.60
2	B	870	U	P-O3'-C3'	6.51	129.96	120.20
2	B	1518	C	C3'-C2'-C1'	-6.51	94.79	101.30
2	B	574	A	C5'-C4'-O4'	6.51	118.86	109.10
2	B	2762	C	C5'-C4'-C3'	-6.50	106.24	116.00
3	0	33	HIS	CB-CG-ND1	6.50	132.46	122.70
23	5	183	ASP	CA-CB-CG	-6.50	106.10	112.60
29	G	158	GLY	N-CA-C	6.50	124.67	115.30
2	B	781	A	P-O3'-C3'	-6.50	110.45	120.20
2	B	825	A	O4'-C1'-N9	6.50	118.25	108.50
2	B	988	A	C5'-C4'-C3'	-6.50	106.25	116.00
2	B	2564	A	O3'-P-O5'	-6.50	94.25	104.00
26	8	35	GLN	CA-C-N	6.50	131.10	120.63
26	8	35	GLN	C-N-CA	6.50	131.10	120.63
2	B	302	C	C3'-C2'-O2'	6.50	120.45	110.70
2	B	782	A	C5'-C4'-C3'	-6.50	105.45	115.20
2	B	257	C	O4'-C4'-C3'	-6.50	97.50	104.00
8	N	41	ALA	CA-C-N	6.50	133.95	121.54
8	N	41	ALA	C-N-CA	6.50	133.95	121.54
2	B	336	C	O4'-C1'-N1	6.50	118.25	108.50
2	B	2568	U	P-O5'-C5'	-6.50	111.16	120.90
2	B	473	G	O5'-C5'-C4'	-6.49	101.76	111.50
2	B	1509	A	P-O5'-C5'	-6.49	111.16	120.90
8	N	3	HIS	O-C-N	6.49	131.23	122.59
2	B	2179	C	O4'-C1'-C2'	6.49	114.09	107.60
20	E	129	PRO	CA-C-N	6.49	133.94	121.54
20	E	129	PRO	C-N-CA	6.49	133.94	121.54
29	G	22	VAL	N-CA-C	-6.49	98.85	108.85
2	B	848	C	C4'-C3'-O3'	-6.49	103.27	113.00
14	D	124	ARG	N-CA-C	-6.49	105.90	113.88
2	B	154	U	O4'-C1'-C2'	-6.49	101.11	107.60
2	B	811	U	O4'-C1'-N1	6.49	117.93	108.20
2	B	2411	A	O3'-P-O5'	6.49	113.73	104.00
2	B	2574	G	C5'-C4'-C3'	6.49	125.73	116.00
31	I	102	ARG	O-C-N	-6.49	114.63	122.22
2	B	165	A	O4'-C4'-C3'	-6.48	97.52	104.00
2	B	209	C	C5'-C4'-C3'	6.48	125.72	116.00
2	B	748	G	C2'-C3'-O3'	6.48	119.22	109.50
2	B	2028	U	C1'-O4'-C4'	-6.48	103.42	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	M	76	LYS	CA-C-N	-6.48	111.74	119.84
7	M	76	LYS	C-N-CA	-6.48	111.74	119.84
19	X	227	ARG	NE-CZ-NH2	6.48	125.03	119.20
2	B	1243	C	C4'-C3'-C2'	-6.48	96.12	102.60
2	B	2471	A	O4'-C1'-N9	6.48	117.92	108.20
22	3	40	HIS	N-CA-CB	6.48	121.44	110.49
1	A	102	G	C4'-C3'-C2'	-6.48	96.12	102.60
2	B	27	G	C1'-O4'-C4'	6.48	116.38	109.90
2	B	572	A	N9-C1'-C2'	-6.48	102.28	112.00
2	B	1559	U	O4'-C1'-N1	6.48	117.92	108.20
2	B	70	G	C3'-C2'-C1'	-6.48	95.02	101.50
2	B	74	A	P-O3'-C3'	-6.47	110.49	120.20
2	B	1574	C	P-O3'-C3'	-6.47	110.49	120.20
2	B	657	U	C5'-C4'-C3'	6.47	125.71	116.00
2	B	1417	C	C4'-C3'-C2'	-6.47	96.13	102.60
2	B	1609	A	C3'-C2'-O2'	-6.47	104.89	114.60
2	B	1108	U	C4'-C3'-C2'	-6.47	96.13	102.60
2	B	2612	C	C4'-C3'-O3'	-6.47	103.30	113.00
2	B	1117	C	C4'-C3'-C2'	-6.47	96.13	102.60
2	B	1964	G	P-O5'-C5'	-6.47	111.20	120.90
2	B	952	G	C4'-C3'-O3'	-6.47	103.30	113.00
2	B	2364	C	P-O3'-C3'	-6.47	110.50	120.20
7	M	94	ALA	CB-CA-C	-6.47	101.21	111.17
2	B	1152	C	P-O5'-C5'	-6.46	111.20	120.90
2	B	1262	A	C4'-C3'-C2'	6.46	109.06	102.60
2	B	1000	A	P-O3'-C3'	-6.46	110.51	120.20
20	E	33	VAL	O-C-N	-6.46	114.50	121.80
3	0	33	HIS	CA-CB-CG	-6.46	107.34	113.80
24	6	14	ARG	CB-CA-C	-6.46	100.73	111.13
27	C	186	ASP	CA-CB-CG	-6.46	106.14	112.60
2	B	629	G	P-O5'-C5'	-6.46	111.22	120.90
2	B	992	C	O4'-C1'-N1	6.46	118.18	108.50
2	B	1680	U	C5'-C4'-C3'	6.46	125.69	116.00
2	B	1902	C	C4'-C3'-O3'	-6.46	103.32	113.00
2	B	2584	U	C5'-C4'-O4'	6.46	119.48	109.80
2	B	2609	U	O3'-P-O5'	6.46	113.68	104.00
2	B	297	G	P-O5'-C5'	6.46	130.58	120.90
2	B	1846	G	O3'-P-O5'	-6.46	94.32	104.00
1	A	109	A	P-O5'-C5'	-6.45	111.22	120.90
2	B	1211	C	O4'-C1'-N1	6.45	117.88	108.20
2	B	1502	A	C4'-C3'-O3'	-6.45	103.32	113.00
19	X	231	TYR	CA-C-N	6.45	133.13	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	231	TYR	C-N-CA	6.45	133.13	121.97
2	B	484	C	P-O5'-C5'	6.45	130.57	120.90
2	B	768	G	C4'-C3'-O3'	-6.45	103.33	113.00
2	B	1939	U	C4'-C3'-O3'	6.45	119.07	109.40
11	Q	74	SER	CA-C-N	6.45	129.75	120.79
11	Q	74	SER	C-N-CA	6.45	129.75	120.79
2	B	175	G	C5'-C4'-C3'	6.45	125.67	116.00
20	E	53	THR	O-C-N	6.45	130.61	122.23
28	F	59	ILE	CA-C-O	-6.45	112.72	120.78
2	B	1230	A	C4'-C3'-O3'	-6.45	103.33	113.00
2	B	1592	C	P-O5'-C5'	-6.45	111.23	120.90
23	5	101	ALA	N-CA-C	6.45	117.97	111.07
28	F	47	LYS	CA-C-N	6.45	130.91	120.60
28	F	47	LYS	C-N-CA	6.45	130.91	120.60
19	X	125	PRO	N-CA-CB	6.44	108.45	103.30
1	A	58	A	O4'-C1'-N9	6.44	118.16	108.50
2	B	901	C	P-O5'-C5'	6.44	130.56	120.90
2	B	1973	G	P-O3'-C3'	-6.44	110.54	120.20
20	E	169	VAL	N-CA-C	-6.44	99.81	108.06
2	B	543	G	P-O5'-C5'	-6.44	111.24	120.90
2	B	801	G	C4'-C3'-C2'	6.44	109.04	102.60
19	X	266	ILE	CA-C-O	-6.44	112.73	120.78
22	3	39	ARG	NE-CZ-NH2	6.44	125.00	119.20
2	B	2783	U	C1'-O4'-C4'	6.44	116.34	109.90
2	B	789	A	O5'-C5'-C4'	6.43	121.15	111.50
16	2	34	THR	O-C-N	-6.43	115.33	123.24
27	C	11	GLY	CA-C-O	6.43	126.15	119.01
29	G	172	GLU	N-CA-C	6.43	119.81	110.42
31	I	7	TYR	N-CA-C	-6.43	97.09	110.80
2	B	131	A	C4'-C3'-C2'	6.43	109.03	102.60
2	B	951	C	O5'-C5'-C4'	-6.43	101.85	111.50
2	B	1111	A	C5'-C4'-C3'	-6.43	105.55	115.20
2	B	1831	G	P-O5'-C5'	-6.43	111.25	120.90
29	G	169	ARG	N-CA-CB	6.43	121.36	110.49
30	H	134	VAL	N-CA-C	-6.43	106.97	113.47
2	B	2086	U	O5'-C5'-C4'	-6.43	101.85	111.50
2	B	2885	G	P-O5'-C5'	-6.43	111.25	120.90
2	B	723	C	C4'-C3'-O3'	-6.43	103.36	113.00
2	B	1015	U	O5'-C5'-C4'	-6.43	101.86	111.50
2	B	1104	C	O3'-P-O5'	-6.43	94.36	104.00
2	B	2096	C	O3'-P-O5'	-6.43	94.36	104.00
2	B	1027	A	P-O3'-C3'	-6.43	110.56	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2812	G	C5'-C4'-C3'	6.42	125.64	116.00
5	L	12	SER	O-C-N	6.42	129.47	122.15
2	B	831	G	O4'-C1'-N9	6.42	118.13	108.50
23	5	164	ARG	O-C-N	-6.42	116.45	123.52
1	A	71	C	P-O3'-C3'	-6.42	110.57	120.20
2	B	1133	A	C1'-C2'-O2'	-6.42	102.17	111.80
2	B	2747	G	C4'-C3'-O3'	-6.42	103.37	113.00
2	B	2398	U	C1'-O4'-C4'	-6.42	103.48	109.90
2	B	797	G	C5'-C4'-C3'	6.42	125.62	116.00
2	B	2586	U	C4'-C3'-C2'	-6.42	96.18	102.60
4	K	118	LEU	N-CA-CB	6.42	121.33	110.49
2	B	203	A	C5'-C4'-C3'	6.42	125.62	116.00
2	B	614	A	O4'-C4'-C3'	-6.41	99.69	106.10
2	B	1184	U	C4'-C3'-C2'	-6.41	96.19	102.60
2	B	1527	G	C4'-C3'-O3'	-6.41	103.38	113.00
19	X	131	ASP	CA-C-N	6.41	130.06	120.31
19	X	131	ASP	C-N-CA	6.41	130.06	120.31
2	B	788	A	O5'-C5'-C4'	-6.41	102.08	111.70
2	B	804	A	C3'-C2'-C1'	6.41	107.71	101.30
2	B	1464	G	C4'-C3'-C2'	6.41	109.01	102.60
20	E	138	LEU	CA-C-N	6.41	128.77	120.44
20	E	138	LEU	C-N-CA	6.41	128.77	120.44
2	B	407	G	O4'-C1'-N9	6.41	118.11	108.50
2	B	457	A	C2'-C3'-O3'	6.41	119.11	109.50
10	P	81	ASP	CA-CB-CG	-6.41	106.19	112.60
18	W	84	PRO	CA-C-N	6.41	130.86	121.31
18	W	84	PRO	C-N-CA	6.41	130.86	121.31
19	X	42	TYR	CB-CA-C	-6.41	102.22	112.09
27	C	52	HIS	CE1-NE2-CD2	-6.41	102.59	109.00
2	B	2355	G	O5'-C5'-C4'	-6.41	101.89	111.50
14	D	84	LEU	N-CA-CB	6.41	122.16	110.76
25	7	23	HIS	CE1-NE2-CD2	-6.41	102.59	109.00
2	B	152	A	C4'-C3'-O3'	-6.40	103.39	113.00
2	B	1539	U	P-O3'-C3'	-6.40	110.59	120.20
2	B	2158	A	P-O3'-C3'	6.40	129.81	120.20
2	B	2555	U	P-O5'-C5'	-6.40	111.29	120.90
2	B	834	G	C4'-C3'-O3'	-6.40	103.40	113.00
14	D	195	GLY	N-CA-C	-6.40	103.60	112.18
2	B	692	C	C4'-C3'-C2'	-6.40	96.20	102.60
2	B	1256	G	C5'-C4'-C3'	-6.40	106.40	116.00
2	B	1699	G	P-O5'-C5'	-6.40	111.30	120.90
2	B	854	C	O3'-P-O5'	6.40	113.60	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	383	MET	CA-C-O	6.40	127.33	120.55
23	5	45	ALA	CA-C-N	6.40	131.09	122.90
23	5	45	ALA	C-N-CA	6.40	131.09	122.90
32	J	37	ARG	N-CA-C	-6.40	105.51	113.38
2	B	393	C	P-O5'-C5'	-6.40	111.31	120.90
2	B	846	U	O5'-C5'-C4'	-6.39	102.11	111.70
2	B	2549	G	C4'-C3'-C2'	6.39	109.00	102.60
2	B	595	C	C5'-C4'-C3'	6.39	125.59	116.00
2	B	2722	G	C4'-C3'-O3'	-6.39	103.41	113.00
2	B	2851	A	P-O5'-C5'	-6.39	111.31	120.90
5	L	98	ALA	CA-C-N	6.39	131.23	122.34
5	L	98	ALA	C-N-CA	6.39	131.23	122.34
27	C	215	VAL	CA-CB-CG1	-6.39	99.53	110.40
30	H	28	ASN	CA-CB-CG	-6.39	106.21	112.60
2	B	323	C	N1-C1'-C2'	-6.39	104.41	114.00
2	B	481	G	O4'-C1'-C2'	-6.39	99.41	105.80
2	B	887	U	O4'-C1'-C2'	-6.39	101.21	107.60
2	B	1529	G	C3'-C2'-O2'	6.39	120.28	110.70
2	B	2450	A	P-O5'-C5'	-6.39	111.32	120.90
27	C	209	ALA	O-C-N	-6.39	114.41	122.27
2	B	362	A	C5'-C4'-C3'	-6.39	106.42	116.00
1	A	16	G	O5'-C5'-C4'	-6.39	101.92	111.50
2	B	304	U	C5'-C4'-C3'	6.39	125.58	116.00
2	B	1354	A	C1'-O4'-C4'	6.39	116.29	109.90
2	B	2196	C	P-O3'-C3'	6.39	129.78	120.20
2	B	2211	A	O3'-P-O5'	-6.39	94.42	104.00
2	B	1288	G	C5'-C4'-C3'	-6.38	105.62	115.20
2	B	2682	A	O4'-C4'-C3'	-6.38	97.61	104.00
12	R	89	HIS	CE1-NE2-CD2	-6.38	102.62	109.00
19	X	439	MET	CA-C-N	6.38	128.83	120.28
19	X	439	MET	C-N-CA	6.38	128.83	120.28
2	B	1509	A	C3'-C2'-O2'	-6.38	105.03	114.60
2	B	1954	G	P-O3'-C3'	6.38	129.77	120.20
2	B	1109	C	C4'-C3'-C2'	6.38	108.98	102.60
2	B	1887	C	O4'-C1'-N1	6.38	118.07	108.50
6	1	60	LYS	N-CA-C	-6.38	104.19	112.23
29	G	140	ILE	N-CA-CB	6.38	118.02	110.55
32	J	2	LYS	N-CA-CB	6.38	121.28	110.49
2	B	12	U	O4'-C1'-N1	6.38	118.07	108.50
2	B	2387	U	O4'-C1'-N1	6.38	118.07	108.50
9	O	81	ARG	CB-CA-C	-6.38	98.42	110.67
19	X	122	GLY	N-CA-C	-6.38	103.69	111.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	155	A	C3'-C2'-C1'	-6.38	94.92	101.30
7	M	88	ASN	OD1-CG-ND2	6.38	128.98	122.60
23	5	16	ASP	CA-C-N	6.38	133.72	121.54
23	5	16	ASP	C-N-CA	6.38	133.72	121.54
23	5	38	PHE	N-CA-C	-6.38	97.22	110.80
2	B	2093	G	C5'-C4'-C3'	-6.37	106.44	116.00
3	0	25	LYS	CA-C-O	-6.37	114.45	121.33
13	S	68	ASP	N-CA-C	-6.37	97.23	110.80
30	H	59	ALA	CA-C-O	-6.37	114.70	122.41
2	B	414	C	O5'-C5'-C4'	-6.37	101.94	111.50
4	K	93	GLN	CA-C-N	6.37	127.25	120.11
4	K	93	GLN	C-N-CA	6.37	127.25	120.11
2	B	748	G	O4'-C4'-C3'	-6.37	99.73	106.10
11	Q	59	LEU	O-C-N	-6.37	115.37	122.12
17	U	79	ALA	N-CA-C	-6.37	99.96	109.83
2	B	984	A	O4'-C1'-C2'	6.37	112.17	105.80
2	B	2248	C	O3'-P-O5'	6.37	113.55	104.00
19	X	371	ALA	O-C-N	-6.37	115.37	122.12
32	J	103	ILE	N-CA-CB	6.37	120.13	110.58
2	B	457	A	O4'-C1'-N9	6.36	117.75	108.20
2	B	1241	A	O3'-P-O5'	6.36	113.55	104.00
2	B	1512	C	C5'-C4'-C3'	-6.36	106.46	116.00
17	U	18	LYS	CA-CB-CG	6.36	126.82	114.10
2	B	1617	C	O4'-C1'-C2'	-6.36	99.44	105.80
2	B	2698	U	P-O5'-C5'	6.36	130.44	120.90
13	S	32	ALA	CA-C-O	6.36	127.16	120.42
2	B	2831	G	O3'-P-O5'	-6.36	94.46	104.00
19	X	26	ARG	N-CA-C	-6.36	99.55	109.72
19	X	100	GLU	O-C-N	-6.36	115.38	122.12
19	X	370	GLU	CA-C-N	6.36	128.80	120.28
19	X	370	GLU	C-N-CA	6.36	128.80	120.28
26	8	1	MET	CA-C-N	6.36	133.68	121.54
26	8	1	MET	C-N-CA	6.36	133.68	121.54
2	B	249	C	O4'-C1'-N1	6.36	117.73	108.20
2	B	1348	C	O4'-C1'-N1	6.36	118.03	108.50
2	B	2028	U	C4'-C3'-C2'	-6.36	96.24	102.60
8	N	66	ALA	N-CA-C	-6.36	105.53	113.28
20	E	171	ASP	N-CA-C	-6.36	99.46	109.50
23	5	49	GLY	CA-C-N	6.36	133.41	121.97
23	5	49	GLY	C-N-CA	6.36	133.41	121.97
27	C	164	VAL	N-CA-C	-6.36	106.75	111.90
2	B	1229	C	P-O3'-C3'	-6.35	110.67	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2455	G	C1'-O4'-C4'	-6.35	103.55	109.90
12	R	26	ASP	CA-CB-CG	-6.35	106.25	112.60
14	D	140	HIS	CE1-NE2-CD2	-6.35	102.65	109.00
2	B	1595	C	C5'-C4'-C3'	6.35	125.53	116.00
2	B	2403	C	P-O5'-C5'	-6.35	111.37	120.90
11	Q	61	ILE	CA-C-N	6.35	129.08	120.38
11	Q	61	ILE	C-N-CA	6.35	129.08	120.38
2	B	1794	A	P-O3'-C3'	-6.35	110.67	120.20
2	B	1688	U	O5'-C5'-C4'	-6.35	101.97	111.50
2	B	1824	G	P-O5'-C5'	-6.35	111.38	120.90
2	B	2065	C	O4'-C4'-C3'	-6.35	97.65	104.00
5	L	138	ALA	N-CA-C	-6.35	97.28	110.80
26	8	28	SER	O-C-N	6.35	128.95	122.09
27	C	141	HIS	ND1-CE1-NE2	6.35	114.75	108.40
2	B	1461	C	C5'-C4'-C3'	6.35	125.52	116.00
2	B	2147	A	O4'-C4'-C3'	-6.35	97.65	104.00
9	O	54	VAL	CA-C-N	6.35	131.43	120.58
9	O	54	VAL	C-N-CA	6.35	131.43	120.58
18	W	63	ILE	CB-CA-C	-6.35	103.19	111.25
19	X	298	ILE	CA-CB-CG1	6.35	121.19	110.40
2	B	558	U	C5'-C4'-O4'	-6.35	100.28	109.80
2	B	1697	G	C5'-C4'-C3'	6.35	125.52	116.00
2	B	2844	G	O4'-C1'-N9	6.35	118.02	108.50
14	D	114	LYS	N-CA-C	6.35	118.73	111.11
1	A	77	U	C4'-C3'-O3'	-6.34	103.48	113.00
2	B	295	G	P-O3'-C3'	-6.34	110.68	120.20
2	B	1777	U	C4'-C3'-O3'	-6.34	103.48	113.00
23	5	151	GLU	CA-C-N	6.34	129.07	120.38
23	5	151	GLU	C-N-CA	6.34	129.07	120.38
27	C	83	ASP	CA-CB-CG	6.34	118.94	112.60
2	B	709	U	O4'-C4'-C3'	-6.34	97.66	104.00
2	B	1814	G	P-O5'-C5'	-6.34	111.39	120.90
14	D	206	ALA	N-CA-CB	6.34	121.21	110.49
2	B	893	C	C4'-C3'-C2'	-6.34	96.26	102.60
2	B	1456	G	O5'-C5'-C4'	-6.34	101.99	111.50
2	B	850	U	P-O5'-C5'	-6.34	111.40	120.90
19	X	156	GLU	N-CA-CB	6.34	119.44	110.12
2	B	97	C	C1'-O4'-C4'	-6.33	103.57	109.90
2	B	331	C	C1'-O4'-C4'	-6.33	103.37	109.70
2	B	846	U	O4'-C1'-C2'	-6.33	99.47	105.80
2	B	1272	A	C1'-O4'-C4'	-6.33	103.37	109.70
2	B	1325	U	P-O5'-C5'	6.33	130.40	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1528	A	C1'-C2'-O2'	6.33	117.90	108.40
2	B	1620	G	C5'-C4'-C3'	6.33	125.50	116.00
2	B	2633	G	P-O3'-C3'	6.33	129.70	120.20
2	B	1105	U	P-O5'-C5'	-6.33	111.40	120.90
2	B	2418	A	C5'-C4'-C3'	6.33	125.50	116.00
10	P	64	SER	N-CA-CB	6.33	119.96	110.65
2	B	748	G	C4'-C3'-C2'	6.33	108.93	102.60
2	B	1339	G	C5'-C4'-C3'	-6.33	105.71	115.20
3	O	26	ARG	NE-CZ-NH1	6.33	127.83	121.50
11	Q	26	ALA	CA-C-N	6.33	129.39	120.28
11	Q	26	ALA	C-N-CA	6.33	129.39	120.28
15	T	70	HIS	ND1-CE1-NE2	6.33	114.73	108.40
2	B	394	C	C5'-C4'-C3'	6.33	125.49	116.00
2	B	657	U	C4'-C3'-O3'	-6.33	103.51	113.00
2	B	122	G	C4'-C3'-C2'	6.33	108.92	102.60
2	B	1698	A	C5'-C4'-C3'	-6.33	105.71	115.20
2	B	2480	C	O4'-C1'-N1	6.33	117.99	108.50
19	X	240	SER	CA-C-N	6.33	133.35	121.97
19	X	240	SER	C-N-CA	6.33	133.35	121.97
27	C	69	ASN	N-CA-CB	6.33	121.22	111.22
32	J	132	HIS	CB-CA-C	-6.33	97.83	110.42
1	A	89	U	O4'-C1'-N1	6.32	117.69	108.20
2	B	2790	U	O4'-C4'-C3'	-6.32	99.78	106.10
2	B	2799	A	O4'-C4'-C3'	-6.32	99.78	106.10
8	N	80	PHE	CA-C-N	6.32	129.04	120.38
8	N	80	PHE	C-N-CA	6.32	129.04	120.38
14	D	130	GLN	CA-C-N	6.32	133.62	121.54
14	D	130	GLN	C-N-CA	6.32	133.62	121.54
21	Y	19	ARG	N-CA-C	6.32	120.11	111.39
32	J	92	MET	CB-CA-C	-6.32	100.30	110.79
19	X	326	LEU	CA-C-N	6.32	130.73	121.31
19	X	326	LEU	C-N-CA	6.32	130.73	121.31
28	F	61	GLY	O-C-N	6.32	128.26	122.19
2	B	1442	U	P-O5'-C5'	6.32	130.38	120.90
20	E	27	LEU	O-C-N	-6.32	115.52	122.09
2	B	1659	G	P-O3'-C3'	-6.32	110.73	120.20
10	P	14	GLN	OE1-CD-NE2	-6.32	116.28	122.60
2	B	455	C	O3'-P-O5'	-6.31	94.53	104.00
1	A	44	G	O3'-P-O5'	-6.31	94.53	104.00
2	B	886	A	P-O5'-C5'	6.31	130.37	120.90
2	B	1145	C	O4'-C1'-N1	6.31	117.97	108.50
2	B	1824	G	O4'-C4'-C3'	-6.31	97.69	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1489	C	C5'-C4'-C3'	6.31	124.67	115.20
20	E	112	LEU	CA-C-O	-6.31	114.20	120.70
2	B	1253	A	P-O3'-C3'	-6.31	110.74	120.20
31	I	27	LEU	N-CA-C	-6.31	105.62	113.38
2	B	286	U	P-O5'-C5'	6.31	130.36	120.90
2	B	670	A	C2'-C3'-O3'	6.31	118.96	109.50
2	B	802	A	C5'-C4'-C3'	6.31	125.46	116.00
2	B	2125	G	O3'-P-O5'	-6.31	94.54	104.00
27	C	57	HIS	CE1-NE2-CD2	-6.31	102.69	109.00
30	H	53	GLU	N-CA-C	-6.31	101.43	111.02
7	M	46	ILE	N-CA-C	-6.31	104.19	110.62
2	B	572	A	C3'-C2'-O2'	6.30	120.16	110.70
2	B	581	C	P-O5'-C5'	6.30	130.36	120.90
2	B	963	U	O4'-C1'-N1	6.30	117.96	108.50
2	B	2767	C	C5'-C4'-C3'	-6.30	106.54	116.00
20	E	75	SER	CA-C-O	-6.30	111.52	120.16
2	B	2801	G	C5'-C4'-C3'	6.30	125.45	116.00
2	B	212	G	C1'-O4'-C4'	-6.30	103.60	109.90
2	B	571	U	O4'-C1'-C2'	-6.30	99.50	105.80
2	B	813	U	C5'-C4'-C3'	6.30	125.45	116.00
2	B	2294	G	C1'-O4'-C4'	-6.30	103.60	109.90
2	B	2403	C	O4'-C1'-N1	6.30	117.95	108.50
7	M	69	PRO	CB-CA-C	-6.30	102.99	111.12
2	B	736	C	O4'-C1'-N1	6.30	117.95	108.50
2	B	983	A	C3'-C2'-C1'	6.30	107.60	101.30
2	B	1844	C	P-O3'-C3'	-6.30	110.75	120.20
15	T	61	LEU	N-CA-CB	6.30	121.14	110.49
2	B	241	A	C4'-C3'-O3'	-6.30	99.95	109.40
2	B	701	G	C5'-C4'-C3'	-6.30	106.56	116.00
2	B	714	U	C4'-C3'-C2'	-6.30	96.30	102.60
2	B	1785	A	O3'-P-O5'	-6.30	94.55	104.00
2	B	2695	U	C5'-C4'-C3'	6.30	125.44	116.00
5	L	59	ARG	N-CA-C	-6.30	105.54	112.72
11	Q	104	ALA	N-CA-C	6.30	118.14	111.28
2	B	520	G	P-O5'-C5'	-6.29	111.46	120.90
2	B	578	G	C4'-C3'-O3'	-6.29	103.56	113.00
2	B	846	U	C2'-C3'-O3'	6.29	118.94	109.50
2	B	1241	A	C3'-C2'-C1'	-6.29	95.01	101.30
23	5	172	HIS	CE1-NE2-CD2	-6.29	102.71	109.00
2	B	1075	C	C4'-C3'-O3'	-6.29	103.56	113.00
8	N	2	ARG	N-CA-C	-6.29	103.72	111.40
19	X	333	GLN	N-CA-C	-6.29	104.42	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	5	173	THR	N-CA-CB	6.29	120.97	110.59
3	0	32	LEU	O-C-N	6.29	130.55	122.81
1	A	106	G	C5'-C4'-C3'	6.29	125.43	116.00
2	B	1177	G	O5'-C5'-C4'	-6.29	102.07	111.50
2	B	1544	A	O3'-P-O5'	-6.29	94.57	104.00
2	B	2009	A	O4'-C1'-N9	6.29	117.93	108.50
19	X	205	LEU	N-CA-CB	6.29	123.22	111.52
23	5	29	LEU	CA-C-N	6.29	129.00	120.38
23	5	29	LEU	C-N-CA	6.29	129.00	120.38
27	C	224	MET	CA-C-N	6.29	132.23	121.35
27	C	224	MET	C-N-CA	6.29	132.23	121.35
28	F	131	VAL	CA-C-N	6.29	133.55	121.54
28	F	131	VAL	C-N-CA	6.29	133.55	121.54
2	B	1074	G	C4'-C3'-O3'	-6.29	103.57	113.00
5	L	38	GLN	CA-C-O	6.29	126.63	119.27
2	B	678	C	C4'-C3'-O3'	-6.29	103.57	113.00
2	B	885	C	C4'-C3'-O3'	-6.29	103.57	113.00
2	B	1929	G	O4'-C1'-C2'	-6.29	99.52	105.80
2	B	681	G	C4'-C3'-C2'	-6.28	96.32	102.60
2	B	1364	G	C5'-C4'-C3'	6.28	125.42	116.00
20	E	34	ALA	CA-C-N	6.28	128.70	120.28
20	E	34	ALA	C-N-CA	6.28	128.70	120.28
27	C	11	GLY	N-CA-C	-6.28	106.41	115.27
1	A	50	A	P-O3'-C3'	-6.28	110.78	120.20
2	B	892	A	P-O5'-C5'	6.28	130.32	120.90
29	G	6	ALA	CA-C-O	-6.28	114.17	119.76
29	G	103	ASN	CA-CB-CG	-6.28	106.32	112.60
2	B	1973	G	C4'-C3'-O3'	-6.28	103.58	113.00
2	B	2885	G	C3'-C2'-O2'	6.28	120.12	110.70
13	S	47	VAL	N-CA-C	-6.28	103.80	113.16
32	J	98	GLU	CA-C-O	-6.28	113.17	120.20
1	A	46	A	C1'-O4'-C4'	-6.28	103.62	109.90
12	R	101	ILE	N-CA-C	6.28	122.40	109.34
2	B	611	C	C4'-C3'-O3'	-6.28	103.59	113.00
20	E	46	GLN	N-CA-CB	6.28	121.09	110.49
2	B	1372	U	C4'-C3'-C2'	-6.27	96.33	102.60
2	B	2153	C	C5'-C4'-C3'	-6.27	105.79	115.20
24	6	12	ARG	NE-CZ-NH2	6.27	124.85	119.20
2	B	331	C	O3'-P-O5'	-6.27	94.59	104.00
2	B	415	A	P-O3'-C3'	6.27	129.61	120.20
27	C	39	SER	N-CA-C	-6.27	104.43	113.21
31	I	77	VAL	N-CA-CB	6.27	117.89	110.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	J	117	ALA	N-CA-C	-6.27	104.54	111.82
2	B	478	A	C5'-C4'-C3'	-6.27	106.59	116.00
2	B	1809	A	C3'-C2'-C1'	6.27	107.57	101.30
14	D	126	ASN	N-CA-C	-6.27	99.80	109.14
2	B	82	U	P-O5'-C5'	-6.27	111.50	120.90
2	B	1058	U	O5'-C5'-C4'	6.27	120.90	111.50
2	B	2259	U	C4'-C3'-O3'	-6.27	103.60	113.00
2	B	2259	U	P-O5'-C5'	6.27	130.30	120.90
2	B	2366	A	O4'-C1'-N9	6.27	117.90	108.50
2	B	2503	A	O4'-C1'-C2'	-6.27	99.53	105.80
2	B	2522	U	C4'-C3'-O3'	-6.27	103.60	113.00
2	B	2650	U	P-O3'-C3'	-6.27	110.80	120.20
19	X	376	THR	CA-C-N	6.27	133.51	121.54
19	X	376	THR	C-N-CA	6.27	133.51	121.54
2	B	2759	G	P-O5'-C5'	-6.27	111.50	120.90
19	X	272	LYS	CA-C-N	6.27	128.68	120.28
19	X	272	LYS	C-N-CA	6.27	128.68	120.28
27	C	218	THR	N-CA-C	-6.27	97.45	108.23
22	3	25	THR	CA-C-N	6.26	133.50	121.54
22	3	25	THR	C-N-CA	6.26	133.50	121.54
2	B	822	G	O4'-C4'-C3'	-6.26	97.74	104.00
2	B	972	A	C4'-C3'-O3'	-6.26	103.61	113.00
2	B	1081	U	O4'-C1'-N1	6.26	117.89	108.50
2	B	2328	A	P-O5'-C5'	-6.26	111.51	120.90
22	3	41	HIS	CE1-NE2-CD2	-6.26	102.74	109.00
2	B	832	U	C3'-C2'-C1'	6.26	107.56	101.30
2	B	2895	G	P-O5'-C5'	-6.26	111.51	120.90
28	F	30	VAL	CA-C-N	6.26	133.14	122.37
28	F	30	VAL	C-N-CA	6.26	133.14	122.37
12	R	66	HIS	ND1-CE1-NE2	6.26	114.66	108.40
2	B	172	A	C4'-C3'-O3'	-6.25	103.62	113.00
2	B	878	A	O3'-P-O5'	-6.25	94.62	104.00
2	B	1793	C	O4'-C1'-N1	6.25	117.88	108.50
2	B	2603	G	C5'-C4'-C3'	6.25	125.38	116.00
2	B	2392	A	O4'-C4'-C3'	-6.25	97.75	104.00
2	B	2541	A	C4'-C3'-O3'	-6.25	103.62	113.00
2	B	2860	A	C4'-C3'-C2'	-6.25	96.35	102.60
8	N	11	ASN	N-CA-C	-6.25	105.61	113.18
2	B	413	C	C5'-C4'-O4'	6.25	119.18	109.80
2	B	1006	C	C5'-C4'-C3'	-6.25	106.62	116.00
2	B	2392	A	C4'-C3'-O3'	-6.25	103.62	113.00
6	1	57	LEU	O-C-N	6.25	129.33	121.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	O	40	ILE	CA-CB-CG1	6.25	121.03	110.40
2	B	524	G	O4'-C1'-N9	6.25	117.88	108.50
3	O	28	PHE	CA-CB-CG	-6.25	107.55	113.80
13	S	27	LYS	N-CA-C	-6.25	103.71	113.02
14	D	130	GLN	N-CA-C	-6.25	97.43	109.24
2	B	2693	G	C5'-C4'-C3'	-6.25	106.63	116.00
2	B	784	G	O4'-C4'-C3'	-6.25	97.75	104.00
2	B	1394	U	O3'-P-O5'	-6.25	94.63	104.00
1	A	108	A	P-O5'-C5'	-6.25	111.53	120.90
32	J	38	GLY	N-CA-C	-6.25	106.29	115.72
2	B	998	C	P-O5'-C5'	6.24	130.26	120.90
2	B	1902	C	C4'-C3'-C2'	-6.24	96.36	102.60
2	B	361	G	P-O5'-C5'	6.24	130.26	120.90
21	Y	81	ILE	O-C-N	-6.24	116.52	123.26
28	F	120	SER	N-CA-C	-6.24	98.72	108.90
2	B	1969	A	C3'-C2'-C1'	-6.24	95.06	101.30
2	B	2189	U	O3'-P-O5'	6.24	113.36	104.00
7	M	117	PHE	CA-CB-CG	-6.24	107.56	113.80
22	3	2	VAL	N-CA-C	-6.24	96.36	109.34
2	B	1056	G	C4'-C3'-O3'	6.24	122.36	113.00
2	B	998	C	C4'-C3'-O3'	-6.24	103.65	113.00
2	B	1168	G	O4'-C1'-N9	6.24	117.85	108.50
5	L	30	THR	N-CA-CB	6.23	121.02	110.49
27	C	180	MET	CG-SD-CE	-6.23	87.19	100.90
2	B	573	U	O3'-P-O5'	-6.23	94.65	104.00
2	B	730	A	C4'-C3'-O3'	-6.23	103.65	113.00
2	B	1704	C	C3'-C2'-C1'	-6.23	95.07	101.30
2	B	2409	G	P-O5'-C5'	-6.23	111.56	120.90
2	B	2745	C	O4'-C1'-N1	6.23	117.85	108.50
19	X	239	ASP	CA-C-N	6.23	131.27	121.99
19	X	239	ASP	C-N-CA	6.23	131.27	121.99
2	B	2402	U	O4'-C4'-C3'	-6.23	99.87	106.10
19	X	215	LYS	CA-C-N	6.23	129.25	120.28
19	X	215	LYS	C-N-CA	6.23	129.25	120.28
32	J	139	VAL	O-C-N	6.23	129.46	122.67
2	B	997	G	C1'-O4'-C4'	-6.23	103.67	109.90
2	B	1997	C	O4'-C1'-C2'	-6.23	101.37	107.60
2	B	2458	G	O4'-C1'-N9	6.23	117.54	108.20
2	B	2508	G	C5'-C4'-C3'	-6.23	106.66	116.00
22	3	15	ARG	NE-CZ-NH2	6.23	124.81	119.20
28	F	176	PHE	CA-C-O	-6.23	112.36	120.71
1	A	22	U	C3'-C2'-C1'	-6.22	95.08	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	31	C	C4'-C3'-O3'	-6.22	103.66	113.00
2	B	738	G	C5'-C4'-O4'	6.22	119.14	109.80
2	B	1482	G	O3'-P-O5'	-6.22	94.67	104.00
2	B	2435	A	P-O3'-C3'	6.22	129.53	120.20
14	D	180	VAL	CA-C-O	6.22	127.37	120.59
19	X	408	LYS	N-CA-C	6.22	124.06	110.80
2	B	758	C	O4'-C1'-C2'	6.22	113.82	107.60
8	N	106	ASP	CA-CB-CG	-6.22	106.38	112.60
20	E	154	ASP	N-CA-C	-6.22	97.13	108.02
27	C	139	THR	CA-C-N	6.22	131.19	122.23
27	C	139	THR	C-N-CA	6.22	131.19	122.23
2	B	1404	C	C4'-C3'-O3'	-6.22	103.67	113.00
2	B	2073	C	C4'-C3'-O3'	-6.22	103.67	113.00
14	D	164	GLN	CB-CG-CD	-6.22	102.03	112.60
2	B	1738	G	P-O5'-C5'	-6.22	111.57	120.90
2	B	2399	G	C5'-C4'-C3'	6.22	125.33	116.00
4	K	22	ILE	CB-CA-C	-6.22	104.55	110.70
13	S	71	VAL	N-CA-CB	6.22	118.09	112.06
30	H	81	ALA	N-CA-C	-6.22	99.58	109.59
2	B	96	C	O5'-C5'-C4'	-6.21	102.18	111.50
2	B	575	A	C3'-C2'-C1'	6.21	107.51	101.30
2	B	1264	A	O3'-P-O5'	-6.21	94.68	104.00
2	B	2632	A	C5'-C4'-C3'	-6.21	106.68	116.00
2	B	539	G	P-O5'-C5'	6.21	130.22	120.90
16	2	12	ALA	O-C-N	6.21	128.80	122.09
27	C	269	ARG	NE-CZ-NH1	6.21	127.71	121.50
2	B	285	G	C4'-C3'-C2'	-6.21	96.39	102.60
2	B	346	A	O4'-C4'-C3'	-6.21	97.79	104.00
2	B	1104	C	P-O5'-C5'	-6.21	111.58	120.90
2	B	2042	A	O5'-C5'-C4'	-6.21	102.38	111.70
2	B	2504	U	P-O5'-C5'	-6.21	111.58	120.90
14	D	191	GLY	N-CA-C	-6.21	103.86	112.18
18	W	91	PHE	CA-C-N	6.21	131.36	123.10
18	W	91	PHE	C-N-CA	6.21	131.36	123.10
2	B	2521	C	C1'-O4'-C4'	-6.21	103.69	109.90
1	A	59	A	C4'-C3'-C2'	-6.21	96.39	102.60
2	B	1549	A	C4'-C3'-O3'	-6.21	103.69	113.00
2	B	2020	A	O3'-P-O5'	6.21	113.31	104.00
31	I	121	ILE	N-CA-C	6.21	116.95	110.62
2	B	306	U	O4'-C4'-C3'	-6.21	97.79	104.00
2	B	477	A	C5'-C4'-C3'	6.21	125.31	116.00
2	B	949	G	C4'-C3'-O3'	-6.21	103.69	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1031	G	O4'-C1'-N9	6.21	117.81	108.50
2	B	1739	A	O5'-C5'-C4'	-6.21	102.19	111.50
23	5	130	VAL	CA-CB-CG2	6.21	120.95	110.40
2	B	1483	G	P-O5'-C5'	6.21	130.21	120.90
8	N	112	TYR	O-C-N	-6.21	116.18	123.25
2	B	674	G	O3'-P-O5'	-6.20	94.69	104.00
2	B	1641	A	C5'-C4'-C3'	6.20	125.31	116.00
2	B	2875	C	O4'-C1'-N1	6.20	117.81	108.50
25	7	35	LYS	N-CA-C	6.20	124.02	110.80
32	J	135	GLN	N-CA-C	-6.20	104.99	113.30
18	W	5	ASN	OD1-CG-ND2	-6.20	116.40	122.60
2	B	269	C	P-O3'-C3'	-6.20	110.90	120.20
2	B	817	C	O4'-C1'-N1	6.20	117.80	108.50
2	B	1338	G	C4'-C3'-O3'	-6.20	103.70	113.00
2	B	1405	U	C5'-C4'-C3'	6.20	125.30	116.00
2	B	2636	C	O4'-C4'-C3'	-6.20	97.80	104.00
14	D	108	ASP	CA-CB-CG	-6.20	106.40	112.60
19	X	164	GLU	N-CA-CB	6.20	119.00	110.01
2	B	540	C	C4'-C3'-O3'	-6.20	103.71	113.00
11	Q	67	ALA	CB-CA-C	-6.20	101.42	110.96
18	W	61	LEU	CA-C-O	-6.20	114.10	121.66
19	X	411	HIS	CE1-NE2-CD2	-6.20	102.81	109.00
32	J	22	GLY	CA-C-N	6.20	133.37	121.54
32	J	22	GLY	C-N-CA	6.20	133.37	121.54
2	B	511	U	O4'-C1'-N1	6.19	117.79	108.50
2	B	825	A	C3'-C2'-C1'	6.19	107.49	101.30
2	B	1751	U	P-O3'-C3'	-6.19	110.92	120.20
2	B	566	U	O4'-C1'-N1	6.19	117.78	108.50
2	B	577	G	C4'-C3'-C2'	-6.19	96.41	102.60
5	L	32	GLY	N-CA-C	-6.19	98.52	113.18
2	B	564	C	C2'-C3'-O3'	-6.19	104.42	113.70
2	B	1892	C	C5'-C4'-C3'	6.19	125.28	116.00
2	B	589	U	C2'-C3'-O3'	6.18	122.98	113.70
2	B	1689	A	C4'-C3'-C2'	-6.18	96.42	102.60
3	0	12	VAL	O-C-N	6.18	129.91	123.05
2	B	1377	G	C4'-C3'-O3'	-6.18	103.73	113.00
2	B	2480	C	P-O5'-C5'	-6.18	111.63	120.90
2	B	2632	A	C4'-C3'-O3'	-6.18	103.73	113.00
2	B	2711	A	O3'-P-O5'	-6.18	94.73	104.00
27	C	201	LEU	N-CA-C	-6.18	105.74	113.28
2	B	970	U	C4'-C3'-O3'	-6.18	103.73	113.00
2	B	820	A	P-O3'-C3'	-6.18	110.93	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2450	A	C3'-C2'-C1'	-6.18	95.12	101.30
11	Q	1	ALA	N-CA-CB	6.18	119.67	110.40
11	Q	82	LEU	CA-C-O	-6.18	114.00	120.55
20	E	130	LYS	N-CA-C	-6.18	97.64	110.80
2	B	335	C	C5'-C4'-C3'	-6.18	106.73	116.00
2	B	528	A	C4'-C3'-C2'	6.18	108.78	102.60
12	R	95	ASP	CA-C-O	-6.18	114.03	120.70
2	B	967	U	P-O5'-C5'	-6.18	111.64	120.90
2	B	984	A	O4'-C1'-N9	6.18	117.47	108.20
2	B	1000	A	C3'-C2'-O2'	6.18	119.97	110.70
3	0	11	PRO	N-CA-C	-6.18	101.37	111.68
14	D	167	ASN	CA-C-N	6.18	132.36	121.80
14	D	167	ASN	C-N-CA	6.18	132.36	121.80
2	B	796	C	O4'-C1'-N1	6.17	117.46	108.20
2	B	1002	G	N9-C1'-C2'	-6.17	102.74	112.00
2	B	1524	G	C5'-C4'-C3'	-6.17	106.74	116.00
12	R	13	ARG	NE-CZ-NH1	6.17	127.67	121.50
22	3	9	ARG	CA-C-N	6.17	129.37	120.79
22	3	9	ARG	C-N-CA	6.17	129.37	120.79
2	B	267	C	C4'-C3'-O3'	-6.17	103.74	113.00
2	B	554	U	O5'-C5'-C4'	-6.17	102.24	111.50
2	B	1025	G	C2'-C3'-O3'	6.17	118.76	109.50
2	B	1035	U	C4'-C3'-O3'	-6.17	103.74	113.00
2	B	1605	C	C4'-C3'-O3'	-6.17	103.74	113.00
2	B	2250	G	C5'-C4'-C3'	-6.17	105.94	115.20
2	B	2670	A	P-O5'-C5'	-6.17	111.64	120.90
27	C	63	ILE	N-CA-CB	6.17	117.86	110.95
3	0	31	ASN	CA-C-O	6.17	127.42	119.95
11	Q	100	PHE	N-CA-CB	6.17	120.92	110.49
32	J	91	GLU	N-CA-CB	6.17	119.80	110.30
2	B	2006	C	C4'-C3'-C2'	6.17	108.77	102.60
2	B	2041	U	P-O3'-C3'	6.17	129.45	120.20
2	B	2819	G	P-O5'-C5'	-6.17	111.65	120.90
2	B	111	A	O4'-C1'-N9	6.17	117.75	108.50
2	B	791	C	P-O3'-C3'	-6.17	110.95	120.20
2	B	829	A	C3'-C2'-O2'	-6.17	105.35	114.60
2	B	848	C	O5'-C5'-C4'	-6.17	102.25	111.50
2	B	1775	U	P-O3'-C3'	-6.17	110.95	120.20
23	5	43	ASP	CA-CB-CG	6.17	118.77	112.60
27	C	100	ARG	CB-CA-C	-6.17	98.86	109.65
2	B	461	C	C4'-C3'-O3'	-6.16	103.75	113.00
2	B	797	G	C1'-O4'-C4'	-6.16	103.74	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	7	11	LYS	O-C-N	6.16	129.47	122.20
2	B	1451	C	C5'-C4'-C3'	-6.16	105.96	115.20
2	B	236	C	P-O5'-C5'	-6.16	111.66	120.90
2	B	713	G	P-O5'-C5'	6.16	130.14	120.90
2	B	1602	U	C3'-C2'-C1'	-6.16	95.34	101.50
2	B	2549	G	O4'-C4'-C3'	-6.16	97.84	104.00
18	W	15	GLY	N-CA-C	-6.16	105.35	112.50
21	Y	81	ILE	CA-C-N	6.16	131.61	122.86
21	Y	81	ILE	C-N-CA	6.16	131.61	122.86
23	5	165	ASN	N-CA-C	-6.16	97.68	110.80
1	A	27	C	O4'-C1'-C2'	-6.16	101.44	107.60
2	B	726	G	O3'-P-O5'	6.16	113.24	104.00
2	B	1811	G	C4'-C3'-C2'	-6.16	96.44	102.60
16	2	28	LEU	N-CA-C	6.16	123.92	110.80
27	C	73	ILE	CA-C-O	-6.16	114.70	119.20
2	B	183	C	O5'-C5'-C4'	-6.16	102.26	111.50
2	B	1532	A	C4'-C3'-O3'	-6.16	103.77	113.00
2	B	1643	G	C4'-C3'-C2'	-6.16	96.44	102.60
2	B	2338	C	O4'-C1'-N1	6.16	117.74	108.50
2	B	2441	U	O4'-C1'-N1	6.16	117.73	108.50
11	Q	57	ARG	NE-CZ-NH1	6.16	127.66	121.50
14	D	113	SER	CA-C-N	6.16	128.85	120.54
14	D	113	SER	C-N-CA	6.16	128.85	120.54
2	B	1164	C	O4'-C1'-C2'	6.15	113.75	107.60
2	B	1945	G	C4'-C3'-C2'	-6.15	96.45	102.60
2	B	1970	A	C4'-C3'-C2'	-6.15	96.45	102.60
2	B	2867	G	C3'-C2'-C1'	-6.15	95.35	101.50
20	E	197	GLU	CA-C-O	-6.15	114.36	120.82
2	B	1663	G	C2'-C3'-O3'	-6.15	104.47	113.70
2	B	2578	G	C4'-C3'-O3'	-6.15	103.78	113.00
5	L	22	GLY	N-CA-C	-6.15	104.89	112.33
8	N	99	LYS	O-C-N	-6.15	116.03	123.10
2	B	1284	A	C4'-C3'-O3'	-6.15	103.78	113.00
2	B	1813	G	O4'-C1'-N9	6.15	117.72	108.50
1	A	8	C	P-O3'-C3'	6.15	129.42	120.20
2	B	295	G	O5'-C5'-C4'	-6.15	102.28	111.50
2	B	1743	G	C4'-C3'-O3'	-6.15	103.78	113.00
10	P	52	ARG	N-CA-C	-6.15	104.36	113.40
2	B	478	A	C4'-C3'-O3'	-6.14	103.78	113.00
2	B	621	A	P-O5'-C5'	-6.14	111.68	120.90
2	B	1855	U	C1'-O4'-C4'	6.14	116.04	109.90
16	2	21	ALA	N-CA-CB	6.14	119.42	110.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	W	53	LYS	N-CA-CB	6.14	119.11	109.83
2	B	1545	A	C4'-C3'-C2'	-6.14	96.46	102.60
2	B	2347	C	O3'-P-O5'	-6.14	94.78	104.00
5	L	18	ARG	NE-CZ-NH1	-6.14	115.36	121.50
15	T	92	ASN	OD1-CG-ND2	6.14	128.74	122.60
23	5	56	ASP	N-CA-CB	6.14	120.87	110.49
2	B	269	C	O5'-C5'-C4'	-6.14	102.29	111.50
2	B	1963	U	C4'-C3'-C2'	-6.14	96.46	102.60
2	B	1796	U	P-O5'-C5'	-6.14	111.69	120.90
13	S	96	ILE	CB-CA-C	6.14	118.71	110.42
2	B	929	U	P-O3'-C3'	-6.14	111.00	120.20
2	B	1072	C	O4'-C1'-N1	6.14	117.70	108.50
2	B	1530	G	C3'-C2'-C1'	-6.14	95.16	101.30
2	B	1746	A	C5'-C4'-C3'	6.14	125.21	116.00
2	B	2629	U	O4'-C4'-C3'	-6.14	99.96	106.10
12	R	57	GLY	CA-C-N	6.14	131.47	122.94
12	R	57	GLY	C-N-CA	6.14	131.47	122.94
2	B	428	A	P-O5'-C5'	6.13	130.10	120.90
2	B	2177	C	O4'-C1'-N1	6.13	117.70	108.50
2	B	2427	C	O4'-C1'-N1	6.13	117.70	108.50
2	B	2443	C	P-O5'-C5'	-6.13	111.70	120.90
2	B	2570	G	C4'-C3'-O3'	-6.13	103.80	113.00
2	B	2615	U	O4'-C1'-N1	6.13	117.70	108.50
18	W	72	VAL	CB-CA-C	-6.13	102.75	111.34
29	G	88	LEU	N-CA-CB	6.13	120.86	110.49
2	B	572	A	P-O5'-C5'	-6.13	111.70	120.90
12	R	94	THR	CA-C-O	-6.13	113.99	120.80
19	X	391	ALA	CA-C-N	6.13	129.13	120.42
19	X	391	ALA	C-N-CA	6.13	129.13	120.42
29	G	3	VAL	O-C-N	6.13	128.73	121.80
2	B	302	C	P-O5'-C5'	6.13	130.10	120.90
2	B	996	A	C3'-C2'-C1'	-6.13	95.17	101.30
20	E	98	LYS	CG-CD-CE	6.13	125.40	111.30
29	G	71	LEU	N-CA-CB	6.13	119.23	110.16
2	B	1508	A	O4'-C4'-C3'	-6.13	99.97	106.10
2	B	1782	U	C5'-C4'-C3'	6.13	124.39	115.20
29	G	86	LEU	CA-C-N	6.13	131.97	121.86
29	G	86	LEU	C-N-CA	6.13	131.97	121.86
2	B	1515	A	O4'-C1'-N9	6.13	117.69	108.50
2	B	2034	U	O4'-C1'-N1	6.13	117.69	108.50
11	Q	81	GLY	N-CA-C	-6.13	98.66	113.18
2	B	270	A	C1'-O4'-C4'	-6.13	103.77	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1244	A	C3'-C2'-C1'	6.13	107.43	101.30
2	B	105	C	P-O5'-C5'	-6.12	111.71	120.90
10	P	35	SER	N-CA-CB	6.12	121.22	111.91
20	E	61	ARG	N-CA-CB	-6.12	103.31	110.35
2	B	776	G	C1'-O4'-C4'	-6.12	103.58	109.70
2	B	1933	G	C1'-O4'-C4'	-6.12	103.78	109.90
14	D	51	THR	N-CA-CB	6.12	121.23	111.56
19	X	392	VAL	N-CA-C	-6.12	104.54	110.72
23	5	39	VAL	CB-CA-C	6.12	121.57	111.59
2	B	1564	C	C5'-C4'-C3'	-6.12	106.82	116.00
2	B	2562	U	O5'-C5'-C4'	-6.12	102.32	111.50
19	X	277	LYS	N-CA-C	6.12	117.95	111.28
20	E	58	LYS	N-CA-CB	6.12	119.33	109.90
27	C	111	ALA	N-CA-CB	6.12	120.83	110.49
2	B	276	U	C5'-C4'-C3'	-6.12	106.02	115.20
2	B	307	G	N9-C1'-C2'	-6.12	102.82	112.00
2	B	1331	G	P-O3'-C3'	6.12	129.38	120.20
32	J	42	ALA	CA-C-N	6.12	133.23	121.54
32	J	42	ALA	C-N-CA	6.12	133.23	121.54
2	B	911	A	C4'-C3'-C2'	6.12	108.72	102.60
2	B	1095	A	C5'-C4'-O4'	6.12	118.97	109.80
2	B	1168	G	O4'-C4'-C3'	-6.12	97.88	104.00
2	B	1302	A	O4'-C4'-C3'	-6.12	99.98	106.10
23	5	47	ASN	OD1-CG-ND2	-6.12	116.48	122.60
28	F	173	ASP	CA-CB-CG	-6.12	106.48	112.60
1	A	57	A	C4'-C3'-C2'	-6.12	96.48	102.60
2	B	1577	C	C4'-C3'-O3'	-6.12	103.83	113.00
25	7	42	HIS	CE1-NE2-CD2	-6.12	102.88	109.00
2	B	1087	G	C4'-C3'-O3'	-6.11	103.83	113.00
2	B	1555	G	C5'-C4'-C3'	-6.11	106.83	116.00
2	B	1594	U	C5'-C4'-C3'	-6.11	106.83	116.00
2	B	2029	G	O5'-C5'-C4'	-6.11	102.33	111.50
2	B	2690	U	C1'-O4'-C4'	-6.11	103.59	109.70
5	L	26	GLY	N-CA-C	-6.11	107.66	115.42
19	X	164	GLU	CA-C-O	-6.11	114.40	120.82
27	C	196	ASN	CB-CA-C	6.11	120.73	111.80
2	B	507	A	P-O5'-C5'	6.11	130.07	120.90
2	B	2686	G	C5'-C4'-C3'	-6.11	106.83	116.00
9	O	83	LEU	N-CA-CB	6.11	119.79	110.44
2	B	309	A	O4'-C1'-N9	6.11	117.67	108.50
2	B	746	U	C1'-O4'-C4'	-6.11	103.79	109.90
15	T	67	VAL	CA-C-O	-6.11	115.35	122.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2633	G	O4'-C1'-C2'	6.11	113.71	107.60
13	S	35	ILE	N-CA-CB	6.11	118.85	110.54
2	B	129	C	P-O5'-C5'	6.11	130.06	120.90
2	B	737	C	O5'-C5'-C4'	6.11	120.66	111.50
2	B	889	C	C2'-C3'-O3'	6.11	118.66	109.50
2	B	2240	U	O3'-P-O5'	6.11	113.16	104.00
5	L	23	ILE	O-C-N	-6.11	115.45	122.17
29	G	93	TYR	CA-C-N	6.11	133.20	121.54
29	G	93	TYR	C-N-CA	6.11	133.20	121.54
2	B	12	U	C1'-O4'-C4'	6.11	116.00	109.90
2	B	978	G	O5'-C5'-C4'	-6.11	102.34	111.50
2	B	1809	A	P-O5'-C5'	6.11	130.06	120.90
2	B	2212	A	O4'-C1'-N9	6.11	117.36	108.20
9	O	9	ARG	CB-CG-CD	6.11	125.34	111.30
32	J	73	VAL	N-CA-C	6.11	122.04	109.34
2	B	2312	U	O3'-P-O5'	-6.10	94.84	104.00
16	2	21	ALA	N-CA-C	-6.10	103.97	112.45
1	A	89	U	C2'-C3'-O3'	6.10	118.65	109.50
2	B	499	U	C5'-C4'-C3'	6.10	125.16	116.00
2	B	1661	G	O5'-C5'-C4'	-6.10	102.34	111.50
2	B	1839	G	C3'-C2'-O2'	6.10	119.85	110.70
2	B	2694	G	P-O5'-C5'	-6.10	111.75	120.90
2	B	2836	U	P-O3'-C3'	-6.10	111.05	120.20
13	S	12	SER	N-CA-CB	6.10	120.80	110.49
2	B	242	G	C5'-C4'-O4'	6.10	118.25	109.10
2	B	385	C	O5'-C5'-C4'	-6.10	102.35	111.50
7	M	117	PHE	N-CA-C	-6.10	104.71	111.36
13	S	77	ASP	CA-C-N	6.10	129.50	120.90
13	S	77	ASP	C-N-CA	6.10	129.50	120.90
13	S	91	GLY	O-C-N	-6.10	116.32	122.54
15	T	3	ARG	N-CA-CB	6.10	120.80	110.49
31	I	70	THR	CA-C-N	6.10	134.33	122.07
31	I	70	THR	C-N-CA	6.10	134.33	122.07
2	B	2059	A	C4'-C3'-C2'	-6.10	96.50	102.60
2	B	659	G	C1'-C2'-O2'	6.09	117.54	108.40
2	B	1425	G	C5'-C4'-C3'	-6.09	106.86	116.00
2	B	1662	U	C1'-O4'-C4'	-6.09	103.81	109.90
2	B	2571	U	O3'-P-O5'	6.09	113.14	104.00
2	B	2789	C	O4'-C1'-N1	6.09	117.64	108.50
3	0	2	ARG	N-CA-C	-6.09	97.82	110.80
13	S	102	HIS	CE1-NE2-CD2	-6.09	102.91	109.00
2	B	1770	G	P-O3'-C3'	-6.09	111.06	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2677	G	O4'-C4'-C3'	-6.09	97.91	104.00
14	D	166	GLY	N-CA-C	6.09	127.62	113.18
2	B	124	G	P-O3'-C3'	6.09	129.34	120.20
2	B	993	G	O4'-C1'-N9	6.09	117.64	108.50
2	B	1971	U	P-O3'-C3'	-6.09	111.06	120.20
2	B	2763	G	C4'-C3'-O3'	-6.09	103.86	113.00
2	B	588	U	O4'-C4'-C3'	-6.09	97.91	104.00
2	B	1136	G	C3'-C2'-C1'	-6.09	95.21	101.30
2	B	1775	U	C4'-C3'-O3'	-6.09	103.87	113.00
5	L	124	GLY	N-CA-C	-6.09	106.92	115.32
14	D	167	ASN	CB-CG-ND2	-6.09	107.27	116.40
2	B	769	U	O5'-C5'-C4'	-6.09	102.37	111.50
2	B	1374	G	C5'-C4'-C3'	-6.09	106.87	116.00
2	B	2876	G	P-O3'-C3'	-6.09	111.07	120.20
2	B	1216	G	C5'-C4'-C3'	-6.09	106.87	116.00
2	B	1388	G	O5'-C5'-C4'	-6.09	102.37	111.50
2	B	1997	C	P-O3'-C3'	-6.09	111.07	120.20
2	B	2110	G	C4'-C3'-C2'	-6.09	96.51	102.60
30	H	9	VAL	N-CA-C	-6.09	99.48	107.88
2	B	1330	C	C4'-C3'-C2'	-6.08	96.52	102.60
2	B	2535	G	O5'-C5'-C4'	-6.08	102.37	111.50
10	P	89	GLY	CA-C-O	6.08	127.94	121.31
2	B	704	G	O4'-C1'-N9	6.08	117.63	108.50
2	B	1408	G	C4'-C3'-O3'	-6.08	103.88	113.00
2	B	2252	G	C4'-C3'-O3'	-6.08	103.88	113.00
2	B	2584	U	O4'-C1'-N1	6.08	117.63	108.50
7	M	66	ARG	NH1-CZ-NH2	-6.08	111.39	119.30
2	B	13	A	C4'-C3'-C2'	-6.08	96.52	102.60
2	B	1432	G	O4'-C1'-C2'	-6.08	101.52	107.60
2	B	1561	C	O5'-C5'-C4'	-6.08	102.38	111.50
14	D	171	THR	O-C-N	-6.08	114.50	122.59
31	I	96	LYS	N-CA-CB	6.08	120.99	111.56
2	B	1484	U	P-O3'-C3'	-6.08	111.08	120.20
2	B	2183	A	O4'-C4'-C3'	-6.08	97.92	104.00
2	B	2537	U	P-O5'-C5'	6.08	130.02	120.90
2	B	2889	C	O4'-C1'-N1	6.08	117.62	108.50
2	B	622	G	C5'-C4'-O4'	6.08	118.92	109.80
2	B	676	A	C4'-C3'-O3'	-6.08	103.89	113.00
2	B	125	A	O4'-C4'-C3'	-6.08	100.02	106.10
2	B	625	G	P-O3'-C3'	6.08	129.31	120.20
2	B	1726	C	C5'-C4'-C3'	-6.08	106.89	116.00
2	B	1809	A	P-O3'-C3'	-6.08	111.09	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	79	ILE	CA-C-O	-6.08	113.91	120.47
2	B	725	G	C4'-C3'-O3'	-6.07	103.89	113.00
2	B	805	G	O4'-C4'-C3'	-6.07	100.03	106.10
2	B	2840	C	C4'-C3'-O3'	-6.07	103.89	113.00
2	B	353	C	C5'-C4'-C3'	-6.07	106.89	116.00
2	B	513	A	C4'-C3'-O3'	-6.07	103.89	113.00
2	B	1543	G	P-O3'-C3'	-6.07	111.09	120.20
2	B	1557	C	C5'-C4'-C3'	6.07	125.11	116.00
2	B	1822	C	P-O3'-C3'	-6.07	111.09	120.20
29	G	25	ILE	N-CA-C	-6.07	99.82	109.17
2	B	765	C	C4'-C3'-C2'	-6.07	96.53	102.60
2	B	1279	G	C3'-C2'-O2'	6.07	119.81	110.70
2	B	1586	A	O3'-P-O5'	-6.07	94.89	104.00
2	B	2292	U	P-O5'-C5'	-6.07	111.79	120.90
7	M	80	VAL	CA-C-N	6.07	131.75	120.95
7	M	80	VAL	C-N-CA	6.07	131.75	120.95
32	J	91	GLU	N-CA-C	-6.07	104.58	112.23
2	B	2698	U	C5'-C4'-C3'	-6.07	106.90	116.00
2	B	1829	A	P-O3'-C3'	-6.07	111.10	120.20
2	B	2228	G	P-O5'-C5'	-6.07	111.80	120.90
23	5	137	MET	CA-C-N	6.07	127.42	119.84
23	5	137	MET	C-N-CA	6.07	127.42	119.84
2	B	2802	G	P-O3'-C3'	-6.07	111.10	120.20
2	B	1651	G	O5'-C5'-C4'	-6.06	102.40	111.50
2	B	2731	G	P-O5'-C5'	6.06	130.00	120.90
2	B	2867	G	O4'-C4'-C3'	-6.06	100.04	106.10
2	B	2887	A	C3'-C2'-O2'	6.06	119.80	110.70
2	B	209	C	C3'-C2'-C1'	-6.06	95.24	101.30
2	B	666	A	P-O5'-C5'	-6.06	111.81	120.90
2	B	1032	A	C5'-C4'-C3'	6.06	125.09	116.00
2	B	1914	C	P-O3'-C3'	6.06	129.29	120.20
2	B	2892	G	C4'-C3'-C2'	6.06	108.66	102.60
13	S	31	GLN	CA-C-O	6.06	126.64	119.06
21	Y	49	ASN	CB-CG-ND2	6.06	125.49	116.40
31	I	60	VAL	CA-CB-CG1	6.06	120.70	110.40
2	B	1122	G	C2'-C3'-O3'	6.06	122.79	113.70
15	T	37	ASP	CA-C-N	6.06	133.12	121.54
15	T	37	ASP	C-N-CA	6.06	133.12	121.54
19	X	261	ARG	CB-CA-C	6.06	122.48	110.42
31	I	116	MET	CA-C-O	-6.06	114.37	121.16
2	B	16	C	O4'-C1'-N1	6.06	117.59	108.50
2	B	1581	G	C5'-C4'-C3'	-6.06	106.91	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2285	C	O4'-C1'-N1	6.06	117.59	108.50
2	B	135	U	C4'-C3'-O3'	-6.06	103.91	113.00
2	B	267	C	O4'-C1'-N1	6.06	117.59	108.50
2	B	464	U	C3'-C2'-C1'	6.06	107.36	101.30
2	B	537	G	C5'-C4'-C3'	6.06	125.08	116.00
2	B	1668	A	O3'-P-O5'	-6.06	94.91	104.00
4	K	90	ASN	OD1-CG-ND2	6.06	128.66	122.60
25	7	11	LYS	CA-C-O	-6.06	112.03	119.18
32	J	56	VAL	N-CA-C	-6.06	99.69	108.17
2	B	1096	A	O4'-C1'-N9	6.06	117.58	108.50
2	B	1330	C	C4'-C3'-O3'	-6.06	103.92	113.00
28	F	46	LYS	N-CA-C	-6.06	104.97	112.90
2	B	480	A	C1'-O4'-C4'	6.05	115.95	109.90
2	B	783	A	P-O3'-C3'	6.05	129.28	120.20
2	B	1542	U	C4'-C3'-C2'	-6.05	96.55	102.60
2	B	1616	A	O3'-P-O5'	-6.05	94.92	104.00
11	Q	94	LEU	N-CA-C	-6.05	105.75	113.02
20	E	70	SER	N-CA-C	-6.05	99.87	109.07
23	5	179	ASP	CA-CB-CG	-6.05	106.55	112.60
20	E	16	GLU	N-CA-C	-6.05	105.73	112.57
2	B	1037	G	O5'-C5'-C4'	6.05	120.58	111.50
2	B	1038	G	O5'-C5'-C4'	-6.05	102.42	111.50
2	B	1617	C	O4'-C1'-N1	6.05	117.28	108.20
2	B	2196	C	O4'-C1'-N1	6.05	117.58	108.50
2	B	2622	U	P-O5'-C5'	-6.05	111.82	120.90
27	C	56	GLY	O-C-N	6.05	130.57	122.70
2	B	647	G	O4'-C4'-C3'	-6.05	97.95	104.00
2	B	2819	G	C4'-C3'-O3'	-6.05	103.93	113.00
29	G	37	ASN	CB-CA-C	-6.05	99.25	109.83
2	B	1999	C	P-O5'-C5'	-6.05	111.83	120.90
2	B	2070	A	O5'-C5'-C4'	-6.05	102.43	111.50
2	B	1670	C	C5'-C4'-C3'	-6.05	106.93	116.00
2	B	1755	A	P-O5'-C5'	6.05	129.97	120.90
4	K	2	ILE	CA-C-N	6.05	128.38	120.28
4	K	2	ILE	C-N-CA	6.05	128.38	120.28
31	I	18	ASN	CA-C-N	6.05	126.39	119.92
31	I	18	ASN	C-N-CA	6.05	126.39	119.92
1	A	19	C	O4'-C1'-N1	6.04	117.57	108.50
8	N	64	ARG	CA-C-N	6.04	131.72	121.14
8	N	64	ARG	C-N-CA	6.04	131.72	121.14
2	B	1306	C	O4'-C1'-N1	6.04	117.56	108.50
2	B	1605	C	O4'-C1'-N1	6.04	117.57	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1712	U	C4'-C3'-O3'	-6.04	103.94	113.00
2	B	2397	G	C5'-C4'-C3'	6.04	125.06	116.00
27	C	48	ILE	CA-C-N	6.04	133.08	121.54
27	C	48	ILE	C-N-CA	6.04	133.08	121.54
2	B	780	G	C2'-C3'-O3'	6.04	118.56	109.50
19	X	300	ASP	O-C-N	6.04	128.52	122.12
19	X	379	VAL	N-CA-CB	6.04	119.22	112.45
27	C	188	ARG	N-CA-C	6.04	118.32	110.53
2	B	11	C	C4'-C3'-C2'	6.04	108.64	102.60
2	B	1657	U	P-O3'-C3'	6.04	129.26	120.20
2	B	2739	U	O5'-C5'-C4'	-6.04	102.44	111.50
10	P	75	THR	CA-C-N	6.04	129.88	120.82
10	P	75	THR	C-N-CA	6.04	129.88	120.82
2	B	242	G	P-O3'-C3'	6.04	129.25	120.20
2	B	274	C	O4'-C1'-N1	6.04	117.55	108.50
2	B	2368	C	C5'-C4'-C3'	6.04	125.05	116.00
2	B	2574	G	P-O5'-C5'	6.04	129.95	120.90
18	W	80	HIS	ND1-CE1-NE2	6.04	114.44	108.40
2	B	1161	C	O4'-C1'-N1	6.03	117.55	108.50
2	B	1738	G	C2'-C3'-O3'	6.03	118.55	109.50
2	B	2282	G	O5'-C5'-C4'	-6.03	102.65	111.70
30	H	128	HIS	ND1-CE1-NE2	6.03	114.43	108.40
2	B	637	A	P-O5'-C5'	6.03	129.95	120.90
2	B	1464	G	O3'-P-O5'	6.03	113.05	104.00
2	B	1678	A	P-O5'-C5'	6.03	129.95	120.90
2	B	2685	G	C4'-C3'-C2'	6.03	108.63	102.60
10	P	7	LEU	CA-C-O	6.03	126.94	120.55
30	H	142	VAL	CA-C-N	6.03	128.81	120.49
30	H	142	VAL	C-N-CA	6.03	128.81	120.49
2	B	1906	G	C4'-C3'-C2'	-6.03	96.57	102.60
2	B	1919	A	O3'-P-O5'	6.03	113.05	104.00
2	B	2472	G	C5'-C4'-C3'	6.03	125.05	116.00
2	B	2540	C	C5'-C4'-C3'	6.03	125.05	116.00
10	P	15	ASP	CA-C-N	6.03	133.29	122.13
10	P	15	ASP	C-N-CA	6.03	133.29	122.13
2	B	191	A	P-O5'-C5'	-6.03	111.86	120.90
2	B	2022	U	O4'-C1'-N1	6.03	117.54	108.50
2	B	675	A	O5'-C5'-C4'	-6.03	102.46	111.50
2	B	1201	U	C5'-C4'-C3'	-6.03	106.96	116.00
2	B	1639	C	C3'-C2'-C1'	-6.03	95.27	101.30
2	B	2651	C	O4'-C1'-N1	6.03	117.54	108.50
18	W	72	VAL	N-CA-C	6.03	116.17	108.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	G	62	ALA	CB-CA-C	-6.03	101.42	110.88
2	B	1401	G	P-O3'-C3'	-6.03	111.16	120.20
2	B	18	U	O5'-C5'-C4'	-6.02	102.46	111.50
2	B	1140	C	O4'-C1'-N1	6.02	117.53	108.50
2	B	1839	G	P-O5'-C5'	-6.02	111.86	120.90
20	E	108	ILE	CA-C-O	6.02	126.76	120.25
27	C	216	ARG	N-CA-CB	6.02	119.18	109.90
2	B	1045	C	P-O5'-C5'	-6.02	111.87	120.90
2	B	1602	U	O4'-C1'-N1	6.02	117.23	108.20
2	B	1798	U	P-O3'-C3'	-6.02	111.17	120.20
2	B	2256	G	C1'-O4'-C4'	6.02	115.92	109.90
15	T	34	VAL	N-CA-CB	-6.02	105.16	112.33
30	H	132	PHE	CA-CB-CG	6.02	119.82	113.80
1	A	71	C	O4'-C1'-N1	6.02	117.53	108.50
2	B	575	A	C5'-C4'-C3'	-6.02	106.97	116.00
2	B	1695	G	C4'-C3'-O3'	-6.02	103.97	113.00
2	B	1913	A	C4'-C3'-O3'	-6.02	103.97	113.00
2	B	2894	G	O4'-C1'-N9	6.02	117.23	108.20
3	0	31	ASN	N-CA-C	-6.02	104.58	112.41
8	N	33	ILE	N-CA-C	-6.02	99.05	108.86
19	X	117	ALA	O-C-N	6.02	131.07	123.12
23	5	71	ARG	N-CA-CB	6.02	121.71	111.66
2	B	821	A	C2'-C3'-O3'	6.02	118.53	109.50
2	B	2732	G	C1'-O4'-C4'	6.02	115.92	109.90
2	B	2443	C	O4'-C1'-N1	6.02	117.52	108.50
1	A	65	U	O4'-C1'-N1	6.01	117.52	108.50
2	B	565	C	O4'-C4'-C3'	-6.01	97.99	104.00
2	B	1742	U	C4'-C3'-O3'	-6.01	103.98	113.00
9	O	67	ASN	CA-CB-CG	6.01	118.61	112.60
9	O	103	VAL	CA-C-O	-6.01	114.47	120.85
2	B	2119	A	C3'-C2'-C1'	6.01	107.51	101.50
7	M	55	ARG	O-C-N	6.01	128.49	122.12
20	E	90	GLN	CB-CG-CD	-6.01	102.38	112.60
2	B	2107	G	C4'-C3'-O3'	-6.01	103.98	113.00
2	B	2351	G	O3'-P-O5'	6.01	113.02	104.00
13	S	92	ARG	NE-CZ-NH2	-6.01	113.79	119.20
19	X	373	ASP	CB-CA-C	-6.01	101.44	110.88
20	E	31	VAL	N-CA-C	-6.01	104.45	111.00
2	B	972	A	P-O3'-C3'	6.01	129.21	120.20
8	N	25	ALA	N-CA-CB	6.01	118.78	110.07
11	Q	2	ARG	N-CA-C	-6.01	99.41	107.88
19	X	142	PRO	CA-C-O	-6.01	114.59	121.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	6	18	PHE	CA-CB-CG	-6.01	107.79	113.80
1	A	15	A	C4'-C3'-C2'	-6.01	96.59	102.60
2	B	1195	G	P-O3'-C3'	-6.01	111.19	120.20
19	X	374	SER	N-CA-CB	6.01	119.05	110.16
23	5	56	ASP	N-CA-C	-6.01	98.00	110.80
32	J	135	GLN	OE1-CD-NE2	6.01	128.61	122.60
2	B	191	A	C2'-C3'-O3'	6.01	122.71	113.70
2	B	1465	G	N9-C1'-C2'	-6.01	102.99	112.00
9	O	117	PHE	CA-CB-CG	6.01	119.81	113.80
14	D	120	GLY	CA-C-N	6.01	133.01	121.54
14	D	120	GLY	C-N-CA	6.01	133.01	121.54
4	K	72	PRO	CA-C-N	6.00	131.62	122.37
4	K	72	PRO	C-N-CA	6.00	131.62	122.37
2	B	1606	C	O5'-C5'-C4'	-6.00	102.49	111.50
2	B	2211	A	C1'-O4'-C4'	6.00	115.90	109.90
27	C	16	VAL	CA-C-O	-6.00	114.09	120.39
2	B	388	G	C1'-C2'-O2'	-6.00	99.40	108.40
2	B	460	A	C4'-C3'-O3'	-6.00	104.00	113.00
2	B	1390	U	C4'-C3'-O3'	-6.00	104.00	113.00
2	B	1633	G	N9-C1'-C2'	6.00	121.00	112.00
2	B	2369	A	O5'-C5'-C4'	-6.00	102.50	111.50
4	K	80	ASP	N-CA-C	-6.00	105.82	113.02
27	C	193	GLU	CA-C-N	6.00	130.84	123.10
27	C	193	GLU	C-N-CA	6.00	130.84	123.10
2	B	1000	A	O4'-C4'-C3'	-6.00	98.00	104.00
2	B	2228	G	C5'-C4'-C3'	6.00	125.00	116.00
2	B	2517	C	P-O5'-C5'	-6.00	111.90	120.90
27	C	225	ASN	CA-CB-CG	-6.00	106.60	112.60
2	B	181	A	O4'-C4'-C3'	-6.00	98.00	104.00
2	B	1991	U	O4'-C1'-N1	6.00	117.50	108.50
2	B	2766	A	C4'-C3'-O3'	-6.00	104.00	113.00
28	F	174	PHE	O-C-N	-6.00	114.42	121.32
32	J	40	HIS	CA-CB-CG	-6.00	107.80	113.80
2	B	2578	G	P-O5'-C5'	-6.00	111.90	120.90
2	B	2726	A	O5'-C5'-C4'	-6.00	102.70	111.70
19	X	205	LEU	CA-C-O	6.00	127.71	120.99
23	5	13	GLU	CA-C-N	6.00	130.59	120.88
23	5	13	GLU	C-N-CA	6.00	130.59	120.88
15	T	55	VAL	N-CA-C	6.00	117.78	109.45
20	E	44	ARG	N-CA-C	-6.00	99.89	109.96
2	B	1252	G	C1'-C2'-O2'	-5.99	102.81	111.80
2	B	2333	A	N9-C1'-C2'	-5.99	105.01	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	Y	30	VAL	N-CA-C	-5.99	99.85	108.48
25	7	61	LEU	CA-C-N	5.99	125.61	119.56
25	7	61	LEU	C-N-CA	5.99	125.61	119.56
2	B	534	U	C4'-C3'-C2'	-5.99	96.61	102.60
2	B	1229	C	C5'-C4'-C3'	-5.99	107.01	116.00
2	B	2205	A	O5'-C5'-C4'	-5.99	102.51	111.50
2	B	2666	C	C4'-C3'-O3'	-5.99	104.01	113.00
2	B	934	U	C4'-C3'-C2'	5.99	108.59	102.60
2	B	1061	U	O5'-C5'-C4'	-5.99	102.71	111.70
2	B	2116	G	P-O3'-C3'	5.99	129.19	120.20
2	B	2823	A	C4'-C3'-C2'	5.99	108.59	102.60
9	O	110	ALA	CA-C-O	-5.99	114.53	120.82
11	Q	93	ILE	CA-C-O	5.99	127.18	120.95
32	J	138	GLN	N-CA-C	-5.99	98.64	108.76
2	B	304	U	P-O5'-C5'	5.99	129.88	120.90
2	B	410	G	O4'-C1'-N9	5.99	117.48	108.50
2	B	500	G	O3'-P-O5'	-5.99	95.02	104.00
2	B	1799	G	O4'-C4'-C3'	-5.99	100.11	106.10
2	B	2501	C	P-O5'-C5'	5.99	129.88	120.90
12	R	97	LYS	O-C-N	5.99	130.38	122.30
27	C	177	SER	N-CA-CB	5.99	120.61	110.49
2	B	424	G	P-O3'-C3'	5.99	129.18	120.20
2	B	775	G	C4'-C3'-O3'	5.99	118.38	109.40
2	B	1525	A	O4'-C4'-C3'	-5.99	98.01	104.00
15	T	15	HIS	CE1-NE2-CD2	-5.99	103.02	109.00
29	G	116	LEU	CA-C-O	-5.99	114.18	120.70
18	W	31	TYR	N-CA-C	-5.98	100.04	108.96
2	B	877	A	O4'-C4'-C3'	-5.98	98.02	104.00
2	B	1833	C	C1'-O4'-C4'	-5.98	103.92	109.90
2	B	1917	U	O4'-C1'-N1	5.98	117.47	108.50
2	B	2813	A	O4'-C4'-C3'	-5.98	98.02	104.00
2	B	2113	U	O4'-C1'-N1	5.98	117.47	108.50
16	2	17	PRO	N-CA-CB	5.98	110.00	103.30
32	J	34	ARG	CA-C-O	-5.98	114.08	120.42
2	B	1427	A	C3'-C2'-C1'	-5.98	95.52	101.50
10	P	98	TYR	CB-CG-CD1	5.98	129.77	120.80
2	B	2127	G	O4'-C1'-N9	5.98	117.47	108.50
2	B	2418	A	O5'-C5'-C4'	-5.98	102.53	111.50
29	G	14	VAL	N-CA-C	-5.98	96.91	109.34
2	B	1077	A	O4'-C1'-N9	5.98	117.46	108.50
2	B	616	A	O4'-C1'-N9	5.97	117.46	108.50
2	B	1170	C	C4'-C3'-C2'	-5.97	96.63	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1272	A	O4'-C1'-C2'	-5.97	99.83	105.80
2	B	2390	U	P-O5'-C5'	-5.97	111.94	120.90
3	O	38	TRP	N-CA-C	-5.97	97.56	108.02
2	B	126	A	O5'-C5'-C4'	-5.97	102.74	111.70
2	B	357	C	O4'-C1'-N1	5.97	117.46	108.50
2	B	1905	C	P-O3'-C3'	5.97	129.16	120.20
2	B	2738	A	O5'-C5'-C4'	-5.97	102.54	111.50
14	D	197	THR	O-C-N	5.97	130.10	122.93
2	B	1023	U	C3'-C2'-O2'	5.97	119.66	110.70
2	B	1427	A	O5'-C5'-C4'	-5.97	102.74	111.70
2	B	437	U	C1'-C2'-O2'	5.97	117.35	108.40
2	B	2095	A	C5'-C4'-C3'	-5.97	107.05	116.00
6	1	37	LEU	N-CA-CB	5.97	118.81	110.04
13	S	41	LYS	N-CA-CB	5.97	120.58	110.49
29	G	125	PRO	N-CA-C	-5.97	100.17	112.47
9	O	5	SER	CA-C-N	5.97	128.28	120.28
9	O	5	SER	C-N-CA	5.97	128.28	120.28
14	D	23	PRO	O-C-N	5.97	130.57	122.99
1	A	24	G	C4'-C3'-C2'	5.97	108.57	102.60
2	B	329	G	O4'-C1'-C2'	-5.97	99.83	105.80
2	B	585	G	C5'-C4'-C3'	-5.97	107.05	116.00
2	B	987	C	C1'-C2'-O2'	5.97	117.35	108.40
15	T	87	LEU	CA-C-O	-5.97	114.26	120.70
29	G	9	VAL	CA-C-N	-5.97	117.66	122.85
29	G	9	VAL	C-N-CA	-5.97	117.66	122.85
2	B	555	G	O4'-C4'-C3'	-5.96	98.03	104.00
2	B	1283	G	C5'-C4'-C3'	5.96	124.94	116.00
30	H	12	LEU	N-CA-C	-5.96	100.08	109.50
2	B	1390	U	C1'-O4'-C4'	5.96	115.86	109.90
2	B	224	U	C4'-C3'-C2'	5.96	108.56	102.60
2	B	414	C	O4'-C1'-N1	5.96	117.44	108.50
2	B	628	G	O4'-C1'-N9	5.96	117.44	108.50
14	D	148	GLN	CB-CG-CD	-5.96	102.47	112.60
27	C	134	ILE	CA-C-N	5.96	126.15	120.31
27	C	134	ILE	C-N-CA	5.96	126.15	120.31
2	B	468	G	C5'-C4'-C3'	5.96	124.94	116.00
2	B	617	G	C4'-C3'-O3'	-5.96	104.06	113.00
2	B	1413	A	O5'-C5'-C4'	-5.96	102.56	111.50
2	B	1505	A	P-O3'-C3'	5.96	129.14	120.20
2	B	2893	A	P-O5'-C5'	5.96	129.84	120.90
19	X	149	ARG	NE-CZ-NH2	-5.96	113.84	119.20
27	C	114	GLN	CA-C-N	5.96	131.28	123.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	C	114	GLN	C-N-CA	5.96	131.28	123.06
2	B	505	A	P-O5'-C5'	5.96	129.84	120.90
2	B	1775	U	O4'-C1'-C2'	-5.96	101.64	107.60
2	B	2581	G	P-O5'-C5'	-5.96	111.97	120.90
7	M	48	ALA	N-CA-C	5.96	117.77	111.28
9	O	73	ALA	N-CA-C	-5.96	104.87	111.36
10	P	53	GLY	CA-C-N	5.96	132.91	121.54
10	P	53	GLY	C-N-CA	5.96	132.91	121.54
15	T	22	THR	N-CA-C	-5.96	105.09	112.72
2	B	376	G	O5'-C5'-C4'	-5.96	102.57	111.50
2	B	2467	C	O4'-C4'-C3'	-5.96	98.05	104.00
7	M	50	ARG	NE-CZ-NH1	-5.96	115.55	121.50
2	B	1063	G	C3'-C2'-O2'	5.95	119.63	110.70
2	B	1593	A	C4'-C3'-O3'	-5.95	104.07	113.00
2	B	2243	U	O4'-C1'-N1	5.95	117.43	108.50
19	X	320	VAL	N-CA-CB	5.95	119.92	111.82
23	5	204	ALA	CA-C-N	5.95	132.91	121.54
23	5	204	ALA	C-N-CA	5.95	132.91	121.54
2	B	296	U	P-O3'-C3'	5.95	129.13	120.20
2	B	621	A	P-O3'-C3'	-5.95	111.27	120.20
2	B	1825	U	C5'-C4'-C3'	5.95	124.93	116.00
2	B	2402	U	C4'-C3'-O3'	5.95	118.32	109.40
10	P	81	ASP	N-CA-CB	5.95	120.55	110.49
21	Y	19	ARG	NE-CZ-NH2	-5.95	113.84	119.20
2	B	2585	U	C2'-C3'-O3'	5.95	122.62	113.70
13	S	82	MET	N-CA-CB	5.95	119.67	110.21
13	S	98	LYS	O-C-N	-5.95	115.37	122.63
17	U	91	LYS	N-CA-C	-5.95	100.15	109.25
19	X	342	LEU	O-C-N	-5.95	115.37	122.15
2	B	1357	C	C5'-C4'-C3'	5.95	124.92	116.00
16	2	7	THR	O-C-N	-5.95	116.26	123.10
32	J	88	THR	N-CA-C	-5.95	101.97	110.59
2	B	2042	A	C2'-C3'-O3'	5.94	118.42	109.50
12	R	18	GLN	CA-C-O	5.94	126.94	120.58
2	B	628	G	C1'-O4'-C4'	-5.94	103.96	109.90
2	B	878	A	C5'-C4'-O4'	5.94	118.71	109.80
2	B	2094	A	O3'-P-O5'	-5.94	95.09	104.00
2	B	2231	U	P-O3'-C3'	5.94	129.11	120.20
19	X	317	VAL	N-CA-C	-5.94	99.61	108.46
23	5	167	LYS	O-C-N	-5.94	114.69	122.59
2	B	629	G	C4'-C3'-O3'	-5.94	104.09	113.00
2	B	1295	C	O4'-C1'-N1	5.94	117.41	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2012	G	C4'-C3'-O3'	-5.94	104.09	113.00
3	0	57	VAL	CB-CA-C	-5.94	104.28	112.24
10	P	73	PHE	CA-CB-CG	-5.94	107.86	113.80
1	A	36	C	O4'-C1'-N1	5.94	117.41	108.50
2	B	155	A	O4'-C1'-N9	5.94	117.41	108.50
2	B	285	G	C1'-O4'-C4'	-5.94	103.96	109.90
2	B	1060	U	C3'-C2'-O2'	-5.94	105.69	114.60
2	B	2213	U	C4'-C3'-C2'	-5.94	96.66	102.60
2	B	2473	U	C4'-C3'-O3'	-5.94	104.09	113.00
18	W	92	VAL	N-CA-C	-5.94	99.08	107.75
19	X	395	HIS	CB-CG-ND1	5.94	131.60	122.70
2	B	527	C	C3'-C2'-O2'	-5.94	105.69	114.60
2	B	2716	C	O4'-C1'-N1	5.94	117.40	108.50
3	0	47	THR	N-CA-CB	5.93	119.01	109.28
8	N	113	ILE	N-CA-C	-5.93	99.51	108.17
19	X	346	ASP	N-CA-CB	5.93	120.52	110.49
30	H	49	ALA	CA-C-N	5.93	128.83	120.28
30	H	49	ALA	C-N-CA	5.93	128.83	120.28
31	I	107	GLU	O-C-N	5.93	128.91	122.15
1	A	37	C	O4'-C1'-N1	5.93	117.40	108.50
24	6	17	GLY	N-CA-C	-5.93	99.91	111.12
14	D	56	LYS	N-CA-CB	5.93	118.69	109.97
15	T	89	GLU	CB-CG-CD	-5.93	102.52	112.60
20	E	76	PRO	N-CA-C	-5.93	100.25	112.47
27	C	175	LEU	CA-C-N	5.93	132.87	121.54
27	C	175	LEU	C-N-CA	5.93	132.87	121.54
2	B	630	G	C4'-C3'-O3'	-5.93	104.11	113.00
2	B	1654	A	O4'-C1'-N9	5.93	117.39	108.50
2	B	2659	G	C3'-C2'-C1'	-5.93	95.37	101.30
17	U	60	LYS	CA-C-O	-5.93	113.95	120.24
19	X	307	GLY	CA-C-N	5.93	128.71	120.29
19	X	307	GLY	C-N-CA	5.93	128.71	120.29
1	A	80	U	O4'-C1'-N1	5.93	117.39	108.50
2	B	349	U	C5'-C4'-C3'	-5.93	107.11	116.00
2	B	761	A	O5'-C5'-C4'	5.93	120.39	111.50
2	B	2233	U	O4'-C1'-C2'	5.93	113.53	107.60
2	B	2570	G	C4'-C3'-C2'	-5.93	96.67	102.60
2	B	2788	C	O4'-C1'-N1	5.93	117.39	108.50
2	B	388	G	O4'-C4'-C3'	-5.92	98.08	104.00
2	B	401	A	P-O5'-C5'	-5.92	112.01	120.90
2	B	421	C	C2'-C3'-O3'	5.92	118.39	109.50
2	B	467	G	C4'-C3'-C2'	-5.92	96.68	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2688	G	C4'-C3'-O3'	-5.92	104.11	113.00
3	0	70	LEU	N-CA-CB	5.92	120.50	110.49
12	R	61	ALA	CA-C-O	5.92	127.57	121.23
20	E	84	THR	CA-CB-OG1	5.92	118.49	109.60
30	H	141	LYS	CA-C-N	5.92	132.63	121.97
30	H	141	LYS	C-N-CA	5.92	132.63	121.97
2	B	618	G	C5'-C4'-C3'	-5.92	107.11	116.00
2	B	1638	C	O4'-C1'-N1	5.92	117.39	108.50
2	B	1029	A	C5'-C4'-C3'	5.92	124.88	116.00
32	J	80	HIS	CB-CG-CD2	-5.92	123.50	131.20
2	B	177	G	O3'-P-O5'	5.92	112.88	104.00
2	B	2186	G	P-O3'-C3'	5.92	129.08	120.20
2	B	376	G	C4'-C3'-C2'	-5.92	96.68	102.60
21	Y	71	LYS	CA-C-N	5.92	131.16	121.87
21	Y	71	LYS	C-N-CA	5.92	131.16	121.87
25	7	32	LEU	N-CA-C	-5.92	98.19	110.80
2	B	2055	C	C4'-C3'-C2'	5.92	108.52	102.60
8	N	89	SER	O-C-N	-5.92	115.94	122.09
2	B	1432	G	O4'-C1'-N9	5.92	117.37	108.50
2	B	2690	U	O4'-C4'-C3'	-5.92	100.19	106.10
13	S	36	LEU	CA-C-O	-5.92	114.28	120.55
14	D	134	HIS	CB-CA-C	-5.92	103.49	111.89
28	F	41	GLU	O-C-N	-5.92	114.72	122.59
2	B	2321	U	O3'-P-O5'	5.91	112.87	104.00
4	K	82	ASN	N-CA-C	-5.91	98.20	110.80
28	F	113	PHE	CA-C-N	5.91	131.53	122.24
28	F	113	PHE	C-N-CA	5.91	131.53	122.24
2	B	311	A	O4'-C1'-N9	5.91	117.07	108.20
2	B	965	C	C5'-C4'-C3'	-5.91	107.13	116.00
2	B	1467	U	O4'-C1'-N1	5.91	117.37	108.50
2	B	2510	C	C4'-C3'-O3'	-5.91	104.13	113.00
27	C	65	ASP	CA-CB-CG	-5.91	106.69	112.60
2	B	1001	A	C5'-C4'-C3'	5.91	124.87	116.00
2	B	1719	G	O4'-C4'-C3'	-5.91	98.09	104.00
2	B	253	C	C4'-C3'-O3'	-5.91	104.14	113.00
2	B	905	A	O4'-C1'-N9	5.91	117.36	108.50
22	3	49	ARG	CA-C-N	5.91	130.63	122.06
22	3	49	ARG	C-N-CA	5.91	130.63	122.06
1	A	11	C	O4'-C4'-C3'	5.91	109.91	104.00
2	B	352	A	O3'-P-O5'	-5.91	95.14	104.00
2	B	908	C	P-O5'-C5'	5.91	129.76	120.90
2	B	1629	U	O5'-C5'-C4'	-5.91	102.64	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	W	34	LYS	N-CA-C	-5.91	103.30	111.81
2	B	1552	A	P-O5'-C5'	5.91	129.76	120.90
2	B	1565	C	O5'-C5'-C4'	-5.91	102.84	111.70
2	B	2036	C	O4'-C1'-N1	5.91	117.36	108.50
2	B	2211	A	P-O5'-C5'	5.91	129.76	120.90
12	R	85	LYS	N-CA-CB	-5.91	101.14	110.77
20	E	126	VAL	N-CA-C	-5.91	100.09	108.65
2	B	811	U	P-O5'-C5'	5.90	129.76	120.90
2	B	1937	A	C5'-C4'-O4'	5.90	117.95	109.10
23	5	153	VAL	CA-C-O	-5.90	114.91	121.17
28	F	48	LEU	N-CA-CB	5.90	120.36	110.32
2	B	1683	U	O4'-C1'-C2'	-5.90	101.70	107.60
6	1	62	GLY	N-CA-C	-5.90	107.17	115.32
20	E	40	ARG	CD-NE-CZ	-5.90	116.14	124.40
2	B	187	G	O4'-C4'-C3'	-5.90	98.10	104.00
2	B	2062	A	O4'-C1'-N9	5.90	117.05	108.20
2	B	2211	A	O4'-C4'-C3'	-5.90	98.10	104.00
23	5	155	ASN	CA-C-N	5.90	128.47	120.44
23	5	155	ASN	C-N-CA	5.90	128.47	120.44
2	B	89	A	C5'-C4'-C3'	-5.90	107.15	116.00
2	B	667	U	O4'-C1'-N1	5.90	117.35	108.50
2	B	1305	C	O4'-C1'-N1	5.90	117.35	108.50
2	B	1606	C	O4'-C4'-C3'	-5.90	98.10	104.00
7	M	17	ASN	OD1-CG-ND2	5.90	128.50	122.60
20	E	185	LYS	CA-C-O	-5.90	114.85	121.81
2	B	588	U	C4'-C3'-O3'	-5.90	104.16	113.00
2	B	1842	G	O4'-C4'-C3'	-5.90	98.10	104.00
2	B	2014	A	O5'-C5'-C4'	-5.90	102.66	111.50
11	Q	48	ASP	CA-C-N	5.90	128.18	120.28
11	Q	48	ASP	C-N-CA	5.90	128.18	120.28
16	2	7	THR	N-CA-C	-5.90	100.18	108.96
23	5	115	ILE	N-CA-C	-5.90	100.09	108.58
2	B	206	U	C5'-C4'-C3'	5.89	124.84	116.00
2	B	1040	A	C4'-C3'-O3'	-5.89	104.16	113.00
2	B	1786	A	O3'-P-O5'	-5.89	95.16	104.00
2	B	1908	C	O4'-C1'-N1	5.89	117.34	108.50
2	B	1806	C	P-O5'-C5'	5.89	129.74	120.90
2	B	2098	U	C1'-O4'-C4'	-5.89	104.01	109.90
27	C	97	ASP	N-CA-C	-5.89	105.19	112.38
31	I	82	ALA	N-CA-C	5.89	117.38	111.07
1	A	13	G	C2'-C3'-O3'	5.89	122.54	113.70
2	B	1779	U	P-O3'-C3'	-5.89	111.37	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	2	38	GLU	CA-C-N	5.89	132.79	121.54
16	2	38	GLU	C-N-CA	5.89	132.79	121.54
19	X	342	LEU	N-CA-C	5.89	117.78	111.36
31	I	126	ARG	N-CA-C	-5.89	104.94	111.71
2	B	649	G	O4'-C1'-N9	5.89	117.33	108.50
2	B	2359	C	O4'-C1'-N1	5.89	117.33	108.50
10	P	19	PHE	CB-CA-C	-5.89	99.63	111.17
1	A	20	G	O4'-C1'-C2'	-5.88	101.72	107.60
2	B	435	C	C5'-C4'-C3'	5.88	124.83	116.00
2	B	2898	U	O5'-C5'-C4'	-5.88	102.67	111.50
3	0	1	SER	CB-CA-C	5.88	121.28	110.10
14	D	134	HIS	CE1-NE2-CD2	-5.88	103.11	109.00
19	X	95	LEU	N-CA-C	-5.88	102.35	110.35
31	I	111	THR	N-CA-C	-5.88	104.95	111.36
1	A	17	C	C4'-C3'-O3'	-5.88	104.18	113.00
2	B	188	G	P-O5'-C5'	-5.88	112.08	120.90
2	B	753	A	P-O5'-C5'	5.88	129.72	120.90
2	B	2143	C	P-O5'-C5'	5.88	129.72	120.90
2	B	2632	A	O3'-P-O5'	-5.88	95.17	104.00
2	B	2788	C	P-O5'-C5'	-5.88	112.08	120.90
2	B	654	A	C4'-C3'-C2'	5.88	108.48	102.60
2	B	2683	C	C4'-C3'-O3'	-5.88	104.18	113.00
3	0	35	HIS	CA-C-O	5.88	126.71	120.36
11	Q	5	ARG	CD-NE-CZ	-5.88	116.17	124.40
14	D	133	THR	N-CA-C	5.88	118.29	110.53
32	J	60	ASP	CA-CB-CG	-5.88	106.72	112.60
2	B	1358	G	C5'-C4'-O4'	-5.88	100.98	109.80
26	8	13	ASN	CA-CB-CG	-5.88	106.72	112.60
28	F	56	LEU	CD1-CG-CD2	-5.88	97.87	110.80
30	H	128	HIS	CB-CA-C	5.88	119.19	110.14
2	B	333	G	C4'-C3'-C2'	-5.88	96.72	102.60
2	B	365	U	P-O5'-C5'	-5.88	112.08	120.90
2	B	1370	C	C5'-C4'-C3'	5.88	124.81	116.00
7	M	133	LYS	N-CA-C	-5.88	106.73	114.31
27	C	9	SER	O-C-N	5.88	126.05	121.88
29	G	34	ARG	N-CA-CB	-5.88	102.77	110.59
30	H	35	LYS	N-CA-C	-5.88	106.15	113.38
2	B	1164	C	O3'-P-O5'	-5.88	95.19	104.00
2	B	1387	A	P-O3'-C3'	5.88	129.01	120.20
2	B	1854	A	C1'-O4'-C4'	5.88	115.78	109.90
2	B	1923	U	P-O3'-C3'	-5.88	111.39	120.20
8	N	33	ILE	O-C-N	-5.88	116.71	123.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	5	79	THR	CA-CB-OG1	5.88	118.41	109.60
2	B	686	U	O4'-C1'-N1	5.87	117.01	108.20
2	B	1102	C	C4'-C3'-O3'	-5.87	104.19	113.00
2	B	1660	G	O5'-C5'-C4'	5.87	120.31	111.50
19	X	379	VAL	CB-CA-C	-5.87	103.12	111.34
20	E	102	ARG	CA-C-N	5.87	126.63	119.99
20	E	102	ARG	C-N-CA	5.87	126.63	119.99
27	C	59	GLN	OE1-CD-NE2	5.87	128.47	122.60
2	B	43	G	O5'-C5'-C4'	-5.87	102.69	111.50
2	B	1060	U	C4'-C3'-O3'	5.87	118.21	109.40
2	B	1779	U	C4'-C3'-C2'	5.87	108.47	102.60
18	W	69	GLU	N-CA-C	-5.87	100.13	109.23
20	E	196	VAL	N-CA-CB	5.87	118.53	110.54
14	D	146	ILE	N-CA-CB	5.87	118.08	110.57
19	X	431	PRO	CA-C-O	-5.87	114.91	122.13
20	E	114	ARG	N-CA-C	5.87	117.48	111.14
1	A	46	A	P-O3'-C3'	-5.87	111.40	120.20
2	B	567	U	C1'-O4'-C4'	5.87	115.77	109.90
2	B	2551	C	O5'-C5'-C4'	-5.87	102.70	111.50
14	D	101	PHE	CA-CB-CG	-5.87	107.93	113.80
23	5	60	ARG	N-CA-C	-5.87	101.43	109.71
2	B	398	C	O4'-C1'-C2'	5.87	113.47	107.60
2	B	479	A	O4'-C1'-N9	5.87	117.00	108.20
2	B	631	A	C1'-O4'-C4'	-5.87	104.03	109.90
2	B	700	G	C4'-C3'-O3'	-5.87	104.20	113.00
23	5	111	PHE	N-CA-CB	5.87	119.17	110.49
2	B	529	A	O5'-C5'-C4'	-5.86	102.91	111.70
2	B	1447	C	P-O3'-C3'	5.86	129.00	120.20
2	B	1491	G	O4'-C1'-N9	5.86	117.30	108.50
20	E	102	ARG	N-CA-CB	5.86	118.51	110.01
28	F	50	ASP	CA-C-N	5.86	128.62	120.29
28	F	50	ASP	C-N-CA	5.86	128.62	120.29
2	B	1155	A	C5'-C4'-O4'	5.86	118.59	109.80
19	X	387	ILE	CA-C-N	5.86	128.13	120.28
19	X	387	ILE	C-N-CA	5.86	128.13	120.28
2	B	1287	A	C3'-C2'-C1'	-5.86	95.44	101.30
2	B	1676	A	P-O5'-C5'	-5.86	112.11	120.90
17	U	21	ARG	O-C-N	5.86	130.13	123.27
2	B	633	A	C4'-C3'-O3'	-5.86	104.22	113.00
2	B	1717	A	C1'-O4'-C4'	-5.86	104.04	109.90
22	3	23	ALA	N-CA-C	-5.86	101.07	108.45
29	G	173	ALA	N-CA-C	-5.86	98.32	108.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	91	A	P-O5'-C5'	-5.86	112.12	120.90
2	B	1668	A	C4'-C3'-C2'	-5.86	96.74	102.60
2	B	1679	A	P-O3'-C3'	-5.86	111.42	120.20
2	B	2751	G	C5'-C4'-C3'	-5.86	106.42	115.20
2	B	2872	A	O4'-C1'-C2'	5.86	111.66	105.80
12	R	81	LYS	CA-C-O	-5.86	112.14	120.51
19	X	274	SER	O-C-N	5.86	128.33	122.12
19	X	348	ALA	O-C-N	-5.86	114.80	122.59
2	B	143	C	C5'-C4'-C3'	5.85	124.78	116.00
2	B	356	G	O5'-C5'-C4'	-5.85	102.72	111.50
2	B	816	C	P-O3'-C3'	-5.85	111.42	120.20
2	B	1722	A	C5'-C4'-O4'	5.85	118.58	109.80
19	X	387	ILE	CA-C-O	5.85	127.06	120.85
23	5	65	LEU	CA-C-N	5.85	126.15	119.83
23	5	65	LEU	C-N-CA	5.85	126.15	119.83
2	B	1381	G	C4'-C3'-O3'	-5.85	104.22	113.00
2	B	2396	G	P-O3'-C3'	-5.85	111.42	120.20
2	B	2566	A	C5'-C4'-C3'	-5.85	106.42	115.20
2	B	2583	G	P-O3'-C3'	-5.85	111.42	120.20
14	D	68	PHE	CA-CB-CG	-5.85	107.95	113.80
19	X	458	LYS	N-CA-C	-5.85	100.86	109.81
2	B	1838	C	C5'-C4'-C3'	5.85	123.97	115.20
16	2	38	GLU	N-CA-C	-5.85	99.36	108.90
1	A	106	G	O4'-C4'-C3'	-5.85	98.15	104.00
2	B	776	G	O4'-C1'-N9	5.85	116.97	108.20
2	B	988	A	P-O5'-C5'	-5.85	112.13	120.90
2	B	2051	A	O3'-P-O5'	-5.85	95.23	104.00
2	B	912	C	N1-C1'-C2'	5.84	120.77	112.00
2	B	2677	G	O3'-P-O5'	5.84	112.77	104.00
2	B	238	C	C5'-C4'-C3'	5.84	124.76	116.00
8	N	30	ARG	N-CA-C	5.84	123.25	110.80
2	B	134	G	C5'-C4'-C3'	-5.84	107.24	116.00
2	B	1410	G	O4'-C1'-N9	5.84	117.26	108.50
2	B	1583	A	C4'-C3'-C2'	-5.84	96.76	102.60
2	B	2097	A	O5'-C5'-C4'	-5.84	102.74	111.50
2	B	2830	C	C4'-C3'-C2'	-5.84	96.76	102.60
2	B	714	U	C3'-C2'-C1'	5.84	107.14	101.30
2	B	1588	G	C1'-O4'-C4'	-5.84	104.06	109.90
2	B	2150	C	O4'-C4'-C3'	-5.84	98.16	104.00
31	I	42	ASN	CA-CB-CG	5.84	118.44	112.60
2	B	89	A	C4'-C3'-O3'	-5.84	104.24	113.00
2	B	2165	C	O4'-C1'-N1	5.84	117.26	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2172	U	O4'-C1'-N1	5.84	116.96	108.20
1	A	39	A	O3'-P-O5'	5.84	112.75	104.00
2	B	796	C	P-O5'-C5'	5.84	129.66	120.90
2	B	1712	U	P-O5'-C5'	-5.84	112.14	120.90
2	B	2580	U	C4'-C3'-C2'	5.84	108.44	102.60
2	B	2675	A	C4'-C3'-O3'	-5.84	104.25	113.00
9	O	117	PHE	CB-CG-CD2	5.84	130.62	120.70
22	3	37	HIS	CG-CD2-NE2	5.84	113.04	107.20
2	B	858	G	C3'-C2'-O2'	-5.83	105.85	114.60
2	B	998	C	O4'-C1'-N1	5.83	117.25	108.50
2	B	2353	G	O5'-C5'-C4'	-5.83	102.75	111.50
2	B	35	G	P-O5'-C5'	5.83	129.65	120.90
2	B	2213	U	O4'-C1'-N1	5.83	117.25	108.50
9	O	96	GLY	N-CA-C	-5.83	107.27	115.32
2	B	726	G	O4'-C4'-C3'	-5.83	98.17	104.00
2	B	1189	A	O5'-C5'-C4'	-5.83	102.75	111.50
9	O	38	GLN	CG-CD-NE2	5.83	125.15	116.40
10	P	45	VAL	N-CA-C	5.83	121.47	109.34
19	X	167	ALA	CA-C-O	-5.83	114.85	120.97
28	F	45	ASP	CA-C-O	-5.83	112.41	118.65
2	B	160	A	C2'-C3'-O3'	5.83	122.44	113.70
2	B	700	G	O3'-P-O5'	-5.83	95.25	104.00
2	B	1371	G	O4'-C1'-N9	5.83	117.25	108.50
2	B	1773	A	P-O5'-C5'	-5.83	112.16	120.90
2	B	2087	G	O4'-C1'-N9	5.83	117.25	108.50
13	S	35	ILE	CA-C-N	5.83	128.09	120.28
13	S	35	ILE	C-N-CA	5.83	128.09	120.28
2	B	1816	C	O4'-C4'-C3'	-5.83	98.17	104.00
2	B	1941	C	P-O3'-C3'	5.83	128.94	120.20
2	B	2163	A	C1'-O4'-C4'	-5.83	103.87	109.70
19	X	321	ASN	CA-CB-CG	5.83	118.43	112.60
27	C	53	ILE	CA-C-O	-5.83	114.40	121.04
27	C	228	ASP	N-CA-CB	5.83	119.27	110.30
2	B	823	C	C2'-C3'-O3'	5.83	122.44	113.70
2	B	1296	G	O3'-P-O5'	5.83	112.74	104.00
28	F	115	GLY	CA-C-O	-5.83	117.61	122.33
2	B	25	U	P-O5'-C5'	5.82	129.63	120.90
2	B	1525	A	C1'-O4'-C4'	5.82	115.72	109.90
2	B	2282	G	P-O5'-C5'	5.82	129.64	120.90
2	B	2410	G	P-O5'-C5'	-5.82	112.16	120.90
15	T	30	ILE	N-CA-CB	5.82	117.53	109.84
1	A	108	A	O4'-C1'-C2'	5.82	111.62	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	L	92	LEU	N-CA-CB	5.82	118.68	110.12
18	W	2	PHE	CA-CB-CG	-5.82	107.98	113.80
21	Y	41	GLY	N-CA-C	-5.82	98.00	111.04
1	A	71	C	C4'-C3'-O3'	-5.82	104.27	113.00
2	B	1370	C	O4'-C4'-C3'	-5.82	98.18	104.00
2	B	2493	U	O4'-C1'-N1	5.82	117.23	108.50
19	X	18	LEU	CA-C-O	-5.82	114.38	120.55
27	C	219	VAL	N-CA-CB	5.82	116.87	110.53
2	B	1705	A	C4'-C3'-O3'	-5.82	104.27	113.00
2	B	1777	U	C1'-O4'-C4'	-5.82	104.08	109.90
2	B	2753	A	C5'-C4'-C3'	5.82	124.72	116.00
9	O	39	VAL	CA-C-N	-5.82	112.31	121.62
9	O	39	VAL	C-N-CA	-5.82	112.31	121.62
10	P	11	GLN	N-CA-C	-5.82	104.88	113.61
12	R	12	HIS	ND1-CE1-NE2	5.82	114.22	108.40
14	D	47	ALA	CA-C-O	5.82	129.28	121.89
2	B	334	C	P-O3'-C3'	-5.82	111.48	120.20
2	B	2649	C	C4'-C3'-O3'	-5.82	104.28	113.00
2	B	1506	U	O4'-C1'-N1	5.81	117.22	108.50
2	B	2233	U	C4'-C3'-O3'	-5.81	104.28	113.00
5	L	21	ARG	NE-CZ-NH2	-5.81	113.97	119.20
2	B	13	A	O3'-P-O5'	-5.81	95.28	104.00
2	B	458	G	O4'-C4'-C3'	-5.81	100.29	106.10
2	B	793	A	P-O5'-C5'	-5.81	112.18	120.90
2	B	860	U	N1-C1'-C2'	5.81	120.72	112.00
2	B	1825	U	P-O3'-C3'	5.81	128.92	120.20
2	B	1829	A	C4'-C3'-O3'	-5.81	104.28	113.00
2	B	1904	G	O4'-C1'-C2'	-5.81	101.79	107.60
2	B	2268	A	C5'-C4'-C3'	-5.81	107.28	116.00
2	B	2481	G	N9-C1'-C2'	-5.81	103.28	112.00
2	B	2526	G	P-O5'-C5'	-5.81	112.18	120.90
4	K	98	ARG	NH1-CZ-NH2	5.81	126.86	119.30
19	X	238	ARG	CA-C-N	5.81	132.64	121.54
19	X	238	ARG	C-N-CA	5.81	132.64	121.54
23	5	104	ILE	N-CA-C	5.81	116.00	110.42
2	B	349	U	P-O3'-C3'	-5.81	111.48	120.20
2	B	749	A	O4'-C4'-C3'	-5.81	98.19	104.00
2	B	1544	A	C4'-C3'-O3'	-5.81	104.28	113.00
2	B	2560	A	C4'-C3'-O3'	-5.81	104.28	113.00
20	E	198	GLU	O-C-N	5.81	128.78	122.15
2	B	371	A	P-O5'-C5'	-5.81	112.19	120.90
2	B	932	U	C2'-C3'-O3'	5.81	118.21	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1990	C	C4'-C3'-C2'	-5.81	96.79	102.60
2	B	386	G	P-O5'-C5'	-5.81	112.19	120.90
2	B	2835	A	P-O5'-C5'	-5.81	112.19	120.90
19	X	147	HIS	N-CA-C	-5.81	98.43	110.80
2	B	198	C	C5'-C4'-C3'	-5.80	107.29	116.00
2	B	609	A	C4'-C3'-O3'	-5.80	104.29	113.00
2	B	1080	A	C4'-C3'-C2'	-5.80	96.80	102.60
2	B	1249	U	C4'-C3'-O3'	-5.80	104.29	113.00
2	B	1564	C	O4'-C4'-C3'	-5.80	98.20	104.00
2	B	2445	G	C5'-C4'-C3'	-5.80	107.29	116.00
2	B	2651	C	O5'-C5'-C4'	-5.80	102.79	111.50
25	7	62	PRO	N-CA-C	-5.80	106.61	113.86
27	C	262	THR	N-CA-C	5.80	121.12	112.94
2	B	1910	G	C4'-C3'-C2'	-5.80	96.80	102.60
3	0	18	SER	N-CA-C	-5.80	100.25	109.07
19	X	111	LYS	N-CA-C	-5.80	100.63	108.11
20	E	104	ALA	N-CA-C	5.80	117.28	111.07
23	5	197	LYS	CA-C-O	5.80	126.57	120.42
24	6	42	LEU	CA-C-N	5.80	128.06	120.28
24	6	42	LEU	C-N-CA	5.80	128.06	120.28
2	B	629	G	C1'-O4'-C4'	-5.80	104.10	109.90
2	B	2102	G	C5'-C4'-C3'	-5.80	107.30	116.00
19	X	165	ASP	CA-CB-CG	-5.80	106.80	112.60
23	5	179	ASP	N-CA-C	-5.80	106.11	112.72
2	B	2235	G	C1'-O4'-C4'	5.80	115.70	109.90
2	B	2332	C	O4'-C1'-N1	5.80	117.20	108.50
29	G	134	GLY	N-CA-C	-5.80	97.30	111.04
2	B	165	A	P-O3'-C3'	-5.80	111.51	120.20
2	B	2544	G	C5'-C4'-C3'	5.80	124.69	116.00
8	N	34	ILE	CA-CB-CG1	-5.80	100.55	110.40
19	X	82	ALA	N-CA-CB	5.80	118.52	110.17
29	G	6	ALA	N-CA-CB	5.80	119.46	110.01
2	B	811	U	C5'-C4'-C3'	5.79	123.89	115.20
2	B	2478	A	P-O3'-C3'	-5.79	111.51	120.20
2	B	2531	A	O5'-C5'-C4'	-5.79	102.81	111.50
1	A	109	A	C5'-C4'-C3'	-5.79	107.31	116.00
2	B	29	U	C4'-C3'-O3'	-5.79	104.31	113.00
2	B	112	U	P-O3'-C3'	-5.79	111.51	120.20
2	B	499	U	O4'-C1'-N1	5.79	117.19	108.50
2	B	960	A	C3'-C2'-C1'	5.79	107.09	101.30
2	B	1691	C	O4'-C1'-N1	5.79	117.19	108.50
2	B	1763	G	O3'-P-O5'	5.79	112.69	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2022	U	C4'-C3'-C2'	-5.79	96.81	102.60
2	B	2790	U	C1'-O4'-C4'	-5.79	103.91	109.70
14	D	140	HIS	CA-CB-CG	5.79	119.59	113.80
19	X	117	ALA	N-CA-C	5.79	118.33	108.02
27	C	222	THR	CA-CB-CG2	5.79	120.35	110.50
27	C	263	ASP	CA-CB-CG	-5.79	106.81	112.60
2	B	777	G	C5'-C4'-C3'	-5.79	107.31	116.00
2	B	1307	A	O4'-C1'-N9	5.79	117.19	108.50
19	X	449	MET	N-CA-C	-5.79	106.06	113.01
2	B	628	G	C4'-C3'-C2'	-5.79	96.81	102.60
2	B	2672	U	O4'-C1'-N1	5.79	117.19	108.50
2	B	2763	G	C5'-C4'-C3'	-5.79	107.31	116.00
2	B	1382	G	C5'-C4'-C3'	5.79	124.68	116.00
5	L	123	ARG	CA-C-O	5.79	127.40	120.28
19	X	414	GLY	N-CA-C	-5.79	103.39	111.09
2	B	880	G	P-O3'-C3'	5.79	128.88	120.20
2	B	1210	G	O4'-C4'-C3'	-5.79	100.31	106.10
2	B	1973	G	O4'-C4'-C3'	-5.79	98.21	104.00
2	B	2260	C	O4'-C1'-N1	5.79	117.18	108.50
32	J	17	VAL	N-CA-C	-5.79	99.72	108.17
2	B	1277	G	C5'-C4'-C3'	-5.79	107.32	116.00
2	B	2621	G	C4'-C3'-C2'	5.79	108.39	102.60
27	C	146	LYS	N-CA-C	-5.79	99.04	108.82
30	H	60	GLU	N-CA-CB	5.79	120.27	110.49
30	H	138	VAL	O-C-N	-5.79	116.95	123.03
27	C	83	ASP	O-C-N	-5.78	117.32	121.83
29	G	107	GLY	N-CA-C	-5.78	107.34	115.32
2	B	58	G	C4'-C3'-O3'	-5.78	104.33	113.00
2	B	2833	U	O4'-C1'-N1	5.78	116.87	108.20
2	B	368	A	P-O3'-C3'	-5.78	111.53	120.20
2	B	544	C	O3'-P-O5'	-5.78	95.33	104.00
2	B	1095	A	C1'-O4'-C4'	-5.78	104.12	109.90
2	B	2229	U	C4'-C3'-O3'	-5.78	104.33	113.00
17	U	24	VAL	N-CA-CB	5.78	118.54	111.60
2	B	2130	U	N1-C1'-C2'	5.78	120.67	112.00
2	B	372	G	C3'-C2'-C1'	-5.78	95.72	101.50
2	B	2118	U	C5'-C4'-C3'	5.78	123.87	115.20
2	B	2545	G	O3'-P-O5'	-5.78	95.33	104.00
7	M	66	ARG	NE-CZ-NH1	5.78	127.28	121.50
30	H	102	ALA	N-CA-C	-5.78	98.87	108.75
2	B	2874	C	C3'-C2'-C1'	-5.78	95.53	101.30
3	0	36	ARG	O-C-N	5.78	130.38	122.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	E	29	HIS	CE1-NE2-CD2	-5.78	103.22	109.00
25	7	50	SER	N-CA-C	-5.78	103.20	108.75
2	B	567	U	C4'-C3'-C2'	5.77	108.37	102.60
2	B	1379	U	O5'-C5'-C4'	-5.77	102.84	111.50
2	B	1673	G	C5'-C4'-C3'	5.77	123.86	115.20
2	B	528	A	O4'-C1'-N9	5.77	117.16	108.50
2	B	1269	A	O3'-P-O5'	-5.77	95.34	104.00
2	B	2423	U	O4'-C4'-C3'	-5.77	100.33	106.10
20	E	179	SER	CA-C-N	5.77	128.33	120.54
20	E	179	SER	C-N-CA	5.77	128.33	120.54
31	I	112	LYS	N-CA-CB	5.77	119.27	110.44
2	B	1906	G	C5'-C4'-C3'	5.77	124.66	116.00
2	B	2031	A	P-O3'-C3'	5.77	128.86	120.20
2	B	2340	A	C1'-O4'-C4'	-5.77	104.13	109.90
6	1	46	VAL	CA-C-N	5.77	128.33	120.54
6	1	46	VAL	C-N-CA	5.77	128.33	120.54
2	B	3	U	C5'-C4'-C3'	-5.77	107.35	116.00
2	B	27	G	O4'-C1'-C2'	-5.77	101.83	107.60
2	B	1101	U	O4'-C1'-N1	5.77	117.15	108.50
2	B	2167	U	P-O3'-C3'	-5.77	111.54	120.20
2	B	2809	A	C4'-C3'-C2'	-5.77	96.83	102.60
4	K	7	MET	O-C-N	5.77	130.02	123.27
24	6	19	ARG	NE-CZ-NH2	5.77	124.39	119.20
2	B	55	G	O5'-C5'-C4'	-5.77	102.85	111.50
2	B	1312	U	O4'-C1'-N1	5.77	116.85	108.20
1	A	71	C	C5'-C4'-C3'	-5.77	107.35	116.00
2	B	173	A	C4'-C3'-O3'	-5.77	104.35	113.00
2	B	550	C	C5'-C4'-C3'	-5.77	107.35	116.00
5	L	35	HIS	N-CA-C	-5.77	98.48	108.69
19	X	162	TRP	CA-C-N	5.77	128.48	120.29
19	X	162	TRP	C-N-CA	5.77	128.48	120.29
32	J	67	ASN	O-C-N	-5.77	116.49	121.85
2	B	456	C	P-O3'-C3'	-5.76	111.55	120.20
2	B	463	G	O3'-P-O5'	-5.76	95.35	104.00
2	B	860	U	C4'-C3'-O3'	-5.76	104.36	113.00
2	B	1504	A	O5'-C5'-C4'	-5.76	102.85	111.50
2	B	1716	U	O4'-C4'-C3'	-5.76	98.23	104.00
2	B	1927	A	N9-C1'-C2'	5.76	120.65	112.00
2	B	2417	C	O5'-C5'-C4'	-5.76	102.86	111.50
13	S	15	GLN	OE1-CD-NE2	5.76	128.36	122.60
2	B	53	A	O4'-C4'-C3'	-5.76	98.24	104.00
2	B	2470	G	O4'-C4'-C3'	-5.76	98.24	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	O	33	ARG	NE-CZ-NH2	5.76	124.39	119.20
19	X	447	ASP	N-CA-CB	5.76	118.85	109.69
28	F	38	GLY	N-CA-C	-5.76	101.54	111.57
2	B	1378	A	P-O5'-C5'	-5.76	112.26	120.90
2	B	2015	A	P-O3'-C3'	5.76	128.84	120.20
15	T	32	LEU	CB-CA-C	-5.76	100.44	109.72
2	B	1349	C	O4'-C1'-N1	5.76	117.14	108.50
2	B	2470	G	C4'-C3'-C2'	5.76	108.36	102.60
2	B	2821	A	C4'-C3'-C2'	-5.76	96.84	102.60
23	5	38	PHE	N-CA-CB	5.76	120.22	110.49
2	B	1314	C	C2'-C3'-O3'	-5.76	105.06	113.70
2	B	2254	C	O4'-C4'-C3'	-5.76	98.24	104.00
2	B	2797	U	P-O5'-C5'	5.76	129.54	120.90
10	P	83	ILE	N-CA-CB	5.76	119.65	111.82
19	X	137	LEU	N-CA-C	-5.76	99.95	108.99
2	B	320	A	O4'-C4'-C3'	-5.76	98.24	104.00
2	B	2476	A	P-O5'-C5'	-5.76	112.26	120.90
2	B	2623	G	O5'-C5'-C4'	-5.76	102.86	111.50
2	B	1307	A	P-O3'-C3'	-5.75	111.57	120.20
2	B	2076	U	P-O3'-C3'	-5.75	111.57	120.20
20	E	183	PHE	CA-C-N	5.75	128.27	120.44
20	E	183	PHE	C-N-CA	5.75	128.27	120.44
31	I	49	GLU	N-CA-CB	5.75	118.05	109.19
2	B	679	C	O4'-C1'-N1	5.75	117.13	108.50
2	B	964	C	P-O3'-C3'	5.75	128.83	120.20
2	B	1455	G	C5'-C4'-C3'	-5.75	107.37	116.00
11	Q	109	VAL	N-CA-C	-5.75	104.75	110.62
27	C	114	GLN	CG-CD-NE2	-5.75	107.77	116.40
2	B	122	G	P-O5'-C5'	5.75	129.53	120.90
2	B	1517	G	P-O5'-C5'	-5.75	112.27	120.90
2	B	1841	U	C4'-C3'-C2'	-5.75	96.85	102.60
21	Y	46	ALA	CA-C-N	5.75	132.68	121.41
21	Y	46	ALA	C-N-CA	5.75	132.68	121.41
2	B	859	G	O3'-P-O5'	-5.75	95.38	104.00
2	B	801	G	C5'-C4'-O4'	5.75	117.72	109.10
2	B	841	G	O4'-C1'-N9	5.75	117.12	108.50
2	B	1280	G	C5'-C4'-O4'	5.75	118.42	109.80
2	B	2841	C	C4'-C3'-O3'	-5.75	104.38	113.00
12	R	92	TRP	CA-CB-CG	5.75	124.52	113.60
2	B	1092	C	O4'-C1'-N1	5.75	117.12	108.50
2	B	1100	C	C4'-C3'-O3'	-5.75	104.38	113.00
17	U	82	VAL	N-CA-C	-5.75	99.27	107.77

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	344	PHE	CA-CB-CG	-5.75	108.05	113.80
12	R	94	THR	CA-C-N	5.75	131.56	122.94
12	R	94	THR	C-N-CA	5.75	131.56	122.94
13	S	88	ARG	N-CA-C	5.75	117.34	111.14
2	B	418	C	O5'-C5'-C4'	-5.74	102.89	111.50
2	B	605	G	P-O3'-C3'	-5.74	111.58	120.20
11	Q	47	ARG	CA-C-N	5.74	129.79	120.60
11	Q	47	ARG	C-N-CA	5.74	129.79	120.60
31	I	59	THR	CA-C-N	5.74	131.12	122.91
31	I	59	THR	C-N-CA	5.74	131.12	122.91
2	B	2584	U	O4'-C4'-C3'	-5.74	98.26	104.00
2	B	638	G	C5'-C4'-C3'	-5.74	107.39	116.00
2	B	1725	U	O4'-C1'-N1	5.74	117.11	108.50
2	B	2690	U	C4'-C3'-C2'	5.74	108.34	102.60
32	J	14	ASP	N-CA-C	5.74	117.95	110.43
2	B	576	U	P-O5'-C5'	-5.74	112.29	120.90
25	7	55	GLY	N-CA-C	-5.74	107.22	114.16
2	B	36	G	P-O5'-C5'	5.74	129.50	120.90
2	B	782	A	C4'-C3'-C2'	-5.74	96.86	102.60
2	B	1642	G	O5'-C5'-C4'	-5.74	102.90	111.50
2	B	2759	G	C3'-C2'-O2'	5.74	119.30	110.70
7	M	108	VAL	N-CA-C	-5.74	96.49	108.88
14	D	206	ALA	CB-CA-C	-5.74	99.00	110.42
15	T	68	LYS	N-CA-CB	5.74	115.36	109.51
19	X	324	ASP	O-C-N	-5.74	115.54	122.48
2	B	2167	U	O4'-C4'-C3'	5.73	109.73	104.00
27	C	98	GLY	O-C-N	5.73	129.16	122.45
29	G	51	PHE	CA-CB-CG	-5.73	108.07	113.80
2	B	2064	C	C4'-C3'-C2'	-5.73	96.87	102.60
14	D	167	ASN	CA-CB-CG	5.73	118.33	112.60
2	B	1181	U	O4'-C1'-N1	5.73	117.10	108.50
15	T	50	LEU	N-CA-C	-5.73	102.97	110.53
18	W	45	ASP	CA-CB-CG	-5.73	106.87	112.60
10	P	55	HIS	ND1-CE1-NE2	5.73	114.13	108.40
2	B	598	U	C5'-C4'-C3'	-5.73	107.41	116.00
2	B	1762	A	C4'-C3'-O3'	-5.73	104.41	113.00
4	K	23	LYS	N-CA-C	5.73	123.00	110.80
10	P	97	TYR	CA-C-N	5.73	132.48	121.54
10	P	97	TYR	C-N-CA	5.73	132.48	121.54
2	B	382	A	C5'-C4'-C3'	5.73	124.59	116.00
2	B	490	C	N1-C1'-C2'	-5.73	105.41	114.00
2	B	2898	U	P-O5'-C5'	-5.73	112.31	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	91	A	C2'-C3'-O3'	5.72	118.09	109.50
2	B	931	U	O4'-C1'-N1	5.72	116.79	108.20
2	B	1700	A	C4'-C3'-O3'	-5.72	104.41	113.00
2	B	2482	A	P-O3'-C3'	-5.72	111.61	120.20
13	S	20	VAL	CA-C-O	5.72	126.12	119.36
2	B	696	G	P-O5'-C5'	-5.72	112.32	120.90
2	B	932	U	O4'-C1'-N1	5.72	116.78	108.20
2	B	1033	U	C4'-C3'-O3'	5.72	117.98	109.40
2	B	1117	C	O3'-P-O5'	-5.72	95.42	104.00
2	B	1978	A	C4'-C3'-O3'	-5.72	104.42	113.00
2	B	2621	G	C5'-C4'-C3'	5.72	124.58	116.00
14	D	33	ARG	CA-C-O	-5.72	114.42	121.06
13	S	46	LEU	N-CA-C	-5.72	106.43	113.41
2	B	530	G	C4'-C3'-C2'	5.72	108.32	102.60
2	B	2052	A	C5'-C4'-C3'	5.72	124.58	116.00
3	0	53	LYS	N-CA-C	-5.72	104.42	111.40
3	0	55	MET	CA-C-N	5.72	127.94	120.28
3	0	55	MET	C-N-CA	5.72	127.94	120.28
2	B	790	U	C1'-O4'-C4'	-5.72	104.18	109.90
2	B	869	G	C4'-C3'-C2'	-5.72	96.88	102.60
2	B	1266	G	O3'-P-O5'	-5.72	95.42	104.00
2	B	2763	G	O3'-P-O5'	-5.72	95.43	104.00
3	0	17	ARG	O-C-N	5.72	130.19	122.59
5	L	135	ILE	N-CA-C	-5.72	105.24	113.07
29	G	58	ALA	N-CA-C	5.72	122.98	110.80
2	B	1800	C	P-O5'-C5'	-5.71	112.33	120.90
19	X	317	VAL	CA-C-O	-5.71	114.27	120.67
2	B	70	G	P-O5'-C5'	-5.71	112.33	120.90
2	B	127	A	O4'-C1'-C2'	5.71	113.31	107.60
2	B	177	G	O4'-C1'-N9	5.71	116.77	108.20
2	B	1131	G	P-O3'-C3'	5.71	128.77	120.20
2	B	1440	U	C5'-C4'-C3'	-5.71	107.43	116.00
2	B	1512	C	O4'-C1'-N1	5.71	117.07	108.50
2	B	2805	C	C5'-C4'-C3'	-5.71	107.43	116.00
12	R	28	ALA	CA-C-N	5.71	129.37	120.75
12	R	28	ALA	C-N-CA	5.71	129.37	120.75
2	B	1341	G	O3'-P-O5'	-5.71	95.44	104.00
2	B	1901	A	P-O5'-C5'	5.71	129.47	120.90
2	B	41	C	C5'-C4'-O4'	-5.71	101.24	109.80
2	B	529	A	O4'-C1'-C2'	5.71	111.51	105.80
2	B	655	A	O4'-C1'-C2'	-5.71	100.09	105.80
2	B	874	G	C4'-C3'-O3'	-5.71	104.44	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1330	C	O4'-C1'-N1	5.71	117.06	108.50
2	B	1429	G	C3'-C2'-O2'	5.71	119.26	110.70
2	B	1611	C	C4'-C3'-O3'	-5.71	104.44	113.00
2	B	2077	A	C1'-O4'-C4'	-5.71	104.19	109.90
2	B	2307	G	P-O3'-C3'	5.71	128.76	120.20
2	B	2426	A	P-O5'-C5'	-5.71	112.34	120.90
27	C	192	GLY	O-C-N	5.71	128.96	122.62
30	H	112	LYS	N-CA-C	-5.71	103.67	110.41
2	B	614	A	C5'-C4'-C3'	5.71	123.76	115.20
2	B	1300	G	P-O3'-C3'	5.71	128.76	120.20
2	B	1683	U	O4'-C1'-N1	5.71	117.06	108.50
2	B	1939	U	C1'-O4'-C4'	-5.71	103.99	109.70
9	O	62	LEU	CA-C-O	5.71	127.22	120.66
2	B	489	G	C2'-C3'-O3'	5.71	118.06	109.50
2	B	2217	G	O4'-C1'-N9	5.70	117.06	108.50
7	M	104	GLU	N-CA-CB	5.70	120.13	110.49
2	B	554	U	P-O3'-C3'	5.70	128.75	120.20
2	B	1827	U	P-O5'-C5'	-5.70	112.35	120.90
2	B	763	G	C5'-C4'-C3'	-5.70	107.45	116.00
2	B	1728	C	O3'-P-O5'	-5.70	95.45	104.00
2	B	1915	U	C5'-C4'-C3'	5.70	124.55	116.00
2	B	2188	U	C3'-C2'-O2'	5.70	119.25	110.70
2	B	2376	A	C4'-C3'-C2'	-5.70	96.90	102.60
14	D	156	PHE	N-CA-C	5.70	118.62	110.24
27	C	101	ARG	NE-CZ-NH1	-5.70	115.80	121.50
30	H	39	ALA	N-CA-C	-5.70	100.89	109.95
32	J	5	THR	N-CA-C	-5.70	99.32	108.55
32	J	72	LYS	N-CA-C	-5.70	98.66	110.80
2	B	2676	C	O3'-P-O5'	5.70	112.55	104.00
23	5	54	LYS	N-CA-C	-5.70	100.63	109.24
2	B	2168	G	O5'-C5'-C4'	5.70	120.05	111.50
28	F	55	ASP	N-CA-CB	5.70	118.59	110.16
2	B	1376	C	C5'-C4'-C3'	5.70	124.54	116.00
2	B	1718	G	P-O5'-C5'	-5.70	112.36	120.90
2	B	2477	U	O5'-C5'-C4'	-5.70	102.96	111.50
2	B	2045	C	C4'-C3'-C2'	5.69	108.29	102.60
2	B	934	U	P-O3'-C3'	-5.69	111.66	120.20
2	B	1139	G	P-O3'-C3'	-5.69	111.66	120.20
2	B	1192	G	O4'-C1'-N9	5.69	117.04	108.50
2	B	1269	A	C5'-C4'-O4'	5.69	118.34	109.80
2	B	2175	C	C3'-C2'-C1'	5.69	106.99	101.30
2	B	2296	U	P-O5'-C5'	5.69	129.44	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	D	32	ASN	CA-CB-CG	-5.69	106.91	112.60
2	B	1750	G	O5'-C5'-C4'	-5.69	102.97	111.50
2	B	2032	G	O4'-C1'-C2'	5.69	111.49	105.80
21	Y	35	ILE	CA-CB-CG1	5.69	120.07	110.40
2	B	194	G	O5'-C5'-C4'	-5.69	102.97	111.50
2	B	2426	A	C4'-C3'-O3'	5.69	117.93	109.40
32	J	24	THR	N-CA-C	-5.69	99.25	108.41
1	A	28	C	O5'-C5'-C4'	-5.69	102.97	111.50
2	B	733	G	N9-C1'-C2'	-5.69	103.47	112.00
2	B	821	A	C1'-C2'-O2'	-5.69	103.27	111.80
2	B	1350	C	O4'-C1'-N1	5.69	117.03	108.50
2	B	2296	U	C3'-C2'-C1'	-5.69	95.81	101.50
2	B	2496	C	C1'-O4'-C4'	-5.69	104.21	109.90
2	B	2605	U	O4'-C1'-N1	5.69	117.03	108.50
5	L	66	PHE	N-CA-CB	5.69	120.10	110.49
7	M	127	LYS	N-CA-C	5.69	118.70	110.28
9	O	89	ASP	CA-C-N	5.69	132.21	121.97
9	O	89	ASP	C-N-CA	5.69	132.21	121.97
14	D	151	THR	N-CA-CB	5.69	120.83	110.08
29	G	15	ASP	N-CA-C	-5.69	100.49	108.96
32	J	76	HIS	CA-C-O	-5.69	114.63	120.89
1	A	57	A	O4'-C1'-N9	5.69	117.03	108.50
2	B	354	A	C4'-C3'-C2'	-5.68	96.92	102.60
2	B	418	C	C5'-C4'-C3'	5.68	124.53	116.00
2	B	838	C	O4'-C1'-N1	5.68	117.03	108.50
2	B	895	U	O5'-C5'-C4'	5.68	120.03	111.50
2	B	1108	U	C5'-C4'-C3'	-5.68	107.47	116.00
2	B	1564	C	O4'-C1'-N1	5.68	117.03	108.50
23	5	54	LYS	CG-CD-CE	5.68	124.37	111.30
32	J	5	THR	CA-C-O	5.68	127.14	120.43
2	B	816	C	O4'-C4'-C3'	-5.68	98.32	104.00
2	B	1535	A	O3'-P-O5'	-5.68	95.48	104.00
2	B	1535	A	C4'-C3'-O3'	-5.68	104.48	113.00
2	B	1617	C	O4'-C4'-C3'	-5.68	100.42	106.10
2	B	2339	C	C5'-C4'-C3'	-5.68	107.47	116.00
20	E	53	THR	CA-CB-CG2	-5.68	100.84	110.50
30	H	58	LEU	CA-C-O	5.68	126.44	120.42
2	B	592	A	O4'-C1'-N9	5.68	117.02	108.50
2	B	769	U	O3'-P-O5'	-5.68	95.48	104.00
19	X	263	ARG	CA-C-N	5.68	132.54	121.41
19	X	263	ARG	C-N-CA	5.68	132.54	121.41
2	B	505	A	O4'-C1'-N9	5.68	117.02	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	128	ALA	N-CA-C	-5.68	100.42	109.96
19	X	373	ASP	N-CA-CB	5.68	118.25	110.01
2	B	1098	A	O3'-P-O5'	-5.68	95.48	104.00
2	B	1138	G	P-O5'-C5'	-5.68	112.38	120.90
2	B	1888	G	C2'-C3'-O3'	5.68	122.22	113.70
2	B	1847	A	O4'-C1'-N9	5.68	117.02	108.50
2	B	2851	A	O4'-C4'-C3'	-5.68	98.32	104.00
9	O	16	ARG	N-CA-C	-5.68	98.71	110.80
14	D	33	ARG	O-C-N	5.68	129.85	123.27
27	C	89	ASN	N-CA-CB	5.68	120.08	110.49
2	B	333	G	O5'-C5'-C4'	-5.67	102.99	111.50
2	B	672	C	C1'-O4'-C4'	-5.67	104.23	109.90
2	B	1155	A	C5'-C4'-C3'	-5.67	107.49	116.00
2	B	2490	G	P-O5'-C5'	-5.67	112.39	120.90
2	B	2765	A	O4'-C1'-C2'	5.67	113.28	107.60
7	M	36	VAL	N-CA-C	-5.67	99.33	107.78
9	O	106	LEU	N-CA-CB	5.67	120.08	110.49
1	A	95	U	C5'-C4'-C3'	5.67	124.51	116.00
6	1	27	ASN	CA-CB-CG	-5.67	106.93	112.60
14	D	77	ARG	NE-CZ-NH1	-5.67	115.83	121.50
19	X	293	ASP	CA-CB-CG	-5.67	106.93	112.60
21	Y	37	VAL	CA-C-N	5.67	130.42	122.36
21	Y	37	VAL	C-N-CA	5.67	130.42	122.36
1	A	22	U	C4'-C3'-O3'	-5.67	104.49	113.00
2	B	1104	C	O4'-C1'-N1	5.67	117.01	108.50
2	B	1271	G	C1'-O4'-C4'	-5.67	104.03	109.70
2	B	1678	A	C4'-C3'-O3'	-5.67	104.49	113.00
12	R	87	GLN	N-CA-C	-5.67	97.62	107.49
15	T	80	TRP	CG-CD2-CE3	-5.67	128.23	133.90
19	X	223	LEU	O-C-N	-5.67	115.30	122.27
2	B	1509	A	O4'-C1'-C2'	-5.67	100.13	105.80
2	B	2608	G	O4'-C1'-N9	5.67	117.01	108.50
7	M	23	GLY	CA-C-O	5.67	126.65	121.77
2	B	1130	U	C2'-C3'-O3'	5.67	118.00	109.50
2	B	1754	A	P-O5'-C5'	-5.67	112.40	120.90
2	B	1848	A	C4'-C3'-C2'	-5.67	96.93	102.60
2	B	2518	A	N9-C1'-C2'	5.67	122.50	114.00
2	B	2742	G	P-O5'-C5'	-5.67	112.40	120.90
15	T	59	ASN	N-CA-C	-5.67	100.16	109.40
2	B	443	A	O4'-C1'-C2'	5.67	111.47	105.80
2	B	1891	G	O3'-P-O5'	5.67	112.50	104.00
2	B	1904	G	O4'-C1'-N9	5.67	117.00	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2267	A	P-O5'-C5'	-5.67	112.40	120.90
12	R	84	ARG	CA-C-O	5.67	127.80	121.40
16	2	44	ARG	CA-C-O	5.67	125.61	119.15
23	5	6	LYS	N-CA-C	5.67	117.26	111.14
29	G	6	ALA	CB-CA-C	-5.67	100.23	109.41
2	B	619	G	O5'-C5'-C4'	-5.66	103.00	111.50
2	B	1038	G	O4'-C1'-C2'	5.66	113.26	107.60
2	B	1169	A	O4'-C1'-N9	5.66	117.00	108.50
2	B	2155	U	O5'-C5'-C4'	5.66	120.00	111.50
2	B	2383	G	C5'-C4'-C3'	-5.66	107.50	116.00
2	B	527	C	P-O3'-C3'	-5.66	111.71	120.20
13	S	39	THR	N-CA-CB	5.66	118.29	109.85
31	I	4	VAL	CA-C-O	5.66	127.86	120.78
2	B	749	A	O3'-P-O5'	-5.66	95.51	104.00
2	B	1616	A	C4'-C3'-C2'	-5.66	96.94	102.60
2	B	1638	C	P-O3'-C3'	-5.66	111.71	120.20
2	B	2412	A	O5'-C5'-C4'	5.66	119.99	111.50
19	X	80	GLU	N-CA-C	5.66	118.39	111.82
29	G	157	LYS	O-C-N	-5.66	115.06	122.59
2	B	1188	U	C4'-C3'-O3'	-5.66	104.51	113.00
20	E	102	ARG	NE-CZ-NH2	5.66	124.29	119.20
22	3	36	LYS	N-CA-CB	5.66	119.56	110.85
23	5	120	ALA	CB-CA-C	-5.66	101.76	110.81
12	R	78	ARG	N-CA-C	5.66	117.62	108.34
2	B	780	G	O4'-C1'-C2'	5.66	111.46	105.80
2	B	1010	A	C3'-C2'-C1'	5.66	106.96	101.30
2	B	1345	C	C4'-C3'-O3'	-5.66	104.52	113.00
2	B	1711	A	C5'-C4'-C3'	-5.66	107.52	116.00
27	C	249	VAL	CA-C-N	5.66	129.29	120.75
27	C	249	VAL	C-N-CA	5.66	129.29	120.75
2	B	11	C	P-O5'-C5'	5.65	129.38	120.90
7	M	135	VAL	CB-CA-C	-5.65	103.83	111.63
25	7	43	LEU	N-CA-C	-5.65	107.03	114.04
1	A	15	A	C5'-C4'-O4'	5.65	117.58	109.10
19	X	331	LYS	N-CA-C	-5.65	105.64	112.54
2	B	424	G	P-O5'-C5'	5.65	129.38	120.90
2	B	1420	A	C1'-O4'-C4'	-5.65	104.05	109.70
2	B	2013	A	C5'-C4'-C3'	-5.65	107.52	116.00
2	B	2554	U	O4'-C1'-N1	5.65	116.98	108.50
7	M	118	LYS	CA-C-O	-5.65	113.72	120.10
14	D	104	VAL	N-CA-C	-5.65	103.83	110.21
18	W	43	ASP	CA-CB-CG	-5.65	106.95	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	F	100	GLU	N-CA-C	-5.65	104.01	112.54
2	B	44	A	O3'-P-O5'	-5.65	95.53	104.00
2	B	1145	C	O4'-C4'-C3'	-5.65	98.35	104.00
8	N	75	ILE	CB-CA-C	5.65	120.55	111.29
2	B	456	C	O5'-C5'-C4'	-5.65	103.23	111.70
2	B	857	G	C3'-C2'-C1'	-5.65	95.65	101.30
2	B	1845	G	C5'-C4'-C3'	5.65	124.47	116.00
2	B	2103	C	C4'-C3'-C2'	-5.65	96.95	102.60
25	7	12	ARG	CB-CG-CD	5.65	124.29	111.30
31	I	93	ASN	CA-CB-CG	-5.65	106.95	112.60
2	B	604	G	O4'-C1'-N9	5.65	116.97	108.50
2	B	979	A	C5'-C4'-O4'	5.65	118.27	109.80
2	B	2552	U	O4'-C1'-N1	5.65	116.97	108.50
2	B	758	C	P-O5'-C5'	5.64	129.37	120.90
2	B	917	A	P-O3'-C3'	-5.64	111.73	120.20
2	B	1441	G	O4'-C1'-N9	5.64	116.97	108.50
2	B	1625	C	C2'-C3'-O3'	5.64	122.17	113.70
22	3	3	GLN	CA-C-O	-5.64	115.32	121.87
29	G	112	VAL	CA-CB-CG1	5.64	120.00	110.40
29	G	136	ASP	N-CA-CB	5.64	120.03	110.49
1	A	7	G	P-O3'-C3'	-5.64	111.74	120.20
2	B	1305	C	O5'-C5'-C4'	5.64	119.96	111.50
2	B	1686	C	O4'-C1'-N1	5.64	116.96	108.50
2	B	2029	G	C4'-C3'-C2'	5.64	108.24	102.60
2	B	2755	C	O3'-P-O5'	-5.64	95.53	104.00
12	R	40	MET	N-CA-C	-5.64	98.78	110.80
28	F	86	CYS	N-CA-CB	5.64	121.34	111.13
29	G	147	LEU	CB-CA-C	5.64	119.70	110.95
2	B	49	A	N9-C1'-C2'	-5.64	105.54	114.00
2	B	2232	C	O5'-C5'-C4'	-5.64	103.04	111.50
2	B	2401	U	P-O5'-C5'	-5.64	112.44	120.90
2	B	2431	U	O4'-C4'-C3'	-5.64	98.36	104.00
28	F	87	LYS	N-CA-C	-5.64	100.72	109.24
2	B	1535	A	O4'-C1'-N9	5.64	116.96	108.50
2	B	2442	C	C4'-C3'-C2'	-5.64	96.96	102.60
2	B	125	A	O4'-C1'-N9	5.64	116.66	108.20
2	B	1360	G	O4'-C1'-N9	5.64	116.95	108.50
2	B	1673	G	O4'-C4'-C3'	-5.64	100.46	106.10
2	B	2153	C	C2'-C3'-O3'	5.64	117.96	109.50
2	B	2239	G	P-O3'-C3'	5.64	128.65	120.20
12	R	92	TRP	N-CA-C	-5.64	100.56	108.96
21	Y	10	ARG	O-C-N	-5.64	115.02	122.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	833	A	O4'-C4'-C3'	-5.63	98.37	104.00
2	B	1929	G	C3'-C2'-C1'	-5.63	95.86	101.50
2	B	2449	U	C4'-C3'-O3'	5.63	117.85	109.40
2	B	2820	A	O4'-C1'-N9	5.63	116.95	108.50
23	5	89	ALA	N-CA-C	-5.63	105.22	111.36
31	I	18	ASN	CA-CB-CG	-5.63	106.97	112.60
1	A	97	C	O4'-C4'-C3'	-5.63	98.37	104.00
2	B	195	A	O4'-C1'-N9	5.63	116.95	108.50
2	B	1334	G	O5'-C5'-C4'	-5.63	103.05	111.50
17	U	41	VAL	N-CA-C	-5.63	99.66	108.95
31	I	11	GLN	CA-C-O	-5.63	114.76	120.84
2	B	828	U	C5'-C4'-O4'	5.63	117.55	109.10
2	B	1965	C	C3'-C2'-C1'	5.63	106.93	101.30
14	D	141	ARG	CB-CA-C	-5.63	104.45	111.43
29	G	130	ILE	N-CA-C	-5.63	99.95	108.17
2	B	665	U	C4'-C3'-C2'	-5.63	96.97	102.60
2	B	1227	G	O5'-C5'-C4'	-5.63	103.06	111.50
2	B	2467	C	O4'-C1'-N1	5.63	116.94	108.50
11	Q	19	GLN	CA-C-N	5.63	127.82	120.28
11	Q	19	GLN	C-N-CA	5.63	127.82	120.28
2	B	1182	G	C4'-C3'-C2'	-5.63	96.97	102.60
2	B	2842	G	P-O3'-C3'	-5.63	111.76	120.20
27	C	162	GLN	N-CA-C	-5.63	100.53	109.76
2	B	398	C	O4'-C1'-N1	5.62	116.94	108.50
19	X	121	ASP	CA-CB-CG	-5.62	106.97	112.60
32	J	63	ALA	CA-C-N	5.62	132.09	121.97
32	J	63	ALA	C-N-CA	5.62	132.09	121.97
2	B	1777	U	O4'-C1'-N1	5.62	116.93	108.50
2	B	61	C	C5'-C4'-C3'	-5.62	107.57	116.00
2	B	813	U	P-O5'-C5'	-5.62	112.47	120.90
2	B	1427	A	P-O5'-C5'	-5.62	112.47	120.90
2	B	2567	G	O5'-C5'-C4'	-5.62	103.07	111.50
2	B	14	A	C1'-C2'-O2'	-5.62	99.97	108.40
2	B	1779	U	O3'-P-O5'	-5.62	95.57	104.00
2	B	1847	A	C3'-C2'-C1'	-5.62	95.68	101.30
2	B	2815	C	C4'-C3'-C2'	-5.62	96.98	102.60
1	A	26	C	P-O5'-C5'	-5.62	112.47	120.90
2	B	27	G	N9-C1'-C2'	5.62	120.43	112.00
2	B	486	C	C4'-C3'-C2'	-5.62	96.98	102.60
2	B	516	C	P-O3'-C3'	-5.62	111.77	120.20
2	B	965	C	O4'-C1'-C2'	-5.62	101.98	107.60
23	5	79	THR	CA-C-O	-5.62	113.49	120.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	G	72	ASN	N-CA-CB	5.62	119.87	110.32
32	J	74	TYR	CA-CB-CG	-5.62	103.79	113.90
2	B	1024	G	C4'-C3'-O3'	-5.62	104.58	113.00
29	G	124	CYS	O-C-N	5.62	127.78	121.32
2	B	480	A	P-O3'-C3'	5.62	128.62	120.20
2	B	1662	U	O5'-C5'-C4'	-5.62	103.08	111.50
2	B	1765	U	C4'-C3'-C2'	-5.62	96.98	102.60
2	B	1991	U	O4'-C1'-C2'	-5.62	101.98	107.60
2	B	2220	U	O5'-C5'-C4'	-5.62	103.08	111.50
8	N	16	HIS	ND1-CE1-NE2	5.62	114.02	108.40
21	Y	33	GLY	N-CA-C	-5.62	99.87	113.18
1	A	115	A	C3'-C2'-C1'	-5.61	95.69	101.30
2	B	240	C	O3'-P-O5'	-5.61	95.58	104.00
2	B	1752	C	C4'-C3'-C2'	-5.61	96.99	102.60
2	B	1788	C	C5'-C4'-C3'	-5.61	107.58	116.00
2	B	182	A	C4'-C3'-O3'	-5.61	104.58	113.00
30	H	47	PHE	CA-CB-CG	-5.61	108.19	113.80
2	B	196	A	C1'-C2'-O2'	-5.61	103.38	111.80
2	B	1348	C	O4'-C1'-C2'	-5.61	101.99	107.60
2	B	2248	C	C1'-O4'-C4'	-5.61	104.29	109.90
2	B	2721	A	P-O3'-C3'	-5.61	111.78	120.20
23	5	212	VAL	CA-CB-CG2	-5.61	100.86	110.40
28	F	94	ARG	N-CA-C	5.61	119.39	112.54
29	G	159	LYS	N-CA-C	-5.61	102.59	110.50
2	B	42	A	P-O5'-C5'	5.61	129.31	120.90
2	B	514	A	O4'-C4'-C3'	-5.61	98.39	104.00
2	B	2171	A	C5'-C4'-C3'	5.61	123.61	115.20
2	B	2576	G	C4'-C3'-C2'	5.61	108.21	102.60
19	X	229	VAL	CB-CA-C	-5.61	105.17	111.45
28	F	9	ASP	CA-CB-CG	-5.61	106.99	112.60
2	B	770	G	O4'-C1'-N9	5.61	116.91	108.50
2	B	1229	C	P-O5'-C5'	5.61	129.31	120.90
29	G	113	ASP	N-CA-C	-5.61	100.54	109.23
30	H	62	LEU	N-CA-C	-5.61	106.43	113.72
2	B	1645	G	C5'-C4'-C3'	-5.61	107.59	116.00
29	G	93	TYR	CB-CG-CD1	-5.61	112.39	120.80
30	H	68	ARG	CA-C-N	5.61	127.73	120.44
30	H	68	ARG	C-N-CA	5.61	127.73	120.44
2	B	2065	C	O3'-P-O5'	5.60	112.41	104.00
2	B	451	U	C1'-O4'-C4'	-5.60	104.10	109.70
2	B	1490	A	O4'-C1'-C2'	-5.60	102.00	107.60
17	U	95	PHE	N-CA-CB	5.60	119.35	110.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	E	190	ALA	O-C-N	5.60	127.92	122.09
2	B	710	U	P-O3'-C3'	-5.60	111.80	120.20
1	A	67	G	C4'-C3'-O3'	-5.60	104.60	113.00
2	B	179	C	O5'-C5'-C4'	-5.60	103.10	111.50
2	B	480	A	O4'-C1'-C2'	-5.60	102.00	107.60
2	B	541	A	O5'-C5'-C4'	-5.60	103.10	111.50
2	B	571	U	C2'-C3'-O3'	5.60	117.90	109.50
2	B	2237	G	C4'-C3'-O3'	-5.60	104.60	113.00
31	I	97	VAL	O-C-N	-5.60	115.57	122.57
2	B	2850	A	O4'-C1'-N9	5.60	116.90	108.50
6	1	40	SER	CA-C-N	5.60	128.82	120.31
6	1	40	SER	C-N-CA	5.60	128.82	120.31
7	M	12	MET	N-CA-C	-5.60	104.19	108.78
20	E	20	GLY	CA-C-N	5.60	130.29	121.56
20	E	20	GLY	C-N-CA	5.60	130.29	121.56
27	C	87	SER	N-CA-C	-5.60	96.71	107.57
2	B	61	C	C4'-C3'-O3'	-5.60	104.61	113.00
2	B	146	A	C4'-C3'-C2'	-5.60	97.00	102.60
2	B	244	A	C3'-C2'-C1'	5.60	106.90	101.30
2	B	1265	A	C2'-C3'-O3'	5.60	117.89	109.50
2	B	2030	A	P-O5'-C5'	-5.60	112.51	120.90
27	C	231	HIS	CA-CB-CG	-5.60	108.20	113.80
2	B	697	G	O5'-C5'-C4'	-5.59	103.11	111.50
2	B	710	U	C4'-C3'-C2'	-5.59	97.00	102.60
2	B	1518	C	C1'-O4'-C4'	-5.59	104.31	109.90
2	B	2723	C	C5'-C4'-O4'	-5.59	101.41	109.80
23	5	94	LEU	N-CA-C	-5.59	99.78	108.90
2	B	393	C	C5'-C4'-C3'	-5.59	107.61	116.00
2	B	960	A	C4'-C3'-C2'	-5.59	97.01	102.60
2	B	73	A	C4'-C3'-O3'	-5.59	104.61	113.00
2	B	1801	A	O3'-P-O5'	-5.59	95.61	104.00
2	B	2584	U	P-O5'-C5'	5.59	129.29	120.90
2	B	2649	C	C4'-C3'-C2'	-5.59	97.01	102.60
12	R	27	ILE	N-CA-CB	5.59	120.45	111.23
23	5	181	ASP	CA-C-N	5.59	127.71	120.44
23	5	181	ASP	C-N-CA	5.59	127.71	120.44
1	A	81	G	C3'-C2'-C1'	-5.59	95.71	101.30
2	B	130	C	O5'-C5'-C4'	-5.59	103.12	111.50
2	B	1745	A	P-O5'-C5'	-5.59	112.52	120.90
2	B	2409	G	C4'-C3'-O3'	-5.59	104.61	113.00
16	2	19	HIS	CE1-NE2-CD2	-5.59	103.41	109.00
16	2	37	ARG	NE-CZ-NH1	5.59	127.09	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	7	29	ARG	NE-CZ-NH2	5.59	124.23	119.20
27	C	133	ASN	CA-CB-CG	-5.59	107.01	112.60
2	B	23	G	C4'-C3'-O3'	-5.59	104.62	113.00
11	Q	87	VAL	O-C-N	5.59	129.56	122.57
2	B	451	U	C1'-C2'-O2'	-5.59	103.42	111.80
2	B	463	G	O5'-C5'-C4'	-5.59	103.12	111.50
2	B	626	A	P-O3'-C3'	-5.59	111.82	120.20
2	B	812	C	O4'-C1'-N1	5.59	116.88	108.50
2	B	1052	C	O4'-C1'-N1	5.59	116.88	108.50
2	B	2441	U	C5'-C4'-C3'	-5.59	107.62	116.00
2	B	2658	C	P-O5'-C5'	-5.59	112.52	120.90
18	W	14	LYS	CA-C-N	5.59	126.14	119.94
18	W	14	LYS	C-N-CA	5.59	126.14	119.94
22	3	16	ARG	CD-NE-CZ	-5.59	116.58	124.40
2	B	916	G	N9-C1'-C2'	-5.58	103.62	112.00
10	P	46	VAL	N-CA-CB	5.58	117.87	111.39
25	7	11	LYS	N-CA-C	-5.58	105.23	113.61
2	B	1159	U	P-O3'-C3'	-5.58	111.82	120.20
2	B	1604	C	O4'-C1'-N1	5.58	116.88	108.50
2	B	2619	C	C3'-C2'-O2'	5.58	119.08	110.70
8	N	106	ASP	N-CA-C	-5.58	98.91	110.80
10	P	40	GLN	CA-C-O	-5.58	114.29	120.38
15	T	51	PHE	CA-CB-CG	-5.58	108.22	113.80
2	B	111	A	O4'-C4'-C3'	-5.58	98.42	104.00
2	B	126	A	O4'-C1'-N9	5.58	116.57	108.20
2	B	782	A	C5'-C4'-O4'	5.58	117.47	109.10
2	B	934	U	O5'-C5'-C4'	-5.58	103.13	111.50
2	B	2060	A	C1'-C2'-O2'	-5.58	103.43	111.80
2	B	2061	G	P-O3'-C3'	-5.58	111.83	120.20
2	B	2544	G	P-O5'-C5'	5.58	129.27	120.90
4	K	45	GLU	CB-CG-CD	-5.58	103.11	112.60
15	T	79	ASP	N-CA-C	-5.58	100.64	108.96
2	B	733	G	C4'-C3'-C2'	-5.58	97.02	102.60
2	B	1319	C	C2'-C3'-O3'	5.58	122.07	113.70
2	B	1804	C	O5'-C5'-C4'	-5.58	103.13	111.50
19	X	47	ILE	CB-CA-C	5.58	118.48	110.33
27	C	120	ASP	CA-CB-CG	-5.58	107.02	112.60
1	A	28	C	C5'-C4'-C3'	5.58	124.37	116.00
2	B	1053	C	O4'-C1'-C2'	-5.58	102.02	107.60
2	B	1378	A	C5'-C4'-C3'	-5.58	106.83	115.20
2	B	1610	A	O3'-P-O5'	-5.58	95.63	104.00
2	B	2778	A	C5'-C4'-C3'	-5.58	106.83	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	D	148	GLN	N-CA-C	5.58	122.68	110.80
2	B	2593	U	O4'-C1'-N1	5.58	116.87	108.50
21	Y	69	GLU	CA-C-N	5.58	128.10	120.35
21	Y	69	GLU	C-N-CA	5.58	128.10	120.35
23	5	83	ASN	CA-C-N	5.58	128.79	120.31
23	5	83	ASN	C-N-CA	5.58	128.79	120.31
30	H	22	LYS	CA-C-N	5.58	128.21	120.29
30	H	22	LYS	C-N-CA	5.58	128.21	120.29
1	A	24	G	P-O3'-C3'	5.58	128.56	120.20
2	B	327	G	C3'-C2'-C1'	5.58	106.88	101.30
2	B	1034	G	P-O3'-C3'	-5.58	111.84	120.20
2	B	1035	U	P-O3'-C3'	-5.58	111.84	120.20
2	B	1360	G	P-O5'-C5'	5.58	129.26	120.90
27	C	24	HIS	N-CA-C	-5.58	103.02	110.55
32	J	109	LEU	N-CA-C	-5.58	100.45	109.82
2	B	1992	G	N9-C1'-C2'	-5.57	105.64	114.00
2	B	542	C	C2'-C3'-O3'	-5.57	105.34	113.70
2	B	520	G	C5'-C4'-O4'	5.57	118.16	109.80
2	B	1559	U	O4'-C4'-C3'	-5.57	100.53	106.10
13	S	8	ARG	NE-CZ-NH2	-5.57	114.19	119.20
13	S	55	ILE	N-CA-C	-5.57	105.07	110.42
16	2	33	HIS	CA-CB-CG	5.57	119.37	113.80
2	B	89	A	P-O3'-C3'	-5.57	111.85	120.20
2	B	1431	A	C1'-O4'-C4'	5.57	115.47	109.90
19	X	94	GLY	N-CA-C	-5.57	99.98	113.18
2	B	90	U	C4'-C3'-C2'	5.57	108.17	102.60
2	B	177	G	C3'-C2'-C1'	5.57	107.07	101.50
2	B	1524	G	C4'-C3'-C2'	5.57	108.17	102.60
2	B	1551	A	C2'-C3'-O3'	-5.57	105.35	113.70
2	B	2024	G	O4'-C4'-C3'	-5.57	98.43	104.00
2	B	2180	U	O4'-C1'-N1	5.57	116.85	108.50
2	B	853	C	P-O5'-C5'	-5.57	112.55	120.90
2	B	1206	G	P-O3'-C3'	-5.57	111.85	120.20
2	B	2241	A	C5'-C4'-C3'	-5.57	107.65	116.00
15	T	1	MET	CG-SD-CE	-5.57	88.66	100.90
23	5	133	PRO	CB-CA-C	-5.57	102.38	111.56
20	E	119	ILE	N-CA-C	-5.56	99.63	107.75
2	B	954	G	O4'-C1'-C2'	5.56	113.16	107.60
2	B	2619	C	C5'-C4'-O4'	5.56	118.14	109.80
9	O	28	VAL	CB-CA-C	-5.56	102.40	110.63
20	E	22	ASP	CA-C-O	5.56	127.45	121.55
31	I	9	LYS	N-CA-C	-5.56	99.61	109.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	747	U	P-O3'-C3'	-5.56	111.86	120.20
2	B	1507	C	C3'-C2'-C1'	-5.56	95.74	101.30
5	L	65	GLY	O-C-N	5.56	128.50	122.77
2	B	222	A	C3'-C2'-C1'	-5.56	95.94	101.50
2	B	540	C	P-O5'-C5'	-5.56	112.56	120.90
2	B	1159	U	O5'-C5'-C4'	-5.56	103.16	111.50
2	B	1318	U	O4'-C1'-N1	5.56	116.84	108.50
2	B	1765	U	O3'-P-O5'	-5.56	95.66	104.00
2	B	1930	G	C2'-C3'-O3'	5.56	117.84	109.50
2	B	2057	G	C4'-C3'-O3'	-5.56	104.66	113.00
2	B	2060	A	P-O5'-C5'	5.56	129.24	120.90
27	C	141	HIS	CG-CD2-NE2	5.56	112.76	107.20
2	B	1437	C	O4'-C1'-N1	5.56	116.84	108.50
6	1	58	ASN	N-CA-C	-5.56	106.54	113.38
12	R	11	GLN	N-CA-C	5.56	117.86	109.41
2	B	326	G	P-O5'-C5'	5.56	129.23	120.90
2	B	1247	A	C5'-C4'-C3'	-5.56	106.86	115.20
2	B	2023	C	P-O3'-C3'	-5.56	111.87	120.20
2	B	833	A	C3'-C2'-C1'	-5.55	95.75	101.30
2	B	1668	A	C3'-C2'-C1'	-5.55	95.94	101.50
2	B	1826	G	C2'-C3'-O3'	5.55	122.03	113.70
2	B	1925	C	P-O3'-C3'	5.55	128.53	120.20
6	1	31	GLN	CA-C-N	5.55	127.72	120.28
6	1	31	GLN	C-N-CA	5.55	127.72	120.28
25	7	34	LYS	CA-C-N	5.55	132.15	121.54
25	7	34	LYS	C-N-CA	5.55	132.15	121.54
2	B	2629	U	O3'-P-O5'	5.55	112.33	104.00
27	C	118	GLY	CA-C-N	5.55	129.41	120.30
27	C	118	GLY	C-N-CA	5.55	129.41	120.30
2	B	590	A	P-O3'-C3'	5.55	128.53	120.20
2	B	963	U	P-O3'-C3'	-5.55	111.87	120.20
2	B	1408	G	P-O3'-C3'	5.55	128.53	120.20
2	B	1654	A	N9-C1'-C2'	-5.55	103.67	112.00
2	B	2486	C	O4'-C1'-N1	5.55	116.83	108.50
2	B	2899	A	O4'-C4'-C3'	-5.55	98.45	104.00
13	S	33	LEU	O-C-N	5.55	129.10	122.27
2	B	2716	C	O3'-P-O5'	5.55	112.33	104.00
20	E	35	TYR	O-C-N	5.55	128.00	122.12
2	B	626	A	C4'-C3'-C2'	-5.55	97.05	102.60
2	B	2254	C	O3'-P-O5'	-5.55	95.68	104.00
10	P	105	LYS	CB-CA-C	-5.55	103.85	111.73
19	X	130	VAL	CA-C-O	-5.55	115.29	121.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	E	42	GLY	N-CA-C	-5.55	104.12	112.89
2	B	479	A	O4'-C1'-C2'	-5.55	100.25	105.80
2	B	864	G	P-O3'-C3'	-5.55	111.88	120.20
2	B	2720	U	C5'-C4'-C3'	-5.55	107.68	116.00
19	X	42	TYR	O-C-N	-5.55	116.04	122.86
2	B	122	G	O5'-C5'-C4'	-5.54	103.18	111.50
2	B	2347	C	C5'-C4'-C3'	-5.54	107.68	116.00
2	B	1656	C	C2'-C3'-O3'	-5.54	105.39	113.70
2	B	2862	G	C5'-C4'-C3'	5.54	124.32	116.00
2	B	2887	A	P-O5'-C5'	-5.54	112.58	120.90
19	X	218	LEU	N-CA-C	-5.54	105.32	111.36
20	E	153	LEU	N-CA-CB	5.54	119.41	110.65
2	B	817	C	C4'-C3'-O3'	-5.54	104.69	113.00
2	B	1171	G	C5'-C4'-C3'	-5.54	107.69	116.00
2	B	1204	A	C2'-C3'-O3'	5.54	117.81	109.50
2	B	1444	G	C5'-C4'-C3'	5.54	124.31	116.00
2	B	1655	A	P-O3'-C3'	-5.54	111.89	120.20
2	B	2191	A	P-O3'-C3'	5.54	128.51	120.20
2	B	2254	C	C5'-C4'-O4'	5.54	118.11	109.80
2	B	2339	C	O4'-C1'-N1	5.54	116.81	108.50
2	B	2662	A	C3'-C2'-C1'	-5.54	95.76	101.30
2	B	1287	A	O4'-C4'-C3'	-5.54	98.46	104.00
2	B	2400	G	C4'-C3'-C2'	5.54	108.14	102.60
21	Y	82	GLU	CA-C-N	5.54	132.12	121.54
21	Y	82	GLU	C-N-CA	5.54	132.12	121.54
1	A	74	U	O5'-C5'-C4'	-5.54	103.19	111.50
2	B	663	G	C3'-C2'-C1'	5.54	106.84	101.30
2	B	664	G	C5'-C4'-C3'	5.54	124.31	116.00
2	B	893	C	C1'-O4'-C4'	-5.54	104.36	109.90
2	B	1061	U	O4'-C1'-N1	5.54	116.51	108.20
2	B	1679	A	C1'-O4'-C4'	-5.54	104.36	109.90
2	B	2576	G	C3'-C2'-C1'	-5.54	95.96	101.50
3	0	49	ARG	NE-CZ-NH2	5.54	124.18	119.20
14	D	34	VAL	CA-C-N	5.54	132.12	121.54
14	D	34	VAL	C-N-CA	5.54	132.12	121.54
28	F	167	ALA	N-CA-C	-5.54	105.24	111.28
2	B	1233	C	C4'-C3'-O3'	-5.54	104.69	113.00
7	M	77	PRO	N-CA-C	-5.54	101.06	112.47
2	B	825	A	O4'-C1'-C2'	-5.54	102.06	107.60
2	B	2029	G	C1'-C2'-O2'	5.54	116.70	108.40
2	B	2133	G	C5'-C4'-C3'	5.54	124.30	116.00
2	B	2691	C	O4'-C4'-C3'	-5.54	98.46	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	D	8	LYS	CA-C-O	-5.54	115.10	121.47
2	B	801	G	O4'-C4'-C3'	-5.53	100.57	106.10
2	B	1668	A	P-O3'-C3'	5.53	128.50	120.20
2	B	1937	A	C2'-C3'-O3'	5.53	117.80	109.50
30	H	124	THR	CA-CB-OG1	5.53	117.90	109.60
2	B	971	G	C3'-C2'-C1'	5.53	106.83	101.30
2	B	1466	U	C4'-C3'-O3'	-5.53	104.70	113.00
2	B	2515	C	C1'-C2'-O2'	-5.53	100.10	108.40
2	B	803	U	C5'-C4'-C3'	5.53	124.29	116.00
15	T	33	LYS	CA-C-O	5.53	127.06	120.70
19	X	319	VAL	CA-C-N	5.53	130.83	122.98
19	X	319	VAL	C-N-CA	5.53	130.83	122.98
27	C	254	LYS	N-CA-CB	5.53	119.25	110.57
2	B	277	G	P-O3'-C3'	-5.53	111.91	120.20
2	B	2547	A	C5'-C4'-O4'	-5.53	101.51	109.80
19	X	396	GLN	O-C-N	-5.53	114.97	121.32
23	5	177	LYS	O-C-N	-5.53	116.43	122.84
25	7	4	LYS	N-CA-C	-5.53	100.95	109.52
2	B	273	G	C5'-C4'-C3'	5.52	124.29	116.00
2	B	1138	G	C4'-C3'-O3'	-5.52	104.72	113.00
2	B	1821	A	O4'-C1'-N9	5.52	116.79	108.50
2	B	2599	G	C4'-C3'-O3'	-5.52	104.71	113.00
28	F	107	VAL	O-C-N	-5.52	114.80	121.10
2	B	299	A	P-O5'-C5'	5.52	129.18	120.90
2	B	1329	U	C1'-C2'-O2'	5.52	120.08	111.80
2	B	1465	G	C5'-C4'-C3'	5.52	124.28	116.00
2	B	2336	A	O3'-P-O5'	-5.52	95.72	104.00
9	O	8	ILE	O-C-N	-5.52	116.50	121.91
2	B	803	U	O5'-C5'-C4'	-5.52	103.22	111.50
2	B	846	U	O4'-C4'-C3'	-5.52	100.58	106.10
27	C	184	GLU	CA-C-N	5.52	127.68	120.28
27	C	184	GLU	C-N-CA	5.52	127.68	120.28
1	A	41	G	C2'-C3'-O3'	5.52	121.98	113.70
2	B	1315	C	O3'-P-O5'	5.52	112.28	104.00
2	B	1566	A	O4'-C4'-C3'	-5.52	100.58	106.10
2	B	2227	A	O4'-C1'-N9	5.52	116.78	108.50
5	L	72	ALA	CA-C-O	5.52	126.32	119.97
16	2	37	ARG	NE-CZ-NH2	-5.52	114.23	119.20
2	B	135	U	O4'-C1'-N1	5.52	116.78	108.50
2	B	870	U	C5'-C4'-C3'	5.52	124.28	116.00
2	B	1736	U	C4'-C3'-O3'	-5.52	104.72	113.00
2	B	2026	U	C4'-C3'-O3'	-5.52	104.72	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	R	7	SER	O-C-N	5.52	128.79	122.55
24	6	13	ASN	O-C-N	-5.52	115.76	122.22
27	C	204	LEU	N-CA-C	-5.52	99.86	110.56
31	I	113	ALA	CA-C-O	5.52	128.40	120.51
15	T	47	VAL	CA-CB-CG2	5.52	119.78	110.40
29	G	70	LEU	CA-C-N	5.52	128.12	120.29
29	G	70	LEU	C-N-CA	5.52	128.12	120.29
2	B	2172	U	P-O5'-C5'	-5.51	112.63	120.90
9	O	75	GLY	CA-C-N	5.51	127.94	120.44
9	O	75	GLY	C-N-CA	5.51	127.94	120.44
20	E	150	THR	O-C-N	-5.51	117.30	123.48
32	J	49	ASP	N-CA-CB	5.51	118.07	109.85
1	A	87	U	C5'-C4'-O4'	5.51	117.37	109.10
2	B	884	U	C5'-C4'-C3'	-5.51	107.73	116.00
2	B	2901	C	C5'-C4'-C3'	5.51	124.27	116.00
24	6	34	ARG	O-C-N	5.51	127.96	122.12
28	F	156	THR	N-CA-C	-5.51	99.06	110.80
2	B	230	G	O4'-C1'-C2'	5.51	113.11	107.60
2	B	273	G	P-O5'-C5'	5.51	129.17	120.90
2	B	1370	C	P-O5'-C5'	-5.51	112.63	120.90
2	B	1500	G	C1'-O4'-C4'	-5.51	104.39	109.90
2	B	1670	C	C4'-C3'-C2'	5.51	108.11	102.60
2	B	2127	G	C4'-C3'-O3'	-5.51	104.73	113.00
2	B	2381	A	C4'-C3'-O3'	-5.51	104.73	113.00
2	B	2553	G	P-O5'-C5'	5.51	129.17	120.90
1	A	102	G	C5'-C4'-O4'	-5.51	101.54	109.80
2	B	9	G	P-O5'-C5'	-5.51	112.64	120.90
2	B	73	A	C2'-C3'-O3'	5.51	121.96	113.70
2	B	370	G	C4'-C3'-O3'	5.51	117.67	109.40
2	B	382	A	P-O5'-C5'	-5.51	112.64	120.90
2	B	1272	A	P-O5'-C5'	-5.51	112.64	120.90
2	B	1659	G	P-O5'-C5'	5.51	129.16	120.90
2	B	2057	G	C1'-O4'-C4'	-5.51	104.39	109.90
23	5	147	PRO	N-CA-C	5.51	119.51	111.03
2	B	789	A	O4'-C4'-C3'	-5.51	98.49	104.00
12	R	36	ALA	N-CA-C	-5.51	106.44	112.72
2	B	779	U	O5'-C5'-C4'	-5.51	103.24	111.50
2	B	1400	U	C4'-C3'-C2'	-5.51	97.09	102.60
2	B	1708	C	O3'-P-O5'	5.51	112.26	104.00
2	B	2253	G	O4'-C4'-C3'	-5.51	98.49	104.00
2	B	2420	C	C5'-C4'-C3'	5.51	124.26	116.00
2	B	2432	A	O4'-C4'-C3'	-5.51	98.49	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	O	22	GLY	CA-C-O	-5.51	113.99	122.52
14	D	185	ASN	CA-CB-CG	-5.51	107.09	112.60
2	B	54	G	C3'-C2'-O2'	5.50	118.96	110.70
2	B	1532	A	C2'-C3'-O3'	5.50	121.96	113.70
2	B	1609	A	O4'-C1'-N9	5.50	116.46	108.20
2	B	118	A	C4'-C3'-O3'	-5.50	104.74	113.00
2	B	363	G	O5'-C5'-C4'	5.50	119.75	111.50
2	B	679	C	C3'-C2'-C1'	5.50	106.80	101.30
2	B	1463	C	O4'-C4'-C3'	-5.50	98.50	104.00
2	B	2410	G	O4'-C1'-C2'	-5.50	102.10	107.60
2	B	1297	C	P-O5'-C5'	-5.50	112.65	120.90
2	B	1530	G	C1'-C2'-O2'	5.50	116.65	108.40
2	B	2252	G	C2'-C3'-O3'	5.50	121.95	113.70
7	M	55	ARG	NE-CZ-NH1	-5.50	116.00	121.50
1	A	30	C	O4'-C1'-C2'	-5.50	102.10	107.60
2	B	111	A	P-O3'-C3'	-5.50	111.95	120.20
2	B	1652	A	O4'-C1'-N9	5.50	116.75	108.50
2	B	2192	U	O4'-C1'-C2'	-5.50	102.10	107.60
2	B	606	U	O4'-C4'-C3'	-5.50	98.50	104.00
2	B	2348	U	P-O5'-C5'	-5.50	112.66	120.90
2	B	2442	C	C2'-C3'-O3'	5.50	121.95	113.70
10	P	4	ILE	CB-CA-C	-5.50	104.35	111.88
19	X	8	VAL	N-CA-C	-5.50	99.94	107.75
23	5	225	ASP	CB-CA-C	-5.50	102.49	111.50
32	J	93	ILE	CA-C-N	5.50	127.96	120.54
32	J	93	ILE	C-N-CA	5.50	127.96	120.54
1	A	27	C	O4'-C1'-N1	5.50	116.74	108.50
30	H	143	ILE	CB-CA-C	-5.50	102.44	111.51
2	B	239	C	O5'-C5'-C4'	-5.49	103.26	111.50
2	B	2069	G	O4'-C4'-C3'	5.49	109.49	104.00
2	B	2164	C	P-O3'-C3'	5.49	128.44	120.20
2	B	2663	G	C4'-C3'-C2'	-5.49	97.11	102.60
19	X	248	ASP	CA-C-N	5.49	132.18	121.41
19	X	248	ASP	C-N-CA	5.49	132.18	121.41
8	N	99	LYS	N-CA-CB	5.49	120.24	111.56
28	F	75	GLY	N-CA-C	5.49	120.71	114.67
2	B	1439	A	C3'-C2'-C1'	-5.49	95.81	101.30
2	B	2564	A	C5'-C4'-C3'	-5.49	107.76	116.00
5	L	128	THR	CA-CB-OG1	5.49	117.84	109.60
15	T	71	GLY	CA-C-N	5.49	132.03	121.54
15	T	71	GLY	C-N-CA	5.49	132.03	121.54
30	H	110	VAL	O-C-N	5.49	129.43	122.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	800	A	O4'-C1'-N9	5.49	116.43	108.20
6	1	50	VAL	CA-C-N	5.49	127.89	120.65
6	1	50	VAL	C-N-CA	5.49	127.89	120.65
21	Y	25	PHE	CB-CG-CD2	-5.49	111.37	120.70
2	B	784	G	N9-C1'-C2'	-5.49	103.77	112.00
10	P	39	LEU	CA-C-N	-5.49	115.43	123.00
10	P	39	LEU	C-N-CA	-5.49	115.43	123.00
12	R	55	ASP	O-C-N	-5.49	115.37	121.84
19	X	102	ILE	O-C-N	-5.49	116.55	121.87
25	7	24	LYS	N-CA-CB	5.49	117.75	110.29
2	B	487	C	O4'-C1'-N1	5.49	116.73	108.50
2	B	1725	U	O4'-C1'-C2'	-5.49	102.11	107.60
2	B	1796	U	O4'-C4'-C3'	-5.49	98.52	104.00
2	B	2630	G	P-O3'-C3'	-5.49	111.97	120.20
5	L	70	LYS	CA-C-O	5.49	126.36	120.55
8	N	112	TYR	N-CA-C	-5.49	100.73	109.07
18	W	65	VAL	N-CA-C	-5.49	99.74	107.75
2	B	6	A	C4'-C3'-O3'	-5.48	104.77	113.00
2	B	831	G	C4'-C3'-O3'	-5.48	104.77	113.00
2	B	1528	A	O4'-C1'-N9	5.48	116.73	108.50
2	B	1708	C	O4'-C1'-N1	5.48	116.73	108.50
20	E	158	PHE	O-C-N	-5.48	115.90	122.15
2	B	861	A	P-O3'-C3'	-5.48	111.98	120.20
2	B	1796	U	O5'-C5'-C4'	-5.48	103.28	111.50
2	B	2130	U	C1'-O4'-C4'	5.48	115.38	109.90
2	B	2290	G	O4'-C1'-N9	5.48	116.72	108.50
2	B	2437	G	P-O5'-C5'	-5.48	112.68	120.90
19	X	24	ARG	CG-CD-NE	-5.48	99.94	112.00
2	B	248	G	C5'-C4'-C3'	-5.48	107.78	116.00
2	B	606	U	C5'-C4'-O4'	-5.48	101.58	109.80
2	B	1324	G	O4'-C1'-N9	5.48	116.42	108.20
2	B	1733	G	P-O3'-C3'	-5.48	111.98	120.20
19	X	250	ARG	N-CA-CB	-5.48	101.78	110.06
32	J	64	VAL	N-CA-CB	5.48	120.27	111.23
2	B	140	C	O5'-C5'-C4'	-5.48	103.48	111.70
2	B	780	G	O5'-C5'-C4'	-5.48	103.48	111.70
14	D	153	GLY	N-CA-C	-5.48	107.47	115.63
25	7	21	PHE	O-C-N	5.48	129.80	123.17
1	A	93	C	O5'-C5'-C4'	-5.48	103.28	111.50
2	B	2869	G	O5'-C5'-C4'	-5.48	103.28	111.50
7	M	79	ALA	N-CA-CB	5.48	117.97	109.48
15	T	61	LEU	CA-C-N	5.48	128.52	120.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	T	61	LEU	C-N-CA	5.48	128.52	120.91
2	B	1696	G	C3'-C2'-O2'	5.48	118.92	110.70
2	B	1905	C	O5'-C5'-C4'	5.48	119.71	111.50
19	X	351	HIS	CE1-NE2-CD2	-5.48	103.52	109.00
2	B	1077	A	O4'-C4'-C3'	-5.47	98.53	104.00
2	B	1839	G	C4'-C3'-C2'	-5.47	97.13	102.60
2	B	2395	C	P-O3'-C3'	5.47	128.41	120.20
5	L	18	ARG	N-CA-C	-5.47	104.86	112.30
9	O	12	THR	N-CA-C	-5.47	106.37	113.16
2	B	309	A	C5'-C4'-C3'	5.47	124.21	116.00
2	B	444	C	C4'-C3'-O3'	-5.47	104.79	113.00
2	B	1114	C	O4'-C1'-N1	5.47	116.71	108.50
2	B	1284	A	O4'-C4'-C3'	-5.47	98.53	104.00
5	L	121	THR	N-CA-CB	5.47	119.74	110.49
2	B	584	C	O5'-C5'-C4'	-5.47	103.29	111.50
2	B	752	A	O4'-C4'-C3'	-5.47	100.63	106.10
2	B	1784	A	N1-C6-N6	5.47	135.01	118.60
2	B	2169	A	C4'-C3'-C2'	5.47	108.07	102.60
2	B	2435	A	P-O5'-C5'	5.47	129.11	120.90
2	B	115	C	C4'-C3'-O3'	-5.47	104.80	113.00
2	B	689	A	C1'-O4'-C4'	-5.47	104.43	109.90
2	B	2238	G	O3'-P-O5'	-5.47	95.80	104.00
5	L	88	GLY	N-CA-C	-5.47	107.03	115.73
7	M	48	ALA	O-C-N	5.47	127.92	122.12
25	7	6	VAL	N-CA-C	-5.47	104.09	110.05
2	B	178	G	N9-C1'-C2'	-5.47	103.80	112.00
2	B	700	G	O4'-C1'-C2'	-5.47	102.13	107.60
2	B	2713	U	O4'-C1'-N1	5.47	116.40	108.20
2	B	856	G	O5'-C5'-C4'	-5.47	103.30	111.50
2	B	914	G	C5'-C4'-C3'	5.47	124.20	116.00
2	B	2118	U	P-O5'-C5'	5.47	129.10	120.90
2	B	2605	U	C4'-C3'-C2'	5.47	108.07	102.60
5	L	135	ILE	CA-CB-CG2	-5.47	101.21	110.50
23	5	43	ASP	CA-C-O	-5.47	114.72	121.11
24	6	34	ARG	CA-C-O	-5.47	114.73	120.63
30	H	10	ALA	N-CA-C	-5.47	100.12	108.76
2	B	193	U	C1'-O4'-C4'	5.46	115.36	109.90
2	B	233	A	O5'-C5'-C4'	-5.46	103.30	111.50
2	B	244	A	O5'-C5'-C4'	-5.46	103.30	111.50
2	B	1494	A	O4'-C4'-C3'	-5.46	98.53	104.00
2	B	2799	A	C4'-C3'-C2'	-5.46	97.14	102.60
15	T	77	ARG	N-CA-CB	5.46	118.76	110.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	45	ALA	CA-C-N	-5.46	115.01	122.93
19	X	45	ALA	C-N-CA	-5.46	115.01	122.93
27	C	212	TRP	CA-CB-CG	5.46	123.98	113.60
2	B	545	U	C4'-C3'-O3'	-5.46	104.81	113.00
2	B	1666	G	O4'-C4'-C3'	-5.46	98.54	104.00
19	X	340	PHE	CA-CB-CG	-5.46	108.34	113.80
2	B	243	U	P-O5'-C5'	-5.46	112.71	120.90
2	B	817	C	P-O3'-C3'	-5.46	112.01	120.20
2	B	925	A	O4'-C1'-N9	5.46	116.69	108.50
2	B	1518	C	O5'-C5'-C4'	-5.46	103.31	111.50
2	B	2213	U	O4'-C4'-C3'	-5.46	98.54	104.00
4	K	89	ASN	CA-CB-CG	-5.46	107.14	112.60
15	T	71	GLY	N-CA-C	-5.46	102.30	110.38
2	B	340	A	C1'-O4'-C4'	-5.46	104.44	109.90
2	B	1798	U	C4'-C3'-C2'	5.46	108.06	102.60
17	U	73	ASN	CA-C-N	5.46	128.04	120.29
17	U	73	ASN	C-N-CA	5.46	128.04	120.29
2	B	29	U	C4'-C3'-C2'	-5.46	97.14	102.60
2	B	1294	U	C4'-C3'-O3'	-5.46	104.81	113.00
2	B	1943	U	C4'-C3'-O3'	5.46	117.59	109.40
5	L	25	SER	O-C-N	5.46	127.91	122.12
5	L	113	ALA	N-CA-CB	5.46	119.72	110.49
23	5	36	ALA	CA-C-O	-5.46	114.46	120.30
2	B	364	C	C5'-C4'-O4'	5.46	117.98	109.80
2	B	461	C	C2'-C3'-O3'	5.46	121.89	113.70
2	B	735	A	C1'-O4'-C4'	-5.46	104.44	109.90
2	B	2210	U	N1-C1'-C2'	-5.46	105.82	114.00
2	B	2341	G	P-O5'-C5'	-5.46	112.72	120.90
2	B	2361	G	C5'-C4'-C3'	-5.46	107.81	116.00
6	1	53	VAL	CA-C-O	-5.46	115.39	121.17
11	Q	89	ILE	N-CA-C	-5.46	97.99	109.34
1	A	19	C	C4'-C3'-O3'	-5.46	104.82	113.00
9	O	68	LYS	N-CA-CB	5.46	121.67	113.65
2	B	682	G	P-O3'-C3'	-5.45	112.02	120.20
2	B	962	G	C4'-C3'-C2'	-5.45	97.15	102.60
2	B	2872	A	C2'-C3'-O3'	5.45	117.68	109.50
30	H	117	LEU	CB-CA-C	-5.45	101.01	108.86
2	B	426	C	C4'-C3'-C2'	-5.45	97.15	102.60
2	B	1779	U	O4'-C1'-N1	5.45	116.68	108.50
2	B	2214	C	C4'-C3'-O3'	-5.45	104.82	113.00
20	E	25	GLU	CA-C-N	5.45	127.53	120.44
20	E	25	GLU	C-N-CA	5.45	127.53	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	94	A	P-O3'-C3'	-5.45	112.03	120.20
2	B	481	G	P-O3'-C3'	5.45	128.38	120.20
2	B	1744	A	O4'-C1'-C2'	-5.45	102.15	107.60
2	B	2448	A	C4'-C3'-C2'	5.45	108.05	102.60
2	B	2638	G	O3'-P-O5'	-5.45	95.82	104.00
19	X	156	GLU	CB-CA-C	-5.45	101.74	110.79
1	A	13	G	C4'-C3'-O3'	-5.45	104.83	113.00
2	B	1355	G	N9-C1'-C2'	-5.45	103.83	112.00
20	E	195	GLN	CB-CA-C	-5.45	100.73	110.70
26	8	35	GLN	CA-C-O	5.45	126.21	120.33
2	B	1610	A	P-O5'-C5'	5.45	129.07	120.90
2	B	2505	G	N9-C1'-C2'	-5.45	103.83	112.00
9	O	72	ALA	CA-C-N	5.45	128.03	120.29
9	O	72	ALA	C-N-CA	5.45	128.03	120.29
2	B	340	A	C4'-C3'-C2'	-5.45	97.15	102.60
2	B	1223	G	O5'-C5'-C4'	-5.45	103.33	111.50
2	B	2341	G	O4'-C4'-C3'	-5.45	98.56	104.00
2	B	2479	U	N1-C1'-C2'	-5.45	103.83	112.00
19	X	10	ARG	N-CA-CB	5.45	120.06	110.37
2	B	553	G	N9-C1'-C2'	-5.44	103.83	112.00
2	B	674	G	C4'-C3'-O3'	-5.44	104.84	113.00
2	B	1095	A	O4'-C1'-N9	5.44	116.66	108.50
2	B	1446	C	C4'-C3'-O3'	-5.44	104.84	113.00
1	A	40	U	O4'-C4'-C3'	-5.44	100.66	106.10
2	B	248	G	O4'-C1'-N9	5.44	116.66	108.50
2	B	284	U	O5'-C5'-C4'	-5.44	103.34	111.50
2	B	2617	U	C4'-C3'-O3'	-5.44	104.84	113.00
27	C	139	THR	CB-CA-C	5.44	118.73	109.75
2	B	283	G	C3'-C2'-O2'	5.44	118.86	110.70
9	O	80	GLU	O-C-N	5.44	128.35	122.15
23	5	117	SER	CA-C-O	-5.44	112.71	120.16
28	F	62	GLN	N-CA-CB	5.44	118.03	110.04
2	B	2283	C	O4'-C1'-N1	5.44	116.66	108.50
5	L	105	ILE	O-C-N	5.44	128.39	122.63
5	L	135	ILE	CA-CB-CG1	5.44	119.64	110.40
9	O	111	ARG	NE-CZ-NH1	-5.44	116.06	121.50
20	E	88	ARG	N-CA-C	-5.44	102.10	110.58
23	5	51	ASP	CA-CB-CG	5.44	118.04	112.60
28	F	172	PHE	CA-CB-CG	5.44	119.24	113.80
2	B	481	G	C3'-C2'-O2'	-5.44	106.45	114.60
12	R	66	HIS	N-CA-C	-5.44	101.15	109.41
30	H	136	SER	N-CA-C	-5.44	104.53	113.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	49	A	C5'-C4'-O4'	5.43	117.25	109.10
2	B	744	U	C4'-C3'-O3'	-5.43	104.85	113.00
2	B	1280	G	C5'-C4'-C3'	-5.43	107.85	116.00
2	B	2405	G	C3'-C2'-C1'	5.43	106.73	101.30
14	D	14	ILE	CA-C-O	5.43	126.04	120.39
19	X	95	LEU	N-CA-CB	5.43	118.03	110.04
27	C	19	VAL	O-C-N	5.43	129.36	122.57
2	B	430	A	C4'-C3'-O3'	-5.43	104.85	113.00
2	B	643	A	O4'-C4'-C3'	-5.43	98.57	104.00
2	B	1126	A	P-O5'-C5'	-5.43	112.75	120.90
2	B	1265	A	C1'-C2'-O2'	5.43	119.95	111.80
2	B	2000	C	C4'-C3'-O3'	-5.43	104.85	113.00
14	D	160	LYS	CA-C-O	-5.43	114.93	120.80
2	B	251	A	C3'-C2'-O2'	5.43	118.85	110.70
2	B	784	G	O5'-C5'-C4'	-5.43	103.35	111.50
9	O	35	ILE	CB-CA-C	5.43	118.26	110.33
19	X	257	THR	N-CA-CB	-5.43	103.39	110.88
20	E	158	PHE	CA-C-N	5.43	127.50	120.44
20	E	158	PHE	C-N-CA	5.43	127.50	120.44
2	B	110	G	O4'-C1'-N9	5.43	116.65	108.50
2	B	916	G	P-O5'-C5'	-5.43	112.75	120.90
2	B	1312	U	O5'-C5'-C4'	-5.43	103.56	111.70
2	B	1475	G	C5'-C4'-C3'	-5.43	107.06	115.20
2	B	1727	C	P-O5'-C5'	5.43	129.04	120.90
7	M	106	ASP	CA-CB-CG	-5.43	107.17	112.60
2	B	327	G	O3'-P-O5'	-5.43	95.86	104.00
2	B	370	G	C5'-C4'-O4'	5.43	117.24	109.10
2	B	2300	C	O4'-C1'-N1	5.43	116.64	108.50
2	B	2350	C	C2'-C3'-O3'	-5.43	105.56	113.70
2	B	2480	C	O4'-C4'-C3'	-5.43	98.57	104.00
2	B	2501	C	C5'-C4'-C3'	5.43	123.34	115.20
1	A	21	G	N9-C1'-C2'	-5.43	103.86	112.00
1	A	60	C	C3'-C2'-O2'	5.43	118.84	110.70
2	B	377	G	C4'-C3'-O3'	-5.43	104.86	113.00
2	B	444	C	O4'-C1'-N1	5.43	116.64	108.50
2	B	895	U	P-O5'-C5'	-5.43	112.76	120.90
2	B	985	C	O4'-C1'-N1	5.43	116.64	108.50
11	Q	97	ILE	N-CA-C	-5.43	98.05	109.34
19	X	91	ALA	CB-CA-C	-5.43	102.61	110.96
28	F	148	VAL	N-CA-C	-5.43	98.05	109.34
2	B	179	C	O4'-C1'-N1	5.42	116.64	108.50
2	B	1519	G	O3'-P-O5'	-5.42	95.86	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1724	G	P-O5'-C5'	-5.42	112.77	120.90
2	B	2078	C	O5'-C5'-C4'	-5.42	103.36	111.50
5	L	78	ARG	O-C-N	-5.42	116.33	122.68
17	U	68	ASN	CA-C-O	5.42	125.21	118.43
21	Y	27	GLY	CA-C-N	-5.42	110.90	121.91
21	Y	27	GLY	C-N-CA	-5.42	110.90	121.91
27	C	89	ASN	CA-C-N	5.42	128.07	122.27
27	C	89	ASN	C-N-CA	5.42	128.07	122.27
30	H	81	ALA	CA-C-O	5.42	126.46	120.71
19	X	276	ILE	N-CA-CB	5.42	117.92	110.54
14	D	140	HIS	ND1-CE1-NE2	5.42	113.82	108.40
19	X	319	VAL	O-C-N	-5.42	117.32	123.18
21	Y	63	ASP	CA-C-O	-5.42	115.63	121.38
2	B	102	U	O4'-C4'-C3'	-5.42	98.58	104.00
2	B	1508	A	O4'-C1'-N9	5.42	116.33	108.20
2	B	795	C	O4'-C1'-N1	5.42	116.63	108.50
2	B	995	C	C2'-C3'-O3'	5.42	117.63	109.50
2	B	1136	G	O4'-C1'-N9	5.42	116.63	108.50
2	B	1671	U	O4'-C1'-N1	5.42	116.63	108.50
30	H	144	VAL	N-CA-C	-5.42	101.27	108.96
2	B	1250	G	C3'-C2'-C1'	-5.42	96.08	101.50
2	B	2126	A	O4'-C4'-C3'	-5.42	100.68	106.10
2	B	2882	A	C4'-C3'-C2'	5.42	108.02	102.60
2	B	936	A	O4'-C1'-N9	5.42	116.62	108.50
2	B	1202	G	C5'-C4'-O4'	-5.42	101.68	109.80
2	B	1377	G	P-O5'-C5'	5.42	129.02	120.90
2	B	2594	C	C5'-C4'-C3'	5.42	124.12	116.00
5	L	56	PRO	O-C-N	5.42	129.95	122.64
2	B	248	G	P-O3'-C3'	5.41	128.32	120.20
2	B	1275	A	C8-N9-C1'	-5.41	111.46	127.70
2	B	1357	C	O4'-C1'-N1	5.41	116.62	108.50
2	B	1888	G	C3'-C2'-O2'	-5.41	102.58	110.70
2	B	2382	G	C3'-C2'-C1'	5.41	106.91	101.50
2	B	2726	A	O4'-C1'-N9	5.41	116.32	108.20
10	P	77	SER	N-CA-C	5.41	121.78	109.81
19	X	323	TRP	O-C-N	-5.41	115.21	122.19
2	B	283	G	C4'-C3'-C2'	-5.41	97.19	102.60
11	Q	23	TYR	CB-CG-CD1	-5.41	112.68	120.80
2	B	2008	C	P-O5'-C5'	-5.41	112.78	120.90
2	B	2463	C	C5'-C4'-C3'	5.41	124.12	116.00
2	B	2480	C	C2'-C3'-O3'	-5.41	105.58	113.70
2	B	2593	U	P-O3'-C3'	-5.41	112.08	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	329	G	O4'-C4'-C3'	-5.41	100.69	106.10
2	B	600	G	C3'-C2'-C1'	-5.41	95.89	101.30
2	B	1697	G	P-O3'-C3'	-5.41	112.09	120.20
2	B	2045	C	O4'-C4'-C3'	-5.41	98.59	104.00
2	B	2427	C	O3'-P-O5'	-5.41	95.89	104.00
19	X	367	SER	CB-CA-C	-5.41	101.81	110.79
29	G	165	ASP	N-CA-C	-5.41	98.39	108.02
2	B	1985	C	C4'-C3'-C2'	-5.41	97.19	102.60
2	B	2336	A	O5'-C5'-C4'	-5.41	103.59	111.70
2	B	1651	G	P-O5'-C5'	-5.41	112.79	120.90
2	B	2331	G	C2'-C3'-O3'	-5.41	105.59	113.70
2	B	2891	U	O4'-C1'-N1	5.41	116.61	108.50
16	2	16	LEU	N-CA-C	5.41	116.51	109.64
22	3	53	VAL	N-CA-CB	5.41	120.15	111.23
32	J	131	ASN	CA-CB-CG	-5.41	107.19	112.60
2	B	2223	G	C4'-C3'-O3'	-5.40	104.89	113.00
11	Q	59	LEU	CA-C-N	5.40	127.78	120.65
11	Q	59	LEU	C-N-CA	5.40	127.78	120.65
2	B	1243	C	O4'-C1'-N1	5.40	116.60	108.50
2	B	1419	A	C1'-O4'-C4'	-5.40	104.30	109.70
15	T	41	ALA	N-CA-C	-5.40	105.42	112.23
2	B	457	A	C3'-C2'-O2'	-5.40	106.50	114.60
2	B	1184	U	C1'-O4'-C4'	-5.40	104.50	109.90
2	B	1634	A	O4'-C1'-C2'	-5.40	100.40	105.80
2	B	192	C	O5'-C5'-C4'	-5.40	103.40	111.50
2	B	2400	G	O4'-C4'-C3'	-5.40	98.60	104.00
13	S	96	ILE	O-C-N	5.40	128.79	123.18
20	E	94	GLN	O-C-N	-5.40	117.10	123.25
2	B	1324	G	C1'-C2'-O2'	-5.40	103.70	111.80
2	B	2266	A	P-O3'-C3'	5.40	128.29	120.20
2	B	2502	G	C1'-O4'-C4'	-5.40	104.50	109.90
7	M	107	GLY	N-CA-C	-5.40	106.23	115.08
14	D	32	ASN	OD1-CG-ND2	5.40	128.00	122.60
29	G	102	ILE	N-CA-C	-5.40	100.11	107.99
1	A	26	C	O4'-C1'-N1	5.40	116.59	108.50
2	B	1985	C	C5'-C4'-C3'	5.40	124.09	116.00
2	B	2592	G	C4'-C3'-O3'	-5.40	104.91	113.00
1	A	16	G	C5'-C4'-C3'	5.39	124.09	116.00
2	B	1379	U	O4'-C4'-C3'	-5.39	98.61	104.00
2	B	1821	A	C3'-C2'-C1'	5.39	106.69	101.30
2	B	2359	C	P-O5'-C5'	5.39	128.99	120.90
2	B	2579	C	P-O5'-C5'	-5.39	112.81	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2755	C	P-O3'-C3'	5.39	128.29	120.20
4	K	35	VAL	CA-C-O	5.39	126.11	119.58
1	A	31	C	C5'-C4'-C3'	-5.39	107.91	116.00
2	B	918	A	C4'-C3'-C2'	-5.39	97.21	102.60
2	B	1265	A	P-O3'-C3'	5.39	128.29	120.20
2	B	1963	U	O3'-P-O5'	-5.39	95.91	104.00
19	X	222	ILE	O-C-N	5.39	127.39	121.83
23	5	4	LEU	N-CA-C	-5.39	99.32	110.80
23	5	92	ALA	N-CA-C	-5.39	101.68	110.20
8	N	36	THR	O-C-N	-5.39	117.60	123.26
2	B	326	G	P-O3'-C3'	-5.39	112.12	120.20
2	B	1081	U	O4'-C4'-C3'	-5.39	98.61	104.00
2	B	1438	U	C4'-C3'-C2'	-5.39	97.21	102.60
2	B	1459	G	O4'-C4'-C3'	-5.39	98.61	104.00
31	I	59	THR	CA-C-O	5.39	126.07	120.30
2	B	2162	G	C5'-C4'-C3'	5.39	124.08	116.00
2	B	2252	G	C4'-C3'-C2'	-5.39	97.21	102.60
5	L	23	ILE	CA-C-O	5.39	123.64	118.90
2	B	191	A	O4'-C1'-C2'	5.39	112.99	107.60
2	B	364	C	O3'-P-O5'	-5.39	95.92	104.00
2	B	1932	A	N9-C1'-C2'	5.39	120.08	112.00
2	B	2124	G	O3'-P-O5'	-5.39	95.92	104.00
2	B	2822	G	O5'-C5'-C4'	-5.39	103.42	111.50
19	X	443	ARG	CA-C-N	5.39	127.77	120.44
19	X	443	ARG	C-N-CA	5.39	127.77	120.44
2	B	2584	U	O3'-P-O5'	-5.38	95.92	104.00
2	B	284	U	O4'-C1'-C2'	-5.38	102.22	107.60
2	B	2226	C	O4'-C1'-N1	5.38	116.58	108.50
2	B	2329	U	P-O3'-C3'	5.38	128.27	120.20
2	B	2805	C	P-O5'-C5'	5.38	128.97	120.90
20	E	178	VAL	CA-CB-CG1	5.38	119.55	110.40
2	B	548	G	C2'-C3'-O3'	5.38	117.57	109.50
2	B	781	A	C5'-C4'-O4'	5.38	117.87	109.80
2	B	2116	G	C5'-C4'-O4'	5.38	117.87	109.80
2	B	2615	U	O4'-C4'-C3'	-5.38	98.62	104.00
2	B	2741	A	C1'-O4'-C4'	-5.38	104.52	109.90
10	P	73	PHE	N-CA-C	-5.38	101.18	109.52
21	Y	28	GLU	CA-C-N	5.38	127.49	120.28
21	Y	28	GLU	C-N-CA	5.38	127.49	120.28
17	U	99	SER	N-CA-CB	5.38	119.58	110.49
1	A	69	G	O5'-C5'-C4'	-5.38	103.43	111.50
2	B	313	G	O4'-C1'-N9	5.38	116.57	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	607	U	C4'-C3'-O3'	-5.38	104.93	113.00
2	B	1504	A	C3'-C2'-C1'	-5.38	95.92	101.30
2	B	1628	G	C4'-C3'-O3'	-5.38	104.93	113.00
14	D	187	LEU	N-CA-C	-5.38	98.45	108.02
1	A	83	G	O5'-C5'-C4'	-5.38	103.44	111.50
2	B	369	U	C3'-C2'-O2'	-5.38	106.54	114.60
2	B	767	U	P-O3'-C3'	5.38	128.27	120.20
2	B	1727	C	C3'-C2'-O2'	5.38	118.77	110.70
2	B	2891	U	C1'-C2'-O2'	5.38	116.46	108.40
27	C	57	HIS	ND1-CE1-NE2	5.38	113.78	108.40
1	A	42	C	O4'-C1'-N1	5.38	116.56	108.50
2	B	2561	U	P-O5'-C5'	5.38	128.96	120.90
2	B	455	C	O4'-C1'-C2'	-5.37	102.23	107.60
2	B	1588	G	O4'-C1'-N9	5.37	116.56	108.50
2	B	1733	G	O3'-P-O5'	5.37	112.06	104.00
2	B	1934	C	P-O5'-C5'	5.37	128.96	120.90
2	B	2291	U	O5'-C5'-C4'	-5.37	103.44	111.50
11	Q	54	ARG	N-CA-C	-5.37	106.40	113.12
27	C	43	ASN	CA-CB-CG	5.37	117.97	112.60
31	I	116	MET	N-CA-CB	5.37	117.87	109.97
11	Q	31	TYR	N-CA-C	-5.37	106.66	113.43
21	Y	66	VAL	N-CA-C	-5.37	102.65	109.58
28	F	160	LYS	N-CA-C	-5.37	106.10	113.30
2	B	488	G	O4'-C1'-C2'	5.37	112.97	107.60
2	B	966	G	C5'-C4'-O4'	5.37	117.86	109.80
2	B	723	C	C3'-C2'-O2'	5.37	118.75	110.70
2	B	1417	C	O4'-C1'-N1	5.37	116.55	108.50
2	B	2051	A	O5'-C5'-C4'	-5.37	103.65	111.70
2	B	2086	U	O4'-C1'-N1	5.37	116.55	108.50
2	B	2796	U	C4'-C3'-O3'	-5.37	104.95	113.00
12	R	68	ARG	NE-CZ-NH1	-5.37	116.13	121.50
30	H	26	ALA	O-C-N	-5.37	115.25	122.23
1	A	90	C	P-O3'-C3'	-5.37	112.15	120.20
2	B	1713	A	O4'-C1'-N9	5.37	116.25	108.20
11	Q	104	ALA	O-C-N	5.37	127.81	122.12
2	B	50	U	P-O3'-C3'	5.37	128.25	120.20
9	O	87	ILE	CA-C-O	-5.37	115.46	121.36
27	C	229	HIS	CB-CG-CD2	-5.37	124.22	131.20
2	B	150	U	P-O5'-C5'	5.36	128.94	120.90
2	B	260	G	C3'-C2'-C1'	5.36	106.66	101.30
2	B	371	A	C3'-C2'-C1'	-5.36	96.14	101.50
2	B	650	C	C4'-C3'-O3'	-5.36	104.95	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	857	G	C4'-C3'-C2'	5.36	107.96	102.60
2	B	2730	C	O4'-C1'-N1	5.36	116.55	108.50
6	1	12	GLU	N-CA-C	-5.36	105.12	110.97
12	R	37	GLU	N-CA-C	-5.36	105.44	112.41
13	S	94	ASP	CA-C-N	5.36	128.96	121.24
13	S	94	ASP	C-N-CA	5.36	128.96	121.24
19	X	245	MET	O-C-N	-5.36	115.59	122.94
2	B	1330	C	P-O5'-C5'	5.36	128.94	120.90
2	B	1644	C	O5'-C5'-C4'	-5.36	103.46	111.50
2	B	2147	A	O4'-C1'-C2'	-5.36	102.24	107.60
2	B	2762	C	O3'-P-O5'	5.36	112.04	104.00
27	C	254	LYS	O-C-N	-5.36	116.96	123.29
2	B	824	U	C5'-C4'-C3'	5.36	124.04	116.00
2	B	998	C	C1'-O4'-C4'	-5.36	104.54	109.90
2	B	1420	A	O4'-C1'-N9	5.36	116.24	108.20
2	B	1728	C	C5'-C4'-C3'	-5.36	107.96	116.00
2	B	2430	A	O4'-C1'-N9	5.36	116.54	108.50
9	O	89	ASP	CA-CB-CG	-5.36	107.24	112.60
2	B	716	A	O4'-C1'-N9	5.36	116.54	108.50
2	B	771	G	C2'-C3'-O3'	5.36	121.74	113.70
2	B	868	U	O4'-C1'-N1	5.36	116.54	108.50
2	B	962	G	C1'-O4'-C4'	-5.36	104.54	109.90
2	B	2333	A	C1'-C2'-O2'	-5.36	103.76	111.80
1	A	25	U	O4'-C1'-C2'	-5.36	102.24	107.60
2	B	3	U	C4'-C3'-O3'	-5.36	104.96	113.00
2	B	302	C	C1'-O4'-C4'	-5.36	104.54	109.90
2	B	424	G	O4'-C1'-N9	5.36	116.54	108.50
2	B	670	A	O5'-C5'-C4'	-5.36	103.67	111.70
2	B	1355	G	O5'-C5'-C4'	-5.36	103.46	111.50
2	B	1522	A	O5'-C5'-C4'	-5.36	103.66	111.70
2	B	1755	A	C3'-C2'-C1'	5.36	106.66	101.30
2	B	1969	A	O3'-P-O5'	5.36	112.04	104.00
2	B	2070	A	C5'-C4'-C3'	5.36	124.04	116.00
2	B	2215	C	O4'-C1'-N1	5.36	116.53	108.50
2	B	2466	C	O5'-C5'-C4'	-5.36	103.46	111.50
23	5	2	ALA	CA-C-O	5.36	126.03	120.40
27	C	129	LEU	CB-CA-C	-5.36	104.22	110.76
1	A	69	G	P-O5'-C5'	-5.36	112.87	120.90
2	B	245	G	C5'-C4'-C3'	-5.36	107.97	116.00
2	B	899	A	O4'-C1'-N9	5.36	116.53	108.50
2	B	1286	A	P-O5'-C5'	-5.36	112.87	120.90
2	B	1658	C	C4'-C3'-O3'	-5.36	104.97	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	C	239	PHE	CA-CB-CG	-5.36	108.44	113.80
31	I	72	THR	CA-C-O	-5.36	114.26	119.51
1	A	83	G	C1'-O4'-C4'	-5.35	104.55	109.90
2	B	885	C	N1-C1'-C2'	5.35	120.03	112.00
2	B	1814	G	C3'-C2'-C1'	5.35	106.65	101.30
2	B	2831	G	C4'-C3'-C2'	-5.35	97.25	102.60
2	B	440	C	C5'-C4'-C3'	5.35	124.03	116.00
2	B	1242	U	C4'-C3'-C2'	5.35	107.95	102.60
16	2	34	THR	N-CA-C	-5.35	101.04	109.50
19	X	416	ASN	O-C-N	5.35	127.48	121.32
31	I	129	GLU	CB-CA-C	-5.35	101.91	110.79
2	B	964	C	C3'-C2'-C1'	-5.35	95.95	101.30
2	B	2444	G	C5'-C4'-C3'	5.35	124.03	116.00
1	A	68	C	O4'-C4'-C3'	-5.35	98.65	104.00
2	B	177	G	C4'-C3'-C2'	-5.35	97.25	102.60
2	B	509	C	O4'-C1'-N1	5.35	116.53	108.50
2	B	1681	G	O4'-C1'-N9	5.35	116.22	108.20
8	N	16	HIS	CE1-NE2-CD2	-5.35	103.65	109.00
9	O	37	ALA	N-CA-C	-5.35	99.10	107.93
18	W	44	HIS	CG-CD2-NE2	5.35	112.55	107.20
2	B	664	G	C3'-C2'-C1'	5.35	106.65	101.30
2	B	868	U	C5'-C4'-C3'	-5.35	107.98	116.00
2	B	1667	G	C2'-C3'-O3'	5.35	117.52	109.50
2	B	1812	U	C4'-C3'-O3'	-5.35	104.98	113.00
2	B	2135	A	C5'-C4'-C3'	5.35	124.02	116.00
2	B	2263	C	O4'-C1'-N1	5.35	116.52	108.50
2	B	2691	C	P-O3'-C3'	-5.35	112.18	120.20
3	0	63	ILE	CA-CB-CG2	-5.35	101.41	110.50
2	B	806	C	C4'-C3'-C2'	-5.35	97.25	102.60
2	B	972	A	C3'-C2'-C1'	-5.35	95.95	101.30
3	0	5	GLN	CB-CG-CD	-5.35	103.51	112.60
4	K	62	VAL	N-CA-C	-5.35	100.05	108.23
2	B	1117	C	P-O5'-C5'	-5.34	112.88	120.90
2	B	2094	A	O4'-C1'-C2'	-5.34	102.26	107.60
2	B	2229	U	O4'-C1'-N1	5.34	116.52	108.50
2	B	2236	U	O4'-C1'-N1	5.34	116.52	108.50
2	B	2871	U	O3'-P-O5'	-5.34	95.98	104.00
19	X	73	GLU	CA-C-O	-5.34	114.89	120.55
29	G	82	PHE	N-CA-C	-5.34	99.41	110.80
31	I	139	VAL	O-C-N	-5.34	117.62	123.18
2	B	770	G	O4'-C4'-C3'	-5.34	98.66	104.00
2	B	2188	U	O4'-C4'-C3'	-5.34	98.66	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2275	C	O3'-P-O5'	-5.34	95.98	104.00
14	D	119	ALA	N-CA-CB	5.34	119.52	110.49
2	B	473	G	C5'-C4'-O4'	-5.34	101.79	109.80
2	B	604	G	C5'-C4'-C3'	-5.34	107.99	116.00
2	B	668	A	C4'-C3'-O3'	-5.34	104.99	113.00
2	B	809	G	O5'-C5'-C4'	-5.34	103.49	111.50
2	B	899	A	O4'-C4'-C3'	-5.34	98.66	104.00
2	B	1271	G	O4'-C1'-C2'	-5.34	100.46	105.80
2	B	2556	C	O5'-C5'-C4'	-5.34	103.49	111.50
8	N	72	ASP	N-CA-CB	5.34	119.52	110.49
23	5	114	VAL	N-CA-C	-5.34	99.55	107.51
30	H	57	LYS	O-C-N	-5.34	116.46	122.12
2	B	797	G	P-O5'-C5'	-5.34	112.89	120.90
2	B	867	C	P-O5'-C5'	5.34	128.91	120.90
2	B	2184	A	P-O3'-C3'	-5.34	112.19	120.20
19	X	327	SER	CA-C-N	5.34	127.87	120.29
19	X	327	SER	C-N-CA	5.34	127.87	120.29
2	B	515	A	O4'-C1'-N9	5.34	116.51	108.50
31	I	61	TYR	O-C-N	5.34	129.63	123.17
1	A	82	U	C5'-C4'-C3'	-5.34	108.00	116.00
2	B	561	G	O4'-C1'-C2'	-5.34	102.26	107.60
2	B	595	C	P-O3'-C3'	5.34	128.21	120.20
2	B	826	U	C5'-C4'-C3'	5.34	124.00	116.00
2	B	1137	G	P-O3'-C3'	5.34	128.21	120.20
2	B	2795	C	C4'-C3'-O3'	-5.34	105.00	113.00
10	P	112	ARG	NH1-CZ-NH2	5.34	126.24	119.30
14	D	160	LYS	CB-CA-C	-5.34	102.64	110.06
30	H	28	ASN	N-CA-C	-5.34	105.04	112.03
30	H	128	HIS	CG-CD2-NE2	5.34	112.54	107.20
2	B	696	G	C3'-C2'-O2'	5.33	118.70	110.70
2	B	2583	G	O4'-C1'-N9	5.33	116.50	108.50
2	B	187	G	P-O5'-C5'	5.33	128.90	120.90
2	B	1006	C	C1'-O4'-C4'	-5.33	104.57	109.90
2	B	1165	A	O4'-C1'-N9	5.33	116.50	108.50
2	B	1903	G	O3'-P-O5'	5.33	112.00	104.00
2	B	2077	A	C4'-C3'-O3'	-5.33	105.00	113.00
2	B	2511	U	C5'-C4'-C3'	5.33	124.00	116.00
2	B	2714	G	C5'-C4'-C3'	5.33	124.00	116.00
2	B	2762	C	O4'-C1'-N1	5.33	116.50	108.50
2	B	1193	G	O4'-C1'-C2'	5.33	112.93	107.60
2	B	1289	C	C4'-C3'-O3'	-5.33	105.00	113.00
2	B	2189	U	C5'-C4'-C3'	5.33	124.00	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2645	G	P-O3'-C3'	-5.33	112.20	120.20
7	M	12	MET	CA-C-O	-5.33	114.85	117.94
23	5	159	GLY	O-C-N	-5.33	115.77	122.70
32	J	89	PHE	N-CA-CB	5.33	117.96	110.12
32	J	131	ASN	CA-C-N	-5.33	111.36	121.54
32	J	131	ASN	C-N-CA	-5.33	111.36	121.54
2	B	113	U	O4'-C1'-N1	5.33	116.50	108.50
2	B	1053	C	C5'-C4'-C3'	5.33	124.00	116.00
2	B	709	U	O4'-C1'-C2'	-5.33	102.27	107.60
2	B	1066	U	P-O5'-C5'	5.33	128.89	120.90
2	B	1100	C	O5'-C5'-C4'	-5.33	103.51	111.50
2	B	1160	G	C4'-C3'-C2'	5.33	107.93	102.60
2	B	1342	A	P-O3'-C3'	-5.33	112.21	120.20
2	B	2902	C	O3'-P-O5'	-5.33	96.01	104.00
2	B	1246	A	O5'-C5'-C4'	-5.33	103.51	111.50
20	E	195	GLN	N-CA-CB	5.33	118.14	110.20
2	B	180	G	C4'-C3'-O3'	-5.33	105.01	113.00
2	B	1045	C	O5'-C5'-C4'	-5.33	103.71	111.70
2	B	1101	U	O3'-P-O5'	-5.33	96.01	104.00
2	B	2119	A	O3'-P-O5'	5.33	111.99	104.00
9	O	29	HIS	CA-CB-CG	-5.33	108.47	113.80
2	B	332	A	O4'-C4'-C3'	-5.32	100.78	106.10
2	B	1030	C	O4'-C1'-C2'	5.32	112.92	107.60
2	B	1314	C	C5'-C4'-C3'	-5.32	108.01	116.00
2	B	1320	C	C4'-C3'-C2'	-5.32	97.28	102.60
2	B	1449	G	C4'-C3'-O3'	-5.32	105.01	113.00
2	B	1679	A	O4'-C4'-C3'	5.32	109.32	104.00
2	B	2022	U	O3'-P-O5'	-5.32	96.01	104.00
2	B	2051	A	C2'-C3'-O3'	5.32	117.48	109.50
2	B	2277	G	C4'-C3'-C2'	5.32	107.92	102.60
5	L	111	ILE	CA-C-O	5.32	126.83	121.72
16	2	4	ILE	N-CA-C	-5.32	100.81	108.48
28	F	88	VAL	N-CA-C	-5.32	100.40	108.17
31	I	133	ARG	CA-C-O	5.32	125.93	119.49
2	B	784	G	O4'-C1'-N9	5.32	116.48	108.50
2	B	833	A	C4'-C3'-O3'	-5.32	105.02	113.00
2	B	1153	C	N1-C1'-C2'	5.32	119.98	112.00
2	B	2385	C	C5'-C4'-C3'	-5.32	108.02	116.00
21	Y	9	THR	CA-CB-OG1	5.32	117.58	109.60
28	F	98	PHE	CA-CB-CG	-5.32	108.48	113.80
1	A	26	C	C5'-C4'-C3'	-5.32	108.02	116.00
1	A	29	A	O4'-C4'-C3'	5.32	109.32	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	647	G	O3'-P-O5'	-5.32	96.02	104.00
2	B	1330	C	O5'-C5'-C4'	-5.32	103.52	111.50
2	B	1475	G	C4'-C3'-O3'	5.32	117.38	109.40
2	B	1623	G	O4'-C4'-C3'	-5.32	98.68	104.00
2	B	1787	A	O3'-P-O5'	-5.32	96.02	104.00
2	B	2253	G	C1'-O4'-C4'	5.32	115.22	109.90
2	B	2497	A	C3'-C2'-O2'	-5.32	106.62	114.60
2	B	2512	C	O4'-C1'-N1	5.32	116.48	108.50
14	D	80	TRP	CA-C-O	-5.32	115.58	121.33
19	X	395	HIS	CB-CG-CD2	-5.32	124.28	131.20
30	H	53	GLU	CB-CG-CD	-5.32	103.56	112.60
30	H	112	LYS	CA-C-O	-5.32	116.23	121.02
2	B	1381	G	C5'-C4'-C3'	-5.32	108.02	116.00
2	B	2734	A	C5'-C4'-C3'	5.32	123.98	116.00
20	E	192	ALA	CA-C-O	-5.32	114.80	121.02
2	B	841	G	C5'-C4'-C3'	5.32	123.97	116.00
2	B	1119	U	O4'-C1'-N1	5.32	116.48	108.50
2	B	1357	C	P-O5'-C5'	5.32	128.88	120.90
2	B	2002	G	O4'-C1'-C2'	5.32	112.92	107.60
2	B	2885	G	O3'-P-O5'	5.32	111.98	104.00
5	L	77	ILE	O-C-N	-5.32	117.23	122.76
11	Q	84	LYS	N-CA-CB	5.32	118.41	110.22
12	R	86	GLN	CA-CB-CG	-5.32	103.47	114.10
18	W	4	ILE	N-CA-C	-5.32	100.82	108.48
19	X	65	ASP	CA-CB-CG	5.32	117.92	112.60
19	X	243	ILE	CA-C-N	5.32	126.49	119.84
19	X	243	ILE	C-N-CA	5.32	126.49	119.84
19	X	294	ALA	CB-CA-C	-5.32	102.46	111.02
1	A	49	C	O4'-C1'-N1	5.32	116.47	108.50
2	B	96	C	C5'-C4'-O4'	5.32	117.77	109.80
2	B	558	U	C4'-C3'-O3'	-5.32	105.03	113.00
2	B	689	A	O5'-C5'-C4'	-5.32	103.53	111.50
2	B	1091	G	P-O5'-C5'	-5.32	112.93	120.90
2	B	1409	U	P-O5'-C5'	5.32	128.88	120.90
2	B	1913	A	C5'-C4'-C3'	5.32	123.97	116.00
2	B	2513	A	C4'-C3'-O3'	-5.32	105.03	113.00
12	R	45	GLU	N-CA-C	-5.32	105.64	113.61
14	D	141	ARG	NE-CZ-NH2	-5.32	114.42	119.20
23	5	30	LEU	N-CA-C	5.32	117.76	111.33
2	B	1323	C	O4'-C4'-C3'	-5.31	98.69	104.00
2	B	1627	G	O4'-C1'-C2'	-5.31	102.29	107.60
2	B	1888	G	C4'-C3'-O3'	-5.31	105.03	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2237	G	O3'-P-O5'	-5.31	96.03	104.00
2	B	2316	G	P-O5'-C5'	5.31	128.87	120.90
2	B	2562	U	O4'-C4'-C3'	-5.31	98.69	104.00
28	F	92	GLY	O-C-N	-5.31	115.79	122.70
32	J	51	GLY	CA-C-N	-5.31	115.22	122.93
32	J	51	GLY	C-N-CA	-5.31	115.22	122.93
2	B	192	C	O4'-C1'-N1	5.31	116.47	108.50
2	B	288	U	O4'-C1'-N1	5.31	116.47	108.50
2	B	853	C	C5'-C4'-C3'	-5.31	108.03	116.00
2	B	1974	C	N1-C1'-C2'	-5.31	104.03	112.00
2	B	2064	C	C5'-C4'-C3'	5.31	123.97	116.00
2	B	2382	G	O4'-C1'-N9	5.31	116.17	108.20
2	B	2688	G	P-O3'-C3'	-5.31	112.23	120.20
7	M	18	ARG	O-C-N	-5.31	115.52	122.59
20	E	24	ASN	CA-C-O	5.31	126.58	120.84
23	5	146	THR	CA-CB-OG1	5.31	117.57	109.60
27	C	160	TYR	CA-CB-CG	-5.31	104.34	113.90
2	B	2059	A	P-O5'-C5'	5.31	128.87	120.90
2	B	2347	C	C4'-C3'-C2'	5.31	107.91	102.60
8	N	74	GLU	CA-C-O	5.31	126.10	120.10
19	X	195	ASP	CA-C-N	5.31	128.38	120.95
19	X	195	ASP	C-N-CA	5.31	128.38	120.95
23	5	97	MET	N-CA-C	-5.31	104.92	111.40
28	F	88	VAL	CA-C-O	5.31	126.22	120.43
2	B	154	U	C5'-C4'-C3'	5.31	123.96	116.00
2	B	320	A	C1'-O4'-C4'	5.31	115.21	109.90
2	B	1609	A	C4'-C3'-C2'	-5.31	97.29	102.60
2	B	2054	A	P-O5'-C5'	5.31	128.86	120.90
2	B	2246	G	C5'-C4'-C3'	5.31	123.96	116.00
9	O	93	ASP	O-C-N	-5.31	117.27	123.27
18	W	19	ARG	CB-CA-C	-5.31	101.98	110.79
19	X	336	GLU	CA-C-N	5.31	127.39	120.28
19	X	336	GLU	C-N-CA	5.31	127.39	120.28
27	C	6	LYS	N-CA-C	-5.31	103.08	109.72
27	C	75	ALA	CB-CA-C	-5.31	100.49	111.22
2	B	217	A	O3'-P-O5'	-5.31	96.04	104.00
2	B	2094	A	C4'-C3'-O3'	-5.31	105.04	113.00
2	B	2150	C	C5'-C4'-O4'	5.31	117.76	109.80
2	B	2559	C	C1'-O4'-C4'	-5.31	104.59	109.90
19	X	216	SER	N-CA-CB	5.31	118.39	110.22
20	E	156	ASN	CB-CA-C	-5.31	100.48	110.67
2	B	1528	A	C1'-O4'-C4'	-5.31	104.59	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1649	G	O4'-C1'-C2'	-5.31	102.29	107.60
2	B	2692	G	C5'-C4'-C3'	5.31	123.96	116.00
27	C	141	HIS	O-C-N	-5.31	117.11	123.27
2	B	654	A	O4'-C4'-C3'	-5.30	100.80	106.10
2	B	1466	U	O5'-C5'-C4'	-5.30	103.55	111.50
2	B	1648	U	O3'-P-O5'	-5.30	96.04	104.00
2	B	2669	G	P-O5'-C5'	-5.30	112.94	120.90
20	E	181	ILE	N-CA-CB	5.30	118.54	110.58
27	C	116	GLN	N-CA-C	-5.30	98.93	108.48
2	B	915	C	P-O5'-C5'	-5.30	112.94	120.90
2	B	1802	A	C3'-C2'-O2'	5.30	118.65	110.70
2	B	1848	A	O4'-C4'-C3'	-5.30	98.70	104.00
2	B	2196	C	P-O5'-C5'	-5.30	112.95	120.90
29	G	27	GLY	CA-C-N	5.30	131.81	121.63
29	G	27	GLY	C-N-CA	5.30	131.81	121.63
2	B	1171	G	C1'-O4'-C4'	5.30	115.20	109.90
2	B	2001	C	C4'-C3'-O3'	-5.30	105.05	113.00
7	M	109	PRO	N-CA-CB	5.30	108.26	103.33
12	R	70	GLU	O-C-N	-5.30	117.75	123.42
32	J	124	VAL	N-CA-C	-5.30	100.22	108.81
2	B	2786	U	O5'-C5'-C4'	-5.30	103.55	111.50
29	G	63	GLN	OE1-CD-NE2	-5.30	117.30	122.60
2	B	171	U	C5'-C4'-C3'	5.30	123.94	116.00
2	B	298	G	C5'-C4'-C3'	5.30	123.95	116.00
2	B	2187	U	C5'-C4'-C3'	-5.30	108.06	116.00
21	Y	43	LYS	N-CA-CB	5.30	118.10	110.37
1	A	26	C	O5'-C5'-C4'	5.29	119.44	111.50
2	B	471	A	C3'-C2'-C1'	5.29	106.59	101.30
2	B	576	U	C4'-C3'-O3'	-5.29	105.06	113.00
2	B	1492	G	P-O3'-C3'	-5.29	112.26	120.20
1	A	110	C	C5'-C4'-C3'	5.29	123.94	116.00
2	B	618	G	C4'-C3'-O3'	-5.29	105.06	113.00
2	B	685	A	O4'-C1'-N9	5.29	116.14	108.20
2	B	844	A	O4'-C1'-N9	5.29	116.44	108.50
2	B	1083	U	C3'-C2'-C1'	-5.29	96.01	101.30
2	B	1269	A	C5'-C4'-C3'	-5.29	108.06	116.00
2	B	1962	C	C1'-O4'-C4'	-5.29	104.41	109.70
2	B	2336	A	C2'-C3'-O3'	5.29	117.44	109.50
2	B	2725	A	O5'-C5'-C4'	-5.29	103.76	111.70
1	A	81	G	C5'-C4'-C3'	5.29	123.94	116.00
2	B	271	G	P-O3'-C3'	5.29	128.14	120.20
2	B	422	A	C5'-C4'-C3'	-5.29	108.06	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1136	G	P-O3'-C3'	-5.29	112.26	120.20
2	B	2247	A	O3'-P-O5'	-5.29	96.06	104.00
2	B	946	C	O4'-C1'-N1	5.29	116.44	108.50
2	B	1230	A	O4'-C4'-C3'	-5.29	98.71	104.00
2	B	1630	A	O3'-P-O5'	-5.29	96.07	104.00
2	B	2644	G	C4'-C3'-C2'	5.29	107.89	102.60
2	B	778	G	N9-C1'-C2'	5.29	119.93	112.00
2	B	821	A	N9-C1'-C2'	-5.29	106.07	114.00
2	B	1191	G	P-O5'-C5'	5.29	128.83	120.90
2	B	1633	G	O4'-C4'-C3'	-5.29	98.71	104.00
2	B	1896	G	O4'-C4'-C3'	5.29	109.29	104.00
2	B	2243	U	C4'-C3'-C2'	5.29	107.89	102.60
2	B	2384	U	O4'-C1'-C2'	-5.29	100.51	105.80
32	J	30	THR	CA-C-O	5.29	125.92	119.05
2	B	2494	G	O5'-C5'-C4'	-5.29	103.57	111.50
16	2	30	ARG	O-C-N	5.29	128.76	122.20
2	B	165	A	N9-C1'-C2'	-5.29	104.07	112.00
2	B	519	U	C4'-C3'-O3'	-5.29	105.07	113.00
2	B	866	A	O4'-C4'-C3'	-5.29	98.71	104.00
2	B	1435	G	O4'-C1'-N9	5.29	116.43	108.50
2	B	1675	C	O4'-C1'-C2'	-5.29	102.31	107.60
2	B	2154	A	P-O5'-C5'	-5.29	112.97	120.90
2	B	2245	U	O5'-C5'-C4'	-5.29	103.57	111.50
2	B	2333	A	O5'-C5'-C4'	5.29	119.63	111.70
2	B	2424	C	C1'-C2'-O2'	5.29	116.33	108.40
15	T	71	GLY	O-C-N	5.29	129.21	123.87
27	C	185	ALA	N-CA-C	5.29	117.04	111.28
28	F	53	ALA	CA-C-O	-5.29	115.25	120.70
28	F	105	ILE	N-CA-CB	5.29	119.95	111.23
2	B	646	U	C1'-C2'-O2'	5.28	116.33	108.40
2	B	684	G	C4'-C3'-C2'	-5.28	97.32	102.60
2	B	1141	U	C5'-C4'-C3'	5.28	123.13	115.20
2	B	1588	G	O5'-C5'-C4'	-5.28	103.58	111.50
2	B	1647	U	P-O3'-C3'	-5.28	112.28	120.20
2	B	2192	U	C5'-C4'-C3'	-5.28	108.08	116.00
2	B	2896	C	O4'-C1'-N1	5.28	116.42	108.50
18	W	67	GLY	CA-C-O	-5.28	113.44	119.04
2	B	1525	A	C5'-C4'-C3'	5.28	123.92	116.00
29	G	137	LYS	CB-CA-C	-5.28	101.70	110.68
30	H	18	GLN	CB-CG-CD	-5.28	103.62	112.60
2	B	637	A	C5'-C4'-C3'	-5.28	107.28	115.20
2	B	1902	C	C1'-O4'-C4'	-5.28	104.62	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2514	U	P-O5'-C5'	-5.28	112.98	120.90
13	S	38	TYR	N-CA-C	-5.28	104.79	113.50
14	D	34	VAL	CA-CB-CG1	5.28	119.38	110.40
18	W	5	ASN	CA-CB-CG	5.28	117.88	112.60
19	X	285	ALA	CA-C-N	-5.28	113.86	122.26
19	X	285	ALA	C-N-CA	-5.28	113.86	122.26
25	7	30	HIS	CE1-NE2-CD2	-5.28	103.72	109.00
30	H	91	PHE	CA-C-N	5.28	130.77	121.32
30	H	91	PHE	C-N-CA	5.28	130.77	121.32
2	B	2604	U	P-O5'-C5'	5.28	128.82	120.90
2	B	1241	A	O4'-C1'-N9	5.28	116.42	108.50
2	B	1925	C	C1'-C2'-O2'	5.28	116.32	108.40
2	B	2681	C	C2'-C3'-O3'	5.28	117.42	109.50
14	D	96	ILE	N-CA-CB	5.28	116.56	110.49
19	X	295	ARG	NE-CZ-NH1	-5.28	116.22	121.50
21	Y	30	VAL	CB-CA-C	5.28	118.48	110.62
2	B	999	U	C5'-C4'-C3'	5.28	123.91	116.00
2	B	1969	A	O4'-C4'-C3'	-5.28	98.72	104.00
2	B	2502	G	C2'-C3'-O3'	5.28	121.61	113.70
2	B	2645	G	C4'-C3'-C2'	-5.28	97.33	102.60
2	B	2852	G	C5'-C4'-C3'	-5.28	108.09	116.00
2	B	1	G	O4'-C1'-C2'	-5.27	102.33	107.60
20	E	16	GLU	CB-CA-C	-5.27	102.89	111.06
2	B	857	G	O3'-P-O5'	5.27	111.91	104.00
2	B	1598	A	O5'-C5'-C4'	-5.27	103.59	111.50
2	B	1621	U	C4'-C3'-C2'	-5.27	97.33	102.60
2	B	2203	U	O5'-C5'-C4'	-5.27	103.59	111.50
2	B	2458	G	O3'-P-O5'	-5.27	96.09	104.00
8	N	48	VAL	CA-C-N	5.27	126.68	120.09
8	N	48	VAL	C-N-CA	5.27	126.68	120.09
29	G	91	VAL	CA-C-O	-5.27	115.11	121.54
2	B	1326	U	C5'-C4'-C3'	5.27	123.91	116.00
2	B	2805	C	O4'-C1'-C2'	-5.27	102.33	107.60
8	N	90	ARG	O-C-N	5.27	129.08	122.86
14	D	207	VAL	CA-C-O	-5.27	113.20	119.58
19	X	1	MET	CA-CB-CG	5.27	124.64	114.10
2	B	1474	U	C4'-C3'-C2'	5.27	107.87	102.60
2	B	2499	C	O4'-C1'-N1	5.27	116.40	108.50
2	B	2721	A	C5'-C4'-C3'	-5.27	108.10	116.00
21	Y	40	ARG	NE-CZ-NH1	-5.27	116.23	121.50
27	C	54	GLY	CA-C-N	5.27	131.74	121.41
27	C	54	GLY	C-N-CA	5.27	131.74	121.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	360	U	C5'-C4'-C3'	-5.27	108.10	116.00
2	B	402	A	C4'-C3'-O3'	-5.27	105.10	113.00
2	B	607	U	C4'-C3'-C2'	-5.27	97.33	102.60
2	B	1764	C	O4'-C1'-N1	5.27	116.40	108.50
2	B	2774	C	O5'-C5'-C4'	-5.27	103.60	111.50
19	X	107	ARG	N-CA-C	5.27	117.02	111.28
27	C	12	ARG	N-CA-C	-5.27	105.13	112.03
27	C	86	ARG	NE-CZ-NH2	5.27	123.94	119.20
2	B	12	U	O4'-C1'-C2'	-5.27	102.33	107.60
2	B	2270	A	C5'-C4'-O4'	5.27	117.70	109.80
2	B	2741	A	O5'-C5'-C4'	-5.27	103.60	111.50
17	U	34	ILE	N-CA-CB	5.27	118.49	111.64
20	E	39	ALA	CA-C-N	5.27	128.25	120.82
20	E	39	ALA	C-N-CA	5.27	128.25	120.82
2	B	59	U	O4'-C1'-N1	5.26	116.40	108.50
2	B	1819	A	C1'-C2'-O2'	5.26	119.70	111.80
2	B	2042	A	O4'-C1'-N9	5.26	116.10	108.20
2	B	2067	G	O4'-C4'-C3'	-5.26	100.84	106.10
2	B	2328	A	N9-C1'-C2'	5.26	119.90	112.00
8	N	103	ARG	O-C-N	-5.26	117.05	123.16
17	U	66	VAL	CA-CB-CG1	5.26	119.35	110.40
31	I	65	SER	N-CA-C	-5.26	101.44	108.86
2	B	212	G	C4'-C3'-C2'	-5.26	97.34	102.60
23	5	202	THR	N-CA-CB	5.26	119.05	110.37
31	I	76	ALA	CB-CA-C	-5.26	102.05	110.79
2	B	219	A	C4'-C3'-O3'	-5.26	105.11	113.00
2	B	937	C	C5'-C4'-C3'	-5.26	108.11	116.00
2	B	1113	U	O4'-C1'-N1	5.26	116.39	108.50
2	B	1675	C	C5'-C4'-C3'	5.26	123.89	116.00
2	B	2420	C	O4'-C1'-C2'	5.26	112.86	107.60
5	L	92	LEU	N-CA-C	-5.26	105.55	111.28
15	T	44	LYS	CA-C-O	5.26	126.12	120.70
16	2	49	ALA	CB-CA-C	-5.26	100.90	110.63
17	U	93	ARG	CD-NE-CZ	-5.26	117.03	124.40
2	B	574	A	C1'-O4'-C4'	5.26	114.96	109.70
2	B	2442	C	P-O3'-C3'	-5.26	112.31	120.20
10	P	29	VAL	N-CA-C	5.26	115.47	108.11
2	B	1419	A	P-O5'-C5'	5.26	128.79	120.90
2	B	2370	G	O5'-C5'-C4'	-5.26	103.61	111.50
2	B	2504	U	O5'-C5'-C4'	-5.26	103.61	111.50
9	O	55	GLU	CA-C-N	5.26	131.58	121.54
9	O	55	GLU	C-N-CA	5.26	131.58	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	265	LYS	CA-C-O	-5.26	112.22	119.05
28	F	96	TRP	CE2-CD2-CE3	5.26	124.06	118.80
2	B	639	U	O4'-C1'-N1	5.26	116.39	108.50
2	B	1070	A	O5'-C5'-C4'	5.26	119.38	111.50
2	B	1397	U	C5'-C4'-C3'	-5.26	107.32	115.20
2	B	1554	U	C5'-C4'-C3'	-5.26	107.31	115.20
2	B	2579	C	P-O3'-C3'	5.26	128.09	120.20
2	B	2649	C	O4'-C1'-N1	5.26	116.39	108.50
17	U	79	ALA	O-C-N	5.26	129.14	121.78
22	3	4	GLN	N-CA-CB	5.26	117.88	110.36
2	B	203	A	C3'-C2'-O2'	5.25	118.58	110.70
2	B	1274	A	C3'-C2'-C1'	5.25	106.55	101.30
2	B	1313	U	C4'-C3'-O3'	-5.25	105.12	113.00
4	K	97	THR	N-CA-C	-5.25	105.85	113.21
8	N	77	ALA	N-CA-CB	5.25	118.09	110.26
14	D	18	ASP	CA-CB-CG	-5.25	107.35	112.60
2	B	79	C	C4'-C3'-O3'	-5.25	105.12	113.00
2	B	722	A	C3'-C2'-C1'	-5.25	96.05	101.30
2	B	959	A	O5'-C5'-C4'	-5.25	103.62	111.50
2	B	2243	U	O4'-C4'-C3'	-5.25	98.75	104.00
2	B	2282	G	O3'-P-O5'	5.25	111.88	104.00
2	B	2618	G	O4'-C1'-C2'	5.25	112.85	107.60
4	K	42	THR	CA-C-N	5.25	128.36	120.69
4	K	42	THR	C-N-CA	5.25	128.36	120.69
2	B	1362	C	O4'-C1'-N1	5.25	116.38	108.50
2	B	998	C	C2'-C3'-O3'	5.25	121.57	113.70
2	B	1159	U	C5'-C4'-C3'	-5.25	108.13	116.00
2	B	2244	U	O5'-C5'-C4'	-5.25	103.63	111.50
14	D	38	LYS	N-CA-C	-5.25	99.03	108.48
2	B	277	G	C1'-C2'-O2'	-5.25	100.53	108.40
2	B	461	C	C1'-C2'-O2'	5.25	116.27	108.40
2	B	943	A	C4'-C3'-C2'	5.25	107.85	102.60
2	B	944	C	C4'-C3'-C2'	5.25	107.85	102.60
2	B	2014	A	P-O5'-C5'	-5.25	113.03	120.90
2	B	2035	G	C5'-C4'-C3'	-5.25	107.33	115.20
17	U	61	GLU	CA-C-O	-5.25	115.24	120.96
18	W	80	HIS	CA-C-O	-5.25	115.46	120.97
20	E	85	PHE	N-CA-C	-5.25	99.78	108.75
2	B	2857	G	C1'-C2'-O2'	5.25	116.27	108.40
28	F	20	ASN	CA-CB-CG	-5.25	107.36	112.60
31	I	104	GLN	CA-C-O	5.25	126.33	120.82
2	B	807	U	P-O3'-C3'	-5.24	112.34	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1303	G	C4'-C3'-O3'	-5.24	105.14	113.00
2	B	2343	U	C3'-C2'-O2'	5.24	118.56	110.70
16	2	33	HIS	CA-C-O	5.24	127.11	121.55
28	F	45	ASP	O-C-N	5.24	128.03	121.84
31	I	122	GLU	CA-C-N	5.24	127.26	120.44
31	I	122	GLU	C-N-CA	5.24	127.26	120.44
2	B	169	G	C5'-C4'-C3'	-5.24	108.14	116.00
2	B	859	G	C2'-C3'-O3'	5.24	117.36	109.50
23	5	120	ALA	CA-C-N	5.24	127.83	120.28
23	5	120	ALA	C-N-CA	5.24	127.83	120.28
2	B	569	U	C4'-C3'-C2'	-5.24	97.36	102.60
2	B	785	G	O4'-C1'-C2'	5.24	112.84	107.60
2	B	920	A	C5'-C4'-O4'	-5.24	101.94	109.80
2	B	2195	U	P-O5'-C5'	-5.24	113.04	120.90
8	N	73	ASN	CA-CB-CG	-5.24	107.36	112.60
12	R	36	ALA	CA-C-O	5.24	126.02	119.78
27	C	100	ARG	N-CA-CB	5.24	119.61	110.81
31	I	44	LYS	O-C-N	-5.24	116.45	121.85
2	B	1357	C	C1'-O4'-C4'	-5.24	104.66	109.90
2	B	2644	G	O3'-P-O5'	-5.24	96.14	104.00
24	6	10	LEU	CB-CA-C	-5.24	100.00	110.42
29	G	3	VAL	CA-C-N	5.24	128.27	120.31
29	G	3	VAL	C-N-CA	5.24	128.27	120.31
2	B	2033	A	C4'-C3'-O3'	5.24	117.25	109.40
13	S	60	HIS	ND1-CE1-NE2	5.24	113.64	108.40
15	T	83	ALA	N-CA-CB	5.24	119.86	110.80
28	F	45	ASP	CA-CB-CG	5.24	117.84	112.60
2	B	217	A	O4'-C1'-N9	5.24	116.35	108.50
2	B	1932	A	C1'-O4'-C4'	-5.24	104.66	109.90
2	B	2317	A	C1'-O4'-C4'	-5.24	104.66	109.90
2	B	2867	G	P-O3'-C3'	5.24	128.05	120.20
19	X	164	GLU	CA-C-N	5.24	131.54	121.54
19	X	164	GLU	C-N-CA	5.24	131.54	121.54
2	B	1464	G	P-O5'-C5'	5.23	128.75	120.90
2	B	1623	G	O4'-C1'-N9	5.23	116.35	108.50
2	B	646	U	N1-C1'-C2'	5.23	119.85	112.00
2	B	2033	A	C5'-C4'-C3'	-5.23	107.35	115.20
17	U	33	VAL	O-C-N	5.23	128.75	123.00
2	B	865	C	P-O3'-C3'	-5.23	112.36	120.20
2	B	2011	U	P-O5'-C5'	-5.23	113.06	120.90
2	B	2310	C	P-O3'-C3'	5.23	128.05	120.20
2	B	2803	G	O4'-C4'-C3'	-5.23	98.77	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	O	9	ARG	CA-C-O	5.23	126.09	120.55
17	U	11	ILE	CA-C-O	5.23	125.09	119.91
17	U	84	PHE	CB-CA-C	-5.23	102.32	109.28
19	X	459	GLU	N-CA-C	-5.23	101.41	109.52
23	5	119	ASP	CA-CB-CG	-5.23	107.37	112.60
27	C	11	GLY	O-C-N	-5.23	116.33	122.50
31	I	131	THR	CA-C-O	5.23	125.97	120.42
2	B	131	A	C1'-C2'-O2'	-5.23	100.56	108.40
2	B	454	A	P-O3'-C3'	-5.23	112.36	120.20
2	B	1517	G	C4'-C3'-O3'	-5.23	105.16	113.00
2	B	1621	U	C4'-C3'-O3'	-5.23	105.16	113.00
2	B	2128	G	O4'-C1'-N9	5.23	116.34	108.50
10	P	10	GLU	O-C-N	5.23	129.43	122.43
17	U	44	HIS	ND1-CE1-NE2	5.23	113.63	108.40
2	B	1083	U	C4'-C3'-C2'	5.23	107.83	102.60
2	B	1113	U	C4'-C3'-O3'	-5.23	105.16	113.00
2	B	2331	G	O4'-C1'-N9	5.23	116.34	108.50
12	R	28	ALA	N-CA-C	5.23	117.28	110.43
25	7	36	ALA	N-CA-C	-5.23	100.78	108.99
2	B	183	C	C4'-C3'-O3'	-5.22	105.16	113.00
2	B	1792	G	O4'-C4'-C3'	-5.22	98.78	104.00
2	B	2248	C	C4'-C3'-O3'	-5.22	105.16	113.00
8	N	3	HIS	CA-C-N	5.22	131.52	121.54
8	N	3	HIS	C-N-CA	5.22	131.52	121.54
10	P	11	GLN	CB-CG-CD	-5.22	103.72	112.60
13	S	102	HIS	CA-C-N	5.22	128.87	121.66
13	S	102	HIS	C-N-CA	5.22	128.87	121.66
14	D	42	ASN	CB-CA-C	5.22	119.08	109.99
17	U	53	GLN	CA-C-O	-5.22	113.61	118.73
23	5	50	ILE	N-CA-C	5.22	120.21	109.34
2	B	751	A	C1'-O4'-C4'	-5.22	104.68	109.90
2	B	1440	U	C5'-C4'-O4'	5.22	117.63	109.80
2	B	1558	C	C2'-C3'-O3'	5.22	117.33	109.50
2	B	2207	C	C3'-C2'-O2'	5.22	118.53	110.70
2	B	2446	G	O3'-P-O5'	-5.22	96.17	104.00
2	B	2699	C	O4'-C4'-C3'	-5.22	98.78	104.00
2	B	2757	A	O3'-P-O5'	-5.22	96.17	104.00
18	W	93	ARG	CA-C-O	-5.22	115.80	121.44
2	B	1516	G	N9-C1'-C2'	-5.22	104.17	112.00
2	B	1763	G	P-O3'-C3'	5.22	128.03	120.20
23	5	11	ILE	CA-C-N	5.22	127.80	120.28
23	5	11	ILE	C-N-CA	5.22	127.80	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	377	G	O4'-C4'-C3'	-5.22	98.78	104.00
2	B	388	G	O4'-C1'-C2'	-5.22	102.38	107.60
2	B	923	G	O4'-C1'-N9	5.22	116.33	108.50
2	B	937	C	O4'-C1'-N1	5.22	116.33	108.50
2	B	1672	A	P-O5'-C5'	-5.22	113.07	120.90
2	B	1786	A	C5'-C4'-C3'	5.22	123.03	115.20
2	B	1969	A	C5'-C4'-C3'	5.22	123.83	116.00
2	B	2216	G	O5'-C5'-C4'	-5.22	103.67	111.50
2	B	2852	G	P-O5'-C5'	5.22	128.73	120.90
5	L	107	PHE	CA-C-O	-5.22	115.50	121.40
2	B	2693	G	C4'-C3'-C2'	-5.22	97.38	102.60
5	L	100	ILE	CA-CB-CG2	5.22	119.37	110.50
10	P	35	SER	N-CA-C	-5.22	104.21	111.52
23	5	86	ALA	CA-C-O	5.22	125.97	119.97
2	B	69	C	P-O3'-C3'	-5.22	112.38	120.20
2	B	199	A	C5'-C4'-O4'	5.22	116.92	109.10
2	B	228	C	C5'-C4'-C3'	-5.22	107.38	115.20
2	B	900	A	O3'-P-O5'	5.22	111.83	104.00
2	B	1097	U	O4'-C1'-N1	5.22	116.33	108.50
2	B	1968	G	C4'-C3'-C2'	5.22	107.82	102.60
2	B	2087	G	P-O3'-C3'	-5.22	112.37	120.20
2	B	2769	U	P-O3'-C3'	-5.22	112.37	120.20
4	K	5	GLN	CB-CG-CD	5.22	121.47	112.60
8	N	17	ARG	NE-CZ-NH2	5.22	123.89	119.20
14	D	102	ALA	N-CA-CB	5.22	118.03	110.47
24	6	3	ARG	N-CA-C	-5.22	101.43	109.52
27	C	263	ASP	N-CA-C	5.22	116.97	111.28
2	B	94	A	C4'-C3'-C2'	-5.21	97.39	102.60
2	B	2185	U	O3'-P-O5'	-5.21	96.18	104.00
2	B	2225	A	P-O5'-C5'	5.21	128.72	120.90
1	A	13	G	O4'-C1'-N9	5.21	116.32	108.50
2	B	1577	C	O5'-C5'-C4'	-5.21	103.68	111.50
2	B	1914	C	O4'-C1'-N1	5.21	116.32	108.50
2	B	2159	G	P-O5'-C5'	-5.21	113.08	120.90
2	B	2393	U	C1'-O4'-C4'	-5.21	104.69	109.90
2	B	2805	C	O5'-C5'-C4'	-5.21	103.68	111.50
6	1	34	SER	O-C-N	-5.21	115.82	122.34
2	B	74	A	C5'-C4'-C3'	-5.21	107.38	115.20
2	B	332	A	C5'-C4'-C3'	5.21	123.02	115.20
2	B	1816	C	O3'-P-O5'	-5.21	96.18	104.00
2	B	2271	G	O4'-C1'-N9	5.21	116.32	108.50
2	B	2715	C	P-O5'-C5'	5.21	128.72	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	R	80	ARG	O-C-N	-5.21	116.68	122.00
14	D	184	ARG	CA-C-N	5.21	131.49	121.54
14	D	184	ARG	C-N-CA	5.21	131.49	121.54
27	C	111	ALA	CA-C-N	5.21	131.12	120.80
27	C	111	ALA	C-N-CA	5.21	131.12	120.80
2	B	1034	G	O5'-C5'-C4'	-5.21	103.69	111.50
14	D	126	ASN	N-CA-CB	5.21	120.06	111.62
31	I	32	VAL	CA-C-N	5.21	128.27	120.87
31	I	32	VAL	C-N-CA	5.21	128.27	120.87
14	D	59	ARG	N-CA-C	5.21	118.73	112.38
2	B	152	A	C4'-C3'-C2'	-5.21	97.39	102.60
2	B	1511	G	P-O3'-C3'	-5.21	112.39	120.20
2	B	2000	C	P-O3'-C3'	-5.21	112.39	120.20
19	X	293	ASP	N-CA-CB	5.21	118.46	110.70
30	H	23	ALA	CA-C-O	5.21	125.94	120.42
2	B	2392	A	C5'-C4'-C3'	-5.21	108.19	116.00
2	B	2429	G	C4'-C3'-C2'	-5.21	97.39	102.60
2	B	38	A	C1'-C2'-O2'	5.20	116.20	108.40
2	B	666	A	C1'-O4'-C4'	-5.20	104.70	109.90
2	B	1041	G	O5'-C5'-C4'	-5.20	103.69	111.50
2	B	1131	G	C1'-O4'-C4'	-5.20	104.50	109.70
2	B	1364	G	O4'-C4'-C3'	-5.20	98.80	104.00
2	B	2604	U	O4'-C1'-N1	5.20	116.31	108.50
2	B	2888	C	O4'-C4'-C3'	-5.20	98.80	104.00
28	F	91	ARG	CD-NE-CZ	-5.20	117.11	124.40
2	B	1407	G	P-O3'-C3'	-5.20	112.40	120.20
24	6	34	ARG	N-CA-CB	5.20	117.86	110.06
2	B	608	A	O4'-C1'-N9	5.20	116.30	108.50
2	B	615	U	P-O3'-C3'	5.20	128.00	120.20
2	B	867	C	P-O3'-C3'	-5.20	112.40	120.20
2	B	990	A	O3'-P-O5'	-5.20	96.20	104.00
2	B	1551	A	P-O3'-C3'	5.20	128.00	120.20
2	B	1968	G	O5'-C5'-C4'	-5.20	103.70	111.50
2	B	2049	G	C5'-C4'-C3'	-5.20	108.20	116.00
2	B	2061	G	O4'-C1'-N9	5.20	116.00	108.20
13	S	110	ARG	NE-CZ-NH1	-5.20	116.30	121.50
19	X	345	ILE	N-CA-C	-5.20	100.27	108.23
1	A	71	C	O4'-C1'-C2'	-5.20	102.40	107.60
2	B	364	C	P-O5'-C5'	5.20	128.70	120.90
2	B	1071	G	C4'-C3'-O3'	-5.20	105.20	113.00
2	B	1844	C	C4'-C3'-C2'	-5.20	97.40	102.60
2	B	2494	G	C4'-C3'-O3'	-5.20	105.20	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	O	54	VAL	CA-CB-CG1	-5.20	101.56	110.40
12	R	91	GLN	O-C-N	5.20	128.69	123.13
23	5	126	GLN	CG-CD-NE2	-5.20	108.60	116.40
28	F	111	ARG	N-CA-C	-5.20	106.17	112.88
2	B	107	G	O4'-C1'-N9	5.20	116.30	108.50
2	B	238	C	C4'-C3'-O3'	-5.20	105.20	113.00
2	B	1033	U	O4'-C1'-C2'	5.20	111.00	105.80
2	B	1578	U	O4'-C1'-N1	5.20	116.30	108.50
2	B	2174	C	C5'-C4'-C3'	-5.20	108.20	116.00
2	B	225	C	O3'-P-O5'	-5.20	96.21	104.00
2	B	337	C	P-O5'-C5'	-5.20	113.11	120.90
2	B	914	G	C3'-C2'-O2'	5.20	118.49	110.70
2	B	1007	C	O4'-C1'-N1	5.20	116.29	108.50
2	B	1503	A	O3'-P-O5'	-5.20	96.21	104.00
2	B	1699	G	C3'-C2'-C1'	-5.20	96.30	101.50
2	B	2253	G	P-O3'-C3'	-5.20	112.41	120.20
2	B	2612	C	O4'-C1'-N1	5.20	116.29	108.50
10	P	32	VAL	N-CA-CB	5.20	119.80	111.23
20	E	4	VAL	N-CA-CB	5.20	119.80	111.23
29	G	163	TYR	CB-CG-CD2	5.20	128.59	120.80
6	1	34	SER	N-CA-C	-5.19	106.62	113.17
2	B	199	A	O4'-C4'-C3'	-5.19	100.91	106.10
2	B	319	G	N1-C6-O6	5.19	135.47	119.90
2	B	982	C	O4'-C4'-C3'	-5.19	98.81	104.00
2	B	1027	A	C5'-C4'-C3'	-5.19	108.21	116.00
8	N	13	ASN	CB-CG-OD1	5.19	131.18	120.80
26	8	33	HIS	CE1-NE2-CD2	-5.19	103.81	109.00
2	B	121	G	C1'-O4'-C4'	-5.19	104.71	109.90
2	B	1059	G	P-O5'-C5'	-5.19	113.11	120.90
2	B	1125	G	C5'-C4'-C3'	5.19	123.78	116.00
2	B	1323	C	P-O3'-C3'	-5.19	112.42	120.20
2	B	1382	G	O4'-C1'-N9	5.19	116.28	108.50
2	B	1959	G	C4'-C3'-C2'	-5.19	97.41	102.60
4	K	29	HIS	CE1-NE2-CD2	-5.19	103.81	109.00
14	D	97	SER	CA-C-N	5.19	129.13	120.62
14	D	97	SER	C-N-CA	5.19	129.13	120.62
2	B	1629	U	O4'-C1'-C2'	5.19	112.79	107.60
2	B	1631	G	O4'-C1'-N9	5.19	116.28	108.50
2	B	2700	A	C3'-C2'-O2'	5.19	118.48	110.70
8	N	100	CYS	O-C-N	5.19	129.49	122.59
31	I	128	ILE	CB-CA-C	-5.19	103.85	112.26
2	B	8	C	C4'-C3'-O3'	-5.19	105.22	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	332	A	N1-C6-N6	5.19	134.16	118.60
2	B	980	A	C1'-C2'-O2'	-5.19	104.02	111.80
2	B	1028	A	C4'-C3'-C2'	-5.19	97.41	102.60
2	B	1599	U	C4'-C3'-C2'	5.19	107.79	102.60
2	B	1668	A	C3'-C2'-O2'	-5.19	106.82	114.60
2	B	2021	C	O4'-C4'-C3'	5.19	109.19	104.00
2	B	2856	A	C4'-C3'-C2'	-5.19	97.41	102.60
31	I	70	THR	CA-C-O	-5.19	114.47	120.49
2	B	2149	U	C3'-C2'-C1'	-5.19	96.11	101.30
16	2	46	MET	N-CA-C	-5.19	105.52	111.07
17	U	94	PHE	N-CA-C	-5.19	101.41	109.14
32	J	3	THR	N-CA-C	-5.19	102.07	110.32
32	J	130	HIS	CB-CG-CD2	-5.19	124.46	131.20
2	B	848	C	O4'-C1'-C2'	-5.18	102.42	107.60
2	B	1112	G	C4'-C3'-C2'	-5.18	97.42	102.60
2	B	1285	A	C4'-C3'-C2'	5.18	107.78	102.60
2	B	1474	U	C4'-C3'-O3'	-5.18	105.22	113.00
2	B	2319	G	N9-C1'-C2'	5.18	121.78	114.00
2	B	2667	C	C4'-C3'-O3'	-5.18	105.22	113.00
2	B	2886	A	N9-C1'-C2'	5.18	119.78	112.00
19	X	124	ASP	CA-C-O	-5.18	113.06	120.16
19	X	287	VAL	O-C-N	-5.18	117.55	123.10
20	E	28	VAL	CB-CA-C	-5.18	105.14	112.14
20	E	165	HIS	CE1-NE2-CD2	-5.18	103.82	109.00
1	A	45	A	O5'-C5'-C4'	5.18	119.27	111.50
1	A	97	C	C1'-C2'-O2'	5.18	116.17	108.40
1	A	98	G	P-O3'-C3'	5.18	127.97	120.20
2	B	389	G	C5'-C4'-C3'	-5.18	107.43	115.20
2	B	1512	C	P-O3'-C3'	-5.18	112.43	120.20
2	B	2608	G	C5'-C4'-C3'	5.18	123.78	116.00
27	C	71	ASP	CA-C-O	5.18	126.26	120.82
2	B	228	C	C5'-C4'-O4'	5.18	116.87	109.10
2	B	1976	U	P-O5'-C5'	5.18	128.67	120.90
2	B	2679	A	O4'-C4'-C3'	-5.18	98.82	104.00
13	S	40	ASN	CB-CA-C	5.18	118.26	109.50
19	X	339	ASP	CA-C-N	5.18	127.22	120.28
19	X	339	ASP	C-N-CA	5.18	127.22	120.28
24	6	18	PHE	CB-CG-CD2	5.18	129.51	120.70
31	I	16	MET	CA-C-N	5.18	131.44	121.54
31	I	16	MET	C-N-CA	5.18	131.44	121.54
1	A	73	A	C4'-C3'-C2'	5.18	107.78	102.60
2	B	785	G	C4'-C3'-C2'	5.18	107.78	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1348	C	O3'-P-O5'	5.18	111.77	104.00
2	B	1355	G	O4'-C4'-C3'	-5.18	98.82	104.00
2	B	1622	G	O3'-P-O5'	5.18	111.77	104.00
2	B	2410	G	O5'-C5'-C4'	-5.18	103.73	111.50
2	B	2416	C	C4'-C3'-O3'	-5.18	105.23	113.00
2	B	2713	U	O3'-P-O5'	-5.18	96.23	104.00
2	B	2892	G	O4'-C1'-C2'	5.18	112.78	107.60
12	R	37	GLU	N-CA-CB	-5.18	102.65	111.20
12	R	52	PRO	N-CA-C	-5.18	103.06	111.03
2	B	1155	A	P-O5'-C5'	5.18	128.67	120.90
2	B	1398	C	C4'-C3'-O3'	-5.18	105.23	113.00
2	B	1500	G	P-O5'-C5'	-5.18	113.13	120.90
2	B	2407	A	C4'-C3'-C2'	5.18	107.78	102.60
2	B	222	A	O4'-C4'-C3'	-5.18	100.92	106.10
2	B	365	U	C4'-C3'-O3'	-5.18	105.23	113.00
2	B	609	A	O4'-C1'-C2'	-5.18	102.42	107.60
2	B	658	U	O4'-C1'-N1	5.18	116.27	108.50
2	B	2093	G	O4'-C1'-N9	5.18	116.26	108.50
2	B	2278	A	P-O5'-C5'	5.18	128.67	120.90
5	L	70	LYS	CA-C-N	5.18	127.53	120.54
5	L	70	LYS	C-N-CA	5.18	127.53	120.54
2	B	96	C	O4'-C1'-N1	5.17	116.26	108.50
2	B	386	G	O4'-C1'-C2'	5.17	110.97	105.80
2	B	1343	G	O3'-P-O5'	-5.17	96.24	104.00
2	B	1561	C	C2'-C3'-O3'	5.17	121.46	113.70
2	B	1840	G	C4'-C3'-C2'	-5.17	97.42	102.60
2	B	1924	C	O5'-C5'-C4'	-5.17	103.74	111.50
2	B	2042	A	P-O3'-C3'	-5.17	112.44	120.20
2	B	2817	U	C4'-C3'-O3'	-5.17	105.24	113.00
7	M	40	ARG	N-CA-C	-5.17	100.26	109.06
19	X	431	PRO	N-CA-CB	5.17	108.70	102.85
20	E	68	ALA	CA-C-N	5.17	131.83	122.62
20	E	68	ALA	C-N-CA	5.17	131.83	122.62
20	E	128	ALA	N-CA-C	-5.17	103.56	108.22
23	5	157	LYS	N-CA-CB	5.17	117.73	110.12
26	8	12	ARG	N-CA-C	-5.17	106.72	112.57
26	8	33	HIS	ND1-CE1-NE2	5.17	113.57	108.40
29	G	103	ASN	CB-CA-C	5.17	118.07	109.53
31	I	44	LYS	CB-CA-C	-5.17	102.40	110.37
1	A	18	G	C4'-C3'-O3'	-5.17	105.24	113.00
2	B	1193	G	O4'-C1'-N9	5.17	116.26	108.50
2	B	1485	U	P-O3'-C3'	5.17	127.96	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2664	G	O4'-C1'-C2'	-5.17	102.43	107.60
19	X	316	LEU	O-C-N	5.17	129.39	123.29
23	5	55	SER	N-CA-C	-5.17	99.78	110.80
32	J	76	HIS	CE1-NE2-CD2	-5.17	103.83	109.00
2	B	388	G	O4'-C1'-N9	5.17	116.25	108.50
8	N	34	ILE	CA-C-N	5.17	130.29	123.00
8	N	34	ILE	C-N-CA	5.17	130.29	123.00
2	B	72	U	C4'-C3'-C2'	-5.17	97.43	102.60
2	B	229	C	O4'-C1'-N1	5.17	116.25	108.50
2	B	642	U	C3'-C2'-C1'	5.17	106.47	101.30
2	B	1692	U	O4'-C1'-N1	5.17	116.25	108.50
2	B	2074	U	O4'-C1'-N1	5.17	116.25	108.50
2	B	2493	U	C4'-C3'-C2'	-5.17	97.43	102.60
2	B	2885	G	P-O3'-C3'	5.17	127.95	120.20
19	X	127	GLN	CA-C-N	-5.17	114.44	122.09
19	X	127	GLN	C-N-CA	-5.17	114.44	122.09
29	G	95	ALA	N-CA-C	-5.17	99.79	110.80
2	B	173	A	C5'-C4'-O4'	5.17	117.55	109.80
2	B	400	G	C4'-C3'-O3'	-5.17	105.25	113.00
2	B	501	A	C1'-C2'-O2'	5.17	116.15	108.40
2	B	726	G	C4'-C3'-O3'	-5.17	105.25	113.00
2	B	1117	C	O5'-C5'-C4'	-5.17	103.75	111.50
2	B	2033	A	O4'-C1'-N9	5.17	115.95	108.20
2	B	2055	C	C5'-C4'-C3'	5.17	122.95	115.20
2	B	2521	C	P-O5'-C5'	-5.17	113.15	120.90
2	B	2847	U	C3'-C2'-O2'	5.17	118.45	110.70
8	N	67	PHE	N-CA-C	-5.17	106.82	113.23
19	X	318	ILE	CA-C-O	5.17	125.81	120.39
2	B	556	A	P-O3'-C3'	-5.17	112.45	120.20
2	B	749	A	C4'-C3'-C2'	5.17	107.77	102.60
2	B	17	G	P-O5'-C5'	-5.16	113.15	120.90
2	B	972	A	P-O5'-C5'	-5.16	113.16	120.90
2	B	1057	A	C4'-C3'-O3'	-5.16	105.26	113.00
2	B	1638	C	C4'-C3'-O3'	-5.16	105.25	113.00
2	B	2272	U	P-O3'-C3'	5.16	127.94	120.20
2	B	2272	U	O4'-C1'-C2'	5.16	110.96	105.80
5	L	63	LYS	CA-C-O	-5.16	115.36	121.66
29	G	84	LYS	O-C-N	-5.16	117.47	122.99
2	B	948	C	C5'-C4'-C3'	5.16	123.74	116.00
2	B	2323	G	O3'-P-O5'	-5.16	96.26	104.00
27	C	237	ARG	CA-C-N	5.16	129.96	121.39
27	C	237	ARG	C-N-CA	5.16	129.96	121.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	10	G	O4'-C1'-C2'	5.16	112.76	107.60
2	B	95	A	O4'-C4'-C3'	-5.16	98.84	104.00
2	B	640	C	O5'-C5'-C4'	-5.16	103.76	111.50
2	B	1319	C	C5'-C4'-C3'	5.16	123.74	116.00
2	B	1374	G	C2'-C3'-O3'	5.16	121.44	113.70
18	W	34	LYS	CA-C-N	5.16	130.03	122.39
18	W	34	LYS	C-N-CA	5.16	130.03	122.39
27	C	225	ASN	N-CA-C	-5.16	100.55	109.58
2	B	1511	G	C4'-C3'-O3'	-5.16	105.26	113.00
2	B	1994	C	O4'-C1'-N1	5.16	116.24	108.50
2	B	2127	G	P-O5'-C5'	-5.16	113.16	120.90
2	B	2236	U	C2'-C3'-O3'	-5.16	105.96	113.70
2	B	2577	A	C5'-C4'-C3'	5.16	123.74	116.00
2	B	2769	U	P-O5'-C5'	5.16	128.64	120.90
5	L	38	GLN	N-CA-CB	5.16	118.49	110.44
10	P	36	LYS	O-C-N	5.16	129.25	123.27
14	D	67	HIS	N-CA-CB	5.16	117.80	110.06
20	E	173	THR	CA-CB-OG1	5.16	117.34	109.60
25	7	23	HIS	CG-CD2-NE2	5.16	112.36	107.20
28	F	113	PHE	O-C-N	-5.16	115.73	122.59
30	H	37	VAL	CA-C-N	5.16	126.29	119.84
30	H	37	VAL	C-N-CA	5.16	126.29	119.84
30	H	135	HIS	CE1-NE2-CD2	-5.16	103.84	109.00
2	B	2244	U	O3'-P-O5'	5.16	111.74	104.00
23	5	65	LEU	CD1-CG-CD2	5.16	122.14	110.80
2	B	56	A	O5'-C5'-C4'	-5.16	103.77	111.50
2	B	103	A	N9-C1'-C2'	5.16	119.73	112.00
2	B	262	A	O4'-C1'-C2'	5.16	112.76	107.60
2	B	763	G	C2'-C3'-O3'	5.16	121.43	113.70
2	B	1142	A	P-O3'-C3'	-5.16	112.47	120.20
2	B	2228	G	O5'-C5'-C4'	-5.16	103.77	111.50
7	M	76	LYS	CA-C-O	-5.16	114.86	120.69
30	H	54	LEU	N-CA-C	5.16	117.30	111.11
30	H	76	GLU	CA-C-N	-5.16	114.22	122.62
30	H	76	GLU	C-N-CA	-5.16	114.22	122.62
5	L	16	GLY	O-C-N	5.15	129.40	122.70
19	X	417	PRO	N-CD-CG	5.15	110.93	103.20
22	3	20	ALA	N-CA-CB	5.15	119.20	110.49
2	B	1519	G	O4'-C4'-C3'	5.15	109.15	104.00
2	B	2236	U	C5'-C4'-C3'	5.15	123.73	116.00
2	B	2333	A	C4'-C3'-O3'	5.15	117.13	109.40
2	B	2512	C	C4'-C3'-O3'	-5.15	105.27	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2676	C	O5'-C5'-C4'	-5.15	103.77	111.50
4	K	115	ILE	N-CA-CB	5.15	118.31	110.58
5	L	100	ILE	CA-C-O	5.15	125.72	119.54
5	L	140	GLY	N-CA-C	-5.15	104.97	111.72
19	X	227	ARG	NE-CZ-NH1	-5.15	116.35	121.50
19	X	279	LEU	CB-CA-C	-5.15	101.10	110.63
26	8	18	LYS	N-CA-C	-5.15	100.50	108.90
29	G	79	THR	N-CA-CB	5.15	119.20	110.49
30	H	73	ASN	CA-CB-CG	5.15	117.75	112.60
2	B	497	A	C4'-C3'-C2'	-5.15	97.45	102.60
2	B	885	C	O4'-C1'-N1	5.15	116.22	108.50
2	B	1852	U	C4'-C3'-C2'	-5.15	97.45	102.60
2	B	2656	U	C4'-C3'-C2'	5.15	107.75	102.60
29	G	101	VAL	N-CA-CB	5.15	117.17	110.99
11	Q	74	SER	CA-C-O	5.15	127.89	121.81
17	U	44	HIS	CE1-NE2-CD2	-5.15	103.85	109.00
2	B	852	U	O4'-C1'-C2'	-5.15	102.45	107.60
2	B	1174	U	O4'-C1'-C2'	-5.15	100.65	105.80
2	B	2057	G	O3'-P-O5'	-5.15	96.28	104.00
2	B	2433	A	O3'-P-O5'	-5.15	96.28	104.00
2	B	2535	G	C5'-C4'-C3'	-5.15	108.28	116.00
2	B	2817	U	O5'-C5'-C4'	-5.15	103.78	111.50
14	D	135	GLY	N-CA-C	-5.15	100.98	113.18
29	G	125	PRO	N-CA-CB	5.15	108.65	103.25
2	B	1248	G	O4'-C1'-N9	5.15	115.92	108.20
2	B	1282	U	C4'-C3'-O3'	-5.15	105.28	113.00
2	B	2034	U	C4'-C3'-O3'	-5.15	105.28	113.00
2	B	2582	G	C3'-C2'-O2'	5.15	118.42	110.70
2	B	2682	A	O4'-C1'-N9	5.15	116.22	108.50
7	M	14	LYS	N-CA-CB	5.15	117.63	110.07
2	B	246	C	O4'-C1'-N1	5.14	116.22	108.50
2	B	511	U	O5'-C5'-C4'	-5.14	103.78	111.50
2	B	880	G	C1'-O4'-C4'	5.14	115.04	109.90
2	B	1648	U	N1-C1'-C2'	-5.14	104.28	112.00
2	B	1764	C	P-O3'-C3'	-5.14	112.48	120.20
13	S	104	THR	CA-C-N	5.14	129.74	123.10
13	S	104	THR	C-N-CA	5.14	129.74	123.10
1	A	87	U	O3'-P-O5'	-5.14	96.29	104.00
2	B	361	G	C4'-C3'-O3'	-5.14	105.29	113.00
2	B	591	U	P-O5'-C5'	5.14	128.61	120.90
2	B	693	A	P-O5'-C5'	5.14	128.61	120.90
2	B	1400	U	P-O3'-C3'	-5.14	112.49	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1465	G	O5'-C5'-C4'	-5.14	103.79	111.50
2	B	2722	G	P-O5'-C5'	5.14	128.61	120.90
19	X	445	SER	CA-C-N	5.14	130.00	122.39
19	X	445	SER	C-N-CA	5.14	130.00	122.39
20	E	113	VAL	CA-CB-CG1	5.14	119.14	110.40
30	H	79	THR	CA-C-N	5.14	130.33	122.92
30	H	79	THR	C-N-CA	5.14	130.33	122.92
2	B	1025	G	C5'-C4'-C3'	-5.14	107.49	115.20
2	B	1918	A	P-O5'-C5'	-5.14	113.19	120.90
3	O	65	THR	N-CA-C	-5.14	99.85	110.80
14	D	180	VAL	N-CA-C	-5.14	100.48	107.99
17	U	96	LYS	N-CA-CB	5.14	118.36	110.49
19	X	202	PRO	N-CA-C	-5.14	102.55	112.01
19	X	435	LYS	N-CA-CB	5.14	117.46	110.01
1	A	90	C	C1'-O4'-C4'	-5.14	104.76	109.90
2	B	489	G	P-O3'-C3'	5.14	127.91	120.20
2	B	743	A	C4'-C3'-O3'	-5.14	105.29	113.00
2	B	820	A	C3'-C2'-C1'	5.14	106.44	101.30
2	B	1388	G	P-O5'-C5'	-5.14	113.19	120.90
2	B	1526	C	C4'-C3'-C2'	-5.14	97.46	102.60
2	B	1701	A	O3'-P-O5'	-5.14	96.29	104.00
2	B	2457	U	C3'-C2'-C1'	-5.14	96.16	101.30
11	Q	5	ARG	N-CA-CB	5.14	119.18	110.49
19	X	367	SER	O-C-N	-5.14	116.67	122.12
2	B	1183	U	O4'-C1'-C2'	5.14	112.74	107.60
2	B	2331	G	C5'-C4'-C3'	5.14	123.71	116.00
30	H	65	ALA	CA-C-O	-5.14	115.10	120.55
2	B	1351	C	P-O5'-C5'	-5.14	113.20	120.90
2	B	2593	U	O3'-P-O5'	-5.14	96.29	104.00
5	L	18	ARG	CA-C-N	5.14	131.35	121.54
5	L	18	ARG	C-N-CA	5.14	131.35	121.54
18	W	28	ALA	N-CA-CB	5.14	119.17	110.49
28	F	89	THR	CA-C-O	-5.14	114.83	120.43
30	H	31	VAL	CA-CB-CG1	-5.14	101.67	110.40
2	B	563	A	P-O3'-C3'	-5.13	112.50	120.20
2	B	687	C	O5'-C5'-C4'	5.13	119.20	111.50
2	B	1490	A	C1'-O4'-C4'	5.13	115.03	109.90
2	B	1799	G	O4'-C1'-N9	5.13	115.90	108.20
2	B	433	C	O4'-C1'-N1	5.13	116.20	108.50
2	B	1153	C	C1'-O4'-C4'	5.13	115.03	109.90
2	B	1609	A	P-O3'-C3'	5.13	127.90	120.20
2	B	1819	A	C3'-C2'-O2'	-5.13	106.90	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	C	45	ASN	CA-CB-CG	-5.13	107.47	112.60
27	C	174	ARG	CA-C-O	-5.13	115.30	120.84
2	B	765	C	C1'-O4'-C4'	-5.13	104.77	109.90
2	B	1252	G	C5'-C4'-C3'	-5.13	107.50	115.20
10	P	88	ARG	N-CA-C	-5.13	99.98	108.75
12	R	41	ILE	CA-CB-CG2	-5.13	101.78	110.50
1	A	98	G	P-O5'-C5'	-5.13	113.21	120.90
2	B	699	A	C4'-C3'-O3'	-5.13	105.31	113.00
2	B	705	A	P-O5'-C5'	-5.13	113.21	120.90
2	B	732	C	C4'-C3'-C2'	-5.13	97.47	102.60
2	B	1366	A	O3'-P-O5'	-5.13	96.31	104.00
2	B	1459	G	C4'-C3'-O3'	-5.13	105.31	113.00
16	2	9	THR	CA-C-O	5.13	127.84	120.51
27	C	86	ARG	N-CA-C	-5.13	99.88	110.80
2	B	589	U	O3'-P-O5'	5.13	111.69	104.00
2	B	645	C	O4'-C1'-C2'	5.13	110.93	105.80
2	B	687	C	C4'-C3'-O3'	-5.13	105.31	113.00
2	B	1115	G	C4'-C3'-O3'	-5.13	105.31	113.00
2	B	1934	C	O4'-C1'-N1	5.13	116.19	108.50
3	0	4	CYS	CB-CA-C	-5.13	99.92	110.38
19	X	216	SER	N-CA-C	-5.13	105.81	111.71
23	5	234	ASN	CA-CB-CG	-5.13	107.47	112.60
30	H	132	PHE	CB-CA-C	5.12	119.06	111.17
2	B	385	C	C3'-C2'-O2'	5.12	118.39	110.70
2	B	482	A	P-O3'-C3'	-5.12	112.51	120.20
2	B	1529	G	P-O3'-C3'	-5.12	112.52	120.20
19	X	2	VAL	N-CA-CB	-5.12	104.04	111.21
19	X	220	ASN	CA-C-N	5.12	127.10	120.44
19	X	220	ASN	C-N-CA	5.12	127.10	120.44
31	I	37	PHE	CA-C-O	5.12	127.84	120.51
2	B	721	A	P-O5'-C5'	-5.12	113.22	120.90
2	B	1144	A	O4'-C1'-N9	5.12	116.18	108.50
2	B	1339	G	P-O5'-C5'	-5.12	113.22	120.90
2	B	1562	U	O4'-C1'-N1	5.12	116.18	108.50
2	B	1968	G	P-O5'-C5'	5.12	128.58	120.90
2	B	2294	G	O4'-C4'-C3'	5.12	109.12	104.00
2	B	2795	C	C3'-C2'-C1'	-5.12	96.18	101.30
4	K	98	ARG	NE-CZ-NH2	-5.12	114.59	119.20
23	5	199	ALA	N-CA-C	5.12	116.90	110.24
32	J	34	ARG	N-CA-C	-5.12	105.78	111.36
2	B	1553	A	C4'-C3'-C2'	-5.12	97.48	102.60
2	B	1731	G	C1'-C2'-O2'	-5.12	104.12	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2004	G	O4'-C1'-N9	5.12	116.18	108.50
2	B	2314	A	C1'-O4'-C4'	-5.12	104.78	109.90
2	B	2714	G	C4'-C3'-C2'	-5.12	97.48	102.60
13	S	77	ASP	CA-CB-CG	-5.12	107.48	112.60
2	B	914	G	O4'-C1'-N9	5.12	116.18	108.50
2	B	2122	U	O4'-C1'-N1	5.12	116.18	108.50
2	B	2636	C	C3'-C2'-C1'	5.12	106.42	101.30
17	U	31	GLY	N-CA-C	-5.12	101.05	113.18
2	B	881	G	O4'-C1'-N9	5.12	116.17	108.50
2	B	1717	A	P-O5'-C5'	5.12	128.57	120.90
2	B	1843	C	C4'-C3'-O3'	-5.12	105.33	113.00
2	B	1853	A	O3'-P-O5'	5.12	111.68	104.00
2	B	2246	G	P-O5'-C5'	5.12	128.57	120.90
5	L	123	ARG	NE-CZ-NH1	-5.12	116.38	121.50
11	Q	51	GLN	CB-CG-CD	-5.12	103.90	112.60
2	B	737	C	C2'-C3'-O3'	-5.12	106.03	113.70
2	B	738	G	O4'-C4'-C3'	-5.12	98.89	104.00
2	B	800	A	O4'-C4'-C3'	-5.12	100.98	106.10
2	B	813	U	C2'-C3'-O3'	-5.12	106.03	113.70
2	B	1649	G	O4'-C1'-N9	5.12	116.17	108.50
2	B	2321	U	C5'-C4'-C3'	5.12	123.67	116.00
2	B	2545	G	C3'-C2'-C1'	5.12	106.42	101.30
3	O	32	LEU	CA-C-O	-5.12	116.13	121.55
9	O	78	VAL	O-C-N	5.12	127.04	121.87
11	Q	87	VAL	N-CA-CB	5.12	119.67	111.23
12	R	13	ARG	NE-CZ-NH2	-5.12	114.59	119.20
19	X	89	VAL	N-CA-C	-5.12	100.51	108.95
32	J	85	LYS	N-CA-CB	5.12	120.39	111.13
32	J	141	ASP	N-CA-C	-5.12	99.90	110.80
2	B	78	U	O4'-C4'-C3'	-5.11	98.89	104.00
2	B	838	C	C5'-C4'-C3'	5.11	123.67	116.00
2	B	895	U	C5'-C4'-C3'	5.11	123.67	116.00
2	B	1293	C	O4'-C1'-C2'	5.11	112.71	107.60
23	5	161	VAL	CA-CB-CG1	5.11	119.09	110.40
2	B	1977	A	C4'-C3'-O3'	-5.11	105.33	113.00
2	B	2772	C	O5'-C5'-C4'	-5.11	103.83	111.50
11	Q	27	ARG	CD-NE-CZ	-5.11	117.24	124.40
14	D	85	ALA	N-CA-C	-5.11	99.91	110.80
14	D	134	HIS	CA-CB-CG	-5.11	108.69	113.80
1	A	7	G	N9-C1'-C2'	-5.11	104.33	112.00
2	B	157	C	P-O5'-C5'	5.11	128.56	120.90
2	B	876	C	C2'-C3'-O3'	5.11	121.37	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	909	A	N1-C6-N6	5.11	133.93	118.60
7	M	125	PRO	N-CA-C	-5.11	101.94	112.47
18	W	80	HIS	CG-CD2-NE2	5.11	112.31	107.20
27	C	27	LYS	CA-C-O	-5.11	115.25	120.87
27	C	142	ASN	CA-C-N	5.11	127.93	120.98
27	C	142	ASN	C-N-CA	5.11	127.93	120.98
2	B	294	A	P-O5'-C5'	-5.11	113.24	120.90
2	B	710	U	C5'-C4'-C3'	-5.11	108.34	116.00
2	B	1716	U	C5'-C4'-C3'	-5.11	108.34	116.00
2	B	1796	U	C4'-C3'-C2'	5.11	107.71	102.60
2	B	2586	U	O4'-C1'-N1	5.11	116.16	108.50
27	C	77	VAL	CA-C-N	-5.11	114.50	122.42
27	C	77	VAL	C-N-CA	-5.11	114.50	122.42
32	J	7	LYS	N-CA-C	-5.11	102.43	110.14
2	B	193	U	P-O5'-C5'	-5.11	113.24	120.90
2	B	268	C	P-O3'-C3'	5.11	127.86	120.20
2	B	285	G	C2'-C3'-O3'	-5.11	106.04	113.70
2	B	518	G	O4'-C4'-C3'	5.11	109.11	104.00
2	B	787	C	O4'-C4'-C3'	-5.11	98.89	104.00
2	B	903	C	C4'-C3'-C2'	-5.11	97.49	102.60
2	B	1027	A	P-O5'-C5'	5.11	128.56	120.90
2	B	1163	G	O4'-C4'-C3'	-5.11	98.89	104.00
10	P	112	ARG	CD-NE-CZ	-5.11	117.25	124.40
19	X	355	ALA	N-CA-C	-5.11	107.05	113.28
27	C	45	ASN	OD1-CG-ND2	-5.11	117.49	122.60
27	C	96	LYS	CA-C-N	5.11	128.77	120.60
27	C	96	LYS	C-N-CA	5.11	128.77	120.60
30	H	135	HIS	CA-C-N	5.11	128.04	120.17
30	H	135	HIS	C-N-CA	5.11	128.04	120.17
31	I	41	PHE	CA-C-N	5.11	128.10	120.90
31	I	41	PHE	C-N-CA	5.11	128.10	120.90
2	B	1451	C	O5'-C5'-C4'	5.11	119.36	111.70
2	B	1791	A	C4'-C3'-O3'	-5.11	105.34	113.00
2	B	1902	C	C3'-C2'-C1'	5.11	106.41	101.30
2	B	1932	A	O3'-P-O5'	5.11	111.66	104.00
2	B	2463	C	P-O3'-C3'	-5.11	112.54	120.20
2	B	2723	C	P-O3'-C3'	5.11	127.86	120.20
18	W	46	LYS	CA-C-O	5.11	125.96	120.70
23	5	186	LYS	CG-CD-CE	5.11	123.04	111.30
27	C	43	ASN	CB-CG-ND2	5.11	124.06	116.40
2	B	1279	G	C4'-C3'-O3'	-5.10	105.34	113.00
2	B	2354	C	C2'-C3'-O3'	5.10	121.36	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	M	71	LYS	O-C-N	5.10	127.38	121.10
21	Y	40	ARG	CA-C-O	5.10	127.81	120.51
30	H	145	ASN	OD1-CG-ND2	5.10	127.70	122.60
1	A	94	A	C5'-C4'-C3'	5.10	123.65	116.00
2	B	394	C	C4'-C3'-C2'	-5.10	97.50	102.60
2	B	1127	A	P-O5'-C5'	-5.10	113.25	120.90
4	K	87	LEU	CA-C-O	-5.10	114.79	120.66
11	Q	30	VAL	N-CA-CB	5.10	119.65	111.23
13	S	40	ASN	CA-C-O	-5.10	115.26	121.28
27	C	48	ILE	N-CA-C	5.10	119.24	112.76
1	A	51	G	C3'-C2'-C1'	-5.10	96.20	101.30
2	B	2078	C	P-O5'-C5'	-5.10	113.25	120.90
2	B	2679	A	P-O3'-C3'	5.10	127.85	120.20
5	L	127	VAL	N-CA-CB	5.10	121.31	111.62
2	B	10	A	O4'-C4'-C3'	-5.10	98.90	104.00
2	B	131	A	N9-C1'-C2'	-5.10	104.35	112.00
2	B	267	C	O3'-P-O5'	-5.10	96.35	104.00
2	B	434	U	P-O5'-C5'	-5.10	113.25	120.90
2	B	2093	G	O4'-C4'-C3'	-5.10	98.90	104.00
2	B	2455	G	O4'-C1'-N9	5.10	116.15	108.50
2	B	2498	C	O4'-C1'-N1	5.10	116.15	108.50
6	1	8	GLU	N-CA-CB	5.10	117.45	109.85
9	O	22	GLY	CA-C-N	5.10	131.28	121.54
9	O	22	GLY	C-N-CA	5.10	131.28	121.54
14	D	115	GLY	O-C-N	-5.10	116.07	122.70
16	2	27	GLY	N-CA-C	-5.10	101.09	113.18
16	2	53	MET	CA-C-N	5.10	127.73	122.27
16	2	53	MET	C-N-CA	5.10	127.73	122.27
19	X	241	ILE	O-C-N	-5.10	116.20	122.57
20	E	27	LEU	CA-C-O	5.10	126.36	120.90
24	6	16	HIS	CE1-NE2-CD2	-5.10	103.90	109.00
28	F	149	ARG	NE-CZ-NH2	-5.10	114.61	119.20
2	B	104	A	C4'-C3'-C2'	-5.10	97.50	102.60
2	B	1703	G	P-O3'-C3'	-5.10	112.55	120.20
2	B	2233	U	C1'-O4'-C4'	-5.10	104.80	109.90
24	6	30	VAL	CB-CA-C	-5.10	105.34	112.02
2	B	275	C	O4'-C1'-N1	5.09	116.14	108.50
2	B	625	G	O4'-C1'-C2'	-5.09	102.50	107.60
2	B	658	U	P-O3'-C3'	-5.09	112.56	120.20
2	B	1311	G	O4'-C1'-N9	5.09	115.84	108.20
2	B	1991	U	C5'-C4'-C3'	5.09	123.64	116.00
2	B	2055	C	O4'-C4'-C3'	-5.09	101.01	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2262	U	C1'-O4'-C4'	-5.09	104.81	109.90
2	B	2509	G	O4'-C1'-N9	5.09	116.14	108.50
2	B	2516	A	C4'-C3'-C2'	5.09	107.69	102.60
16	2	51	SER	N-CA-CB	5.09	117.61	110.12
31	I	33	ASN	CB-CG-ND2	-5.09	108.76	116.40
1	A	109	A	C4'-C3'-O3'	-5.09	105.36	113.00
2	B	443	A	P-O3'-C3'	-5.09	112.56	120.20
2	B	699	A	P-O3'-C3'	-5.09	112.56	120.20
2	B	1133	A	P-O5'-C5'	5.09	128.54	120.90
2	B	1808	A	O5'-C5'-C4'	5.09	119.34	111.70
2	B	2408	U	C4'-C3'-O3'	-5.09	105.36	113.00
23	5	172	HIS	CG-CD2-NE2	5.09	112.29	107.20
28	F	124	ARG	NE-CZ-NH2	-5.09	114.62	119.20
30	H	124	THR	CA-C-N	5.09	130.69	122.29
30	H	124	THR	C-N-CA	5.09	130.69	122.29
2	B	48	G	P-O5'-C5'	-5.09	113.26	120.90
2	B	932	U	P-O3'-C3'	-5.09	112.56	120.20
2	B	1502	A	C2'-C3'-O3'	5.09	121.34	113.70
2	B	2102	G	O4'-C1'-N9	5.09	116.14	108.50
32	J	52	ASP	N-CA-CB	5.09	118.89	110.69
32	J	82	GLY	CA-C-O	-5.09	117.14	121.57
2	B	694	U	C4'-C3'-O3'	-5.09	105.37	113.00
2	B	1049	C	O4'-C1'-N1	5.09	116.14	108.50
2	B	1478	G	O3'-P-O5'	-5.09	96.36	104.00
2	B	1676	A	C2'-C3'-O3'	5.09	121.33	113.70
2	B	2765	A	O5'-C5'-C4'	5.09	119.14	111.50
14	D	75	ALA	N-CA-CB	5.09	119.09	110.49
28	F	57	ALA	CB-CA-C	-5.09	101.21	110.63
2	B	260	G	O4'-C1'-N9	5.09	116.13	108.50
2	B	1242	U	C5'-C4'-C3'	5.09	123.63	116.00
2	B	2817	U	N1-C1'-C2'	-5.09	104.37	112.00
19	X	430	LEU	CA-C-O	-5.09	115.39	120.63
23	5	30	LEU	CA-C-O	-5.09	115.14	120.63
2	B	661	A	O5'-C5'-C4'	-5.09	103.87	111.50
2	B	748	G	O3'-P-O5'	-5.09	96.37	104.00
2	B	1755	A	C1'-O4'-C4'	-5.09	104.81	109.90
2	B	2275	C	C4'-C3'-O3'	5.09	117.03	109.40
2	B	2380	C	O4'-C1'-N1	5.09	116.13	108.50
2	B	2648	G	O5'-C5'-C4'	-5.09	103.87	111.50
2	B	2887	A	C1'-O4'-C4'	-5.09	104.81	109.90
8	N	107	ASN	N-CA-C	-5.09	106.09	113.21
10	P	14	GLN	CA-C-N	5.09	129.67	122.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	P	14	GLN	C-N-CA	5.09	129.67	122.24
30	H	66	ASN	OD1-CG-ND2	5.09	127.69	122.60
2	B	295	G	C5'-C4'-O4'	-5.08	102.17	109.80
21	Y	59	PHE	O-C-N	-5.08	115.83	122.59
30	H	79	THR	CA-CB-CG2	5.08	119.14	110.50
2	B	46	G	C5'-C4'-C3'	-5.08	108.37	116.00
2	B	85	G	C1'-C2'-O2'	5.08	116.03	108.40
2	B	641	U	C5'-C4'-C3'	5.08	123.62	116.00
2	B	676	A	P-O3'-C3'	5.08	127.82	120.20
2	B	733	G	C5'-C4'-C3'	-5.08	108.38	116.00
2	B	1904	G	C5'-C4'-C3'	5.08	123.63	116.00
11	Q	60	TRP	CE2-CD2-CE3	5.08	123.88	118.80
14	D	170	VAL	O-C-N	-5.08	118.55	122.97
27	C	72	GLY	CA-C-N	-5.08	117.73	123.02
27	C	72	GLY	C-N-CA	-5.08	117.73	123.02
27	C	83	ASP	N-CA-C	-5.08	101.55	108.11
27	C	164	VAL	CB-CA-C	-5.08	106.42	111.30
28	F	161	SER	CA-C-N	5.08	127.35	120.44
28	F	161	SER	C-N-CA	5.08	127.35	120.44
29	G	139	VAL	CB-CA-C	5.08	118.21	111.70
30	H	135	HIS	ND1-CE1-NE2	5.08	113.48	108.40
2	B	1014	A	O5'-C5'-C4'	-5.08	103.88	111.50
2	B	1662	U	P-O3'-C3'	-5.08	112.58	120.20
13	S	100	THR	CA-C-O	-5.08	115.84	121.33
27	C	127	ASN	CA-CB-CG	-5.08	107.52	112.60
2	B	1124	G	O5'-C5'-C4'	-5.08	103.88	111.50
2	B	1451	C	P-O3'-C3'	-5.08	112.58	120.20
2	B	1660	G	C4'-C3'-C2'	5.08	107.68	102.60
2	B	2741	A	C4'-C3'-C2'	-5.08	97.52	102.60
25	7	32	LEU	CA-C-N	-5.08	111.84	121.54
25	7	32	LEU	C-N-CA	-5.08	111.84	121.54
27	C	225	ASN	O-C-N	-5.08	116.89	121.31
29	G	162	ARG	N-CA-CB	-5.08	103.20	110.87
2	B	185	G	O4'-C1'-N9	5.08	116.12	108.50
2	B	647	G	O4'-C1'-N9	5.08	116.12	108.50
2	B	774	G	C5'-C4'-O4'	-5.08	101.48	109.10
2	B	1592	C	C4'-C3'-C2'	-5.08	97.52	102.60
2	B	2110	G	O5'-C5'-C4'	5.08	119.32	111.70
2	B	2359	C	P-O3'-C3'	-5.08	112.58	120.20
2	B	2570	G	O4'-C1'-N9	5.08	116.12	108.50
2	B	2605	U	C5'-C4'-C3'	5.08	123.62	116.00
7	M	29	GLY	CA-C-O	-5.08	114.19	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	X	282	ILE	CB-CG1-CD1	5.08	124.47	113.80
28	F	16	MET	N-CA-C	-5.08	105.81	112.72
29	G	62	ALA	N-CA-CB	5.08	117.38	110.01
29	G	167	VAL	N-CA-C	-5.08	98.78	109.34
2	B	1348	C	C4'-C3'-O3'	5.08	120.61	113.00
2	B	1542	U	O4'-C1'-N1	5.08	116.12	108.50
2	B	2070	A	P-O5'-C5'	-5.08	113.28	120.90
1	A	59	A	C4'-C3'-O3'	-5.08	105.39	113.00
2	B	113	U	P-O5'-C5'	-5.08	113.29	120.90
2	B	517	C	C4'-C3'-O3'	-5.08	105.39	113.00
2	B	663	G	C4'-C3'-O3'	-5.08	105.39	113.00
2	B	1934	C	C4'-C3'-C2'	-5.08	97.53	102.60
2	B	2285	C	O4'-C4'-C3'	-5.08	98.92	104.00
25	7	33	THR	CA-CB-CG2	5.08	119.13	110.50
2	B	268	C	O4'-C1'-C2'	-5.07	102.53	107.60
2	B	1008	A	P-O3'-C3'	5.07	127.81	120.20
2	B	1586	A	C4'-C3'-O3'	-5.07	105.39	113.00
2	B	1824	G	C3'-C2'-O2'	5.07	118.31	110.70
2	B	1837	C	O3'-P-O5'	5.07	111.61	104.00
2	B	2130	U	O4'-C1'-N1	5.07	116.11	108.50
14	D	104	VAL	CA-CB-CG2	-5.07	101.77	110.40
2	B	1261	C	O4'-C1'-N1	5.07	116.11	108.50
2	B	2710	C	C4'-C3'-O3'	-5.07	105.39	113.00
32	J	42	ALA	CB-CA-C	-5.07	104.73	111.88
2	B	81	G	C5'-C4'-C3'	-5.07	108.39	116.00
2	B	889	C	O4'-C1'-N1	5.07	115.81	108.20
2	B	1150	C	C4'-C3'-O3'	-5.07	105.39	113.00
2	B	1618	A	N9-C1'-C2'	5.07	121.61	114.00
2	B	2101	A	O4'-C4'-C3'	-5.07	98.93	104.00
2	B	2731	G	O3'-P-O5'	5.07	111.61	104.00
5	L	101	ILE	CA-C-N	5.07	131.35	121.41
5	L	101	ILE	C-N-CA	5.07	131.35	121.41
19	X	87	PHE	CA-C-N	5.07	130.54	122.94
19	X	87	PHE	C-N-CA	5.07	130.54	122.94
25	7	53	ASP	CA-CB-CG	-5.07	107.53	112.60
27	C	202	ARG	N-CA-CB	5.07	117.42	109.97
2	B	1771	C	C1'-O4'-C4'	-5.07	104.83	109.90
19	X	402	GLY	N-CA-C	-5.07	107.09	114.90
23	5	74	ARG	N-CA-CB	5.07	117.71	110.06
2	B	448	U	O3'-P-O5'	-5.07	96.40	104.00
2	B	666	A	O3'-P-O5'	5.07	111.60	104.00
5	L	64	PHE	CA-C-N	-5.07	116.01	122.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	L	64	PHE	C-N-CA	-5.07	116.01	122.19
26	8	11	CYS	CB-CA-C	5.07	120.05	110.62
30	H	72	ILE	CA-C-O	5.07	123.54	118.98
2	B	456	C	C3'-C2'-O2'	-5.07	107.00	114.60
2	B	646	U	P-O3'-C3'	5.07	127.80	120.20
2	B	788	A	C5'-C4'-C3'	-5.07	107.60	115.20
2	B	1635	A	O5'-C5'-C4'	-5.07	103.90	111.50
2	B	2245	U	P-O3'-C3'	5.07	127.80	120.20
13	S	57	ASN	OD1-CG-ND2	5.07	127.67	122.60
27	C	54	GLY	CA-C-O	-5.07	111.76	120.57
2	B	807	U	C3'-C2'-O2'	5.06	118.30	110.70
2	B	1953	A	C2'-C3'-O3'	5.06	117.10	109.50
20	E	97	ASN	CA-C-N	5.06	129.18	120.72
20	E	97	ASN	C-N-CA	5.06	129.18	120.72
1	A	25	U	C4'-C3'-O3'	-5.06	105.41	113.00
2	B	521	U	P-O5'-C5'	5.06	128.49	120.90
2	B	701	G	P-O3'-C3'	-5.06	112.61	120.20
2	B	1019	U	P-O3'-C3'	5.06	127.79	120.20
2	B	1672	A	O3'-P-O5'	5.06	111.59	104.00
2	B	1784	A	C5-C6-N6	-5.06	108.51	123.70
2	B	1849	G	O5'-C5'-C4'	5.06	119.09	111.50
2	B	1926	U	C3'-C2'-C1'	5.06	106.36	101.30
2	B	2407	A	C3'-C2'-C1'	-5.06	96.24	101.30
8	N	31	HIS	ND1-CE1-NE2	5.06	113.46	108.40
28	F	127	TYR	CA-C-N	5.06	130.93	122.73
28	F	127	TYR	C-N-CA	5.06	130.93	122.73
14	D	121	THR	O-C-N	5.06	129.32	122.59
31	I	44	LYS	CA-C-N	5.06	129.72	121.98
31	I	44	LYS	C-N-CA	5.06	129.72	121.98
32	J	77	HIS	ND1-CE1-NE2	5.06	113.46	108.40
32	J	130	HIS	CE1-NE2-CD2	-5.06	103.94	109.00
2	B	12	U	O4'-C4'-C3'	-5.06	98.94	104.00
2	B	692	C	C4'-C3'-O3'	-5.06	105.41	113.00
2	B	2653	U	C1'-C2'-O2'	5.06	115.99	108.40
2	B	2762	C	O5'-C5'-C4'	-5.06	103.91	111.50
2	B	2836	U	O4'-C1'-N1	5.06	116.09	108.50
14	D	82	PHE	N-CA-CB	5.06	119.70	110.95
29	G	59	ASP	N-CA-CB	5.06	117.98	110.49
8	N	63	ARG	N-CA-C	-5.06	100.03	110.80
18	W	60	VAL	N-CA-C	-5.06	101.13	108.36
24	6	10	LEU	CA-C-N	5.06	127.31	120.38
24	6	10	LEU	C-N-CA	5.06	127.31	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	351	C	C1'-C2'-O2'	5.06	115.98	108.40
2	B	689	A	P-O5'-C5'	-5.06	113.32	120.90
2	B	1237	A	C4'-C3'-O3'	-5.06	105.42	113.00
2	B	1247	A	O4'-C1'-N9	5.06	115.78	108.20
2	B	1721	G	C2'-C3'-O3'	5.06	117.08	109.50
2	B	2190	G	C3'-C2'-O2'	5.06	118.28	110.70
2	B	2407	A	N9-C1'-C2'	5.06	119.58	112.00
17	U	69	VAL	N-CA-CB	5.06	119.57	111.23
1	A	51	G	C5'-C4'-C3'	5.05	123.58	116.00
2	B	640	C	C4'-C3'-O3'	-5.05	105.42	113.00
2	B	766	U	P-O5'-C5'	-5.05	113.32	120.90
2	B	1791	A	O4'-C1'-C2'	5.05	112.65	107.60
2	B	1998	A	C3'-C2'-O2'	5.05	118.28	110.70
2	B	2250	G	C2'-C3'-O3'	5.05	117.08	109.50
2	B	2879	A	P-O5'-C5'	-5.05	113.32	120.90
29	G	34	ARG	CA-C-N	5.05	130.45	122.36
29	G	34	ARG	C-N-CA	5.05	130.45	122.36
2	B	1334	G	C4'-C3'-O3'	-5.05	105.42	113.00
2	B	1943	U	P-O3'-C3'	5.05	127.78	120.20
2	B	2037	A	C4'-C3'-O3'	-5.05	105.42	113.00
2	B	2401	U	C3'-C2'-C1'	5.05	106.55	101.50
6	1	14	LEU	O-C-N	5.05	127.27	122.07
15	T	43	ILE	O-C-N	5.05	129.62	122.04
23	5	211	LYS	CB-CA-C	-5.05	102.00	110.29
27	C	47	ARG	CD-NE-CZ	-5.05	117.33	124.40
2	B	660	C	C1'-O4'-C4'	-5.05	104.85	109.90
2	B	2513	A	P-O5'-C5'	5.05	128.48	120.90
2	B	2633	G	C5'-C4'-O4'	-5.05	102.22	109.80
11	Q	62	ALA	CB-CA-C	-5.05	102.09	110.68
11	Q	88	GLU	N-CA-C	-5.05	100.04	110.80
18	W	80	HIS	CB-CG-CD2	-5.05	124.63	131.20
28	F	19	PHE	CA-C-N	5.05	131.19	121.54
28	F	19	PHE	C-N-CA	5.05	131.19	121.54
2	B	210	C	P-O5'-C5'	-5.05	113.33	120.90
2	B	491	G	C4'-C3'-O3'	-5.05	105.42	113.00
2	B	844	A	C3'-C2'-C1'	-5.05	96.25	101.30
2	B	1985	C	O4'-C1'-N1	5.05	116.07	108.50
8	N	25	ALA	CB-CA-C	-5.05	102.92	110.90
17	U	100	GLU	CA-C-N	5.05	131.19	121.54
17	U	100	GLU	C-N-CA	5.05	131.19	121.54
23	5	190	GLU	CA-C-N	5.05	127.05	120.28
23	5	190	GLU	C-N-CA	5.05	127.05	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	C	269	ARG	O-C-N	5.05	129.31	122.59
2	B	869	G	C5'-C4'-C3'	-5.05	108.43	116.00
2	B	2603	G	C4'-C3'-O3'	-5.05	105.43	113.00
2	B	2640	G	C1'-C2'-O2'	5.05	115.97	108.40
2	B	1519	G	O4'-C1'-C2'	-5.05	102.55	107.60
2	B	1833	C	C3'-C2'-O2'	5.05	118.27	110.70
2	B	1985	C	C4'-C3'-O3'	-5.05	105.43	113.00
2	B	2003	A	O4'-C1'-C2'	5.05	112.65	107.60
2	B	2055	C	P-O3'-C3'	5.05	127.77	120.20
2	B	2059	A	O3'-P-O5'	5.05	111.57	104.00
2	B	2282	G	C3'-C2'-C1'	5.05	106.55	101.50
17	U	13	LEU	N-CA-C	-5.05	100.05	110.80
21	Y	40	ARG	N-CA-C	-5.05	100.05	110.80
23	5	60	ARG	CB-CA-C	-5.05	104.60	112.07
23	5	71	ARG	NE-CZ-NH2	5.05	123.74	119.20
23	5	177	LYS	CA-C-N	5.05	131.05	121.97
23	5	177	LYS	C-N-CA	5.05	131.05	121.97
27	C	18	VAL	CA-C-O	-5.05	115.25	120.25
2	B	293	U	O4'-C4'-C3'	-5.04	98.95	104.00
7	M	55	ARG	CA-C-O	-5.04	115.20	120.55
12	R	44	GLY	N-CA-C	-5.04	108.29	115.30
19	X	370	GLU	N-CA-C	-5.04	105.78	111.28
23	5	25	GLU	O-C-N	5.04	127.27	122.07
24	6	18	PHE	N-CA-CB	-5.04	102.49	110.06
2	B	406	G	C4'-C3'-O3'	-5.04	105.43	113.00
2	B	644	A	O4'-C1'-C2'	-5.04	102.56	107.60
2	B	774	G	C1'-C2'-O2'	5.04	119.37	111.80
2	B	871	U	C3'-C2'-C1'	5.04	106.34	101.30
2	B	1142	A	O3'-P-O5'	-5.04	96.43	104.00
2	B	2609	U	C3'-C2'-C1'	5.04	106.54	101.50
2	B	2900	A	C5'-C4'-C3'	-5.04	108.44	116.00
8	N	74	GLU	N-CA-CB	5.04	117.99	110.22
14	D	193	VAL	N-CA-C	-5.04	97.99	108.88
18	W	3	THR	CA-C-N	-5.04	116.10	123.06
18	W	3	THR	C-N-CA	-5.04	116.10	123.06
27	C	112	GLY	N-CA-C	-5.04	107.13	114.90
2	B	924	G	O4'-C1'-N9	5.04	116.06	108.50
2	B	1071	G	O4'-C1'-N9	5.04	116.06	108.50
2	B	2299	U	P-O5'-C5'	5.04	128.46	120.90
4	K	41	ILE	CA-CB-CG2	5.04	119.07	110.50
4	K	90	ASN	CA-CB-CG	-5.04	107.56	112.60
14	D	64	GLU	CA-C-O	5.04	129.13	122.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	D	163	GLY	CA-C-N	5.04	131.17	121.54
14	D	163	GLY	C-N-CA	5.04	131.17	121.54
29	G	29	ASN	N-CA-CB	5.04	119.01	110.49
2	B	726	G	P-O3'-C3'	5.04	127.76	120.20
2	B	1390	U	P-O5'-C5'	-5.04	113.34	120.90
2	B	1695	G	P-O3'-C3'	-5.04	112.64	120.20
16	2	1	ALA	N-CA-CB	-5.04	102.84	110.40
2	B	63	A	P-O5'-C5'	-5.04	113.34	120.90
2	B	83	A	C1'-O4'-C4'	5.04	114.94	109.90
2	B	757	G	P-O3'-C3'	5.04	127.76	120.20
2	B	901	C	O4'-C1'-N1	5.04	116.06	108.50
2	B	2646	C	O4'-C1'-N1	5.04	116.06	108.50
17	U	64	ILE	N-CA-C	5.04	119.82	109.34
2	B	548	G	P-O5'-C5'	-5.04	113.34	120.90
2	B	1972	G	P-O3'-C3'	-5.04	112.64	120.20
8	N	68	ALA	N-CA-CB	5.04	117.37	110.07
19	X	336	GLU	CB-CA-C	-5.04	102.43	110.79
23	5	47	ASN	CA-C-N	5.04	131.20	122.64
23	5	47	ASN	C-N-CA	5.04	131.20	122.64
2	B	267	C	O5'-C5'-C4'	-5.04	103.95	111.50
2	B	1026	G	O5'-C5'-C4'	5.04	119.25	111.70
2	B	2542	A	O3'-P-O5'	-5.04	96.45	104.00
2	B	2747	G	O3'-P-O5'	-5.04	96.45	104.00
2	B	1178	C	O3'-P-O5'	-5.03	96.45	104.00
2	B	2903	U	C4'-C3'-C2'	-5.03	97.57	102.60
8	N	67	PHE	N-CA-CB	5.03	118.29	110.44
30	H	82	SER	N-CA-C	-5.03	107.27	113.41
2	B	150	U	O4'-C1'-N1	5.03	116.05	108.50
2	B	529	A	O3'-P-O5'	-5.03	96.45	104.00
2	B	742	A	C4'-C3'-C2'	5.03	107.63	102.60
2	B	786	C	O4'-C1'-N1	5.03	116.05	108.50
2	B	1288	G	O4'-C1'-N9	5.03	115.75	108.20
2	B	1521	G	C4'-C3'-O3'	-5.03	105.45	113.00
2	B	1844	C	P-O5'-C5'	5.03	128.45	120.90
19	X	98	ALA	CA-C-N	5.03	127.02	120.28
19	X	98	ALA	C-N-CA	5.03	127.02	120.28
28	F	112	ASP	CA-C-N	5.03	131.15	121.54
28	F	112	ASP	C-N-CA	5.03	131.15	121.54
32	J	67	ASN	N-CA-C	-5.03	106.17	113.21
32	J	82	GLY	N-CA-C	-5.03	103.18	111.38
1	A	56	G	C4'-C3'-O3'	5.03	116.95	109.40
2	B	1163	G	O3'-P-O5'	5.03	111.55	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1220	G	C5'-C4'-C3'	5.03	123.55	116.00
2	B	1267	U	C3'-C2'-C1'	5.03	106.33	101.30
2	B	2835	A	P-O3'-C3'	-5.03	112.65	120.20
10	P	71	ARG	CA-C-O	-5.03	115.22	121.11
29	G	148	ARG	CA-C-O	5.03	125.83	120.20
2	B	460	A	P-O3'-C3'	-5.03	112.66	120.20
2	B	973	A	O5'-C5'-C4'	5.03	119.24	111.70
2	B	1295	C	C3'-C2'-C1'	5.03	106.33	101.30
27	C	30	ALA	N-CA-C	5.03	120.44	113.45
28	F	90	LEU	CB-CA-C	-5.03	99.39	109.35
32	J	76	HIS	ND1-CE1-NE2	5.03	113.43	108.40
2	B	31	C	O4'-C1'-N1	5.03	116.04	108.50
2	B	140	C	C3'-C2'-O2'	-5.03	107.06	114.60
2	B	933	A	O5'-C5'-C4'	-5.03	103.96	111.50
2	B	1249	U	P-O5'-C5'	-5.03	113.36	120.90
2	B	1437	C	P-O5'-C5'	-5.03	113.36	120.90
2	B	2241	A	P-O5'-C5'	-5.03	113.36	120.90
2	B	2825	G	N9-C1'-C2'	-5.03	104.46	112.00
19	X	446	LEU	CA-C-N	5.03	127.99	120.90
19	X	446	LEU	C-N-CA	5.03	127.99	120.90
22	3	9	ARG	NE-CZ-NH2	5.03	123.72	119.20
23	5	165	ASN	OD1-CG-ND2	-5.03	117.57	122.60
27	C	245	THR	CA-C-N	5.03	126.12	119.84
27	C	245	THR	C-N-CA	5.03	126.12	119.84
29	G	64	ALA	CA-C-N	5.03	125.56	119.98
29	G	64	ALA	C-N-CA	5.03	125.56	119.98
2	B	155	A	C2'-C3'-O3'	-5.03	106.16	113.70
22	3	22	THR	CA-CB-OG1	5.03	117.14	109.60
28	F	169	LEU	CB-CA-C	-5.03	100.56	110.11
29	G	146	ASP	CA-C-O	5.03	125.78	120.10
2	B	2371	G	C5'-C4'-C3'	-5.02	108.47	116.00
2	B	2517	C	C5'-C4'-C3'	5.02	122.73	115.20
2	B	856	G	P-O3'-C3'	5.02	127.73	120.20
2	B	2006	C	C5'-C4'-O4'	-5.02	102.27	109.80
2	B	2801	G	O4'-C1'-N9	5.02	116.03	108.50
2	B	2897	U	O4'-C4'-C3'	-5.02	98.98	104.00
11	Q	43	GLN	N-CA-CB	5.02	117.42	109.94
14	D	3	GLY	N-CA-C	-5.02	103.90	112.64
18	W	26	PHE	N-CA-CB	5.02	117.75	110.77
24	6	39	ARG	CB-CA-C	-5.02	102.74	110.78
32	J	75	TYR	O-C-N	-5.02	117.44	123.27
2	B	210	C	P-O3'-C3'	-5.02	112.67	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	232	G	P-O3'-C3'	-5.02	112.67	120.20
2	B	265	A	P-O5'-C5'	-5.02	113.37	120.90
2	B	1356	G	O5'-C5'-C4'	5.02	119.03	111.50
2	B	1741	C	C5'-C4'-C3'	-5.02	108.47	116.00
2	B	2239	G	C4'-C3'-O3'	-5.02	105.47	113.00
2	B	2732	G	P-O3'-C3'	5.02	127.73	120.20
8	N	113	ILE	CA-C-O	5.02	125.90	120.43
23	5	185	LEU	N-CA-CB	5.02	117.24	109.91
2	B	400	G	O5'-C5'-C4'	-5.02	103.97	111.50
2	B	1822	C	O4'-C4'-C3'	-5.02	98.98	104.00
2	B	2112	G	C4'-C3'-C2'	-5.02	97.58	102.60
2	B	2206	C	P-O3'-C3'	-5.02	112.67	120.20
2	B	2635	A	C4'-C3'-C2'	5.02	107.62	102.60
23	5	193	LEU	CA-C-N	5.02	127.34	120.46
23	5	193	LEU	C-N-CA	5.02	127.34	120.46
2	B	996	A	C4'-C3'-O3'	-5.02	105.47	113.00
2	B	1199	U	C3'-C2'-C1'	5.02	106.32	101.30
2	B	1430	G	O4'-C1'-N9	5.02	116.03	108.50
2	B	1578	U	C1'-O4'-C4'	-5.02	104.88	109.90
2	B	1812	U	P-O3'-C3'	-5.02	112.67	120.20
2	B	2554	U	C4'-C3'-C2'	-5.02	97.58	102.60
10	P	114	ASN	CA-CB-CG	5.02	117.62	112.60
20	E	161	ALA	CA-C-N	5.02	127.31	120.54
20	E	161	ALA	C-N-CA	5.02	127.31	120.54
22	3	37	HIS	CA-CB-CG	-5.02	108.78	113.80
27	C	141	HIS	CB-CG-CD2	-5.02	124.68	131.20
1	A	104	A	C4'-C3'-C2'	-5.02	97.58	102.60
2	B	434	U	C5'-C4'-C3'	5.02	122.72	115.20
2	B	1567	G	C5'-C4'-O4'	5.02	116.62	109.10
2	B	2407	A	C5'-C4'-C3'	-5.02	108.48	116.00
2	B	2503	A	C4'-C3'-C2'	-5.02	97.58	102.60
2	B	2815	C	O4'-C1'-N1	5.02	116.02	108.50
3	0	10	ARG	N-CA-CB	5.02	119.30	110.37
2	B	1568	G	O4'-C1'-C2'	-5.01	102.59	107.60
2	B	1888	G	C3'-C2'-C1'	5.01	106.31	101.30
2	B	2144	G	O4'-C4'-C3'	-5.01	101.08	106.10
5	L	111	ILE	N-CA-CB	5.01	118.06	112.34
7	M	6	ARG	CA-CB-CG	5.01	124.13	114.10
19	X	280	GLN	N-CA-CB	5.01	117.28	110.01
23	5	152	ALA	N-CA-CB	5.01	117.58	110.06
2	B	1079	C	O4'-C4'-C3'	-5.01	98.99	104.00
2	B	1546	G	O5'-C5'-C4'	-5.01	103.98	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1783	A	O4'-C1'-C2'	5.01	112.61	107.60
2	B	1582	C	C4'-C3'-C2'	5.01	107.61	102.60
2	B	1653	G	C5'-C4'-C3'	5.01	122.72	115.20
2	B	1732	C	O3'-P-O5'	5.01	111.52	104.00
2	B	2068	U	C4'-C3'-O3'	-5.01	105.48	113.00
24	6	39	ARG	O-C-N	-5.01	117.09	123.05
2	B	822	G	N9-C1'-C2'	-5.01	104.49	112.00
2	B	895	U	O4'-C1'-C2'	-5.01	102.59	107.60
2	B	996	A	O4'-C4'-C3'	-5.01	98.99	104.00
2	B	1420	A	C2'-C3'-O3'	5.01	117.02	109.50
2	B	1604	C	P-O5'-C5'	-5.01	113.39	120.90
2	B	1651	G	O4'-C4'-C3'	-5.01	98.99	104.00
2	B	1769	U	O4'-C4'-C3'	-5.01	98.99	104.00
2	B	2270	A	N1-C6-N6	5.01	133.63	118.60
2	B	2475	C	O5'-C5'-C4'	-5.01	103.99	111.50
6	1	11	VAL	O-C-N	5.01	126.95	121.94
23	5	140	PRO	N-CD-CG	5.01	110.71	103.20
2	B	2618	G	O3'-P-O5'	-5.01	96.49	104.00
16	2	53	MET	CB-CA-C	-5.01	102.48	110.79
2	B	1231	U	O4'-C1'-N1	5.01	116.01	108.50
2	B	1267	U	P-O5'-C5'	-5.01	113.39	120.90
2	B	1423	G	C4'-C3'-O3'	-5.01	105.49	113.00
2	B	1784	A	C5'-C4'-O4'	5.01	116.61	109.10
2	B	2356	U	O5'-C5'-C4'	-5.01	103.99	111.50
11	Q	79	ILE	N-CA-C	-5.01	105.51	110.62
19	X	357	HIS	CA-C-N	5.01	131.22	121.41
19	X	357	HIS	C-N-CA	5.01	131.22	121.41
27	C	240	GLY	O-C-N	-5.01	116.19	122.70
2	B	446	G	C2'-C3'-O3'	5.00	117.01	109.50
2	B	1700	A	O4'-C4'-C3'	-5.00	99.00	104.00
2	B	1941	C	O3'-P-O5'	-5.00	96.49	104.00
16	2	35	VAL	CA-CB-CG2	5.00	118.91	110.40
2	B	784	G	P-O5'-C5'	5.00	128.41	120.90
2	B	1414	C	O5'-C5'-C4'	-5.00	103.99	111.50
2	B	1794	A	C1'-O4'-C4'	-5.00	104.90	109.90
2	B	2794	C	P-O5'-C5'	-5.00	113.39	120.90
19	X	418	PRO	N-CA-C	5.00	119.05	110.95
2	B	464	U	P-O3'-C3'	5.00	127.70	120.20
2	B	692	C	O4'-C4'-C3'	5.00	109.00	104.00
2	B	1264	A	P-O5'-C5'	-5.00	113.40	120.90
2	B	1384	A	P-O3'-C3'	5.00	127.70	120.20
2	B	1624	U	C2'-C3'-O3'	5.00	121.20	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	7	45	PRO	CA-C-N	-5.00	113.79	122.64
25	7	45	PRO	C-N-CA	-5.00	113.79	122.64

There are no chirality outliers.

All (2032) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	0	17	ARG	Sidechain
3	0	30	PRO	Peptide
3	0	71	ARG	Sidechain
3	0	73	ARG	Sidechain
3	0	77	TYR	Sidechain
6	1	29	ARG	Sidechain
6	1	47	ARG	Sidechain
6	1	52	ARG	Sidechain
6	1	59	GLU	Peptide,Mainchain
6	1	7	ARG	Sidechain
16	2	10	ARG	Sidechain
16	2	29	ARG	Sidechain
16	2	37	ARG	Sidechain
16	2	52	PHE	Sidechain
22	3	16	ARG	Sidechain
22	3	39	ARG	Sidechain
22	3	47	TYR	Sidechain
22	3	9	ARG	Sidechain
23	5	124	VAL	Peptide
23	5	134	ARG	Sidechain
23	5	144	THR	Peptide
23	5	159	GLY	Peptide
23	5	162	ARG	Sidechain
23	5	163	TYR	Sidechain
23	5	172	HIS	Sidechain
24	6	19	ARG	Sidechain
24	6	34	ARG	Sidechain
24	6	39	ARG	Sidechain
25	7	21	PHE	Sidechain
25	7	25	HIS	Sidechain
25	7	63	TYR	Sidechain
26	8	12	ARG	Sidechain
1	A	10	G	Sidechain
1	A	100	G	Sidechain
1	A	101	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	102	G	Sidechain
1	A	105	G	Sidechain
1	A	106	G	Sidechain
1	A	107	G	Sidechain
1	A	108	A	Sidechain
1	A	109	A	Sidechain
1	A	11	C	Sidechain
1	A	112	G	Sidechain
1	A	113	C	Sidechain
1	A	114	C	Sidechain
1	A	116	G	Sidechain
1	A	117	G	Sidechain
1	A	13	G	Sidechain
1	A	15	A	Sidechain
1	A	16	G	Sidechain
1	A	17	C	Sidechain
1	A	18	G	Sidechain
1	A	2	G	Sidechain
1	A	22	U	Sidechain
1	A	23	G	Sidechain
1	A	25	U	Sidechain
1	A	26	C	Sidechain
1	A	28	C	Sidechain
1	A	29	A	Sidechain
1	A	32	U	Sidechain
1	A	33	G	Sidechain
1	A	36	C	Sidechain
1	A	4	C	Sidechain
1	A	40	U	Sidechain
1	A	41	G	Sidechain
1	A	43	C	Sidechain
1	A	44	G	Sidechain
1	A	45	A	Sidechain
1	A	46	A	Sidechain
1	A	48	U	Sidechain
1	A	49	C	Sidechain
1	A	5	U	Sidechain
1	A	51	G	Sidechain
1	A	54	G	Sidechain
1	A	58	A	Sidechain
1	A	59	A	Sidechain
1	A	60	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	61	G	Sidechain
1	A	63	C	Sidechain
1	A	65	U	Sidechain
1	A	7	G	Sidechain
1	A	72	G	Sidechain
1	A	74	U	Sidechain
1	A	75	G	Sidechain
1	A	78	A	Sidechain
1	A	79	G	Sidechain
1	A	8	C	Sidechain
1	A	80	U	Sidechain
1	A	81	G	Sidechain
1	A	82	U	Sidechain
1	A	85	G	Sidechain
1	A	87	U	Sidechain
1	A	88	C	Sidechain
1	A	89	U	Sidechain
1	A	9	G	Sidechain
1	A	90	C	Sidechain
1	A	94	A	Sidechain
1	A	96	G	Sidechain
1	A	97	C	Sidechain
1	A	98	G	Sidechain
1	A	99	A	Sidechain
2	B	1	G	Sidechain
2	B	10	A	Sidechain
2	B	1000	A	Sidechain
2	B	1002	G	Sidechain
2	B	1003	G	Sidechain
2	B	1004	U	Sidechain
2	B	1005	C	Sidechain
2	B	1006	C	Sidechain
2	B	1008	A	Sidechain
2	B	101	A	Sidechain
2	B	1015	U	Sidechain
2	B	1017	G	Sidechain
2	B	1018	U	Sidechain
2	B	1019	U	Sidechain
2	B	1020	A	Sidechain
2	B	1021	A	Sidechain
2	B	1023	U	Sidechain
2	B	1024	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1025	G	Sidechain
2	B	1026	G	Sidechain
2	B	1027	A	Sidechain
2	B	1028	A	Sidechain
2	B	103	A	Sidechain
2	B	1031	G	Sidechain
2	B	1032	A	Sidechain
2	B	1033	U	Sidechain
2	B	1035	U	Sidechain
2	B	1037	G	Sidechain
2	B	1038	G	Sidechain
2	B	1039	A	Sidechain
2	B	104	A	Sidechain
2	B	1041	G	Sidechain
2	B	1042	G	Sidechain
2	B	1046	A	Sidechain
2	B	1048	A	Sidechain
2	B	1055	G	Sidechain
2	B	1056	G	Sidechain
2	B	1057	A	Sidechain
2	B	1058	U	Sidechain
2	B	106	C	Sidechain
2	B	1060	U	Sidechain
2	B	1063	G	Sidechain
2	B	1064	C	Sidechain
2	B	1065	U	Sidechain
2	B	1068	G	Sidechain
2	B	107	G	Sidechain
2	B	1070	A	Sidechain
2	B	1071	G	Sidechain
2	B	1072	C	Sidechain
2	B	1073	A	Sidechain
2	B	1075	C	Sidechain
2	B	1076	C	Sidechain
2	B	1077	A	Sidechain
2	B	1078	U	Sidechain
2	B	1079	C	Sidechain
2	B	1080	A	Sidechain
2	B	1081	U	Sidechain
2	B	1082	U	Sidechain
2	B	1083	U	Sidechain
2	B	1084	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1085	A	Sidechain
2	B	1086	A	Sidechain
2	B	1088	A	Sidechain
2	B	1089	A	Sidechain
2	B	109	C	Sidechain
2	B	1091	G	Sidechain
2	B	1093	G	Sidechain
2	B	1095	A	Sidechain
2	B	1096	A	Sidechain
2	B	1098	A	Sidechain
2	B	1099	G	Sidechain
2	B	11	C	Sidechain
2	B	1100	C	Sidechain
2	B	1101	U	Sidechain
2	B	1104	C	Sidechain
2	B	1105	U	Sidechain
2	B	1106	G	Sidechain
2	B	1107	G	Sidechain
2	B	1108	U	Sidechain
2	B	1109	C	Sidechain
2	B	1110	G	Sidechain
2	B	1111	A	Sidechain
2	B	1112	G	Sidechain
2	B	1113	U	Sidechain
2	B	1115	G	Sidechain
2	B	1119	U	Sidechain
2	B	1120	G	Sidechain
2	B	1122	G	Sidechain
2	B	1123	C	Sidechain
2	B	1129	A	Sidechain
2	B	113	U	Sidechain
2	B	1130	U	Sidechain
2	B	1133	A	Sidechain
2	B	1134	A	Sidechain
2	B	1136	G	Sidechain
2	B	1137	G	Sidechain
2	B	1138	G	Sidechain
2	B	1139	G	Sidechain
2	B	1140	C	Sidechain
2	B	1141	U	Sidechain
2	B	1142	A	Sidechain
2	B	1144	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1148	U	Sidechain
2	B	115	C	Sidechain
2	B	1150	C	Sidechain
2	B	1151	A	Sidechain
2	B	1152	C	Sidechain
2	B	1153	C	Sidechain
2	B	1154	G	Sidechain
2	B	1159	U	Sidechain
2	B	1162	G	Sidechain
2	B	1163	G	Sidechain
2	B	1168	G	Sidechain
2	B	1169	A	Sidechain
2	B	1170	C	Sidechain
2	B	1171	G	Sidechain
2	B	1173	U	Sidechain
2	B	1175	A	Sidechain
2	B	1176	U	Sidechain
2	B	1177	G	Sidechain
2	B	1179	G	Sidechain
2	B	1181	U	Sidechain
2	B	1182	G	Sidechain
2	B	1184	U	Sidechain
2	B	1185	G	Sidechain
2	B	1187	G	Sidechain
2	B	1188	U	Sidechain
2	B	1189	A	Sidechain
2	B	1191	G	Sidechain
2	B	1193	G	Sidechain
2	B	1195	G	Sidechain
2	B	1204	A	Sidechain
2	B	1208	C	Sidechain
2	B	121	G	Sidechain
2	B	1210	G	Sidechain
2	B	1211	C	Sidechain
2	B	1212	G	Sidechain
2	B	1215	G	Sidechain
2	B	1216	G	Sidechain
2	B	1217	U	Sidechain
2	B	1219	U	Sidechain
2	B	122	G	Sidechain
2	B	1221	C	Sidechain
2	B	1223	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1224	U	Sidechain
2	B	1225	G	Sidechain
2	B	1226	A	Sidechain
2	B	1228	G	Sidechain
2	B	123	G	Sidechain
2	B	1233	C	Sidechain
2	B	1236	G	Sidechain
2	B	1239	G	Sidechain
2	B	124	G	Sidechain
2	B	1240	U	Sidechain
2	B	1244	A	Sidechain
2	B	1245	G	Sidechain
2	B	1246	A	Sidechain
2	B	1249	U	Sidechain
2	B	1250	G	Sidechain
2	B	1252	G	Sidechain
2	B	1254	A	Sidechain
2	B	1255	U	Sidechain
2	B	1259	G	Sidechain
2	B	126	A	Sidechain
2	B	1261	C	Sidechain
2	B	1263	U	Sidechain
2	B	1264	A	Sidechain
2	B	1266	G	Sidechain
2	B	1269	A	Sidechain
2	B	127	A	Sidechain
2	B	1272	A	Sidechain
2	B	1273	U	Sidechain
2	B	1274	A	Sidechain
2	B	1275	A	Sidechain
2	B	1277	G	Sidechain
2	B	1278	C	Sidechain
2	B	1279	G	Sidechain
2	B	128	C	Sidechain
2	B	1280	G	Sidechain
2	B	1283	G	Sidechain
2	B	1284	A	Sidechain
2	B	1285	A	Sidechain
2	B	1287	A	Sidechain
2	B	1288	G	Sidechain
2	B	1289	C	Sidechain
2	B	1290	C	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1291	C	Sidechain
2	B	1292	G	Sidechain
2	B	1293	C	Sidechain
2	B	1294	U	Sidechain
2	B	1295	C	Sidechain
2	B	1296	G	Sidechain
2	B	1297	C	Sidechain
2	B	1298	C	Sidechain
2	B	1299	G	Sidechain
2	B	130	C	Sidechain
2	B	1300	G	Sidechain
2	B	1301	A	Sidechain
2	B	1302	A	Sidechain
2	B	1303	G	Sidechain
2	B	1305	C	Sidechain
2	B	1306	C	Sidechain
2	B	1307	A	Sidechain
2	B	1309	G	Sidechain
2	B	1310	G	Sidechain
2	B	1311	G	Sidechain
2	B	1314	C	Sidechain
2	B	1315	C	Sidechain
2	B	1316	U	Sidechain
2	B	1319	C	Sidechain
2	B	132	G	Sidechain
2	B	1320	C	Sidechain
2	B	1321	A	Sidechain
2	B	1322	A	Sidechain
2	B	1323	C	Sidechain
2	B	1325	U	Sidechain
2	B	1326	U	Sidechain
2	B	1328	A	Sidechain
2	B	1329	U	Sidechain
2	B	133	U	Sidechain
2	B	1330	C	Sidechain
2	B	1332	G	Sidechain
2	B	1333	G	Sidechain
2	B	1337	G	Sidechain
2	B	1339	G	Sidechain
2	B	1340	U	Sidechain
2	B	1341	G	Sidechain
2	B	1343	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1344	U	Sidechain
2	B	1346	G	Sidechain
2	B	1348	C	Sidechain
2	B	1349	C	Sidechain
2	B	1350	C	Sidechain
2	B	1351	C	Sidechain
2	B	1353	A	Sidechain
2	B	1354	A	Sidechain
2	B	1356	G	Sidechain
2	B	1357	C	Sidechain
2	B	1358	G	Sidechain
2	B	1359	A	Sidechain
2	B	136	G	Sidechain
2	B	1360	G	Sidechain
2	B	1364	G	Sidechain
2	B	1365	A	Sidechain
2	B	1367	A	Sidechain
2	B	1369	G	Sidechain
2	B	1372	U	Sidechain
2	B	1374	G	Sidechain
2	B	1376	C	Sidechain
2	B	1377	G	Sidechain
2	B	1378	A	Sidechain
2	B	1379	U	Sidechain
2	B	138	U	Sidechain
2	B	1380	G	Sidechain
2	B	1382	G	Sidechain
2	B	1386	C	Sidechain
2	B	1387	A	Sidechain
2	B	1388	G	Sidechain
2	B	1389	G	Sidechain
2	B	139	U	Sidechain
2	B	1392	A	Sidechain
2	B	1393	A	Sidechain
2	B	1395	A	Sidechain
2	B	1396	U	Sidechain
2	B	1397	U	Sidechain
2	B	1399	C	Sidechain
2	B	14	A	Sidechain
2	B	140	C	Sidechain
2	B	1400	U	Sidechain
2	B	1401	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1402	U	Sidechain
2	B	1403	A	Sidechain
2	B	1405	U	Sidechain
2	B	1406	U	Sidechain
2	B	1407	G	Sidechain
2	B	1408	G	Sidechain
2	B	1410	G	Sidechain
2	B	1411	U	Sidechain
2	B	1412	U	Sidechain
2	B	1416	G	Sidechain
2	B	1417	C	Sidechain
2	B	1418	G	Sidechain
2	B	1419	A	Sidechain
2	B	142	A	Sidechain
2	B	1420	A	Sidechain
2	B	1422	G	Sidechain
2	B	1424	G	Sidechain
2	B	1425	G	Sidechain
2	B	1426	G	Sidechain
2	B	1427	A	Sidechain
2	B	1429	G	Sidechain
2	B	143	C	Sidechain
2	B	1430	G	Sidechain
2	B	1432	G	Sidechain
2	B	1433	A	Sidechain
2	B	1434	A	Sidechain
2	B	1435	G	Sidechain
2	B	1436	G	Sidechain
2	B	1438	U	Sidechain
2	B	1439	A	Sidechain
2	B	1440	U	Sidechain
2	B	1442	U	Sidechain
2	B	1443	U	Sidechain
2	B	1445	G	Sidechain
2	B	1448	G	Sidechain
2	B	1449	G	Sidechain
2	B	145	C	Sidechain
2	B	1450	G	Sidechain
2	B	1452	G	Sidechain
2	B	1454	C	Sidechain
2	B	1456	G	Sidechain
2	B	1458	U	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1459	G	Sidechain
2	B	146	A	Sidechain
2	B	1460	U	Sidechain
2	B	1461	C	Sidechain
2	B	1464	G	Sidechain
2	B	1466	U	Sidechain
2	B	1467	U	Sidechain
2	B	147	C	Sidechain
2	B	1470	A	Sidechain
2	B	1471	G	Sidechain
2	B	1475	G	Sidechain
2	B	1476	U	Sidechain
2	B	1477	A	Sidechain
2	B	1479	G	Sidechain
2	B	1481	U	Sidechain
2	B	1482	G	Sidechain
2	B	1483	G	Sidechain
2	B	1484	U	Sidechain
2	B	1485	U	Sidechain
2	B	1486	U	Sidechain
2	B	1487	U	Sidechain
2	B	1489	C	Sidechain
2	B	149	A	Sidechain
2	B	1491	G	Sidechain
2	B	1492	G	Sidechain
2	B	1496	A	Sidechain
2	B	1498	C	Sidechain
2	B	1502	A	Sidechain
2	B	1505	A	Sidechain
2	B	1508	A	Sidechain
2	B	1510	G	Sidechain
2	B	1512	C	Sidechain
2	B	1514	G	Sidechain
2	B	1515	A	Sidechain
2	B	1516	G	Sidechain
2	B	1517	G	Sidechain
2	B	152	A	Sidechain
2	B	1520	U	Sidechain
2	B	1521	G	Sidechain
2	B	1522	A	Sidechain
2	B	1523	U	Sidechain
2	B	1524	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1525	A	Sidechain
2	B	1526	C	Sidechain
2	B	1528	A	Sidechain
2	B	153	U	Sidechain
2	B	1530	G	Sidechain
2	B	1532	A	Sidechain
2	B	1536	C	Sidechain
2	B	1539	U	Sidechain
2	B	154	U	Sidechain
2	B	1542	U	Sidechain
2	B	1544	A	Sidechain
2	B	1545	A	Sidechain
2	B	1547	C	Sidechain
2	B	1548	A	Sidechain
2	B	1549	A	Sidechain
2	B	1551	A	Sidechain
2	B	1554	U	Sidechain
2	B	1555	G	Sidechain
2	B	1556	C	Sidechain
2	B	1557	C	Sidechain
2	B	1558	C	Sidechain
2	B	1562	U	Sidechain
2	B	1564	C	Sidechain
2	B	1565	C	Sidechain
2	B	1566	A	Sidechain
2	B	1569	A	Sidechain
2	B	1571	A	Sidechain
2	B	1572	A	Sidechain
2	B	1574	C	Sidechain
2	B	1578	U	Sidechain
2	B	158	U	Sidechain
2	B	1583	A	Sidechain
2	B	1584	U	Sidechain
2	B	1585	C	Sidechain
2	B	1588	G	Sidechain
2	B	1590	A	Sidechain
2	B	1592	C	Sidechain
2	B	1594	U	Sidechain
2	B	1596	A	Sidechain
2	B	1598	A	Sidechain
2	B	1599	U	Sidechain
2	B	160	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1600	C	Sidechain
2	B	1604	C	Sidechain
2	B	1607	C	Sidechain
2	B	1611	C	Sidechain
2	B	1613	G	Sidechain
2	B	1615	C	Sidechain
2	B	1616	A	Sidechain
2	B	1618	A	Sidechain
2	B	1619	G	Sidechain
2	B	1620	G	Sidechain
2	B	1621	U	Sidechain
2	B	1622	G	Sidechain
2	B	1624	U	Sidechain
2	B	1626	A	Sidechain
2	B	1627	G	Sidechain
2	B	1628	G	Sidechain
2	B	1629	U	Sidechain
2	B	1630	A	Sidechain
2	B	1631	G	Sidechain
2	B	1632	A	Sidechain
2	B	1634	A	Sidechain
2	B	1637	A	Sidechain
2	B	164	C	Sidechain
2	B	1640	A	Sidechain
2	B	1641	A	Sidechain
2	B	1642	G	Sidechain
2	B	1643	G	Sidechain
2	B	1645	G	Sidechain
2	B	1646	C	Sidechain
2	B	1647	U	Sidechain
2	B	1649	G	Sidechain
2	B	1650	A	Sidechain
2	B	1651	G	Sidechain
2	B	1652	A	Sidechain
2	B	1653	G	Sidechain
2	B	1657	U	Sidechain
2	B	1659	G	Sidechain
2	B	1660	G	Sidechain
2	B	1661	G	Sidechain
2	B	1662	U	Sidechain
2	B	1663	G	Sidechain
2	B	1664	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1665	A	Sidechain
2	B	1669	A	Sidechain
2	B	167	A	Sidechain
2	B	1670	C	Sidechain
2	B	1671	U	Sidechain
2	B	1673	G	Sidechain
2	B	1674	G	Sidechain
2	B	1676	A	Sidechain
2	B	1677	A	Sidechain
2	B	1678	A	Sidechain
2	B	1680	U	Sidechain
2	B	1681	G	Sidechain
2	B	1682	G	Sidechain
2	B	1683	U	Sidechain
2	B	1684	G	Sidechain
2	B	1685	C	Sidechain
2	B	1686	C	Sidechain
2	B	1687	G	Sidechain
2	B	169	G	Sidechain
2	B	1690	A	Sidechain
2	B	1695	G	Sidechain
2	B	1696	G	Sidechain
2	B	1697	G	Sidechain
2	B	1698	A	Sidechain
2	B	1699	G	Sidechain
2	B	170	U	Sidechain
2	B	1702	G	Sidechain
2	B	1703	G	Sidechain
2	B	1708	C	Sidechain
2	B	1709	U	Sidechain
2	B	171	U	Sidechain
2	B	1710	G	Sidechain
2	B	1712	U	Sidechain
2	B	1713	A	Sidechain
2	B	1714	U	Sidechain
2	B	1715	G	Sidechain
2	B	1717	A	Sidechain
2	B	1719	G	Sidechain
2	B	1720	U	Sidechain
2	B	1721	G	Sidechain
2	B	1722	A	Sidechain
2	B	1723	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1725	U	Sidechain
2	B	1726	C	Sidechain
2	B	1727	C	Sidechain
2	B	1728	C	Sidechain
2	B	1729	U	Sidechain
2	B	173	A	Sidechain
2	B	1731	G	Sidechain
2	B	1734	G	Sidechain
2	B	1737	G	Sidechain
2	B	1738	G	Sidechain
2	B	1739	A	Sidechain
2	B	1740	G	Sidechain
2	B	1742	U	Sidechain
2	B	1743	G	Sidechain
2	B	1749	A	Sidechain
2	B	175	G	Sidechain
2	B	1750	G	Sidechain
2	B	1751	U	Sidechain
2	B	1752	C	Sidechain
2	B	1753	G	Sidechain
2	B	1755	A	Sidechain
2	B	1756	G	Sidechain
2	B	1757	A	Sidechain
2	B	1758	U	Sidechain
2	B	1759	A	Sidechain
2	B	176	A	Sidechain
2	B	1760	C	Sidechain
2	B	1765	U	Sidechain
2	B	1766	G	Sidechain
2	B	1767	G	Sidechain
2	B	1769	U	Sidechain
2	B	177	G	Sidechain
2	B	1773	A	Sidechain
2	B	1774	C	Sidechain
2	B	1775	U	Sidechain
2	B	1776	G	Sidechain
2	B	1777	U	Sidechain
2	B	1778	U	Sidechain
2	B	1779	U	Sidechain
2	B	1781	U	Sidechain
2	B	1782	U	Sidechain
2	B	1784	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1785	A	Sidechain
2	B	1787	A	Sidechain
2	B	1789	A	Sidechain
2	B	179	C	Sidechain
2	B	1790	C	Sidechain
2	B	1791	A	Sidechain
2	B	1795	C	Sidechain
2	B	1796	U	Sidechain
2	B	1797	G	Sidechain
2	B	18	U	Sidechain
2	B	180	G	Sidechain
2	B	1802	A	Sidechain
2	B	1803	A	Sidechain
2	B	1804	C	Sidechain
2	B	1807	G	Sidechain
2	B	1808	A	Sidechain
2	B	1809	A	Sidechain
2	B	181	A	Sidechain
2	B	1811	G	Sidechain
2	B	1812	U	Sidechain
2	B	1813	G	Sidechain
2	B	1814	G	Sidechain
2	B	1815	A	Sidechain
2	B	1816	C	Sidechain
2	B	1818	U	Sidechain
2	B	1819	A	Sidechain
2	B	1820	U	Sidechain
2	B	1821	A	Sidechain
2	B	1823	G	Sidechain
2	B	1824	G	Sidechain
2	B	1825	U	Sidechain
2	B	1826	G	Sidechain
2	B	183	C	Sidechain
2	B	1831	G	Sidechain
2	B	1833	C	Sidechain
2	B	1835	G	Sidechain
2	B	1838	C	Sidechain
2	B	1839	G	Sidechain
2	B	1840	G	Sidechain
2	B	1842	G	Sidechain
2	B	1843	C	Sidechain
2	B	1844	C	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1846	G	Sidechain
2	B	1847	A	Sidechain
2	B	1849	G	Sidechain
2	B	1850	G	Sidechain
2	B	1852	U	Sidechain
2	B	1853	A	Sidechain
2	B	1854	A	Sidechain
2	B	187	G	Sidechain
2	B	1885	A	Sidechain
2	B	1888	G	Sidechain
2	B	189	G	Sidechain
2	B	1890	A	Sidechain
2	B	1893	C	Sidechain
2	B	1894	C	Sidechain
2	B	1895	C	Sidechain
2	B	1896	G	Sidechain
2	B	1897	G	Sidechain
2	B	1899	A	Sidechain
2	B	19	A	Sidechain
2	B	190	A	Sidechain
2	B	1902	C	Sidechain
2	B	1903	G	Sidechain
2	B	1905	C	Sidechain
2	B	1906	G	Sidechain
2	B	1907	G	Sidechain
2	B	1908	C	Sidechain
2	B	1909	C	Sidechain
2	B	191	A	Sidechain
2	B	1910	G	Sidechain
2	B	1911	U	Sidechain
2	B	1912	A	Sidechain
2	B	1915	U	Sidechain
2	B	1916	A	Sidechain
2	B	1918	A	Sidechain
2	B	1920	C	Sidechain
2	B	1923	U	Sidechain
2	B	1926	U	Sidechain
2	B	1927	A	Sidechain
2	B	1928	A	Sidechain
2	B	1929	G	Sidechain
2	B	193	U	Sidechain
2	B	1930	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1932	A	Sidechain
2	B	1933	G	Sidechain
2	B	1936	A	Sidechain
2	B	1937	A	Sidechain
2	B	194	G	Sidechain
2	B	1940	U	Sidechain
2	B	1941	C	Sidechain
2	B	1942	C	Sidechain
2	B	1943	U	Sidechain
2	B	1944	U	Sidechain
2	B	1946	U	Sidechain
2	B	1947	C	Sidechain
2	B	1948	G	Sidechain
2	B	1949	G	Sidechain
2	B	195	A	Sidechain
2	B	1952	A	Sidechain
2	B	1954	G	Sidechain
2	B	1955	U	Sidechain
2	B	1958	C	Sidechain
2	B	196	A	Sidechain
2	B	1962	C	Sidechain
2	B	1963	U	Sidechain
2	B	1964	G	Sidechain
2	B	1967	C	Sidechain
2	B	1968	G	Sidechain
2	B	1969	A	Sidechain
2	B	197	A	Sidechain
2	B	1971	U	Sidechain
2	B	1972	G	Sidechain
2	B	1973	G	Sidechain
2	B	1975	G	Sidechain
2	B	1979	U	Sidechain
2	B	198	C	Sidechain
2	B	1981	A	Sidechain
2	B	1982	U	Sidechain
2	B	1984	G	Sidechain
2	B	1987	A	Sidechain
2	B	1991	U	Sidechain
2	B	1993	U	Sidechain
2	B	1995	U	Sidechain
2	B	1996	C	Sidechain
2	B	1998	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1999	C	Sidechain
2	B	2	G	Sidechain
2	B	200	U	Sidechain
2	B	2000	C	Sidechain
2	B	2002	G	Sidechain
2	B	2005	A	Sidechain
2	B	2006	C	Sidechain
2	B	2007	U	Sidechain
2	B	2008	C	Sidechain
2	B	201	C	Sidechain
2	B	2010	G	Sidechain
2	B	2011	U	Sidechain
2	B	2012	G	Sidechain
2	B	2015	A	Sidechain
2	B	2016	U	Sidechain
2	B	2017	U	Sidechain
2	B	2019	A	Sidechain
2	B	202	U	Sidechain
2	B	2021	C	Sidechain
2	B	2022	U	Sidechain
2	B	2023	C	Sidechain
2	B	2024	G	Sidechain
2	B	2025	C	Sidechain
2	B	2026	U	Sidechain
2	B	2028	U	Sidechain
2	B	2029	G	Sidechain
2	B	203	A	Sidechain
2	B	2030	A	Sidechain
2	B	2033	A	Sidechain
2	B	2035	G	Sidechain
2	B	2037	A	Sidechain
2	B	2038	G	Sidechain
2	B	204	A	Sidechain
2	B	2040	G	Sidechain
2	B	2042	A	Sidechain
2	B	2046	G	Sidechain
2	B	2047	C	Sidechain
2	B	2048	G	Sidechain
2	B	205	G	Sidechain
2	B	2051	A	Sidechain
2	B	2052	A	Sidechain
2	B	2053	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2054	A	Sidechain
2	B	2055	C	Sidechain
2	B	2056	G	Sidechain
2	B	2057	G	Sidechain
2	B	2058	A	Sidechain
2	B	2059	A	Sidechain
2	B	206	U	Sidechain
2	B	2060	A	Sidechain
2	B	2061	G	Sidechain
2	B	2062	A	Sidechain
2	B	2063	C	Sidechain
2	B	2065	C	Sidechain
2	B	2068	U	Sidechain
2	B	2070	A	Sidechain
2	B	2071	A	Sidechain
2	B	2072	C	Sidechain
2	B	2075	U	Sidechain
2	B	2078	C	Sidechain
2	B	208	C	Sidechain
2	B	2080	A	Sidechain
2	B	2082	A	Sidechain
2	B	2083	G	Sidechain
2	B	2084	C	Sidechain
2	B	2085	U	Sidechain
2	B	2087	G	Sidechain
2	B	2092	U	Sidechain
2	B	2094	A	Sidechain
2	B	2097	A	Sidechain
2	B	2098	U	Sidechain
2	B	2099	U	Sidechain
2	B	21	A	Sidechain
2	B	2100	G	Sidechain
2	B	2103	C	Sidechain
2	B	2106	U	Sidechain
2	B	2107	G	Sidechain
2	B	2109	U	Sidechain
2	B	211	C	Sidechain
2	B	2110	G	Sidechain
2	B	2112	G	Sidechain
2	B	2114	A	Sidechain
2	B	2115	G	Sidechain
2	B	2116	G	Sidechain

Continued on next page...

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Mol	Chain	Res	Type	Group
2	B	2117	A	Sidechain
2	B	2119	A	Sidechain
2	B	2120	G	Sidechain
2	B	2121	G	Sidechain
2	B	2122	U	Sidechain
2	B	2123	G	Sidechain
2	B	2124	G	Sidechain
2	B	2125	G	Sidechain
2	B	2126	A	Sidechain
2	B	2128	G	Sidechain
2	B	2129	C	Sidechain
2	B	213	A	Sidechain
2	B	2131	U	Sidechain
2	B	2132	U	Sidechain
2	B	2133	G	Sidechain
2	B	2134	A	Sidechain
2	B	2136	G	Sidechain
2	B	2137	U	Sidechain
2	B	2138	G	Sidechain
2	B	2139	U	Sidechain
2	B	214	G	Sidechain
2	B	2140	G	Sidechain
2	B	2141	G	Sidechain
2	B	2144	G	Sidechain
2	B	2145	C	Sidechain
2	B	2148	G	Sidechain
2	B	2149	U	Sidechain
2	B	215	G	Sidechain
2	B	2150	C	Sidechain
2	B	2155	U	Sidechain
2	B	2156	G	Sidechain
2	B	2157	G	Sidechain
2	B	2158	A	Sidechain
2	B	2161	C	Sidechain
2	B	2162	G	Sidechain
2	B	2164	C	Sidechain
2	B	2166	U	Sidechain
2	B	2167	U	Sidechain
2	B	2169	A	Sidechain
2	B	217	A	Sidechain
2	B	2170	A	Sidechain
2	B	2171	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2172	U	Sidechain
2	B	2173	A	Sidechain
2	B	2178	C	Sidechain
2	B	2179	C	Sidechain
2	B	218	A	Sidechain
2	B	2181	U	Sidechain
2	B	2184	A	Sidechain
2	B	2185	U	Sidechain
2	B	2186	G	Sidechain
2	B	2187	U	Sidechain
2	B	2188	U	Sidechain
2	B	2189	U	Sidechain
2	B	2193	G	Sidechain
2	B	2195	U	Sidechain
2	B	2197	U	Sidechain
2	B	2198	A	Sidechain
2	B	2200	C	Sidechain
2	B	2201	G	Sidechain
2	B	2202	U	Sidechain
2	B	2203	U	Sidechain
2	B	2204	G	Sidechain
2	B	2205	A	Sidechain
2	B	2209	G	Sidechain
2	B	221	A	Sidechain
2	B	2210	U	Sidechain
2	B	2212	A	Sidechain
2	B	2213	U	Sidechain
2	B	2214	C	Sidechain
2	B	2215	C	Sidechain
2	B	2217	G	Sidechain
2	B	2218	G	Sidechain
2	B	2219	U	Sidechain
2	B	222	A	Sidechain
2	B	2221	G	Sidechain
2	B	2223	G	Sidechain
2	B	2224	G	Sidechain
2	B	2225	A	Sidechain
2	B	2226	C	Sidechain
2	B	2228	G	Sidechain
2	B	2231	U	Sidechain
2	B	2233	U	Sidechain
2	B	2234	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2235	G	Sidechain
2	B	2238	G	Sidechain
2	B	2239	G	Sidechain
2	B	224	U	Sidechain
2	B	2242	G	Sidechain
2	B	2248	C	Sidechain
2	B	2249	U	Sidechain
2	B	2251	G	Sidechain
2	B	2252	G	Sidechain
2	B	2253	G	Sidechain
2	B	2254	C	Sidechain
2	B	2255	G	Sidechain
2	B	2257	U	Sidechain
2	B	2258	C	Sidechain
2	B	2259	U	Sidechain
2	B	226	A	Sidechain
2	B	2260	C	Sidechain
2	B	2261	C	Sidechain
2	B	2264	C	Sidechain
2	B	2265	U	Sidechain
2	B	227	A	Sidechain
2	B	2271	G	Sidechain
2	B	2272	U	Sidechain
2	B	2273	A	Sidechain
2	B	2277	G	Sidechain
2	B	2278	A	Sidechain
2	B	2279	G	Sidechain
2	B	228	C	Sidechain
2	B	2280	G	Sidechain
2	B	2281	A	Sidechain
2	B	2282	G	Sidechain
2	B	2283	C	Sidechain
2	B	2284	A	Sidechain
2	B	2285	C	Sidechain
2	B	2288	A	Sidechain
2	B	229	C	Sidechain
2	B	2290	G	Sidechain
2	B	2291	U	Sidechain
2	B	2293	G	Sidechain
2	B	2298	A	Sidechain
2	B	23	G	Sidechain
2	B	230	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2301	C	Sidechain
2	B	2302	U	Sidechain
2	B	2303	G	Sidechain
2	B	2306	C	Sidechain
2	B	2307	G	Sidechain
2	B	2308	G	Sidechain
2	B	231	A	Sidechain
2	B	2310	C	Sidechain
2	B	2312	U	Sidechain
2	B	2313	C	Sidechain
2	B	2315	G	Sidechain
2	B	2316	G	Sidechain
2	B	2317	A	Sidechain
2	B	2318	G	Sidechain
2	B	2319	G	Sidechain
2	B	232	G	Sidechain
2	B	2320	U	Sidechain
2	B	2321	U	Sidechain
2	B	2322	A	Sidechain
2	B	2323	G	Sidechain
2	B	2325	G	Sidechain
2	B	2327	A	Sidechain
2	B	2328	A	Sidechain
2	B	2329	U	Sidechain
2	B	233	A	Sidechain
2	B	2330	G	Sidechain
2	B	2332	C	Sidechain
2	B	2333	A	Sidechain
2	B	2334	U	Sidechain
2	B	2335	A	Sidechain
2	B	2338	C	Sidechain
2	B	234	U	Sidechain
2	B	2341	G	Sidechain
2	B	2342	C	Sidechain
2	B	2343	U	Sidechain
2	B	2344	U	Sidechain
2	B	2345	G	Sidechain
2	B	2346	A	Sidechain
2	B	2348	U	Sidechain
2	B	2349	G	Sidechain
2	B	235	U	Sidechain
2	B	2351	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2352	A	Sidechain
2	B	2356	U	Sidechain
2	B	2357	G	Sidechain
2	B	2358	A	Sidechain
2	B	236	C	Sidechain
2	B	2360	G	Sidechain
2	B	2362	C	Sidechain
2	B	2364	C	Sidechain
2	B	2365	G	Sidechain
2	B	2367	G	Sidechain
2	B	2369	A	Sidechain
2	B	2371	G	Sidechain
2	B	2373	G	Sidechain
2	B	2374	C	Sidechain
2	B	2375	G	Sidechain
2	B	2376	A	Sidechain
2	B	2379	G	Sidechain
2	B	2382	G	Sidechain
2	B	2383	G	Sidechain
2	B	2386	A	Sidechain
2	B	239	C	Sidechain
2	B	2390	U	Sidechain
2	B	2391	G	Sidechain
2	B	2392	A	Sidechain
2	B	2393	U	Sidechain
2	B	2398	U	Sidechain
2	B	2399	G	Sidechain
2	B	24	G	Sidechain
2	B	240	C	Sidechain
2	B	2400	G	Sidechain
2	B	2404	U	Sidechain
2	B	2405	G	Sidechain
2	B	2406	A	Sidechain
2	B	2407	A	Sidechain
2	B	241	A	Sidechain
2	B	2410	G	Sidechain
2	B	2413	G	Sidechain
2	B	2414	G	Sidechain
2	B	2415	G	Sidechain
2	B	242	G	Sidechain
2	B	2425	A	Sidechain
2	B	2426	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2428	G	Sidechain
2	B	2429	G	Sidechain
2	B	243	U	Sidechain
2	B	2430	A	Sidechain
2	B	2432	A	Sidechain
2	B	2433	A	Sidechain
2	B	2434	A	Sidechain
2	B	2436	G	Sidechain
2	B	2437	G	Sidechain
2	B	244	A	Sidechain
2	B	2440	C	Sidechain
2	B	2441	U	Sidechain
2	B	2442	C	Sidechain
2	B	2444	G	Sidechain
2	B	2445	G	Sidechain
2	B	2446	G	Sidechain
2	B	2447	G	Sidechain
2	B	2450	A	Sidechain
2	B	2452	C	Sidechain
2	B	2453	A	Sidechain
2	B	2454	G	Sidechain
2	B	2455	G	Sidechain
2	B	2457	U	Sidechain
2	B	2458	G	Sidechain
2	B	246	C	Sidechain
2	B	2460	U	Sidechain
2	B	2463	C	Sidechain
2	B	2465	C	Sidechain
2	B	247	G	Sidechain
2	B	2471	A	Sidechain
2	B	2472	G	Sidechain
2	B	2475	C	Sidechain
2	B	2476	A	Sidechain
2	B	2479	U	Sidechain
2	B	248	G	Sidechain
2	B	2480	C	Sidechain
2	B	2481	G	Sidechain
2	B	2482	A	Sidechain
2	B	2483	C	Sidechain
2	B	2484	G	Sidechain
2	B	2485	G	Sidechain
2	B	2489	U	Sidechain

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Mol	Chain	Res	Type	Group
2	B	249	C	Sidechain
2	B	2490	G	Sidechain
2	B	2491	U	Sidechain
2	B	2492	U	Sidechain
2	B	2493	U	Sidechain
2	B	2494	G	Sidechain
2	B	2495	G	Sidechain
2	B	2497	A	Sidechain
2	B	2498	C	Sidechain
2	B	25	U	Sidechain
2	B	250	G	Sidechain
2	B	2505	G	Sidechain
2	B	2506	U	Sidechain
2	B	2507	C	Sidechain
2	B	2509	G	Sidechain
2	B	251	A	Sidechain
2	B	2510	C	Sidechain
2	B	2511	U	Sidechain
2	B	2512	C	Sidechain
2	B	2513	A	Sidechain
2	B	2514	U	Sidechain
2	B	2515	C	Sidechain
2	B	2516	A	Sidechain
2	B	2518	A	Sidechain
2	B	2520	C	Sidechain
2	B	2521	C	Sidechain
2	B	2523	G	Sidechain
2	B	2524	G	Sidechain
2	B	2525	G	Sidechain
2	B	2527	C	Sidechain
2	B	2529	G	Sidechain
2	B	253	C	Sidechain
2	B	2530	A	Sidechain
2	B	2531	A	Sidechain
2	B	2533	U	Sidechain
2	B	2534	A	Sidechain
2	B	2535	G	Sidechain
2	B	2536	G	Sidechain
2	B	2537	U	Sidechain
2	B	254	G	Sidechain
2	B	2541	A	Sidechain
2	B	2543	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2544	G	Sidechain
2	B	2545	G	Sidechain
2	B	2548	U	Sidechain
2	B	2549	G	Sidechain
2	B	2550	G	Sidechain
2	B	2554	U	Sidechain
2	B	2555	U	Sidechain
2	B	2557	G	Sidechain
2	B	2558	C	Sidechain
2	B	256	A	Sidechain
2	B	2562	U	Sidechain
2	B	2563	U	Sidechain
2	B	2564	A	Sidechain
2	B	2566	A	Sidechain
2	B	2567	G	Sidechain
2	B	2568	U	Sidechain
2	B	2569	G	Sidechain
2	B	257	C	Sidechain
2	B	2570	G	Sidechain
2	B	2571	U	Sidechain
2	B	2572	A	Sidechain
2	B	2574	G	Sidechain
2	B	2576	G	Sidechain
2	B	258	G	Sidechain
2	B	2580	U	Sidechain
2	B	2581	G	Sidechain
2	B	2583	G	Sidechain
2	B	2584	U	Sidechain
2	B	2586	U	Sidechain
2	B	2588	G	Sidechain
2	B	259	G	Sidechain
2	B	2592	G	Sidechain
2	B	2595	G	Sidechain
2	B	2596	U	Sidechain
2	B	2597	G	Sidechain
2	B	2598	A	Sidechain
2	B	2599	G	Sidechain
2	B	26	G	Sidechain
2	B	260	G	Sidechain
2	B	2600	A	Sidechain
2	B	2601	C	Sidechain
2	B	2603	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2605	U	Sidechain
2	B	2606	C	Sidechain
2	B	2609	U	Sidechain
2	B	261	G	Sidechain
2	B	2612	C	Sidechain
2	B	2613	U	Sidechain
2	B	2614	A	Sidechain
2	B	2615	U	Sidechain
2	B	2620	C	Sidechain
2	B	2623	G	Sidechain
2	B	2624	G	Sidechain
2	B	2625	G	Sidechain
2	B	2628	C	Sidechain
2	B	2629	U	Sidechain
2	B	2633	G	Sidechain
2	B	2635	A	Sidechain
2	B	2636	C	Sidechain
2	B	2638	G	Sidechain
2	B	2640	G	Sidechain
2	B	2641	G	Sidechain
2	B	2643	G	Sidechain
2	B	2644	G	Sidechain
2	B	2645	G	Sidechain
2	B	2646	C	Sidechain
2	B	2648	G	Sidechain
2	B	265	A	Sidechain
2	B	2653	U	Sidechain
2	B	2655	G	Sidechain
2	B	2659	G	Sidechain
2	B	266	G	Sidechain
2	B	2660	A	Sidechain
2	B	2662	A	Sidechain
2	B	2663	G	Sidechain
2	B	2664	G	Sidechain
2	B	2665	A	Sidechain
2	B	2666	C	Sidechain
2	B	2668	G	Sidechain
2	B	2669	G	Sidechain
2	B	2670	A	Sidechain
2	B	2671	G	Sidechain
2	B	2674	G	Sidechain
2	B	2675	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2677	G	Sidechain
2	B	2678	C	Sidechain
2	B	2680	U	Sidechain
2	B	2682	A	Sidechain
2	B	2683	C	Sidechain
2	B	2685	G	Sidechain
2	B	2688	G	Sidechain
2	B	2689	U	Sidechain
2	B	2690	U	Sidechain
2	B	2691	C	Sidechain
2	B	2692	G	Sidechain
2	B	2693	G	Sidechain
2	B	2694	G	Sidechain
2	B	2695	U	Sidechain
2	B	2696	U	Sidechain
2	B	2697	G	Sidechain
2	B	2701	U	Sidechain
2	B	2702	G	Sidechain
2	B	2707	U	Sidechain
2	B	2708	G	Sidechain
2	B	2709	G	Sidechain
2	B	271	G	Sidechain
2	B	2710	C	Sidechain
2	B	2713	U	Sidechain
2	B	2715	C	Sidechain
2	B	2716	C	Sidechain
2	B	2718	G	Sidechain
2	B	272	A	Sidechain
2	B	2720	U	Sidechain
2	B	2722	G	Sidechain
2	B	2723	C	Sidechain
2	B	2724	U	Sidechain
2	B	2725	A	Sidechain
2	B	2727	A	Sidechain
2	B	2728	U	Sidechain
2	B	273	G	Sidechain
2	B	2732	G	Sidechain
2	B	2733	A	Sidechain
2	B	2734	A	Sidechain
2	B	2736	A	Sidechain
2	B	2739	U	Sidechain
2	B	2740	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2741	A	Sidechain
2	B	2742	G	Sidechain
2	B	2743	U	Sidechain
2	B	2745	C	Sidechain
2	B	2747	G	Sidechain
2	B	2749	A	Sidechain
2	B	275	C	Sidechain
2	B	2751	G	Sidechain
2	B	2752	C	Sidechain
2	B	2753	A	Sidechain
2	B	2754	U	Sidechain
2	B	2758	A	Sidechain
2	B	2759	G	Sidechain
2	B	276	U	Sidechain
2	B	2762	C	Sidechain
2	B	2763	G	Sidechain
2	B	2765	A	Sidechain
2	B	2766	A	Sidechain
2	B	2768	U	Sidechain
2	B	2769	U	Sidechain
2	B	277	G	Sidechain
2	B	2771	C	Sidechain
2	B	2773	C	Sidechain
2	B	2775	G	Sidechain
2	B	2776	A	Sidechain
2	B	2777	G	Sidechain
2	B	2778	A	Sidechain
2	B	2779	U	Sidechain
2	B	278	A	Sidechain
2	B	2781	A	Sidechain
2	B	2782	G	Sidechain
2	B	2783	U	Sidechain
2	B	2784	U	Sidechain
2	B	2786	U	Sidechain
2	B	2787	C	Sidechain
2	B	279	A	Sidechain
2	B	2790	U	Sidechain
2	B	2791	G	Sidechain
2	B	2792	A	Sidechain
2	B	2794	C	Sidechain
2	B	2797	U	Sidechain
2	B	28	A	Sidechain

Continued on next page...

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Mol	Chain	Res	Type	Group
2	B	280	U	Sidechain
2	B	2801	G	Sidechain
2	B	2802	G	Sidechain
2	B	2803	G	Sidechain
2	B	2804	U	Sidechain
2	B	2805	C	Sidechain
2	B	2806	C	Sidechain
2	B	2807	U	Sidechain
2	B	2809	A	Sidechain
2	B	281	C	Sidechain
2	B	2810	A	Sidechain
2	B	2811	G	Sidechain
2	B	2812	G	Sidechain
2	B	2813	A	Sidechain
2	B	2816	G	Sidechain
2	B	2817	U	Sidechain
2	B	2818	U	Sidechain
2	B	2819	G	Sidechain
2	B	282	A	Sidechain
2	B	2821	A	Sidechain
2	B	2822	G	Sidechain
2	B	2826	A	Sidechain
2	B	2827	C	Sidechain
2	B	2829	A	Sidechain
2	B	2830	C	Sidechain
2	B	2832	U	Sidechain
2	B	2834	G	Sidechain
2	B	2836	U	Sidechain
2	B	2838	G	Sidechain
2	B	2839	G	Sidechain
2	B	284	U	Sidechain
2	B	2840	C	Sidechain
2	B	2841	C	Sidechain
2	B	2842	G	Sidechain
2	B	2843	G	Sidechain
2	B	2846	G	Sidechain
2	B	2847	U	Sidechain
2	B	2848	G	Sidechain
2	B	2849	U	Sidechain
2	B	285	G	Sidechain
2	B	2850	A	Sidechain
2	B	2852	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2855	C	Sidechain
2	B	2857	G	Sidechain
2	B	2858	C	Sidechain
2	B	2859	G	Sidechain
2	B	2861	U	Sidechain
2	B	2862	G	Sidechain
2	B	2863	C	Sidechain
2	B	2865	U	Sidechain
2	B	2868	A	Sidechain
2	B	2871	U	Sidechain
2	B	2876	G	Sidechain
2	B	2879	A	Sidechain
2	B	288	U	Sidechain
2	B	2880	C	Sidechain
2	B	2881	U	Sidechain
2	B	2882	A	Sidechain
2	B	2883	A	Sidechain
2	B	2885	G	Sidechain
2	B	2887	A	Sidechain
2	B	2888	C	Sidechain
2	B	2889	C	Sidechain
2	B	2890	G	Sidechain
2	B	2891	U	Sidechain
2	B	2892	G	Sidechain
2	B	2894	G	Sidechain
2	B	2895	G	Sidechain
2	B	2896	C	Sidechain
2	B	2897	U	Sidechain
2	B	2898	U	Sidechain
2	B	29	U	Sidechain
2	B	290	U	Sidechain
2	B	2900	A	Sidechain
2	B	2902	C	Sidechain
2	B	292	U	Sidechain
2	B	293	U	Sidechain
2	B	294	A	Sidechain
2	B	296	U	Sidechain
2	B	297	G	Sidechain
2	B	298	G	Sidechain
2	B	299	A	Sidechain
2	B	300	A	Sidechain
2	B	301	G	Sidechain

Continued on next page...

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Mol	Chain	Res	Type	Group
2	B	303	G	Sidechain
2	B	304	U	Sidechain
2	B	306	U	Sidechain
2	B	307	G	Sidechain
2	B	310	A	Sidechain
2	B	311	A	Sidechain
2	B	312	G	Sidechain
2	B	313	G	Sidechain
2	B	315	G	Sidechain
2	B	318	C	Sidechain
2	B	319	G	Sidechain
2	B	322	A	Sidechain
2	B	328	U	Sidechain
2	B	329	G	Sidechain
2	B	332	A	Sidechain
2	B	336	C	Sidechain
2	B	337	C	Sidechain
2	B	339	U	Sidechain
2	B	344	A	Sidechain
2	B	345	A	Sidechain
2	B	346	A	Sidechain
2	B	348	A	Sidechain
2	B	349	U	Sidechain
2	B	350	G	Sidechain
2	B	355	U	Sidechain
2	B	356	G	Sidechain
2	B	357	C	Sidechain
2	B	359	G	Sidechain
2	B	360	U	Sidechain
2	B	361	G	Sidechain
2	B	362	A	Sidechain
2	B	363	G	Sidechain
2	B	364	C	Sidechain
2	B	368	A	Sidechain
2	B	369	U	Sidechain
2	B	37	C	Sidechain
2	B	372	G	Sidechain
2	B	373	U	Sidechain
2	B	376	G	Sidechain
2	B	377	G	Sidechain
2	B	380	G	Sidechain
2	B	382	A	Sidechain

Continued on next page...

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Mol	Chain	Res	Type	Group
2	B	386	G	Sidechain
2	B	387	U	Sidechain
2	B	388	G	Sidechain
2	B	389	G	Sidechain
2	B	39	G	Sidechain
2	B	390	U	Sidechain
2	B	392	U	Sidechain
2	B	393	C	Sidechain
2	B	394	C	Sidechain
2	B	395	U	Sidechain
2	B	398	C	Sidechain
2	B	399	U	Sidechain
2	B	4	U	Sidechain
2	B	400	G	Sidechain
2	B	401	A	Sidechain
2	B	402	A	Sidechain
2	B	403	U	Sidechain
2	B	404	A	Sidechain
2	B	407	G	Sidechain
2	B	408	G	Sidechain
2	B	409	G	Sidechain
2	B	411	G	Sidechain
2	B	412	A	Sidechain
2	B	414	C	Sidechain
2	B	416	U	Sidechain
2	B	42	A	Sidechain
2	B	422	A	Sidechain
2	B	428	A	Sidechain
2	B	429	A	Sidechain
2	B	430	A	Sidechain
2	B	431	U	Sidechain
2	B	433	C	Sidechain
2	B	436	C	Sidechain
2	B	437	U	Sidechain
2	B	438	G	Sidechain
2	B	441	U	Sidechain
2	B	442	G	Sidechain
2	B	443	A	Sidechain
2	B	445	C	Sidechain
2	B	446	G	Sidechain
2	B	447	A	Sidechain
2	B	449	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	45	G	Sidechain
2	B	452	G	Sidechain
2	B	453	A	Sidechain
2	B	454	A	Sidechain
2	B	455	C	Sidechain
2	B	457	A	Sidechain
2	B	458	G	Sidechain
2	B	459	U	Sidechain
2	B	46	G	Sidechain
2	B	463	G	Sidechain
2	B	464	U	Sidechain
2	B	465	G	Sidechain
2	B	467	G	Sidechain
2	B	469	G	Sidechain
2	B	47	C	Sidechain
2	B	471	A	Sidechain
2	B	472	A	Sidechain
2	B	473	G	Sidechain
2	B	474	G	Sidechain
2	B	475	C	Sidechain
2	B	476	G	Sidechain
2	B	477	A	Sidechain
2	B	479	A	Sidechain
2	B	480	A	Sidechain
2	B	481	G	Sidechain
2	B	483	A	Sidechain
2	B	485	C	Sidechain
2	B	486	C	Sidechain
2	B	488	G	Sidechain
2	B	489	G	Sidechain
2	B	492	A	Sidechain
2	B	493	G	Sidechain
2	B	494	G	Sidechain
2	B	495	G	Sidechain
2	B	496	G	Sidechain
2	B	497	A	Sidechain
2	B	499	U	Sidechain
2	B	5	A	Sidechain
2	B	50	U	Sidechain
2	B	500	G	Sidechain
2	B	502	A	Sidechain
2	B	505	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	507	A	Sidechain
2	B	510	C	Sidechain
2	B	514	A	Sidechain
2	B	515	A	Sidechain
2	B	516	C	Sidechain
2	B	517	C	Sidechain
2	B	518	G	Sidechain
2	B	519	U	Sidechain
2	B	520	G	Sidechain
2	B	522	A	Sidechain
2	B	524	G	Sidechain
2	B	525	U	Sidechain
2	B	526	A	Sidechain
2	B	528	A	Sidechain
2	B	529	A	Sidechain
2	B	530	G	Sidechain
2	B	533	G	Sidechain
2	B	534	U	Sidechain
2	B	535	G	Sidechain
2	B	536	G	Sidechain
2	B	539	G	Sidechain
2	B	540	C	Sidechain
2	B	543	G	Sidechain
2	B	544	C	Sidechain
2	B	545	U	Sidechain
2	B	547	A	Sidechain
2	B	548	G	Sidechain
2	B	549	G	Sidechain
2	B	550	C	Sidechain
2	B	552	U	Sidechain
2	B	554	U	Sidechain
2	B	555	G	Sidechain
2	B	556	A	Sidechain
2	B	557	C	Sidechain
2	B	558	U	Sidechain
2	B	56	A	Sidechain
2	B	560	C	Sidechain
2	B	561	G	Sidechain
2	B	563	A	Sidechain
2	B	565	C	Sidechain
2	B	566	U	Sidechain
2	B	567	U	Sidechain

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Mol	Chain	Res	Type	Group
2	B	568	U	Sidechain
2	B	569	U	Sidechain
2	B	572	A	Sidechain
2	B	573	U	Sidechain
2	B	574	A	Sidechain
2	B	576	U	Sidechain
2	B	577	G	Sidechain
2	B	578	G	Sidechain
2	B	579	G	Sidechain
2	B	58	G	Sidechain
2	B	580	U	Sidechain
2	B	581	C	Sidechain
2	B	582	A	Sidechain
2	B	583	G	Sidechain
2	B	585	G	Sidechain
2	B	586	A	Sidechain
2	B	588	U	Sidechain
2	B	589	U	Sidechain
2	B	59	U	Sidechain
2	B	590	A	Sidechain
2	B	593	U	Sidechain
2	B	594	U	Sidechain
2	B	596	U	Sidechain
2	B	6	A	Sidechain
2	B	60	G	Sidechain
2	B	601	C	Sidechain
2	B	604	G	Sidechain
2	B	605	G	Sidechain
2	B	606	U	Sidechain
2	B	607	U	Sidechain
2	B	608	A	Sidechain
2	B	609	A	Sidechain
2	B	610	C	Sidechain
2	B	612	G	Sidechain
2	B	613	A	Sidechain
2	B	615	U	Sidechain
2	B	616	A	Sidechain
2	B	617	G	Sidechain
2	B	619	G	Sidechain
2	B	62	U	Sidechain
2	B	620	G	Sidechain
2	B	621	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	622	G	Sidechain
2	B	623	C	Sidechain
2	B	625	G	Sidechain
2	B	626	A	Sidechain
2	B	627	A	Sidechain
2	B	628	G	Sidechain
2	B	63	A	Sidechain
2	B	630	G	Sidechain
2	B	632	A	Sidechain
2	B	633	A	Sidechain
2	B	635	C	Sidechain
2	B	636	G	Sidechain
2	B	637	A	Sidechain
2	B	638	G	Sidechain
2	B	639	U	Sidechain
2	B	64	A	Sidechain
2	B	641	U	Sidechain
2	B	644	A	Sidechain
2	B	645	C	Sidechain
2	B	646	U	Sidechain
2	B	649	G	Sidechain
2	B	65	U	Sidechain
2	B	651	G	Sidechain
2	B	652	U	Sidechain
2	B	653	U	Sidechain
2	B	655	A	Sidechain
2	B	656	G	Sidechain
2	B	657	U	Sidechain
2	B	658	U	Sidechain
2	B	660	C	Sidechain
2	B	661	A	Sidechain
2	B	663	G	Sidechain
2	B	664	G	Sidechain
2	B	665	U	Sidechain
2	B	666	A	Sidechain
2	B	67	U	Sidechain
2	B	671	C	Sidechain
2	B	672	C	Sidechain
2	B	673	C	Sidechain
2	B	674	G	Sidechain
2	B	675	A	Sidechain
2	B	677	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	679	C	Sidechain
2	B	680	C	Sidechain
2	B	681	G	Sidechain
2	B	682	G	Sidechain
2	B	683	U	Sidechain
2	B	684	G	Sidechain
2	B	685	A	Sidechain
2	B	686	U	Sidechain
2	B	687	C	Sidechain
2	B	688	U	Sidechain
2	B	689	A	Sidechain
2	B	69	C	Sidechain
2	B	690	G	Sidechain
2	B	691	C	Sidechain
2	B	694	U	Sidechain
2	B	697	G	Sidechain
2	B	698	C	Sidechain
2	B	699	A	Sidechain
2	B	7	G	Sidechain
2	B	70	G	Sidechain
2	B	700	G	Sidechain
2	B	701	G	Sidechain
2	B	702	U	Sidechain
2	B	703	U	Sidechain
2	B	705	A	Sidechain
2	B	707	G	Sidechain
2	B	708	G	Sidechain
2	B	71	A	Sidechain
2	B	711	G	Sidechain
2	B	712	G	Sidechain
2	B	713	G	Sidechain
2	B	714	U	Sidechain
2	B	72	U	Sidechain
2	B	720	U	Sidechain
2	B	721	A	Sidechain
2	B	722	A	Sidechain
2	B	724	U	Sidechain
2	B	725	G	Sidechain
2	B	727	A	Sidechain
2	B	728	G	Sidechain
2	B	729	G	Sidechain
2	B	731	C	Sidechain

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Mol	Chain	Res	Type	Group
2	B	732	C	Sidechain
2	B	733	G	Sidechain
2	B	736	C	Sidechain
2	B	739	A	Sidechain
2	B	74	A	Sidechain
2	B	740	C	Sidechain
2	B	743	A	Sidechain
2	B	744	U	Sidechain
2	B	748	G	Sidechain
2	B	75	G	Sidechain
2	B	750	A	Sidechain
2	B	751	A	Sidechain
2	B	752	A	Sidechain
2	B	753	A	Sidechain
2	B	755	U	Sidechain
2	B	756	A	Sidechain
2	B	757	G	Sidechain
2	B	758	C	Sidechain
2	B	760	G	Sidechain
2	B	761	A	Sidechain
2	B	762	U	Sidechain
2	B	763	G	Sidechain
2	B	766	U	Sidechain
2	B	767	U	Sidechain
2	B	768	G	Sidechain
2	B	769	U	Sidechain
2	B	77	G	Sidechain
2	B	772	C	Sidechain
2	B	773	U	Sidechain
2	B	774	G	Sidechain
2	B	775	G	Sidechain
2	B	776	G	Sidechain
2	B	777	G	Sidechain
2	B	778	G	Sidechain
2	B	779	U	Sidechain
2	B	78	U	Sidechain
2	B	780	G	Sidechain
2	B	781	A	Sidechain
2	B	784	G	Sidechain
2	B	785	G	Sidechain
2	B	788	A	Sidechain
2	B	789	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	79	C	Sidechain
2	B	791	C	Sidechain
2	B	792	A	Sidechain
2	B	793	A	Sidechain
2	B	794	A	Sidechain
2	B	795	C	Sidechain
2	B	796	C	Sidechain
2	B	798	G	Sidechain
2	B	800	A	Sidechain
2	B	801	G	Sidechain
2	B	802	A	Sidechain
2	B	803	U	Sidechain
2	B	804	A	Sidechain
2	B	805	G	Sidechain
2	B	807	U	Sidechain
2	B	808	G	Sidechain
2	B	81	G	Sidechain
2	B	813	U	Sidechain
2	B	814	C	Sidechain
2	B	816	C	Sidechain
2	B	818	G	Sidechain
2	B	819	A	Sidechain
2	B	82	U	Sidechain
2	B	820	A	Sidechain
2	B	821	A	Sidechain
2	B	822	G	Sidechain
2	B	823	C	Sidechain
2	B	824	U	Sidechain
2	B	825	A	Sidechain
2	B	83	A	Sidechain
2	B	830	G	Sidechain
2	B	831	G	Sidechain
2	B	832	U	Sidechain
2	B	833	A	Sidechain
2	B	834	G	Sidechain
2	B	835	C	Sidechain
2	B	836	G	Sidechain
2	B	837	C	Sidechain
2	B	839	U	Sidechain
2	B	84	A	Sidechain
2	B	840	C	Sidechain
2	B	841	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	845	A	Sidechain
2	B	846	U	Sidechain
2	B	847	U	Sidechain
2	B	848	C	Sidechain
2	B	849	A	Sidechain
2	B	85	G	Sidechain
2	B	850	U	Sidechain
2	B	852	U	Sidechain
2	B	853	C	Sidechain
2	B	855	G	Sidechain
2	B	858	G	Sidechain
2	B	859	G	Sidechain
2	B	861	A	Sidechain
2	B	862	G	Sidechain
2	B	864	G	Sidechain
2	B	865	C	Sidechain
2	B	867	C	Sidechain
2	B	871	U	Sidechain
2	B	873	C	Sidechain
2	B	875	G	Sidechain
2	B	876	C	Sidechain
2	B	877	A	Sidechain
2	B	878	A	Sidechain
2	B	879	G	Sidechain
2	B	88	G	Sidechain
2	B	880	G	Sidechain
2	B	881	G	Sidechain
2	B	882	G	Sidechain
2	B	884	U	Sidechain
2	B	885	C	Sidechain
2	B	886	A	Sidechain
2	B	887	U	Sidechain
2	B	888	C	Sidechain
2	B	89	A	Sidechain
2	B	891	G	Sidechain
2	B	892	A	Sidechain
2	B	894	U	Sidechain
2	B	895	U	Sidechain
2	B	898	C	Sidechain
2	B	899	A	Sidechain
2	B	9	G	Sidechain
2	B	902	C	Sidechain

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Mol	Chain	Res	Type	Group
2	B	904	G	Sidechain
2	B	905	A	Sidechain
2	B	908	C	Sidechain
2	B	909	A	Sidechain
2	B	91	A	Sidechain
2	B	910	A	Sidechain
2	B	911	A	Sidechain
2	B	912	C	Sidechain
2	B	913	U	Sidechain
2	B	914	G	Sidechain
2	B	916	G	Sidechain
2	B	918	A	Sidechain
2	B	919	U	Sidechain
2	B	92	U	Sidechain
2	B	920	A	Sidechain
2	B	921	C	Sidechain
2	B	922	C	Sidechain
2	B	923	G	Sidechain
2	B	929	U	Sidechain
2	B	932	U	Sidechain
2	B	933	A	Sidechain
2	B	934	U	Sidechain
2	B	935	C	Sidechain
2	B	938	G	Sidechain
2	B	940	G	Sidechain
2	B	941	A	Sidechain
2	B	942	G	Sidechain
2	B	943	A	Sidechain
2	B	946	C	Sidechain
2	B	947	A	Sidechain
2	B	948	C	Sidechain
2	B	949	G	Sidechain
2	B	950	G	Sidechain
2	B	952	G	Sidechain
2	B	955	U	Sidechain
2	B	956	G	Sidechain
2	B	957	C	Sidechain
2	B	958	U	Sidechain
2	B	959	A	Sidechain
2	B	96	C	Sidechain
2	B	960	A	Sidechain
2	B	961	C	Sidechain

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Mol	Chain	Res	Type	Group
2	B	964	C	Sidechain
2	B	969	G	Sidechain
2	B	97	C	Sidechain
2	B	970	U	Sidechain
2	B	971	G	Sidechain
2	B	972	A	Sidechain
2	B	973	A	Sidechain
2	B	975	A	Sidechain
2	B	977	G	Sidechain
2	B	979	A	Sidechain
2	B	980	A	Sidechain
2	B	981	A	Sidechain
2	B	982	C	Sidechain
2	B	983	A	Sidechain
2	B	984	A	Sidechain
2	B	985	C	Sidechain
2	B	987	C	Sidechain
2	B	988	A	Sidechain
2	B	989	G	Sidechain
2	B	99	U	Sidechain
2	B	990	A	Sidechain
2	B	991	C	Sidechain
2	B	995	C	Sidechain
2	B	999	U	Sidechain
27	C	170	TYR	Sidechain
27	C	181	ARG	Sidechain
27	C	211	ARG	Sidechain
27	C	213	ARG	Sidechain
27	C	216	ARG	Sidechain
27	C	237	ARG	Sidechain
27	C	261	ARG	Sidechain
27	C	62	ARG	Sidechain
27	C	66	PHE	Sidechain
27	C	82	TYR	Sidechain
27	C	9	SER	Peptide
14	D	127	PHE	Sidechain
14	D	13	ARG	Sidechain
14	D	141	ARG	Sidechain
14	D	184	ARG	Sidechain
14	D	199	SER	Peptide
14	D	24	VAL	Mainchain
14	D	42	ASN	Peptide

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Mol	Chain	Res	Type	Group
14	D	45	TYR	Sidechain
14	D	67	HIS	Sidechain
14	D	68	PHE	Sidechain
14	D	90	PHE	Peptide
20	E	158	PHE	Sidechain
20	E	162	ARG	Sidechain
20	E	170	ARG	Sidechain
20	E	23	PHE	Sidechain
20	E	35	TYR	Sidechain
20	E	44	ARG	Sidechain
20	E	88	ARG	Peptide
28	F	124	ARG	Sidechain
28	F	127	TYR	Sidechain
28	F	176	PHE	Sidechain
28	F	21	TYR	Sidechain
28	F	82	TYR	Sidechain
28	F	91	ARG	Sidechain
29	G	100	ASN	Mainchain
29	G	151	ARG	Sidechain
29	G	152	ARG	Sidechain
29	G	156	TYR	Sidechain
29	G	2	ARG	Sidechain
29	G	42	VAL	Peptide
29	G	77	GLY	Mainchain
29	G	93	TYR	Sidechain
29	G	94	ARG	Sidechain
30	H	123	ARG	Sidechain
30	H	132	PHE	Sidechain
30	H	25	TYR	Sidechain
30	H	47	PHE	Sidechain
30	H	50	ARG	Sidechain
30	H	51	ARG	Sidechain
30	H	83	LYS	Peptide
30	H	91	PHE	Sidechain
30	H	97	ARG	Sidechain
31	I	126	ARG	Sidechain
31	I	41	PHE	Sidechain
31	I	61	TYR	Sidechain
32	J	37	ARG	Sidechain
32	J	4	PHE	Sidechain
32	J	40	HIS	Sidechain
32	J	44	TYR	Sidechain

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Mol	Chain	Res	Type	Group
32	J	45	THR	Peptide
32	J	47	HIS	Sidechain
32	J	53	TYR	Sidechain
32	J	74	TYR	Sidechain
32	J	77	HIS	Sidechain
4	K	105	ARG	Sidechain
4	K	30	ARG	Sidechain
4	K	70	ARG	Peptide
4	K	71	ARG	Peptide
5	L	126	ARG	Sidechain
5	L	132	ARG	Sidechain
5	L	18	ARG	Sidechain
5	L	30	THR	Peptide
5	L	33	ARG	Sidechain
5	L	41	ARG	Sidechain
5	L	47	ARG	Sidechain
5	L	50	PHE	Sidechain
5	L	66	PHE	Sidechain
5	L	87	GLY	Mainchain
7	M	103	TYR	Sidechain
7	M	114	ARG	Sidechain
7	M	13	HIS	Sidechain
7	M	31	PHE	Sidechain
7	M	40	ARG	Sidechain
7	M	44	ARG	Sidechain
7	M	51	ARG	Sidechain
7	M	6	ARG	Sidechain
7	M	81	ARG	Sidechain
8	N	103	ARG	Sidechain
8	N	2	ARG	Sidechain
8	N	4	ARG	Sidechain
8	N	94	TYR	Sidechain
9	O	111	ARG	Sidechain
9	O	36	TYR	Sidechain
9	O	64	TYR	Sidechain
9	O	94	ARG	Sidechain
9	O	99	TYR	Sidechain
10	P	112	ARG	Sidechain
10	P	20	ARG	Sidechain
10	P	51	ASN	Peptide
10	P	52	ARG	Sidechain
10	P	60	VAL	Peptide

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Mol	Chain	Res	Type	Group
10	P	61	ARG	Sidechain
10	P	97	TYR	Sidechain
11	Q	10	ARG	Sidechain
11	Q	105	PHE	Sidechain
11	Q	13	HIS	Sidechain
11	Q	23	TYR	Sidechain
11	Q	24	TYR	Sidechain
11	Q	29	ARG	Sidechain
11	Q	32	ARG	Sidechain
11	Q	46	TYR	Sidechain
11	Q	54	ARG	Sidechain
11	Q	63	ARG	Sidechain
11	Q	69	ARG	Sidechain
12	R	2	TYR	Sidechain
12	R	21	ARG	Sidechain
12	R	33	VAL	Peptide
12	R	78	ARG	Sidechain
12	R	81	LYS	Mainchain
12	R	82	HIS	Peptide
12	R	89	HIS	Sidechain
12	R	90	ARG	Sidechain
13	S	11	ARG	Sidechain
13	S	25	ARG	Sidechain
13	S	75	PHE	Sidechain
15	T	51	PHE	Sidechain
15	T	76	ARG	Sidechain
15	T	84	TYR	Sidechain
17	U	21	ARG	Sidechain
17	U	72	PHE	Sidechain
17	U	93	ARG	Sidechain
17	U	95	PHE	Mainchain
18	W	31	TYR	Sidechain
18	W	82	TYR	Sidechain
19	X	109	ARG	Sidechain
19	X	141	TYR	Sidechain
19	X	147	HIS	Sidechain
19	X	149	ARG	Sidechain
19	X	157	HIS	Sidechain
19	X	21	ARG	Sidechain,Mainchain
19	X	221	ARG	Sidechain
19	X	224	GLY	Peptide
19	X	237	THR	Peptide

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Mol	Chain	Res	Type	Group
19	X	241	ILE	Peptide
19	X	243	ILE	Peptide
19	X	285	ALA	Peptide
19	X	314	ARG	Sidechain
19	X	331	LYS	Peptide
19	X	348	ALA	Peptide
19	X	349	ARG	Sidechain
19	X	379	VAL	Peptide
19	X	395	HIS	Peptide
19	X	401	ARG	Sidechain
19	X	409	TYR	Sidechain
19	X	415	TYR	Sidechain
19	X	416	ASN	Peptide
19	X	52	PHE	Sidechain
19	X	70	ARG	Sidechain
21	Y	10	ARG	Sidechain
21	Y	42	THR	Mainchain
21	Y	44	PHE	Sidechain
21	Y	56	HIS	Mainchain
21	Y	76	ARG	Sidechain
21	Y	78	PHE	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2455	0	1253	65	0
2	B	61689	0	30889	2040	0
3	O	625	0	655	9	0
4	K	931	0	1003	13	0
5	L	1045	0	1117	18	0
6	1	509	0	543	8	0
7	M	1074	0	1157	17	0
8	N	960	0	1000	15	0
9	O	892	0	923	10	0
10	P	917	0	965	26	0
11	Q	947	0	1022	17	0
12	R	816	0	839	13	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
13	S	857	0	922	18	0
14	D	1565	0	1616	27	0
15	T	738	0	807	8	0
16	2	449	0	491	7	0
17	U	755	0	807	6	0
18	W	753	0	780	11	0
19	X	3280	0	3334	51	0
20	E	1552	0	1619	27	0
21	Y	596	0	610	14	0
22	3	444	0	461	7	0
23	5	1733	0	1824	20	0
24	6	377	0	418	6	0
25	7	504	0	574	9	0
26	8	302	0	343	8	0
27	C	2082	0	2157	32	0
28	F	1420	0	1460	18	0
29	G	1316	0	1364	15	0
30	H	1111	0	1148	13	0
31	I	1032	0	1088	4	0
32	J	1129	0	1162	34	0
All	All	94855	0	64351	2486	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 16.

All (2486) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:X:347:PHE:CD2	19:X:449:MET:CG	2.00	1.45
19:X:347:PHE:CD2	19:X:449:MET:HG2	1.49	1.26
19:X:449:MET:HA	19:X:449:MET:HE2	1.20	1.10
19:X:347:PHE:CD2	19:X:449:MET:HG3	1.84	0.97
19:X:449:MET:HA	19:X:449:MET:CE	1.97	0.94
19:X:347:PHE:HD2	19:X:449:MET:HG2	0.77	0.90
28:F:105:ILE:HG23	28:F:109:ARG:HE	1.44	0.81
2:B:1065:U:H3	2:B:1069:A:H2'	1.49	0.76
2:B:864:G:C6	2:B:865:C:C4	2.72	0.76
19:X:347:PHE:HD2	19:X:449:MET:CG	1.62	0.76
21:Y:58:LEU:HD23	21:Y:81:ILE:HD11	1.67	0.75
2:B:664:G:C5	2:B:665:U:C5	2.75	0.74
23:5:149:VAL:O	23:5:153:VAL:HG23	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:630:G:H22	2:B:632:A:H3'	1.52	0.74
2:B:2749:A:H62	2:B:2753:A:H61	1.33	0.74
2:B:2452:C:H2'	2:B:2453:A:C8	2.24	0.73
2:B:514:A:C2	2:B:515:A:C4	2.77	0.73
2:B:508:A:C6	13:S:9:HIS:CE1	2.78	0.71
19:X:143:ILE:HG22	19:X:144:ALA:H	1.55	0.71
2:B:800:A:C2	2:B:802:A:C8	2.79	0.71
2:B:781:A:C6	2:B:1777:U:H4'	2.25	0.71
2:B:2686:G:H2'	2:B:2687:U:C6	2.26	0.70
14:D:124:ARG:HH21	14:D:125:TRP:HE1	1.40	0.70
10:P:61:ARG:HH22	10:P:69:VAL:H	1.39	0.70
2:B:1313:U:C6	2:B:1610:A:C8	2.80	0.69
4:K:35:VAL:HG12	4:K:69:VAL:HG12	1.75	0.69
2:B:2230:G:C6	2:B:2231:U:C4	2.81	0.69
2:B:1128:G:C5	2:B:1129:A:C6	2.81	0.68
1:A:13:G:C6	1:A:70:C:H4'	2.29	0.68
2:B:572:A:C2	2:B:2033:A:C2	2.82	0.67
2:B:2028:U:H2'	2:B:2029:G:C8	2.30	0.67
2:B:771:G:C4	2:B:772:C:C5	2.83	0.67
2:B:1004:U:H1'	2:B:1010:A:C4	2.30	0.67
2:B:2839:G:H21	8:N:92:GLY:HA3	1.60	0.67
19:X:314:ARG:HA	19:X:314:ARG:HE	1.60	0.67
2:B:2106:U:C4	2:B:2183:A:C6	2.84	0.66
2:B:823:C:H2'	2:B:824:U:C6	2.30	0.66
2:B:2352:A:C2	2:B:2366:A:C2	2.84	0.66
2:B:1298:C:H42	2:B:1642:G:H1	1.42	0.66
2:B:695:G:C5	2:B:768:G:C6	2.84	0.66
2:B:2644:G:H2'	2:B:2645:G:C8	2.30	0.66
2:B:870:U:H2'	2:B:871:U:H5''	1.78	0.66
2:B:1041:G:H1	2:B:1114:C:H42	1.43	0.66
2:B:674:G:H2'	2:B:804:A:H61	1.61	0.66
2:B:669:G:C5	2:B:801:G:C6	2.84	0.66
2:B:688:U:H2'	2:B:689:A:C8	2.32	0.65
2:B:849:A:H2'	2:B:850:U:C6	2.31	0.65
2:B:1027:A:C6	2:B:1126:A:C4	2.84	0.65
2:B:1437:C:H2'	2:B:1438:U:C6	2.32	0.65
2:B:2284:A:C2	2:B:2285:C:C2	2.85	0.65
2:B:190:A:H2'	2:B:191:A:C8	2.32	0.65
2:B:530:G:H21	2:B:2035:G:H5'	1.61	0.65
2:B:2764:A:C6	2:B:2766:A:C5	2.84	0.65
1:A:39:A:H2'	1:A:40:U:C5	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:822:G:C5	2:B:836:G:C2	2.84	0.65
2:B:2243:U:H2'	2:B:2244:U:C6	2.31	0.65
2:B:527:C:C5	2:B:2779:U:H2'	2.32	0.65
2:B:1257:C:H4'	20:E:78:TRP:CZ2	2.32	0.65
19:X:107:ARG:HH21	23:5:130:VAL:HG22	1.62	0.65
32:J:130:HIS:CD2	32:J:131:ASN:OD1	2.50	0.65
1:A:73:A:C4	1:A:74:U:C6	2.85	0.65
2:B:768:G:C6	2:B:769:U:C4	2.85	0.65
2:B:891:G:H2'	2:B:892:A:C8	2.32	0.65
2:B:1785:A:C5	2:B:1787:A:C4	2.84	0.65
2:B:669:G:C5	2:B:801:G:C5	2.85	0.65
27:C:43:ASN:HB3	27:C:45:ASN:O	1.96	0.65
2:B:2358:A:C4	2:B:2359:C:C6	2.85	0.64
2:B:585:G:C6	2:B:1251:C:C2	2.85	0.64
2:B:1445:G:C5	2:B:1446:C:C5	2.86	0.64
2:B:1887:C:H3'	2:B:1888:G:H5'	1.80	0.64
2:B:2415:G:C6	2:B:2416:C:C4	2.86	0.64
2:B:2119:A:C2	2:B:2171:A:C2	2.85	0.64
12:R:12:HIS:CD2	12:R:20:VAL:HG11	2.33	0.64
30:H:135:HIS:CG	30:H:136:SER:H	2.16	0.64
2:B:36:G:H4'	2:B:451:U:C4	2.33	0.64
27:C:163:ILE:HG12	27:C:173:LEU:HD12	1.78	0.64
32:J:130:HIS:CG	32:J:131:ASN:H	2.15	0.64
26:8:10:LEU:O	26:8:33:HIS:CE1	2.50	0.64
2:B:749:A:C6	2:B:1618:A:C2	2.86	0.63
2:B:2487:G:C6	2:B:2488:G:C5	2.86	0.63
2:B:2358:A:C5	2:B:2359:C:C5	2.86	0.63
2:B:983:A:C6	2:B:984:A:C5	2.86	0.63
2:B:2335:A:C2	2:B:2337:G:H1'	2.34	0.63
2:B:818:G:H3'	2:B:1187:G:H1	1.63	0.63
2:B:2637:U:H1'	2:B:2782:G:H22	1.63	0.63
16:2:40:THR:HG22	16:2:42:ALA:H	1.64	0.63
2:B:701:G:C5	2:B:702:U:C5	2.86	0.63
2:B:2615:U:C2	22:3:3:GLN:HA	2.33	0.63
2:B:850:U:H2'	2:B:851:C:C6	2.34	0.62
2:B:2070:A:H2'	2:B:2071:A:H8	1.64	0.62
2:B:2452:C:C4	2:B:2453:A:C6	2.87	0.62
2:B:1995:U:H5''	14:D:128:ARG:HH12	1.64	0.62
2:B:2057:G:C5	2:B:2058:A:C5	2.88	0.62
9:O:34:HIS:CG	9:O:54:VAL:HG12	2.34	0.62
2:B:1279:G:C6	2:B:1292:G:C6	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2543:G:C5	2:B:2765:A:C4	2.87	0.62
2:B:2056:G:C5	2:B:2577:A:C5	2.88	0.62
2:B:2536:G:C5	2:B:2537:U:C4	2.88	0.62
2:B:2640:G:C6	2:B:2641:G:C5	2.87	0.62
2:B:864:G:C5	2:B:865:C:C5	2.88	0.62
2:B:2696:U:H2'	2:B:2697:G:C8	2.36	0.61
2:B:2267:A:C8	2:B:2267:A:H3'	2.35	0.61
2:B:2516:A:C2	2:B:2517:C:C2	2.88	0.61
16:2:16:LEU:HB2	16:2:19:HIS:CE1	2.35	0.61
20:E:29:HIS:HA	20:E:32:VAL:HG22	1.82	0.61
2:B:855:G:C6	2:B:923:G:C6	2.88	0.61
2:B:1293:C:H2'	2:B:1294:U:C6	2.35	0.61
2:B:417:C:H2'	2:B:418:C:C6	2.35	0.61
2:B:527:C:C6	2:B:528:A:C6	2.88	0.61
2:B:2020:A:C5	2:B:2022:U:C5	2.88	0.61
2:B:146:A:C5	2:B:147:C:C4	2.89	0.61
2:B:452:G:C2	2:B:453:A:C2	2.88	0.61
2:B:580:U:H2'	2:B:581:C:C6	2.36	0.61
2:B:1672:A:C5	2:B:2582:G:H5'	2.35	0.61
2:B:2869:G:C5	2:B:2870:C:C5	2.88	0.61
2:B:310:A:C4	2:B:312:G:C5	2.88	0.61
2:B:587:C:C6	2:B:671:C:H1'	2.35	0.61
2:B:1315:C:H2'	2:B:1316:U:C6	2.35	0.61
2:B:2679:A:C6	2:B:2680:U:C4	2.88	0.61
1:A:59:A:H2'	1:A:60:C:C6	2.36	0.61
2:B:2057:G:H2'	2:B:2058:A:C8	2.35	0.61
2:B:832:U:H2'	2:B:833:A:C8	2.36	0.61
2:B:1296:G:C6	2:B:1645:G:C6	2.88	0.61
2:B:2482:A:C2	2:B:2483:C:H1'	2.36	0.61
29:G:40:VAL:HA	29:G:54:ARG:H	1.65	0.61
2:B:825:A:C2	2:B:826:U:C2	2.89	0.61
2:B:870:U:C2'	2:B:871:U:H5''	2.30	0.61
2:B:1153:C:H2'	2:B:1154:G:C8	2.35	0.61
32:J:47:HIS:CE1	32:J:48:VAL:HG22	2.36	0.61
1:A:11:C:H3'	1:A:12:C:C6	2.36	0.61
1:A:66:A:C2	1:A:108:A:C4	2.89	0.61
12:R:51:VAL:HB	12:R:52:PRO:HD2	1.83	0.61
2:B:590:A:H2'	2:B:591:U:C6	2.36	0.60
1:A:73:A:C5	1:A:74:U:C5	2.89	0.60
1:A:76:G:C6	1:A:77:U:C4	2.89	0.60
2:B:187:G:C5	2:B:188:G:C8	2.88	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:966:G:H2'	2:B:967:U:C6	2.36	0.60
2:B:1609:A:C8	2:B:1616:A:H1'	2.36	0.60
2:B:9:G:C2	2:B:2895:G:C5	2.90	0.60
10:P:54:LEU:HG	10:P:55:HIS:CD2	2.37	0.60
27:C:75:ALA:HA	27:C:95:TYR:HA	1.84	0.60
2:B:941:A:H2'	2:B:942:G:C8	2.36	0.60
2:B:1160:G:C5	2:B:1161:C:C5	2.89	0.60
2:B:1551:A:H3'	2:B:1552:A:H5''	1.83	0.60
2:B:2183:A:H2'	2:B:2184:A:C8	2.37	0.60
2:B:2011:U:H2'	2:B:2012:G:C8	2.36	0.60
2:B:2829:A:C5	2:B:2830:C:C5	2.90	0.60
1:A:83:G:C6	1:A:84:G:C5	2.89	0.60
2:B:195:A:H61	2:B:198:C:H3'	1.66	0.60
2:B:1323:C:H5''	13:S:84:ARG:HH22	1.67	0.60
2:B:1680:U:C5	2:B:1681:G:C6	2.89	0.60
2:B:2638:G:C6	2:B:2775:G:C5	2.89	0.60
4:K:11:ALA:HB2	4:K:83:ALA:HB1	1.84	0.60
2:B:439:A:H2'	2:B:440:C:H6	1.67	0.60
2:B:457:A:C8	2:B:459:U:C2	2.90	0.60
2:B:699:A:H4'	2:B:1634:A:C6	2.36	0.60
2:B:1274:A:H3'	2:B:1646:C:H41	1.67	0.60
2:B:1598:A:C5	2:B:1599:U:C5	2.90	0.60
1:A:28:C:H2'	1:A:29:A:C8	2.37	0.60
2:B:449:A:C6	2:B:450:G:C4	2.90	0.60
29:G:110:HIS:CD2	29:G:110:HIS:H	2.19	0.60
2:B:19:A:H2'	2:B:20:C:C6	2.37	0.60
2:B:664:G:C6	2:B:665:U:C5	2.90	0.60
14:D:124:ARG:HH22	14:D:161:MET:H	1.49	0.60
2:B:1448:G:C4	2:B:1449:G:C8	2.90	0.59
2:B:1579:A:H2'	2:B:1580:A:C8	2.37	0.59
2:B:1659:G:C5	2:B:1660:G:C8	2.90	0.59
2:B:2048:G:C2	2:B:2049:G:H1'	2.37	0.59
2:B:2059:A:C5	2:B:2503:A:C2	2.89	0.59
2:B:2286:G:H1	2:B:2346:A:H2'	1.66	0.59
19:X:310:LEU:HD12	19:X:452:PRO:HG3	1.84	0.59
2:B:625:G:C2	2:B:626:A:H1'	2.37	0.59
2:B:1152:C:H2'	2:B:1153:C:C6	2.37	0.59
2:B:1661:G:C5	2:B:1662:U:C5	2.90	0.59
2:B:1998:A:H2'	2:B:1999:C:C6	2.38	0.59
2:B:2357:G:C5	2:B:2361:G:C6	2.91	0.59
2:B:1225:G:C2	2:B:1226:A:C2	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1307:A:C5	2:B:1622:G:C6	2.90	0.59
18:W:56:PHE:CD2	18:W:57:TYR:CZ	2.91	0.59
2:B:367:G:C6	2:B:368:A:C4	2.91	0.59
2:B:972:A:C6	2:B:973:A:C6	2.90	0.59
2:B:1428:C:C6	2:B:1428:C:H5''	2.38	0.59
2:B:2822:G:H22	8:N:2:ARG:HH21	1.50	0.59
12:R:7:SER:H	12:R:11:GLN:HA	1.67	0.59
14:D:67:HIS:CE1	14:D:68:PHE:CZ	2.90	0.59
27:C:269:ARG:HG3	27:C:270:ARG:H	1.67	0.59
1:A:106:G:C6	1:A:107:G:C4	2.90	0.59
2:B:465:G:C6	2:B:466:A:C6	2.89	0.59
2:B:1153:C:C4	2:B:1154:G:C6	2.90	0.59
2:B:2141:G:H1	2:B:2146:C:H5''	1.67	0.59
2:B:809:G:C6	2:B:810:U:C4	2.90	0.59
2:B:983:A:C2	2:B:984:A:C4	2.90	0.59
2:B:1122:G:C2	2:B:1123:C:C6	2.91	0.59
2:B:1562:U:C4	2:B:1563:U:C4	2.91	0.59
30:H:113:SER:HB2	30:H:133:GLN:HE22	1.67	0.59
2:B:39:G:C4	2:B:40:U:C5	2.91	0.59
2:B:1778:U:H2'	2:B:1784:A:C6	2.37	0.59
2:B:2051:A:C6	2:B:2614:A:C5	2.91	0.59
1:A:13:G:C5	1:A:70:C:H4'	2.38	0.59
2:B:855:G:C5	2:B:923:G:C6	2.91	0.59
2:B:1560:G:C6	2:B:1561:C:C4	2.91	0.59
2:B:1659:G:C6	2:B:1660:G:C5	2.91	0.59
2:B:527:C:C4	2:B:2779:U:H2'	2.38	0.58
2:B:531:C:C4	2:B:2035:G:C6	2.91	0.58
2:B:823:C:H2'	2:B:824:U:C5	2.38	0.58
2:B:1797:G:H1	2:B:1822:C:H42	1.50	0.58
2:B:1896:G:C6	2:B:1897:G:C6	2.91	0.58
2:B:2252:G:H2'	2:B:2253:G:C8	2.37	0.58
5:L:85:VAL:HG23	5:L:90:VAL:HG22	1.84	0.58
2:B:252:G:H2'	2:B:253:C:C6	2.38	0.58
2:B:1403:A:C5	2:B:1404:C:C5	2.90	0.58
2:B:1454:C:C5	8:N:64:ARG:HG3	2.38	0.58
2:B:2056:G:C6	2:B:2577:A:C4	2.91	0.58
2:B:661:A:C4	2:B:662:G:C8	2.91	0.58
23:5:121:MET:HE1	23:5:140:PRO:HA	1.84	0.58
31:I:124:MET:HE1	31:I:128:ILE:HD11	1.86	0.58
2:B:58:G:H2'	2:B:59:U:C6	2.38	0.58
2:B:877:A:C6	2:B:901:C:C4	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1603:A:C4	2:B:1604:C:C6	2.91	0.58
2:B:2183:A:C2	2:B:2184:A:C4	2.91	0.58
2:B:2184:A:C2	2:B:2185:U:C2	2.90	0.58
2:B:569:U:O4	2:B:2498:C:H5''	2.03	0.58
2:B:1301:A:C8	2:B:1303:G:C8	2.91	0.58
28:F:39:VAL:HG13	28:F:40:GLY:H	1.68	0.58
1:A:30:C:N4	1:A:53:A:H61	2.02	0.58
2:B:270:A:C5	2:B:370:G:C6	2.91	0.58
2:B:1257:C:H4'	20:E:78:TRP:CE2	2.39	0.58
2:B:1331:G:C6	2:B:1333:G:C4	2.91	0.58
2:B:1441:G:H2'	2:B:1442:U:C6	2.38	0.58
2:B:1586:A:H3'	2:B:1587:G:C8	2.38	0.58
2:B:2618:G:C6	2:B:2619:C:C4	2.92	0.58
10:P:61:ARG:HH11	10:P:63:ILE:N	2.01	0.58
21:Y:18:LYS:HE2	21:Y:37:VAL:H	1.68	0.58
2:B:291:G:C6	2:B:292:U:C4	2.91	0.58
2:B:1218:G:C6	2:B:1232:G:C6	2.92	0.58
2:B:1724:G:C5	2:B:1725:U:C4	2.92	0.58
28:F:131:VAL:HG22	28:F:151:LEU:H	1.68	0.58
2:B:2345:G:C5	2:B:2347:C:C5	2.91	0.58
9:O:64:TYR:H	9:O:67:ASN:HD21	1.52	0.58
2:B:58:G:C5	2:B:59:U:C4	2.92	0.58
2:B:2461:A:H1'	2:B:2492:U:C2	2.39	0.58
2:B:669:G:C6	2:B:801:G:C6	2.92	0.57
2:B:1770:G:C5	2:B:1983:G:C6	2.92	0.57
2:B:2126:A:H1'	2:B:2173:A:C8	2.38	0.57
9:O:34:HIS:CD2	9:O:54:VAL:HG12	2.39	0.57
2:B:1036:G:C5	2:B:1120:G:C6	2.93	0.57
2:B:583:G:C6	2:B:584:C:C4	2.92	0.57
2:B:962:G:H21	2:B:2250:G:H22	1.50	0.57
2:B:2404:U:C5	2:B:2405:G:C5	2.93	0.57
2:B:18:U:H2'	2:B:19:A:C8	2.39	0.57
2:B:514:A:C6	2:B:515:A:C5	2.92	0.57
2:B:899:A:C8	2:B:899:A:H3'	2.40	0.57
2:B:1131:G:C6	32:J:77:HIS:CD2	2.92	0.57
2:B:1132:U:H2'	2:B:1133:A:C8	2.38	0.57
2:B:1461:C:C4	2:B:1462:C:C5	2.92	0.57
1:A:99:A:C6	1:A:100:G:C5	2.92	0.57
2:B:294:A:C5	2:B:345:A:C5	2.93	0.57
2:B:2293:G:C6	2:B:2294:G:C5	2.93	0.57
2:B:2749:A:H62	2:B:2753:A:N6	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:R:89:HIS:C	12:R:89:HIS:CD2	2.82	0.57
2:B:194:G:C6	2:B:195:A:C5	2.92	0.57
2:B:1524:G:C4	2:B:1525:A:C8	2.93	0.57
2:B:152:A:H2'	2:B:153:U:C6	2.40	0.57
2:B:831:G:C5	2:B:832:U:C5	2.91	0.57
2:B:1699:G:C6	2:B:1763:G:C4	2.92	0.57
2:B:2087:G:H2'	2:B:2088:A:H8	1.70	0.57
2:B:2194:U:H2'	2:B:2195:U:C6	2.39	0.57
2:B:2346:A:C5	2:B:2383:G:C6	2.92	0.57
6:1:53:VAL:HG12	6:1:57:LEU:HD23	1.87	0.57
2:B:1672:A:C6	2:B:1673:G:C5	2.93	0.57
1:A:50:A:C2	1:A:51:G:H1'	2.40	0.57
2:B:764:A:H5''	27:C:208:GLY:HA2	1.87	0.57
2:B:1131:G:H21	2:B:1132:U:H5	1.52	0.57
2:B:2517:C:C6	2:B:2542:A:N7	2.73	0.57
5:L:56:PRO:HB2	5:L:59:ARG:HB2	1.87	0.57
27:C:60:ALA:HB3	27:C:62:ARG:HH21	1.69	0.57
2:B:579:G:C8	2:B:2017:U:C4	2.92	0.56
2:B:751:A:C8	2:B:789:A:C2	2.93	0.56
2:B:160:A:C6	2:B:161:A:C6	2.93	0.56
2:B:798:G:C6	2:B:799:G:C6	2.92	0.56
2:B:1034:G:C5	2:B:1035:U:C4	2.93	0.56
2:B:1182:G:C2	2:B:1183:U:C2	2.94	0.56
2:B:2516:A:H2'	2:B:2517:C:C6	2.40	0.56
14:D:109:VAL:HG11	14:D:193:VAL:HG12	1.86	0.56
2:B:242:G:N3	2:B:254:G:C6	2.73	0.56
2:B:971:G:C5	2:B:972:A:C4	2.94	0.56
2:B:1024:G:H3'	2:B:1025:G:H5''	1.86	0.56
2:B:1262:A:C5	2:B:1263:U:C4	2.93	0.56
2:B:1322:A:C5	2:B:1323:C:C6	2.94	0.56
2:B:1429:G:C5	2:B:1568:G:C6	2.93	0.56
2:B:1572:A:C2	2:B:1573:G:C4	2.94	0.56
2:B:1823:G:C4	2:B:1824:G:C8	2.93	0.56
2:B:2120:G:C5	2:B:2121:G:C5	2.93	0.56
2:B:2261:C:H2'	2:B:2262:U:C6	2.40	0.56
2:B:2858:C:C5	2:B:2859:G:C6	2.93	0.56
11:Q:30:VAL:HG12	11:Q:31:TYR:H	1.69	0.56
20:E:62:GLN:HG3	20:E:63:LYS:H	1.70	0.56
23:5:58:ASN:H	23:5:171:ILE:HD13	1.70	0.56
2:B:222:A:C2	2:B:233:A:H5''	2.41	0.56
2:B:617:G:C5'	20:E:102:ARG:HH12	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1331:G:C5	2:B:1333:G:C5	2.94	0.56
2:B:2109:U:H2'	2:B:2110:G:C8	2.40	0.56
2:B:2383:G:C6	2:B:2384:U:C4	2.93	0.56
2:B:2700:A:C6	2:B:2701:U:C4	2.93	0.56
2:B:2800:A:C4	2:B:2801:G:H1'	2.39	0.56
2:B:2886:A:C4	2:B:2887:A:C8	2.94	0.56
1:A:30:C:H42	1:A:53:A:H61	1.53	0.56
2:B:302:C:H2'	2:B:303:G:H8	1.71	0.56
2:B:701:G:C6	2:B:702:U:C5	2.94	0.56
2:B:859:G:OP2	2:B:859:G:C8	2.58	0.56
2:B:943:A:C4	2:B:944:C:C5	2.94	0.56
2:B:991:C:H5''	2:B:1185:G:H2'	1.87	0.56
2:B:481:G:C5	2:B:507:A:C2	2.94	0.56
2:B:2472:G:H2'	2:B:2475:C:H42	1.69	0.56
2:B:4:U:C2	2:B:2900:A:C2	2.94	0.56
2:B:463:G:C4	2:B:467:G:C2	2.94	0.56
2:B:825:A:C6	2:B:826:U:C4	2.94	0.56
2:B:972:A:C5	2:B:973:A:C5	2.94	0.56
2:B:1405:U:H2'	2:B:1406:U:C6	2.40	0.56
2:B:1835:G:H4'	2:B:1969:A:C4	2.40	0.56
1:A:33:G:C2	1:A:50:A:C2	2.93	0.56
2:B:197:A:C5	2:B:2430:A:C5	2.94	0.56
2:B:774:G:H5''	27:C:47:ARG:HH21	1.70	0.56
2:B:2884:U:H3'	2:B:2885:G:C8	2.41	0.56
2:B:169:G:C4	2:B:170:U:C5	2.93	0.56
2:B:589:U:N3	2:B:670:A:C2	2.74	0.56
2:B:703:U:C5	2:B:704:G:C5	2.94	0.56
2:B:2198:A:C5	30:H:29:PHE:CD1	2.93	0.56
2:B:1198:U:H2'	2:B:1199:U:C6	2.41	0.56
2:B:1831:G:C2	2:B:1832:C:C2	2.94	0.56
2:B:1041:G:H1	2:B:1114:C:N4	2.04	0.55
2:B:1216:G:C2	2:B:1217:U:C2	2.94	0.55
2:B:1628:G:H2'	2:B:1629:U:C6	2.40	0.55
2:B:2250:G:C5	7:M:83:GLY:HA3	2.41	0.55
27:C:264:LYS:HD2	27:C:265:PHE:CZ	2.41	0.55
2:B:214:G:H2'	2:B:215:G:C8	2.40	0.55
2:B:471:A:H2'	2:B:472:A:C8	2.40	0.55
2:B:684:G:C6	2:B:774:G:C5	2.94	0.55
2:B:1162:G:C4	2:B:1163:G:C8	2.94	0.55
2:B:1677:A:H2'	2:B:1678:A:C8	2.41	0.55
2:B:1050:A:C2	2:B:2751:G:C5	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1213:A:C2	2:B:1214:A:C4	2.93	0.55
2:B:1429:G:C6	2:B:1568:G:C6	2.94	0.55
2:B:1895:C:C4	2:B:1896:G:C6	2.94	0.55
2:B:2098:U:C4	2:B:2099:U:C4	2.95	0.55
2:B:2842:G:C6	2:B:2843:G:C5	2.94	0.55
15:T:37:ASP:H	15:T:81:LYS:HD3	1.69	0.55
2:B:303:G:C6	2:B:315:G:C6	2.95	0.55
2:B:656:G:H2'	2:B:657:U:C6	2.42	0.55
2:B:825:A:C5	2:B:826:U:C4	2.94	0.55
2:B:855:G:C6	2:B:923:G:C5	2.95	0.55
2:B:943:A:C5	2:B:944:C:C5	2.94	0.55
2:B:1632:A:C5	2:B:1633:G:C6	2.94	0.55
2:B:1767:G:C6	2:B:1768:C:C5	2.95	0.55
2:B:2521:C:H2'	2:B:2522:U:C6	2.41	0.55
2:B:2543:G:H2'	2:B:2544:G:C8	2.42	0.55
2:B:2706:A:C5	2:B:2707:U:C5	2.94	0.55
2:B:530:G:H21	2:B:2035:G:C5'	2.19	0.55
2:B:792:A:C2	2:B:2440:C:C4	2.94	0.55
2:B:858:G:H22	2:B:919:U:H3	1.55	0.55
12:R:23:GLU:H	12:R:23:GLU:CD	2.14	0.55
2:B:520:G:C6	2:B:521:U:C4	2.94	0.55
2:B:905:A:C6	2:B:906:U:C4	2.95	0.55
2:B:1128:G:H1'	2:B:1129:A:C4	2.41	0.55
2:B:1312:U:C4	2:B:1603:A:C5	2.95	0.55
2:B:1599:U:H2'	2:B:1600:C:C6	2.42	0.55
2:B:2692:G:H2'	2:B:2693:G:C8	2.42	0.55
2:B:2829:A:C6	2:B:2830:C:C4	2.95	0.55
2:B:2087:G:H2'	2:B:2088:A:C8	2.40	0.55
11:Q:67:ALA:HB1	11:Q:105:PHE:CZ	2.42	0.55
19:X:448:VAL:C	19:X:450:GLY:H	2.14	0.55
1:A:99:A:C4	1:A:100:G:C8	2.95	0.55
2:B:64:A:C6	2:B:65:U:C4	2.95	0.55
2:B:219:A:C6	2:B:220:G:C6	2.95	0.55
2:B:557:C:C4	2:B:558:U:C4	2.95	0.55
2:B:1560:G:C5	2:B:1561:C:C5	2.95	0.55
2:B:2053:G:C2	2:B:2054:A:C4	2.95	0.55
2:B:2471:A:C6	2:B:2472:G:C4	2.94	0.55
2:B:468:G:C5	2:B:469:G:C5	2.95	0.55
2:B:617:G:H5'	20:E:102:ARG:HH12	1.71	0.55
2:B:1672:A:C2	2:B:1673:G:C4	2.95	0.55
2:B:590:A:H2'	2:B:591:U:H6	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:775:G:C6	2:B:794:A:C8	2.95	0.55
20:E:42:GLY:O	20:E:43:THR:HG23	2.06	0.55
23:5:39:VAL:HB	23:5:178:VAL:HG21	1.88	0.55
2:B:841:G:C5	2:B:842:U:C5	2.96	0.54
2:B:952:G:C2	2:B:966:G:C5	2.95	0.54
2:B:1182:G:C5	2:B:1183:U:C4	2.96	0.54
2:B:1485:U:C2	2:B:1505:A:C2	2.95	0.54
2:B:1722:A:C8	2:B:1739:A:C6	2.95	0.54
2:B:1817:G:C6	2:B:1818:U:C5	2.94	0.54
2:B:2052:A:H5'	14:D:146:ILE:H	1.72	0.54
2:B:2173:A:C6	2:B:2174:C:C2	2.95	0.54
2:B:2297:A:C4	2:B:2320:U:C2	2.95	0.54
2:B:2445:G:H2'	2:B:2446:G:C8	2.42	0.54
2:B:464:U:C2	2:B:788:A:C6	2.96	0.54
2:B:1287:A:H2'	2:B:1288:G:H5'	1.88	0.54
2:B:2241:A:C2	2:B:2242:G:C5	2.95	0.54
2:B:2688:G:C8	2:B:2719:G:C6	2.95	0.54
4:K:76:VAL:H	10:P:72:VAL:HB	1.70	0.54
7:M:27:SER:H	7:M:66:ARG:HH22	1.55	0.54
19:X:282:ILE:HG23	19:X:312:SER:HB3	1.89	0.54
2:B:293:U:H3	2:B:347:A:H61	1.54	0.54
2:B:851:C:C2	16:2:46:MET:HE2	2.43	0.54
2:B:1205:A:C5	20:E:165:HIS:CE1	2.96	0.54
2:B:154:U:H3	2:B:172:A:H61	1.56	0.54
2:B:409:G:H2'	2:B:410:G:C8	2.42	0.54
2:B:1300:G:C6	2:B:1626:A:C8	2.96	0.54
13:S:9:HIS:H	13:S:102:HIS:CE1	2.26	0.54
2:B:695:G:C6	2:B:768:G:C6	2.95	0.54
2:B:752:A:H2'	24:6:1:MET:HE1	1.89	0.54
2:B:1000:A:C2	2:B:1155:A:C2	2.95	0.54
2:B:1408:G:H2'	2:B:1409:U:C6	2.43	0.54
2:B:1623:G:H2'	2:B:1624:U:H6	1.73	0.54
2:B:2644:G:C5	2:B:2645:G:C6	2.96	0.54
18:W:80:HIS:CD2	18:W:82:TYR:H	2.26	0.54
23:5:163:TYR:CD2	23:5:173:THR:HG23	2.43	0.54
2:B:5:A:C6	2:B:6:A:C6	2.96	0.54
2:B:529:A:C8	2:B:2042:A:C6	2.95	0.54
2:B:1128:G:C4	2:B:1129:A:C6	2.95	0.54
2:B:2370:G:C6	2:B:2371:G:C5	2.96	0.54
2:B:2261:C:C2	2:B:2262:U:C5	2.95	0.54
32:J:98:GLU:CD	32:J:98:GLU:H	2.16	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:687:C:H3'	2:B:688:U:C6	2.43	0.54
2:B:1712:U:C4	2:B:1713:A:C5	2.96	0.54
2:B:2162:G:C8	2:B:2173:A:H5''	2.43	0.54
2:B:2528:U:C4	2:B:2530:A:C4	2.96	0.54
2:B:13:A:C2	2:B:526:A:C5	2.96	0.54
2:B:464:U:C4	2:B:788:A:C5	2.95	0.54
2:B:557:C:H2'	2:B:558:U:C6	2.43	0.54
2:B:706:A:C6	2:B:707:G:C4	2.95	0.54
2:B:834:G:C5	2:B:835:C:C5	2.96	0.54
2:B:1322:A:C5	2:B:1323:C:C5	2.96	0.54
10:P:31:VAL:HG21	10:P:38:ARG:HE	1.73	0.54
20:E:18:THR:O	20:E:18:THR:HG22	2.08	0.54
2:B:518:G:C6	2:B:519:U:C4	2.95	0.53
2:B:695:G:C6	2:B:768:G:C5	2.96	0.53
2:B:845:A:C6	2:B:932:U:C5	2.96	0.53
2:B:2343:U:H4'	2:B:2374:C:H5''	1.90	0.53
19:X:208:VAL:HA	19:X:255:ILE:HG22	1.90	0.53
2:B:728:G:C6	2:B:730:A:C5	2.96	0.53
2:B:748:G:C5	2:B:750:A:C5	2.96	0.53
2:B:819:A:C6	2:B:1189:A:H1'	2.43	0.53
2:B:1444:G:C6	2:B:1445:G:C5	2.97	0.53
2:B:1823:G:C6	2:B:1824:G:C5	2.96	0.53
2:B:2112:G:H1	23:5:130:VAL:CG2	2.21	0.53
2:B:2540:C:C4	2:B:2541:A:C5	2.97	0.53
19:X:3:PRO:HA	19:X:83:ASP:HB3	1.90	0.53
29:G:44:HIS:CE1	29:G:46:ASP:O	2.62	0.53
2:B:6:A:C2	2:B:7:G:C5	2.97	0.53
2:B:160:A:H2'	2:B:161:A:C8	2.43	0.53
2:B:452:G:C6	2:B:458:G:C6	2.95	0.53
2:B:1218:G:C5	2:B:1219:U:C5	2.96	0.53
2:B:1318:U:C2	2:B:1319:C:C5	2.97	0.53
2:B:2024:G:C2	2:B:2025:C:C2	2.97	0.53
2:B:503:A:C5	2:B:506:G:C6	2.97	0.53
2:B:795:C:C4	2:B:796:C:C5	2.97	0.53
2:B:1887:C:C3'	2:B:1888:G:H5'	2.37	0.53
2:B:2116:G:OP2	2:B:2116:G:C6	2.61	0.53
10:P:54:LEU:HG	10:P:55:HIS:CG	2.44	0.53
19:X:208:VAL:HA	19:X:255:ILE:CG2	2.39	0.53
1:A:76:G:C5	1:A:77:U:C5	2.97	0.53
2:B:659:G:C6	2:B:660:C:C4	2.97	0.53
2:B:802:A:H2'	2:B:803:U:C6	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:936:A:H2'	2:B:937:C:C6	2.44	0.53
2:B:1218:G:C6	2:B:1232:G:C5	2.97	0.53
2:B:1381:G:C2	2:B:1382:G:C4	2.96	0.53
2:B:2060:A:C2	2:B:2502:G:C5	2.96	0.53
2:B:2835:A:C4	2:B:2879:A:C6	2.96	0.53
2:B:26:G:H1'	2:B:515:A:H61	1.74	0.53
2:B:928:A:H2'	2:B:929:U:C6	2.44	0.53
2:B:966:G:H2'	2:B:967:U:H6	1.72	0.53
2:B:1000:A:C6	2:B:1155:A:C4	2.96	0.53
2:B:1675:C:C2	14:D:134:HIS:CE1	2.97	0.53
2:B:1747:U:H2'	2:B:1748:C:C6	2.43	0.53
2:B:1767:G:C2	2:B:1986:C:C2	2.97	0.53
2:B:2077:A:C8	2:B:2435:A:C4	2.97	0.53
2:B:2466:C:C2	2:B:2485:G:C2	2.97	0.53
2:B:2642:G:H5'	32:J:80:HIS:CD2	2.43	0.53
2:B:2727:A:C4	2:B:2728:U:C5	2.96	0.53
5:L:57:LEU:HA	5:L:60:ARG:HB2	1.91	0.53
2:B:64:A:C5	2:B:65:U:C4	2.97	0.53
2:B:346:A:C8	2:B:347:A:H1'	2.43	0.53
2:B:943:A:C4	2:B:944:C:C6	2.97	0.53
2:B:983:A:C6	2:B:984:A:C6	2.97	0.53
2:B:1664:A:C4	2:B:1665:A:C8	2.97	0.53
2:B:1692:U:H2'	2:B:1694:C:C5	2.44	0.53
2:B:2274:A:C2	2:B:2276:G:H1'	2.43	0.53
19:X:207:ILE:HD13	19:X:222:ILE:HD12	1.90	0.53
2:B:66:C:C5	2:B:67:U:C5	2.97	0.53
2:B:625:G:C6	2:B:626:A:C4	2.96	0.53
2:B:670:A:H3'	5:L:42:SER:HB3	1.91	0.53
2:B:779:U:O2'	2:B:780:G:H5'	2.09	0.53
2:B:2816:G:C4	2:B:2817:U:C5	2.97	0.53
29:G:81:GLY:HA2	29:G:135:ALA:HB2	1.90	0.53
32:J:18:VAL:HG12	32:J:55:ILE:O	2.08	0.53
2:B:1387:A:C2	2:B:1388:G:C4	2.97	0.53
2:B:2617:U:H2'	2:B:2618:G:C8	2.44	0.53
2:B:195:A:C2	2:B:198:C:C4	2.97	0.53
2:B:954:G:C5	2:B:955:U:C5	2.96	0.53
2:B:1381:G:C6	2:B:1382:G:C2	2.97	0.53
2:B:1385:A:C2	2:B:1403:A:H1'	2.43	0.53
2:B:1596:A:C2	2:B:1597:A:C4	2.96	0.53
2:B:2342:C:H2'	2:B:2343:U:H6	1.74	0.53
2:B:800:A:H4'	2:B:801:G:OP1	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:941:A:C2	2:B:942:G:C4	2.97	0.52
2:B:2836:U:H2'	2:B:2837:A:C8	2.42	0.52
2:B:91:A:H61	15:T:69:ARG:HH22	1.55	0.52
2:B:435:C:C5	2:B:436:C:C5	2.97	0.52
2:B:607:U:H5	2:B:619:G:C5	2.27	0.52
2:B:849:A:H2'	2:B:850:U:C5	2.44	0.52
2:B:870:U:H2'	2:B:871:U:C5'	2.38	0.52
2:B:1244:A:H4'	20:E:29:HIS:CE1	2.43	0.52
2:B:1275:A:C6	2:B:1296:G:H4'	2.44	0.52
2:B:1641:A:C8	2:B:1642:G:C8	2.97	0.52
2:B:2231:U:C4	2:B:2232:C:C4	2.97	0.52
2:B:1389:G:H2'	2:B:1390:U:C6	2.44	0.52
2:B:1724:G:H2'	2:B:1725:U:C6	2.44	0.52
2:B:2198:A:C4	30:H:29:PHE:CD1	2.97	0.52
2:B:2630:G:C8	2:B:2894:G:C5	2.97	0.52
2:B:2823:A:C5	2:B:2824:C:C4	2.98	0.52
2:B:96:C:H5'	6:1:41:HIS:CD2	2.43	0.52
2:B:217:A:C6	2:B:218:A:C5	2.97	0.52
2:B:471:A:C2	2:B:472:A:C4	2.97	0.52
2:B:664:G:C6	2:B:665:U:C4	2.97	0.52
2:B:911:A:C6	7:M:9:PHE:CG	2.97	0.52
2:B:1443:U:H3	2:B:1548:A:H61	1.58	0.52
2:B:1637:A:C6	2:B:1638:C:C4	2.97	0.52
2:B:2644:G:C6	2:B:2645:G:C6	2.98	0.52
1:A:54:G:C5	1:A:55:U:C5	2.98	0.52
2:B:972:A:H2'	2:B:973:A:C8	2.45	0.52
2:B:1190:G:C2	2:B:1191:G:C5	2.98	0.52
2:B:2236:U:C4	2:B:2237:G:C6	2.97	0.52
2:B:2376:A:C4	9:O:99:TYR:CZ	2.97	0.52
2:B:2599:G:C6	2:B:2600:A:C5	2.98	0.52
2:B:2599:G:C4	2:B:2600:A:C8	2.97	0.52
2:B:1827:U:C4	2:B:1828:G:C5	2.98	0.52
2:B:2162:G:C8	2:B:2173:A:H4'	2.45	0.52
2:B:2291:U:H2'	2:B:2292:U:C6	2.45	0.52
2:B:2834:G:C5	2:B:2879:A:C5	2.97	0.52
2:B:799:G:C5	2:B:800:A:C5	2.97	0.52
2:B:869:G:C6	2:B:870:U:C2	2.98	0.52
2:B:1633:G:C6	2:B:1635:A:C4	2.98	0.52
2:B:2782:G:C2	2:B:2783:U:C2	2.98	0.52
1:A:15:A:C4	1:A:109:A:C4	2.97	0.52
2:B:233:A:C5	2:B:234:U:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:309:A:C6	2:B:330:A:C5	2.97	0.52
2:B:518:G:C5	2:B:519:U:C4	2.98	0.52
2:B:589:U:H2'	2:B:590:A:C8	2.45	0.52
2:B:926:G:C2	2:B:927:A:C5	2.98	0.52
2:B:235:U:H2'	2:B:236:C:C6	2.45	0.52
2:B:947:A:C5	2:B:971:G:N2	2.78	0.52
2:B:1680:U:C5	2:B:1681:G:C5	2.98	0.52
2:B:2052:A:C4	2:B:2053:G:C8	2.98	0.52
2:B:2493:U:C5	2:B:2494:G:C8	2.97	0.52
2:B:2677:G:C6	2:B:2731:G:C6	2.98	0.52
2:B:2758:A:C2	2:B:2759:G:H1'	2.45	0.52
19:X:448:VAL:C	19:X:450:GLY:N	2.65	0.52
31:I:129:GLU:HG3	31:I:139:VAL:HG11	1.92	0.52
1:A:18:G:C5	1:A:19:C:C5	2.97	0.52
2:B:762:U:O2	2:B:763:G:C5	2.62	0.52
2:B:1296:G:C6	2:B:1645:G:C5	2.97	0.52
2:B:2018:G:C4	2:B:2019:A:C8	2.98	0.52
2:B:2261:C:H4'	2:B:2388:A:C5'	2.40	0.52
2:B:2273:A:C6	2:B:2274:A:C6	2.97	0.52
2:B:2418:A:C6	2:B:2419:U:C4	2.98	0.52
2:B:2806:C:H2'	2:B:2807:U:H6	1.75	0.52
2:B:2898:U:H2'	2:B:2899:A:C8	2.45	0.52
2:B:678:C:H2'	2:B:679:C:C6	2.45	0.51
2:B:716:A:C8	2:B:717:C:C6	2.98	0.51
2:B:2459:A:H3'	2:B:2460:U:H6	1.75	0.51
14:D:23:PRO:C	14:D:24:VAL:HG23	2.34	0.51
23:5:142:VAL:HG12	23:5:160:GLN:HE22	1.75	0.51
2:B:100:U:H2'	2:B:101:A:C2	2.46	0.51
2:B:191:A:H62	2:B:206:U:H3	1.57	0.51
2:B:439:A:H2'	2:B:440:C:C6	2.44	0.51
2:B:760:G:C5	2:B:761:A:C5	2.99	0.51
2:B:953:G:H2'	2:B:954:G:H8	1.75	0.51
11:Q:58:GLN:HE22	11:Q:62:ALA:HB2	1.75	0.51
23:5:77:VAL:HG21	23:5:153:VAL:HG22	1.93	0.51
2:B:420:C:H2'	2:B:421:C:C6	2.45	0.51
2:B:851:C:H2'	2:B:852:U:C6	2.45	0.51
2:B:1050:A:C2	2:B:1051:G:C4	2.99	0.51
2:B:1532:A:H2'	2:B:1533:C:C6	2.46	0.51
2:B:2720:U:C2	2:B:2872:A:C6	2.98	0.51
2:B:2838:G:C6	2:B:2839:G:C5	2.99	0.51
2:B:457:A:C4	2:B:459:U:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1034:G:C6	2:B:1122:G:C6	2.98	0.51
2:B:1168:G:C6	2:B:1169:A:C5	2.99	0.51
2:B:2218:G:C6	2:B:2219:U:C4	2.98	0.51
2:B:2588:G:C4	2:B:2589:A:C8	2.99	0.51
2:B:2623:G:H2'	2:B:2624:G:H8	1.75	0.51
2:B:2680:U:H2'	2:B:2681:C:C6	2.45	0.51
2:B:669:G:N7	2:B:801:G:C5	2.78	0.51
2:B:993:G:C6	2:B:994:C:C4	2.98	0.51
2:B:1059:G:C6	2:B:1060:U:C2	2.98	0.51
2:B:1216:G:C5	2:B:1217:U:C4	2.99	0.51
2:B:1332:G:C5	2:B:1609:A:C2	2.98	0.51
2:B:1708:C:C4	2:B:1709:U:C5	2.99	0.51
2:B:2377:A:C2	2:B:2378:A:C4	2.99	0.51
2:B:2829:A:C6	2:B:2830:C:C5	2.98	0.51
11:Q:60:TRP:CE2	11:Q:93:ILE:HD13	2.46	0.51
2:B:575:A:C2	2:B:576:U:C6	2.99	0.51
2:B:675:A:C5	2:B:676:A:C6	2.99	0.51
2:B:822:G:O6	2:B:836:G:C6	2.63	0.51
2:B:1009:A:H2'	2:B:1010:A:C4	2.45	0.51
2:B:1128:G:C8	2:B:1129:A:C5	2.98	0.51
2:B:1314:C:C2	2:B:1315:C:C5	2.99	0.51
2:B:2043:C:C4	2:B:2777:G:C4	2.99	0.51
2:B:2091:C:H3'	2:B:2092:U:H5''	1.93	0.51
2:B:2282:G:H1'	2:B:2390:U:O4	2.11	0.51
2:B:2325:G:C6	2:B:2326:C:C4	2.99	0.51
2:B:2516:A:C5	2:B:2569:G:C2	2.98	0.51
2:B:48:G:C2	2:B:178:G:C5	2.99	0.51
2:B:190:A:N7	2:B:207:A:C5	2.79	0.51
2:B:381:G:O2'	2:B:382:A:H5'	2.11	0.51
2:B:491:G:C5	2:B:492:A:C5	2.99	0.51
2:B:514:A:C6	2:B:515:A:C6	2.99	0.51
2:B:687:C:H5'	24:6:6:GLN:HG2	1.93	0.51
2:B:934:U:C2	2:B:935:C:C6	2.99	0.51
2:B:1017:G:C6	2:B:1018:U:C4	2.98	0.51
2:B:1024:G:C3'	2:B:1025:G:H5''	2.41	0.51
2:B:1586:A:H3'	2:B:1587:G:H8	1.74	0.51
2:B:1659:G:C6	2:B:2002:G:O6	2.64	0.51
2:B:1728:C:H1'	2:B:1729:U:C4	2.46	0.51
2:B:1742:U:H2'	2:B:1743:G:C8	2.45	0.51
2:B:2125:G:C6	23:5:135:GLY:HA3	2.46	0.51
2:B:2261:C:H2'	2:B:2262:U:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2408:U:H2'	2:B:2409:G:C8	2.45	0.51
2:B:2447:G:C5	2:B:2500:U:C6	2.98	0.51
2:B:2869:G:C4	2:B:2870:C:C6	2.99	0.51
16:2:55:LYS:HZ2	16:2:56:VAL:H	1.56	0.51
2:B:23:G:C5	2:B:518:G:C6	2.98	0.51
2:B:250:G:C6	2:B:251:A:C4	2.99	0.51
2:B:545:U:H3	2:B:549:G:H5'	1.75	0.51
2:B:579:G:C4	2:B:580:U:C5	2.99	0.51
2:B:651:G:H5''	25:7:18:LYS:HD2	1.93	0.51
2:B:690:G:H2'	2:B:691:C:C6	2.46	0.51
2:B:1682:G:C6	2:B:1757:A:C4	2.99	0.51
2:B:2331:G:C5	2:B:2332:C:C5	2.99	0.51
2:B:2679:A:N1	2:B:2680:U:C4	2.79	0.51
2:B:2841:C:C2	2:B:2877:G:N2	2.79	0.51
18:W:16:ALA:HA	18:W:19:ARG:HD2	1.93	0.51
2:B:182:A:C2	2:B:183:C:C2	2.99	0.51
2:B:666:A:H2'	2:B:667:U:C6	2.45	0.51
2:B:2747:G:H1	2:B:2754:U:H2'	1.76	0.51
4:K:114:LYS:H	4:K:114:LYS:HD2	1.75	0.51
10:P:61:ARG:HH12	10:P:69:VAL:N	2.08	0.51
1:A:24:G:C4	1:A:56:G:C6	2.99	0.51
2:B:54:G:C6	2:B:55:G:C5	3.00	0.51
2:B:301:G:C5	2:B:317:G:C6	2.99	0.51
2:B:533:G:C5	2:B:534:U:C4	2.98	0.51
2:B:1054:A:C2	2:B:1106:G:C4	2.99	0.51
2:B:1230:A:C6	2:B:1231:U:C4	2.99	0.51
2:B:1831:G:C6	2:B:1832:C:C4	2.99	0.51
2:B:2064:C:H2'	2:B:2065:C:C6	2.46	0.51
2:B:2361:G:H2'	2:B:2362:C:C6	2.46	0.51
2:B:2638:G:C5	2:B:2775:G:C6	2.99	0.51
2:B:2761:A:H2'	2:B:2762:C:H6	1.75	0.51
2:B:2888:C:H2'	2:B:2889:C:H6	1.75	0.51
11:Q:2:ARG:O	11:Q:3:VAL:HG13	2.11	0.51
2:B:233:A:C6	2:B:234:U:C4	2.99	0.50
2:B:688:U:H2'	2:B:689:A:H8	1.73	0.50
2:B:762:U:C2	2:B:763:G:C6	2.99	0.50
2:B:817:C:C4	2:B:818:G:C5	2.99	0.50
2:B:934:U:C2	2:B:935:C:C5	3.00	0.50
2:B:961:C:C2	2:B:2031:A:C6	2.98	0.50
2:B:2052:A:H61	2:B:2617:U:H3	1.57	0.50
2:B:2417:C:C2	2:B:2418:A:C8	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2445:G:C6	2:B:2446:G:C6	2.99	0.50
2:B:2700:A:C2	2:B:2701:U:C2	2.98	0.50
10:P:11:GLN:HE22	14:D:15:PHE:HB2	1.76	0.50
18:W:29:ILE:HG22	18:W:39:ALA:HA	1.93	0.50
19:X:42:TYR:CE2	19:X:234:PRO:HB3	2.46	0.50
32:J:140:LEU:HD11	32:J:142:ILE:OXT	2.10	0.50
1:A:110:C:C4	1:A:111:U:C4	2.99	0.50
2:B:120:U:C5	2:B:149:A:C6	3.00	0.50
2:B:297:G:C5	2:B:298:G:C8	2.99	0.50
2:B:542:C:C2	2:B:543:G:C8	3.00	0.50
2:B:622:G:C6	2:B:623:C:C4	2.99	0.50
2:B:749:A:C4	2:B:1618:A:C5	2.99	0.50
2:B:1050:A:C5	2:B:2751:G:C6	3.00	0.50
2:B:1488:C:N3	2:B:1502:A:C2	2.80	0.50
2:B:2091:C:H3'	2:B:2092:U:C5'	2.41	0.50
2:B:2151:U:C5	2:B:2153:C:H2'	2.46	0.50
2:B:2246:G:C6	2:B:2247:A:C5	2.98	0.50
2:B:2792:A:C6	2:B:2793:C:C5	2.99	0.50
4:K:13:ASN:HD21	4:K:96:GLY:HA3	1.76	0.50
5:L:122:VAL:HG13	5:L:125:LEU:HB2	1.92	0.50
2:B:2340:A:C2	2:B:2341:G:C5	2.99	0.50
2:B:2471:A:HO2'	2:B:2472:G:H8	1.58	0.50
2:B:2729:G:H2'	2:B:2730:C:C6	2.46	0.50
2:B:2761:A:H2'	2:B:2762:C:C6	2.45	0.50
3:0:4:CYS:SG	3:0:6:VAL:HB	2.51	0.50
5:L:37:GLY:O	5:L:40:SER:HB3	2.11	0.50
2:B:535:G:C5	2:B:559:G:C6	3.00	0.50
2:B:553:G:H2'	2:B:554:U:O4'	2.11	0.50
2:B:603:A:C5	2:B:655:A:C4	3.00	0.50
2:B:687:C:H2'	2:B:688:U:C6	2.46	0.50
2:B:763:G:C6	2:B:765:C:N3	2.79	0.50
2:B:780:G:C2	2:B:782:A:C2	3.00	0.50
2:B:1445:G:C6	2:B:1446:C:C4	2.99	0.50
2:B:1544:A:C5	2:B:1545:A:C5	3.00	0.50
2:B:1661:G:C4	2:B:1662:U:C6	3.00	0.50
2:B:2292:U:H2'	2:B:2293:G:C8	2.46	0.50
10:P:61:ARG:HH11	10:P:63:ILE:CA	2.25	0.50
19:X:387:ILE:HA	19:X:390:MET:SD	2.51	0.50
21:Y:23:LYS:HA	21:Y:66:VAL:HB	1.93	0.50
32:J:77:HIS:CE1	32:J:83:GLY:C	2.89	0.50
2:B:357:C:H2'	2:B:358:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:945:A:C2	2:B:2448:A:C4	2.99	0.50
2:B:947:A:C5	2:B:971:G:C2	2.99	0.50
2:B:1151:A:H4'	11:Q:80:ASN:OD1	2.12	0.50
2:B:1435:G:C2	2:B:1436:G:C4	3.00	0.50
2:B:1596:A:C2	2:B:1597:A:N3	2.80	0.50
2:B:2407:A:C4	2:B:2408:U:C5	2.99	0.50
5:L:68:SER:HB2	5:L:71:ALA:HB2	1.93	0.50
10:P:61:ARG:NH2	10:P:69:VAL:H	2.08	0.50
18:W:47:VAL:HG11	18:W:86:LEU:HD12	1.93	0.50
26:8:12:ARG:HE	26:8:13:ASN:HD21	1.59	0.50
2:B:136:G:C6	2:B:144:A:C6	2.99	0.50
2:B:367:G:C2	2:B:368:A:H1'	2.47	0.50
2:B:371:A:C8	2:B:373:U:C2	3.00	0.50
2:B:647:G:C6	2:B:648:G:C5	2.99	0.50
2:B:2206:C:H2'	2:B:2207:C:C6	2.46	0.50
21:Y:64:GLY:HA2	21:Y:83:ALA:HA	1.94	0.50
2:B:190:A:C6	2:B:191:A:C6	3.00	0.50
2:B:346:A:C5	2:B:347:A:C4	3.00	0.50
2:B:518:G:C4	2:B:519:U:C5	2.99	0.50
2:B:536:G:H1	2:B:557:C:N4	2.09	0.50
2:B:879:G:OP2	2:B:894:U:C5	2.65	0.50
2:B:952:G:C6	2:B:953:G:C5	3.00	0.50
2:B:1237:A:N3	2:B:1237:A:H2'	2.27	0.50
2:B:1274:A:H3'	2:B:1646:C:N4	2.26	0.50
2:B:1659:G:C4	2:B:1660:G:C8	3.00	0.50
2:B:2027:G:C2	2:B:2037:A:C5	2.99	0.50
2:B:2227:A:C4	2:B:2228:G:C8	3.00	0.50
2:B:2231:U:H2'	2:B:2232:C:H6	1.77	0.50
2:B:2293:G:C4	2:B:2294:G:C8	2.98	0.50
22:3:43:THR:HB	22:3:45:ASP:H	1.76	0.50
28:F:174:PHE:CG	28:F:175:PRO:HD2	2.47	0.50
2:B:195:A:H2'	2:B:198:C:H41	1.76	0.50
2:B:216:A:C5	2:B:217:A:C8	2.99	0.50
2:B:539:G:H2'	2:B:540:C:H6	1.75	0.50
2:B:639:U:C2	2:B:640:C:C5	3.00	0.50
2:B:864:G:C2	2:B:865:C:C2	3.00	0.50
2:B:1055:G:H21	2:B:1086:A:H1'	1.76	0.50
2:B:1139:G:N2	2:B:1140:C:H1'	2.27	0.50
2:B:1418:G:O6	2:B:1578:U:C6	2.64	0.50
2:B:1426:G:C6	2:B:1427:A:N1	2.80	0.50
2:B:2346:A:C6	2:B:2383:G:C6	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2607:G:C6	2:B:2608:G:C5	2.99	0.50
2:B:2680:U:H2'	2:B:2681:C:C5	2.47	0.50
2:B:2697:G:H2'	2:B:2698:U:C6	2.47	0.50
10:P:6:GLN:HA	10:P:9:GLN:HE21	1.76	0.50
10:P:50:ARG:HA	10:P:57:ALA:H	1.77	0.50
2:B:86:G:H2'	2:B:87:U:C6	2.47	0.50
2:B:755:U:C2	2:B:756:A:C8	3.00	0.50
2:B:1214:A:H2'	2:B:1215:G:O4'	2.12	0.50
2:B:1478:G:C4	2:B:1479:G:C8	3.00	0.50
2:B:1799:G:C6	2:B:1819:A:C4	3.00	0.50
2:B:2081:U:C4	2:B:2237:G:C2	2.99	0.50
2:B:2219:U:H2'	2:B:2220:U:C6	2.47	0.50
2:B:2447:G:C5	2:B:2500:U:C5	3.00	0.50
2:B:2464:G:C6	2:B:2487:G:C6	3.00	0.50
2:B:2813:A:C5	2:B:2814:A:C5	2.99	0.50
11:Q:57:ARG:HA	11:Q:60:TRP:CE3	2.47	0.50
23:5:58:ASN:N	23:5:171:ILE:HD13	2.27	0.50
27:C:74:PRO:HB3	27:C:115:ILE:O	2.12	0.50
27:C:173:LEU:HD22	27:C:173:LEU:N	2.27	0.50
2:B:204:A:C5	2:B:206:U:O4	2.65	0.49
2:B:639:U:N3	2:B:640:C:C4	2.80	0.49
2:B:1026:G:C4	2:B:1134:A:C2	2.99	0.49
2:B:2485:G:C6	2:B:2486:C:C5	3.00	0.49
2:B:2831:G:H4'	2:B:2883:A:C6	2.47	0.49
20:E:164:LEU:HD12	20:E:165:HIS:H	1.77	0.49
2:B:533:G:C6	2:B:534:U:C4	3.00	0.49
2:B:576:U:H2'	2:B:577:G:C8	2.46	0.49
2:B:1603:A:C2	2:B:1604:C:H1'	2.47	0.49
2:B:2094:A:H2'	2:B:2095:A:C8	2.48	0.49
2:B:2230:G:C5	2:B:2231:U:C5	3.00	0.49
2:B:2526:G:H2'	2:B:2527:C:C6	2.47	0.49
2:B:2674:G:C4	2:B:2675:A:C8	2.99	0.49
2:B:2819:G:C6	2:B:2821:A:C2	3.00	0.49
18:W:72:VAL:HA	18:W:94:ALA:H	1.78	0.49
2:B:29:U:H2'	2:B:30:G:C8	2.47	0.49
2:B:36:G:H4'	2:B:451:U:C5	2.47	0.49
2:B:40:U:H2'	2:B:41:C:C6	2.47	0.49
2:B:275:C:C5	2:B:276:U:C6	3.00	0.49
2:B:845:A:C6	2:B:932:U:H5	2.30	0.49
2:B:1022:G:C6	2:B:1140:C:C4	2.99	0.49
2:B:1128:G:C6	2:B:2518:A:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1195:G:C2	2:B:1196:C:C5	3.00	0.49
2:B:1318:U:H2'	2:B:1319:C:C6	2.47	0.49
2:B:1374:G:C6	2:B:1375:U:C4	3.01	0.49
2:B:1754:A:C2	2:B:1755:A:C5	2.99	0.49
2:B:1776:G:N1	2:B:1789:A:C5	2.80	0.49
2:B:2267:A:C8	2:B:2267:A:C3'	2.93	0.49
2:B:2353:G:H1	2:B:2364:C:H42	1.59	0.49
14:D:149:ASN:HB3	14:D:151:THR:H	1.77	0.49
2:B:46:G:C6	2:B:180:G:C2	3.00	0.49
2:B:97:C:H2'	2:B:98:G:C8	2.47	0.49
2:B:350:G:C5	2:B:351:C:C4	3.00	0.49
2:B:784:G:C6	2:B:792:A:C4	3.00	0.49
2:B:1155:A:C5	2:B:1157:G:C5	3.00	0.49
2:B:1214:A:C5	2:B:1215:G:C5	3.01	0.49
2:B:1307:A:C6	2:B:1308:A:C4	2.99	0.49
2:B:1516:G:C6	2:B:1517:G:C5	3.00	0.49
2:B:1527:G:N2	2:B:1544:A:C8	2.80	0.49
2:B:2630:G:C5	2:B:2894:G:C6	3.00	0.49
2:B:2:G:C2	2:B:3:U:C2	3.00	0.49
2:B:111:A:C5	2:B:112:U:C5	3.01	0.49
2:B:120:U:C4	2:B:149:A:C6	3.00	0.49
2:B:540:C:H2'	2:B:541:A:C8	2.47	0.49
2:B:711:G:C2	2:B:712:G:C4	3.00	0.49
2:B:794:A:H2'	2:B:795:C:C6	2.47	0.49
2:B:943:A:C2	2:B:944:C:C2	3.01	0.49
2:B:1257:C:C2	2:B:1258:U:C5	3.01	0.49
2:B:1336:A:C2	2:B:1337:G:C5	3.01	0.49
2:B:1717:A:C6	2:B:1744:A:C8	3.01	0.49
2:B:1801:A:C4	2:B:2203:U:C5	3.00	0.49
2:B:1844:C:H2'	2:B:1845:G:C8	2.48	0.49
2:B:1893:C:C5	2:B:1894:C:C4	3.01	0.49
2:B:2037:A:C2	2:B:2038:G:C5	3.01	0.49
2:B:2287:A:N3	2:B:2287:A:H5''	2.27	0.49
2:B:2521:C:C4	2:B:2522:U:C4	3.00	0.49
2:B:2806:C:H2'	2:B:2807:U:C6	2.47	0.49
13:S:1:MET:HB2	13:S:63:GLY:HA2	1.94	0.49
26:8:24:ARG:HB3	26:8:36:ARG:HA	1.93	0.49
2:B:533:G:C5	2:B:534:U:C5	3.01	0.49
2:B:679:C:C2	2:B:680:C:C5	3.00	0.49
2:B:825:A:C4	2:B:826:U:C5	3.00	0.49
2:B:909:A:C4	2:B:912:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:947:A:C6	2:B:971:G:C2	3.00	0.49
2:B:1014:A:H2'	2:B:1015:U:C6	2.47	0.49
2:B:1401:G:C6	2:B:1402:U:C4	3.01	0.49
2:B:2159:G:C6	2:B:2161:C:C5	3.00	0.49
2:B:2398:U:O5'	2:B:2398:U:H6	1.94	0.49
20:E:105:LEU:HD23	20:E:108:ILE:HD12	1.93	0.49
2:B:801:G:H3'	2:B:802:A:C5'	2.43	0.49
2:B:1277:G:C2	2:B:1278:C:C2	3.00	0.49
2:B:1353:A:C6	2:B:1354:A:C2	3.01	0.49
2:B:1376:C:C2	2:B:1377:G:C4	3.01	0.49
2:B:1742:U:C4	2:B:1743:G:C6	3.00	0.49
2:B:1797:G:H1	2:B:1822:C:N4	2.09	0.49
2:B:2370:G:C2	2:B:2371:G:C4	3.01	0.49
2:B:2398:U:O5'	2:B:2398:U:C6	2.66	0.49
1:A:10:G:C5	1:A:11:C:C5	3.01	0.49
2:B:721:A:C6	2:B:722:A:C5	3.00	0.49
2:B:1059:G:C6	2:B:1080:A:N1	2.81	0.49
2:B:1142:A:C4	2:B:1144:A:C8	3.00	0.49
2:B:1171:G:C6	2:B:1172:C:C4	3.00	0.49
2:B:1364:G:C6	2:B:1368:G:C6	3.00	0.49
2:B:1383:A:C6	2:B:1384:A:C6	3.01	0.49
2:B:2374:C:H2'	2:B:2375:G:C8	2.48	0.49
2:B:2578:G:H2'	2:B:2579:C:C6	2.48	0.49
29:G:90:GLY:HA3	29:G:93:TYR:CZ	2.47	0.49
2:B:492:A:C2	13:S:7:HIS:CE1	3.01	0.49
2:B:583:G:C5	2:B:584:C:C5	3.01	0.49
2:B:687:C:H3'	2:B:688:U:H6	1.77	0.49
2:B:983:A:C5	2:B:984:A:C5	3.01	0.49
2:B:2091:C:C4	2:B:2092:U:N3	2.80	0.49
2:B:2278:A:H2'	2:B:2279:G:H5''	1.94	0.49
2:B:2621:G:C5	2:B:2622:U:C4	3.01	0.49
2:B:2630:G:C6	2:B:2631:G:C6	3.01	0.49
13:S:58:ALA:HA	13:S:63:GLY:HA3	1.95	0.49
14:D:67:HIS:CE1	14:D:68:PHE:CE1	3.01	0.49
2:B:80:G:H4'	2:B:346:A:O4'	2.12	0.49
2:B:115:C:H2'	2:B:116:C:H6	1.78	0.49
2:B:190:A:C8	2:B:207:A:C6	3.00	0.49
2:B:436:C:C2	2:B:437:U:C5	3.01	0.49
2:B:611:C:C4	2:B:612:G:C5	3.01	0.49
2:B:723:C:H2'	2:B:724:U:O4'	2.13	0.49
2:B:807:U:H2'	2:B:808:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1006:C:C2	2:B:1138:G:C2	3.01	0.49
2:B:1389:G:C5	2:B:1390:U:C5	3.01	0.49
2:B:1672:A:C4	2:B:2582:G:H5'	2.48	0.49
2:B:1689:A:C5	2:B:1700:A:C4	3.01	0.49
2:B:1744:A:C4	2:B:1745:A:C8	3.01	0.49
2:B:2373:G:H2'	2:B:2374:C:C6	2.48	0.49
2:B:2383:G:C5	2:B:2384:U:C5	3.01	0.49
2:B:2429:G:C8	2:B:2429:G:H3'	2.47	0.49
2:B:2636:C:H2'	2:B:2637:U:H6	1.77	0.49
2:B:2718:G:C6	2:B:2719:G:C5	3.00	0.49
2:B:647:G:C6	2:B:648:G:C6	3.01	0.48
2:B:825:A:C6	2:B:833:A:N1	2.81	0.48
2:B:978:G:C2	2:B:979:A:C4	3.01	0.48
2:B:1607:C:H5''	2:B:1608:A:C8	2.48	0.48
2:B:2330:G:C6	2:B:2331:G:C4	3.01	0.48
2:B:2505:G:O6	2:B:2576:G:C8	2.66	0.48
2:B:2688:G:N7	2:B:2719:G:C5	2.81	0.48
2:B:2790:U:C4	2:B:2893:A:C2	3.01	0.48
2:B:2885:G:H1	22:3:39:ARG:HB3	1.78	0.48
20:E:2:GLU:HG3	20:E:4:VAL:H	1.77	0.48
2:B:465:G:C2	2:B:466:A:C2	3.01	0.48
2:B:482:A:H4'	17:U:44:HIS:HB2	1.94	0.48
2:B:616:A:C8	2:B:617:G:C8	3.01	0.48
2:B:831:G:C4	2:B:832:U:C6	3.01	0.48
2:B:954:G:C5	2:B:955:U:C6	3.01	0.48
2:B:1444:G:O6	2:B:1445:G:C6	2.66	0.48
2:B:1896:G:C6	2:B:1897:G:C5	3.01	0.48
2:B:2110:G:O6	2:B:2120:G:C8	2.65	0.48
2:B:2869:G:H2'	2:B:2870:C:H6	1.78	0.48
23:5:57:GLN:HA	23:5:171:ILE:HD13	1.95	0.48
32:J:130:HIS:CE1	32:J:132:HIS:O	2.67	0.48
1:A:18:G:C2	1:A:67:G:C6	3.01	0.48
2:B:589:U:H2'	2:B:590:A:H8	1.78	0.48
2:B:644:A:H3'	2:B:644:A:C8	2.48	0.48
2:B:801:G:H4'	2:B:802:A:OP2	2.13	0.48
2:B:1153:C:C2	2:B:1154:G:C4	3.01	0.48
2:B:1298:C:H2'	2:B:1299:G:C8	2.49	0.48
2:B:1659:G:C6	2:B:2002:G:C6	3.02	0.48
2:B:2264:C:H41	21:Y:13:ARG:HH12	1.61	0.48
27:C:68:ARG:NH2	27:C:128:THR:H	2.11	0.48
2:B:475:C:C5	2:B:476:G:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:770:G:C6	2:B:771:G:N7	2.81	0.48
2:B:854:C:N3	2:B:924:G:C6	2.81	0.48
2:B:1029:A:H3'	2:B:1030:C:C6	2.48	0.48
2:B:2214:C:C5	2:B:2215:C:C5	3.02	0.48
2:B:2796:U:C4	2:B:2801:G:C6	3.01	0.48
2:B:2815:C:H2'	2:B:2816:G:C8	2.48	0.48
2:B:2822:G:H1	8:N:2:ARG:NH2	2.11	0.48
32:J:131:ASN:OD1	32:J:132:HIS:CE1	2.66	0.48
1:A:81:G:C5	1:A:96:G:C2	3.01	0.48
2:B:379:G:C6	2:B:380:G:C5	3.02	0.48
2:B:911:A:C2	7:M:9:PHE:CD1	3.02	0.48
2:B:2813:A:C6	2:B:2814:A:C4	3.01	0.48
2:B:638:G:C5	2:B:639:U:C4	3.01	0.48
2:B:1132:U:C5	2:B:1133:A:C6	3.01	0.48
2:B:1301:A:C5	2:B:1303:G:C5	3.01	0.48
2:B:1307:A:C6	2:B:1308:A:C5	3.01	0.48
2:B:1314:C:C2	2:B:1315:C:C6	3.02	0.48
2:B:1773:A:H2'	2:B:1774:C:O4'	2.13	0.48
2:B:2227:A:C5	2:B:2228:G:C5	3.02	0.48
2:B:2745:C:C4	2:B:2746:U:C4	3.02	0.48
2:B:2792:A:C2	2:B:2805:C:C2	3.02	0.48
5:L:92:LEU:C	5:L:92:LEU:HD12	2.38	0.48
20:E:27:LEU:O	20:E:30:GLN:HB3	2.14	0.48
1:A:55:U:H2'	1:A:56:G:C8	2.49	0.48
1:A:73:A:C4	1:A:104:A:C2	3.02	0.48
2:B:656:G:C2	2:B:657:U:C2	3.02	0.48
2:B:768:G:C5	2:B:769:U:C5	3.02	0.48
2:B:973:A:H1'	2:B:1188:U:C6	2.49	0.48
2:B:1166:G:H2'	2:B:1167:C:H6	1.78	0.48
2:B:1239:G:C2	2:B:1240:U:C2	3.01	0.48
2:B:1426:G:C6	2:B:1427:A:C6	3.02	0.48
2:B:2134:A:C5	2:B:2135:A:C2	3.01	0.48
15:T:2:ILE:HG13	15:T:3:ARG:H	1.77	0.48
21:Y:46:ALA:O	21:Y:80:SER:HA	2.14	0.48
27:C:24:HIS:CE1	27:C:27:LYS:O	2.66	0.48
27:C:52:HIS:CE1	27:C:218:THR:HA	2.49	0.48
2:B:1007:C:C6	2:B:1008:A:C8	3.01	0.48
2:B:1016:G:C6	2:B:1017:G:C5	3.01	0.48
2:B:1279:G:H4'	8:N:31:HIS:CD2	2.49	0.48
2:B:2286:G:C5	2:B:2346:A:C6	3.00	0.48
2:B:2311:A:H4'	2:B:2312:U:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:J:16:TYR:O	32:J:54:ILE:HA	2.14	0.48
2:B:137:U:H2'	2:B:138:U:C6	2.49	0.48
2:B:194:G:C4	2:B:195:A:C8	3.02	0.48
2:B:409:G:C6	2:B:410:G:C6	3.02	0.48
2:B:442:G:C2	2:B:444:C:C4	3.02	0.48
2:B:1198:U:H2'	2:B:1199:U:C5	2.48	0.48
2:B:1275:A:O2'	8:N:16:HIS:CE1	2.67	0.48
2:B:1444:G:C6	2:B:1445:G:C6	3.02	0.48
2:B:1450:G:C2	2:B:1462:C:C2	3.02	0.48
2:B:1630:A:C5	2:B:1631:G:C4	3.02	0.48
2:B:2094:A:C2	2:B:2196:C:C2	3.01	0.48
2:B:2273:A:C5	2:B:2274:A:C5	3.02	0.48
2:B:2412:A:H2'	2:B:2413:G:C8	2.48	0.48
2:B:2774:C:H2'	2:B:2775:G:O4'	2.13	0.48
27:C:106:PRO:HA	27:C:194:VAL:HA	1.96	0.48
2:B:253:C:H2'	2:B:254:G:O4'	2.14	0.48
2:B:391:A:C2	2:B:411:G:C5	3.02	0.48
2:B:460:A:C2	2:B:470:A:C4	3.02	0.48
2:B:816:C:C4	2:B:1192:G:O6	2.66	0.48
2:B:983:A:C4	2:B:984:A:C8	3.02	0.48
2:B:1022:G:H22	2:B:1142:A:H2	1.62	0.48
2:B:1459:G:H3'	2:B:1460:U:H5'	1.95	0.48
2:B:2335:A:C5	2:B:2337:G:C4	3.02	0.48
2:B:2622:U:C2	2:B:2623:G:C8	3.02	0.48
12:R:54:VAL:HB	12:R:56:GLY:H	1.79	0.48
30:H:130:VAL:HG12	30:H:131:SER:N	2.29	0.48
2:B:460:A:C8	2:B:461:C:C5	3.02	0.47
2:B:590:A:C2	2:B:591:U:C2	3.02	0.47
2:B:748:G:C6	2:B:750:A:C6	3.02	0.47
2:B:954:G:C4	2:B:955:U:C6	3.02	0.47
2:B:975:A:H2	2:B:1156:A:C2	2.32	0.47
2:B:1053:C:O5'	2:B:1053:C:C6	2.67	0.47
2:B:1403:A:C4	2:B:1404:C:C6	3.02	0.47
2:B:1844:C:C2	2:B:1897:G:N2	2.82	0.47
2:B:2086:U:H1'	2:B:2234:G:C2	2.49	0.47
2:B:2255:G:H2'	2:B:2256:G:O4'	2.13	0.47
2:B:2323:G:C6	2:B:2324:U:C4	3.02	0.47
2:B:2459:A:H3'	2:B:2460:U:C6	2.49	0.47
2:B:2789:C:C4	2:B:2893:A:C2	3.01	0.47
12:R:5:PHE:C	12:R:5:PHE:CD2	2.92	0.47
19:X:448:VAL:O	19:X:448:VAL:HG12	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:E:105:LEU:C	20:E:109:LEU:HD13	2.39	0.47
2:B:301:G:C6	2:B:317:G:C5	3.02	0.47
2:B:393:C:C2	2:B:394:C:C5	3.02	0.47
2:B:415:A:H2'	2:B:416:U:C6	2.50	0.47
2:B:436:C:H2'	2:B:437:U:C6	2.49	0.47
2:B:823:C:C2	2:B:824:U:C5	3.03	0.47
2:B:1445:G:C5	2:B:1446:C:C4	3.02	0.47
2:B:2484:G:C6	2:B:2485:G:C5	3.02	0.47
4:K:66:LYS:HA	4:K:79:PHE:O	2.14	0.47
23:5:214:ILE:HG22	23:5:222:VAL:HG23	1.96	0.47
1:A:81:G:C6	1:A:96:G:C6	3.01	0.47
2:B:183:C:N4	2:B:213:A:H61	2.12	0.47
2:B:538:A:C4	2:B:556:A:C2	3.03	0.47
2:B:734:A:C5	2:B:735:A:C8	3.02	0.47
2:B:1021:A:C2	2:B:1023:U:C2	3.02	0.47
2:B:1257:C:H4'	20:E:78:TRP:CH2	2.49	0.47
2:B:1265:A:C4	2:B:1267:U:C4	3.03	0.47
2:B:2115:G:H3'	2:B:2116:G:H5''	1.95	0.47
2:B:2290:G:C6	2:B:2291:U:C4	3.02	0.47
2:B:2314:A:C2	2:B:2315:G:C5	3.02	0.47
2:B:2567:G:C5	2:B:2568:U:C4	3.01	0.47
2:B:2766:A:C4	2:B:2767:C:C6	3.01	0.47
2:B:2809:A:C5	2:B:2810:A:C5	3.02	0.47
2:B:2850:A:C4	2:B:2851:A:C8	3.02	0.47
30:H:117:LEU:HD13	30:H:121:VAL:HG13	1.97	0.47
2:B:491:G:C6	2:B:492:A:C4	3.02	0.47
2:B:661:A:C2	2:B:662:G:C4	3.02	0.47
2:B:735:A:C6	2:B:736:C:C2	3.02	0.47
2:B:1014:A:C6	2:B:1015:U:N3	2.82	0.47
2:B:1056:G:H21	2:B:1103:A:H62	1.62	0.47
2:B:1173:U:C4	2:B:1174:U:C2	3.02	0.47
2:B:1477:A:C8	2:B:1478:G:C8	3.02	0.47
2:B:1477:A:C2	2:B:1515:A:C4	3.02	0.47
2:B:2004:G:C6	2:B:2005:A:C4	3.02	0.47
26:8:10:LEU:O	26:8:33:HIS:HE1	1.97	0.47
2:B:13:A:N3	2:B:526:A:C6	2.83	0.47
2:B:48:G:C4	2:B:178:G:N1	2.83	0.47
2:B:96:C:H2'	2:B:97:C:H6	1.79	0.47
2:B:1026:G:C6	2:B:1134:A:C6	3.02	0.47
2:B:1034:G:C5	2:B:1035:U:C5	3.03	0.47
2:B:1254:A:C8	2:B:1256:G:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1359:A:C8	2:B:1373:A:C2	3.03	0.47
2:B:1591:A:C2	2:B:1592:C:C2	3.02	0.47
2:B:1720:U:C5	2:B:1721:G:C5	3.03	0.47
4:K:28:SER:C	4:K:29:HIS:CG	2.92	0.47
2:B:17:G:H2'	2:B:18:U:C6	2.50	0.47
2:B:256:A:C2	2:B:257:C:C2	3.03	0.47
2:B:467:G:C6	2:B:468:G:C4	3.03	0.47
2:B:527:C:O2	2:B:2779:U:C4	2.68	0.47
2:B:571:U:C5	2:B:575:A:C5	3.02	0.47
2:B:871:U:H3	2:B:906:U:H3	1.63	0.47
2:B:934:U:N3	2:B:935:C:C4	2.83	0.47
2:B:1106:G:C6	2:B:1107:G:C5	3.02	0.47
2:B:1359:A:C8	2:B:1360:G:C8	3.03	0.47
2:B:1590:A:C2	2:B:1591:A:C5	3.03	0.47
2:B:2014:A:C2	2:B:2015:A:C2	3.03	0.47
2:B:2065:C:H2'	2:B:2066:C:C6	2.49	0.47
2:B:2189:U:H2'	2:B:2190:G:C8	2.50	0.47
9:O:74:VAL:HA	9:O:77:ALA:HB3	1.95	0.47
20:E:134:LEU:HB2	20:E:160:ALA:HB1	1.96	0.47
27:C:116:GLN:OE1	27:C:116:GLN:HA	2.14	0.47
1:A:34:A:C2	1:A:49:C:C2	3.03	0.47
2:B:197:A:C5	2:B:2430:A:C4	3.03	0.47
2:B:265:A:H2'	2:B:266:G:C4'	2.45	0.47
2:B:270:A:C2	2:B:370:G:C4	3.02	0.47
2:B:279:A:H3'	2:B:280:U:H6	1.79	0.47
2:B:346:A:C6	2:B:347:A:C4	3.03	0.47
2:B:418:C:C4	2:B:419:U:C4	3.03	0.47
2:B:519:U:H2'	2:B:520:G:C8	2.50	0.47
2:B:687:C:H2'	2:B:687:C:O2	2.15	0.47
2:B:1014:A:C2	2:B:1015:U:C2	3.03	0.47
2:B:1251:C:OP2	11:Q:5:ARG:HG2	2.15	0.47
2:B:1386:C:H2'	2:B:1387:A:C8	2.49	0.47
2:B:2038:G:H2'	2:B:2039:U:C6	2.49	0.47
2:B:2115:G:O2'	2:B:2119:A:C6	2.67	0.47
2:B:2221:G:C6	2:B:2222:C:C4	3.03	0.47
2:B:2325:G:C4	2:B:2326:C:C5	3.03	0.47
2:B:2325:G:C5	2:B:2326:C:C5	3.02	0.47
2:B:2407:A:C2	2:B:2408:U:C2	3.02	0.47
2:B:2452:C:C5	2:B:2453:A:N6	2.83	0.47
2:B:2485:G:C5	2:B:2486:C:C5	3.03	0.47
2:B:2547:A:C6	2:B:2562:U:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2623:G:H2'	2:B:2624:G:C8	2.49	0.47
2:B:2721:A:C2	2:B:2873:A:C2	3.03	0.47
2:B:2758:A:C5	2:B:2759:G:C8	3.03	0.47
19:X:409:TYR:OH	19:X:411:HIS:CE1	2.67	0.47
21:Y:19:ARG:H	21:Y:36:ILE:HG12	1.80	0.47
2:B:701:G:C4	2:B:702:U:C6	3.02	0.47
2:B:1445:G:C4	2:B:1446:C:C6	3.03	0.47
2:B:1613:G:C5	2:B:1617:C:C4	3.03	0.47
2:B:2070:A:H2'	2:B:2071:A:C8	2.46	0.47
2:B:2075:U:O4	2:B:2238:G:C5	2.68	0.47
2:B:2638:G:C6	2:B:2775:G:C4	3.02	0.47
2:B:2895:G:C2	2:B:2896:C:H1'	2.50	0.47
7:M:41:LEU:HB2	7:M:94:ALA:HB3	1.97	0.47
2:B:114:U:H2'	2:B:115:C:C6	2.50	0.47
2:B:152:A:H2'	2:B:153:U:H6	1.78	0.47
2:B:323:C:C4	2:B:333:G:C5	3.03	0.47
2:B:560:C:H3'	2:B:561:G:H8	1.78	0.47
2:B:701:G:C6	2:B:702:U:C4	3.03	0.47
2:B:735:A:C8	2:B:736:C:C5	3.03	0.47
2:B:923:G:C2	2:B:924:G:C8	3.03	0.47
2:B:1016:G:N1	2:B:1017:G:C5	2.82	0.47
2:B:1441:G:C6	2:B:1442:U:C4	3.03	0.47
2:B:1677:A:C2	2:B:1678:A:C4	3.03	0.47
2:B:1759:A:C4	2:B:2697:G:H1'	2.50	0.47
2:B:1776:G:C6	2:B:1789:A:C6	3.02	0.47
2:B:1797:G:C5	2:B:1798:U:C4	3.02	0.47
2:B:2104:C:C2	2:B:2186:G:C2	3.03	0.47
2:B:2209:G:C4	2:B:2210:U:C5	3.03	0.47
2:B:2273:A:H2'	2:B:2274:A:C8	2.50	0.47
2:B:2748:A:N6	2:B:2749:A:C6	2.83	0.47
19:X:160:LEU:HD13	19:X:160:LEU:C	2.40	0.47
19:X:279:LEU:HD23	19:X:282:ILE:HD12	1.95	0.47
27:C:104:LEU:O	27:C:105:ALA:HB3	2.14	0.47
2:B:5:A:H2'	2:B:6:A:C8	2.50	0.47
2:B:482:A:C2	2:B:506:G:C5	3.03	0.47
2:B:866:A:C6	2:B:914:G:C5	3.02	0.47
2:B:943:A:C6	2:B:944:C:C4	3.03	0.47
2:B:974:G:C4	2:B:1186:G:C2	3.03	0.47
2:B:1120:G:C5	2:B:1121:C:C5	3.02	0.47
2:B:1642:G:N1	2:B:1643:G:C5	2.83	0.47
2:B:2168:G:H3'	2:B:2168:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2346:A:C8	2:B:2383:G:C4	3.03	0.47
19:X:72:ALA:O	19:X:76:LEU:HG	2.15	0.47
19:X:165:ASP:O	19:X:166:LEU:HG	2.15	0.47
2:B:363:G:H2'	2:B:364:C:H6	1.80	0.46
2:B:519:U:H2'	2:B:520:G:H8	1.80	0.46
2:B:684:G:C2	2:B:774:G:C6	3.04	0.46
2:B:809:G:H2'	2:B:810:U:C6	2.49	0.46
2:B:971:G:N7	2:B:972:A:C5	2.83	0.46
2:B:1309:G:H21	2:B:1611:C:C4'	2.29	0.46
2:B:1473:G:C6	2:B:1519:G:C6	3.04	0.46
2:B:1676:A:C6	2:B:1677:A:C5	3.03	0.46
2:B:2080:A:C2	2:B:2241:A:C5	3.03	0.46
2:B:2374:C:H2'	2:B:2375:G:H8	1.79	0.46
2:B:2647:U:H2'	2:B:2648:G:H8	1.79	0.46
13:S:71:VAL:HA	13:S:107:VAL:HA	1.96	0.46
19:X:286:ASN:HD22	19:X:287:VAL:HG23	1.80	0.46
20:E:29:HIS:HA	20:E:32:VAL:CG2	2.45	0.46
25:7:15:LYS:HA	25:7:21:PHE:CD2	2.50	0.46
2:B:68:G:C5	2:B:69:C:C5	3.03	0.46
2:B:234:U:C2	2:B:235:U:C6	3.03	0.46
2:B:499:U:H2'	2:B:500:G:C8	2.50	0.46
2:B:1527:G:N2	2:B:1544:A:H8	2.14	0.46
2:B:1811:G:C5	2:B:1812:U:C5	3.03	0.46
2:B:1975:G:C6	2:B:1976:U:N3	2.83	0.46
2:B:2027:G:C2	2:B:2037:A:C6	3.03	0.46
2:B:2317:A:C2	2:B:2318:G:H1'	2.50	0.46
2:B:2327:A:H2'	2:B:2327:A:N3	2.30	0.46
2:B:2660:A:N6	2:B:2661:G:C2	2.83	0.46
2:B:2744:G:C2	2:B:2745:C:C6	3.03	0.46
2:B:2802:G:C2	2:B:2803:G:C4	3.03	0.46
5:L:87:GLY:C	5:L:89:VAL:H	2.23	0.46
14:D:109:VAL:HG11	14:D:193:VAL:CG1	2.45	0.46
19:X:285:ALA:O	19:X:314:ARG:HD3	2.15	0.46
2:B:194:G:C5	2:B:195:A:C5	3.03	0.46
2:B:244:A:C4	2:B:255:A:C5	3.04	0.46
2:B:464:U:C4	2:B:465:G:C6	3.04	0.46
2:B:465:G:C5	2:B:466:A:C6	3.04	0.46
2:B:569:U:C4	2:B:2498:C:H5''	2.51	0.46
2:B:675:A:C6	2:B:676:A:C6	3.03	0.46
2:B:1004:U:H1'	2:B:1010:A:C5	2.50	0.46
2:B:1050:A:C6	2:B:1051:G:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1346:G:C5	2:B:1347:A:C5	3.03	0.46
2:B:1643:G:C5	2:B:1644:C:C5	3.04	0.46
2:B:2265:U:H2'	2:B:2266:A:C8	2.51	0.46
2:B:2543:G:C6	2:B:2765:A:C5	3.04	0.46
2:B:2744:G:C5	2:B:2745:C:C5	3.03	0.46
25:7:23:HIS:CE1	25:7:25:HIS:CE1	3.04	0.46
32:J:35:ARG:HA	32:J:40:HIS:CD2	2.50	0.46
2:B:80:G:N1	2:B:107:G:C6	2.84	0.46
2:B:323:C:C5	2:B:333:G:C8	3.03	0.46
2:B:422:A:C6	2:B:423:A:C6	3.04	0.46
2:B:460:A:C5	2:B:461:C:C2	3.04	0.46
2:B:551:G:C6	2:B:552:U:C4	3.03	0.46
2:B:677:A:C5	2:B:678:C:C5	3.04	0.46
2:B:751:A:C2	13:S:91:GLY:HA3	2.50	0.46
2:B:752:A:C2'	24:6:1:MET:HE1	2.45	0.46
2:B:822:G:C6	2:B:823:C:C4	3.03	0.46
2:B:1144:A:C5	2:B:1145:C:C4	3.03	0.46
2:B:1292:G:H2'	2:B:1293:C:C6	2.50	0.46
2:B:1400:U:C4	2:B:1401:G:C6	3.04	0.46
2:B:1999:C:H2'	2:B:2000:C:O4'	2.15	0.46
2:B:2020:A:C4	2:B:2022:U:C5	3.04	0.46
2:B:2347:C:C2	2:B:2348:U:C6	3.03	0.46
12:R:49:ILE:HD13	12:R:51:VAL:O	2.15	0.46
19:X:338:LEU:HA	19:X:341:ARG:HH21	1.79	0.46
20:E:78:TRP:C	20:E:80:SER:H	2.24	0.46
28:F:159:ALA:HB1	28:F:161:SER:H	1.80	0.46
2:B:83:A:H2'	2:B:84:A:C8	2.51	0.46
2:B:138:U:H2'	2:B:140:C:C5	2.50	0.46
2:B:257:C:C5	2:B:258:G:C8	3.04	0.46
2:B:483:A:C8	17:U:44:HIS:ND1	2.83	0.46
2:B:711:G:C2	2:B:721:A:C2	3.03	0.46
2:B:719:C:C4	2:B:720:U:C4	3.03	0.46
2:B:785:G:C5	2:B:786:C:C5	3.04	0.46
2:B:874:G:C6	2:B:904:G:C6	3.03	0.46
2:B:891:G:H2'	2:B:892:A:N7	2.29	0.46
2:B:1022:G:C5	2:B:1140:C:C4	3.03	0.46
2:B:1228:G:C6	2:B:1229:C:C4	3.04	0.46
2:B:1383:A:C2	2:B:1384:A:C5	3.04	0.46
2:B:1404:C:C2	2:B:1405:U:C5	3.02	0.46
2:B:1693:U:C4	2:B:1977:A:C4	3.03	0.46
2:B:1799:G:C6	2:B:1819:A:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2796:U:C4	2:B:2798:U:C6	3.03	0.46
2:B:2849:U:H5'	2:B:2868:A:C5	2.51	0.46
10:P:12:MET:HA	10:P:76:HIS:CE1	2.51	0.46
14:D:126:ASN:O	14:D:127:PHE:CD1	2.68	0.46
17:U:10:VAL:HA	17:U:71:ILE:HA	1.98	0.46
21:Y:53:GLY:O	21:Y:56:HIS:CE1	2.69	0.46
2:B:583:G:C5	2:B:584:C:C4	3.03	0.46
2:B:760:G:H2'	2:B:761:A:C8	2.51	0.46
2:B:941:A:C5	2:B:942:G:C5	3.03	0.46
2:B:952:G:C6	2:B:966:G:C6	3.03	0.46
2:B:1057:A:C2	2:B:1082:U:C2	3.04	0.46
2:B:1326:U:C4	2:B:1648:U:H1'	2.51	0.46
2:B:1545:A:C6	2:B:1546:G:C4	3.04	0.46
2:B:1630:A:C5	2:B:1631:G:C5	3.04	0.46
2:B:1895:C:H1'	19:X:357:HIS:CE1	2.51	0.46
2:B:2002:G:C2	2:B:2003:A:C8	3.04	0.46
2:B:2119:A:C2	2:B:2170:A:O2'	2.69	0.46
2:B:2286:G:N7	19:X:147:HIS:CG	2.84	0.46
2:B:2727:A:C5	2:B:2728:U:C5	3.03	0.46
14:D:5:VAL:HG21	14:D:80:TRP:CD2	2.51	0.46
28:F:23:SER:HB2	28:F:26:GLN:HB2	1.97	0.46
31:I:53:PRO:HD2	31:I:77:VAL:HG13	1.98	0.46
2:B:39:G:H2'	2:B:40:U:C6	2.51	0.46
2:B:117:G:C6	2:B:119:A:C6	3.04	0.46
2:B:169:G:H2'	2:B:170:U:C6	2.51	0.46
2:B:289:G:H2'	2:B:290:U:C6	2.51	0.46
2:B:346:A:C2	2:B:347:A:C5	3.03	0.46
2:B:719:C:C5	2:B:720:U:C5	3.03	0.46
2:B:721:A:C6	2:B:722:A:C6	3.04	0.46
2:B:1014:A:C6	2:B:1149:G:C6	3.03	0.46
2:B:1025:G:C6	2:B:1135:C:C6	3.03	0.46
2:B:1295:C:C2	2:B:1296:G:C8	3.03	0.46
2:B:1358:G:O6	2:B:1371:G:C8	2.69	0.46
2:B:1569:A:C6	2:B:1570:A:C4	3.04	0.46
2:B:1633:G:C2	2:B:1635:A:H1'	2.51	0.46
2:B:1667:G:H22	2:B:1991:U:H3'	1.80	0.46
2:B:1799:G:C5	2:B:1819:A:C2	3.04	0.46
2:B:1802:A:H2'	2:B:1803:A:C8	2.50	0.46
2:B:2198:A:C2	30:H:29:PHE:HB2	2.51	0.46
2:B:2250:G:C6	7:M:83:GLY:HA3	2.51	0.46
2:B:2813:A:C5	2:B:2814:A:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:E:13:THR:HG22	20:E:15:SER:H	1.81	0.46
23:5:60:ARG:HG2	23:5:164:ARG:HE	1.80	0.46
2:B:6:A:H2'	2:B:7:G:C8	2.50	0.46
2:B:149:A:C6	2:B:150:U:C4	3.04	0.46
2:B:260:G:C4	2:B:261:G:C8	3.04	0.46
2:B:379:G:N1	2:B:396:G:C6	2.84	0.46
2:B:391:A:C8	2:B:392:U:C5	3.04	0.46
2:B:518:G:H2'	2:B:519:U:C6	2.51	0.46
2:B:577:G:H2'	2:B:578:G:C8	2.51	0.46
2:B:609:A:H2'	2:B:610:C:O4'	2.15	0.46
2:B:629:G:H1	2:B:634:C:H42	1.63	0.46
2:B:921:C:C2	2:B:922:C:C6	3.04	0.46
2:B:952:G:C6	2:B:953:G:N7	2.84	0.46
2:B:959:A:H2'	2:B:960:A:C8	2.50	0.46
2:B:969:G:H2'	2:B:970:U:H6	1.79	0.46
2:B:1002:G:O6	2:B:1003:G:C6	2.68	0.46
2:B:1020:A:N1	2:B:1141:U:C2	2.84	0.46
2:B:1410:G:C6	2:B:1411:U:C4	3.03	0.46
2:B:1410:G:C5	2:B:1411:U:C4	3.04	0.46
2:B:1544:A:H3'	2:B:1545:A:C8	2.51	0.46
2:B:1640:A:C5	2:B:1641:A:C4	3.03	0.46
2:B:1770:G:C6	2:B:1983:G:C6	3.03	0.46
2:B:2331:G:C6	2:B:2332:C:C4	3.03	0.46
2:B:2523:G:C5	2:B:2765:A:N6	2.84	0.46
10:P:56:SER:N	10:P:75:THR:HG23	2.31	0.46
18:W:88:HIS:CD2	18:W:89:ILE:N	2.83	0.46
2:B:138:U:H2'	2:B:140:C:C4	2.51	0.46
2:B:332:A:C2	2:B:335:C:C5	3.04	0.46
2:B:928:A:C6	2:B:929:U:C4	3.04	0.46
2:B:994:C:O3'	32:J:1:MET:HE1	2.16	0.46
2:B:1138:G:H21	32:J:108:MET:HE2	1.81	0.46
2:B:1147:A:C5	2:B:1148:U:C5	3.04	0.46
2:B:1286:A:C6	2:B:1329:U:C2	3.03	0.46
2:B:1401:G:C2	2:B:1402:U:C2	3.04	0.46
2:B:1426:G:C5	2:B:1427:A:C5	3.04	0.46
2:B:1519:G:C6	2:B:1520:U:C4	3.04	0.46
2:B:1549:A:H2'	2:B:1550:C:C6	2.51	0.46
2:B:2065:C:H2'	2:B:2066:C:H6	1.81	0.46
2:B:2164:C:C5'	2:B:2173:A:H5'	2.46	0.46
2:B:2231:U:H2'	2:B:2232:C:C6	2.51	0.46
2:B:2246:G:H2'	2:B:2247:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2269:G:C6	2:B:2270:A:H1'	2.51	0.46
2:B:2819:G:C2	2:B:2821:A:C4	3.04	0.46
8:N:33:ILE:HB	8:N:114:GLU:HB3	1.98	0.46
1:A:54:G:C6	1:A:55:U:C4	3.03	0.46
2:B:170:U:N3	2:B:171:U:C4	2.84	0.46
2:B:182:A:C5	2:B:183:C:C5	3.04	0.46
2:B:207:A:H2'	2:B:208:C:O4'	2.16	0.46
2:B:471:A:C5	2:B:472:A:C5	3.04	0.46
2:B:587:C:C5	2:B:671:C:C2	3.04	0.46
2:B:713:G:H2'	2:B:714:U:N1	2.31	0.46
2:B:721:A:C5	2:B:722:A:N7	2.84	0.46
2:B:822:G:H2'	2:B:823:C:C6	2.51	0.46
2:B:834:G:C6	2:B:835:C:C4	3.04	0.46
2:B:858:G:N3	2:B:2268:A:C2	2.84	0.46
2:B:911:A:H2'	7:M:9:PHE:CZ	2.51	0.46
2:B:939:G:C2	2:B:940:G:C4	3.04	0.46
2:B:1271:G:C2	2:B:1617:C:H4'	2.51	0.46
2:B:1286:A:C4	2:B:1289:C:C5	3.03	0.46
2:B:1388:G:H1	2:B:1399:C:H42	1.64	0.46
2:B:1797:G:C2	2:B:1823:G:C6	3.04	0.46
2:B:2243:U:N3	2:B:2244:U:C4	2.83	0.46
2:B:2373:G:C4	2:B:2381:A:C2	3.04	0.46
26:8:17:VAL:HG12	26:8:18:LYS:N	2.31	0.46
28:F:92:GLY:O	28:F:96:TRP:CD2	2.68	0.46
2:B:149:A:C5	2:B:150:U:C5	3.03	0.45
2:B:520:G:C5	2:B:521:U:C5	3.04	0.45
2:B:579:G:C6	2:B:580:U:O4	2.69	0.45
2:B:587:C:C5	2:B:671:C:H1'	2.52	0.45
2:B:675:A:N6	2:B:804:A:C8	2.84	0.45
2:B:798:G:O2'	2:B:799:G:H5'	2.15	0.45
2:B:869:G:C2	2:B:909:A:C2	3.04	0.45
2:B:1160:G:H2'	2:B:1161:C:C6	2.50	0.45
2:B:1213:A:H2'	2:B:1214:A:C8	2.51	0.45
2:B:1496:A:H2'	2:B:1498:C:C4	2.51	0.45
2:B:2029:G:C2	2:B:2033:A:N7	2.84	0.45
2:B:2095:A:C2	2:B:2195:U:C2	3.04	0.45
2:B:2220:U:H2'	2:B:2221:G:C8	2.51	0.45
2:B:2415:G:C5	2:B:2416:C:C5	3.03	0.45
2:B:2575:C:H5'	14:D:149:ASN:HD22	1.81	0.45
13:S:1:MET:C	13:S:108:SER:HA	2.42	0.45
2:B:44:A:C2	2:B:45:G:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:54:G:H1'	24:6:35:ARG:HH11	1.82	0.45
2:B:96:C:H2'	2:B:97:C:C6	2.52	0.45
2:B:617:G:C6	2:B:618:G:C5	3.04	0.45
2:B:639:U:H2'	2:B:640:C:C6	2.51	0.45
2:B:647:G:H2'	2:B:648:G:C8	2.51	0.45
2:B:706:A:C2	2:B:707:G:H1'	2.51	0.45
2:B:841:G:C6	2:B:842:U:C4	3.04	0.45
2:B:841:G:C6	2:B:938:G:C6	3.04	0.45
2:B:1321:A:C8	2:B:1322:A:C8	3.03	0.45
2:B:1333:G:C4	2:B:1334:G:C8	3.04	0.45
2:B:2151:U:H2'	2:B:2153:C:C5	2.51	0.45
2:B:2314:A:H2'	2:B:2315:G:C8	2.51	0.45
2:B:2393:U:H2'	2:B:2394:C:O4'	2.16	0.45
9:O:72:ALA:HA	9:O:75:GLY:HA3	1.98	0.45
19:X:255:ILE:HG13	19:X:256:ASP:H	1.80	0.45
2:B:30:G:C5	2:B:31:C:C4	3.04	0.45
2:B:701:G:C4	2:B:702:U:C5	3.03	0.45
2:B:832:U:H2'	2:B:833:A:H8	1.81	0.45
2:B:975:A:C4	2:B:990:A:C5	3.04	0.45
2:B:1412:U:H2'	2:B:1413:A:C8	2.51	0.45
2:B:1434:A:C6	2:B:1435:G:C6	3.05	0.45
2:B:1799:G:C2	2:B:1819:A:C5	3.04	0.45
2:B:2236:U:H2'	2:B:2237:G:H8	1.81	0.45
2:B:2392:A:C5	2:B:2393:U:C6	3.04	0.45
2:B:2636:C:C2	2:B:2637:U:C6	3.04	0.45
11:Q:60:TRP:CD2	11:Q:93:ILE:HB	2.51	0.45
24:6:39:ARG:HH11	24:6:39:ARG:HG3	1.81	0.45
2:B:160:A:C2	2:B:161:A:C2	3.05	0.45
2:B:222:A:C8	2:B:224:U:C6	3.05	0.45
2:B:575:A:C2	2:B:576:U:C5	3.04	0.45
2:B:617:G:C4	2:B:618:G:C8	3.05	0.45
2:B:795:C:C4	2:B:796:C:H5	2.34	0.45
2:B:939:G:C6	2:B:940:G:C5	3.05	0.45
2:B:983:A:H2'	2:B:984:A:C8	2.52	0.45
2:B:1214:A:H2'	2:B:1215:G:C8	2.51	0.45
2:B:1266:G:C4	2:B:2012:G:O6	2.70	0.45
2:B:1269:A:C5	2:B:1270:C:C5	3.04	0.45
2:B:2297:A:C5	2:B:2320:U:C2	3.04	0.45
2:B:2454:G:N2	2:B:2499:C:C6	2.84	0.45
2:B:2517:C:C5	2:B:2542:A:C5	3.04	0.45
2:B:2528:U:C5	2:B:2530:A:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2630:G:C6	2:B:2631:G:C5	3.05	0.45
2:B:2650:U:H2'	2:B:2651:C:C6	2.51	0.45
3:0:32:LEU:H	3:0:32:LEU:HG	1.55	0.45
18:W:19:ARG:O	18:W:22:ALA:HB3	2.17	0.45
27:C:221:GLY:HA2	27:C:224:MET:HE3	1.97	0.45
28:F:100:GLU:HA	28:F:100:GLU:OE1	2.17	0.45
2:B:83:A:C5	2:B:101:A:OP1	2.69	0.45
2:B:950:G:C6	2:B:951:C:C4	3.05	0.45
2:B:1009:A:H2'	2:B:1010:A:C5	2.51	0.45
2:B:1029:A:H3'	2:B:1030:C:H6	1.81	0.45
2:B:1131:G:C2	32:J:77:HIS:CG	3.03	0.45
2:B:1160:G:H2'	2:B:1161:C:H6	1.81	0.45
2:B:1218:G:N1	2:B:1232:G:C5	2.85	0.45
2:B:1315:C:C2	2:B:1316:U:C5	3.04	0.45
2:B:1670:C:C4	2:B:1671:U:C2	3.05	0.45
2:B:2440:C:N3	2:B:2441:U:H1'	2.32	0.45
2:B:2568:U:H2'	2:B:2569:G:O4'	2.17	0.45
15:T:31:VAL:HG12	15:T:84:TYR:HA	1.97	0.45
2:B:96:C:H4'	6:1:41:HIS:CG	2.51	0.45
2:B:479:A:C2	2:B:480:A:C4	3.05	0.45
2:B:527:C:N3	2:B:2779:U:C6	2.84	0.45
2:B:822:G:C6	2:B:836:G:C5	3.04	0.45
2:B:1284:A:C4	2:B:1285:A:C8	3.05	0.45
2:B:2084:C:C6	2:B:2085:U:C5	3.05	0.45
2:B:2327:A:C5	2:B:2328:A:C5	3.04	0.45
2:B:2500:U:O2	2:B:2504:U:C4	2.70	0.45
2:B:2511:U:O2	2:B:2578:G:C6	2.69	0.45
2:B:2607:G:O6	2:B:2608:G:C6	2.70	0.45
13:S:88:ARG:O	13:S:89:ALA:HB2	2.16	0.45
2:B:17:G:C6	2:B:18:U:C4	3.04	0.45
2:B:93:G:C6	2:B:94:A:C5	3.04	0.45
2:B:149:A:C4	2:B:150:U:C6	3.05	0.45
2:B:327:G:H2'	2:B:328:U:C6	2.52	0.45
2:B:612:G:C5	2:B:614:A:C6	3.05	0.45
2:B:749:A:C2	2:B:750:A:C8	3.05	0.45
2:B:809:G:C5	2:B:810:U:C4	3.05	0.45
2:B:816:C:N3	2:B:1192:G:C6	2.84	0.45
2:B:1432:G:H2'	2:B:1433:A:C8	2.52	0.45
2:B:1637:A:C5	2:B:1638:C:C5	3.05	0.45
2:B:2025:C:C4	2:B:2026:U:C4	3.05	0.45
2:B:2051:A:C6	2:B:2614:A:C4	3.03	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2834:G:C6	2:B:2879:A:C8	3.05	0.45
28:F:105:ILE:HG23	28:F:109:ARG:NE	2.23	0.45
30:H:3:VAL:HB	30:H:36:ALA:HB1	1.99	0.45
32:J:33:ALA:HA	32:J:36:LEU:HB3	1.98	0.45
2:B:70:G:C2	2:B:114:U:C4	3.05	0.45
2:B:103:A:C5	2:B:104:A:C5	3.05	0.45
2:B:387:U:C2	2:B:388:G:C5	3.05	0.45
2:B:621:A:H3'	2:B:622:G:H8	1.82	0.45
2:B:684:G:C6	2:B:774:G:C8	3.05	0.45
2:B:1168:G:C6	2:B:1169:A:C6	3.05	0.45
2:B:1376:C:H2'	2:B:1377:G:C8	2.51	0.45
2:B:1778:U:H2'	2:B:1784:A:N6	2.32	0.45
2:B:1789:A:C2	2:B:1790:C:C2	3.04	0.45
2:B:1815:A:C5	2:B:1817:G:C6	3.05	0.45
2:B:2397:G:C6	2:B:2420:C:C2	3.05	0.45
2:B:2823:A:C5	2:B:2824:C:C5	3.05	0.45
5:L:106:GLU:HB2	5:L:107:PHE:CD2	2.52	0.45
15:T:29:THR:HA	15:T:86:THR:HA	1.99	0.45
28:F:15:LEU:HD13	28:F:28:PRO:HD2	1.98	0.45
28:F:74:ALA:HA	28:F:77:LYS:HD2	1.99	0.45
2:B:28:A:H1'	2:B:513:A:C2	2.52	0.45
2:B:151:C:H2'	2:B:152:A:H8	1.82	0.45
2:B:324:A:C6	2:B:325:G:C4	3.04	0.45
2:B:406:G:C6	2:B:407:G:C5	3.05	0.45
2:B:416:U:C2	2:B:417:C:C6	3.05	0.45
2:B:497:A:H2'	2:B:498:G:C8	2.51	0.45
2:B:565:C:C4	2:B:566:U:C5	3.05	0.45
2:B:748:G:C8	2:B:750:A:C8	3.04	0.45
2:B:748:G:C2	2:B:750:A:N6	2.85	0.45
2:B:1051:G:C6	2:B:1052:C:C4	3.05	0.45
2:B:1291:C:C2	2:B:1292:G:C8	3.05	0.45
2:B:1435:G:C6	2:B:1436:G:C6	3.05	0.45
2:B:1455:G:C6	2:B:1456:G:C5	3.05	0.45
2:B:2016:U:H2'	2:B:2017:U:C6	2.52	0.45
2:B:2353:G:C6	2:B:2354:C:C4	3.05	0.45
2:B:2373:G:C6	2:B:2381:A:C6	3.04	0.45
2:B:2702:G:C6	2:B:2703:C:C4	3.05	0.45
9:O:62:LEU:HD22	9:O:62:LEU:N	2.32	0.45
11:Q:46:TYR:HA	11:Q:49:ARG:HE	1.81	0.45
32:J:77:HIS:CE1	32:J:83:GLY:CA	3.00	0.45
32:J:141:ASP:CG	32:J:142:ILE:H	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:63:C:H2'	1:A:64:G:C8	2.52	0.45
2:B:402:A:C8	2:B:403:U:C5	3.05	0.45
2:B:545:U:O2	2:B:545:U:H2'	2.16	0.45
2:B:579:G:C6	2:B:1262:A:C5	3.04	0.45
2:B:865:C:H42	2:B:912:C:H42	1.65	0.45
2:B:875:G:H3'	2:B:876:C:C6	2.52	0.45
2:B:905:A:C6	2:B:906:U:C5	3.05	0.45
2:B:1136:G:C4	2:B:1137:G:C8	3.04	0.45
2:B:1785:A:C4	2:B:1787:A:C8	3.05	0.45
2:B:2290:G:C5	2:B:2291:U:C5	3.05	0.45
2:B:2367:G:C5	2:B:2368:C:C5	3.06	0.45
2:B:2468:A:H2'	2:B:2476:A:C6	2.52	0.45
2:B:2579:C:H2'	2:B:2580:U:C6	2.51	0.45
2:B:2748:A:C6	2:B:2749:A:C5	3.05	0.45
2:B:2765:A:C2'	2:B:2766:A:H5'	2.46	0.45
2:B:2825:G:N1	2:B:2826:A:C5	2.85	0.45
4:K:73:ASP:HB2	14:D:13:ARG:HH22	1.82	0.45
10:P:21:PRO:HA	10:P:23:ASP:OD1	2.17	0.45
11:Q:97:ILE:O	11:Q:97:ILE:HG22	2.16	0.45
15:T:29:THR:HG22	15:T:86:THR:HA	1.97	0.45
23:5:79:THR:HB	23:5:84:ALA:HB1	1.99	0.45
27:C:140:VAL:HA	27:C:190:THR:O	2.17	0.45
2:B:169:G:C5	2:B:170:U:C4	3.05	0.44
2:B:299:A:C2	2:B:322:A:C8	3.05	0.44
2:B:579:G:C5	2:B:580:U:C5	3.05	0.44
2:B:629:G:C4	2:B:630:G:C8	3.06	0.44
2:B:1034:G:C6	2:B:1035:U:C4	3.05	0.44
2:B:1085:A:C8	2:B:1086:A:C4	3.06	0.44
2:B:1133:A:C2	2:B:2038:G:N2	2.85	0.44
2:B:1401:G:H2'	2:B:1402:U:C6	2.52	0.44
2:B:1490:A:H62	2:B:1501:G:H21	1.65	0.44
2:B:1664:A:C5	2:B:2726:A:C6	3.05	0.44
2:B:1797:G:C2	2:B:1798:U:C2	3.05	0.44
2:B:1897:G:C6	2:B:1898:U:C4	3.05	0.44
2:B:2016:U:N3	2:B:2017:U:C4	2.85	0.44
2:B:2036:C:H2'	2:B:2037:A:H8	1.83	0.44
2:B:2236:U:H2'	2:B:2237:G:C8	2.52	0.44
2:B:2358:A:C4	2:B:2359:C:C5	3.04	0.44
2:B:2454:G:C2	2:B:2499:C:C5	3.05	0.44
2:B:2478:A:C6	2:B:2479:U:C2	3.05	0.44
2:B:2495:G:C5	2:B:2496:C:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2867:G:C6	10:P:20:ARG:CZ	3.00	0.44
13:S:4:ILE:HG22	13:S:106:VAL:HG22	1.99	0.44
1:A:15:A:H3'	1:A:16:G:C8	2.53	0.44
2:B:356:G:C2	2:B:357:C:C2	3.04	0.44
2:B:847:U:C5	2:B:848:C:C6	3.05	0.44
2:B:1031:G:C2	2:B:1032:A:C5	3.05	0.44
2:B:1256:G:C6	2:B:1257:C:C4	3.05	0.44
2:B:1394:U:O2'	2:B:1395:A:H5'	2.17	0.44
2:B:1473:G:C5	2:B:1474:U:C4	3.05	0.44
2:B:1661:G:C4	2:B:1662:U:C5	3.06	0.44
2:B:2084:C:H3'	2:B:2085:U:H6	1.82	0.44
2:B:2165:C:H5''	2:B:2172:U:OP2	2.17	0.44
2:B:2271:G:C5	2:B:2272:U:C5	3.04	0.44
2:B:2691:C:H2'	2:B:2692:G:C8	2.52	0.44
2:B:2869:G:H2'	2:B:2870:C:C6	2.53	0.44
2:B:2902:C:N4	2:B:2903:U:H3	2.15	0.44
11:Q:99:VAL:HG11	32:J:43:GLU:O	2.17	0.44
19:X:347:PHE:CD1	19:X:347:PHE:O	2.71	0.44
22:3:1:ALA:O	22:3:2:VAL:HG13	2.18	0.44
32:J:130:HIS:CD2	32:J:131:ASN:H	2.35	0.44
2:B:133:U:C2	2:B:134:G:C8	3.06	0.44
2:B:495:G:C4	2:B:496:G:C8	3.05	0.44
2:B:503:A:C5	2:B:506:G:C5	3.06	0.44
2:B:648:G:H4'	2:B:2352:A:OP1	2.16	0.44
2:B:771:G:H2'	2:B:772:C:H6	1.81	0.44
2:B:825:A:H2'	2:B:826:U:C6	2.52	0.44
2:B:875:G:C2	2:B:876:C:H1'	2.52	0.44
2:B:973:A:C4	2:B:1188:U:C4	3.06	0.44
2:B:974:G:C6	2:B:1186:G:C6	3.05	0.44
2:B:1284:A:N1	2:B:1285:A:C4	2.86	0.44
2:B:1336:A:C2	2:B:1337:G:C4	3.05	0.44
2:B:1566:A:C6	27:C:212:TRP:CZ3	3.05	0.44
2:B:1722:A:H2'	2:B:1723:G:C8	2.52	0.44
2:B:2312:U:C5	2:B:2313:C:C5	3.05	0.44
2:B:2322:A:C5	2:B:2323:G:C5	3.05	0.44
2:B:2578:G:H2'	2:B:2579:C:H6	1.82	0.44
2:B:2881:U:C2	2:B:2882:A:C8	3.05	0.44
19:X:349:ARG:HH21	19:X:367:SER:HA	1.82	0.44
28:F:12:VAL:HG13	28:F:13:LYS:HD2	2.00	0.44
29:G:19:ASN:HD21	29:G:24:THR:H	1.65	0.44
2:B:167:A:C6	2:B:168:G:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:413:C:O5'	2:B:413:C:H6	2.01	0.44
2:B:607:U:C5	2:B:619:G:C5	3.05	0.44
2:B:753:A:C5	2:B:754:U:C4	3.06	0.44
2:B:755:U:H2'	2:B:756:A:C8	2.53	0.44
2:B:768:G:C5	2:B:769:U:C4	3.04	0.44
2:B:930:G:C4	2:B:933:A:C2	3.05	0.44
2:B:943:A:N3	2:B:944:C:C6	2.85	0.44
2:B:1454:C:OP1	2:B:1454:C:H4'	2.13	0.44
2:B:1528:A:C8	2:B:1529:G:C8	3.05	0.44
2:B:1563:U:H2'	2:B:1564:C:C6	2.51	0.44
2:B:1770:G:H2'	2:B:1771:C:O4'	2.16	0.44
2:B:2046:G:C6	2:B:2047:C:C4	3.05	0.44
2:B:2134:A:H61	2:B:2158:A:H3'	1.81	0.44
2:B:2355:G:H2'	2:B:2356:U:O4'	2.17	0.44
2:B:2464:G:C6	2:B:2465:C:C4	3.06	0.44
2:B:2835:A:C5	2:B:2878:U:C5	3.06	0.44
4:K:29:HIS:N	4:K:29:HIS:CD2	2.83	0.44
5:L:25:SER:C	5:L:27:LEU:H	2.25	0.44
8:N:13:ASN:O	8:N:17:ARG:HB2	2.18	0.44
10:P:61:ARG:HH12	10:P:69:VAL:H	1.66	0.44
13:S:23:LEU:HD13	22:3:21:LEU:O	2.16	0.44
32:J:15:TRP:CZ3	32:J:53:TYR:HB3	2.53	0.44
2:B:322:A:H5'	2:B:340:A:H1'	2.00	0.44
2:B:357:C:C4	2:B:358:U:C4	3.06	0.44
2:B:424:G:C6	2:B:425:G:N7	2.86	0.44
2:B:733:G:O6	2:B:761:A:C8	2.70	0.44
2:B:847:U:O4	2:B:932:U:C6	2.70	0.44
2:B:1059:G:C8	2:B:1060:U:H2'	2.52	0.44
2:B:1665:A:H61	2:B:1995:U:H3	1.66	0.44
2:B:1681:G:C6	2:B:1762:A:C6	3.05	0.44
2:B:1712:U:C4	2:B:1713:A:C6	3.05	0.44
2:B:2005:A:H2'	2:B:2006:C:C6	2.52	0.44
2:B:2119:A:C5	2:B:2170:A:C5	3.05	0.44
2:B:2209:G:H2'	2:B:2210:U:C5	2.53	0.44
2:B:2544:G:C4	2:B:2545:G:C8	3.05	0.44
2:B:2642:G:C2	2:B:2643:G:C5	3.05	0.44
2:B:2694:G:C2	2:B:2695:U:C2	3.06	0.44
2:B:2898:U:H2'	2:B:2899:A:O4'	2.18	0.44
9:O:51:ALA:HB2	9:O:81:ARG:HE	1.81	0.44
21:Y:40:ARG:HD2	21:Y:56:HIS:CE1	2.53	0.44
1:A:66:A:C4	1:A:108:A:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:13:A:C2	2:B:526:A:C6	3.05	0.44
2:B:313:G:C2	2:B:314:C:C2	3.06	0.44
2:B:712:G:C2	2:B:720:U:C2	3.05	0.44
2:B:850:U:O2	16:2:46:MET:HE1	2.18	0.44
2:B:919:U:H2'	2:B:920:A:C8	2.53	0.44
2:B:1073:A:C6	2:B:1074:G:C4	3.06	0.44
2:B:1306:C:N3	2:B:1307:A:C8	2.85	0.44
2:B:1323:C:C5'	13:S:84:ARG:HH22	2.30	0.44
2:B:1491:G:C6	2:B:1492:G:C5	3.06	0.44
2:B:1651:G:C6	2:B:1652:A:C8	3.05	0.44
2:B:1754:A:C2	2:B:1755:A:C4	3.06	0.44
2:B:1802:A:C6	2:B:1803:A:C6	3.05	0.44
2:B:2198:A:C8	30:H:29:PHE:CE1	3.05	0.44
2:B:2276:G:C2	2:B:2277:G:C8	3.06	0.44
2:B:2383:G:C6	2:B:2384:U:O4	2.71	0.44
8:N:74:GLU:O	8:N:77:ALA:HB3	2.18	0.44
14:D:15:PHE:N	14:D:15:PHE:CD1	2.85	0.44
16:2:4:ILE:C	16:2:5:LYS:HZ2	2.26	0.44
21:Y:71:LYS:HG2	21:Y:78:PHE:CD1	2.53	0.44
1:A:46:A:H2'	1:A:47:C:C6	2.53	0.44
2:B:319:G:C2	2:B:320:A:C4	3.06	0.44
2:B:562:U:C2	2:B:572:A:H1'	2.53	0.44
2:B:570:G:C6	2:B:2030:A:C2	3.05	0.44
2:B:725:G:C6	2:B:726:G:N1	2.85	0.44
2:B:778:G:H4'	27:C:47:ARG:CZ	2.47	0.44
2:B:778:G:H2'	2:B:779:U:O4'	2.18	0.44
2:B:786:C:H2'	2:B:787:C:H6	1.83	0.44
2:B:882:G:H22	2:B:893:C:H42	1.65	0.44
2:B:1799:G:C2	2:B:1819:A:N7	2.86	0.44
2:B:1975:G:C2	2:B:1976:U:H1'	2.53	0.44
2:B:2091:C:C6	2:B:2092:U:O2	2.71	0.44
2:B:2166:U:H3'	2:B:2167:U:C6	2.53	0.44
2:B:2201:G:H2'	2:B:2202:U:O4'	2.17	0.44
2:B:2493:U:C4	2:B:2494:G:C8	3.05	0.44
2:B:2666:C:H3'	2:B:2667:C:H6	1.83	0.44
2:B:2684:U:H1'	4:K:70:ARG:NH1	2.32	0.44
2:B:2722:G:H2'	2:B:2723:C:C6	2.52	0.44
2:B:2756:U:H1'	2:B:2757:A:H5''	2.00	0.44
12:R:5:PHE:CD2	12:R:35:PHE:CD1	3.05	0.44
25:7:53:ASP:O	25:7:57:VAL:HG23	2.18	0.44
2:B:20:C:H2'	2:B:21:A:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:80:G:C2	2:B:107:G:C6	3.05	0.44
2:B:112:U:H2'	2:B:113:U:H5'	2.00	0.44
2:B:188:G:H1	2:B:208:C:H42	1.66	0.44
2:B:195:A:C6	2:B:198:C:C5	3.06	0.44
2:B:480:A:H3'	2:B:481:G:H5''	1.98	0.44
2:B:533:G:C6	2:B:561:G:C2	3.06	0.44
2:B:604:G:H2'	2:B:605:G:C8	2.53	0.44
2:B:612:G:C6	2:B:614:A:C5	3.06	0.44
2:B:1323:C:H5''	13:S:84:ARG:NH2	2.31	0.44
2:B:1476:U:C4	2:B:1514:G:C2	3.06	0.44
2:B:1596:A:N1	2:B:1597:A:C2	2.86	0.44
2:B:1638:C:C2	2:B:1639:C:C6	3.06	0.44
2:B:1710:G:C2	2:B:1711:A:C4	3.05	0.44
2:B:2123:G:H21	23:5:177:LYS:HA	1.83	0.44
2:B:2369:A:C6	2:B:2370:G:C5	3.06	0.44
2:B:2514:U:H4'	14:D:156:PHE:CE1	2.53	0.44
2:B:2691:C:H42	2:B:2718:G:H1	1.65	0.44
2:B:2836:U:C2	2:B:2883:A:C2	3.06	0.44
13:S:45:VAL:HA	13:S:48:LYS:HB2	2.00	0.44
2:B:273:G:C5	2:B:274:C:C4	3.06	0.44
2:B:274:C:H2'	2:B:275:C:C6	2.53	0.44
2:B:348:A:H2'	2:B:349:U:C6	2.53	0.44
2:B:485:C:C2	2:B:496:G:C2	3.06	0.44
2:B:698:C:C2	2:B:762:U:C4	3.05	0.44
2:B:773:U:H5'	2:B:774:G:OP2	2.18	0.44
2:B:831:G:C6	2:B:832:U:C4	3.06	0.44
2:B:855:G:C5	2:B:923:G:N1	2.86	0.44
2:B:927:A:H2'	2:B:928:A:C8	2.53	0.44
2:B:1002:G:C6	2:B:1003:G:C5	3.05	0.44
2:B:1304:A:C6	2:B:1305:C:C5	3.06	0.44
2:B:1522:A:H4'	2:B:1524:G:C8	2.52	0.44
2:B:1630:A:H2'	2:B:1631:G:O4'	2.18	0.44
2:B:1637:A:H2'	2:B:1638:C:C6	2.53	0.44
2:B:2329:U:H2'	2:B:2330:G:C8	2.53	0.44
2:B:2679:A:H2'	2:B:2680:U:C6	2.52	0.44
2:B:2682:A:C4	2:B:2683:C:C6	3.05	0.44
2:B:2816:G:C5	2:B:2817:U:C5	3.06	0.44
2:B:2835:A:C6	2:B:2878:U:C4	3.06	0.44
2:B:2887:A:O2'	2:B:2888:C:H5'	2.18	0.44
6:1:24:GLU:HA	6:1:27:ASN:HD21	1.82	0.44
8:N:51:LEU:HD21	8:N:79:LEU:HD11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:O:66:GLY:H	9:O:70:ALA:HB3	1.81	0.44
26:8:15:LYS:HG3	26:8:26:ILE:HB	2.00	0.44
2:B:85:G:C6	2:B:86:G:C5	3.06	0.43
2:B:107:G:H2'	2:B:108:G:H8	1.82	0.43
2:B:651:G:C6	2:B:652:U:C4	3.06	0.43
2:B:705:A:C5	2:B:727:A:C4	3.06	0.43
2:B:905:A:C5	2:B:906:U:C5	3.06	0.43
2:B:983:A:N1	2:B:984:A:C4	2.86	0.43
2:B:1016:G:C2	2:B:1147:A:C4	3.06	0.43
2:B:1116:G:C6	2:B:1117:C:C4	3.06	0.43
2:B:1171:G:C6	2:B:1172:C:N3	2.85	0.43
2:B:1225:G:N1	2:B:1226:A:C2	2.86	0.43
2:B:1343:G:C5	2:B:1344:U:C4	3.06	0.43
2:B:1579:A:C2	2:B:1580:A:C4	3.06	0.43
2:B:1896:G:C2	2:B:1897:G:C4	3.06	0.43
2:B:2027:G:H2'	2:B:2028:U:C6	2.53	0.43
2:B:2458:G:C2'	2:B:2490:G:H1	2.30	0.43
11:Q:9:ALA:C	11:Q:11:ALA:H	2.26	0.43
17:U:14:THR:HG22	17:U:18:LYS:HA	1.99	0.43
25:7:38:LYS:HG3	25:7:42:HIS:CE1	2.53	0.43
27:C:61:TYR:CG	27:C:62:ARG:N	2.85	0.43
29:G:15:ASP:O	29:G:25:ILE:HG13	2.18	0.43
2:B:1179:G:C2	2:B:1180:U:C2	3.06	0.43
2:B:1223:G:N2	2:B:1227:G:C4	2.86	0.43
2:B:1308:A:C6	2:B:1309:G:C4	3.06	0.43
2:B:1419:A:C2	2:B:1579:A:N3	2.86	0.43
2:B:1794:A:C2	2:B:1795:C:C2	3.06	0.43
2:B:1832:C:N3	2:B:1833:C:C5	2.86	0.43
2:B:2102:G:C6	2:B:2103:C:C4	3.06	0.43
2:B:2682:A:C5	2:B:2683:C:C5	3.05	0.43
2:B:2748:A:C2	2:B:2757:A:C4	3.06	0.43
2:B:2761:A:C2	2:B:2762:C:C2	3.06	0.43
2:B:2799:A:OP1	2:B:2800:A:C4	2.71	0.43
10:P:21:PRO:HB2	10:P:96:LEU:HD13	1.99	0.43
11:Q:33:VAL:HA	11:Q:36:GLN:HG2	2.00	0.43
13:S:81:SER:HA	13:S:98:LYS:O	2.17	0.43
19:X:42:TYR:CD1	19:X:234:PRO:HG3	2.53	0.43
21:Y:21:GLY:O	21:Y:22:VAL:HG13	2.19	0.43
30:H:135:HIS:CG	30:H:136:SER:N	2.84	0.43
1:A:16:G:N1	1:A:69:G:C2	2.87	0.43
2:B:77:G:H4'	6:1:56:LEU:HD21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:173:A:C2	2:B:174:U:C2	3.07	0.43
2:B:207:A:H2'	2:B:208:C:C6	2.54	0.43
2:B:346:A:N1	2:B:347:A:C6	2.86	0.43
2:B:711:G:H2'	2:B:712:G:C8	2.53	0.43
2:B:1338:G:C2	2:B:1339:G:C5	3.06	0.43
2:B:1349:C:H2'	2:B:1350:C:C6	2.53	0.43
2:B:1381:G:C5	2:B:1382:G:C2	3.06	0.43
2:B:1441:G:H2'	2:B:1442:U:H6	1.80	0.43
2:B:1635:A:C8	2:B:1636:U:C5	3.06	0.43
2:B:1672:A:N1	2:B:1673:G:C4	2.86	0.43
2:B:2429:G:C8	2:B:2429:G:C3'	3.02	0.43
2:B:2523:G:C4	2:B:2765:A:C6	3.07	0.43
2:B:2824:C:H2'	2:B:2825:G:O4'	2.18	0.43
1:A:53:A:C2	1:A:54:G:C4	3.06	0.43
2:B:80:G:C6	2:B:107:G:O6	2.71	0.43
2:B:194:G:C5	2:B:195:A:N7	2.87	0.43
2:B:418:C:H2'	2:B:419:U:C6	2.53	0.43
2:B:638:G:H2'	2:B:639:U:C6	2.53	0.43
2:B:669:G:C6	2:B:801:G:O6	2.71	0.43
2:B:721:A:C4	2:B:722:A:C8	3.07	0.43
2:B:795:C:C2	2:B:796:C:C6	3.07	0.43
2:B:1002:G:C5	2:B:1003:G:C8	3.05	0.43
2:B:1036:G:C6	2:B:1120:G:C6	3.07	0.43
2:B:1079:C:C5	2:B:1088:A:N3	2.86	0.43
2:B:1383:A:C2	2:B:1384:A:C4	3.07	0.43
2:B:1544:A:H3'	2:B:1545:A:H8	1.83	0.43
2:B:1553:A:C5	2:B:1555:G:C5	3.07	0.43
2:B:1681:G:C2	2:B:1762:A:C8	3.05	0.43
2:B:1787:A:H2'	2:B:1788:C:H6	1.83	0.43
2:B:1805:A:C6	2:B:1813:G:C6	3.07	0.43
2:B:1990:C:H2'	2:B:1991:U:C1'	2.48	0.43
2:B:2053:G:C4	2:B:2054:A:C8	3.06	0.43
2:B:2327:A:C5	2:B:2328:A:C6	3.07	0.43
2:B:2764:A:N6	2:B:2766:A:C6	2.86	0.43
1:A:33:G:C2	1:A:50:A:N3	2.87	0.43
2:B:265:A:N6	2:B:428:A:C8	2.87	0.43
2:B:498:G:C2	2:B:499:U:C6	3.06	0.43
2:B:541:A:C6	2:B:542:C:C4	3.06	0.43
2:B:579:G:C6	2:B:1262:A:C6	3.06	0.43
2:B:585:G:C5	2:B:1251:C:C4	3.06	0.43
2:B:831:G:O2'	2:B:832:U:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:959:A:C5	2:B:960:A:C6	3.06	0.43
2:B:1026:G:C5	2:B:1134:A:C6	3.07	0.43
2:B:1131:G:N1	32:J:77:HIS:CD2	2.87	0.43
2:B:1591:A:H2'	2:B:1592:C:C6	2.53	0.43
2:B:2090:A:H61	2:B:2229:U:H3	1.65	0.43
2:B:2706:A:C6	2:B:2707:U:C5	3.06	0.43
2:B:2744:G:C6	2:B:2745:C:C5	3.06	0.43
2:B:2816:G:C6	2:B:2817:U:C4	3.06	0.43
4:K:88:ASN:CG	4:K:89:ASN:H	2.27	0.43
26:8:22:VAL:HB	26:8:24:ARG:HE	1.83	0.43
2:B:66:C:C2	2:B:67:U:C6	3.07	0.43
2:B:216:A:C2	2:B:217:A:H1'	2.53	0.43
2:B:289:G:H2'	2:B:290:U:H6	1.83	0.43
2:B:350:G:H2'	2:B:351:C:C6	2.54	0.43
2:B:540:C:H2'	2:B:541:A:H8	1.82	0.43
2:B:684:G:H2'	2:B:774:G:O6	2.19	0.43
2:B:770:G:C4	2:B:771:G:C8	3.07	0.43
2:B:799:G:C6	2:B:800:A:C6	3.06	0.43
2:B:852:U:H2'	2:B:853:C:C6	2.54	0.43
2:B:861:A:H2'	2:B:862:G:O4'	2.18	0.43
2:B:1816:C:O2	27:C:61:TYR:CE1	2.71	0.43
2:B:1907:G:C6	2:B:1908:C:C4	3.06	0.43
2:B:2120:G:C6	2:B:2179:C:C2	3.07	0.43
2:B:2290:G:C5	2:B:2291:U:C4	3.06	0.43
2:B:2895:G:C5	2:B:2896:C:C6	3.06	0.43
7:M:18:ARG:CA	7:M:38:ARG:HH12	2.31	0.43
14:D:183:GLU:CD	14:D:183:GLU:H	2.26	0.43
20:E:147:LEU:HB3	20:E:187:VAL:H	1.84	0.43
23:5:48:LEU:HG	23:5:171:ILE:HG22	2.00	0.43
28:F:33:ILE:HD11	28:F:99:PHE:CE2	2.53	0.43
2:B:73:A:H5'	2:B:75:G:H21	1.83	0.43
2:B:182:A:C6	2:B:183:C:C4	3.07	0.43
2:B:468:G:C6	2:B:469:G:C5	3.06	0.43
2:B:590:A:C4	2:B:591:U:C5	3.07	0.43
2:B:1051:G:C5	2:B:1052:C:C5	3.07	0.43
2:B:1325:U:C4	13:S:86:MET:SD	3.12	0.43
2:B:1387:A:C6	2:B:1388:G:C6	3.06	0.43
2:B:1429:G:C2	2:B:1568:G:N1	2.87	0.43
2:B:1451:C:C2	2:B:1458:U:C5	3.07	0.43
2:B:1607:C:H3'	2:B:1607:C:C6	2.53	0.43
2:B:2016:U:C4	2:B:2017:U:O4	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2024:G:H2'	2:B:2025:C:C6	2.54	0.43
2:B:2269:G:C5	2:B:2270:A:H1'	2.54	0.43
2:B:2278:A:N1	2:B:2279:G:C4	2.86	0.43
2:B:2290:G:C4	2:B:2291:U:C6	3.07	0.43
2:B:2400:G:C5	2:B:2401:U:C5	3.07	0.43
2:B:2534:A:C6	2:B:2535:G:C4	3.07	0.43
2:B:2621:G:C6	2:B:2622:U:C4	3.06	0.43
2:B:2811:G:C6	2:B:2812:G:C5	3.06	0.43
2:B:2849:U:H5'	2:B:2868:A:C4	2.54	0.43
14:D:78:GLY:C	14:D:79:LEU:HD22	2.44	0.43
2:B:64:A:C5	2:B:65:U:C5	3.07	0.43
2:B:146:A:C6	2:B:147:C:C4	3.07	0.43
2:B:218:A:C4	2:B:219:A:C8	3.06	0.43
2:B:425:G:H2'	2:B:426:C:C6	2.54	0.43
2:B:464:U:C5	2:B:788:A:C4	3.07	0.43
2:B:517:C:C2	2:B:518:G:C8	3.07	0.43
2:B:709:U:H2'	2:B:710:U:H6	1.83	0.43
2:B:742:A:H2'	2:B:743:A:O4'	2.19	0.43
2:B:769:U:C2	2:B:770:G:C8	3.07	0.43
2:B:775:G:C4	2:B:777:G:C5	3.07	0.43
2:B:802:A:H2'	2:B:803:U:O4'	2.18	0.43
2:B:820:A:H2'	2:B:821:A:H8	1.84	0.43
2:B:971:G:C6	2:B:972:A:C2	3.06	0.43
2:B:1000:A:C5	2:B:1155:A:C5	3.06	0.43
2:B:1007:C:H3'	2:B:1008:A:H2'	2.00	0.43
2:B:1034:G:C6	2:B:1035:U:N3	2.87	0.43
2:B:1166:G:H2'	2:B:1167:C:C6	2.54	0.43
2:B:1337:G:C6	2:B:1338:G:C5	3.07	0.43
2:B:1590:A:C2	2:B:1591:A:C4	3.07	0.43
2:B:2043:C:C2	2:B:2044:C:C5	3.07	0.43
2:B:2057:G:C6	2:B:2612:C:C2	3.07	0.43
2:B:2204:G:C4	2:B:2205:A:C8	3.06	0.43
2:B:2599:G:C5	2:B:2600:A:N7	2.86	0.43
2:B:2662:A:C5	2:B:2663:G:H1'	2.54	0.43
2:B:2826:A:C5	2:B:2827:C:C4	3.06	0.43
3:0:11:PRO:HA	3:0:28:PHE:O	2.19	0.43
5:L:120:VAL:H	5:L:140:GLY:HA3	1.82	0.43
8:N:83:LEU:C	8:N:83:LEU:HD13	2.44	0.43
21:Y:31:LEU:O	21:Y:59:PHE:HA	2.19	0.43
22:3:1:ALA:HB1	22:3:2:VAL:H	1.61	0.43
27:C:20:ASN:HB3	27:C:23:LEU:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:91:C:H2'	1:A:92:C:H6	1.84	0.43
2:B:128:C:C2	2:B:129:C:C6	3.06	0.43
2:B:146:A:H2'	2:B:147:C:C6	2.53	0.43
2:B:338:G:C6	2:B:339:U:C4	3.06	0.43
2:B:514:A:C2	2:B:515:A:C5	3.06	0.43
2:B:1011:G:N1	2:B:1151:A:C5	2.87	0.43
2:B:1054:A:C4	2:B:1106:G:C2	3.07	0.43
2:B:1278:C:H2'	2:B:1279:G:C8	2.54	0.43
2:B:1426:G:C4	2:B:1427:A:C5	3.07	0.43
2:B:1467:U:C4	2:B:1468:U:C4	3.06	0.43
2:B:1688:U:N3	2:B:1698:A:C2	2.87	0.43
2:B:1740:G:C5	2:B:1741:C:C5	3.06	0.43
2:B:1988:G:C4	2:B:1989:G:C8	3.07	0.43
2:B:2131:U:C5	2:B:2131:U:OP2	2.72	0.43
2:B:2134:A:C6	2:B:2135:A:N1	2.86	0.43
2:B:2265:U:C5	2:B:2266:A:C4	3.07	0.43
2:B:2705:A:C5	2:B:2706:A:C4	3.06	0.43
2:B:2819:G:C2	2:B:2828:G:C4	3.07	0.43
4:K:64:ARG:HH12	4:K:103:VAL:HA	1.84	0.43
21:Y:23:LYS:HB3	21:Y:24:ARG:H	1.58	0.43
2:B:149:A:H2'	2:B:150:U:H6	1.84	0.43
2:B:158:U:C4	2:B:159:G:C6	3.07	0.43
2:B:255:A:C5	2:B:256:A:C8	3.07	0.43
2:B:475:C:H3'	2:B:476:G:C8	2.54	0.43
2:B:633:A:C8	2:B:634:C:C6	3.07	0.43
2:B:735:A:C4	2:B:736:C:C6	3.07	0.43
2:B:802:A:H3'	2:B:803:U:C6	2.54	0.43
2:B:1727:C:C2	2:B:1734:G:C2	3.06	0.43
2:B:1758:U:C2	2:B:2696:U:H4'	2.54	0.43
2:B:1987:A:H2'	2:B:1988:G:C8	2.53	0.43
2:B:2248:C:C4	2:B:2249:U:O2	2.72	0.43
2:B:2545:G:C6	2:B:2546:U:C2	3.07	0.43
2:B:2661:G:C5	2:B:2662:A:C5	3.06	0.43
2:B:2731:G:C2	2:B:2732:G:N7	2.87	0.43
29:G:148:ARG:HH21	29:G:163:TYR:H	1.67	0.43
1:A:86:G:H1	1:A:90:C:H42	1.66	0.42
2:B:5:A:C2	2:B:6:A:C4	3.07	0.42
2:B:61:C:H2'	2:B:62:U:C2	2.54	0.42
2:B:65:U:C4	2:B:66:C:C5	3.07	0.42
2:B:189:G:O6	2:B:205:G:C4	2.72	0.42
2:B:535:G:C6	2:B:559:G:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:740:C:H6	2:B:740:C:O5'	2.02	0.42
2:B:961:C:C6	2:B:2031:A:C2	3.07	0.42
2:B:1042:G:C2	2:B:1114:C:C2	3.07	0.42
2:B:1050:A:C4	2:B:2751:G:C6	3.07	0.42
2:B:1389:G:C2	2:B:1390:U:C2	3.07	0.42
2:B:1651:G:C6	2:B:1652:A:C5	3.07	0.42
2:B:1651:G:N1	2:B:1652:A:C4	2.87	0.42
2:B:1664:A:C4	2:B:2726:A:C6	3.06	0.42
2:B:1723:G:H2'	2:B:1724:G:C8	2.54	0.42
2:B:2358:A:C8	2:B:2359:C:C5	3.07	0.42
2:B:2373:G:C6	2:B:2374:C:C4	3.07	0.42
2:B:2452:C:C2	2:B:2453:A:C5	3.06	0.42
2:B:2531:A:H5''	29:G:156:TYR:CZ	2.54	0.42
2:B:2633:G:C2	2:B:2634:A:C4	3.07	0.42
7:M:71:LYS:HD3	7:M:95:LEU:HD13	2.01	0.42
15:T:8:LEU:HD21	15:T:42:GLU:HB3	2.00	0.42
29:G:14:VAL:HG23	29:G:15:ASP:H	1.84	0.42
29:G:106:LEU:HD13	29:G:151:ARG:HB2	2.01	0.42
29:G:147:LEU:HD12	29:G:147:LEU:HA	1.98	0.42
30:H:141:LYS:O	30:H:142:VAL:HG13	2.19	0.42
1:A:15:A:C8	1:A:109:A:C5	3.07	0.42
2:B:94:A:C6	2:B:95:A:C5	3.07	0.42
2:B:161:A:H62	2:B:165:A:N6	2.16	0.42
2:B:181:A:H1'	2:B:435:C:O4'	2.19	0.42
2:B:583:G:C2	2:B:584:C:C2	3.07	0.42
2:B:742:A:C2	2:B:756:A:C2	3.07	0.42
2:B:892:A:C2	2:B:893:C:H1'	2.54	0.42
2:B:899:A:C8	2:B:899:A:C3'	3.02	0.42
2:B:947:A:H2'	2:B:948:C:C6	2.54	0.42
2:B:1056:G:N2	2:B:1103:A:H62	2.16	0.42
2:B:1082:U:C5	2:B:1083:U:C5	3.07	0.42
2:B:1202:G:C6	2:B:1203:U:N3	2.87	0.42
2:B:1307:A:C5	2:B:1308:A:C8	3.06	0.42
2:B:1431:A:N6	2:B:1432:G:C6	2.87	0.42
2:B:1439:A:N6	2:B:1552:A:C8	2.87	0.42
2:B:1669:A:H5'	4:K:5:GLN:HE22	1.85	0.42
2:B:1746:A:C2	2:B:1747:U:C2	3.07	0.42
2:B:2061:G:C8	2:B:2503:A:C8	3.07	0.42
2:B:2119:A:H1'	2:B:2170:A:C2	2.55	0.42
2:B:2447:G:C4	2:B:2500:U:C5	3.07	0.42
2:B:2543:G:H2'	2:B:2544:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2697:G:C2	2:B:2711:A:C2	3.07	0.42
2:B:2749:A:C6	2:B:2750:A:C5	3.07	0.42
8:N:116:VAL:HG13	8:N:117:ASP:OD1	2.20	0.42
32:J:77:HIS:CE1	32:J:83:GLY:HA3	2.54	0.42
1:A:7:G:C6	1:A:114:C:C4	3.07	0.42
2:B:85:G:C6	2:B:86:G:C6	3.06	0.42
2:B:216:A:C6	2:B:217:A:C4	3.07	0.42
2:B:340:A:C8	2:B:341:C:C6	3.07	0.42
2:B:412:A:C8	2:B:413:C:C5	3.07	0.42
2:B:435:C:C5	2:B:436:C:C4	3.07	0.42
2:B:457:A:C8	2:B:459:U:O2	2.73	0.42
2:B:515:A:H3'	2:B:516:C:H6	1.84	0.42
2:B:764:A:C2	2:B:781:A:C2	3.07	0.42
2:B:807:U:C4	2:B:808:G:C5	3.07	0.42
2:B:945:A:C6	2:B:2448:A:C5	3.07	0.42
2:B:1193:G:C4	2:B:1194:A:C8	3.07	0.42
2:B:2056:G:C4	2:B:2577:A:C6	3.07	0.42
2:B:2246:G:H2'	2:B:2247:A:H8	1.84	0.42
2:B:2301:C:C2	2:B:2316:G:C2	3.07	0.42
2:B:2685:G:H2'	2:B:2686:G:H8	1.85	0.42
2:B:2885:G:H2'	2:B:2886:A:O4'	2.19	0.42
19:X:53:ILE:HG22	19:X:54:CYS:O	2.19	0.42
27:C:16:VAL:H	27:C:203:VAL:HG22	1.83	0.42
31:I:102:ARG:HA	31:I:105:LEU:HD12	2.01	0.42
2:B:48:G:H1'	2:B:178:G:N2	2.34	0.42
2:B:162:U:O4	2:B:2218:G:H4'	2.20	0.42
2:B:302:C:H2'	2:B:303:G:C8	2.52	0.42
2:B:419:U:H2'	2:B:420:C:H6	1.82	0.42
2:B:664:G:O2'	2:B:665:U:H5'	2.19	0.42
2:B:771:G:C5	2:B:772:C:C5	3.08	0.42
2:B:877:A:C6	2:B:878:A:H1'	2.55	0.42
2:B:952:G:C2	2:B:966:G:C4	3.08	0.42
2:B:965:C:N3	2:B:966:G:C8	2.88	0.42
2:B:1488:C:C2	2:B:1502:A:C2	3.07	0.42
2:B:1825:U:H2'	2:B:1826:G:O4'	2.19	0.42
2:B:1987:A:C2	2:B:1988:G:C4	3.07	0.42
2:B:2094:A:H2'	2:B:2095:A:H8	1.84	0.42
2:B:2327:A:C4	2:B:2328:A:C5	3.08	0.42
2:B:2471:A:O2'	2:B:2472:G:H8	2.02	0.42
15:T:14:PRO:HA	15:T:32:LEU:HA	2.01	0.42
1:A:16:G:H2'	1:A:17:C:H6	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:48:U:H2'	1:A:49:C:H6	1.84	0.42
2:B:25:U:C4	2:B:26:G:C2	3.08	0.42
2:B:310:A:C8	2:B:312:G:C6	3.08	0.42
2:B:436:C:C2	2:B:437:U:H5	2.37	0.42
2:B:706:A:C5	2:B:707:G:C8	3.07	0.42
2:B:710:U:H2'	2:B:711:G:C8	2.54	0.42
2:B:822:G:O6	2:B:836:G:C5	2.73	0.42
2:B:874:G:C2	2:B:904:G:C4	3.07	0.42
2:B:943:A:C2	2:B:944:C:C6	3.06	0.42
2:B:1062:G:C4	2:B:1077:A:C2	3.08	0.42
2:B:1105:U:H2'	2:B:1106:G:C8	2.54	0.42
2:B:1399:C:N3	2:B:1400:U:C5	2.87	0.42
2:B:1623:G:C5	2:B:1624:U:C5	3.07	0.42
2:B:1845:G:C2	2:B:1846:G:C4	3.08	0.42
2:B:2134:A:N6	2:B:2158:A:H3'	2.35	0.42
2:B:2148:G:N7	2:B:2149:U:C4	2.87	0.42
2:B:2282:G:H1'	2:B:2390:U:C4	2.54	0.42
2:B:2454:G:C6	2:B:2455:G:N7	2.88	0.42
2:B:2547:A:H5'	2:B:2566:A:C2	2.55	0.42
10:P:7:LEU:HD22	14:D:188:LEU:HD11	2.01	0.42
10:P:98:TYR:CD1	10:P:99:LEU:N	2.88	0.42
32:J:74:TYR:CD1	32:J:92:MET:SD	3.12	0.42
2:B:420:C:H2'	2:B:421:C:C5	2.55	0.42
2:B:608:A:C8	2:B:621:A:C6	3.07	0.42
2:B:744:U:O4	2:B:745:G:C6	2.73	0.42
2:B:768:G:C4	2:B:769:U:C5	3.07	0.42
2:B:843:G:C6	2:B:844:A:C5	3.08	0.42
2:B:941:A:C6	2:B:942:G:C6	3.08	0.42
2:B:1056:G:H21	2:B:1103:A:N6	2.16	0.42
2:B:1316:U:N3	2:B:1337:G:C2	2.87	0.42
2:B:1337:G:H2'	2:B:1338:G:C8	2.54	0.42
2:B:1893:C:C5	2:B:1894:C:N4	2.87	0.42
2:B:2094:A:C2	2:B:2095:A:C5	3.07	0.42
2:B:2168:G:H3'	2:B:2168:G:H8	1.84	0.42
2:B:2274:A:C6	2:B:2276:G:C8	3.08	0.42
2:B:2370:G:C6	2:B:2371:G:C6	3.07	0.42
2:B:2599:G:N1	2:B:2600:A:C5	2.88	0.42
2:B:2634:A:O2'	2:B:2635:A:H5'	2.20	0.42
2:B:2648:G:C4	2:B:2649:C:C6	3.07	0.42
2:B:2884:U:H3'	2:B:2885:G:H8	1.81	0.42
5:L:132:ARG:HE	5:L:136:GLU:CD	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:63:C:H2'	1:A:64:G:H8	1.84	0.42
2:B:107:G:C2	2:B:108:G:C5	3.08	0.42
2:B:165:A:H2'	2:B:166:U:C6	2.54	0.42
2:B:190:A:C5	2:B:191:A:C5	3.07	0.42
2:B:323:C:N4	2:B:333:G:C5	2.88	0.42
2:B:323:C:C2	2:B:333:G:H1'	2.54	0.42
2:B:468:G:C6	2:B:469:G:C4	3.08	0.42
2:B:675:A:C2	2:B:676:A:C2	3.08	0.42
2:B:743:A:O2'	2:B:744:U:H5'	2.19	0.42
2:B:820:A:N1	2:B:821:A:C5	2.88	0.42
2:B:882:G:H2'	2:B:883:G:C8	2.54	0.42
2:B:966:G:C6	2:B:967:U:C4	3.07	0.42
2:B:1218:G:C6	2:B:1219:U:C4	3.08	0.42
2:B:1218:G:C5	2:B:1232:G:C6	3.07	0.42
2:B:1598:A:C6	2:B:1599:U:C5	3.08	0.42
2:B:1733:G:C6	2:B:1734:G:C5	3.07	0.42
2:B:2116:G:OP2	2:B:2116:G:C5	2.72	0.42
2:B:2599:G:C2	2:B:2600:A:C4	3.08	0.42
2:B:2639:A:N6	2:B:2640:G:C4	2.87	0.42
10:P:79:VAL:O	10:P:79:VAL:HG12	2.18	0.42
20:E:150:THR:O	20:E:171:ASP:HA	2.19	0.42
23:5:53:ARG:HE	23:5:202:THR:HG21	1.84	0.42
32:J:105:VAL:HG21	32:J:122:LEU:HD22	2.02	0.42
1:A:4:C:H2'	1:A:5:U:C6	2.55	0.42
1:A:16:G:C6	1:A:69:G:C2	3.08	0.42
2:B:104:A:C5	2:B:105:C:C5	3.08	0.42
2:B:315:G:H2'	2:B:316:C:C6	2.55	0.42
2:B:379:G:C2	2:B:380:G:H1'	2.55	0.42
2:B:387:U:N1	2:B:388:G:C5	2.88	0.42
2:B:816:C:C4	2:B:1192:G:C6	3.07	0.42
2:B:1034:G:H2'	2:B:1035:U:C6	2.54	0.42
2:B:1469:A:H2'	2:B:1470:A:C8	2.55	0.42
2:B:1717:A:C2	2:B:1744:A:C4	3.07	0.42
2:B:1809:A:C5	2:B:1810:A:C6	3.08	0.42
2:B:2077:A:C5	2:B:2435:A:C5	3.08	0.42
2:B:2116:G:P	2:B:2171:A:H62	2.43	0.42
2:B:2261:C:H4'	2:B:2388:A:H5''	2.02	0.42
2:B:2416:C:C2	2:B:2417:C:C5	3.08	0.42
2:B:2468:A:C2	2:B:2481:G:C2	3.08	0.42
3:0:35:HIS:CD2	3:0:35:HIS:C	2.98	0.42
5:L:20:GLY:H	5:L:28:GLY:HA3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:47:ARG:HB2	5:L:50:PHE:CG	2.55	0.42
6:1:38:GLN:HE21	6:1:39:GLN:HG2	1.84	0.42
7:M:27:SER:N	7:M:66:ARG:HH22	2.17	0.42
14:D:126:ASN:C	14:D:127:PHE:CD1	2.97	0.42
1:A:84:G:H2'	1:A:85:G:C8	2.55	0.42
2:B:23:G:C6	2:B:24:G:C6	3.08	0.42
2:B:608:A:C5	2:B:609:A:C5	3.07	0.42
2:B:628:G:C2	2:B:629:G:C4	3.07	0.42
2:B:721:A:C5	2:B:722:A:C5	3.08	0.42
2:B:825:A:C2	2:B:826:U:N3	2.88	0.42
2:B:947:A:C6	2:B:971:G:N1	2.88	0.42
2:B:997:G:H1	2:B:1158:C:N4	2.18	0.42
2:B:1000:A:C4	2:B:1155:A:C6	3.07	0.42
2:B:1007:C:H2'	2:B:1008:A:C8	2.55	0.42
2:B:1018:U:C2	2:B:1019:U:C5	3.08	0.42
2:B:1150:C:C2	2:B:1151:A:C8	3.08	0.42
2:B:1206:G:C5	2:B:1207:C:C5	3.08	0.42
2:B:1300:G:C6	2:B:1626:A:N7	2.87	0.42
2:B:1327:A:C6	2:B:1328:A:C4	3.08	0.42
2:B:1391:U:O2	2:B:1394:U:C5	2.73	0.42
2:B:1394:U:C5	2:B:1395:A:C6	3.08	0.42
2:B:1799:G:C4	2:B:1819:A:C6	3.08	0.42
2:B:1819:A:H1'	2:B:1821:A:C5	2.55	0.42
2:B:2500:U:O2	2:B:2504:U:C5	2.73	0.42
2:B:2538:C:C2	2:B:2539:C:C5	3.08	0.42
2:B:2588:G:C5	2:B:2589:A:C8	3.07	0.42
2:B:2615:U:H2'	2:B:2616:C:H6	1.83	0.42
2:B:2690:U:C4	2:B:2873:A:N1	2.87	0.42
2:B:2745:C:H2'	2:B:2746:U:C6	2.55	0.42
2:B:2858:C:C4	2:B:2859:G:C6	3.08	0.42
19:X:83:ASP:C	19:X:84:VAL:HG23	2.44	0.42
19:X:348:ALA:HB3	19:X:349:ARG:HA	2.01	0.42
19:X:403:ARG:HH11	19:X:403:ARG:HD3	1.70	0.42
20:E:166:LYS:HD2	20:E:166:LYS:HA	1.88	0.42
1:A:7:G:N2	1:A:8:C:C2	2.88	0.42
2:B:9:G:C2	2:B:2895:G:C4	3.08	0.42
2:B:111:A:C6	2:B:112:U:C4	3.08	0.42
2:B:200:U:O4	2:B:248:G:C5	2.73	0.42
2:B:311:A:O4'	2:B:332:A:C2	2.73	0.42
2:B:460:A:C8	2:B:461:C:C6	3.08	0.42
2:B:471:A:C6	2:B:472:A:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:693:A:N1	2:B:770:G:C6	2.88	0.42
2:B:775:G:C4	2:B:777:G:C6	3.08	0.42
2:B:781:A:C5	2:B:1777:U:H4'	2.54	0.42
2:B:853:C:H42	2:B:925:A:N6	2.18	0.42
2:B:991:C:C2	2:B:1185:G:C6	3.08	0.42
2:B:1082:U:C6	2:B:1083:U:C5	3.08	0.42
2:B:1157:G:C2	2:B:1158:C:C2	3.07	0.42
2:B:1176:U:H5''	2:B:1177:G:C5	2.55	0.42
2:B:2016:U:C2	2:B:2017:U:C5	3.08	0.42
2:B:2236:U:C4	2:B:2237:G:C5	3.08	0.42
2:B:2447:G:C6	2:B:2500:U:C5	3.08	0.42
2:B:2516:A:C2	2:B:2517:C:N3	2.88	0.42
2:B:2554:U:C5	2:B:2555:U:C4	3.08	0.42
2:B:2718:G:N1	2:B:2719:G:C4	2.88	0.42
2:B:2782:G:C5	2:B:2783:U:C4	3.08	0.42
2:B:2844:G:O2'	2:B:2845:U:H5'	2.20	0.42
2:B:2854:G:H2'	2:B:2855:C:C6	2.54	0.42
2:B:2885:G:H1	22:3:39:ARG:CB	2.32	0.42
19:X:248:ASP:C	19:X:250:ARG:H	2.28	0.42
29:G:71:LEU:O	29:G:74:MET:HB2	2.20	0.42
2:B:5:A:C4	2:B:6:A:C8	3.08	0.41
2:B:39:G:C5	2:B:40:U:C5	3.08	0.41
2:B:154:U:H3	2:B:172:A:N6	2.16	0.41
2:B:475:C:C4	2:B:476:G:C5	3.08	0.41
2:B:532:A:C8	2:B:2021:C:C5	3.08	0.41
2:B:661:A:H2'	2:B:662:G:O4'	2.20	0.41
2:B:1342:A:C6	2:B:1397:U:C4	3.09	0.41
2:B:1365:A:C4	2:B:1366:A:C8	3.08	0.41
2:B:1684:G:C6	2:B:1685:C:C4	3.08	0.41
2:B:1894:C:C4	2:B:1895:C:N4	2.87	0.41
2:B:1895:C:H1'	19:X:357:HIS:HE1	1.83	0.41
2:B:2073:C:H5''	27:C:227:VAL:HG13	2.02	0.41
2:B:2209:G:C6	2:B:2216:G:C2	3.08	0.41
2:B:2330:G:C2	2:B:2331:G:H1'	2.55	0.41
2:B:2560:A:C6	2:B:2561:U:C4	3.08	0.41
2:B:2663:G:C6	2:B:2664:G:C4	3.09	0.41
2:B:2729:G:H4'	14:D:190:LYS:HE2	2.02	0.41
2:B:2794:C:N3	2:B:2795:C:C5	2.88	0.41
2:B:2804:U:C2	2:B:2805:C:C6	3.07	0.41
2:B:2882:A:H2'	2:B:2883:A:H5''	2.01	0.41
3:0:18:SER:O	3:0:21:LEU:HD23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Q:104:ALA:O	11:Q:107:ALA:HB3	2.20	0.41
19:X:12:ASN:CG	19:X:13:VAL:H	2.27	0.41
19:X:389:THR:O	19:X:393:GLU:HG2	2.20	0.41
27:C:29:PHE:CD2	27:C:32:LEU:HD12	2.55	0.41
1:A:39:A:C6	1:A:44:G:C6	3.08	0.41
2:B:78:U:H2'	2:B:79:C:C6	2.55	0.41
2:B:372:G:C4	3:O:60:LYS:NZ	2.88	0.41
2:B:597:G:C6	2:B:661:A:C6	3.08	0.41
2:B:923:G:C6	2:B:924:G:N7	2.88	0.41
2:B:1307:A:C6	2:B:1622:G:C6	3.08	0.41
2:B:1613:G:C6	2:B:1619:G:O6	2.73	0.41
2:B:1642:G:N1	2:B:1643:G:C6	2.88	0.41
2:B:1785:A:C5	2:B:1787:A:C5	3.08	0.41
2:B:1809:A:C5	2:B:1810:A:C5	3.08	0.41
2:B:1821:A:C5	2:B:1822:C:C4	3.08	0.41
2:B:1834:U:O3'	2:B:1835:G:C8	2.73	0.41
2:B:2008:C:C2	2:B:2009:A:C8	3.08	0.41
2:B:2069:G:N3	2:B:2070:A:C8	2.89	0.41
2:B:2331:G:C4	2:B:2332:C:C6	3.08	0.41
2:B:2345:G:C4	2:B:2347:C:C5	3.08	0.41
2:B:2692:G:O2'	2:B:2693:G:H5'	2.20	0.41
19:X:338:LEU:HD23	19:X:338:LEU:C	2.44	0.41
27:C:86:ARG:HD3	27:C:88:ALA:HB3	2.02	0.41
27:C:141:HIS:CE1	27:C:190:THR:HG22	2.55	0.41
32:J:40:HIS:CD2	32:J:40:HIS:N	2.87	0.41
1:A:40:U:H1'	1:A:43:C:C5	2.56	0.41
2:B:2:G:C6	2:B:3:U:C4	3.08	0.41
2:B:170:U:C2	2:B:171:U:C5	3.08	0.41
2:B:301:G:C2	2:B:302:C:C2	3.07	0.41
2:B:350:G:C5	2:B:351:C:C5	3.08	0.41
2:B:396:G:C5	2:B:397:U:C5	3.09	0.41
2:B:399:U:H5''	3:O:56:ARG:HH22	1.85	0.41
2:B:596:U:H2'	2:B:597:G:C8	2.55	0.41
2:B:662:G:C2	2:B:663:G:C5	3.08	0.41
2:B:945:A:C4	2:B:2448:A:C2	3.08	0.41
2:B:974:G:C4	2:B:989:G:C6	3.09	0.41
2:B:1182:G:C6	2:B:1183:U:C4	3.08	0.41
2:B:1242:U:H2'	2:B:1243:C:C6	2.55	0.41
2:B:1569:A:H2'	2:B:1570:A:O4'	2.20	0.41
2:B:1785:A:O2'	2:B:1786:A:H2'	2.21	0.41
2:B:1796:U:H2'	2:B:1797:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2323:G:C2	2:B:2324:U:C2	3.08	0.41
2:B:2373:G:C5	2:B:2374:C:C4	3.08	0.41
2:B:2458:G:C4	2:B:2490:G:C6	3.08	0.41
2:B:2697:G:C8	2:B:2698:U:C5	3.08	0.41
5:L:77:ILE:O	5:L:111:ILE:HG12	2.21	0.41
6:1:4:LYS:H	6:1:4:LYS:HE2	1.85	0.41
7:M:50:ARG:HG2	7:M:50:ARG:HH21	1.85	0.41
14:D:45:TYR:HA	14:D:83:ARG:HE	1.84	0.41
20:E:45:ALA:O	20:E:46:GLN:HB2	2.20	0.41
20:E:95:LYS:O	20:E:96:VAL:HG22	2.21	0.41
29:G:89:VAL:HG23	29:G:162:ARG:HE	1.86	0.41
30:H:90:LEU:HB2	30:H:128:HIS:CE1	2.55	0.41
2:B:68:G:C6	2:B:69:C:C4	3.08	0.41
2:B:169:G:C6	2:B:170:U:C4	3.08	0.41
2:B:227:A:C5	2:B:2407:A:O4'	2.73	0.41
2:B:455:C:H3'	2:B:455:C:C6	2.56	0.41
2:B:562:U:C4	2:B:572:A:C4	3.09	0.41
2:B:563:A:H2'	2:B:564:C:C6	2.55	0.41
2:B:851:C:C4	2:B:852:U:O4	2.73	0.41
2:B:959:A:C6	2:B:960:A:C6	3.08	0.41
2:B:1419:A:C2	2:B:1579:A:C2	3.08	0.41
2:B:1459:G:H2'	2:B:1461:C:C4	2.56	0.41
2:B:1682:G:C5	2:B:1683:U:C4	3.09	0.41
2:B:2052:A:C5	2:B:2053:G:N7	2.88	0.41
2:B:2230:G:C5	2:B:2231:U:C4	3.08	0.41
2:B:2341:G:C4	2:B:2342:C:C6	3.08	0.41
2:B:2358:A:N7	2:B:2359:C:C5	2.88	0.41
2:B:2453:A:C2	2:B:2504:U:N3	2.89	0.41
2:B:2487:G:C2	2:B:2488:G:C4	3.08	0.41
2:B:2588:G:C5	2:B:2589:A:N7	2.89	0.41
25:7:20:GLY:C	25:7:21:PHE:CD1	2.99	0.41
25:7:23:HIS:CD2	25:7:47:ALA:O	2.73	0.41
28:F:34:THR:HG21	28:F:87:LYS:HE3	2.02	0.41
1:A:66:A:N1	1:A:107:G:H2'	2.36	0.41
2:B:160:A:C5	2:B:161:A:C5	3.08	0.41
2:B:270:A:C2	2:B:370:G:C5	3.09	0.41
2:B:287:G:C2	2:B:288:U:C2	3.08	0.41
2:B:342:A:C5	2:B:343:C:C5	3.08	0.41
2:B:495:G:C2	2:B:496:G:C4	3.08	0.41
2:B:688:U:C2'	2:B:689:A:C8	3.03	0.41
2:B:1059:G:N7	2:B:1060:U:H2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1395:A:C6	2:B:1398:C:C2	3.09	0.41
2:B:1428:C:H5''	2:B:1428:C:H6	1.85	0.41
2:B:1708:C:H42	2:B:1750:G:H1	1.69	0.41
2:B:1770:G:C2	2:B:1983:G:C4	3.08	0.41
2:B:2043:C:N4	2:B:2777:G:C5	2.89	0.41
2:B:2051:A:C4	2:B:2614:A:N6	2.88	0.41
2:B:2186:G:C2	2:B:2187:U:H1'	2.56	0.41
2:B:2464:G:N1	2:B:2487:G:C4	2.88	0.41
2:B:2601:C:H4'	2:B:2602:A:OP2	2.20	0.41
2:B:2773:C:H2'	2:B:2774:C:C6	2.55	0.41
2:B:2782:G:H2'	2:B:2783:U:C6	2.55	0.41
2:B:2833:U:H4'	2:B:2834:G:OP2	2.20	0.41
3:O:34:SER:HA	3:O:49:ARG:HA	2.03	0.41
17:U:23:LYS:O	17:U:35:VAL:HG13	2.20	0.41
18:W:44:HIS:CG	18:W:45:ASP:N	2.87	0.41
20:E:105:LEU:HD21	20:E:177:PRO:HG3	2.01	0.41
32:J:23:LYS:HZ1	32:J:142:ILE:HG12	1.85	0.41
1:A:15:A:H3'	1:A:16:G:H8	1.83	0.41
2:B:112:U:C2'	2:B:113:U:H5'	2.51	0.41
2:B:396:G:C4	2:B:397:U:C5	3.08	0.41
2:B:522:A:C5	2:B:523:C:C5	3.09	0.41
2:B:684:G:N1	2:B:774:G:C5	2.88	0.41
2:B:684:G:O6	2:B:774:G:C8	2.74	0.41
2:B:802:A:C8	2:B:803:U:C4	3.08	0.41
2:B:1136:G:C2	2:B:1137:G:C4	3.09	0.41
2:B:1162:G:C2	2:B:1163:G:C4	3.08	0.41
2:B:1296:G:C5	2:B:1645:G:C6	3.08	0.41
2:B:1307:A:C6	2:B:1622:G:C5	3.08	0.41
2:B:1469:A:C2	2:B:1470:A:C5	3.09	0.41
2:B:1473:G:C2	2:B:1474:U:C2	3.08	0.41
2:B:1658:C:H6	2:B:1658:C:O5'	2.04	0.41
2:B:1817:G:C5	2:B:1818:U:C5	3.09	0.41
2:B:2069:G:C2	2:B:2070:A:C8	3.09	0.41
2:B:2189:U:H2'	2:B:2190:G:H8	1.85	0.41
2:B:2204:G:O6	2:B:2221:G:C6	2.74	0.41
2:B:2312:U:H5	2:B:2313:C:C5	2.38	0.41
2:B:2668:G:N1	2:B:2669:G:C5	2.89	0.41
2:B:2737:G:C2	2:B:2768:U:C2	3.08	0.41
2:B:2901:C:N3	2:B:2902:C:C5	2.89	0.41
9:O:51:ALA:HB2	9:O:81:ARG:HG3	2.03	0.41
27:C:13:ARG:O	27:C:14:HIS:CG	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:F:62:GLN:HB3	28:F:94:ARG:HE	1.85	0.41
32:J:23:LYS:HZ3	32:J:28:LEU:HD13	1.85	0.41
2:B:48:G:C4	2:B:178:G:C6	3.09	0.41
2:B:84:A:C6	2:B:103:A:C5	3.09	0.41
2:B:169:G:C5	2:B:170:U:C5	3.09	0.41
2:B:688:U:C2'	2:B:689:A:H8	2.33	0.41
2:B:719:C:C4	2:B:720:U:C5	3.08	0.41
2:B:862:G:C6	2:B:863:A:C4	3.08	0.41
2:B:1249:U:H4'	11:Q:3:VAL:HG21	2.03	0.41
2:B:1364:G:C2	2:B:1368:G:C5	3.09	0.41
2:B:1389:G:C5	2:B:1390:U:C4	3.08	0.41
2:B:1982:U:O2	2:B:1983:G:C8	2.74	0.41
2:B:2404:U:O2	2:B:2414:G:C2	2.74	0.41
2:B:2576:G:C8	2:B:2580:U:O4	2.74	0.41
2:B:2825:G:C2	2:B:2826:A:N7	2.88	0.41
5:L:63:LYS:HD2	5:L:63:LYS:N	2.36	0.41
11:Q:79:ILE:HG23	11:Q:80:ASN:N	2.35	0.41
19:X:449:MET:SD	19:X:449:MET:O	2.79	0.41
1:A:21:G:C5	1:A:22:U:C5	3.09	0.41
1:A:66:A:C2	1:A:108:A:C5	3.09	0.41
1:A:84:G:C2	1:A:85:G:C4	3.08	0.41
1:A:99:A:C6	1:A:100:G:C4	3.09	0.41
1:A:101:A:C4	1:A:102:G:C8	3.09	0.41
2:B:64:A:H61	2:B:90:U:H3	1.68	0.41
2:B:491:G:C6	2:B:492:A:C5	3.09	0.41
2:B:514:A:C4	2:B:515:A:C8	3.09	0.41
2:B:875:G:N1	2:B:876:C:H1'	2.36	0.41
2:B:1259:G:C6	2:B:1260:A:C6	3.08	0.41
2:B:1314:C:H5'	2:B:1610:A:N6	2.36	0.41
2:B:1317:G:C5	2:B:1318:U:C4	3.08	0.41
2:B:1361:G:C2	2:B:1362:C:C2	3.09	0.41
2:B:1415:U:H1'	2:B:1588:G:N2	2.35	0.41
2:B:2054:A:C2	2:B:2616:C:C2	3.08	0.41
2:B:2075:U:H4'	2:B:2596:U:H3	1.86	0.41
2:B:2246:G:C5	2:B:2247:A:C5	3.08	0.41
2:B:2536:G:C6	2:B:2537:U:C4	3.09	0.41
2:B:2811:G:C6	2:B:2812:G:C4	3.08	0.41
2:B:2819:G:C6	2:B:2828:G:C6	3.09	0.41
27:C:175:LEU:HB2	27:C:179:GLU:HB3	2.03	0.41
28:F:24:VAL:O	28:F:27:VAL:HG22	2.21	0.41
32:J:101:ILE:O	32:J:105:VAL:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:11:C:C4	1:A:12:C:N3	2.89	0.41
1:A:24:G:N7	1:A:56:G:H2'	2.35	0.41
2:B:133:U:H2'	2:B:134:G:C8	2.56	0.41
2:B:218:A:N6	2:B:219:A:C6	2.88	0.41
2:B:225:C:C4	2:B:226:A:C5	3.09	0.41
2:B:266:G:C5	2:B:267:C:C5	3.09	0.41
2:B:266:G:C4	2:B:267:C:C6	3.09	0.41
2:B:332:A:C5	2:B:335:C:C4	3.09	0.41
2:B:541:A:C2	2:B:553:G:C2	3.08	0.41
2:B:701:G:H1	2:B:731:C:H42	1.67	0.41
2:B:847:U:N3	2:B:848:C:C5	2.89	0.41
2:B:920:A:C5	2:B:921:C:C5	3.09	0.41
2:B:936:A:C2	2:B:937:C:C2	3.08	0.41
2:B:998:C:H2'	2:B:999:U:C6	2.56	0.41
2:B:1002:G:C6	2:B:1003:G:C6	3.09	0.41
2:B:1006:C:O2'	2:B:1007:C:H5'	2.21	0.41
2:B:1041:G:C4	2:B:1042:G:C8	3.08	0.41
2:B:1116:G:C5	2:B:1117:C:C5	3.09	0.41
2:B:1228:G:C5	2:B:1229:C:C5	3.09	0.41
2:B:1280:G:N1	2:B:1281:G:C5	2.89	0.41
2:B:1309:G:H21	2:B:1611:C:H4'	1.86	0.41
2:B:1349:C:C2	2:B:1350:C:C5	3.09	0.41
2:B:1637:A:H2'	2:B:1638:C:H6	1.86	0.41
2:B:1659:G:C5	2:B:1660:G:N7	2.89	0.41
2:B:1710:G:C2	2:B:1749:A:C2	3.09	0.41
2:B:1975:G:C6	2:B:1976:U:C2	3.08	0.41
2:B:1980:G:C5	2:B:1982:U:O4	2.74	0.41
2:B:2044:C:N3	2:B:2625:G:C2	2.89	0.41
2:B:2083:G:O6	2:B:2237:G:C2	2.74	0.41
2:B:2148:G:C8	2:B:2149:U:C5	3.09	0.41
2:B:2168:G:C8	2:B:2168:G:C3'	3.03	0.41
2:B:2217:G:C6	2:B:2218:G:C5	3.09	0.41
2:B:2227:A:H2'	2:B:2228:G:C8	2.55	0.41
2:B:2228:G:H2'	2:B:2229:U:C6	2.55	0.41
2:B:2279:G:C5	2:B:2280:G:C8	3.08	0.41
2:B:2357:G:C2	2:B:2361:G:C4	3.09	0.41
2:B:2370:G:C5	2:B:2371:G:C5	3.09	0.41
2:B:2464:G:C2	2:B:2487:G:C4	3.09	0.41
2:B:2513:A:H2'	2:B:2514:U:C6	2.55	0.41
2:B:2517:C:C5	2:B:2542:A:N7	2.89	0.41
2:B:2636:C:H2'	2:B:2637:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2675:A:C5	2:B:2676:C:C5	3.09	0.41
10:P:30:TRP:O	10:P:79:VAL:HG13	2.21	0.41
19:X:85:VAL:HG12	19:X:86:LEU:N	2.36	0.41
21:Y:52:CYS:HB2	21:Y:56:HIS:ND1	2.36	0.41
1:A:10:G:N7	1:A:11:C:C5	2.89	0.41
2:B:2:G:C6	2:B:3:U:N3	2.88	0.41
2:B:692:C:H5''	27:C:38:LYS:HB3	2.02	0.41
2:B:799:G:H2'	2:B:800:A:C8	2.56	0.41
2:B:856:G:H2'	2:B:857:G:C8	2.55	0.41
2:B:891:G:C2'	2:B:892:A:C8	3.02	0.41
2:B:1128:G:N1	2:B:2518:A:C5	2.89	0.41
2:B:1134:A:C8	2:B:1134:A:OP2	2.74	0.41
2:B:1186:G:H2'	2:B:1187:G:O4'	2.20	0.41
2:B:1269:A:C4	2:B:1270:C:C5	3.09	0.41
2:B:1401:G:C5	2:B:1402:U:C5	3.09	0.41
2:B:1794:A:C6	2:B:1795:C:C4	3.09	0.41
2:B:2070:A:C2	2:B:2071:A:C8	3.09	0.41
2:B:2126:A:H62	23:5:134:ARG:HE	1.68	0.41
2:B:2327:A:C2	2:B:2328:A:C4	3.08	0.41
2:B:2383:G:N1	2:B:2384:U:C4	2.89	0.41
2:B:2485:G:OP1	7:M:42:THR:HG21	2.20	0.41
2:B:2722:G:C6	2:B:2723:C:C4	3.08	0.41
2:B:2794:C:C2	2:B:2795:C:C6	3.09	0.41
2:B:2897:U:H2'	2:B:2898:U:O4'	2.21	0.41
14:D:62:LYS:O	14:D:65:ALA:HB3	2.21	0.41
16:2:50:VAL:O	16:2:54:VAL:HG22	2.21	0.41
28:F:38:GLY:CA	28:F:85:GLY:HA2	2.51	0.41
32:J:135:GLN:CD	32:J:135:GLN:N	2.79	0.41
1:A:104:A:C6	1:A:105:G:H1'	2.56	0.40
2:B:14:A:C6	2:B:526:A:C2	3.09	0.40
2:B:77:G:H2'	2:B:78:U:C6	2.56	0.40
2:B:80:G:C6	2:B:81:G:C5	3.08	0.40
2:B:233:A:C6	2:B:234:U:C5	3.09	0.40
2:B:550:C:C2	2:B:551:G:C8	3.09	0.40
2:B:727:A:C2	27:C:8:THR:HG21	2.56	0.40
2:B:976:G:C5	2:B:977:G:N7	2.88	0.40
2:B:1031:G:N1	2:B:1032:A:C5	2.89	0.40
2:B:1165:A:C6	2:B:1185:G:C6	3.09	0.40
2:B:1252:G:C2	2:B:1253:A:C2	3.09	0.40
2:B:1268:A:C2	2:B:2013:A:C4	3.09	0.40
2:B:1335:C:H2'	2:B:1336:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1353:A:N1	2:B:1354:A:C2	2.89	0.40
2:B:1404:C:OP1	2:B:1472:C:H5'	2.20	0.40
2:B:1613:G:C5	2:B:1619:G:C6	3.09	0.40
2:B:1990:C:H2'	2:B:1991:U:H1'	2.03	0.40
2:B:2060:A:N1	2:B:2502:G:C6	2.89	0.40
2:B:2083:G:H2'	2:B:2084:C:C6	2.56	0.40
2:B:2377:A:C2	2:B:2378:A:C5	3.09	0.40
2:B:2472:G:H2'	2:B:2475:C:N4	2.35	0.40
2:B:2550:G:C2	2:B:2559:C:C2	3.10	0.40
2:B:2588:G:C6	2:B:2589:A:N7	2.89	0.40
12:R:68:ARG:HG2	12:R:92:TRP:CE2	2.57	0.40
14:D:46:ARG:HH11	14:D:46:ARG:HA	1.85	0.40
19:X:13:VAL:HG12	19:X:14:GLY:H	1.85	0.40
25:7:34:LYS:HG2	25:7:35:LYS:H	1.86	0.40
2:B:244:A:N6	2:B:245:G:C4	2.89	0.40
2:B:379:G:N1	2:B:380:G:C5	2.90	0.40
2:B:401:A:H2'	2:B:402:A:C8	2.56	0.40
2:B:444:C:H2'	2:B:445:C:H6	1.87	0.40
2:B:522:A:H2'	2:B:523:C:C6	2.56	0.40
2:B:659:G:H2'	2:B:660:C:C6	2.56	0.40
2:B:785:G:C4	2:B:786:C:C6	3.09	0.40
2:B:822:G:C6	2:B:836:G:C6	3.09	0.40
2:B:823:C:H2'	2:B:824:U:H6	1.81	0.40
2:B:1039:A:C2	2:B:1040:A:C4	3.09	0.40
2:B:1306:C:N3	2:B:1623:G:C6	2.89	0.40
2:B:1471:G:H1	2:B:1521:G:H1'	1.85	0.40
2:B:1564:C:H2'	2:B:1565:C:C6	2.56	0.40
2:B:1565:C:C2	2:B:1567:G:C5	3.09	0.40
2:B:1591:A:C6	2:B:1592:C:C4	3.09	0.40
2:B:1668:A:C8	2:B:1674:G:O6	2.75	0.40
2:B:1677:A:C2	2:B:1678:A:N3	2.89	0.40
2:B:1767:G:C6	2:B:1986:C:C4	3.10	0.40
2:B:1817:G:C6	2:B:1818:U:C4	3.09	0.40
2:B:2101:A:H2	2:B:2188:U:H3	1.67	0.40
2:B:2312:U:C6	2:B:2313:C:C6	3.09	0.40
2:B:2373:G:C6	2:B:2381:A:N1	2.89	0.40
2:B:2392:A:O5'	2:B:2392:A:C8	2.75	0.40
2:B:2402:U:H4'	2:B:2403:C:O5'	2.21	0.40
2:B:2482:A:C2	2:B:2483:C:C1'	3.02	0.40
2:B:2487:G:N1	2:B:2488:G:C4	2.89	0.40
2:B:2597:G:C6	2:B:2598:A:C6	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2869:G:C6	2:B:2870:C:C4	3.09	0.40
8:N:45:ARG:HH11	8:N:97:ILE:HD11	1.86	0.40
19:X:53:ILE:HG21	19:X:53:ILE:HD13	1.85	0.40
20:E:59:PRO:HG3	20:E:72:SER:H	1.86	0.40
23:5:217:THR:HG22	23:5:218:MET:H	1.86	0.40
28:F:33:ILE:HD11	28:F:99:PHE:CZ	2.56	0.40
1:A:21:G:H2'	1:A:22:U:C6	2.56	0.40
2:B:7:G:C6	2:B:8:C:C4	3.09	0.40
2:B:19:A:C4	2:B:20:C:C5	3.09	0.40
2:B:270:A:C2	2:B:370:G:C8	3.09	0.40
2:B:424:G:C4	2:B:425:G:C8	3.10	0.40
2:B:498:G:N3	17:U:44:HIS:CE1	2.89	0.40
2:B:571:U:C4	2:B:575:A:C8	3.10	0.40
2:B:608:A:H1'	2:B:621:A:N1	2.37	0.40
2:B:724:U:H2'	2:B:725:G:O4'	2.22	0.40
2:B:1446:C:H2'	2:B:1447:C:C6	2.57	0.40
2:B:1544:A:C6	2:B:1545:A:C5	3.10	0.40
2:B:1560:G:C4	2:B:1561:C:C6	3.09	0.40
2:B:1613:G:C6	2:B:1619:G:C6	3.09	0.40
2:B:1661:G:C6	2:B:1662:U:C4	3.10	0.40
2:B:1670:C:C5	2:B:1671:U:C4	3.09	0.40
2:B:1995:U:C6	2:B:1996:C:C6	3.09	0.40
2:B:2108:A:H2'	2:B:2109:U:C6	2.57	0.40
2:B:2201:G:C2	2:B:2223:G:N3	2.90	0.40
2:B:2243:U:C2	2:B:2244:U:C5	3.09	0.40
2:B:2345:G:H4'	2:B:2346:A:H5''	2.04	0.40
2:B:2580:U:H5'	14:D:136:ASN:O	2.21	0.40
2:B:2700:A:C4	2:B:2708:G:C2	3.10	0.40
2:B:2727:A:C6	2:B:2728:U:O4	2.75	0.40
7:M:123:LYS:HD3	7:M:123:LYS:HA	1.94	0.40
10:P:30:TRP:CE2	10:P:37:LYS:HB3	2.57	0.40
12:R:37:GLU:HA	12:R:53:PHE:CD1	2.55	0.40
26:8:15:LYS:H	26:8:25:VAL:HG12	1.85	0.40
30:H:12:LEU:HD13	30:H:12:LEU:HA	2.02	0.40
32:J:5:THR:HA	32:J:44:TYR:CD1	2.56	0.40
1:A:106:G:C2	1:A:107:G:H1'	2.57	0.40
2:B:10:A:N7	2:B:11:C:C2	2.89	0.40
2:B:28:A:C4	2:B:29:U:C6	3.10	0.40
2:B:48:G:C2	2:B:178:G:C6	3.09	0.40
2:B:66:C:C6	2:B:67:U:C5	3.09	0.40
2:B:294:A:C2	2:B:345:A:N3	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:436:C:H2'	2:B:437:U:C5	2.56	0.40
2:B:501:A:H2'	2:B:502:A:C8	2.56	0.40
2:B:690:G:C4	2:B:691:C:C5	3.09	0.40
2:B:1177:G:OP2	2:B:1177:G:C8	2.75	0.40
2:B:1202:G:N1	2:B:1244:A:C6	2.89	0.40
2:B:1275:A:C2'	8:N:16:HIS:CE1	3.05	0.40
2:B:1279:G:N1	2:B:1292:G:C5	2.89	0.40
2:B:1321:A:N7	2:B:1322:A:C8	2.90	0.40
2:B:1410:G:C6	2:B:1411:U:O4	2.73	0.40
2:B:1448:G:H2'	2:B:1449:G:H8	1.86	0.40
2:B:1560:G:C5	2:B:1561:C:C4	3.08	0.40
2:B:1819:A:C8	2:B:1821:A:C2	3.09	0.40
2:B:2231:U:C2	2:B:2232:C:C6	3.09	0.40
2:B:2478:A:H1'	2:B:2528:U:H4'	2.04	0.40
2:B:2756:U:C4	2:B:2759:G:O6	2.74	0.40
5:L:64:PHE:CG	25:7:24:LYS:HE2	2.56	0.40
6:1:26:PHE:O	6:1:30:MET:SD	2.80	0.40
7:M:18:ARG:HA	7:M:38:ARG:HH12	1.85	0.40
12:R:19:THR:HG22	12:R:97:LYS:HA	2.03	0.40
13:S:41:LYS:O	13:S:44:ALA:HB3	2.22	0.40
18:W:31:TYR:CE1	18:W:92:VAL:HG22	2.57	0.40
29:G:132:LEU:HD12	29:G:132:LEU:H	1.87	0.40
2:B:199:A:C2	2:B:2433:A:C2	3.09	0.40
2:B:244:A:C2	2:B:255:A:C4	3.10	0.40
2:B:269:C:C2	2:B:270:A:C8	3.10	0.40
2:B:633:A:H1'	2:B:2403:C:H4'	2.04	0.40
2:B:911:A:C8	7:M:9:PHE:CE2	3.10	0.40
2:B:939:G:C6	2:B:940:G:C6	3.10	0.40
2:B:1003:G:C4	2:B:1004:U:C5	3.09	0.40
2:B:1144:A:H2'	2:B:1145:C:C6	2.56	0.40
2:B:1284:A:C6	2:B:1285:A:C5	3.10	0.40
2:B:1287:A:H5'	8:N:103:ARG:HD2	2.03	0.40
2:B:1300:G:C5	2:B:1626:A:C8	3.09	0.40
2:B:1608:A:C4	2:B:1611:C:C5	3.09	0.40
2:B:1772:A:H4'	2:B:1786:A:H4'	2.03	0.40
2:B:1998:A:H2'	2:B:1999:C:H6	1.81	0.40
2:B:2344:U:H5''	2:B:2373:G:H4'	2.03	0.40
2:B:2494:G:C4	2:B:2495:G:C8	3.10	0.40
2:B:2625:G:H3'	2:B:2626:C:C6	2.57	0.40
2:B:2646:C:H2'	2:B:2647:U:C6	2.57	0.40
2:B:2692:G:C6	2:B:2718:G:C2	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2848:G:C4	10:P:20:ARG:NH2	2.90	0.40
3:0:39:VAL:C	3:0:41:SER:H	2.30	0.40
7:M:36:VAL:HG13	18:W:82:TYR:CE2	2.57	0.40
7:M:74:THR:HA	7:M:89:VAL:HA	2.03	0.40
10:P:29:VAL:H	10:P:40:GLN:H	1.70	0.40
10:P:38:ARG:HG3	10:P:40:GLN:HE22	1.87	0.40
12:R:91:GLN:HB2	12:R:92:TRP:H	1.60	0.40
19:X:4:VAL:CG1	19:X:83:ASP:H	2.35	0.40
19:X:116:VAL:HG23	19:X:143:ILE:HD11	2.02	0.40
19:X:213:VAL:O	19:X:260:VAL:HA	2.21	0.40
24:6:42:LEU:HD23	24:6:42:LEU:HA	1.95	0.40
32:J:130:HIS:CG	32:J:131:ASN:N	2.83	0.40
32:J:132:HIS:O	32:J:132:HIS:CD2	2.74	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	0	75/78 (96%)	54 (72%)	11 (15%)	10 (13%)	0	3
4	K	119/123 (97%)	84 (71%)	21 (18%)	14 (12%)	0	5
5	L	141/144 (98%)	108 (77%)	23 (16%)	10 (7%)	1	10
6	1	61/63 (97%)	49 (80%)	12 (20%)	0	100	100
7	M	134/136 (98%)	97 (72%)	18 (13%)	19 (14%)	0	3
8	N	118/127 (93%)	91 (77%)	20 (17%)	7 (6%)	1	13
9	O	114/117 (97%)	96 (84%)	12 (10%)	6 (5%)	1	14
10	P	112/115 (97%)	81 (72%)	18 (16%)	13 (12%)	0	5
11	Q	115/118 (98%)	87 (76%)	17 (15%)	11 (10%)	0	7
12	R	101/103 (98%)	71 (70%)	23 (23%)	7 (7%)	1	11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
13	S	108/110 (98%)	83 (77%)	16 (15%)	9 (8%)	0	9
14	D	207/209 (99%)	143 (69%)	42 (20%)	22 (11%)	0	6
15	T	91/100 (91%)	58 (64%)	17 (19%)	16 (18%)	0	2
16	2	56/59 (95%)	46 (82%)	7 (12%)	3 (5%)	1	14
17	U	94/104 (90%)	66 (70%)	16 (17%)	12 (13%)	0	4
18	W	92/94 (98%)	77 (84%)	10 (11%)	5 (5%)	1	14
19	X	410/490 (84%)	329 (80%)	46 (11%)	35 (8%)	0	8
20	E	199/201 (99%)	145 (73%)	28 (14%)	26 (13%)	0	3
21	Y	77/85 (91%)	43 (56%)	15 (20%)	19 (25%)	0	1
22	3	54/57 (95%)	36 (67%)	10 (18%)	8 (15%)	0	3
23	5	232/234 (99%)	185 (80%)	23 (10%)	24 (10%)	0	6
24	6	44/46 (96%)	33 (75%)	7 (16%)	4 (9%)	0	8
25	7	62/65 (95%)	44 (71%)	11 (18%)	7 (11%)	0	5
26	8	36/38 (95%)	26 (72%)	6 (17%)	4 (11%)	0	6
27	C	269/273 (98%)	201 (75%)	35 (13%)	33 (12%)	0	4
28	F	176/179 (98%)	119 (68%)	41 (23%)	16 (9%)	0	8
29	G	171/177 (97%)	128 (75%)	26 (15%)	17 (10%)	0	7
30	H	147/149 (99%)	109 (74%)	25 (17%)	13 (9%)	0	8
31	I	139/142 (98%)	114 (82%)	16 (12%)	9 (6%)	1	12
32	J	140/142 (99%)	102 (73%)	21 (15%)	17 (12%)	0	4
All	All	3894/4078 (96%)	2905 (75%)	593 (15%)	396 (10%)	1	6

All (396) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	0	15	ASN
3	0	28	PHE
3	0	70	LEU
5	L	29	LYS
5	L	41	ARG
5	L	47	ARG
5	L	113	ALA
5	L	142	ILE
7	M	17	ASN
7	M	58	LYS

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Mol	Chain	Res	Type
7	M	67	VAL
7	M	78	LEU
7	M	80	VAL
8	N	3	HIS
9	O	107	ALA
9	O	108	ASP
10	P	25	VAL
10	P	32	VAL
10	P	77	SER
10	P	98	TYR
10	P	107	ALA
11	Q	73	ILE
11	Q	87	VAL
12	R	27	ILE
13	S	12	SER
13	S	41	LYS
13	S	76	VAL
13	S	89	ALA
14	D	107	VAL
14	D	115	GLY
14	D	121	THR
14	D	129	THR
14	D	148	GLN
14	D	152	PRO
14	D	164	GLN
14	D	182	ALA
15	T	3	ARG
15	T	9	LYS
15	T	16	VAL
15	T	18	GLU
15	T	21	SER
15	T	38	ALA
15	T	39	THR
15	T	57	VAL
15	T	78	SER
17	U	13	LEU
17	U	64	ILE
19	X	10	ARG
19	X	13	VAL
19	X	84	VAL
19	X	118	ASN
19	X	166	LEU

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Mol	Chain	Res	Type
19	X	234	PRO
19	X	261	ARG
20	E	43	THR
20	E	76	PRO
21	Y	17	ALA
21	Y	36	ILE
21	Y	42	THR
21	Y	46	ALA
21	Y	49	ASN
21	Y	78	PHE
21	Y	83	ALA
22	3	2	VAL
22	3	20	ALA
22	3	26	SER
23	5	17	ALA
23	5	38	PHE
23	5	50	ILE
23	5	82	ALA
23	5	117	SER
23	5	127	LEU
23	5	140	PRO
23	5	205	LYS
24	6	24	THR
25	7	35	LYS
25	7	49	VAL
25	7	53	ASP
26	8	2	LYS
27	C	43	ASN
27	C	132	ARG
27	C	142	ASN
27	C	145	MET
27	C	154	ALA
27	C	177	SER
27	C	187	CYS
27	C	257	ARG
29	G	2	ARG
29	G	14	VAL
29	G	58	ALA
29	G	125	PRO
30	H	78	VAL
30	H	84	ALA
30	H	142	VAL

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Mol	Chain	Res	Type
31	I	17	ALA
32	J	23	LYS
32	J	73	VAL
32	J	128	ASN
3	0	13	THR
3	0	17	ARG
3	0	27	ARG
4	K	17	ARG
4	K	71	ARG
4	K	117	SER
5	L	30	THR
5	L	51	GLU
7	M	21	ALA
7	M	125	PRO
8	N	63	ARG
8	N	80	PHE
8	N	100	CYS
8	N	119	SER
9	O	59	ALA
10	P	54	LEU
10	P	63	ILE
10	P	79	VAL
11	Q	71	ASN
12	R	40	MET
12	R	98	ILE
13	S	53	SER
14	D	20	VAL
14	D	71	ALA
14	D	109	VAL
14	D	120	GLY
14	D	139	SER
14	D	175	LEU
14	D	206	ALA
15	T	37	ASP
15	T	89	GLU
16	2	28	LEU
17	U	37	GLY
17	U	98	ASN
19	X	145	ALA
19	X	165	ASP
19	X	264	GLY
19	X	266	ILE

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Mol	Chain	Res	Type
19	X	405	VAL
20	E	15	SER
20	E	30	GLN
20	E	54	GLY
20	E	66	GLY
20	E	68	ALA
20	E	72	SER
20	E	93	SER
20	E	96	VAL
20	E	148	ILE
21	Y	9	THR
21	Y	48	ALA
21	Y	53	GLY
23	5	56	ASP
23	5	81	GLY
23	5	229	LEU
24	6	7	PRO
25	7	32	LEU
26	8	7	VAL
27	C	49	THR
27	C	58	LYS
27	C	72	GLY
27	C	74	PRO
27	C	88	ALA
27	C	121	ALA
27	C	176	ARG
27	C	217	PRO
27	C	231	HIS
27	C	269	ARG
28	F	22	ASN
28	F	32	LYS
28	F	44	ALA
28	F	70	ARG
28	F	71	LYS
28	F	84	ILE
28	F	101	ARG
28	F	112	ASP
28	F	146	ASP
28	F	150	GLY
29	G	11	PRO
29	G	136	ASP
29	G	167	VAL

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Mol	Chain	Res	Type
30	H	98	ASP
30	H	116	ARG
30	H	123	ARG
31	I	7	TYR
32	J	2	LYS
32	J	8	PRO
32	J	43	GLU
32	J	59	ALA
32	J	134	ALA
3	O	21	LEU
4	K	64	ARG
4	K	118	LEU
5	L	64	PHE
7	M	16	ARG
7	M	60	GLN
7	M	86	LYS
7	M	87	GLY
8	N	59	SER
10	P	21	PRO
10	P	33	GLU
11	Q	5	ARG
11	Q	99	VAL
11	Q	101	ASP
12	R	81	LYS
14	D	30	GLU
14	D	65	ALA
15	T	2	ILE
15	T	72	GLN
15	T	86	THR
17	U	12	VAL
17	U	31	GLY
17	U	38	ILE
17	U	81	ARG
18	W	24	ASN
18	W	28	ALA
18	W	56	PHE
19	X	9	GLY
19	X	148	GLY
19	X	210	ARG
19	X	211	PRO
19	X	258	ALA
19	X	267	THR

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Mol	Chain	Res	Type
19	X	295	ARG
19	X	346	ASP
19	X	348	ALA
19	X	406	LYS
19	X	460	GLY
20	E	8	ALA
20	E	45	ALA
20	E	46	GLN
20	E	83	VAL
20	E	106	LYS
20	E	124	PHE
20	E	130	LYS
21	Y	56	HIS
21	Y	74	LYS
21	Y	75	ASN
22	3	40	HIS
22	3	51	ARG
22	3	55	ALA
23	5	33	LEU
23	5	35	THR
23	5	135	GLY
23	5	167	LYS
25	7	16	THR
25	7	51	LYS
25	7	52	GLY
26	8	8	LYS
27	C	28	PRO
27	C	42	ARG
27	C	55	GLY
27	C	65	ASP
27	C	86	ARG
27	C	89	ASN
27	C	133	ASN
27	C	189	ALA
28	F	64	PRO
29	G	32	LEU
29	G	98	LYS
29	G	166	GLU
30	H	29	PHE
30	H	111	ALA
31	I	2	LYS
31	I	6	ALA

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Mol	Chain	Res	Type
31	I	31	GLY
31	I	92	PRO
31	I	118	GLY
32	J	19	ASP
32	J	20	ALA
32	J	71	ASP
32	J	127	GLY
32	J	131	ASN
32	J	132	HIS
4	K	12	ASP
4	K	34	GLY
4	K	36	GLY
4	K	82	ASN
7	M	18	ARG
7	M	24	THR
7	M	77	PRO
7	M	132	THR
9	O	69	ASP
10	P	50	ARG
10	P	81	ASP
11	Q	9	ALA
12	R	25	LEU
13	S	2	GLU
14	D	31	ALA
15	T	51	PHE
15	T	74	ILE
16	2	10	ARG
17	U	16	LYS
19	X	24	ARG
19	X	96	MET
19	X	230	VAL
19	X	396	GLN
20	E	4	VAL
20	E	11	ALA
20	E	13	THR
20	E	56	GLY
20	E	65	THR
20	E	81	GLY
20	E	125	SER
21	Y	62	ALA
23	5	160	GLN
23	5	200	LYS

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Mol	Chain	Res	Type
23	5	232	SER
24	6	8	SER
27	C	105	ALA
27	C	198	GLU
28	F	77	LYS
28	F	106	ALA
28	F	148	VAL
29	G	29	ASN
29	G	82	PHE
29	G	157	LYS
29	G	164	ALA
30	H	60	GLU
30	H	83	LYS
30	H	137	GLU
3	0	10	ARG
8	N	93	GLY
9	O	90	VAL
10	P	95	LYS
11	Q	81	GLY
13	S	28	LYS
17	U	17	ASP
17	U	88	ASP
18	W	27	PRO
18	W	44	HIS
19	X	41	LYS
19	X	147	HIS
19	X	343	GLY
20	E	80	SER
21	Y	14	ASP
21	Y	16	GLU
22	3	24	VAL
23	5	52	ALA
23	5	118	PRO
23	5	204	ALA
26	8	16	ILE
27	C	50	THR
28	F	59	ILE
28	F	78	ILE
29	G	155	PRO
29	G	175	LYS
31	I	3	LYS
32	J	137	PRO

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Mol	Chain	Res	Type
4	K	6	THR
4	K	50	GLY
4	K	53	LYS
5	L	36	LYS
5	L	122	VAL
7	M	10	ARG
7	M	30	SER
11	Q	91	ARG
12	R	16	GLU
13	S	26	GLY
14	D	117	GLY
14	D	119	ALA
16	2	13	ILE
19	X	110	GLU
21	Y	69	GLU
23	5	201	PRO
27	C	52	HIS
27	C	84	PRO
29	G	79	THR
30	H	38	PRO
31	I	119	ALA
11	Q	89	ILE
12	R	101	ILE
17	U	69	VAL
19	X	66	GLY
19	X	168	PRO
23	5	233	VAL
27	C	230	PRO
32	J	46	PRO
9	O	66	GLY
11	Q	33	VAL
13	S	87	PRO
14	D	122	VAL
19	X	124	ASP
3	0	6	VAL
4	K	52	VAL
4	K	103	VAL
21	Y	47	GLY
22	3	7	PRO
23	5	142	VAL
30	H	99	ILE
7	M	4	PRO

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Mol	Chain	Res	Type
7	M	124	LEU
14	D	166	GLY
19	X	241	ILE
21	Y	33	GLY
24	6	44	VAL
3	0	63	ILE
27	C	46	GLY
32	J	110	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	0	67/68 (98%)	62 (92%)	5 (8%)	12	33
4	K	102/104 (98%)	91 (89%)	11 (11%)	6	21
5	L	102/103 (99%)	89 (87%)	13 (13%)	4	17
6	1	55/55 (100%)	50 (91%)	5 (9%)	9	28
7	M	109/109 (100%)	103 (94%)	6 (6%)	19	42
8	N	100/103 (97%)	89 (89%)	11 (11%)	6	21
9	O	86/87 (99%)	73 (85%)	13 (15%)	3	13
10	P	99/100 (99%)	86 (87%)	13 (13%)	4	16
11	Q	89/90 (99%)	78 (88%)	11 (12%)	4	18
12	R	84/84 (100%)	68 (81%)	16 (19%)	1	8
13	S	93/93 (100%)	85 (91%)	8 (9%)	10	29
14	D	164/164 (100%)	143 (87%)	21 (13%)	4	17
15	T	80/84 (95%)	67 (84%)	13 (16%)	2	11
16	2	48/49 (98%)	44 (92%)	4 (8%)	10	30
17	U	81/85 (95%)	73 (90%)	8 (10%)	7	24
18	W	78/78 (100%)	72 (92%)	6 (8%)	12	32
19	X	357/419 (85%)	324 (91%)	33 (9%)	8	27

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
20	E	165/165 (100%)	151 (92%)	14 (8%)	10	29
21	Y	59/63 (94%)	54 (92%)	5 (8%)	10	29
22	3	47/48 (98%)	39 (83%)	8 (17%)	2	11
23	5	181/181 (100%)	158 (87%)	23 (13%)	4	17
24	6	38/38 (100%)	35 (92%)	3 (8%)	11	32
25	7	51/52 (98%)	44 (86%)	7 (14%)	3	15
26	8	34/34 (100%)	31 (91%)	3 (9%)	9	29
27	C	216/218 (99%)	192 (89%)	24 (11%)	6	20
28	F	149/150 (99%)	134 (90%)	15 (10%)	7	23
29	G	136/138 (99%)	115 (85%)	21 (15%)	2	12
30	H	114/114 (100%)	105 (92%)	9 (8%)	11	32
31	I	109/110 (99%)	100 (92%)	9 (8%)	10	30
32	J	116/116 (100%)	103 (89%)	13 (11%)	6	20
All	All	3209/3302 (97%)	2858 (89%)	351 (11%)	8	21

All (351) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	0	19	HIS
3	0	28	PHE
3	0	32	LEU
3	0	40	GLU
3	0	63	ILE
4	K	5	GLN
4	K	7	MET
4	K	17	ARG
4	K	29	HIS
4	K	47	ILE
4	K	49	ARG
4	K	72	PRO
4	K	80	ASP
4	K	99	ILE
4	K	109	SER
4	K	110	GLU
5	L	2	ARG
5	L	5	THR
5	L	19	LEU

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Mol	Chain	Res	Type
5	L	23	ILE
5	L	29	LYS
5	L	33	ARG
5	L	48	ARG
5	L	55	MET
5	L	63	LYS
5	L	79	LEU
5	L	111	ILE
5	L	119	PRO
5	L	129	LYS
6	1	5	GLU
6	1	6	LEU
6	1	30	MET
6	1	47	ARG
6	1	54	LYS
7	M	16	ARG
7	M	24	THR
7	M	67	VAL
7	M	69	PRO
7	M	101	VAL
7	M	106	ASP
8	N	1	MET
8	N	2	ARG
8	N	8	ARG
8	N	32	GLU
8	N	35	LYS
8	N	37	THR
8	N	63	ARG
8	N	80	PHE
8	N	85	PRO
8	N	98	LEU
8	N	113	ILE
9	O	31	THR
9	O	34	HIS
9	O	36	TYR
9	O	54	VAL
9	O	62	LEU
9	O	64	TYR
9	O	65	THR
9	O	69	ASP
9	O	80	GLU
9	O	84	GLU

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Mol	Chain	Res	Type
9	O	95	SER
9	O	108	ASP
9	O	117	PHE
10	P	10	GLU
10	P	25	VAL
10	P	27	VAL
10	P	39	LEU
10	P	45	VAL
10	P	59	THR
10	P	63	ILE
10	P	70	GLU
10	P	76	HIS
10	P	87	ARG
10	P	88	ARG
10	P	98	TYR
10	P	111	GLU
11	Q	4	LYS
11	Q	27	ARG
11	Q	30	VAL
11	Q	50	ARG
11	Q	58	GLN
11	Q	73	ILE
11	Q	87	VAL
11	Q	90	ASP
11	Q	93	ILE
11	Q	100	PHE
11	Q	108	LEU
12	R	1	MET
12	R	4	VAL
12	R	6	GLN
12	R	13	ARG
12	R	14	VAL
12	R	20	VAL
12	R	22	LEU
12	R	26	ASP
12	R	33	VAL
12	R	34	GLU
12	R	38	VAL
12	R	39	LEU
12	R	41	ILE
12	R	47	VAL
12	R	54	VAL

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Mol	Chain	Res	Type
12	R	79	ARG
13	S	1	MET
13	S	2	GLU
13	S	35	ILE
13	S	51	LEU
13	S	70	LYS
13	S	71	VAL
13	S	98	LYS
13	S	100	THR
14	D	2	ILE
14	D	20	VAL
14	D	22	ILE
14	D	25	THR
14	D	30	GLU
14	D	45	TYR
14	D	46	ARG
14	D	56	LYS
14	D	60	VAL
14	D	79	LEU
14	D	89	GLU
14	D	92	VAL
14	D	110	THR
14	D	118	PHE
14	D	130	GLN
14	D	146	ILE
14	D	161	MET
14	D	176	ASP
14	D	181	ASP
14	D	183	GLU
14	D	201	LEU
15	T	2	ILE
15	T	4	GLU
15	T	6	ARG
15	T	10	VAL
15	T	11	LEU
15	T	25	GLU
15	T	34	VAL
15	T	37	ASP
15	T	52	GLU
15	T	64	LYS
15	T	68	LYS
15	T	80	TRP

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Mol	Chain	Res	Type
15	T	88	LYS
16	2	5	LYS
16	2	36	GLU
16	2	55	LYS
16	2	56	VAL
17	U	16	LYS
17	U	36	GLU
17	U	51	LEU
17	U	52	ASN
17	U	60	LYS
17	U	64	ILE
17	U	99	SER
17	U	100	GLU
18	W	5	ASN
18	W	7	GLU
18	W	37	PRO
18	W	77	VAL
18	W	79	ARG
18	W	84	PRO
19	X	8	VAL
19	X	10	ARG
19	X	13	VAL
19	X	21	ARG
19	X	55	ILE
19	X	68	GLU
19	X	77	LEU
19	X	86	LEU
19	X	99	ASP
19	X	100	GLU
19	X	106	LEU
19	X	109	ARG
19	X	120	THR
19	X	133	TYR
19	X	135	LEU
19	X	140	ILE
19	X	143	ILE
19	X	204	LYS
19	X	205	LEU
19	X	240	SER
19	X	241	ILE
19	X	255	ILE
19	X	257	THR

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Mol	Chain	Res	Type
19	X	266	ILE
19	X	295	ARG
19	X	309	ILE
19	X	346	ASP
19	X	353	ILE
19	X	356	LEU
19	X	409	TYR
19	X	411	HIS
19	X	419	ILE
19	X	449	MET
20	E	4	VAL
20	E	5	LEU
20	E	7	ASP
20	E	22	ASP
20	E	41	GLN
20	E	43	THR
20	E	60	TRP
20	E	63	LYS
20	E	78	TRP
20	E	83	VAL
20	E	90	GLN
20	E	96	VAL
20	E	133	LEU
20	E	193	VAL
21	Y	11	ASN
21	Y	13	ARG
21	Y	14	ASP
21	Y	16	GLU
21	Y	39	GLN
22	3	2	VAL
22	3	5	ASN
22	3	8	THR
22	3	15	ARG
22	3	28	SER
22	3	29	VAL
22	3	42	ILE
22	3	43	THR
23	5	4	LEU
23	5	7	ARG
23	5	18	THR
23	5	50	ILE
23	5	53	ARG

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Mol	Chain	Res	Type
23	5	71	ARG
23	5	74	ARG
23	5	109	MET
23	5	114	VAL
23	5	121	MET
23	5	127	LEU
23	5	142	VAL
23	5	145	VAL
23	5	162	ARG
23	5	184	LYS
23	5	189	LEU
23	5	193	LEU
23	5	209	ILE
23	5	211	LYS
23	5	214	ILE
23	5	217	THR
23	5	225	ASP
23	5	233	VAL
24	6	1	MET
24	6	21	ARG
24	6	34	ARG
25	7	12	ARG
25	7	18	LYS
25	7	30	HIS
25	7	33	THR
25	7	34	LYS
25	7	37	THR
25	7	58	ILE
26	8	11	CYS
26	8	12	ARG
26	8	22	VAL
27	C	18	VAL
27	C	24	HIS
27	C	28	PRO
27	C	34	GLU
27	C	58	LYS
27	C	78	GLU
27	C	81	GLU
27	C	82	TYR
27	C	99	GLU
27	C	110	LYS
27	C	123	ILE

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Mol	Chain	Res	Type
27	C	152	GLN
27	C	159	THR
27	C	170	TYR
27	C	173	LEU
27	C	177	SER
27	C	193	GLU
27	C	198	GLU
27	C	213	ARG
27	C	228	ASP
27	C	249	VAL
27	C	263	ASP
27	C	264	LYS
27	C	270	ARG
28	F	3	LEU
28	F	8	LYS
28	F	10	GLU
28	F	27	VAL
28	F	37	MET
28	F	46	LYS
28	F	63	LYS
28	F	77	LYS
28	F	103	ILE
28	F	134	GLN
28	F	145	VAL
28	F	162	ASP
28	F	163	GLU
28	F	174	PHE
28	F	177	ARG
29	G	5	LYS
29	G	14	VAL
29	G	18	ILE
29	G	31	GLU
29	G	41	GLU
29	G	61	TRP
29	G	74	MET
29	G	80	GLU
29	G	83	THR
29	G	88	LEU
29	G	91	VAL
29	G	94	ARG
29	G	101	VAL
29	G	115	GLN

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Mol	Chain	Res	Type
29	G	120	ILE
29	G	121	THR
29	G	127	GLN
29	G	140	ILE
29	G	167	VAL
29	G	168	VAL
29	G	169	ARG
30	H	4	ILE
30	H	19	VAL
30	H	20	ASN
30	H	21	VAL
30	H	79	THR
30	H	94	ILE
30	H	108	VAL
30	H	119	ASN
30	H	129	GLU
31	I	4	VAL
31	I	10	LEU
31	I	23	VAL
31	I	96	LYS
31	I	97	VAL
31	I	112	LYS
31	I	115	ASP
31	I	116	MET
31	I	140	GLU
32	J	9	GLU
32	J	13	ARG
32	J	15	TRP
32	J	39	LYS
32	J	50	THR
32	J	55	ILE
32	J	86	GLN
32	J	90	GLU
32	J	91	GLU
32	J	124	VAL
32	J	129	GLU
32	J	132	HIS
32	J	135	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (93) such sidechains are listed below:

Mol	Chain	Res	Type
3	0	15	ASN
3	0	35	HIS
4	K	5	GLN
4	K	9	ASN
5	L	38	GLN
6	1	41	HIS
6	1	45	GLN
7	M	13	HIS
7	M	45	GLN
7	M	97	GLN
8	N	3	HIS
8	N	11	ASN
8	N	16	HIS
8	N	31	HIS
8	N	107	ASN
9	O	19	GLN
9	O	67	ASN
9	O	116	GLN
10	P	6	GLN
10	P	9	GLN
10	P	51	ASN
10	P	74	GLN
11	Q	19	GLN
11	Q	58	GLN
11	Q	70	GLN
12	R	12	HIS
12	R	43	ASN
12	R	82	HIS
12	R	89	HIS
13	S	7	HIS
13	S	9	HIS
13	S	40	ASN
13	S	57	ASN
14	D	67	HIS
14	D	126	ASN
14	D	134	HIS
14	D	136	ASN
14	D	173	GLN
15	T	28	ASN
16	2	8	GLN
17	U	39	ASN
17	U	65	GLN
18	W	12	GLN

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Mol	Chain	Res	Type
18	W	44	HIS
19	X	147	HIS
19	X	169	GLN
19	X	199	GLN
19	X	212	ASN
19	X	286	ASN
19	X	357	HIS
19	X	411	HIS
19	X	423	HIS
20	E	46	GLN
20	E	163	ASN
20	E	165	HIS
21	Y	39	GLN
21	Y	45	HIS
21	Y	75	ASN
22	3	4	GLN
22	3	5	ASN
22	3	37	HIS
22	3	40	HIS
23	5	155	ASN
24	6	13	ASN
24	6	29	GLN
25	7	23	HIS
26	8	13	ASN
27	C	14	HIS
27	C	20	ASN
27	C	24	HIS
27	C	142	ASN
27	C	199	HIS
27	C	229	HIS
27	C	250	GLN
27	C	259	ASN
28	F	22	ASN
29	G	19	ASN
29	G	29	ASN
29	G	44	HIS
29	G	47	ASN
29	G	110	HIS
30	H	20	ASN
30	H	33	GLN
30	H	128	HIS
30	H	133	GLN

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Mol	Chain	Res	Type
31	I	42	ASN
31	I	110	GLN
32	J	40	HIS
32	J	76	HIS
32	J	77	HIS
32	J	86	GLN
32	J	130	HIS
32	J	132	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	112/117 (95%)	20 (17%)	4 (3%)
2	B	2873/2903 (98%)	586 (20%)	122 (4%)
All	All	2985/3020 (98%)	606 (20%)	126 (4%)

All (606) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	9	G
1	A	13	G
1	A	14	U
1	A	15	A
1	A	16	G
1	A	26	C
1	A	29	A
1	A	30	C
1	A	41	G
1	A	45	A
1	A	52	A
1	A	53	A
1	A	66	A
1	A	67	G
1	A	89	U
1	A	90	C
1	A	91	C
1	A	99	A
1	A	109	A
1	A	118	C
2	B	13	A
2	B	23	G

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Mol	Chain	Res	Type
2	B	35	G
2	B	46	G
2	B	50	U
2	B	51	G
2	B	63	A
2	B	71	A
2	B	74	A
2	B	75	G
2	B	84	A
2	B	91	A
2	B	92	U
2	B	100	U
2	B	101	A
2	B	102	U
2	B	103	A
2	B	118	A
2	B	120	U
2	B	126	A
2	B	128	C
2	B	136	G
2	B	137	U
2	B	139	U
2	B	140	C
2	B	141	G
2	B	142	A
2	B	143	C
2	B	144	A
2	B	160	A
2	B	163	C
2	B	181	A
2	B	196	A
2	B	197	A
2	B	198	C
2	B	199	A
2	B	216	A
2	B	219	A
2	B	221	A
2	B	222	A
2	B	223	A
2	B	228	C
2	B	229	C
2	B	233	A

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Mol	Chain	Res	Type
2	B	241	A
2	B	248	G
2	B	249	C
2	B	255	A
2	B	264	C
2	B	265	A
2	B	266	G
2	B	268	C
2	B	271	G
2	B	273	G
2	B	276	U
2	B	277	G
2	B	278	A
2	B	281	C
2	B	283	G
2	B	286	U
2	B	294	A
2	B	299	A
2	B	311	A
2	B	320	A
2	B	321	U
2	B	322	A
2	B	329	G
2	B	330	A
2	B	333	G
2	B	343	C
2	B	346	A
2	B	352	A
2	B	353	C
2	B	361	G
2	B	362	A
2	B	363	G
2	B	369	U
2	B	371	A
2	B	372	G
2	B	386	G
2	B	389	G
2	B	405	U
2	B	406	G
2	B	411	G
2	B	412	A
2	B	424	G

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Mol	Chain	Res	Type
2	B	451	U
2	B	454	A
2	B	455	C
2	B	456	C
2	B	457	A
2	B	479	A
2	B	481	G
2	B	490	C
2	B	491	G
2	B	498	G
2	B	504	A
2	B	505	A
2	B	508	A
2	B	509	C
2	B	512	G
2	B	531	C
2	B	532	A
2	B	533	G
2	B	544	C
2	B	546	U
2	B	547	A
2	B	548	G
2	B	549	G
2	B	550	C
2	B	563	A
2	B	571	U
2	B	572	A
2	B	573	U
2	B	575	A
2	B	586	A
2	B	588	U
2	B	603	A
2	B	613	A
2	B	614	A
2	B	615	U
2	B	621	A
2	B	625	G
2	B	626	A
2	B	627	A
2	B	631	A
2	B	632	A
2	B	637	A

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Mol	Chain	Res	Type
2	B	642	U
2	B	645	C
2	B	646	U
2	B	647	G
2	B	654	A
2	B	655	A
2	B	656	G
2	B	671	C
2	B	686	U
2	B	715	A
2	B	717	C
2	B	730	A
2	B	746	U
2	B	747	U
2	B	751	A
2	B	757	G
2	B	764	A
2	B	773	U
2	B	774	G
2	B	775	G
2	B	776	G
2	B	782	A
2	B	784	G
2	B	785	G
2	B	789	A
2	B	790	U
2	B	792	A
2	B	801	G
2	B	802	A
2	B	804	A
2	B	805	G
2	B	812	C
2	B	819	A
2	B	827	U
2	B	828	U
2	B	829	A
2	B	830	G
2	B	846	U
2	B	847	U
2	B	859	G
2	B	871	U
2	B	875	G

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Mol	Chain	Res	Type
2	B	876	C
2	B	878	A
2	B	881	G
2	B	887	U
2	B	889	C
2	B	890	C
2	B	891	G
2	B	896	A
2	B	897	C
2	B	900	A
2	B	901	C
2	B	910	A
2	B	912	C
2	B	919	U
2	B	931	U
2	B	932	U
2	B	933	A
2	B	941	A
2	B	943	A
2	B	945	A
2	B	946	C
2	B	961	C
2	B	973	A
2	B	974	G
2	B	980	A
2	B	981	A
2	B	983	A
2	B	984	A
2	B	985	C
2	B	991	C
2	B	995	C
2	B	996	A
2	B	1012	U
2	B	1013	C
2	B	1022	G
2	B	1025	G
2	B	1026	G
2	B	1027	A
2	B	1033	U
2	B	1046	A
2	B	1047	G
2	B	1048	A

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Mol	Chain	Res	Type
2	B	1054	A
2	B	1056	G
2	B	1057	A
2	B	1068	G
2	B	1069	A
2	B	1070	A
2	B	1071	G
2	B	1077	A
2	B	1078	U
2	B	1084	A
2	B	1085	A
2	B	1088	A
2	B	1090	A
2	B	1095	A
2	B	1096	A
2	B	1104	C
2	B	1112	G
2	B	1116	G
2	B	1129	A
2	B	1130	U
2	B	1132	U
2	B	1133	A
2	B	1134	A
2	B	1135	C
2	B	1136	G
2	B	1139	G
2	B	1142	A
2	B	1176	U
2	B	1205	A
2	B	1206	G
2	B	1237	A
2	B	1238	G
2	B	1241	A
2	B	1242	U
2	B	1248	G
2	B	1250	G
2	B	1253	A
2	B	1255	U
2	B	1256	G
2	B	1266	G
2	B	1271	G
2	B	1272	A

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Mol	Chain	Res	Type
2	B	1273	U
2	B	1275	A
2	B	1276	A
2	B	1284	A
2	B	1300	G
2	B	1301	A
2	B	1312	U
2	B	1313	U
2	B	1321	A
2	B	1325	U
2	B	1337	G
2	B	1340	U
2	B	1341	G
2	B	1352	U
2	B	1365	A
2	B	1368	G
2	B	1374	G
2	B	1379	U
2	B	1380	G
2	B	1383	A
2	B	1384	A
2	B	1394	U
2	B	1396	U
2	B	1416	G
2	B	1419	A
2	B	1421	G
2	B	1427	A
2	B	1428	C
2	B	1451	C
2	B	1454	C
2	B	1458	U
2	B	1459	G
2	B	1460	U
2	B	1461	C
2	B	1469	A
2	B	1476	U
2	B	1477	A
2	B	1478	G
2	B	1482	G
2	B	1490	A
2	B	1497	U
2	B	1498	C

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Mol	Chain	Res	Type
2	B	1504	A
2	B	1507	C
2	B	1508	A
2	B	1509	A
2	B	1524	G
2	B	1532	A
2	B	1535	A
2	B	1536	C
2	B	1538	G
2	B	1552	A
2	B	1558	C
2	B	1566	A
2	B	1567	G
2	B	1569	A
2	B	1578	U
2	B	1584	U
2	B	1585	C
2	B	1607	C
2	B	1608	A
2	B	1609	A
2	B	1610	A
2	B	1616	A
2	B	1617	C
2	B	1618	A
2	B	1633	G
2	B	1634	A
2	B	1635	A
2	B	1640	A
2	B	1647	U
2	B	1648	U
2	B	1653	G
2	B	1654	A
2	B	1670	C
2	B	1674	G
2	B	1677	A
2	B	1678	A
2	B	1679	A
2	B	1700	A
2	B	1714	U
2	B	1715	G
2	B	1729	U
2	B	1730	C

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Mol	Chain	Res	Type
2	B	1731	G
2	B	1733	G
2	B	1738	G
2	B	1756	G
2	B	1757	A
2	B	1758	U
2	B	1761	C
2	B	1764	C
2	B	1773	A
2	B	1776	G
2	B	1784	A
2	B	1800	C
2	B	1801	A
2	B	1808	A
2	B	1816	C
2	B	1819	A
2	B	1820	U
2	B	1821	A
2	B	1829	A
2	B	1834	U
2	B	1836	C
2	B	1837	C
2	B	1848	A
2	B	1853	A
2	B	1886	U
2	B	1888	G
2	B	1896	G
2	B	1900	A
2	B	1905	C
2	B	1906	G
2	B	1912	A
2	B	1914	C
2	B	1925	C
2	B	1926	U
2	B	1927	A
2	B	1928	A
2	B	1929	G
2	B	1930	G
2	B	1931	U
2	B	1935	G
2	B	1938	A
2	B	1939	U

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Mol	Chain	Res	Type
2	B	1940	U
2	B	1951	U
2	B	1953	A
2	B	1954	G
2	B	1955	U
2	B	1964	G
2	B	1967	C
2	B	1969	A
2	B	1970	A
2	B	1971	U
2	B	1972	G
2	B	1991	U
2	B	1993	U
2	B	1997	C
2	B	2020	A
2	B	2022	U
2	B	2023	C
2	B	2031	A
2	B	2032	G
2	B	2033	A
2	B	2042	A
2	B	2043	C
2	B	2055	C
2	B	2056	G
2	B	2059	A
2	B	2060	A
2	B	2061	G
2	B	2062	A
2	B	2069	G
2	B	2077	A
2	B	2094	A
2	B	2102	G
2	B	2106	U
2	B	2111	U
2	B	2116	G
2	B	2119	A
2	B	2120	G
2	B	2121	G
2	B	2122	U
2	B	2124	G
2	B	2126	A
2	B	2127	G

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Mol	Chain	Res	Type
2	B	2128	G
2	B	2129	C
2	B	2130	U
2	B	2131	U
2	B	2132	U
2	B	2133	G
2	B	2134	A
2	B	2137	U
2	B	2138	G
2	B	2142	A
2	B	2144	G
2	B	2146	C
2	B	2147	A
2	B	2148	G
2	B	2149	U
2	B	2150	C
2	B	2151	U
2	B	2152	G
2	B	2153	C
2	B	2154	A
2	B	2155	U
2	B	2156	G
2	B	2157	G
2	B	2158	A
2	B	2163	A
2	B	2164	C
2	B	2165	C
2	B	2166	U
2	B	2167	U
2	B	2168	G
2	B	2171	A
2	B	2173	A
2	B	2174	C
2	B	2175	C
2	B	2177	C
2	B	2178	C
2	B	2179	C
2	B	2181	U
2	B	2182	U
2	B	2192	U
2	B	2197	U
2	B	2198	A

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Mol	Chain	Res	Type
2	B	2204	G
2	B	2211	A
2	B	2212	A
2	B	2213	U
2	B	2214	C
2	B	2225	A
2	B	2238	G
2	B	2239	G
2	B	2251	G
2	B	2252	G
2	B	2253	G
2	B	2266	A
2	B	2270	A
2	B	2278	A
2	B	2279	G
2	B	2283	C
2	B	2287	A
2	B	2288	A
2	B	2297	A
2	B	2304	G
2	B	2305	U
2	B	2307	G
2	B	2310	C
2	B	2311	A
2	B	2312	U
2	B	2320	U
2	B	2321	U
2	B	2322	A
2	B	2324	U
2	B	2325	G
2	B	2327	A
2	B	2333	A
2	B	2335	A
2	B	2336	A
2	B	2337	G
2	B	2347	C
2	B	2372	U
2	B	2377	A
2	B	2383	G
2	B	2385	C
2	B	2388	A
2	B	2391	G

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Mol	Chain	Res	Type
2	B	2396	G
2	B	2403	C
2	B	2406	A
2	B	2426	A
2	B	2427	C
2	B	2429	G
2	B	2430	A
2	B	2431	U
2	B	2432	A
2	B	2434	A
2	B	2439	A
2	B	2440	C
2	B	2441	U
2	B	2448	A
2	B	2449	U
2	B	2458	G
2	B	2472	G
2	B	2476	A
2	B	2478	A
2	B	2491	U
2	B	2498	C
2	B	2502	G
2	B	2503	A
2	B	2505	G
2	B	2506	U
2	B	2518	A
2	B	2529	G
2	B	2534	A
2	B	2535	G
2	B	2553	G
2	B	2555	U
2	B	2565	A
2	B	2566	A
2	B	2567	G
2	B	2572	A
2	B	2573	C
2	B	2576	G
2	B	2577	A
2	B	2578	G
2	B	2582	G
2	B	2585	U
2	B	2586	U

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Mol	Chain	Res	Type
2	B	2602	A
2	B	2609	U
2	B	2613	U
2	B	2629	U
2	B	2630	G
2	B	2682	A
2	B	2689	U
2	B	2690	U
2	B	2691	C
2	B	2714	G
2	B	2726	A
2	B	2733	A
2	B	2744	G
2	B	2748	A
2	B	2750	A
2	B	2757	A
2	B	2765	A
2	B	2778	A
2	B	2793	C
2	B	2798	U
2	B	2799	A
2	B	2800	A
2	B	2809	A
2	B	2820	A
2	B	2821	A
2	B	2832	U
2	B	2833	U
2	B	2834	G
2	B	2835	A
2	B	2836	U
2	B	2849	U
2	B	2850	A
2	B	2867	G
2	B	2868	A
2	B	2872	A
2	B	2873	A
2	B	2883	A
2	B	2893	A

All (126) RNA pucker outliers are listed below:

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Mol	Chain	Res	Type
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Mol	Chain	Res	Type
1	A	13	G
1	A	14	U
1	A	66	A
1	A	89	U
2	B	1	G
2	B	50	U
2	B	92	U
2	B	100	U
2	B	197	A
2	B	218	A
2	B	228	C
2	B	320	A
2	B	321	U
2	B	329	G
2	B	390	U
2	B	451	U
2	B	455	C
2	B	489	G
2	B	548	G
2	B	571	U
2	B	620	G
2	B	631	A
2	B	642	U
2	B	654	A
2	B	670	A
2	B	748	G
2	B	773	U
2	B	780	G
2	B	796	C
2	B	801	G
2	B	805	G
2	B	821	A
2	B	827	U
2	B	828	U
2	B	846	U
2	B	880	G
2	B	889	C
2	B	890	C
2	B	932	U
2	B	945	A
2	B	973	A

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Mol	Chain	Res	Type
2	B	980	A
2	B	981	A
2	B	982	C
2	B	984	A
2	B	995	C
2	B	1046	A
2	B	1061	U
2	B	1084	A
2	B	1095	A
2	B	1129	A
2	B	1133	A
2	B	1134	A
2	B	1205	A
2	B	1211	C
2	B	1271	G
2	B	1272	A
2	B	1284	A
2	B	1312	U
2	B	1379	U
2	B	1383	A
2	B	1419	A
2	B	1420	A
2	B	1428	C
2	B	1497	U
2	B	1608	A
2	B	1653	G
2	B	1673	G
2	B	1676	A
2	B	1677	A
2	B	1714	U
2	B	1730	C
2	B	1782	U
2	B	1819	A
2	B	1820	U
2	B	1836	C
2	B	1899	A
2	B	1900	A
2	B	1905	C
2	B	1930	G
2	B	1937	A
2	B	1939	U
2	B	1953	A

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Mol	Chain	Res	Type
2	B	1969	A
2	B	2022	U
2	B	2031	A
2	B	2042	A
2	B	2055	C
2	B	2058	A
2	B	2060	A
2	B	2062	A
2	B	2076	U
2	B	2093	G
2	B	2118	U
2	B	2119	A
2	B	2128	G
2	B	2136	G
2	B	2145	C
2	B	2157	G
2	B	2163	A
2	B	2178	C
2	B	2213	U
2	B	2251	G
2	B	2254	C
2	B	2270	A
2	B	2272	U
2	B	2282	G
2	B	2311	A
2	B	2320	U
2	B	2336	A
2	B	2402	U
2	B	2425	A
2	B	2439	A
2	B	2501	C
2	B	2564	A
2	B	2575	C
2	B	2576	G
2	B	2581	G
2	B	2601	C
2	B	2690	U
2	B	2756	U
2	B	2790	U
2	B	2809	A
2	B	2820	A
2	B	2833	U

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Mol	Chain	Res	Type
2	B	2867	G

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

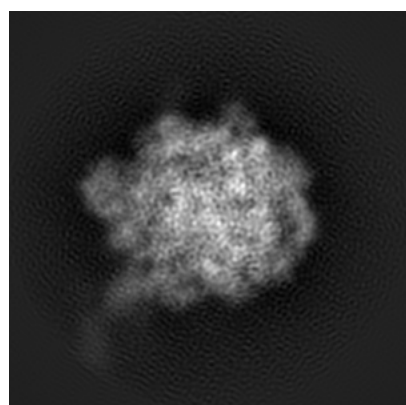
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-6149. These allow visual inspection of the internal detail of the map and identification of artifacts.

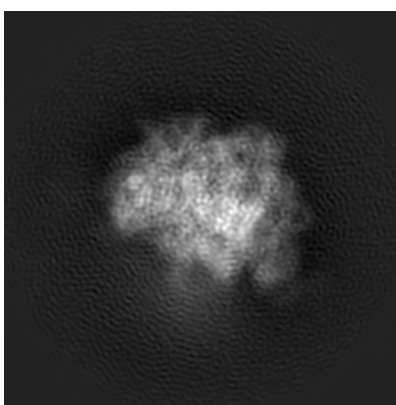
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

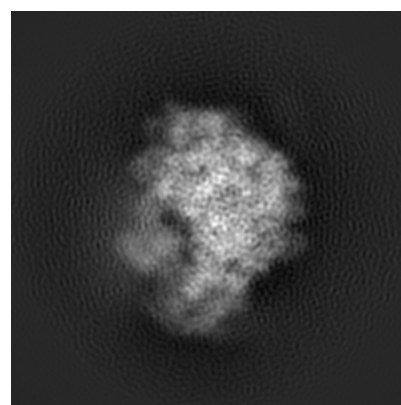
6.1.1 Primary map



X



Y

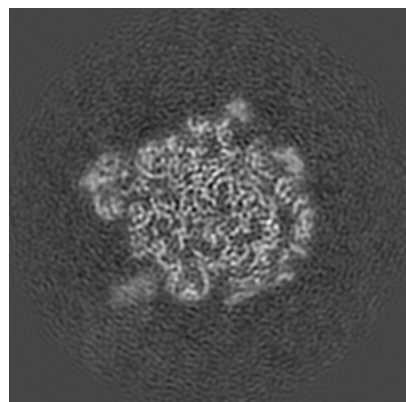


Z

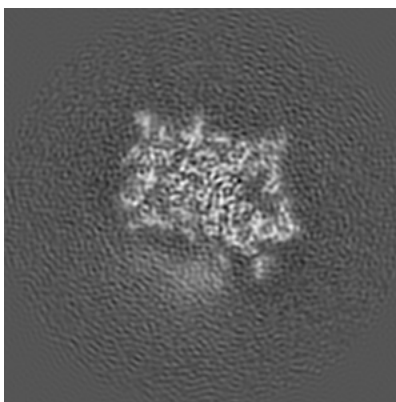
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

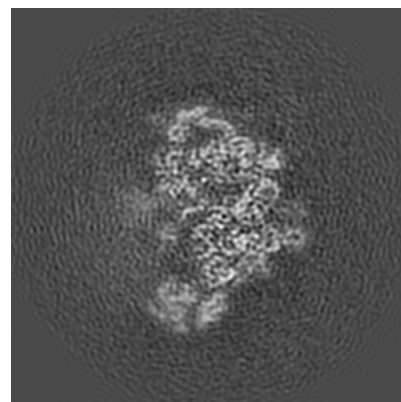
6.2.1 Primary map



X Index: 160



Y Index: 160

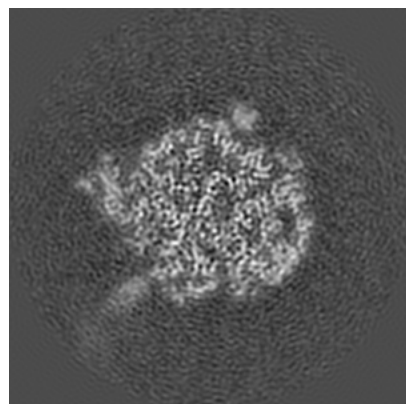


Z Index: 160

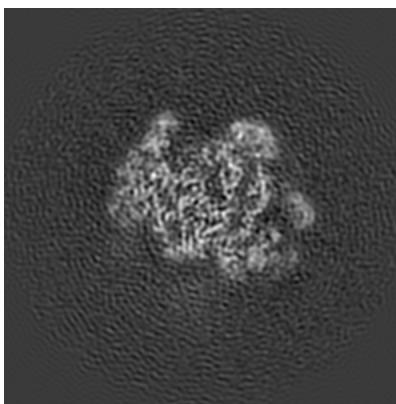
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

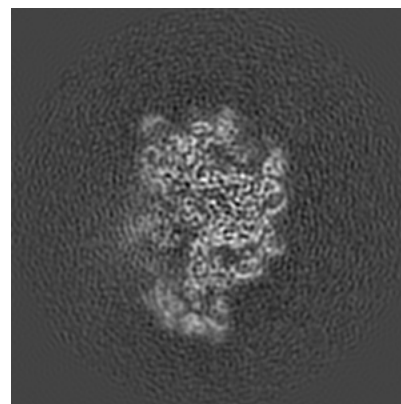
6.3.1 Primary map



X Index: 166



Y Index: 181

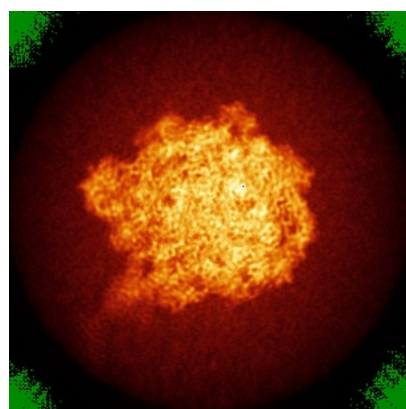


Z Index: 176

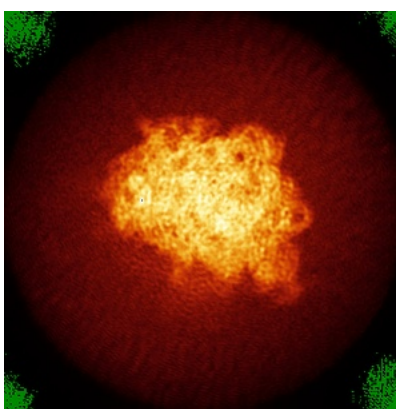
The images above show the largest variance slices of the map in three orthogonal directions.

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

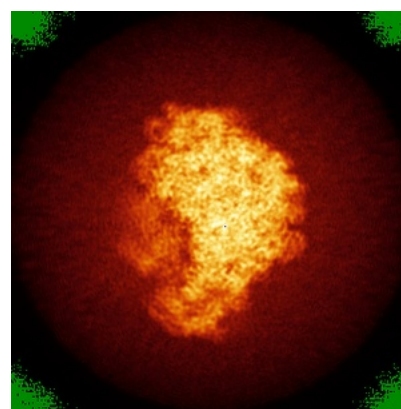
6.4.1 Primary map



X



Y

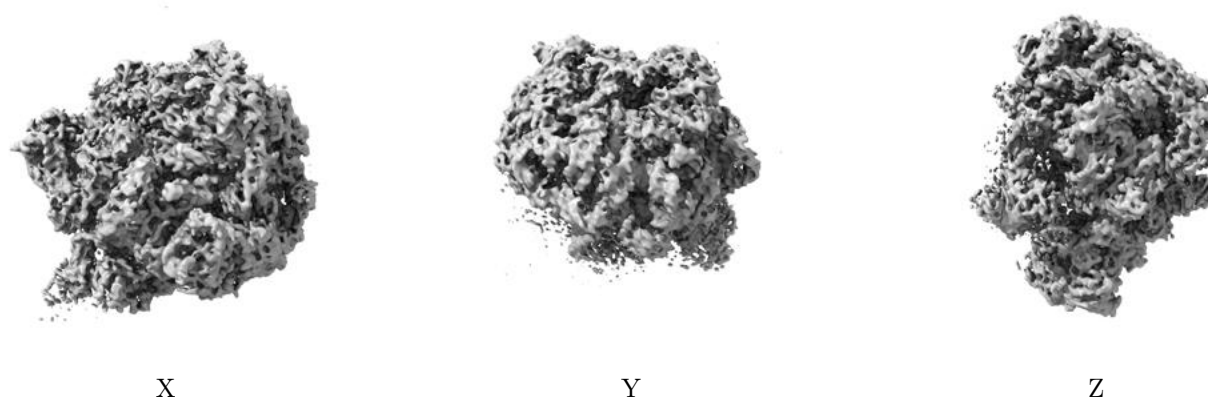


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



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

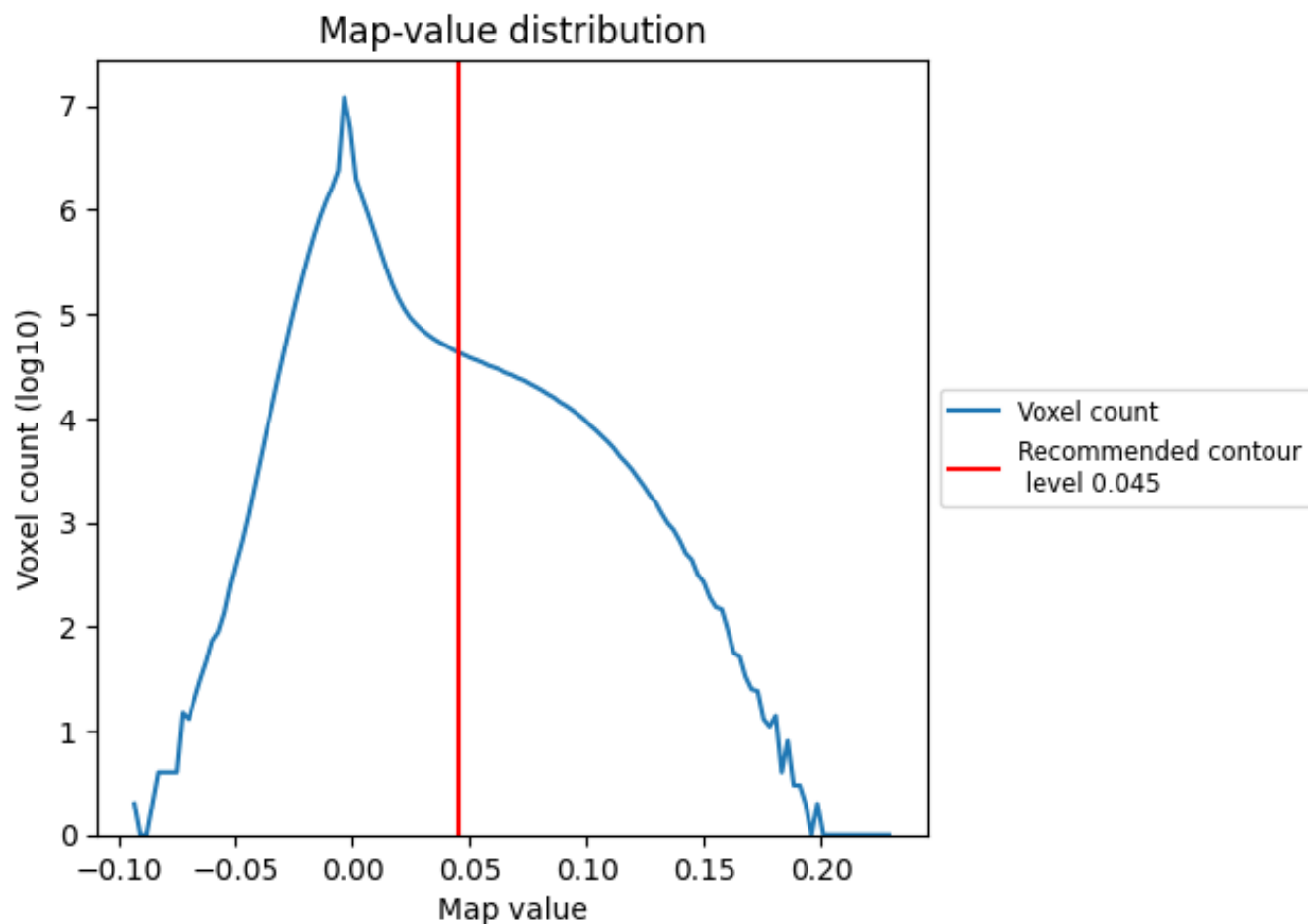
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

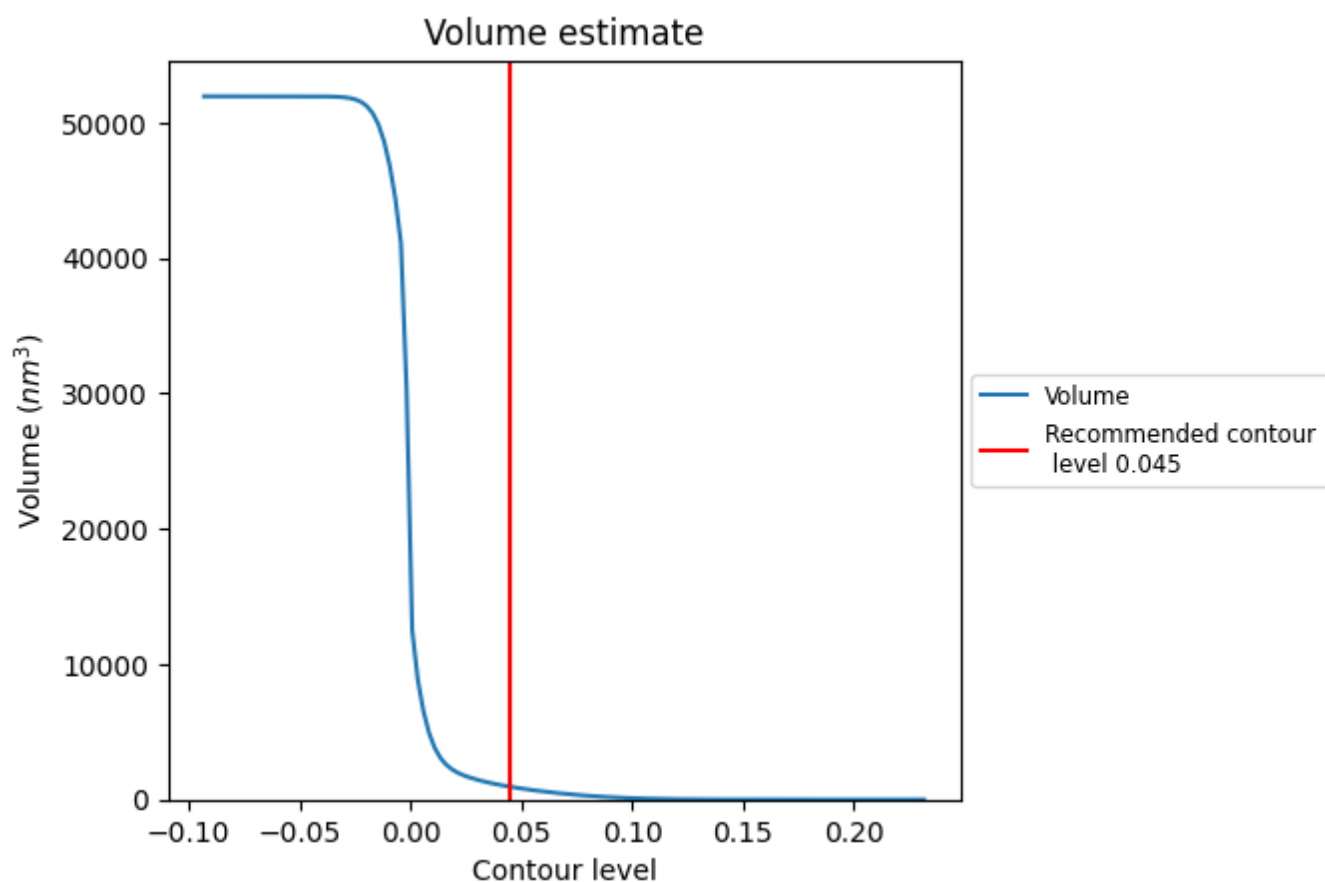
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

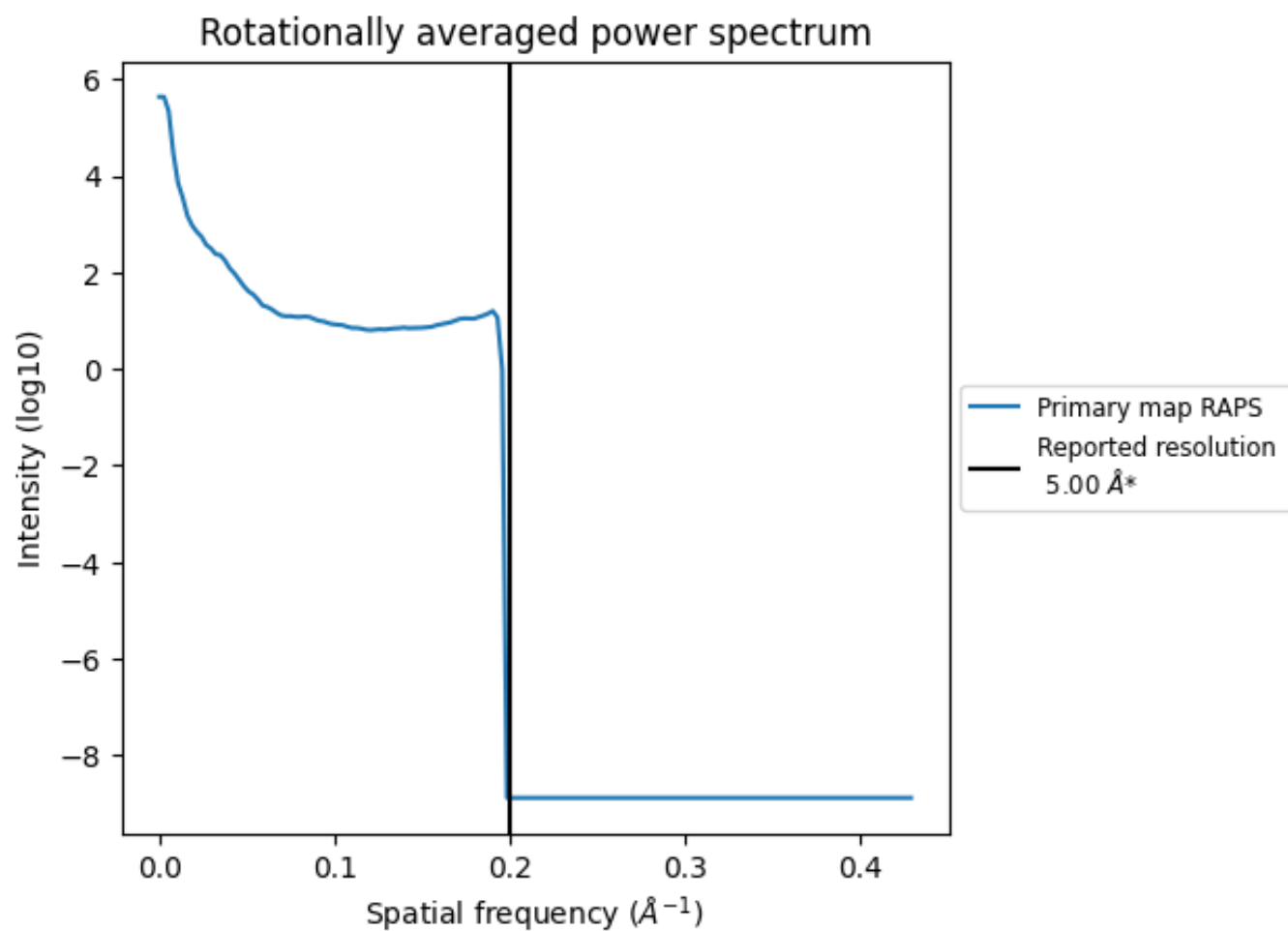
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 946 nm³; this corresponds to an approximate mass of 854 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

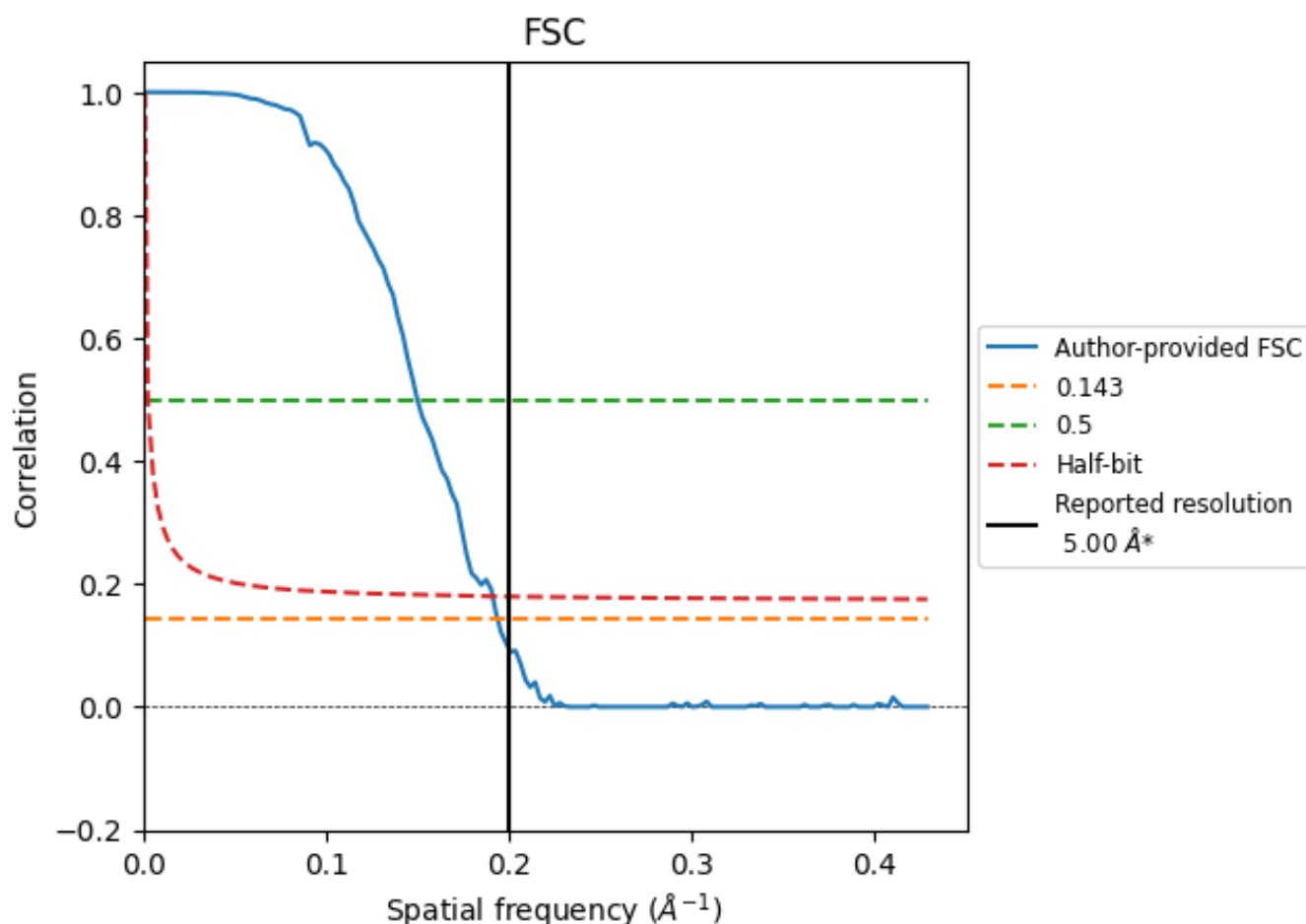


*Reported resolution corresponds to spatial frequency of 0.200 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.200 Å⁻¹

8.2 Resolution estimates [i](#)

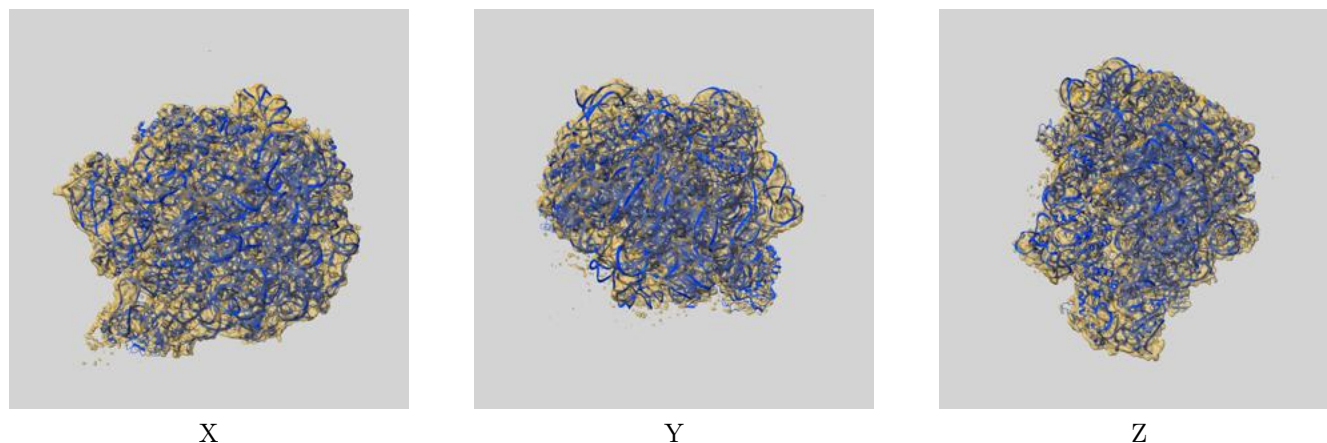
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	5.00	-	-
Author-provided FSC curve	5.16	6.67	5.23
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

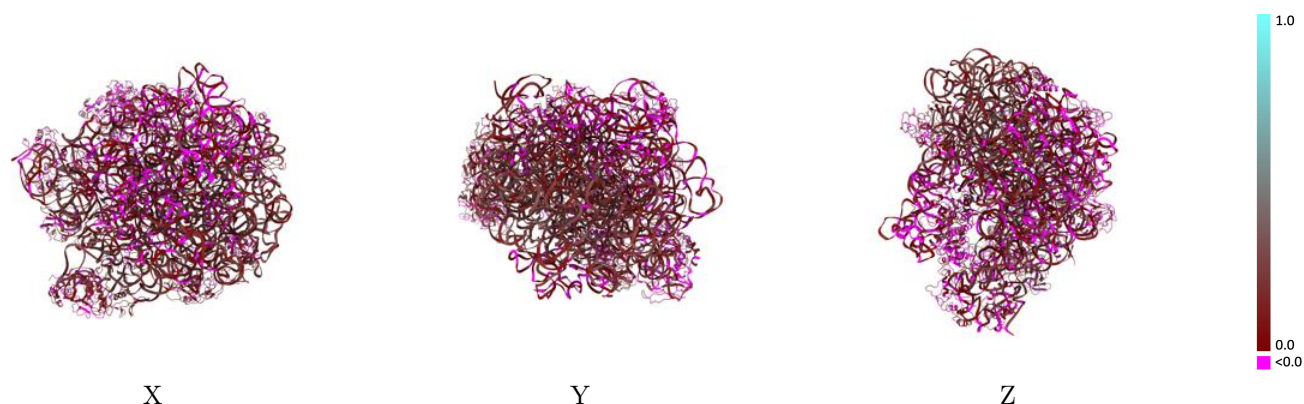
This section contains information regarding the fit between EMDB map EMD-6149 and PDB model 3J8G. Per-residue inclusion information can be found in section [3](#) on page [10](#).

9.1 Map-model overlay [i](#)



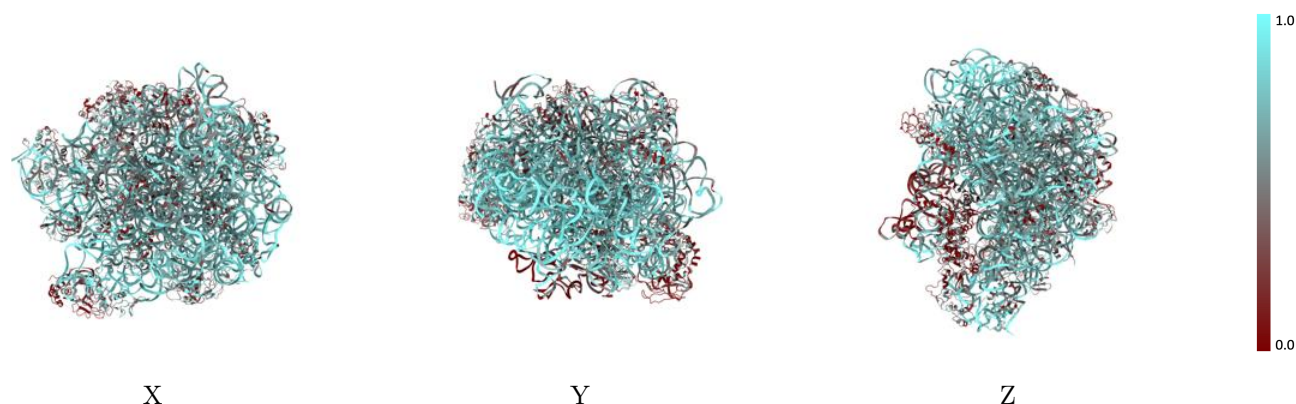
The images above show the 3D surface view of the map at the recommended contour level 0.045 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



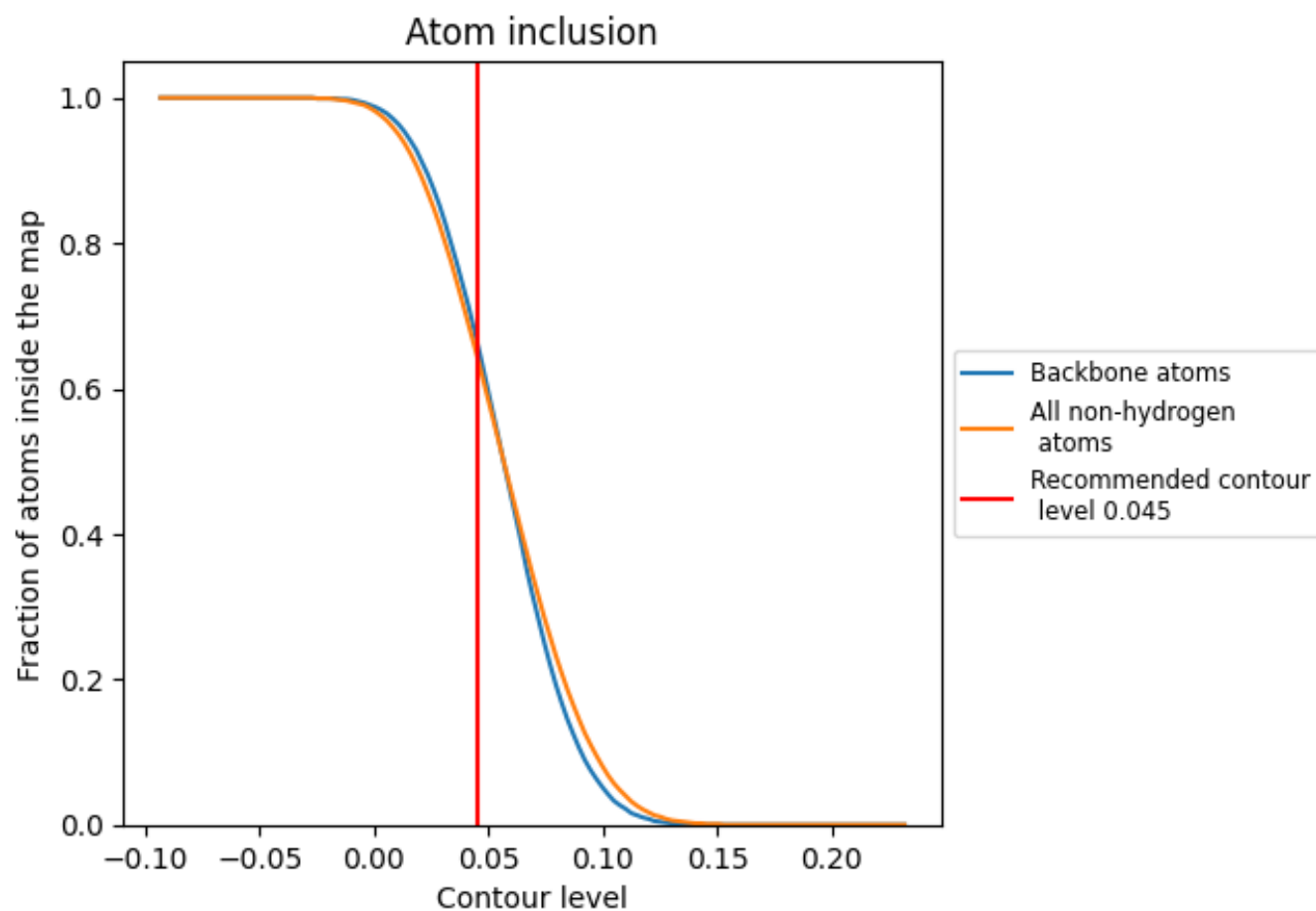
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



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

9.4 Atom inclusion [i](#)



At the recommended contour level, 66% of all backbone atoms, 65% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

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

Chain	Atom inclusion	Q-score
All	 0.6460	 0.1310
0	 0.4330	 0.0960
1	 0.4370	 0.0650
2	 0.4600	 0.0490
3	 0.5190	 0.1010
5	 0.2170	 0.0350
6	 0.5320	 0.1150
7	 0.4440	 0.0550
8	 0.6370	 0.1510
A	 0.7770	 0.1370
B	 0.7330	 0.1480
C	 0.5890	 0.1510
D	 0.6000	 0.1610
E	 0.4220	 0.0490
F	 0.4560	 0.0680
G	 0.6020	 0.1610
H	 0.1650	 0.0600
I	 0.0460	 0.0270
J	 0.5010	 0.1070
K	 0.6060	 0.1510
L	 0.4460	 0.0560
M	 0.6140	 0.1780
N	 0.6190	 0.1280
O	 0.5280	 0.0920
P	 0.5610	 0.1610
Q	 0.5000	 0.0650
R	 0.4560	 0.0500
S	 0.4400	 0.0580
T	 0.5250	 0.1040
U	 0.4280	 0.0400
W	 0.5580	 0.1540
X	 0.3430	 0.0850
Y	 0.4840	 0.0580

